



# Full wwPDB NMR Structure Validation Report ⓘ

Jun 10, 2024 – 01:23 pm BST

PDB ID : 6FVC  
BMRB ID : 34240  
Title : Protein environment affects the water-tryptophan binding mode. Molecular dynamics simulations of Engrailed homeodomain mutants  
Authors : Trosanova, Z.; Zachrdla, M.; Jansen, S.; Srb, P.; Zidek, L.; Kozelka, J.  
Deposited on : 2018-03-02

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A user guide is available at

<https://www.wwpdb.org/validation/2017/NMRValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467  
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) : 2.36.2

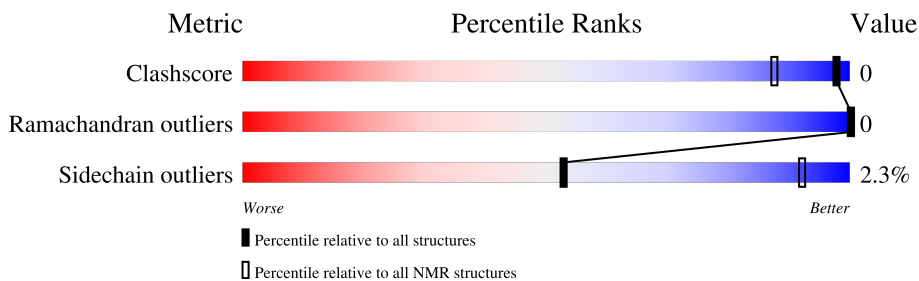
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*SOLUTION NMR*

The overall completeness of chemical shifts assignment is 51%.

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<br>(#Entries) | NMR archive<br>(#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     | 64     |                  |

## 2 Ensemble composition and analysis

This entry contains 3 models. Model 3 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *closest to the average*.

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:11-A:56 (46)        | 0.35              | 3            |

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 1 clusters. No single-model clusters were found.

| Cluster number | Models  |
|----------------|---------|
| 1              | 1, 2, 3 |

### 3 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 1087 atoms, of which 550 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Segmentation polarity homeobox protein engrailed.

| Mol | Chain | Residues | Atoms |     |     |     |    | Trace |   |
|-----|-------|----------|-------|-----|-----|-----|----|-------|---|
|     |       |          | Total | C   | H   | N   | O  |       | S |
| 1   | A     | 64       | 1084  | 329 | 548 | 107 | 99 | 1     | 0 |

There are 6 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment             | Reference  |
|-------|---------|----------|--------|---------------------|------------|
| A     | 1       | GLY      | -      | expression tag      | UNP P02836 |
| A     | 2       | ALA      | -      | expression tag      | UNP P02836 |
| A     | 3       | MET      | -      | expression tag      | UNP P02836 |
| A     | 55      | GLU      | LYS    | engineered mutation | UNP P02836 |
| A     | 63      | GLY      | -      | expression tag      | UNP P02836 |
| A     | 64      | SER      | -      | expression tag      | UNP P02836 |

- Molecule 2 is water.

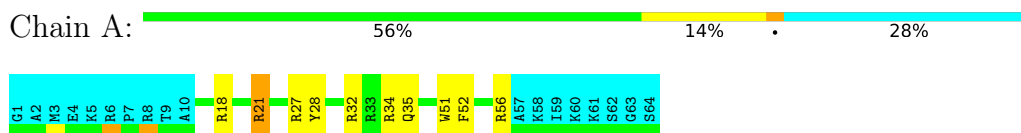
| Mol | Chain | Residues | Atoms |   |   |
|-----|-------|----------|-------|---|---|
|     |       |          | Total | H | O |
| 2   | A     | 1        | 3     | 2 | 1 |

## 4 Residue-property plots [i](#)

### 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: Segmentation polarity homeobox protein engrailed

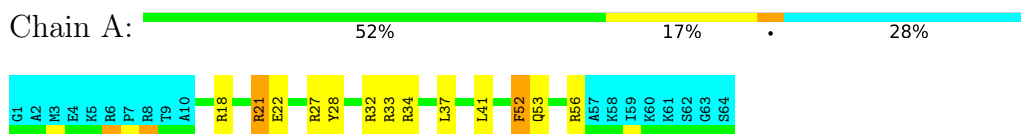


### 4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

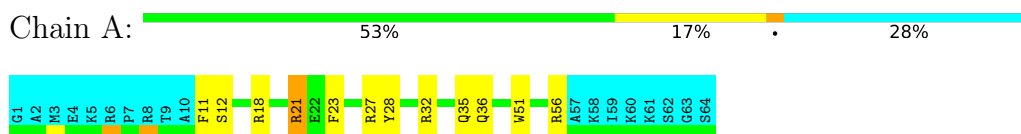
#### 4.2.1 Score per residue for model 1

- Molecule 1: Segmentation polarity homeobox protein engrailed



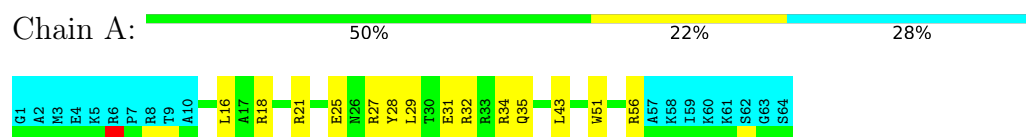
#### 4.2.2 Score per residue for model 2

- Molecule 1: Segmentation polarity homeobox protein engrailed



### 4.2.3 Score per residue for model 3 (medoid)

- Molecule 1: Segmentation polarity homeobox protein engrailed



## 5 Refinement protocol and experimental data overview

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

Of the 100 calculated structures, 3 were deposited, based on the following criterion: *three representative structures for the conformational equilibrium along the torsion angle N-CA-CB-CG of asparagine N51*.

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

| Software name | Classification        | Version |
|---------------|-----------------------|---------|
| CNS           | refinement            |         |
| CYANA         | structure calculation |         |

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                       | 466            |
| Number of shifts mapped to atoms             | 466            |
| Number of unparsed shifts                    | 0              |
| Number of shifts with mapping errors         | 0              |
| Number of shifts with mapping warnings       | 0              |
| Assignment completeness (well-defined parts) | 51%            |

## 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     | 1.67±0.02    | 2±1/409 ( 0.5± 0.2%) | 2.30±0.11   | 15±3/546 ( 2.7± 0.5%) |
| All | All   | 1.67         | 6/1227 ( 0.5%)       | 2.30        | 44/1638 ( 2.7%)       |

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

| Mol | Chain | Chirality | Planarity |
|-----|-------|-----------|-----------|
| 1   | A     | 0.0±0.0   | 1.7±1.2   |
| All | All   | 0         | 5         |

All unique bond 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(Å) | Ideal(Å) | Models |       |
|-----|-------|-----|------|--------|-------|-------------|----------|--------|-------|
|     |       |     |      |        |       |             |          | Worst  | Total |
| 1   | A     | 18  | ARG  | CZ-NH1 | -8.51 | 1.22        | 1.33     | 2      | 1     |
| 1   | A     | 34  | ARG  | CZ-NH1 | -6.97 | 1.24        | 1.33     | 3      | 1     |
| 1   | A     | 21  | ARG  | CZ-NH1 | -5.68 | 1.25        | 1.33     | 3      | 1     |
| 1   | A     | 25  | GLU  | CB-CG  | 5.40  | 1.62        | 1.52     | 3      | 1     |
| 1   | A     | 12  | SER  | CA-CB  | 5.38  | 1.61        | 1.52     | 2      | 1     |
| 1   | A     | 21  | ARG  | CZ-NH2 | -5.12 | 1.26        | 1.33     | 1      | 1     |

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     | 32  | ARG  | NE-CZ-NH1 | 23.81  | 132.20      | 120.30   | 1      | 3     |
| 1   | A     | 32  | ARG  | NE-CZ-NH2 | -20.96 | 109.82      | 120.30   | 1      | 2     |
| 1   | A     | 21  | ARG  | NE-CZ-NH1 | 14.09  | 127.35      | 120.30   | 2      | 2     |
| 1   | A     | 27  | ARG  | NE-CZ-NH1 | 13.35  | 126.97      | 120.30   | 3      | 3     |

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| Mol | Chain | Res | Type | Atoms       | Z      | Observed(°) | Ideal(°) | Models |       |
|-----|-------|-----|------|-------------|--------|-------------|----------|--------|-------|
|     |       |     |      |             |        |             |          | Worst  | Total |
| 1   | A     | 56  | ARG  | NE-CZ-NH1   | 12.49  | 126.55      | 120.30   | 2      | 3     |
| 1   | A     | 21  | ARG  | NE-CZ-NH2   | -12.28 | 114.16      | 120.30   | 2      | 1     |
| 1   | A     | 28  | TYR  | CB-CG-CD2   | 10.92  | 127.55      | 121.00   | 1      | 2     |
| 1   | A     | 23  | PHE  | CB-CG-CD2   | -10.56 | 113.41      | 120.80   | 2      | 1     |
| 1   | A     | 27  | ARG  | NE-CZ-NH2   | -10.32 | 115.14      | 120.30   | 3      | 2     |
| 1   | A     | 18  | ARG  | NE-CZ-NH1   | 9.30   | 124.95      | 120.30   | 3      | 1     |
| 1   | A     | 56  | ARG  | NE-CZ-NH2   | -8.97  | 115.82      | 120.30   | 1      | 1     |
| 1   | A     | 21  | ARG  | CD-NE-CZ    | 7.13   | 133.58      | 123.60   | 3      | 1     |
| 1   | A     | 56  | ARG  | NH1-CZ-NH2  | -6.84  | 111.88      | 119.40   | 3      | 1     |
| 1   | A     | 18  | ARG  | NE-CZ-NH2   | 6.81   | 123.70      | 120.30   | 2      | 3     |
| 1   | A     | 52  | PHE  | CB-CG-CD1   | -6.68  | 116.12      | 120.80   | 1      | 1     |
| 1   | A     | 27  | ARG  | NH1-CZ-NH2  | -6.66  | 112.08      | 119.40   | 1      | 1     |
| 1   | A     | 51  | TRP  | CG-CD2-CE3  | 6.41   | 139.67      | 133.90   | 2      | 1     |
| 1   | A     | 34  | ARG  | NE-CZ-NH1   | 6.35   | 123.47      | 120.30   | 1      | 1     |
| 1   | A     | 51  | TRP  | NE1-CE2-CD2 | -6.22  | 101.08      | 107.30   | 3      | 1     |
| 1   | A     | 33  | ARG  | CG-CD-NE    | -6.17  | 98.84       | 111.80   | 1      | 1     |
| 1   | A     | 28  | TYR  | CB-CG-CD1   | -5.87  | 117.48      | 121.00   | 1      | 1     |
| 1   | A     | 29  | LEU  | C-N-CA      | 5.84   | 136.29      | 121.70   | 3      | 1     |
| 1   | A     | 41  | LEU  | CB-CG-CD2   | 5.77   | 120.81      | 111.00   | 1      | 1     |
| 1   | A     | 11  | PHE  | CA-CB-CG    | 5.69   | 127.55      | 113.90   | 2      | 1     |
| 1   | A     | 16  | LEU  | CB-CG-CD1   | 5.66   | 120.61      | 111.00   | 3      | 1     |
| 1   | A     | 34  | ARG  | NE-CZ-NH2   | -5.37  | 117.61      | 120.30   | 3      | 1     |
| 1   | A     | 11  | PHE  | CB-CG-CD1   | 5.34   | 124.54      | 120.80   | 2      | 1     |
| 1   | A     | 51  | TRP  | CE2-CD2-CG  | 5.33   | 111.57      | 107.30   | 3      | 1     |
| 1   | A     | 33  | ARG  | NE-CZ-NH2   | 5.23   | 122.92      | 120.30   | 1      | 1     |
| 1   | A     | 11  | PHE  | CB-CG-CD2   | -5.07  | 117.25      | 120.80   | 2      | 1     |
| 1   | A     | 31  | GLU  | OE1-CD-OE2  | -5.06  | 117.23      | 123.30   | 3      | 1     |
| 1   | A     | 43  | LEU  | O-C-N       | -5.03  | 114.66      | 122.70   | 3      | 1     |

There are no chirality outliers.

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

| Mol | Chain | Res | Type | Group     | Models (Total) |
|-----|-------|-----|------|-----------|----------------|
| 1   | A     | 21  | ARG  | Sidechain | 2              |
| 1   | A     | 52  | PHE  | Sidechain | 1              |
| 1   | A     | 28  | TYR  | Sidechain | 1              |
| 1   | A     | 36  | GLN  | Mainchain | 1              |

## 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     | 403   | 397      | 397      | 0±0     |
| All | All   | 1212  | 1197     | 1191     | 1       |

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:22:GLU:HG3 | 1:A:37:LEU:HD21 | 0.41     | 1.93        | 1      | 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     | 46/64 (72%)   | 46±0 (99±1%) | 0±0 (1±1%) | 0±0 (0±0%) | 100         | 100 |
| All | All   | 138/192 (72%) | 137 (99%)    | 1 (1%)     | 0 (0%)     | 100         | 100 |

There are no Ramachandran outliers.

### 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     | 43/56 (77%)   | 42±0 (98±0%) | 1±0 (2±0%) | 53          | 92 |
| All | All   | 129/168 (77%) | 126 (98%)    | 3 (2%)     | 53          | 92 |

All 2 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     | 35  | GLN  | 2              |
| 1   | A     | 53  | GLN  | 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 51% for the well-defined parts and 49% for the entire structure.

### 7.1 Chemical shift list 1

File name: working\_cs.cif

Chemical shift list name: *gen\_shifts.str*

#### 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                  | 466 |
| Number of shifts mapped to atoms        | 466 |
| Number of unparsed shifts               | 0   |
| Number of shifts with mapping errors    | 0   |
| Number of shifts with mapping warnings  | 0   |
| Number of shift outliers (ShiftChecker) | 4   |

#### 7.1.2 Chemical shift referencing [i](#)

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

#### 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 51%, i.e. 360 atoms were assigned a chemical shift out of a possible 706. 0 out of 6 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

|           | Total         | <sup>1</sup> H | <sup>13</sup> C | <sup>15</sup> N |
|-----------|---------------|----------------|-----------------|-----------------|
| Backbone  | 93/231 (40%)  | 93/93 (100%)   | 0/92 (0%)       | 0/46 (0%)       |
| Sidechain | 242/424 (57%) | 242/267 (91%)  | 0/125 (0%)      | 0/32 (0%)       |
| Aromatic  | 25/51 (49%)   | 25/25 (100%)   | 0/25 (0%)       | 0/1 (0%)        |
| Overall   | 360/706 (51%) | 360/385 (94%)  | 0/242 (0%)      | 0/79 (0%)       |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 49%, i.e. 466 atoms were assigned a chemical shift out of a possible 947. 0 out of 6 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

|           | Total         | <sup>1</sup> H | <sup>13</sup> C | <sup>15</sup> N |
|-----------|---------------|----------------|-----------------|-----------------|
| Backbone  | 122/321 (38%) | 122/130 (94%)  | 0/128 (0%)      | 0/63 (0%)       |
| Sidechain | 319/575 (55%) | 319/364 (88%)  | 0/169 (0%)      | 0/42 (0%)       |
| Aromatic  | 25/51 (49%)   | 25/25 (100%)   | 0/25 (0%)       | 0/1 (0%)        |
| Overall   | 466/947 (49%) | 466/519 (90%)  | 0/322 (0%)      | 0/106 (0%)      |

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

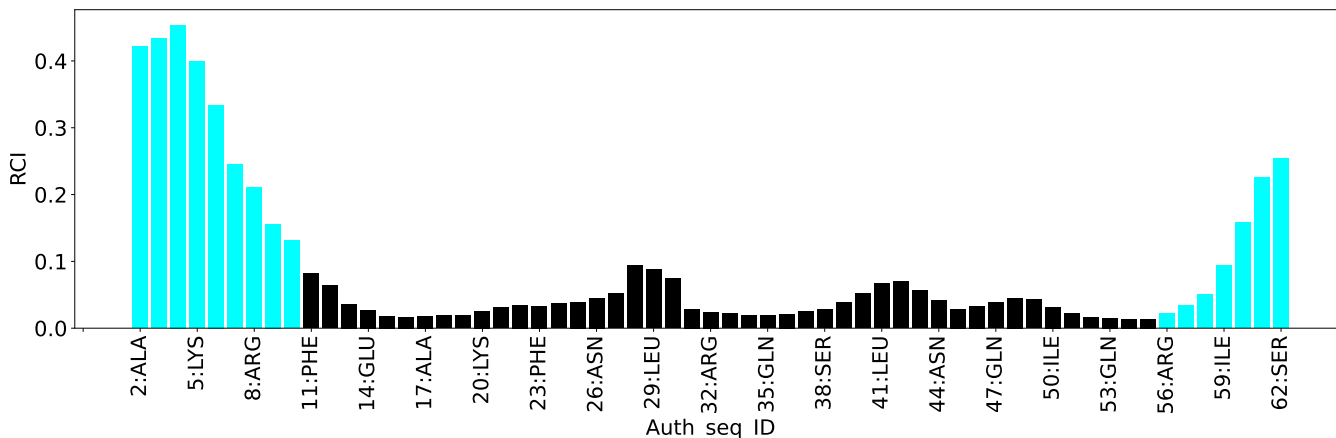
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

| List Id | Chain | Res | Type | Atom | Shift, ppm | Expected range, ppm | Z-score |
|---------|-------|-----|------|------|------------|---------------------|---------|
| 1       | A     | 55  | GLU  | HG2  | 0.15       | 1.24 – 3.30         | -10.3   |
| 1       | A     | 55  | GLU  | HG3  | 0.20       | 1.20 – 3.30         | -9.8    |
| 1       | A     | 55  | GLU  | HB2  | 0.06       | 1.00 – 3.05         | -9.6    |
| 1       | A     | 55  | GLU  | HB3  | 0.32       | 0.95 – 3.05         | -8.0    |

### 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

### 8.1 Conformationally restricting restraints

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

| Description  | Value |
|--|-------|
| Total distance restraints                                | 1915  |
| Intra-residue ( $ i-j =0$ )                              | 432   |
| Sequential ( $ i-j =1$ )                                 | 441   |
| Medium range ( $ i-j >1$ and $ i-j <5$ )                 | 525   |
| Long range ( $ i-j \geq 5$ )                             | 517   |
| Inter-chain  | 0     |
| Hydrogen bond restraints                                 | 0     |
| Disulfide bond restraints                                | 0     |
| Total dihedral-angle restraints                          | 0     |
| Number of unmapped restraints                            | 0     |
| Number of restraints per residue                         | 29.9  |
| Number of long range restraints per residue <sup>1</sup> | 8.1   |

<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

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

#### 8.2.1 Average number of distance violations per model

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

| Bins (Å)         | Average number of violations per model | Max (Å) |
|------------------|--|---------|
| 0.1-0.2 (Small)  | 99.7                                   | 0.2     |
| 0.2-0.5 (Medium) | 172.7                                  | 0.5     |
| >0.5 (Large)     | 102.3                                  | 4.34    |

### 8.2.2 Average number of dihedral-angle violations per model

Dihedral-angle violations less than  $1^\circ$  are not included in the calculation. There are no dihedral-angle violations

## 9 Distance violation analysis i

### 9.1 Summary of distance violations i

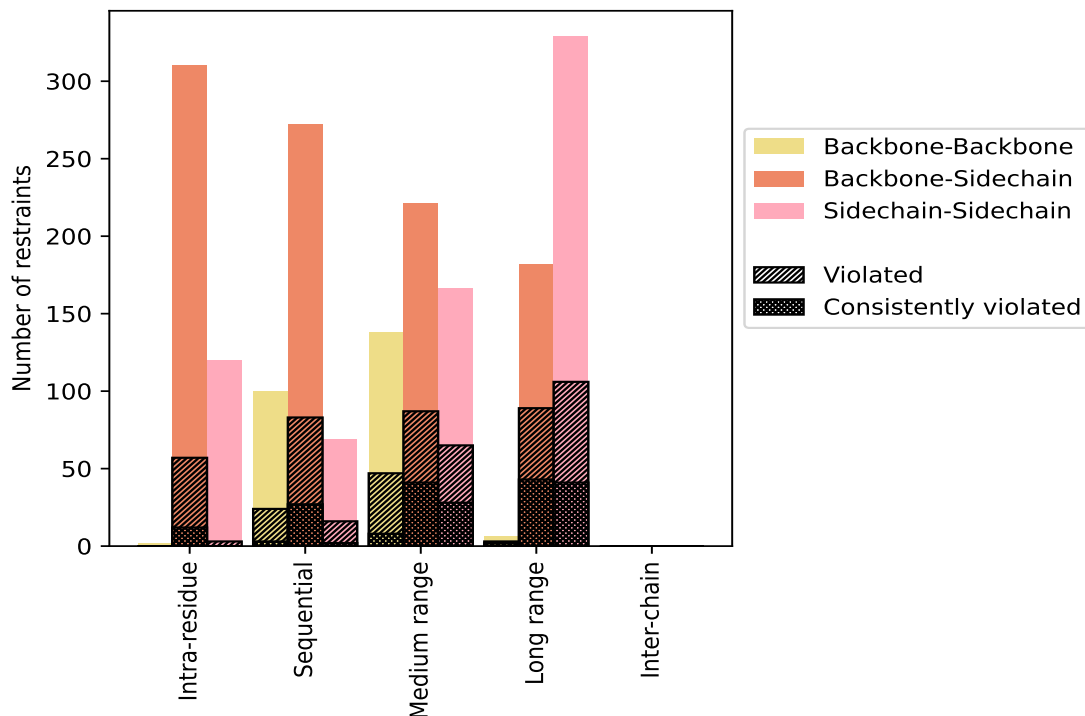
The following table shows the summary of distance violations in different restraint categories based on the sequence separation of the atoms involved. Each category is further sub-divided into three sub-categories based on the atoms involved. Violations less than 0.1 Å are not included in the statistics.

| Restrains 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> |
| <b>Intra-residue (<math> i-j =0</math>)</b>                                 | <b>432</b>  | <b>22.6</b>    | <b>60</b>             | <b>13.9</b>    | <b>3.1</b>     | <b>12</b>                          | <b>2.8</b>     | <b>0.6</b>     |
| Backbone-Backbone   | 2           | 0.1            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain  | 310         | 16.2           | 57                    | 18.4           | 3.0            | 12                                 | 3.9            | 0.6            |
| Sidechain-Sidechain   | 120         | 6.3            | 3                     | 2.5            | 0.2            | 0                                  | 0.0            | 0.0            |
| <b>Sequential (<math> i-j =1</math>)</b>                                    | <b>441</b>  | <b>23.0</b>    | <b>123</b>            | <b>27.9</b>    | <b>6.4</b>     | <b>32</b>                          | <b>7.3</b>     | <b>1.7</b>     |
| Backbone-Backbone   | 100         | 5.2            | 24                    | 24.0           | 1.3            | 3                                  | 3.0            | 0.2            |
| Backbone-Sidechain  | 272         | 14.2           | 83                    | 30.5           | 4.3            | 27                                 | 9.9            | 1.4            |
| Sidechain-Sidechain   | 69          | 3.6            | 16                    | 23.2           | 0.8            | 2                                  | 2.9            | 0.1            |
| <b>Medium range (<math> i-j &gt;1</math> &amp; <math> i-j &lt;5</math>)</b> | <b>525</b>  | <b>27.4</b>    | <b>199</b>            | <b>37.9</b>    | <b>10.4</b>    | <b>77</b>                          | <b>14.7</b>    | <b>4.0</b>     |
| Backbone-Backbone   | 138         | 7.2            | 47                    | 34.1           | 2.5            | 8                                  | 5.8            | 0.4            |
| Backbone-Sidechain  | 221         | 11.5           | 87                    | 39.4           | 4.5            | 41                                 | 18.6           | 2.1            |
| Sidechain-Sidechain   | 166         | 8.7            | 65                    | 39.2           | 3.4            | 28                                 | 16.9           | 1.5            |
| <b>Long range (<math> i-j \geq 5</math>)</b>                                | <b>517</b>  | <b>27.0</b>    | <b>198</b>            | <b>38.3</b>    | <b>10.3</b>    | <b>86</b>                          | <b>16.6</b>    | <b>4.5</b>     |
| Backbone-Backbone   | 6           | 0.3            | 3                     | 50.0           | 0.2            | 2                                  | 33.3           | 0.1            |
| Backbone-Sidechain  | 182         | 9.5            | 89                    | 48.9           | 4.6            | 43                                 | 23.6           | 2.2            |
| Sidechain-Sidechain   | 329         | 17.2           | 106                   | 32.2           | 5.5            | 41                                 | 12.5           | 2.1            |
| <b>Inter-chain</b>  | <b>0</b>    | <b>0.0</b>     | <b>0</b>              | <b>0.0</b>     | <b>0.0</b>     | <b>0</b>                           | <b>0.0</b>     | <b>0.0</b>     |
| 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            |
| <b>Hydrogen bond</b>  | <b>0</b>    | <b>0.0</b>     | <b>0</b>              | <b>0.0</b>     | <b>0.0</b>     | <b>0</b>                           | <b>0.0</b>     | <b>0.0</b>     |
| <b>Disulfide bond</b>   | <b>0</b>    | <b>0.0</b>     | <b>0</b>              | <b>0.0</b>     | <b>0.0</b>     | <b>0</b>                           | <b>0.0</b>     | <b>0.0</b>     |
| <b>Total</b>  | <b>1915</b> | <b>100.0</b>   | <b>580</b>            | <b>30.3</b>    | <b>30.3</b>    | <b>207</b>                         | <b>10.8</b>    | <b>10.8</b>    |
| Backbone-Backbone   | 246         | 12.8           | 74                    | 30.1           | 3.9            | 13                                 | 5.3            | 0.7            |
| Backbone-Sidechain  | 985         | 51.4           | 316                   | 32.1           | 16.5           | 123                                | 12.5           | 6.4            |
| Sidechain-Sidechain   | 684         | 35.7           | 190                   | 27.8           | 9.9            | 71                                 | 10.4           | 3.7            |

<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 disulfid bonds are counted in their appropriate category on the x-axis

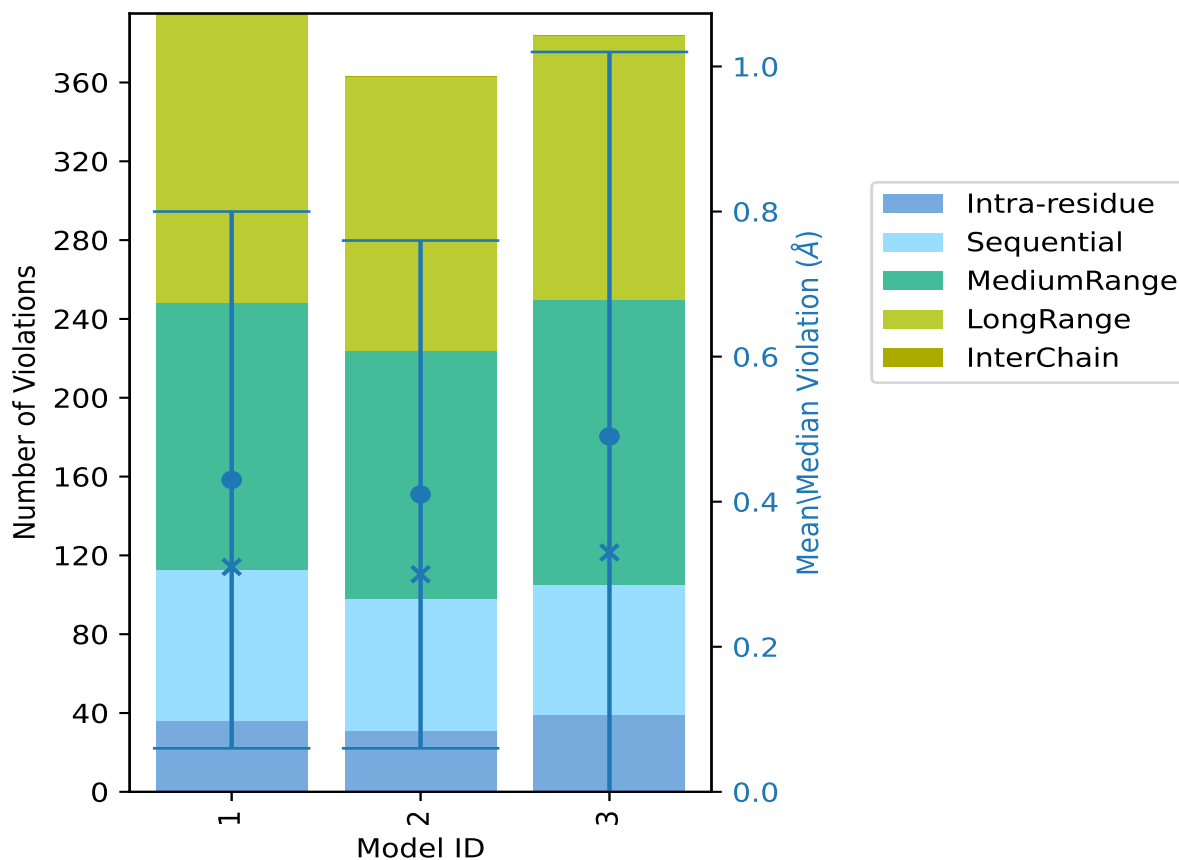
## 9.2 Distance violation statistics for each model [i](#)

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        | 36                   | 77              | 135             | 147             | 0               | 395   | 0.43     | 2.73    | 0.37                | 0.31       |
| 2        | 31                   | 67              | 126             | 139             | 0               | 363   | 0.41     | 2.71    | 0.35                | 0.3        |
| 3        | 39                   | 66              | 145             | 134             | 0               | 384   | 0.49     | 4.34    | 0.53                | 0.33       |

<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](#)

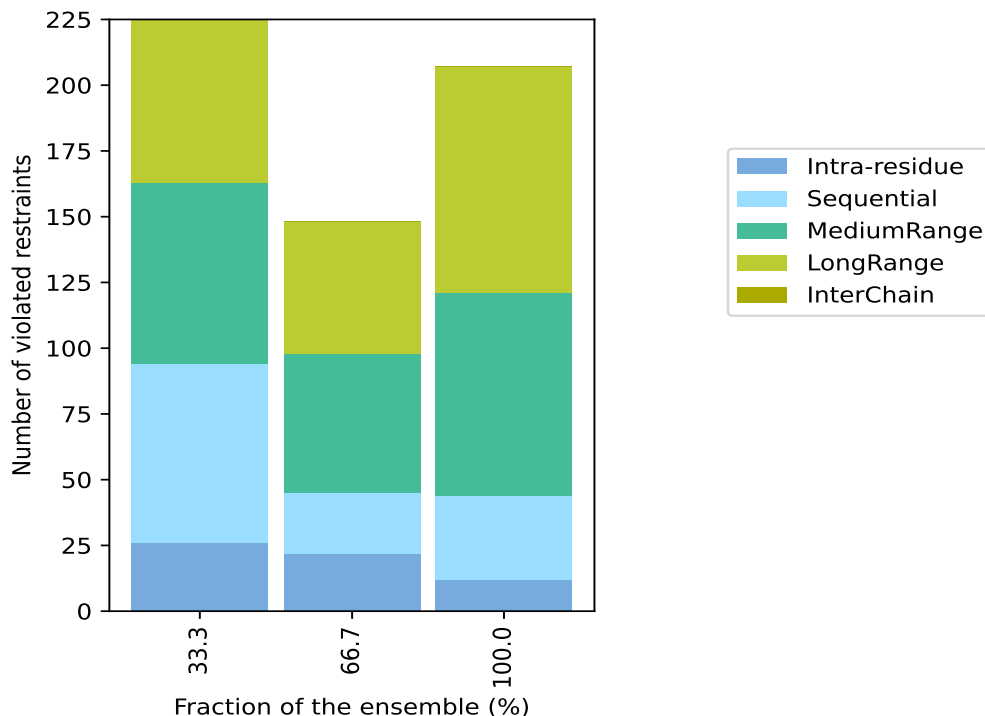
Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 1335(IR:372, SQ:318, MR:326, LR:319, IC:0) restraints are 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>       | %     |
| 26                            | 68              | 69              | 62              | 0               | 225   | 1                        | 33.3  |
| 22                            | 23              | 53              | 50              | 0               | 148   | 2                        | 66.7  |
| 12                            | 32              | 77              | 86              | 0               | 207   | 3                        | 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

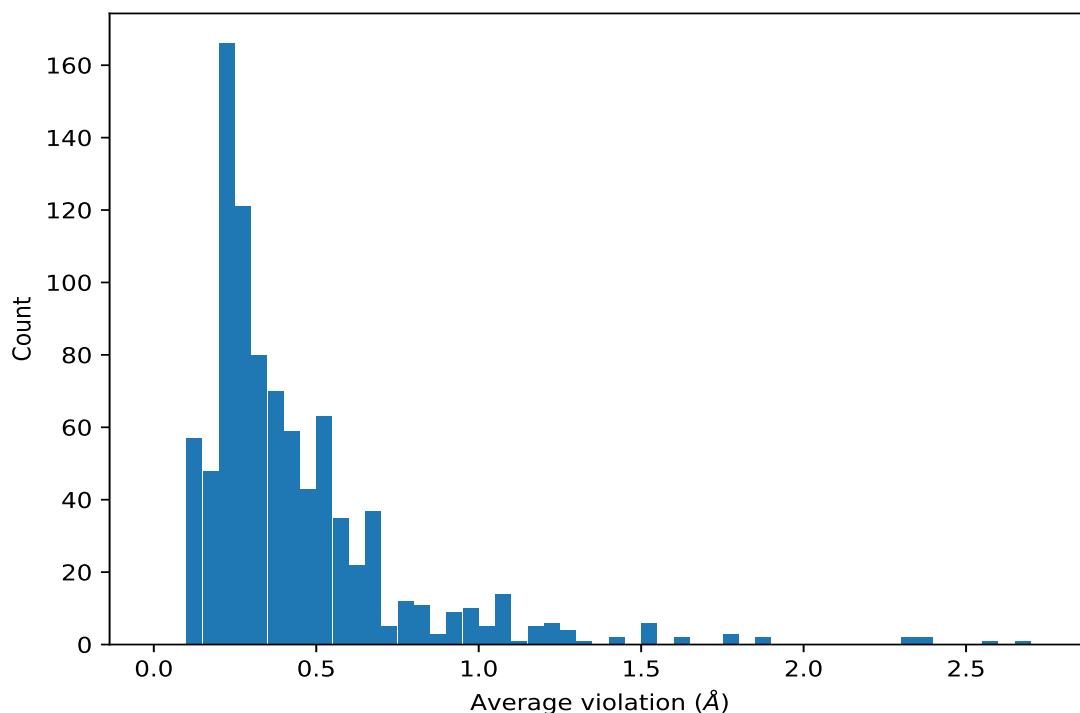
### 9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



## 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) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,519)  | 1:44:A:ASN:HD21 | 1:46:A:ALA:HA   | 3                   | 2.56     | 0.22                | 2.71       |
| (1,1219) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HG   | 3                   | 2.38     | 0.05                | 2.4        |
| (1,1219) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HG   | 3                   | 2.38     | 0.05                | 2.4        |
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD21 | 3                   | 2.34     | 1.61                | 2.28       |
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD22 | 3                   | 2.34     | 1.61                | 2.28       |
| (1,1209) | 1:29:A:LEU:HB3  | 1:49:A:LYS:HA   | 3                   | 1.79     | 0.18                | 1.79       |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB2  | 3                   | 1.64     | 0.11                | 1.65       |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB3  | 3                   | 1.64     | 0.11                | 1.65       |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG2  | 3                   | 1.53     | 0.25                | 1.51       |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG3  | 3                   | 1.53     | 0.25                | 1.51       |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG2  | 3                   | 1.53     | 0.25                | 1.51       |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG3  | 3                   | 1.53     | 0.25                | 1.51       |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG2  | 3                   | 1.53     | 0.25                | 1.51       |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG3  | 3                   | 1.53     | 0.25                | 1.51       |
| (1,1576) | 1:15:A:GLN:HG2  | 1:41:A:LEU:HG   | 3                   | 1.43     | 0.04                | 1.43       |
| (1,1576) | 1:15:A:GLN:HG3  | 1:41:A:LEU:HG   | 3                   | 1.43     | 0.04                | 1.43       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,292)  | 1:12:A:SER:H    | 1:16:A:LEU:HB3  | 3                   | 1.32     | 0.33                | 1.29       |
| (1,64)   | 1:18:A:ARG:H    | 1:41:A:LEU:HG   | 3                   | 1.28     | 0.3                 | 1.11       |
| (1,1387) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 3                   | 1.27     | 1.04                | 0.66       |
| (1,1409) | 1:34:A:ARG:HG2  | 1:45:A:GLU:HG2  | 3                   | 1.26     | 0.25                | 1.19       |
| (1,1409) | 1:34:A:ARG:HG3  | 1:45:A:GLU:HG2  | 3                   | 1.26     | 0.25                | 1.19       |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB2  | 3                   | 1.24     | 0.25                | 1.21       |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB3  | 3                   | 1.24     | 0.25                | 1.21       |
| (1,690)  | 1:11:A:PHE:HZ   | 1:49:A:LYS:H    | 3                   | 1.24     | 0.14                | 1.19       |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD21 | 3                   | 1.21     | 0.23                | 1.29       |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD22 | 3                   | 1.21     | 0.23                | 1.29       |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD23 | 3                   | 1.21     | 0.23                | 1.29       |
| (1,1877) | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 3                   | 1.18     | 0.58                | 0.94       |
| (1,1877) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 3                   | 1.18     | 0.58                | 0.94       |
| (1,819)  | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 3                   | 1.12     | 0.41                | 1.13       |
| (1,1469) | 1:15:A:GLN:HE21 | 1:43:A:LEU:H    | 3                   | 1.08     | 0.23                | 1.01       |
| (1,805)  | 1:34:A:ARG:HD2  | 1:48:A:ILE:HA   | 3                   | 1.07     | 0.07                | 1.08       |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD21 | 3                   | 1.06     | 0.26                | 1.11       |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD22 | 3                   | 1.06     | 0.26                | 1.11       |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD23 | 3                   | 1.06     | 0.26                | 1.11       |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD21 | 3                   | 1.06     | 0.26                | 1.11       |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD22 | 3                   | 1.06     | 0.26                | 1.11       |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD23 | 3                   | 1.06     | 0.26                | 1.11       |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 3                   | 1.06     | 0.17                | 1.12       |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 3                   | 1.06     | 0.17                | 1.12       |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 3                   | 1.06     | 0.17                | 1.12       |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 3                   | 1.06     | 0.17                | 1.12       |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 3                   | 1.06     | 0.17                | 1.12       |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 3                   | 1.06     | 0.17                | 1.12       |
| (1,1386) | 1:15:A:GLN:HA   | 1:41:A:LEU:HG   | 3                   | 1.04     | 0.01                | 1.03       |
| (1,1325) | 1:28:A:TYR:HA   | 1:53:A:GLN:HG3  | 3                   | 1.01     | 0.12                | 1.04       |
| (1,1190) | 1:19:A:LEU:HD11 | 1:41:A:LEU:HG   | 3                   | 1.01     | 0.03                | 1.02       |
| (1,1190) | 1:19:A:LEU:HD12 | 1:41:A:LEU:HG   | 3                   | 1.01     | 0.03                | 1.02       |
| (1,1190) | 1:19:A:LEU:HD13 | 1:41:A:LEU:HG   | 3                   | 1.01     | 0.03                | 1.02       |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 3                   | 0.98     | 0.08                | 0.93       |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 3                   | 0.98     | 0.08                | 0.93       |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 3                   | 0.98     | 0.08                | 1.01       |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 3                   | 0.98     | 0.08                | 1.01       |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 3                   | 0.98     | 0.08                | 1.01       |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 3                   | 0.97     | 0.22                | 1.1        |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 3                   | 0.97     | 0.22                | 1.1        |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 3                   | 0.97     | 0.22                | 1.1        |
| (1,408)  | 1:18:A:ARG:HE   | 1:19:A:LEU:H    | 3                   | 0.97     | 0.03                | 0.96       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1460) | 1:19:A:LEU:HA   | 1:41:A:LEU:HG   | 3                   | 0.96     | 0.03                | 0.98       |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD11 | 3                   | 0.94     | 0.4                 | 1.2        |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD12 | 3                   | 0.94     | 0.4                 | 1.2        |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD13 | 3                   | 0.94     | 0.4                 | 1.2        |
| (1,1302) | 1:18:A:ARG:HB2  | 1:41:A:LEU:H    | 3                   | 0.94     | 0.19                | 0.89       |
| (1,1302) | 1:18:A:ARG:HB3  | 1:41:A:LEU:H    | 3                   | 0.94     | 0.19                | 0.89       |
| (1,1360) | 1:51:A:TRP:HE3  | 1:55:A:GLU:HG3  | 3                   | 0.93     | 0.09                | 0.91       |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD2  | 3                   | 0.92     | 0.08                | 0.86       |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD3  | 3                   | 0.92     | 0.08                | 0.86       |
| (1,1177) | 1:19:A:LEU:HG   | 1:37:A:LEU:HB2  | 3                   | 0.89     | 0.21                | 0.75       |
| (1,1574) | 1:15:A:GLN:HG2  | 1:41:A:LEU:H    | 3                   | 0.88     | 0.2                 | 0.93       |
| (1,1574) | 1:15:A:GLN:HG3  | 1:41:A:LEU:H    | 3                   | 0.88     | 0.2                 | 0.93       |
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG2  | 3                   | 0.84     | 0.32                | 0.93       |
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG3  | 3                   | 0.84     | 0.32                | 0.93       |
| (1,850)  | 1:34:A:ARG:HE   | 1:49:A:LYS:HA   | 3                   | 0.84     | 0.19                | 0.74       |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD1  | 3                   | 0.83     | 0.15                | 0.87       |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD2  | 3                   | 0.83     | 0.15                | 0.87       |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD1  | 3                   | 0.83     | 0.15                | 0.87       |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD2  | 3                   | 0.83     | 0.15                | 0.87       |
| (1,807)  | 1:34:A:ARG:HD3  | 1:48:A:ILE:HA   | 3                   | 0.8      | 0.1                 | 0.75       |
| (1,263)  | 1:15:A:GLN:HE21 | 1:42:A:GLY:H    | 3                   | 0.78     | 0.19                | 0.65       |
| (1,727)  | 1:23:A:PHE:HZ   | 1:27:A:ARG:HD2  | 3                   | 0.77     | 0.15                | 0.73       |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 3                   | 0.76     | 0.06                | 0.74       |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 3                   | 0.76     | 0.06                | 0.74       |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 3                   | 0.76     | 0.06                | 0.74       |
| (1,1107) | 1:29:A:LEU:HG   | 1:34:A:ARG:H    | 3                   | 0.76     | 0.01                | 0.77       |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD11 | 3                   | 0.76     | 0.19                | 0.87       |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD12 | 3                   | 0.76     | 0.19                | 0.87       |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD13 | 3                   | 0.76     | 0.19                | 0.87       |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 3                   | 0.76     | 0.19                | 0.87       |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 3                   | 0.76     | 0.19                | 0.87       |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 3                   | 0.76     | 0.19                | 0.87       |
| (1,321)  | 1:44:A:ASN:HD21 | 1:45:A:GLU:H    | 3                   | 0.74     | 0.15                | 0.66       |
| (1,542)  | 1:44:A:ASN:HD21 | 1:47:A:GLN:HG2  | 3                   | 0.74     | 0.37                | 0.61       |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD2  | 3                   | 0.73     | 0.17                | 0.84       |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD3  | 3                   | 0.73     | 0.17                | 0.84       |
| (1,931)  | 1:27:A:ARG:HB2  | 1:56:A:ARG:HD3  | 3                   | 0.71     | 0.18                | 0.75       |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD21 | 3                   | 0.7      | 0.38                | 0.5        |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD22 | 3                   | 0.7      | 0.38                | 0.5        |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD21 | 3                   | 0.7      | 0.38                | 0.5        |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD22 | 3                   | 0.7      | 0.38                | 0.5        |
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD2  | 3                   | 0.7      | 0.13                | 0.68       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD3  | 3                   | 0.7      | 0.13                | 0.68       |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 3                   | 0.69     | 0.09                | 0.66       |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 3                   | 0.69     | 0.09                | 0.66       |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 3                   | 0.69     | 0.09                | 0.66       |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 3                   | 0.69     | 0.09                | 0.66       |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 3                   | 0.69     | 0.09                | 0.66       |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 3                   | 0.69     | 0.09                | 0.66       |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD11 | 3                   | 0.69     | 0.11                | 0.66       |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD12 | 3                   | 0.69     | 0.11                | 0.66       |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD13 | 3                   | 0.69     | 0.11                | 0.66       |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD11 | 3                   | 0.67     | 0.27                | 0.55       |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD12 | 3                   | 0.67     | 0.27                | 0.55       |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD13 | 3                   | 0.67     | 0.27                | 0.55       |
| (1,716)  | 1:50:A:ILE:HD11 | 1:53:A:GLN:HE21 | 3                   | 0.67     | 0.23                | 0.78       |
| (1,716)  | 1:50:A:ILE:HD12 | 1:53:A:GLN:HE21 | 3                   | 0.67     | 0.23                | 0.78       |
| (1,716)  | 1:50:A:ILE:HD13 | 1:53:A:GLN:HE21 | 3                   | 0.67     | 0.23                | 0.78       |
| (1,1817) | 1:41:A:LEU:HD11 | 1:43:A:LEU:H    | 3                   | 0.67     | 0.06                | 0.69       |
| (1,1817) | 1:41:A:LEU:HD12 | 1:43:A:LEU:H    | 3                   | 0.67     | 0.06                | 0.69       |
| (1,1817) | 1:41:A:LEU:HD13 | 1:43:A:LEU:H    | 3                   | 0.67     | 0.06                | 0.69       |
| (1,1817) | 1:41:A:LEU:HD21 | 1:43:A:LEU:H    | 3                   | 0.67     | 0.06                | 0.69       |
| (1,1817) | 1:41:A:LEU:HD22 | 1:43:A:LEU:H    | 3                   | 0.67     | 0.06                | 0.69       |
| (1,1817) | 1:41:A:LEU:HD23 | 1:43:A:LEU:H    | 3                   | 0.67     | 0.06                | 0.69       |
| (1,1173) | 1:19:A:LEU:HD21 | 1:37:A:LEU:HG   | 3                   | 0.67     | 0.2                 | 0.69       |
| (1,1173) | 1:19:A:LEU:HD22 | 1:37:A:LEU:HG   | 3                   | 0.67     | 0.2                 | 0.69       |
| (1,1173) | 1:19:A:LEU:HD23 | 1:37:A:LEU:HG   | 3                   | 0.67     | 0.2                 | 0.69       |
| (1,798)  | 1:45:A:GLU:HA   | 1:49:A:LYS:HA   | 3                   | 0.66     | 0.07                | 0.64       |
| (1,312)  | 1:43:A:LEU:HG   | 1:44:A:ASN:H    | 3                   | 0.66     | 0.13                | 0.58       |
| (1,1284) | 1:33:A:ARG:HD3  | 1:36:A:GLN:HB2  | 3                   | 0.65     | 0.49                | 0.4        |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 3                   | 0.65     | 0.34                | 0.68       |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 3                   | 0.65     | 0.34                | 0.68       |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 3                   | 0.65     | 0.34                | 0.68       |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD11 | 3                   | 0.64     | 0.36                | 0.63       |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD12 | 3                   | 0.64     | 0.36                | 0.63       |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD13 | 3                   | 0.64     | 0.36                | 0.63       |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD21 | 3                   | 0.64     | 0.36                | 0.63       |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD22 | 3                   | 0.64     | 0.36                | 0.63       |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD23 | 3                   | 0.64     | 0.36                | 0.63       |
| (1,833)  | 1:30:A:THR:H    | 1:33:A:ARG:HD2  | 3                   | 0.64     | 0.08                | 0.65       |
| (1,1116) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG3  | 3                   | 0.63     | 0.15                | 0.71       |
| (1,1116) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG3  | 3                   | 0.63     | 0.15                | 0.71       |
| (1,1116) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG3  | 3                   | 0.63     | 0.15                | 0.71       |
| (1,1179) | 1:43:A:LEU:HG   | 1:47:A:GLN:HB2  | 3                   | 0.61     | 0.03                | 0.6        |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,813)  | 1:15:A:GLN:HA   | 1:41:A:LEU:HA   | 3                   | 0.61     | 0.36                | 0.41       |
| (1,1824) | 1:43:A:LEU:HD11 | 1:45:A:GLU:HA   | 3                   | 0.61     | 0.09                | 0.55       |
| (1,1824) | 1:43:A:LEU:HD12 | 1:45:A:GLU:HA   | 3                   | 0.61     | 0.09                | 0.55       |
| (1,1824) | 1:43:A:LEU:HD13 | 1:45:A:GLU:HA   | 3                   | 0.61     | 0.09                | 0.55       |
| (1,1824) | 1:43:A:LEU:HD21 | 1:45:A:GLU:HA   | 3                   | 0.61     | 0.09                | 0.55       |
| (1,1824) | 1:43:A:LEU:HD22 | 1:45:A:GLU:HA   | 3                   | 0.61     | 0.09                | 0.55       |
| (1,1824) | 1:43:A:LEU:HD23 | 1:45:A:GLU:HA   | 3                   | 0.61     | 0.09                | 0.55       |
| (1,903)  | 1:34:A:ARG:HD3  | 1:49:A:LYS:HD3  | 3                   | 0.6      | 0.08                | 0.63       |
| (1,1062) | 1:52:A:PHE:HB3  | 1:55:A:GLU:HB2  | 3                   | 0.6      | 0.02                | 0.6        |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD21 | 3                   | 0.59     | 0.24                | 0.5        |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD22 | 3                   | 0.59     | 0.24                | 0.5        |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD11 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD12 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD13 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD21 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD22 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD23 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD11 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD12 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD13 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD21 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD22 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD23 | 3                   | 0.59     | 0.11                | 0.58       |
| (1,1397) | 1:19:A:LEU:HD11 | 1:48:A:ILE:H    | 3                   | 0.59     | 0.33                | 0.72       |
| (1,1397) | 1:19:A:LEU:HD12 | 1:48:A:ILE:H    | 3                   | 0.59     | 0.33                | 0.72       |
| (1,1397) | 1:19:A:LEU:HD13 | 1:48:A:ILE:H    | 3                   | 0.59     | 0.33                | 0.72       |
| (1,775)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HG2  | 3                   | 0.58     | 0.32                | 0.43       |
| (1,297)  | 1:11:A:PHE:HE1  | 1:12:A:SER:H    | 3                   | 0.58     | 0.21                | 0.45       |
| (1,297)  | 1:11:A:PHE:HE2  | 1:12:A:SER:H    | 3                   | 0.58     | 0.21                | 0.45       |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD11 | 3                   | 0.57     | 0.05                | 0.6        |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD12 | 3                   | 0.57     | 0.05                | 0.6        |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD13 | 3                   | 0.57     | 0.05                | 0.6        |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB2  | 3                   | 0.57     | 0.08                | 0.56       |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB3  | 3                   | 0.57     | 0.08                | 0.56       |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD11 | 3                   | 0.56     | 0.1                 | 0.62       |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD12 | 3                   | 0.56     | 0.1                 | 0.62       |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD13 | 3                   | 0.56     | 0.1                 | 0.62       |
| (1,1012) | 1:30:A:THR:HG21 | 1:32:A:ARG:H    | 3                   | 0.55     | 0.16                | 0.44       |
| (1,1012) | 1:30:A:THR:HG22 | 1:32:A:ARG:H    | 3                   | 0.55     | 0.16                | 0.44       |
| (1,1012) | 1:30:A:THR:HG23 | 1:32:A:ARG:H    | 3                   | 0.55     | 0.16                | 0.44       |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD2  | 3                   | 0.55     | 0.08                | 0.59       |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD3  | 3                   | 0.55     | 0.08                | 0.59       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,790)  | 1:51:A:TRP:HA   | 1:55:A:GLU:HA   | 3                   | 0.54     | 0.3                 | 0.65       |
| (1,770)  | 1:52:A:PHE:HA   | 1:55:A:GLU:HG3  | 3                   | 0.54     | 0.21                | 0.52       |
| (1,1013) | 1:41:A:LEU:H    | 1:43:A:LEU:HG   | 3                   | 0.53     | 0.09                | 0.47       |
| (1,1364) | 1:30:A:THR:H    | 1:33:A:ARG:HE   | 3                   | 0.53     | 0.09                | 0.59       |
| (1,1328) | 1:28:A:TYR:HE1  | 1:53:A:GLN:HG3  | 3                   | 0.53     | 0.26                | 0.38       |
| (1,1328) | 1:28:A:TYR:HE2  | 1:53:A:GLN:HG3  | 3                   | 0.53     | 0.26                | 0.38       |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG12 | 3                   | 0.52     | 0.19                | 0.62       |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG13 | 3                   | 0.52     | 0.19                | 0.62       |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG21 | 3                   | 0.51     | 0.15                | 0.53       |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG22 | 3                   | 0.51     | 0.15                | 0.53       |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG23 | 3                   | 0.51     | 0.15                | 0.53       |
| (1,295)  | 1:13:A:SER:H    | 1:17:A:ALA:H    | 3                   | 0.5      | 0.05                | 0.47       |
| (1,764)  | 1:24:A:ASN:H    | 1:51:A:TRP:HZ3  | 3                   | 0.5      | 0.07                | 0.55       |
| (1,1233) | 1:30:A:THR:HG21 | 1:34:A:ARG:H    | 3                   | 0.5      | 0.09                | 0.53       |
| (1,1233) | 1:30:A:THR:HG22 | 1:34:A:ARG:H    | 3                   | 0.5      | 0.09                | 0.53       |
| (1,1233) | 1:30:A:THR:HG23 | 1:34:A:ARG:H    | 3                   | 0.5      | 0.09                | 0.53       |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG2  | 3                   | 0.5      | 0.22                | 0.5        |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG3  | 3                   | 0.5      | 0.22                | 0.5        |
| (1,1180) | 1:38:A:SER:HA   | 1:43:A:LEU:HG   | 3                   | 0.49     | 0.16                | 0.51       |
| (1,1494) | 1:6:A:ARG:HB2   | 1:7:A:PRO:HG2   | 3                   | 0.49     | 0.11                | 0.44       |
| (1,1494) | 1:6:A:ARG:HB3   | 1:7:A:PRO:HG2   | 3                   | 0.49     | 0.11                | 0.44       |
| (1,1366) | 1:56:A:ARG:H    | 1:56:A:ARG:HE   | 3                   | 0.49     | 0.09                | 0.46       |
| (1,346)  | 1:44:A:ASN:H    | 1:47:A:GLN:HA   | 3                   | 0.48     | 0.1                 | 0.55       |
| (1,1815) | 1:41:A:LEU:HD11 | 1:42:A:GLY:H    | 3                   | 0.48     | 0.06                | 0.46       |
| (1,1815) | 1:41:A:LEU:HD12 | 1:42:A:GLY:H    | 3                   | 0.48     | 0.06                | 0.46       |
| (1,1815) | 1:41:A:LEU:HD13 | 1:42:A:GLY:H    | 3                   | 0.48     | 0.06                | 0.46       |
| (1,1815) | 1:41:A:LEU:HD21 | 1:42:A:GLY:H    | 3                   | 0.48     | 0.06                | 0.46       |
| (1,1815) | 1:41:A:LEU:HD22 | 1:42:A:GLY:H    | 3                   | 0.48     | 0.06                | 0.46       |
| (1,1815) | 1:41:A:LEU:HD23 | 1:42:A:GLY:H    | 3                   | 0.48     | 0.06                | 0.46       |
| (1,1367) | 1:44:A:ASN:HD21 | 1:47:A:GLN:H    | 3                   | 0.48     | 0.16                | 0.46       |
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD2  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD3  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD2  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD3  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD2  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD3  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD2  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD3  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD2  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD3  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD2  | 3                   | 0.48     | 0.14                | 0.39       |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD3  | 3                   | 0.48     | 0.14                | 0.39       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,695)  | 1:11:A:PHE:HZ   | 1:47:A:GLN:H    | 3                   | 0.47     | 0.1                 | 0.49       |
| (1,1057) | 1:19:A:LEU:HD21 | 1:48:A:ILE:H    | 3                   | 0.46     | 0.22                | 0.52       |
| (1,1057) | 1:19:A:LEU:HD22 | 1:48:A:ILE:H    | 3                   | 0.46     | 0.22                | 0.52       |
| (1,1057) | 1:19:A:LEU:HD23 | 1:48:A:ILE:H    | 3                   | 0.46     | 0.22                | 0.52       |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG12 | 3                   | 0.46     | 0.16                | 0.56       |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG13 | 3                   | 0.46     | 0.16                | 0.56       |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD2  | 3                   | 0.46     | 0.04                | 0.46       |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD3  | 3                   | 0.46     | 0.04                | 0.46       |
| (1,665)  | 1:23:A:PHE:HD1  | 1:55:A:GLU:HA   | 3                   | 0.45     | 0.03                | 0.44       |
| (1,665)  | 1:23:A:PHE:HD2  | 1:55:A:GLU:HA   | 3                   | 0.45     | 0.03                | 0.44       |
| (1,834)  | 1:30:A:THR:H    | 1:34:A:ARG:HD3  | 3                   | 0.45     | 0.08                | 0.42       |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD11 | 3                   | 0.45     | 0.17                | 0.36       |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD12 | 3                   | 0.45     | 0.17                | 0.36       |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD13 | 3                   | 0.45     | 0.17                | 0.36       |
| (1,888)  | 1:53:A:GLN:HG2  | 1:54:A:ASN:HA   | 3                   | 0.45     | 0.09                | 0.41       |
| (1,341)  | 1:12:A:SER:HB3  | 1:14:A:GLU:H    | 3                   | 0.44     | 0.27                | 0.28       |
| (1,526)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:H    | 3                   | 0.44     | 0.11                | 0.39       |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE1  | 3                   | 0.43     | 0.15                | 0.5        |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE2  | 3                   | 0.43     | 0.15                | 0.5        |
| (1,1738) | 1:29:A:LEU:HD11 | 1:53:A:GLN:H    | 3                   | 0.42     | 0.2                 | 0.37       |
| (1,1738) | 1:29:A:LEU:HD12 | 1:53:A:GLN:H    | 3                   | 0.42     | 0.2                 | 0.37       |
| (1,1738) | 1:29:A:LEU:HD13 | 1:53:A:GLN:H    | 3                   | 0.42     | 0.2                 | 0.37       |
| (1,1738) | 1:29:A:LEU:HD21 | 1:53:A:GLN:H    | 3                   | 0.42     | 0.2                 | 0.37       |
| (1,1738) | 1:29:A:LEU:HD22 | 1:53:A:GLN:H    | 3                   | 0.42     | 0.2                 | 0.37       |
| (1,1738) | 1:29:A:LEU:HD23 | 1:53:A:GLN:H    | 3                   | 0.42     | 0.2                 | 0.37       |
| (1,832)  | 1:53:A:GLN:HA   | 1:53:A:GLN:HE22 | 3                   | 0.42     | 0.11                | 0.38       |
| (1,364)  | 1:48:A:ILE:HB   | 1:52:A:PHE:H    | 3                   | 0.42     | 0.07                | 0.37       |
| (1,1734) | 1:29:A:LEU:HD11 | 1:52:A:PHE:HA   | 3                   | 0.42     | 0.07                | 0.45       |
| (1,1734) | 1:29:A:LEU:HD12 | 1:52:A:PHE:HA   | 3                   | 0.42     | 0.07                | 0.45       |
| (1,1734) | 1:29:A:LEU:HD13 | 1:52:A:PHE:HA   | 3                   | 0.42     | 0.07                | 0.45       |
| (1,1734) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HA   | 3                   | 0.42     | 0.07                | 0.45       |
| (1,1734) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HA   | 3                   | 0.42     | 0.07                | 0.45       |
| (1,1734) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HA   | 3                   | 0.42     | 0.07                | 0.45       |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD11 | 3                   | 0.42     | 0.12                | 0.4        |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD12 | 3                   | 0.42     | 0.12                | 0.4        |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD13 | 3                   | 0.42     | 0.12                | 0.4        |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD21 | 3                   | 0.42     | 0.12                | 0.4        |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD22 | 3                   | 0.42     | 0.12                | 0.4        |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD23 | 3                   | 0.42     | 0.12                | 0.4        |
| (1,1463) | 1:11:A:PHE:HB3  | 1:15:A:GLN:H    | 3                   | 0.41     | 0.15                | 0.32       |
| (1,1343) | 1:22:A:GLU:HG2  | 1:37:A:LEU:H    | 3                   | 0.4      | 0.12                | 0.42       |
| (1,1343) | 1:22:A:GLU:HG3  | 1:37:A:LEU:H    | 3                   | 0.4      | 0.12                | 0.42       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1418) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB3  | 3                   | 0.4      | 0.09                | 0.39       |
| (1,1669) | 1:24:A:ASN:HD21 | 1:25:A:GLU:HA   | 3                   | 0.4      | 0.12                | 0.36       |
| (1,1669) | 1:24:A:ASN:HD22 | 1:25:A:GLU:HA   | 3                   | 0.4      | 0.12                | 0.36       |
| (1,108)  | 1:10:A:ALA:H    | 1:47:A:GLN:HE22 | 3                   | 0.4      | 0.12                | 0.48       |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 3                   | 0.4      | 0.14                | 0.5        |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 3                   | 0.4      | 0.14                | 0.5        |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 3                   | 0.4      | 0.14                | 0.5        |
| (1,544)  | 1:42:A:GLY:H    | 1:43:A:LEU:HA   | 3                   | 0.4      | 0.1                 | 0.41       |
| (1,1373) | 1:23:A:PHE:HE1  | 1:27:A:ARG:HD2  | 3                   | 0.4      | 0.21                | 0.35       |
| (1,1373) | 1:23:A:PHE:HE2  | 1:27:A:ARG:HD2  | 3                   | 0.4      | 0.21                | 0.35       |
| (1,1064) | 1:19:A:LEU:HD21 | 1:22:A:GLU:HB3  | 3                   | 0.39     | 0.11                | 0.38       |
| (1,1064) | 1:19:A:LEU:HD22 | 1:22:A:GLU:HB3  | 3                   | 0.39     | 0.11                | 0.38       |
| (1,1064) | 1:19:A:LEU:HD23 | 1:22:A:GLU:HB3  | 3                   | 0.39     | 0.11                | 0.38       |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB2  | 3                   | 0.39     | 0.08                | 0.34       |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB3  | 3                   | 0.39     | 0.08                | 0.34       |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB2  | 3                   | 0.39     | 0.08                | 0.34       |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB3  | 3                   | 0.39     | 0.08                | 0.34       |
| (1,1482) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB2  | 3                   | 0.39     | 0.14                | 0.38       |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD11 | 3                   | 0.39     | 0.13                | 0.31       |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD12 | 3                   | 0.39     | 0.13                | 0.31       |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD13 | 3                   | 0.39     | 0.13                | 0.31       |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD2  | 3                   | 0.39     | 0.06                | 0.35       |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD3  | 3                   | 0.39     | 0.06                | 0.35       |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE1  | 3                   | 0.39     | 0.08                | 0.35       |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE2  | 3                   | 0.39     | 0.08                | 0.35       |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD1  | 3                   | 0.38     | 0.02                | 0.38       |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD2  | 3                   | 0.38     | 0.02                | 0.38       |
| (1,789)  | 1:19:A:LEU:HA   | 1:22:A:GLU:HA   | 3                   | 0.38     | 0.04                | 0.36       |
| (1,1609) | 1:18:A:ARG:HD2  | 1:22:A:GLU:H    | 3                   | 0.38     | 0.26                | 0.25       |
| (1,1609) | 1:18:A:ARG:HD3  | 1:22:A:GLU:H    | 3                   | 0.38     | 0.26                | 0.25       |
| (1,102)  | 1:29:A:LEU:HA   | 1:33:A:ARG:HE   | 3                   | 0.38     | 0.18                | 0.33       |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG21 | 3                   | 0.38     | 0.06                | 0.34       |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG22 | 3                   | 0.38     | 0.06                | 0.34       |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG23 | 3                   | 0.38     | 0.06                | 0.34       |
| (1,661)  | 1:23:A:PHE:HB3  | 1:51:A:TRP:HE3  | 3                   | 0.38     | 0.09                | 0.38       |
| (1,717)  | 1:50:A:ILE:HG21 | 1:51:A:TRP:HD1  | 3                   | 0.38     | 0.01                | 0.37       |
| (1,717)  | 1:50:A:ILE:HG22 | 1:51:A:TRP:HD1  | 3                   | 0.38     | 0.01                | 0.37       |
| (1,717)  | 1:50:A:ILE:HG23 | 1:51:A:TRP:HD1  | 3                   | 0.38     | 0.01                | 0.37       |
| (1,490)  | 1:9:A:THR:HG21  | 1:11:A:PHE:H    | 3                   | 0.37     | 0.07                | 0.42       |
| (1,490)  | 1:9:A:THR:HG22  | 1:11:A:PHE:H    | 3                   | 0.37     | 0.07                | 0.42       |
| (1,490)  | 1:9:A:THR:HG23  | 1:11:A:PHE:H    | 3                   | 0.37     | 0.07                | 0.42       |
| (1,381)  | 1:18:A:ARG:HE   | 1:22:A:GLU:HB2  | 3                   | 0.37     | 0.03                | 0.37       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1404) | 1:34:A:ARG:HD3  | 1:45:A:GLU:HA   | 3                   | 0.37     | 0.12                | 0.36       |
| (1,1047) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HB2  | 3                   | 0.36     | 0.12                | 0.35       |
| (1,1047) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HB2  | 3                   | 0.36     | 0.12                | 0.35       |
| (1,1047) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HB2  | 3                   | 0.36     | 0.12                | 0.35       |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD21 | 3                   | 0.36     | 0.21                | 0.33       |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD22 | 3                   | 0.36     | 0.21                | 0.33       |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD23 | 3                   | 0.36     | 0.21                | 0.33       |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD11 | 3                   | 0.36     | 0.14                | 0.39       |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD12 | 3                   | 0.36     | 0.14                | 0.39       |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD13 | 3                   | 0.36     | 0.14                | 0.39       |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD21 | 3                   | 0.36     | 0.14                | 0.39       |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD22 | 3                   | 0.36     | 0.14                | 0.39       |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD23 | 3                   | 0.36     | 0.14                | 0.39       |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD2  | 3                   | 0.36     | 0.09                | 0.32       |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD3  | 3                   | 0.36     | 0.09                | 0.32       |
| (1,405)  | 1:29:A:LEU:HA   | 1:34:A:ARG:H    | 3                   | 0.36     | 0.03                | 0.37       |
| (1,291)  | 1:34:A:ARG:HB3  | 1:45:A:GLU:H    | 3                   | 0.35     | 0.18                | 0.47       |
| (1,880)  | 1:22:A:GLU:HG2  | 1:37:A:LEU:HA   | 3                   | 0.35     | 0.26                | 0.19       |
| (1,880)  | 1:22:A:GLU:HG3  | 1:37:A:LEU:HA   | 3                   | 0.35     | 0.26                | 0.19       |
| (1,1213) | 1:28:A:TYR:HA   | 1:29:A:LEU:HB3  | 3                   | 0.35     | 0.08                | 0.38       |
| (1,1731) | 1:29:A:LEU:HD11 | 1:49:A:LYS:HB2  | 3                   | 0.34     | 0.1                 | 0.28       |
| (1,1731) | 1:29:A:LEU:HD12 | 1:49:A:LYS:HB2  | 3                   | 0.34     | 0.1                 | 0.28       |
| (1,1731) | 1:29:A:LEU:HD13 | 1:49:A:LYS:HB2  | 3                   | 0.34     | 0.1                 | 0.28       |
| (1,1731) | 1:29:A:LEU:HD21 | 1:49:A:LYS:HB2  | 3                   | 0.34     | 0.1                 | 0.28       |
| (1,1731) | 1:29:A:LEU:HD22 | 1:49:A:LYS:HB2  | 3                   | 0.34     | 0.1                 | 0.28       |
| (1,1731) | 1:29:A:LEU:HD23 | 1:49:A:LYS:HB2  | 3                   | 0.34     | 0.1                 | 0.28       |
| (1,867)  | 1:38:A:SER:HB3  | 1:45:A:GLU:HA   | 3                   | 0.34     | 0.16                | 0.41       |
| (1,1540) | 1:12:A:SER:HB2  | 1:15:A:GLN:H    | 3                   | 0.34     | 0.16                | 0.23       |
| (1,1540) | 1:12:A:SER:HB3  | 1:15:A:GLN:H    | 3                   | 0.34     | 0.16                | 0.23       |
| (1,34)   | 1:16:A:LEU:HD11 | 1:51:A:TRP:HH2  | 3                   | 0.33     | 0.15                | 0.3        |
| (1,34)   | 1:16:A:LEU:HD12 | 1:51:A:TRP:HH2  | 3                   | 0.33     | 0.15                | 0.3        |
| (1,34)   | 1:16:A:LEU:HD13 | 1:51:A:TRP:HH2  | 3                   | 0.33     | 0.15                | 0.3        |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB1  | 3                   | 0.33     | 0.07                | 0.34       |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB2  | 3                   | 0.33     | 0.07                | 0.34       |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB3  | 3                   | 0.33     | 0.07                | 0.34       |
| (1,1252) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HB   | 3                   | 0.33     | 0.03                | 0.35       |
| (1,674)  | 1:23:A:PHE:HE1  | 1:56:A:ARG:HA   | 3                   | 0.33     | 0.08                | 0.37       |
| (1,674)  | 1:23:A:PHE:HE2  | 1:56:A:ARG:HA   | 3                   | 0.33     | 0.08                | 0.37       |
| (1,818)  | 1:48:A:ILE:HA   | 1:51:A:TRP:HD1  | 3                   | 0.33     | 0.12                | 0.36       |
| (1,1287) | 1:19:A:LEU:HA   | 1:22:A:GLU:HB3  | 3                   | 0.33     | 0.03                | 0.32       |
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB2  | 3                   | 0.33     | 0.02                | 0.33       |
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB3  | 3                   | 0.33     | 0.02                | 0.33       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1403) | 1:23:A:PHE:HD1  | 1:27:A:ARG:H    | 3                   | 0.32     | 0.11                | 0.35       |
| (1,1403) | 1:23:A:PHE:HD2  | 1:27:A:ARG:H    | 3                   | 0.32     | 0.11                | 0.35       |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG21 | 3                   | 0.32     | 0.16                | 0.41       |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG22 | 3                   | 0.32     | 0.16                | 0.41       |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG23 | 3                   | 0.32     | 0.16                | 0.41       |
| (1,1666) | 1:24:A:ASN:HB2  | 1:25:A:GLU:H    | 3                   | 0.32     | 0.04                | 0.34       |
| (1,1666) | 1:24:A:ASN:HB3  | 1:25:A:GLU:H    | 3                   | 0.32     | 0.04                | 0.34       |
| (1,1818) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.06                | 0.31       |
| (1,1818) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.06                | 0.31       |
| (1,1818) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.06                | 0.31       |
| (1,1818) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.06                | 0.31       |
| (1,1818) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.06                | 0.31       |
| (1,1818) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.06                | 0.31       |
| (1,293)  | 1:11:A:PHE:HE1  | 1:51:A:TRP:HE1  | 3                   | 0.31     | 0.02                | 0.32       |
| (1,293)  | 1:11:A:PHE:HE2  | 1:51:A:TRP:HE1  | 3                   | 0.31     | 0.02                | 0.32       |
| (1,697)  | 1:11:A:PHE:HZ   | 1:51:A:TRP:HE1  | 3                   | 0.31     | 0.14                | 0.24       |
| (1,1042) | 1:29:A:LEU:HD11 | 1:30:A:THR:H    | 3                   | 0.31     | 0.05                | 0.29       |
| (1,1042) | 1:29:A:LEU:HD12 | 1:30:A:THR:H    | 3                   | 0.31     | 0.05                | 0.29       |
| (1,1042) | 1:29:A:LEU:HD13 | 1:30:A:THR:H    | 3                   | 0.31     | 0.05                | 0.29       |
| (1,1186) | 1:11:A:PHE:HE1  | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.04                | 0.31       |
| (1,1186) | 1:11:A:PHE:HE2  | 1:43:A:LEU:HG   | 3                   | 0.31     | 0.04                | 0.31       |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD1  | 3                   | 0.3      | 0.2                 | 0.17       |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD2  | 3                   | 0.3      | 0.2                 | 0.17       |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD21 | 3                   | 0.3      | 0.22                | 0.16       |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD22 | 3                   | 0.3      | 0.22                | 0.16       |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD23 | 3                   | 0.3      | 0.22                | 0.16       |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD21 | 3                   | 0.3      | 0.22                | 0.16       |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD22 | 3                   | 0.3      | 0.22                | 0.16       |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD23 | 3                   | 0.3      | 0.22                | 0.16       |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE1  | 3                   | 0.3      | 0.12                | 0.3        |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE2  | 3                   | 0.3      | 0.12                | 0.3        |
| (1,1406) | 1:51:A:TRP:HB2  | 1:52:A:PHE:HA   | 3                   | 0.3      | 0.03                | 0.31       |
| (1,891)  | 1:18:A:ARG:HB2  | 1:37:A:LEU:HA   | 3                   | 0.29     | 0.14                | 0.34       |
| (1,891)  | 1:18:A:ARG:HB3  | 1:37:A:LEU:HA   | 3                   | 0.29     | 0.14                | 0.34       |
| (1,1174) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HG   | 3                   | 0.29     | 0.1                 | 0.24       |
| (1,1174) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HG   | 3                   | 0.29     | 0.1                 | 0.24       |
| (1,1174) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HG   | 3                   | 0.29     | 0.1                 | 0.24       |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD1  | 3                   | 0.28     | 0.03                | 0.3        |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD2  | 3                   | 0.28     | 0.03                | 0.3        |
| (1,347)  | 1:31:A:GLU:H    | 1:32:A:ARG:HA   | 3                   | 0.28     | 0.13                | 0.32       |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB1  | 3                   | 0.27     | 0.04                | 0.28       |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB2  | 3                   | 0.27     | 0.04                | 0.28       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB3  | 3                   | 0.27     | 0.04                | 0.28       |
| (1,693)  | 1:24:A:ASN:H    | 1:52:A:PHE:HZ   | 3                   | 0.27     | 0.09                | 0.31       |
| (1,189)  | 1:44:A:ASN:HA   | 1:44:A:ASN:HD21 | 3                   | 0.26     | 0.07                | 0.22       |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE1  | 3                   | 0.26     | 0.07                | 0.21       |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE2  | 3                   | 0.26     | 0.07                | 0.21       |
| (1,654)  | 1:48:A:ILE:HG21 | 1:51:A:TRP:HE3  | 3                   | 0.26     | 0.04                | 0.25       |
| (1,654)  | 1:48:A:ILE:HG22 | 1:51:A:TRP:HE3  | 3                   | 0.26     | 0.04                | 0.25       |
| (1,654)  | 1:48:A:ILE:HG23 | 1:51:A:TRP:HE3  | 3                   | 0.26     | 0.04                | 0.25       |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG12 | 3                   | 0.26     | 0.12                | 0.22       |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG13 | 3                   | 0.26     | 0.12                | 0.22       |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 3                   | 0.26     | 0.12                | 0.22       |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 3                   | 0.26     | 0.12                | 0.22       |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD1  | 3                   | 0.25     | 0.06                | 0.27       |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD2  | 3                   | 0.25     | 0.06                | 0.27       |
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD1  | 3                   | 0.25     | 0.06                | 0.27       |
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD2  | 3                   | 0.25     | 0.06                | 0.27       |
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD1  | 3                   | 0.25     | 0.06                | 0.27       |
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD2  | 3                   | 0.25     | 0.06                | 0.27       |
| (1,705)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:HB2  | 3                   | 0.25     | 0.09                | 0.19       |
| (1,372)  | 1:44:A:ASN:H    | 1:46:A:ALA:H    | 3                   | 0.24     | 0.05                | 0.23       |
| (1,1038) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HA   | 3                   | 0.24     | 0.0                 | 0.24       |
| (1,1038) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HA   | 3                   | 0.24     | 0.0                 | 0.24       |
| (1,1038) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HA   | 3                   | 0.24     | 0.0                 | 0.24       |
| (1,707)  | 1:29:A:LEU:HD21 | 1:51:A:TRP:HE3  | 3                   | 0.24     | 0.1                 | 0.21       |
| (1,707)  | 1:29:A:LEU:HD22 | 1:51:A:TRP:HE3  | 3                   | 0.24     | 0.1                 | 0.21       |
| (1,707)  | 1:29:A:LEU:HD23 | 1:51:A:TRP:HE3  | 3                   | 0.24     | 0.1                 | 0.21       |
| (1,1431) | 1:45:A:GLU:HB3  | 1:47:A:GLN:H    | 3                   | 0.24     | 0.02                | 0.23       |
| (1,1363) | 1:18:A:ARG:H    | 1:21:A:ARG:H    | 3                   | 0.23     | 0.08                | 0.19       |
| (1,1341) | 1:56:A:ARG:H    | 1:56:A:ARG:HD2  | 3                   | 0.23     | 0.05                | 0.2        |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD1  | 3                   | 0.23     | 0.08                | 0.27       |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD2  | 3                   | 0.23     | 0.08                | 0.27       |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD11 | 3                   | 0.22     | 0.09                | 0.22       |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD12 | 3                   | 0.22     | 0.09                | 0.22       |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD13 | 3                   | 0.22     | 0.09                | 0.22       |
| (1,1477) | 1:51:A:TRP:HB3  | 1:52:A:PHE:HA   | 3                   | 0.22     | 0.05                | 0.2        |
| (1,1480) | 1:19:A:LEU:HG   | 1:51:A:TRP:HE3  | 3                   | 0.22     | 0.06                | 0.23       |
| (1,779)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HB3  | 3                   | 0.22     | 0.08                | 0.16       |
| (1,1687) | 1:26:A:ASN:HD21 | 1:27:A:ARG:H    | 3                   | 0.22     | 0.07                | 0.22       |
| (1,1687) | 1:26:A:ASN:HD22 | 1:27:A:ARG:H    | 3                   | 0.22     | 0.07                | 0.22       |
| (1,426)  | 1:19:A:LEU:HD21 | 1:20:A:LYS:H    | 3                   | 0.22     | 0.05                | 0.2        |
| (1,426)  | 1:19:A:LEU:HD22 | 1:20:A:LYS:H    | 3                   | 0.22     | 0.05                | 0.2        |
| (1,426)  | 1:19:A:LEU:HD23 | 1:20:A:LYS:H    | 3                   | 0.22     | 0.05                | 0.2        |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,609)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HB2  | 3                   | 0.22     | 0.12                | 0.15       |
| (1,609)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HB2  | 3                   | 0.22     | 0.12                | 0.15       |
| (1,720)  | 1:23:A:PHE:HD1  | 1:27:A:ARG:HB2  | 3                   | 0.22     | 0.04                | 0.22       |
| (1,720)  | 1:23:A:PHE:HD2  | 1:27:A:ARG:HB2  | 3                   | 0.22     | 0.04                | 0.22       |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD21 | 3                   | 0.22     | 0.05                | 0.23       |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD22 | 3                   | 0.22     | 0.05                | 0.23       |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD23 | 3                   | 0.22     | 0.05                | 0.23       |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD21 | 3                   | 0.22     | 0.05                | 0.23       |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD22 | 3                   | 0.22     | 0.05                | 0.23       |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD23 | 3                   | 0.22     | 0.05                | 0.23       |
| (1,575)  | 1:29:A:LEU:HG   | 1:30:A:THR:H    | 3                   | 0.22     | 0.08                | 0.22       |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB1  | 3                   | 0.2      | 0.01                | 0.2        |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB2  | 3                   | 0.2      | 0.01                | 0.2        |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB3  | 3                   | 0.2      | 0.01                | 0.2        |
| (1,1043) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HE   | 3                   | 0.2      | 0.07                | 0.16       |
| (1,1043) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HE   | 3                   | 0.2      | 0.07                | 0.16       |
| (1,1043) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HE   | 3                   | 0.2      | 0.07                | 0.16       |
| (1,410)  | 1:19:A:LEU:HD11 | 1:20:A:LYS:H    | 3                   | 0.2      | 0.02                | 0.19       |
| (1,410)  | 1:19:A:LEU:HD12 | 1:20:A:LYS:H    | 3                   | 0.2      | 0.02                | 0.19       |
| (1,410)  | 1:19:A:LEU:HD13 | 1:20:A:LYS:H    | 3                   | 0.2      | 0.02                | 0.19       |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD21 | 3                   | 0.19     | 0.1                 | 0.12       |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD22 | 3                   | 0.19     | 0.1                 | 0.12       |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD23 | 3                   | 0.19     | 0.1                 | 0.12       |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD21 | 3                   | 0.19     | 0.1                 | 0.12       |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD22 | 3                   | 0.19     | 0.1                 | 0.12       |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD23 | 3                   | 0.19     | 0.1                 | 0.12       |
| (1,1142) | 1:9:A:THR:HG21  | 1:10:A:ALA:HA   | 3                   | 0.19     | 0.04                | 0.2        |
| (1,1142) | 1:9:A:THR:HG22  | 1:10:A:ALA:HA   | 3                   | 0.19     | 0.04                | 0.2        |
| (1,1142) | 1:9:A:THR:HG23  | 1:10:A:ALA:HA   | 3                   | 0.19     | 0.04                | 0.2        |
| (1,517)  | 1:15:A:GLN:H    | 1:16:A:LEU:HA   | 3                   | 0.17     | 0.05                | 0.18       |
| (1,633)  | 1:33:A:ARG:H    | 1:35:A:GLN:H    | 3                   | 0.17     | 0.04                | 0.18       |
| (1,1357) | 1:16:A:LEU:HA   | 1:20:A:LYS:HB2  | 3                   | 0.17     | 0.05                | 0.14       |
| (1,694)  | 1:23:A:PHE:HE1  | 1:28:A:TYR:H    | 3                   | 0.17     | 0.02                | 0.16       |
| (1,694)  | 1:23:A:PHE:HE2  | 1:28:A:TYR:H    | 3                   | 0.17     | 0.02                | 0.16       |
| (1,640)  | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD11 | 3                   | 0.16     | 0.05                | 0.13       |
| (1,640)  | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD12 | 3                   | 0.16     | 0.05                | 0.13       |
| (1,640)  | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD13 | 3                   | 0.16     | 0.05                | 0.13       |
| (1,1606) | 1:18:A:ARG:HD2  | 1:19:A:LEU:H    | 3                   | 0.16     | 0.02                | 0.17       |
| (1,1606) | 1:18:A:ARG:HD3  | 1:19:A:LEU:H    | 3                   | 0.16     | 0.02                | 0.17       |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD11 | 3                   | 0.14     | 0.04                | 0.12       |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD12 | 3                   | 0.14     | 0.04                | 0.12       |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD13 | 3                   | 0.14     | 0.04                | 0.12       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,365)  | 1:50:A:ILE:HB   | 1:52:A:PHE:H    | 3                   | 0.13     | 0.03                | 0.12       |
| (1,1391) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD22 | 2                   | 2.68     | 1.0                 | 2.68       |
| (1,1855) | 1:51:A:TRP:HB2  | 1:54:A:ASN:HD21 | 2                   | 1.88     | 1.51                | 1.88       |
| (1,1855) | 1:51:A:TRP:HB2  | 1:54:A:ASN:HD22 | 2                   | 1.88     | 1.51                | 1.88       |
| (1,1854) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD21 | 2                   | 1.78     | 1.33                | 1.78       |
| (1,1854) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD22 | 2                   | 1.78     | 1.33                | 1.78       |
| (1,1185) | 1:50:A:ILE:HG21 | 1:53:A:GLN:HE21 | 2                   | 1.19     | 0.1                 | 1.19       |
| (1,1185) | 1:50:A:ILE:HG22 | 1:53:A:GLN:HE21 | 2                   | 1.19     | 0.1                 | 1.19       |
| (1,1185) | 1:50:A:ILE:HG23 | 1:53:A:GLN:HE21 | 2                   | 1.19     | 0.1                 | 1.19       |
| (1,737)  | 1:9:A:THR:HA    | 1:51:A:TRP:HD1  | 2                   | 0.94     | 0.0                 | 0.94       |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD11 | 2                   | 0.85     | 0.12                | 0.85       |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD12 | 2                   | 0.85     | 0.12                | 0.85       |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD13 | 2                   | 0.85     | 0.12                | 0.85       |
| (1,869)  | 1:58:A:LYS:HA   | 1:58:A:LYS:HE3  | 2                   | 0.7      | 0.01                | 0.7        |
| (1,151)  | 1:35:A:GLN:HE22 | 1:36:A:GLN:HB3  | 2                   | 0.64     | 0.03                | 0.64       |
| (1,1056) | 1:43:A:LEU:HD11 | 1:47:A:GLN:HE22 | 2                   | 0.63     | 0.27                | 0.63       |
| (1,1056) | 1:43:A:LEU:HD12 | 1:47:A:GLN:HE22 | 2                   | 0.63     | 0.27                | 0.63       |
| (1,1056) | 1:43:A:LEU:HD13 | 1:47:A:GLN:HE22 | 2                   | 0.63     | 0.27                | 0.63       |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD11 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD12 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD13 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD21 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD22 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD23 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD11 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD12 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD13 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD21 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD22 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD23 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD11 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD12 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD13 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD21 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD22 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD23 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD11 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD12 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD13 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD21 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD22 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD23 | 2                   | 0.54     | 0.15                | 0.54       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD11 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD12 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD13 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD21 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD22 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD23 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD11 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD12 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD13 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD21 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD22 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD23 | 2                   | 0.54     | 0.15                | 0.54       |
| (1,1245) | 1:37:A:LEU:HB2  | 1:48:A:ILE:HG12 | 2                   | 0.52     | 0.04                | 0.52       |
| (1,1245) | 1:37:A:LEU:HB2  | 1:48:A:ILE:HG13 | 2                   | 0.52     | 0.04                | 0.52       |
| (1,1828) | 1:43:A:LEU:HD11 | 1:48:A:ILE:H    | 2                   | 0.5      | 0.01                | 0.5        |
| (1,1828) | 1:43:A:LEU:HD12 | 1:48:A:ILE:H    | 2                   | 0.5      | 0.01                | 0.5        |
| (1,1828) | 1:43:A:LEU:HD13 | 1:48:A:ILE:H    | 2                   | 0.5      | 0.01                | 0.5        |
| (1,1828) | 1:43:A:LEU:HD21 | 1:48:A:ILE:H    | 2                   | 0.5      | 0.01                | 0.5        |
| (1,1828) | 1:43:A:LEU:HD22 | 1:48:A:ILE:H    | 2                   | 0.5      | 0.01                | 0.5        |
| (1,1828) | 1:43:A:LEU:HD23 | 1:48:A:ILE:H    | 2                   | 0.5      | 0.01                | 0.5        |
| (1,315)  | 1:44:A:ASN:H    | 1:47:A:GLN:HB3  | 2                   | 0.5      | 0.1                 | 0.5        |
| (1,762)  | 1:20:A:LYS:HA   | 1:51:A:TRP:HZ3  | 2                   | 0.45     | 0.02                | 0.45       |
| (1,905)  | 1:9:A:THR:HG21  | 1:51:A:TRP:HB2  | 2                   | 0.45     | 0.17                | 0.45       |
| (1,905)  | 1:9:A:THR:HG22  | 1:51:A:TRP:HB2  | 2                   | 0.45     | 0.17                | 0.45       |
| (1,905)  | 1:9:A:THR:HG23  | 1:51:A:TRP:HB2  | 2                   | 0.45     | 0.17                | 0.45       |
| (1,564)  | 1:47:A:GLN:HA   | 1:47:A:GLN:HE21 | 2                   | 0.43     | 0.1                 | 0.43       |
| (1,530)  | 1:28:A:TYR:HD1  | 1:56:A:ARG:HE   | 2                   | 0.42     | 0.04                | 0.42       |
| (1,530)  | 1:28:A:TYR:HD2  | 1:56:A:ARG:HE   | 2                   | 0.42     | 0.04                | 0.42       |
| (1,1748) | 1:32:A:ARG:HA   | 1:32:A:ARG:HD2  | 2                   | 0.42     | 0.14                | 0.42       |
| (1,1748) | 1:32:A:ARG:HA   | 1:32:A:ARG:HD3  | 2                   | 0.42     | 0.14                | 0.42       |
| (1,1389) | 1:35:A:GLN:HE21 | 1:36:A:GLN:HG2  | 2                   | 0.42     | 0.28                | 0.42       |
| (1,1389) | 1:35:A:GLN:HE21 | 1:36:A:GLN:HG3  | 2                   | 0.42     | 0.28                | 0.42       |
| (1,1365) | 1:38:A:SER:H    | 1:42:A:GLY:H    | 2                   | 0.41     | 0.18                | 0.41       |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD21 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD22 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD23 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD21 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD22 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD23 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD21 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD22 | 2                   | 0.4      | 0.16                | 0.4        |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD23 | 2                   | 0.4      | 0.16                | 0.4        |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,415)  | 1:5:A:LYS:HA    | 1:6:A:ARG:H     | 2                   | 0.4      | 0.24                | 0.4        |
| (1,898)  | 1:21:A:ARG:HD2  | 1:22:A:GLU:H    | 2                   | 0.4      | 0.12                | 0.4        |
| (1,898)  | 1:21:A:ARG:HD3  | 1:22:A:GLU:H    | 2                   | 0.4      | 0.12                | 0.4        |
| (1,1345) | 1:20:A:LYS:HE2  | 1:51:A:TRP:HE1  | 2                   | 0.4      | 0.26                | 0.4        |
| (1,1345) | 1:20:A:LYS:HE3  | 1:51:A:TRP:HE1  | 2                   | 0.4      | 0.26                | 0.4        |
| (1,1585) | 1:16:A:LEU:HD11 | 1:18:A:ARG:H    | 2                   | 0.39     | 0.16                | 0.39       |
| (1,1585) | 1:16:A:LEU:HD12 | 1:18:A:ARG:H    | 2                   | 0.39     | 0.16                | 0.39       |
| (1,1585) | 1:16:A:LEU:HD13 | 1:18:A:ARG:H    | 2                   | 0.39     | 0.16                | 0.39       |
| (1,1585) | 1:16:A:LEU:HD21 | 1:18:A:ARG:H    | 2                   | 0.39     | 0.16                | 0.39       |
| (1,1585) | 1:16:A:LEU:HD22 | 1:18:A:ARG:H    | 2                   | 0.39     | 0.16                | 0.39       |
| (1,1585) | 1:16:A:LEU:HD23 | 1:18:A:ARG:H    | 2                   | 0.39     | 0.16                | 0.39       |
| (1,1790) | 1:37:A:LEU:HD11 | 1:51:A:TRP:HB3  | 2                   | 0.39     | 0.13                | 0.39       |
| (1,1790) | 1:37:A:LEU:HD12 | 1:51:A:TRP:HB3  | 2                   | 0.39     | 0.13                | 0.39       |
| (1,1790) | 1:37:A:LEU:HD13 | 1:51:A:TRP:HB3  | 2                   | 0.39     | 0.13                | 0.39       |
| (1,1790) | 1:37:A:LEU:HD21 | 1:51:A:TRP:HB3  | 2                   | 0.39     | 0.13                | 0.39       |
| (1,1790) | 1:37:A:LEU:HD22 | 1:51:A:TRP:HB3  | 2                   | 0.39     | 0.13                | 0.39       |
| (1,1790) | 1:37:A:LEU:HD23 | 1:51:A:TRP:HB3  | 2                   | 0.39     | 0.13                | 0.39       |
| (1,753)  | 1:20:A:LYS:H    | 1:51:A:TRP:HZ2  | 2                   | 0.38     | 0.1                 | 0.38       |
| (1,422)  | 1:61:A:LYS:H    | 1:62:A:SER:HB2  | 2                   | 0.38     | 0.04                | 0.38       |
| (1,422)  | 1:61:A:LYS:H    | 1:62:A:SER:HB3  | 2                   | 0.38     | 0.04                | 0.38       |
| (1,1847) | 1:50:A:ILE:H    | 1:53:A:GLN:HE21 | 2                   | 0.38     | 0.26                | 0.38       |
| (1,1847) | 1:50:A:ILE:H    | 1:53:A:GLN:HE22 | 2                   | 0.38     | 0.26                | 0.38       |
| (1,1699) | 1:27:A:ARG:HG2  | 1:56:A:ARG:HD2  | 2                   | 0.38     | 0.01                | 0.38       |
| (1,1699) | 1:27:A:ARG:HG2  | 1:56:A:ARG:HD3  | 2                   | 0.38     | 0.01                | 0.38       |
| (1,1699) | 1:27:A:ARG:HG3  | 1:56:A:ARG:HD2  | 2                   | 0.38     | 0.01                | 0.38       |
| (1,1699) | 1:27:A:ARG:HG3  | 1:56:A:ARG:HD3  | 2                   | 0.38     | 0.01                | 0.38       |
| (1,1301) | 1:25:A:GLU:HG2  | 1:26:A:ASN:H    | 2                   | 0.37     | 0.11                | 0.37       |
| (1,394)  | 1:44:A:ASN:HD21 | 1:46:A:ALA:H    | 2                   | 0.35     | 0.09                | 0.35       |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD11 | 2                   | 0.34     | 0.06                | 0.34       |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD12 | 2                   | 0.34     | 0.06                | 0.34       |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD13 | 2                   | 0.34     | 0.06                | 0.34       |
| (1,463)  | 1:51:A:TRP:HE3  | 1:53:A:GLN:H    | 2                   | 0.34     | 0.02                | 0.34       |
| (1,760)  | 1:24:A:ASN:H    | 1:51:A:TRP:HH2  | 2                   | 0.34     | 0.05                | 0.34       |
| (1,1157) | 1:50:A:ILE:HG21 | 1:53:A:GLN:HE22 | 2                   | 0.34     | 0.02                | 0.34       |
| (1,1157) | 1:50:A:ILE:HG22 | 1:53:A:GLN:HE22 | 2                   | 0.34     | 0.02                | 0.34       |
| (1,1157) | 1:50:A:ILE:HG23 | 1:53:A:GLN:HE22 | 2                   | 0.34     | 0.02                | 0.34       |
| (1,1354) | 1:11:A:PHE:HB2  | 1:12:A:SER:HA   | 2                   | 0.34     | 0.02                | 0.34       |
| (1,820)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:HA   | 2                   | 0.33     | 0.13                | 0.33       |
| (1,262)  | 1:15:A:GLN:H    | 1:15:A:GLN:HE21 | 2                   | 0.32     | 0.09                | 0.32       |
| (1,1135) | 1:37:A:LEU:HA   | 1:48:A:ILE:HG12 | 2                   | 0.32     | 0.2                 | 0.32       |
| (1,1135) | 1:37:A:LEU:HA   | 1:48:A:ILE:HG13 | 2                   | 0.32     | 0.2                 | 0.32       |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD11 | 2                   | 0.32     | 0.16                | 0.32       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD12 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD13 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD21 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD22 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD23 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD11 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD12 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD13 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD21 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD22 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD23 | 2                   | 0.32     | 0.16                | 0.32       |
| (1,294)  | 1:12:A:SER:H    | 1:16:A:LEU:H    | 2                   | 0.32     | 0.14                | 0.32       |
| (1,35)   | 1:20:A:LYS:HG2  | 1:51:A:TRP:HH2  | 2                   | 0.32     | 0.1                 | 0.32       |
| (1,35)   | 1:20:A:LYS:HG3  | 1:51:A:TRP:HH2  | 2                   | 0.32     | 0.1                 | 0.32       |
| (1,488)  | 1:29:A:LEU:HB3  | 1:34:A:ARG:HE   | 2                   | 0.32     | 0.1                 | 0.32       |
| (1,689)  | 1:23:A:PHE:HE1  | 1:27:A:ARG:H    | 2                   | 0.32     | 0.07                | 0.32       |
| (1,689)  | 1:23:A:PHE:HE2  | 1:27:A:ARG:H    | 2                   | 0.32     | 0.07                | 0.32       |
| (1,319)  | 1:44:A:ASN:HD22 | 1:45:A:GLU:H    | 2                   | 0.32     | 0.01                | 0.32       |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG21 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG22 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG23 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG21 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG22 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG23 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG21 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG22 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG23 | 2                   | 0.3      | 0.0                 | 0.3        |
| (1,1662) | 1:24:A:ASN:H    | 1:24:A:ASN:HD21 | 2                   | 0.3      | 0.06                | 0.3        |
| (1,1662) | 1:24:A:ASN:H    | 1:24:A:ASN:HD22 | 2                   | 0.3      | 0.06                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD11 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD12 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD13 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD21 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD22 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD23 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD11 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD12 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD13 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD21 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD22 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD23 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD11 | 2                   | 0.3      | 0.04                | 0.3        |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD12 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD13 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD21 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD22 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD23 | 2                   | 0.3      | 0.04                | 0.3        |
| (1,650)  | 1:23:A:PHE:HE1  | 1:55:A:GLU:HB2  | 2                   | 0.29     | 0.06                | 0.29       |
| (1,650)  | 1:23:A:PHE:HE2  | 1:55:A:GLU:HB2  | 2                   | 0.29     | 0.06                | 0.29       |
| (1,443)  | 1:38:A:SER:H    | 1:40:A:GLU:H    | 2                   | 0.28     | 0.15                | 0.28       |
| (1,1256) | 1:34:A:ARG:HA   | 1:48:A:ILE:HB   | 2                   | 0.28     | 0.05                | 0.28       |
| (1,1377) | 1:49:A:LYS:HB2  | 1:50:A:ILE:HA   | 2                   | 0.28     | 0.06                | 0.28       |
| (1,1394) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HB3  | 2                   | 0.28     | 0.03                | 0.28       |
| (1,1394) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HB3  | 2                   | 0.28     | 0.03                | 0.28       |
| (1,1730) | 1:29:A:LEU:HD11 | 1:49:A:LYS:HA   | 2                   | 0.28     | 0.18                | 0.28       |
| (1,1730) | 1:29:A:LEU:HD12 | 1:49:A:LYS:HA   | 2                   | 0.28     | 0.18                | 0.28       |
| (1,1730) | 1:29:A:LEU:HD13 | 1:49:A:LYS:HA   | 2                   | 0.28     | 0.18                | 0.28       |
| (1,1730) | 1:29:A:LEU:HD21 | 1:49:A:LYS:HA   | 2                   | 0.28     | 0.18                | 0.28       |
| (1,1730) | 1:29:A:LEU:HD22 | 1:49:A:LYS:HA   | 2                   | 0.28     | 0.18                | 0.28       |
| (1,1730) | 1:29:A:LEU:HD23 | 1:49:A:LYS:HA   | 2                   | 0.28     | 0.18                | 0.28       |
| (1,20)   | 1:15:A:GLN:HA   | 1:15:A:GLN:HE21 | 2                   | 0.27     | 0.05                | 0.27       |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD11 | 2                   | 0.27     | 0.1                 | 0.27       |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD12 | 2                   | 0.27     | 0.1                 | 0.27       |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD13 | 2                   | 0.27     | 0.1                 | 0.27       |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD21 | 2                   | 0.27     | 0.1                 | 0.27       |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD22 | 2                   | 0.27     | 0.1                 | 0.27       |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD23 | 2                   | 0.27     | 0.1                 | 0.27       |
| (1,184)  | 1:8:A:ARG:HA    | 1:8:A:ARG:HD2   | 2                   | 0.26     | 0.14                | 0.26       |
| (1,184)  | 1:8:A:ARG:HA    | 1:8:A:ARG:HD3   | 2                   | 0.26     | 0.14                | 0.26       |
| (1,1054) | 1:19:A:LEU:HD21 | 1:23:A:PHE:HD1  | 2                   | 0.26     | 0.01                | 0.26       |
| (1,1054) | 1:19:A:LEU:HD21 | 1:23:A:PHE:HD2  | 2                   | 0.26     | 0.01                | 0.26       |
| (1,1054) | 1:19:A:LEU:HD22 | 1:23:A:PHE:HD1  | 2                   | 0.26     | 0.01                | 0.26       |
| (1,1054) | 1:19:A:LEU:HD22 | 1:23:A:PHE:HD2  | 2                   | 0.26     | 0.01                | 0.26       |
| (1,1054) | 1:19:A:LEU:HD23 | 1:23:A:PHE:HD1  | 2                   | 0.26     | 0.01                | 0.26       |
| (1,1054) | 1:19:A:LEU:HD23 | 1:23:A:PHE:HD2  | 2                   | 0.26     | 0.01                | 0.26       |
| (1,1065) | 1:19:A:LEU:HD21 | 1:48:A:ILE:HB   | 2                   | 0.26     | 0.16                | 0.26       |
| (1,1065) | 1:19:A:LEU:HD22 | 1:48:A:ILE:HB   | 2                   | 0.26     | 0.16                | 0.26       |
| (1,1065) | 1:19:A:LEU:HD23 | 1:48:A:ILE:HB   | 2                   | 0.26     | 0.16                | 0.26       |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD21 | 2                   | 0.26     | 0.16                | 0.26       |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD22 | 2                   | 0.26     | 0.16                | 0.26       |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD23 | 2                   | 0.26     | 0.16                | 0.26       |
| (1,666)  | 1:23:A:PHE:HD1  | 1:52:A:PHE:HB2  | 2                   | 0.26     | 0.0                 | 0.26       |
| (1,666)  | 1:23:A:PHE:HD2  | 1:52:A:PHE:HB2  | 2                   | 0.26     | 0.0                 | 0.26       |
| (1,755)  | 1:51:A:TRP:HD1  | 1:52:A:PHE:H    | 2                   | 0.26     | 0.05                | 0.26       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1476) | 1:51:A:TRP:HB3  | 1:52:A:PHE:HB2  | 2                   | 0.26     | 0.02                | 0.26       |
| (1,247)  | 1:34:A:ARG:HG2  | 1:49:A:LYS:H    | 2                   | 0.25     | 0.01                | 0.25       |
| (1,247)  | 1:34:A:ARG:HG3  | 1:49:A:LYS:H    | 2                   | 0.25     | 0.01                | 0.25       |
| (1,901)  | 1:6:A:ARG:HD2   | 1:7:A:PRO:HD3   | 2                   | 0.25     | 0.14                | 0.25       |
| (1,901)  | 1:6:A:ARG:HD3   | 1:7:A:PRO:HD3   | 2                   | 0.25     | 0.14                | 0.25       |
| (1,1053) | 1:23:A:PHE:HD1  | 1:55:A:GLU:HB2  | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1053) | 1:23:A:PHE:HD2  | 1:55:A:GLU:HB2  | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD11 | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD12 | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD13 | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD21 | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD22 | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD23 | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1894) | 1:58:A:LYS:HA   | 1:58:A:LYS:HE2  | 2                   | 0.25     | 0.01                | 0.25       |
| (1,1894) | 1:58:A:LYS:HA   | 1:58:A:LYS:HE3  | 2                   | 0.25     | 0.01                | 0.25       |
| (1,16)   | 1:12:A:SER:H    | 1:15:A:GLN:H    | 2                   | 0.24     | 0.03                | 0.24       |
| (1,1269) | 1:33:A:ARG:HE   | 1:36:A:GLN:HB3  | 2                   | 0.24     | 0.04                | 0.24       |
| (1,357)  | 1:44:A:ASN:H    | 1:47:A:GLN:HG2  | 2                   | 0.24     | 0.1                 | 0.24       |
| (1,303)  | 1:12:A:SER:H    | 1:15:A:GLN:HB3  | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD11 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD12 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD13 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD21 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD22 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD23 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,546)  | 1:24:A:ASN:H    | 1:24:A:ASN:HD22 | 2                   | 0.24     | 0.04                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG21 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG22 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG23 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG21 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG22 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG23 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG21 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG22 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG23 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG21 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG22 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG23 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG21 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG22 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG23 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG21 | 2                   | 0.24     | 0.05                | 0.24       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG22 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG23 | 2                   | 0.24     | 0.05                | 0.24       |
| (1,300)  | 1:12:A:SER:H    | 1:15:A:GLN:HA   | 2                   | 0.24     | 0.06                | 0.24       |
| (1,441)  | 1:16:A:LEU:H    | 1:18:A:ARG:H    | 2                   | 0.24     | 0.12                | 0.24       |
| (1,626)  | 1:11:A:PHE:HE1  | 1:47:A:GLN:HA   | 2                   | 0.24     | 0.02                | 0.24       |
| (1,626)  | 1:11:A:PHE:HE2  | 1:47:A:GLN:HA   | 2                   | 0.24     | 0.02                | 0.24       |
| (1,733)  | 1:23:A:PHE:HD1  | 1:56:A:ARG:HA   | 2                   | 0.24     | 0.0                 | 0.24       |
| (1,733)  | 1:23:A:PHE:HD2  | 1:56:A:ARG:HA   | 2                   | 0.24     | 0.0                 | 0.24       |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG21  | 2                   | 0.24     | 0.12                | 0.24       |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG22  | 2                   | 0.24     | 0.12                | 0.24       |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG23  | 2                   | 0.24     | 0.12                | 0.24       |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG21  | 2                   | 0.24     | 0.12                | 0.24       |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG22  | 2                   | 0.24     | 0.12                | 0.24       |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG23  | 2                   | 0.24     | 0.12                | 0.24       |
| (1,563)  | 1:22:A:GLU:HA   | 1:52:A:PHE:HE1  | 2                   | 0.23     | 0.0                 | 0.23       |
| (1,563)  | 1:22:A:GLU:HA   | 1:52:A:PHE:HE2  | 2                   | 0.23     | 0.0                 | 0.23       |
| (1,602)  | 1:16:A:LEU:HB3  | 1:51:A:TRP:HZ2  | 2                   | 0.23     | 0.05                | 0.23       |
| (1,768)  | 1:29:A:LEU:HG   | 1:34:A:ARG:HA   | 2                   | 0.23     | 0.09                | 0.23       |
| (1,899)  | 1:29:A:LEU:H    | 1:52:A:PHE:HB2  | 2                   | 0.23     | 0.03                | 0.23       |
| (1,317)  | 1:45:A:GLU:H    | 1:46:A:ALA:HA   | 2                   | 0.23     | 0.06                | 0.23       |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD11 | 2                   | 0.23     | 0.02                | 0.23       |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD12 | 2                   | 0.23     | 0.02                | 0.23       |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD13 | 2                   | 0.23     | 0.02                | 0.23       |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD11 | 2                   | 0.23     | 0.01                | 0.23       |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD12 | 2                   | 0.23     | 0.01                | 0.23       |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD13 | 2                   | 0.23     | 0.01                | 0.23       |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD21 | 2                   | 0.23     | 0.01                | 0.23       |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD22 | 2                   | 0.23     | 0.01                | 0.23       |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD23 | 2                   | 0.23     | 0.01                | 0.23       |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD11 | 2                   | 0.23     | 0.06                | 0.23       |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD12 | 2                   | 0.23     | 0.06                | 0.23       |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD13 | 2                   | 0.23     | 0.06                | 0.23       |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD21 | 2                   | 0.23     | 0.06                | 0.23       |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD22 | 2                   | 0.23     | 0.06                | 0.23       |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD23 | 2                   | 0.23     | 0.06                | 0.23       |
| (1,204)  | 1:41:A:LEU:HB2  | 1:43:A:LEU:H    | 2                   | 0.22     | 0.11                | 0.22       |
| (1,1319) | 1:20:A:LYS:HA   | 1:23:A:PHE:HB2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,962)  | 1:45:A:GLU:HA   | 1:45:A:GLU:HG2  | 2                   | 0.22     | 0.12                | 0.22       |
| (1,821)  | 1:23:A:PHE:HB3  | 1:51:A:TRP:HZ2  | 2                   | 0.22     | 0.08                | 0.22       |
| (1,1049) | 1:19:A:LEU:HD21 | 1:37:A:LEU:HA   | 2                   | 0.22     | 0.01                | 0.22       |
| (1,1049) | 1:19:A:LEU:HD22 | 1:37:A:LEU:HA   | 2                   | 0.22     | 0.01                | 0.22       |
| (1,1049) | 1:19:A:LEU:HD23 | 1:37:A:LEU:HA   | 2                   | 0.22     | 0.01                | 0.22       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD11 | 2                   | 0.22     | 0.02                | 0.22       |
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD12 | 2                   | 0.22     | 0.02                | 0.22       |
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD13 | 2                   | 0.22     | 0.02                | 0.22       |
| (1,1421) | 1:52:A:PHE:HA   | 1:55:A:GLU:HA   | 2                   | 0.22     | 0.06                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD11 | 1:40:A:GLU:HG2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD11 | 1:40:A:GLU:HG3  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD12 | 1:40:A:GLU:HG2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD12 | 1:40:A:GLU:HG3  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD13 | 1:40:A:GLU:HG2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD13 | 1:40:A:GLU:HG3  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD21 | 1:40:A:GLU:HG2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD21 | 1:40:A:GLU:HG3  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD22 | 1:40:A:GLU:HG2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD22 | 1:40:A:GLU:HG3  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD23 | 1:40:A:GLU:HG2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1788) | 1:37:A:LEU:HD23 | 1:40:A:GLU:HG3  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD11 | 2                   | 0.22     | 0.08                | 0.22       |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD12 | 2                   | 0.22     | 0.08                | 0.22       |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD13 | 2                   | 0.22     | 0.08                | 0.22       |
| (1,713)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD11 | 2                   | 0.22     | 0.08                | 0.22       |
| (1,713)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD12 | 2                   | 0.22     | 0.08                | 0.22       |
| (1,713)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD13 | 2                   | 0.22     | 0.08                | 0.22       |
| (1,942)  | 1:32:A:ARG:HA   | 1:32:A:ARG:HG3  | 2                   | 0.22     | 0.01                | 0.22       |
| (1,1295) | 1:44:A:ASN:HA   | 1:45:A:GLU:HG2  | 2                   | 0.22     | 0.04                | 0.22       |
| (1,1308) | 1:19:A:LEU:HB2  | 1:22:A:GLU:HG2  | 2                   | 0.22     | 0.07                | 0.22       |
| (1,1308) | 1:19:A:LEU:HB2  | 1:22:A:GLU:HG3  | 2                   | 0.22     | 0.07                | 0.22       |
| (1,1308) | 1:19:A:LEU:HB3  | 1:22:A:GLU:HG2  | 2                   | 0.22     | 0.07                | 0.22       |
| (1,1308) | 1:19:A:LEU:HB3  | 1:22:A:GLU:HG3  | 2                   | 0.22     | 0.07                | 0.22       |
| (1,314)  | 1:45:A:GLU:H    | 1:48:A:ILE:HB   | 2                   | 0.21     | 0.05                | 0.21       |
| (1,722)  | 1:23:A:PHE:HE1  | 1:27:A:ARG:HB2  | 2                   | 0.21     | 0.05                | 0.21       |
| (1,722)  | 1:23:A:PHE:HE2  | 1:27:A:ARG:HB2  | 2                   | 0.21     | 0.05                | 0.21       |
| (1,1355) | 1:33:A:ARG:H    | 1:35:A:GLN:HB3  | 2                   | 0.21     | 0.11                | 0.21       |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD11 | 2                   | 0.21     | 0.01                | 0.21       |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD12 | 2                   | 0.21     | 0.01                | 0.21       |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD13 | 2                   | 0.21     | 0.01                | 0.21       |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD21 | 2                   | 0.21     | 0.01                | 0.21       |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD22 | 2                   | 0.21     | 0.01                | 0.21       |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD23 | 2                   | 0.21     | 0.01                | 0.21       |
| (1,1861) | 1:52:A:PHE:HA   | 1:55:A:GLU:HG2  | 2                   | 0.21     | 0.06                | 0.21       |
| (1,1861) | 1:52:A:PHE:HA   | 1:55:A:GLU:HG3  | 2                   | 0.21     | 0.06                | 0.21       |
| (1,393)  | 1:18:A:ARG:H    | 1:20:A:LYS:H    | 2                   | 0.21     | 0.0                 | 0.21       |
| (1,644)  | 1:19:A:LEU:HD11 | 1:51:A:TRP:HZ2  | 2                   | 0.2      | 0.04                | 0.2        |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,644)  | 1:19:A:LEU:HD12 | 1:51:A:TRP:HZ2  | 2                   | 0.2      | 0.04                | 0.2        |
| (1,644)  | 1:19:A:LEU:HD13 | 1:51:A:TRP:HZ2  | 2                   | 0.2      | 0.04                | 0.2        |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD11 | 2                   | 0.2      | 0.1                 | 0.2        |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD12 | 2                   | 0.2      | 0.1                 | 0.2        |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD13 | 2                   | 0.2      | 0.1                 | 0.2        |
| (1,630)  | 1:51:A:TRP:HH2  | 1:52:A:PHE:HE1  | 2                   | 0.2      | 0.09                | 0.2        |
| (1,630)  | 1:51:A:TRP:HH2  | 1:52:A:PHE:HE2  | 2                   | 0.2      | 0.09                | 0.2        |
| (1,1005) | 1:60:A:LYS:H    | 1:60:A:LYS:HD2  | 2                   | 0.2      | 0.03                | 0.2        |
| (1,1005) | 1:60:A:LYS:H    | 1:60:A:LYS:HD3  | 2                   | 0.2      | 0.03                | 0.2        |
| (1,1141) | 1:50:A:ILE:HG21 | 1:54:A:ASN:HA   | 2                   | 0.2      | 0.04                | 0.2        |
| (1,1141) | 1:50:A:ILE:HG22 | 1:54:A:ASN:HA   | 2                   | 0.2      | 0.04                | 0.2        |
| (1,1141) | 1:50:A:ILE:HG23 | 1:54:A:ASN:HA   | 2                   | 0.2      | 0.04                | 0.2        |
| (1,750)  | 1:11:A:PHE:HD1  | 1:15:A:GLN:HE22 | 2                   | 0.19     | 0.05                | 0.19       |
| (1,750)  | 1:11:A:PHE:HD2  | 1:15:A:GLN:HE22 | 2                   | 0.19     | 0.05                | 0.19       |
| (1,817)  | 1:11:A:PHE:HD1  | 1:15:A:GLN:HA   | 2                   | 0.19     | 0.03                | 0.19       |
| (1,817)  | 1:11:A:PHE:HD2  | 1:15:A:GLN:HA   | 2                   | 0.19     | 0.03                | 0.19       |
| (1,1126) | 1:48:A:ILE:HG21 | 1:51:A:TRP:HB2  | 2                   | 0.19     | 0.01                | 0.19       |
| (1,1126) | 1:48:A:ILE:HG22 | 1:51:A:TRP:HB2  | 2                   | 0.19     | 0.01                | 0.19       |
| (1,1126) | 1:48:A:ILE:HG23 | 1:51:A:TRP:HB2  | 2                   | 0.19     | 0.01                | 0.19       |
| (1,1099) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HB2  | 2                   | 0.18     | 0.08                | 0.18       |
| (1,1099) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HB3  | 2                   | 0.18     | 0.08                | 0.18       |
| (1,1099) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HB2  | 2                   | 0.18     | 0.08                | 0.18       |
| (1,1099) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HB3  | 2                   | 0.18     | 0.08                | 0.18       |
| (1,331)  | 1:23:A:PHE:H    | 1:24:A:ASN:HA   | 2                   | 0.18     | 0.07                | 0.18       |
| (1,1722) | 1:29:A:LEU:HD11 | 1:37:A:LEU:HB2  | 2                   | 0.18     | 0.0                 | 0.18       |
| (1,1722) | 1:29:A:LEU:HD12 | 1:37:A:LEU:HB2  | 2                   | 0.18     | 0.0                 | 0.18       |
| (1,1722) | 1:29:A:LEU:HD13 | 1:37:A:LEU:HB2  | 2                   | 0.18     | 0.0                 | 0.18       |
| (1,1722) | 1:29:A:LEU:HD21 | 1:37:A:LEU:HB2  | 2                   | 0.18     | 0.0                 | 0.18       |
| (1,1722) | 1:29:A:LEU:HD22 | 1:37:A:LEU:HB2  | 2                   | 0.18     | 0.0                 | 0.18       |
| (1,1722) | 1:29:A:LEU:HD23 | 1:37:A:LEU:HB2  | 2                   | 0.18     | 0.0                 | 0.18       |
| (1,670)  | 1:48:A:ILE:HA   | 1:51:A:TRP:HE3  | 2                   | 0.18     | 0.0                 | 0.18       |
| (1,1747) | 1:32:A:ARG:HA   | 1:32:A:ARG:HG2  | 2                   | 0.18     | 0.02                | 0.18       |
| (1,1747) | 1:32:A:ARG:HA   | 1:32:A:ARG:HG3  | 2                   | 0.18     | 0.02                | 0.18       |
| (1,838)  | 1:51:A:TRP:H    | 1:52:A:PHE:HA   | 2                   | 0.17     | 0.04                | 0.17       |
| (1,839)  | 1:51:A:TRP:HB2  | 1:53:A:GLN:H    | 2                   | 0.17     | 0.01                | 0.17       |
| (1,181)  | 1:8:A:ARG:H     | 1:8:A:ARG:HB2   | 2                   | 0.16     | 0.02                | 0.16       |
| (1,567)  | 1:52:A:PHE:H    | 1:52:A:PHE:HE1  | 2                   | 0.16     | 0.0                 | 0.16       |
| (1,567)  | 1:52:A:PHE:H    | 1:52:A:PHE:HE2  | 2                   | 0.16     | 0.0                 | 0.16       |
| (1,607)  | 1:43:A:LEU:HB2  | 1:47:A:GLN:HE22 | 2                   | 0.16     | 0.04                | 0.16       |
| (1,607)  | 1:43:A:LEU:HB3  | 1:47:A:GLN:HE22 | 2                   | 0.16     | 0.04                | 0.16       |
| (1,377)  | 1:37:A:LEU:H    | 1:40:A:GLU:H    | 2                   | 0.16     | 0.02                | 0.16       |
| (1,910)  | 1:37:A:LEU:H    | 1:37:A:LEU:HB3  | 2                   | 0.15     | 0.01                | 0.15       |

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| Key      | Atom-1          | Atom-2          | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|-----------------|---------------------|----------|---------------------|------------|
| (1,625)  | 1:19:A:LEU:HA   | 1:52:A:PHE:HE1  | 2                   | 0.15     | 0.04                | 0.15       |
| (1,625)  | 1:19:A:LEU:HA   | 1:52:A:PHE:HE2  | 2                   | 0.15     | 0.04                | 0.15       |
| (1,398)  | 1:46:A:ALA:H    | 1:50:A:ILE:HD11 | 2                   | 0.15     | 0.02                | 0.15       |
| (1,398)  | 1:46:A:ALA:H    | 1:50:A:ILE:HD12 | 2                   | 0.15     | 0.02                | 0.15       |
| (1,398)  | 1:46:A:ALA:H    | 1:50:A:ILE:HD13 | 2                   | 0.15     | 0.02                | 0.15       |
| (1,1075) | 1:47:A:GLN:HB3  | 1:50:A:ILE:HD11 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,1075) | 1:47:A:GLN:HB3  | 1:50:A:ILE:HD12 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,1075) | 1:47:A:GLN:HB3  | 1:50:A:ILE:HD13 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,202)  | 1:47:A:GLN:HG2  | 1:47:A:GLN:HE22 | 2                   | 0.14     | 0.04                | 0.14       |
| (1,1220) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HB2  | 2                   | 0.14     | 0.02                | 0.14       |
| (1,1220) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HB3  | 2                   | 0.14     | 0.02                | 0.14       |
| (1,1220) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HB2  | 2                   | 0.14     | 0.02                | 0.14       |
| (1,1220) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HB3  | 2                   | 0.14     | 0.02                | 0.14       |
| (1,1361) | 1:57:A:ALA:H    | 1:59:A:ILE:H    | 2                   | 0.14     | 0.03                | 0.14       |
| (1,1401) | 1:20:A:LYS:H    | 1:23:A:PHE:HB3  | 2                   | 0.14     | 0.0                 | 0.14       |
| (1,950)  | 1:35:A:GLN:HA   | 1:35:A:GLN:HG3  | 2                   | 0.14     | 0.01                | 0.14       |
| (1,1082) | 1:19:A:LEU:HB2  | 1:23:A:PHE:HB3  | 2                   | 0.14     | 0.01                | 0.14       |
| (1,1082) | 1:19:A:LEU:HB3  | 1:23:A:PHE:HB3  | 2                   | 0.14     | 0.01                | 0.14       |
| (1,1506) | 1:8:A:ARG:HG2   | 1:9:A:THR:H     | 2                   | 0.14     | 0.02                | 0.14       |
| (1,1506) | 1:8:A:ARG:HG3   | 1:9:A:THR:H     | 2                   | 0.14     | 0.02                | 0.14       |
| (1,709)  | 1:43:A:LEU:HD21 | 1:47:A:GLN:HE22 | 2                   | 0.13     | 0.0                 | 0.13       |
| (1,709)  | 1:43:A:LEU:HD22 | 1:47:A:GLN:HE22 | 2                   | 0.13     | 0.0                 | 0.13       |
| (1,709)  | 1:43:A:LEU:HD23 | 1:47:A:GLN:HE22 | 2                   | 0.13     | 0.0                 | 0.13       |
| (1,1462) | 1:41:A:LEU:H    | 1:42:A:GLY:HA2  | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1708) | 1:29:A:LEU:HD11 | 1:30:A:THR:H    | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1708) | 1:29:A:LEU:HD12 | 1:30:A:THR:H    | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1708) | 1:29:A:LEU:HD13 | 1:30:A:THR:H    | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1708) | 1:29:A:LEU:HD21 | 1:30:A:THR:H    | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1708) | 1:29:A:LEU:HD22 | 1:30:A:THR:H    | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1708) | 1:29:A:LEU:HD23 | 1:30:A:THR:H    | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD11 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD12 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD13 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD21 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD22 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD23 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,631)  | 1:23:A:PHE:HD1  | 1:55:A:GLU:H    | 2                   | 0.12     | 0.01                | 0.12       |
| (1,631)  | 1:23:A:PHE:HD2  | 1:55:A:GLU:H    | 2                   | 0.12     | 0.01                | 0.12       |
| (1,829)  | 1:51:A:TRP:HB2  | 1:51:A:TRP:HE3  | 2                   | 0.12     | 0.01                | 0.12       |
| (1,854)  | 1:37:A:LEU:H    | 1:38:A:SER:HA   | 2                   | 0.12     | 0.01                | 0.12       |
| (1,164)  | 1:51:A:TRP:HB3  | 1:51:A:TRP:HZ3  | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB1  | 2                   | 0.12     | 0.0                 | 0.12       |

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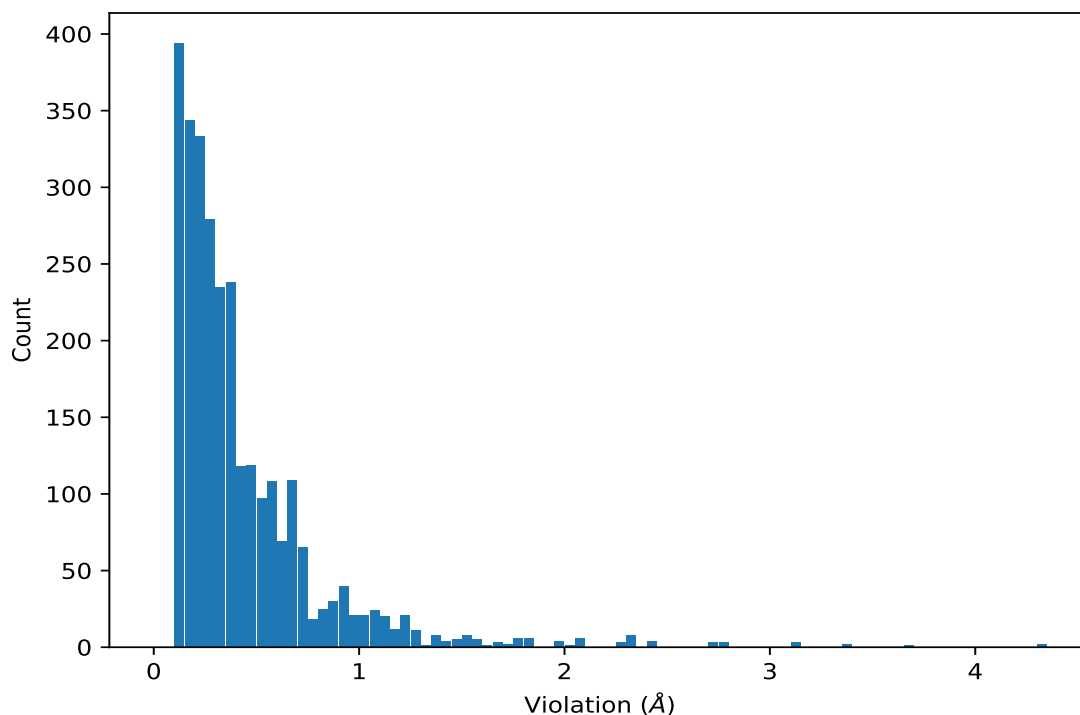
| Key      | Atom-1          | Atom-2         | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|-----------------|----------------|---------------------|----------|---------------------|------------|
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB2 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB3 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1902) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG2 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1902) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG3 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1902) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG2 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1902) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG3 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1902) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG2 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1902) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG3 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,553)  | 1:51:A:TRP:HB2  | 1:52:A:PHE:HD1 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,553)  | 1:51:A:TRP:HB2  | 1:52:A:PHE:HD2 | 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) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD21 | 3        | 4.34          |
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD22 | 3        | 4.34          |
| (1,1391) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD22 | 3        | 3.68          |
| (1,1855) | 1:51:A:TRP:HB2  | 1:54:A:ASN:HD21 | 3        | 3.39          |
| (1,1855) | 1:51:A:TRP:HB2  | 1:54:A:ASN:HD22 | 3        | 3.39          |
| (1,1854) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD21 | 3        | 3.1           |
| (1,1854) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD22 | 3        | 3.1           |
| (1,732)  | 1:51:A:TRP:HA   | 1:54:A:ASN:HD21 | 3        | 3.1           |
| (1,572)  | 1:50:A:ILE:HG21 | 1:54:A:ASN:HD22 | 3        | 2.76          |
| (1,572)  | 1:50:A:ILE:HG22 | 1:54:A:ASN:HD22 | 3        | 2.76          |
| (1,572)  | 1:50:A:ILE:HG23 | 1:54:A:ASN:HD22 | 3        | 2.76          |
| (1,1387) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 1        | 2.73          |
| (1,519)  | 1:44:A:ASN:HD21 | 1:46:A:ALA:HA   | 3        | 2.73          |
| (1,519)  | 1:44:A:ASN:HD21 | 1:46:A:ALA:HA   | 2        | 2.71          |
| (1,1219) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HG   | 1        | 2.44          |
| (1,1219) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HG   | 1        | 2.44          |
| (1,1219) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HG   | 3        | 2.4           |
| (1,1219) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HG   | 3        | 2.4           |
| (1,1852) | 1:50:A:ILE:HD11 | 1:54:A:ASN:HD21 | 3        | 2.32          |
| (1,1852) | 1:50:A:ILE:HD11 | 1:54:A:ASN:HD22 | 3        | 2.32          |
| (1,1852) | 1:50:A:ILE:HD12 | 1:54:A:ASN:HD21 | 3        | 2.32          |
| (1,1852) | 1:50:A:ILE:HD12 | 1:54:A:ASN:HD22 | 3        | 2.32          |
| (1,1852) | 1:50:A:ILE:HD13 | 1:54:A:ASN:HD21 | 3        | 2.32          |
| (1,1852) | 1:50:A:ILE:HD13 | 1:54:A:ASN:HD22 | 3        | 2.32          |
| (1,1219) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HG   | 2        | 2.31          |
| (1,1219) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HG   | 2        | 2.31          |
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD21 | 1        | 2.28          |
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD22 | 1        | 2.28          |
| (1,519)  | 1:44:A:ASN:HD21 | 1:46:A:ALA:HA   | 1        | 2.25          |
| (1,1850) | 1:50:A:ILE:HG21 | 1:54:A:ASN:HD21 | 3        | 2.08          |
| (1,1850) | 1:50:A:ILE:HG21 | 1:54:A:ASN:HD22 | 3        | 2.08          |
| (1,1850) | 1:50:A:ILE:HG22 | 1:54:A:ASN:HD21 | 3        | 2.08          |
| (1,1850) | 1:50:A:ILE:HG22 | 1:54:A:ASN:HD22 | 3        | 2.08          |
| (1,1850) | 1:50:A:ILE:HG23 | 1:54:A:ASN:HD21 | 3        | 2.08          |
| (1,1850) | 1:50:A:ILE:HG23 | 1:54:A:ASN:HD22 | 3        | 2.08          |
| (1,1209) | 1:29:A:LEU:HB3  | 1:49:A:LYS:HA   | 2        | 2.02          |
| (1,1877) | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 1        | 1.98          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1877) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 1        | 1.98          |
| (1,1864) | 1:53:A:GLN:H    | 1:54:A:ASN:HD21 | 3        | 1.97          |
| (1,1864) | 1:53:A:GLN:H    | 1:54:A:ASN:HD22 | 3        | 1.97          |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG2  | 3        | 1.84          |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG3  | 3        | 1.84          |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG2  | 3        | 1.84          |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG3  | 3        | 1.84          |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG2  | 3        | 1.84          |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG3  | 3        | 1.84          |
| (1,1209) | 1:29:A:LEU:HB3  | 1:49:A:LYS:HA   | 3        | 1.79          |
| (1,1149) | 1:50:A:ILE:HG21 | 1:54:A:ASN:HD21 | 3        | 1.79          |
| (1,1149) | 1:50:A:ILE:HG22 | 1:54:A:ASN:HD21 | 3        | 1.79          |
| (1,1149) | 1:50:A:ILE:HG23 | 1:54:A:ASN:HD21 | 3        | 1.79          |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB2  | 2        | 1.77          |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB3  | 2        | 1.77          |
| (1,292)  | 1:12:A:SER:H    | 1:16:A:LEU:HB3  | 3        | 1.73          |
| (1,64)   | 1:18:A:ARG:H    | 1:41:A:LEU:HG   | 2        | 1.7           |
| (1,1391) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD22 | 1        | 1.69          |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB2  | 1        | 1.65          |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB3  | 1        | 1.65          |
| (1,819)  | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 1        | 1.61          |
| (1,1409) | 1:34:A:ARG:HG2  | 1:45:A:GLU:HG2  | 3        | 1.59          |
| (1,1409) | 1:34:A:ARG:HG3  | 1:45:A:GLU:HG2  | 3        | 1.59          |
| (1,1209) | 1:29:A:LEU:HB3  | 1:49:A:LYS:HA   | 1        | 1.57          |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB2  | 2        | 1.56          |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB3  | 2        | 1.56          |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG2  | 1        | 1.51          |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG3  | 1        | 1.51          |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG2  | 1        | 1.51          |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG3  | 1        | 1.51          |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG2  | 1        | 1.51          |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG3  | 1        | 1.51          |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB2  | 3        | 1.51          |
| (1,990)  | 1:29:A:LEU:HG   | 1:33:A:ARG:HB3  | 3        | 1.51          |
| (1,1576) | 1:15:A:GLN:HG2  | 1:41:A:LEU:HG   | 3        | 1.48          |
| (1,1576) | 1:15:A:GLN:HG3  | 1:41:A:LEU:HG   | 3        | 1.48          |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD21 | 3        | 1.45          |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD22 | 3        | 1.45          |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD23 | 3        | 1.45          |
| (1,1576) | 1:15:A:GLN:HG2  | 1:41:A:LEU:HG   | 1        | 1.43          |
| (1,1576) | 1:15:A:GLN:HG3  | 1:41:A:LEU:HG   | 1        | 1.43          |
| (1,690)  | 1:11:A:PHE:HZ   | 1:49:A:LYS:H    | 2        | 1.43          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1469) | 1:15:A:GLN:HE21 | 1:43:A:LEU:H    | 2        | 1.4           |
| (1,1576) | 1:15:A:GLN:HG2  | 1:41:A:LEU:HG   | 2        | 1.39          |
| (1,1576) | 1:15:A:GLN:HG3  | 1:41:A:LEU:HG   | 2        | 1.39          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD21 | 3        | 1.35          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD22 | 3        | 1.35          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD23 | 3        | 1.35          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD21 | 3        | 1.35          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD22 | 3        | 1.35          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD23 | 3        | 1.35          |
| (1,1284) | 1:33:A:ARG:HD3  | 1:36:A:GLN:HB2  | 3        | 1.34          |
| (1,1185) | 1:50:A:ILE:HG21 | 1:53:A:GLN:HE21 | 3        | 1.29          |
| (1,1185) | 1:50:A:ILE:HG22 | 1:53:A:GLN:HE21 | 3        | 1.29          |
| (1,1185) | 1:50:A:ILE:HG23 | 1:53:A:GLN:HE21 | 3        | 1.29          |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD21 | 2        | 1.29          |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD22 | 2        | 1.29          |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD23 | 2        | 1.29          |
| (1,292)  | 1:12:A:SER:H    | 1:16:A:LEU:HB3  | 1        | 1.29          |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD11 | 1        | 1.25          |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD12 | 1        | 1.25          |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD13 | 1        | 1.25          |
| (1,542)  | 1:44:A:ASN:HD21 | 1:47:A:GLN:HG2  | 3        | 1.25          |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG2  | 2        | 1.24          |
| (1,1508) | 1:9:A:THR:HG21  | 1:58:A:LYS:HG3  | 2        | 1.24          |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG2  | 2        | 1.24          |
| (1,1508) | 1:9:A:THR:HG22  | 1:58:A:LYS:HG3  | 2        | 1.24          |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG2  | 2        | 1.24          |
| (1,1508) | 1:9:A:THR:HG23  | 1:58:A:LYS:HG3  | 2        | 1.24          |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD21 | 3        | 1.23          |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD22 | 3        | 1.23          |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD21 | 3        | 1.23          |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD22 | 3        | 1.23          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 1        | 1.22          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 1        | 1.22          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 1        | 1.22          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 1        | 1.22          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 1        | 1.22          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 1        | 1.22          |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB2  | 1        | 1.21          |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB3  | 1        | 1.21          |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD11 | 2        | 1.2           |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD12 | 2        | 1.2           |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD13 | 2        | 1.2           |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG2  | 1        | 1.19          |
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG3  | 1        | 1.19          |
| (1,1409) | 1:34:A:ARG:HG2  | 1:45:A:GLU:HG2  | 2        | 1.19          |
| (1,1409) | 1:34:A:ARG:HG3  | 1:45:A:GLU:HG2  | 2        | 1.19          |
| (1,1302) | 1:18:A:ARG:HB2  | 1:41:A:LEU:H    | 1        | 1.19          |
| (1,1302) | 1:18:A:ARG:HB3  | 1:41:A:LEU:H    | 1        | 1.19          |
| (1,690)  | 1:11:A:PHE:HZ   | 1:49:A:LYS:H    | 3        | 1.19          |
| (1,1177) | 1:19:A:LEU:HG   | 1:37:A:LEU:HB2  | 2        | 1.18          |
| (1,805)  | 1:34:A:ARG:HD2  | 1:48:A:ILE:HA   | 2        | 1.15          |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 3        | 1.15          |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 3        | 1.15          |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 3        | 1.15          |
| (1,1325) | 1:28:A:TYR:HA   | 1:53:A:GLN:HG3  | 2        | 1.14          |
| (1,819)  | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 2        | 1.13          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 3        | 1.12          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 3        | 1.12          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 3        | 1.12          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 3        | 1.12          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 3        | 1.12          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 3        | 1.12          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD21 | 1        | 1.11          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD22 | 1        | 1.11          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD23 | 1        | 1.11          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD21 | 1        | 1.11          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD22 | 1        | 1.11          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD23 | 1        | 1.11          |
| (1,813)  | 1:15:A:GLN:HA   | 1:41:A:LEU:HA   | 1        | 1.11          |
| (1,64)   | 1:18:A:ARG:H    | 1:41:A:LEU:HG   | 1        | 1.11          |
| (1,850)  | 1:34:A:ARG:HE   | 1:49:A:LYS:HA   | 2        | 1.1           |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 1        | 1.1           |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 1        | 1.1           |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 1        | 1.1           |
| (1,1574) | 1:15:A:GLN:HG2  | 1:41:A:LEU:H    | 1        | 1.09          |
| (1,1574) | 1:15:A:GLN:HG3  | 1:41:A:LEU:H    | 1        | 1.09          |
| (1,1185) | 1:50:A:ILE:HG21 | 1:53:A:GLN:HE21 | 2        | 1.09          |
| (1,1185) | 1:50:A:ILE:HG22 | 1:53:A:GLN:HE21 | 2        | 1.09          |
| (1,1185) | 1:50:A:ILE:HG23 | 1:53:A:GLN:HE21 | 2        | 1.09          |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 3        | 1.09          |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 3        | 1.09          |
| (1,690)  | 1:11:A:PHE:HZ   | 1:49:A:LYS:H    | 1        | 1.09          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD11 | 1        | 1.08          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD12 | 1        | 1.08          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD13 | 1        | 1.08          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD21 | 1        | 1.08          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD22 | 1        | 1.08          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD23 | 1        | 1.08          |
| (1,805)  | 1:34:A:ARG:HD2  | 1:48:A:ILE:HA   | 1        | 1.08          |
| (1,1386) | 1:15:A:GLN:HA   | 1:41:A:LEU:HG   | 3        | 1.06          |
| (1,1360) | 1:51:A:TRP:HE3  | 1:55:A:GLU:HG3  | 2        | 1.05          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 3        | 1.05          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 3        | 1.05          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 3        | 1.05          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD11 | 3        | 1.05          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD12 | 3        | 1.05          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD13 | 3        | 1.05          |
| (1,263)  | 1:15:A:GLN:HE21 | 1:42:A:GLY:H    | 1        | 1.05          |
| (1,1325) | 1:28:A:TYR:HA   | 1:53:A:GLN:HG3  | 3        | 1.04          |
| (1,1190) | 1:19:A:LEU:HD11 | 1:41:A:LEU:HG   | 2        | 1.04          |
| (1,1190) | 1:19:A:LEU:HD12 | 1:41:A:LEU:HG   | 2        | 1.04          |
| (1,1190) | 1:19:A:LEU:HD13 | 1:41:A:LEU:HG   | 2        | 1.04          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 1        | 1.04          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 1        | 1.04          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 1        | 1.04          |
| (1,1386) | 1:15:A:GLN:HA   | 1:41:A:LEU:HG   | 1        | 1.03          |
| (1,1386) | 1:15:A:GLN:HA   | 1:41:A:LEU:HG   | 2        | 1.03          |
| (1,775)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HG2  | 1        | 1.03          |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD2  | 2        | 1.03          |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD3  | 2        | 1.03          |
| (1,64)   | 1:18:A:ARG:H    | 1:41:A:LEU:HG   | 3        | 1.03          |
| (1,1190) | 1:19:A:LEU:HD11 | 1:41:A:LEU:HG   | 3        | 1.02          |
| (1,1190) | 1:19:A:LEU:HD12 | 1:41:A:LEU:HG   | 3        | 1.02          |
| (1,1190) | 1:19:A:LEU:HD13 | 1:41:A:LEU:HG   | 3        | 1.02          |
| (1,1469) | 1:15:A:GLN:HE21 | 1:43:A:LEU:H    | 1        | 1.01          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 2        | 1.01          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 2        | 1.01          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 2        | 1.01          |
| (1,408)  | 1:18:A:ARG:HE   | 1:19:A:LEU:H    | 2        | 1.01          |
| (1,1409) | 1:34:A:ARG:HG2  | 1:45:A:GLU:HG2  | 1        | 0.99          |
| (1,1409) | 1:34:A:ARG:HG3  | 1:45:A:GLU:HG2  | 1        | 0.99          |
| (1,805)  | 1:34:A:ARG:HD2  | 1:48:A:ILE:HA   | 3        | 0.99          |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD1  | 3        | 0.99          |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD2  | 3        | 0.99          |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD1  | 3        | 0.99          |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD2  | 3        | 0.99          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1460) | 1:19:A:LEU:HA   | 1:41:A:LEU:HG   | 2        | 0.98          |
| (1,1460) | 1:19:A:LEU:HA   | 1:41:A:LEU:HG   | 3        | 0.98          |
| (1,727)  | 1:23:A:PHE:HZ   | 1:27:A:ARG:HD2  | 1        | 0.98          |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD11 | 3        | 0.97          |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD12 | 3        | 0.97          |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD13 | 3        | 0.97          |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB2  | 3        | 0.96          |
| (1,1216) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HB3  | 3        | 0.96          |
| (1,1190) | 1:19:A:LEU:HD11 | 1:41:A:LEU:HG   | 1        | 0.96          |
| (1,1190) | 1:19:A:LEU:HD12 | 1:41:A:LEU:HG   | 1        | 0.96          |
| (1,1190) | 1:19:A:LEU:HD13 | 1:41:A:LEU:HG   | 1        | 0.96          |
| (1,408)  | 1:18:A:ARG:HE   | 1:19:A:LEU:H    | 1        | 0.96          |
| (1,1362) | 1:21:A:ARG:H    | 1:21:A:ARG:HE   | 3        | 0.95          |
| (1,321)  | 1:44:A:ASN:HD21 | 1:45:A:GLU:H    | 2        | 0.95          |
| (1,1877) | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 2        | 0.94          |
| (1,1877) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 2        | 0.94          |
| (1,807)  | 1:34:A:ARG:HD3  | 1:48:A:ILE:HA   | 2        | 0.94          |
| (1,737)  | 1:9:A:THR:HA    | 1:51:A:TRP:HD1  | 3        | 0.94          |
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG2  | 3        | 0.93          |
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG3  | 3        | 0.93          |
| (1,1574) | 1:15:A:GLN:HG2  | 1:41:A:LEU:H    | 2        | 0.93          |
| (1,1574) | 1:15:A:GLN:HG3  | 1:41:A:LEU:H    | 2        | 0.93          |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 2        | 0.93          |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 2        | 0.93          |
| (1,737)  | 1:9:A:THR:HA    | 1:51:A:TRP:HD1  | 2        | 0.93          |
| (1,408)  | 1:18:A:ARG:HE   | 1:19:A:LEU:H    | 3        | 0.93          |
| (1,292)  | 1:12:A:SER:H    | 1:16:A:LEU:HB3  | 2        | 0.93          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD11 | 1        | 0.92          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD12 | 1        | 0.92          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD13 | 1        | 0.92          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 1        | 0.92          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 1        | 0.92          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 1        | 0.92          |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD21 | 3        | 0.92          |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD22 | 3        | 0.92          |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 1        | 0.92          |
| (1,1136) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 1        | 0.92          |
| (1,1460) | 1:19:A:LEU:HA   | 1:41:A:LEU:HG   | 1        | 0.91          |
| (1,1397) | 1:19:A:LEU:HD11 | 1:48:A:ILE:H    | 1        | 0.91          |
| (1,1397) | 1:19:A:LEU:HD12 | 1:48:A:ILE:H    | 1        | 0.91          |
| (1,1397) | 1:19:A:LEU:HD13 | 1:48:A:ILE:H    | 1        | 0.91          |
| (1,1360) | 1:51:A:TRP:HE3  | 1:55:A:GLU:HG3  | 1        | 0.91          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1173) | 1:19:A:LEU:HD21 | 1:37:A:LEU:HG   | 1        | 0.91          |
| (1,1173) | 1:19:A:LEU:HD22 | 1:37:A:LEU:HG   | 1        | 0.91          |
| (1,1173) | 1:19:A:LEU:HD23 | 1:37:A:LEU:HG   | 1        | 0.91          |
| (1,931)  | 1:27:A:ARG:HB2  | 1:56:A:ARG:HD3  | 1        | 0.91          |
| (1,1328) | 1:28:A:TYR:HE1  | 1:53:A:GLN:HG3  | 2        | 0.9           |
| (1,1328) | 1:28:A:TYR:HE2  | 1:53:A:GLN:HG3  | 2        | 0.9           |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD21 | 1        | 0.9           |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD22 | 1        | 0.9           |
| (1,1124) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD23 | 1        | 0.9           |
| (1,1056) | 1:43:A:LEU:HD11 | 1:47:A:GLN:HE22 | 2        | 0.9           |
| (1,1056) | 1:43:A:LEU:HD12 | 1:47:A:GLN:HE22 | 2        | 0.9           |
| (1,1056) | 1:43:A:LEU:HD13 | 1:47:A:GLN:HE22 | 2        | 0.9           |
| (1,1302) | 1:18:A:ARG:HB2  | 1:41:A:LEU:H    | 2        | 0.89          |
| (1,1302) | 1:18:A:ARG:HB3  | 1:41:A:LEU:H    | 2        | 0.89          |
| (1,716)  | 1:50:A:ILE:HD11 | 1:53:A:GLN:HE21 | 2        | 0.88          |
| (1,716)  | 1:50:A:ILE:HD12 | 1:53:A:GLN:HE21 | 2        | 0.88          |
| (1,716)  | 1:50:A:ILE:HD13 | 1:53:A:GLN:HE21 | 2        | 0.88          |
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD2  | 3        | 0.87          |
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD3  | 3        | 0.87          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD11 | 3        | 0.87          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD12 | 3        | 0.87          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD13 | 3        | 0.87          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 3        | 0.87          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 3        | 0.87          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 3        | 0.87          |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD2  | 2        | 0.87          |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD3  | 2        | 0.87          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 1        | 0.87          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 1        | 0.87          |
| (1,1016) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 1        | 0.87          |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD1  | 2        | 0.87          |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD2  | 2        | 0.87          |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD1  | 2        | 0.87          |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD2  | 2        | 0.87          |
| (1,297)  | 1:11:A:PHE:HE1  | 1:12:A:SER:H    | 3        | 0.87          |
| (1,297)  | 1:11:A:PHE:HE2  | 1:12:A:SER:H    | 3        | 0.87          |
| (1,1325) | 1:28:A:TYR:HA   | 1:53:A:GLN:HG3  | 1        | 0.86          |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD2  | 1        | 0.86          |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD3  | 1        | 0.86          |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD2  | 3        | 0.86          |
| (1,282)  | 1:16:A:LEU:HA   | 1:20:A:LYS:HD3  | 3        | 0.86          |
| (1,790)  | 1:51:A:TRP:HA   | 1:55:A:GLU:HA   | 1        | 0.85          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1469) | 1:15:A:GLN:HE21 | 1:43:A:LEU:H    | 3        | 0.84          |
| (1,1360) | 1:51:A:TRP:HE3  | 1:55:A:GLU:HG3  | 3        | 0.84          |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD2  | 1        | 0.84          |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD3  | 1        | 0.84          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 3        | 0.84          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 3        | 0.84          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 3        | 0.84          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD11 | 2        | 0.84          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD12 | 2        | 0.84          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD13 | 2        | 0.84          |
| (1,312)  | 1:43:A:LEU:HG   | 1:44:A:ASN:H    | 3        | 0.84          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 2        | 0.83          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 2        | 0.83          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 2        | 0.83          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD21 | 2        | 0.83          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD22 | 2        | 0.83          |
| (1,1809) | 1:41:A:LEU:H    | 1:43:A:LEU:HD23 | 2        | 0.83          |
| (1,341)  | 1:12:A:SER:HB3  | 1:14:A:GLU:H    | 2        | 0.82          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 3        | 0.81          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 3        | 0.81          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 3        | 0.81          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 3        | 0.81          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 3        | 0.81          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 3        | 0.81          |
| (1,770)  | 1:52:A:PHE:HA   | 1:55:A:GLU:HG3  | 2        | 0.8           |
| (1,1012) | 1:30:A:THR:HG21 | 1:32:A:ARG:H    | 1        | 0.78          |
| (1,1012) | 1:30:A:THR:HG22 | 1:32:A:ARG:H    | 1        | 0.78          |
| (1,1012) | 1:30:A:THR:HG23 | 1:32:A:ARG:H    | 1        | 0.78          |
| (1,716)  | 1:50:A:ILE:HD11 | 1:53:A:GLN:HE21 | 3        | 0.78          |
| (1,716)  | 1:50:A:ILE:HD12 | 1:53:A:GLN:HE21 | 3        | 0.78          |
| (1,716)  | 1:50:A:ILE:HD13 | 1:53:A:GLN:HE21 | 3        | 0.78          |
| (1,1107) | 1:29:A:LEU:HG   | 1:34:A:ARG:H    | 1        | 0.77          |
| (1,1107) | 1:29:A:LEU:HG   | 1:34:A:ARG:H    | 3        | 0.77          |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG2  | 3        | 0.76          |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG3  | 3        | 0.76          |
| (1,1116) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG3  | 2        | 0.76          |
| (1,1116) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG3  | 2        | 0.76          |
| (1,1116) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG3  | 2        | 0.76          |
| (1,798)  | 1:45:A:GLU:HA   | 1:49:A:LYS:HA   | 3        | 0.76          |
| (1,1177) | 1:19:A:LEU:HG   | 1:37:A:LEU:HB2  | 3        | 0.75          |
| (1,1107) | 1:29:A:LEU:HG   | 1:34:A:ARG:H    | 2        | 0.75          |
| (1,931)  | 1:27:A:ARG:HB2  | 1:56:A:ARG:HD3  | 3        | 0.75          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,807)  | 1:34:A:ARG:HD3  | 1:48:A:ILE:HA   | 1        | 0.75          |
| (1,1824) | 1:43:A:LEU:HD11 | 1:45:A:GLU:HA   | 1        | 0.74          |
| (1,1824) | 1:43:A:LEU:HD12 | 1:45:A:GLU:HA   | 1        | 0.74          |
| (1,1824) | 1:43:A:LEU:HD13 | 1:45:A:GLU:HA   | 1        | 0.74          |
| (1,1824) | 1:43:A:LEU:HD21 | 1:45:A:GLU:HA   | 1        | 0.74          |
| (1,1824) | 1:43:A:LEU:HD22 | 1:45:A:GLU:HA   | 1        | 0.74          |
| (1,1824) | 1:43:A:LEU:HD23 | 1:45:A:GLU:HA   | 1        | 0.74          |
| (1,1817) | 1:41:A:LEU:HD11 | 1:43:A:LEU:H    | 2        | 0.74          |
| (1,1817) | 1:41:A:LEU:HD12 | 1:43:A:LEU:H    | 2        | 0.74          |
| (1,1817) | 1:41:A:LEU:HD13 | 1:43:A:LEU:H    | 2        | 0.74          |
| (1,1817) | 1:41:A:LEU:HD21 | 1:43:A:LEU:H    | 2        | 0.74          |
| (1,1817) | 1:41:A:LEU:HD22 | 1:43:A:LEU:H    | 2        | 0.74          |
| (1,1817) | 1:41:A:LEU:HD23 | 1:43:A:LEU:H    | 2        | 0.74          |
| (1,1609) | 1:18:A:ARG:HD2  | 1:22:A:GLU:H    | 1        | 0.74          |
| (1,1609) | 1:18:A:ARG:HD3  | 1:22:A:GLU:H    | 1        | 0.74          |
| (1,1177) | 1:19:A:LEU:HG   | 1:37:A:LEU:HB2  | 1        | 0.74          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 1        | 0.74          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 1        | 0.74          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 1        | 0.74          |
| (1,850)  | 1:34:A:ARG:HE   | 1:49:A:LYS:HA   | 1        | 0.74          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD11 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD12 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD13 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD21 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD22 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD23 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD11 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD12 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD13 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD21 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD22 | 3        | 0.73          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD23 | 3        | 0.73          |
| (1,1302) | 1:18:A:ARG:HB2  | 1:41:A:LEU:H    | 3        | 0.73          |
| (1,1302) | 1:18:A:ARG:HB3  | 1:41:A:LEU:H    | 3        | 0.73          |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD11 | 1        | 0.73          |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD12 | 1        | 0.73          |
| (1,1148) | 1:51:A:TRP:HH2  | 1:59:A:ILE:HD13 | 1        | 0.73          |
| (1,833)  | 1:30:A:THR:H    | 1:33:A:ARG:HD2  | 1        | 0.73          |
| (1,727)  | 1:23:A:PHE:HZ   | 1:27:A:ARG:HD2  | 3        | 0.73          |
| (1,1397) | 1:19:A:LEU:HD11 | 1:48:A:ILE:H    | 2        | 0.72          |
| (1,1397) | 1:19:A:LEU:HD12 | 1:48:A:ILE:H    | 2        | 0.72          |
| (1,1397) | 1:19:A:LEU:HD13 | 1:48:A:ILE:H    | 2        | 0.72          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,880)  | 1:22:A:GLU:HG2  | 1:37:A:LEU:HA   | 2        | 0.72          |
| (1,880)  | 1:22:A:GLU:HG3  | 1:37:A:LEU:HA   | 2        | 0.72          |
| (1,1870) | 1:54:A:ASN:H    | 1:54:A:ASN:HD21 | 3        | 0.71          |
| (1,1870) | 1:54:A:ASN:H    | 1:54:A:ASN:HD22 | 3        | 0.71          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD21 | 2        | 0.71          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD22 | 2        | 0.71          |
| (1,1359) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD23 | 2        | 0.71          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD21 | 2        | 0.71          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD22 | 2        | 0.71          |
| (1,1359) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD23 | 2        | 0.71          |
| (1,1116) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG3  | 3        | 0.71          |
| (1,1116) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG3  | 3        | 0.71          |
| (1,1116) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG3  | 3        | 0.71          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 2        | 0.71          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 2        | 0.71          |
| (1,1095) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 2        | 0.71          |
| (1,869)  | 1:58:A:LYS:HA   | 1:58:A:LYS:HE3  | 1        | 0.71          |
| (1,1389) | 1:35:A:GLN:HE21 | 1:36:A:GLN:HG2  | 3        | 0.7           |
| (1,1389) | 1:35:A:GLN:HE21 | 1:36:A:GLN:HG3  | 3        | 0.7           |
| (1,1057) | 1:19:A:LEU:HD21 | 1:48:A:ILE:H    | 1        | 0.7           |
| (1,1057) | 1:19:A:LEU:HD22 | 1:48:A:ILE:H    | 1        | 0.7           |
| (1,1057) | 1:19:A:LEU:HD23 | 1:48:A:ILE:H    | 1        | 0.7           |
| (1,869)  | 1:58:A:LYS:HA   | 1:58:A:LYS:HE3  | 3        | 0.7           |
| (1,807)  | 1:34:A:ARG:HD3  | 1:48:A:ILE:HA   | 3        | 0.7           |
| (1,1817) | 1:41:A:LEU:HD11 | 1:43:A:LEU:H    | 3        | 0.69          |
| (1,1817) | 1:41:A:LEU:HD12 | 1:43:A:LEU:H    | 3        | 0.69          |
| (1,1817) | 1:41:A:LEU:HD13 | 1:43:A:LEU:H    | 3        | 0.69          |
| (1,1817) | 1:41:A:LEU:HD21 | 1:43:A:LEU:H    | 3        | 0.69          |
| (1,1817) | 1:41:A:LEU:HD22 | 1:43:A:LEU:H    | 3        | 0.69          |
| (1,1817) | 1:41:A:LEU:HD23 | 1:43:A:LEU:H    | 3        | 0.69          |
| (1,1738) | 1:29:A:LEU:HD11 | 1:53:A:GLN:H    | 2        | 0.69          |
| (1,1738) | 1:29:A:LEU:HD12 | 1:53:A:GLN:H    | 2        | 0.69          |
| (1,1738) | 1:29:A:LEU:HD13 | 1:53:A:GLN:H    | 2        | 0.69          |
| (1,1738) | 1:29:A:LEU:HD21 | 1:53:A:GLN:H    | 2        | 0.69          |
| (1,1738) | 1:29:A:LEU:HD22 | 1:53:A:GLN:H    | 2        | 0.69          |
| (1,1738) | 1:29:A:LEU:HD23 | 1:53:A:GLN:H    | 2        | 0.69          |
| (1,1461) | 1:32:A:ARG:HA   | 1:35:A:GLN:HB3  | 1        | 0.69          |
| (1,1173) | 1:19:A:LEU:HD21 | 1:37:A:LEU:HG   | 2        | 0.69          |
| (1,1173) | 1:19:A:LEU:HD22 | 1:37:A:LEU:HG   | 2        | 0.69          |
| (1,1173) | 1:19:A:LEU:HD23 | 1:37:A:LEU:HG   | 2        | 0.69          |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG12 | 1        | 0.69          |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG13 | 1        | 0.69          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD11 | 3        | 0.69          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD12 | 3        | 0.69          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD13 | 3        | 0.69          |
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD2  | 1        | 0.68          |
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD3  | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD11 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD12 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD13 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD21 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD22 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD23 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD11 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD12 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD13 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD21 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD22 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD23 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD11 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD12 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD13 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD21 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD22 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD23 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD11 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD12 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD13 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD21 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD22 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD23 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD11 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD12 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD13 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD21 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD22 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD23 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD11 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD12 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD13 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD21 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD22 | 1        | 0.68          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD23 | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD2  | 1        | 0.68          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD3  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD2  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD3  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD2  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD3  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD2  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD3  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD2  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD3  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD2  | 1        | 0.68          |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD3  | 1        | 0.68          |
| (1,1373) | 1:23:A:PHE:HE1  | 1:27:A:ARG:HD2  | 1        | 0.68          |
| (1,1373) | 1:23:A:PHE:HE2  | 1:27:A:ARG:HD2  | 1        | 0.68          |
| (1,1367) | 1:44:A:ASN:HD21 | 1:47:A:GLN:H    | 3        | 0.68          |
| (1,1180) | 1:38:A:SER:HA   | 1:43:A:LEU:HG   | 3        | 0.68          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG21 | 3        | 0.68          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG22 | 3        | 0.68          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG23 | 3        | 0.68          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 3        | 0.68          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 3        | 0.68          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 3        | 0.68          |
| (1,903)  | 1:34:A:ARG:HD3  | 1:49:A:LYS:HD3  | 1        | 0.68          |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB2  | 2        | 0.67          |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB3  | 2        | 0.67          |
| (1,850)  | 1:34:A:ARG:HE   | 1:49:A:LYS:HA   | 3        | 0.67          |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 2        | 0.67          |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 2        | 0.67          |
| (1,534)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 2        | 0.67          |
| (1,151)  | 1:35:A:GLN:HE22 | 1:36:A:GLN:HB3  | 2        | 0.67          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 2        | 0.66          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 2        | 0.66          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 2        | 0.66          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 2        | 0.66          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 2        | 0.66          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 2        | 0.66          |
| (1,1387) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 2        | 0.66          |
| (1,1179) | 1:43:A:LEU:HG   | 1:47:A:GLN:HB2  | 2        | 0.66          |
| (1,1013) | 1:41:A:LEU:H    | 1:43:A:LEU:HG   | 1        | 0.66          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD11 | 3        | 0.66          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD12 | 3        | 0.66          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD13 | 3        | 0.66          |
| (1,321)  | 1:44:A:ASN:HD21 | 1:45:A:GLU:H    | 1        | 0.66          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1494) | 1:6:A:ARG:HB2   | 1:7:A:PRO:HG2   | 1        | 0.65          |
| (1,1494) | 1:6:A:ARG:HB3   | 1:7:A:PRO:HG2   | 1        | 0.65          |
| (1,1345) | 1:20:A:LYS:HE2  | 1:51:A:TRP:HE1  | 1        | 0.65          |
| (1,1345) | 1:20:A:LYS:HE3  | 1:51:A:TRP:HE1  | 1        | 0.65          |
| (1,833)  | 1:30:A:THR:H    | 1:33:A:ARG:HD2  | 3        | 0.65          |
| (1,790)  | 1:51:A:TRP:HA   | 1:55:A:GLU:HA   | 3        | 0.65          |
| (1,263)  | 1:15:A:GLN:HE21 | 1:42:A:GLY:H    | 3        | 0.65          |
| (1,1847) | 1:50:A:ILE:H    | 1:53:A:GLN:HE21 | 2        | 0.64          |
| (1,1847) | 1:50:A:ILE:H    | 1:53:A:GLN:HE22 | 2        | 0.64          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD11 | 1        | 0.64          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD12 | 1        | 0.64          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD13 | 1        | 0.64          |
| (1,798)  | 1:45:A:GLU:HA   | 1:49:A:LYS:HA   | 2        | 0.64          |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD1  | 1        | 0.64          |
| (1,610)  | 1:20:A:LYS:HG2  | 1:23:A:PHE:HD2  | 1        | 0.64          |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD1  | 1        | 0.64          |
| (1,610)  | 1:20:A:LYS:HG3  | 1:23:A:PHE:HD2  | 1        | 0.64          |
| (1,415)  | 1:5:A:LYS:HA    | 1:6:A:ARG:H     | 3        | 0.64          |
| (1,263)  | 1:15:A:GLN:HE21 | 1:42:A:GLY:H    | 2        | 0.64          |
| (1,1877) | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 3        | 0.63          |
| (1,1877) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 3        | 0.63          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD11 | 3        | 0.63          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD12 | 3        | 0.63          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD13 | 3        | 0.63          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD21 | 3        | 0.63          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD22 | 3        | 0.63          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD23 | 3        | 0.63          |
| (1,1639) | 1:21:A:ARG:HB2  | 1:22:A:GLU:HA   | 3        | 0.63          |
| (1,1639) | 1:21:A:ARG:HB3  | 1:22:A:GLU:HA   | 3        | 0.63          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD21 | 3        | 0.63          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD22 | 3        | 0.63          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD23 | 3        | 0.63          |
| (1,903)  | 1:34:A:ARG:HD3  | 1:49:A:LYS:HD3  | 2        | 0.63          |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD2  | 2        | 0.62          |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD3  | 2        | 0.62          |
| (1,1574) | 1:15:A:GLN:HG2  | 1:41:A:LEU:H    | 3        | 0.62          |
| (1,1574) | 1:15:A:GLN:HG3  | 1:41:A:LEU:H    | 3        | 0.62          |
| (1,1463) | 1:11:A:PHE:HB3  | 1:15:A:GLN:H    | 2        | 0.62          |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG12 | 2        | 0.62          |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG13 | 2        | 0.62          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD11 | 3        | 0.62          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD12 | 3        | 0.62          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD13 | 3        | 0.62          |
| (1,1062) | 1:52:A:PHE:HB3  | 1:55:A:GLU:HB2  | 1        | 0.62          |
| (1,905)  | 1:9:A:THR:HG21  | 1:51:A:TRP:HB2  | 3        | 0.62          |
| (1,905)  | 1:9:A:THR:HG22  | 1:51:A:TRP:HB2  | 3        | 0.62          |
| (1,905)  | 1:9:A:THR:HG23  | 1:51:A:TRP:HB2  | 3        | 0.62          |
| (1,321)  | 1:44:A:ASN:HD21 | 1:45:A:GLU:H    | 3        | 0.62          |
| (1,102)  | 1:29:A:LEU:HA   | 1:33:A:ARG:HE   | 2        | 0.62          |
| (1,1366) | 1:56:A:ARG:H    | 1:56:A:ARG:HE   | 2        | 0.61          |
| (1,819)  | 1:54:A:ASN:HD21 | 1:55:A:GLU:HA   | 3        | 0.61          |
| (1,727)  | 1:23:A:PHE:HZ   | 1:27:A:ARG:HD2  | 2        | 0.61          |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD21 | 1        | 0.61          |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD22 | 1        | 0.61          |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD23 | 1        | 0.61          |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD21 | 1        | 0.61          |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD22 | 1        | 0.61          |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD23 | 1        | 0.61          |
| (1,542)  | 1:44:A:ASN:HD21 | 1:47:A:GLN:HG2  | 2        | 0.61          |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD11 | 1        | 0.61          |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD12 | 1        | 0.61          |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD13 | 1        | 0.61          |
| (1,151)  | 1:35:A:GLN:HE22 | 1:36:A:GLN:HB3  | 1        | 0.61          |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD11 | 1        | 0.6           |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD12 | 1        | 0.6           |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD13 | 1        | 0.6           |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 1        | 0.6           |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 1        | 0.6           |
| (1,1820) | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 1        | 0.6           |
| (1,1364) | 1:30:A:THR:H    | 1:33:A:ARG:HE   | 2        | 0.6           |
| (1,1179) | 1:43:A:LEU:HG   | 1:47:A:GLN:HB2  | 3        | 0.6           |
| (1,1062) | 1:52:A:PHE:HB3  | 1:55:A:GLU:HB2  | 3        | 0.6           |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD11 | 2        | 0.6           |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD12 | 2        | 0.6           |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD13 | 2        | 0.6           |
| (1,315)  | 1:44:A:ASN:H    | 1:47:A:GLN:HB3  | 3        | 0.6           |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD2  | 1        | 0.59          |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD3  | 1        | 0.59          |
| (1,1817) | 1:41:A:LEU:HD11 | 1:43:A:LEU:H    | 1        | 0.59          |
| (1,1817) | 1:41:A:LEU:HD12 | 1:43:A:LEU:H    | 1        | 0.59          |
| (1,1817) | 1:41:A:LEU:HD13 | 1:43:A:LEU:H    | 1        | 0.59          |
| (1,1817) | 1:41:A:LEU:HD21 | 1:43:A:LEU:H    | 1        | 0.59          |
| (1,1817) | 1:41:A:LEU:HD22 | 1:43:A:LEU:H    | 1        | 0.59          |
| (1,1817) | 1:41:A:LEU:HD23 | 1:43:A:LEU:H    | 1        | 0.59          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1470) | 1:11:A:PHE:HE1  | 1:47:A:GLN:HE21 | 1        | 0.59          |
| (1,1470) | 1:11:A:PHE:HE2  | 1:47:A:GLN:HE21 | 1        | 0.59          |
| (1,1365) | 1:38:A:SER:H    | 1:42:A:GLY:H    | 3        | 0.59          |
| (1,1364) | 1:30:A:THR:H    | 1:33:A:ARG:HE   | 3        | 0.59          |
| (1,1233) | 1:30:A:THR:HG21 | 1:34:A:ARG:H    | 1        | 0.59          |
| (1,1233) | 1:30:A:THR:HG22 | 1:34:A:ARG:H    | 1        | 0.59          |
| (1,1233) | 1:30:A:THR:HG23 | 1:34:A:ARG:H    | 1        | 0.59          |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG12 | 2        | 0.59          |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG13 | 2        | 0.59          |
| (1,798)  | 1:45:A:GLU:HA   | 1:49:A:LYS:HA   | 1        | 0.59          |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD1  | 2        | 0.59          |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD2  | 2        | 0.59          |
| (1,526)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:H    | 2        | 0.59          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD11 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD12 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD13 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD21 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD22 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD23 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD11 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD12 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD13 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD21 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD22 | 1        | 0.58          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD23 | 1        | 0.58          |
| (1,1629) | 1:20:A:LYS:HB2  | 1:24:A:ASN:HD21 | 3        | 0.58          |
| (1,1629) | 1:20:A:LYS:HB2  | 1:24:A:ASN:HD22 | 3        | 0.58          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD11 | 3        | 0.58          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD12 | 3        | 0.58          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD13 | 3        | 0.58          |
| (1,1179) | 1:43:A:LEU:HG   | 1:47:A:GLN:HB2  | 1        | 0.58          |
| (1,695)  | 1:11:A:PHE:HZ   | 1:47:A:GLN:H    | 3        | 0.58          |
| (1,312)  | 1:43:A:LEU:HG   | 1:44:A:ASN:H    | 2        | 0.58          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD11 | 3        | 0.57          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD12 | 3        | 0.57          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD13 | 3        | 0.57          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD21 | 3        | 0.57          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD22 | 3        | 0.57          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD23 | 3        | 0.57          |
| (1,1669) | 1:24:A:ASN:HD21 | 1:25:A:GLU:HA   | 1        | 0.57          |
| (1,1669) | 1:24:A:ASN:HD22 | 1:25:A:GLU:HA   | 1        | 0.57          |
| (1,1482) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB2  | 1        | 0.57          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1390) | 1:21:A:ARG:HA   | 1:21:A:ARG:HE   | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD21 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD22 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD23 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD21 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD22 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD23 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD21 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD22 | 3        | 0.57          |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD23 | 3        | 0.57          |
| (1,1062) | 1:52:A:PHE:HB3  | 1:55:A:GLU:HB2  | 2        | 0.57          |
| (1,888)  | 1:53:A:GLN:HG2  | 1:54:A:ASN:HA   | 1        | 0.57          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD11 | 1        | 0.57          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD12 | 1        | 0.57          |
| (1,873)  | 1:40:A:GLU:HA   | 1:41:A:LEU:HD13 | 1        | 0.57          |
| (1,834)  | 1:30:A:THR:H    | 1:34:A:ARG:HD3  | 3        | 0.57          |
| (1,832)  | 1:53:A:GLN:HA   | 1:53:A:GLN:HE22 | 2        | 0.57          |
| (1,295)  | 1:13:A:SER:H    | 1:17:A:ALA:H    | 3        | 0.57          |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE1  | 1        | 0.57          |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE2  | 1        | 0.57          |
| (1,1815) | 1:41:A:LEU:HD11 | 1:42:A:GLY:H    | 1        | 0.56          |
| (1,1815) | 1:41:A:LEU:HD12 | 1:42:A:GLY:H    | 1        | 0.56          |
| (1,1815) | 1:41:A:LEU:HD13 | 1:42:A:GLY:H    | 1        | 0.56          |
| (1,1815) | 1:41:A:LEU:HD21 | 1:42:A:GLY:H    | 1        | 0.56          |
| (1,1815) | 1:41:A:LEU:HD22 | 1:42:A:GLY:H    | 1        | 0.56          |
| (1,1815) | 1:41:A:LEU:HD23 | 1:42:A:GLY:H    | 1        | 0.56          |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB2  | 1        | 0.56          |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB3  | 1        | 0.56          |
| (1,1540) | 1:12:A:SER:HB2  | 1:15:A:GLN:H    | 2        | 0.56          |
| (1,1540) | 1:12:A:SER:HB3  | 1:15:A:GLN:H    | 2        | 0.56          |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG12 | 1        | 0.56          |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG13 | 1        | 0.56          |
| (1,346)  | 1:44:A:ASN:H    | 1:47:A:GLN:HA   | 3        | 0.56          |
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD2  | 2        | 0.55          |
| (1,1910) | 1:61:A:LYS:H    | 1:61:A:LYS:HD3  | 2        | 0.55          |
| (1,1824) | 1:43:A:LEU:HD11 | 1:45:A:GLU:HA   | 2        | 0.55          |
| (1,1824) | 1:43:A:LEU:HD12 | 1:45:A:GLU:HA   | 2        | 0.55          |
| (1,1824) | 1:43:A:LEU:HD13 | 1:45:A:GLU:HA   | 2        | 0.55          |
| (1,1824) | 1:43:A:LEU:HD21 | 1:45:A:GLU:HA   | 2        | 0.55          |
| (1,1824) | 1:43:A:LEU:HD22 | 1:45:A:GLU:HA   | 2        | 0.55          |
| (1,1824) | 1:43:A:LEU:HD23 | 1:45:A:GLU:HA   | 2        | 0.55          |
| (1,1748) | 1:32:A:ARG:HA   | 1:32:A:ARG:HD2  | 1        | 0.55          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1748) | 1:32:A:ARG:HA   | 1:32:A:ARG:HD3  | 1        | 0.55          |
| (1,1585) | 1:16:A:LEU:HD11 | 1:18:A:ARG:H    | 1        | 0.55          |
| (1,1585) | 1:16:A:LEU:HD12 | 1:18:A:ARG:H    | 1        | 0.55          |
| (1,1585) | 1:16:A:LEU:HD13 | 1:18:A:ARG:H    | 1        | 0.55          |
| (1,1585) | 1:16:A:LEU:HD21 | 1:18:A:ARG:H    | 1        | 0.55          |
| (1,1585) | 1:16:A:LEU:HD22 | 1:18:A:ARG:H    | 1        | 0.55          |
| (1,1585) | 1:16:A:LEU:HD23 | 1:18:A:ARG:H    | 1        | 0.55          |
| (1,1245) | 1:37:A:LEU:HB2  | 1:48:A:ILE:HG12 | 1        | 0.55          |
| (1,1245) | 1:37:A:LEU:HB2  | 1:48:A:ILE:HG13 | 1        | 0.55          |
| (1,764)  | 1:24:A:ASN:H    | 1:51:A:TRP:HZ3  | 2        | 0.55          |
| (1,764)  | 1:24:A:ASN:H    | 1:51:A:TRP:HZ3  | 3        | 0.55          |
| (1,346)  | 1:44:A:ASN:H    | 1:47:A:GLN:HA   | 1        | 0.55          |
| (1,312)  | 1:43:A:LEU:HG   | 1:44:A:ASN:H    | 1        | 0.55          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD11 | 2        | 0.55          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD12 | 2        | 0.55          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD13 | 2        | 0.55          |
| (1,1824) | 1:43:A:LEU:HD11 | 1:45:A:GLU:HA   | 3        | 0.54          |
| (1,1824) | 1:43:A:LEU:HD12 | 1:45:A:GLU:HA   | 3        | 0.54          |
| (1,1824) | 1:43:A:LEU:HD13 | 1:45:A:GLU:HA   | 3        | 0.54          |
| (1,1824) | 1:43:A:LEU:HD21 | 1:45:A:GLU:HA   | 3        | 0.54          |
| (1,1824) | 1:43:A:LEU:HD22 | 1:45:A:GLU:HA   | 3        | 0.54          |
| (1,1824) | 1:43:A:LEU:HD23 | 1:45:A:GLU:HA   | 3        | 0.54          |
| (1,1343) | 1:22:A:GLU:HG2  | 1:37:A:LEU:H    | 2        | 0.54          |
| (1,1343) | 1:22:A:GLU:HG3  | 1:37:A:LEU:H    | 2        | 0.54          |
| (1,1064) | 1:19:A:LEU:HD21 | 1:22:A:GLU:HB3  | 1        | 0.54          |
| (1,1064) | 1:19:A:LEU:HD22 | 1:22:A:GLU:HB3  | 1        | 0.54          |
| (1,1064) | 1:19:A:LEU:HD23 | 1:22:A:GLU:HB3  | 1        | 0.54          |
| (1,1233) | 1:30:A:THR:HG21 | 1:34:A:ARG:H    | 2        | 0.53          |
| (1,1233) | 1:30:A:THR:HG22 | 1:34:A:ARG:H    | 2        | 0.53          |
| (1,1233) | 1:30:A:THR:HG23 | 1:34:A:ARG:H    | 2        | 0.53          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG21 | 2        | 0.53          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG22 | 2        | 0.53          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG23 | 2        | 0.53          |
| (1,1135) | 1:37:A:LEU:HA   | 1:48:A:ILE:HG12 | 1        | 0.53          |
| (1,1135) | 1:37:A:LEU:HA   | 1:48:A:ILE:HG13 | 1        | 0.53          |
| (1,833)  | 1:30:A:THR:H    | 1:33:A:ARG:HD2  | 2        | 0.53          |
| (1,564)  | 1:47:A:GLN:HA   | 1:47:A:GLN:HE21 | 1        | 0.53          |
| (1,34)   | 1:16:A:LEU:HD11 | 1:51:A:TRP:HH2  | 1        | 0.53          |
| (1,34)   | 1:16:A:LEU:HD12 | 1:51:A:TRP:HH2  | 1        | 0.53          |
| (1,34)   | 1:16:A:LEU:HD13 | 1:51:A:TRP:HH2  | 1        | 0.53          |
| (1,1790) | 1:37:A:LEU:HD11 | 1:51:A:TRP:HB3  | 1        | 0.52          |
| (1,1790) | 1:37:A:LEU:HD12 | 1:51:A:TRP:HB3  | 1        | 0.52          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1790) | 1:37:A:LEU:HD13 | 1:51:A:TRP:HB3  | 1        | 0.52          |
| (1,1790) | 1:37:A:LEU:HD21 | 1:51:A:TRP:HB3  | 1        | 0.52          |
| (1,1790) | 1:37:A:LEU:HD22 | 1:51:A:TRP:HB3  | 1        | 0.52          |
| (1,1790) | 1:37:A:LEU:HD23 | 1:51:A:TRP:HB3  | 1        | 0.52          |
| (1,1418) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB3  | 1        | 0.52          |
| (1,1404) | 1:34:A:ARG:HD3  | 1:45:A:GLU:HA   | 3        | 0.52          |
| (1,1057) | 1:19:A:LEU:HD21 | 1:48:A:ILE:H    | 2        | 0.52          |
| (1,1057) | 1:19:A:LEU:HD22 | 1:48:A:ILE:H    | 2        | 0.52          |
| (1,1057) | 1:19:A:LEU:HD23 | 1:48:A:ILE:H    | 2        | 0.52          |
| (1,1047) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HB2  | 2        | 0.52          |
| (1,1047) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HB2  | 2        | 0.52          |
| (1,1047) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HB2  | 2        | 0.52          |
| (1,898)  | 1:21:A:ARG:HD2  | 1:22:A:GLU:H    | 3        | 0.52          |
| (1,898)  | 1:21:A:ARG:HD3  | 1:22:A:GLU:H    | 3        | 0.52          |
| (1,770)  | 1:52:A:PHE:HA   | 1:55:A:GLU:HG3  | 1        | 0.52          |
| (1,364)  | 1:48:A:ILE:HB   | 1:52:A:PHE:H    | 3        | 0.52          |
| (1,1903) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HD2  | 3        | 0.51          |
| (1,1903) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HD3  | 3        | 0.51          |
| (1,1903) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HD2  | 3        | 0.51          |
| (1,1903) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HD3  | 3        | 0.51          |
| (1,1903) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HD2  | 3        | 0.51          |
| (1,1903) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HD3  | 3        | 0.51          |
| (1,1828) | 1:43:A:LEU:HD11 | 1:48:A:ILE:H    | 2        | 0.51          |
| (1,1828) | 1:43:A:LEU:HD12 | 1:48:A:ILE:H    | 2        | 0.51          |
| (1,1828) | 1:43:A:LEU:HD13 | 1:48:A:ILE:H    | 2        | 0.51          |
| (1,1828) | 1:43:A:LEU:HD21 | 1:48:A:ILE:H    | 2        | 0.51          |
| (1,1828) | 1:43:A:LEU:HD22 | 1:48:A:ILE:H    | 2        | 0.51          |
| (1,1828) | 1:43:A:LEU:HD23 | 1:48:A:ILE:H    | 2        | 0.51          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD11 | 3        | 0.51          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD12 | 3        | 0.51          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD13 | 3        | 0.51          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD21 | 3        | 0.51          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD22 | 3        | 0.51          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD23 | 3        | 0.51          |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD2  | 1        | 0.51          |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD3  | 1        | 0.51          |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB2  | 2        | 0.51          |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB3  | 2        | 0.51          |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB2  | 2        | 0.51          |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB3  | 2        | 0.51          |
| (1,1180) | 1:38:A:SER:HA   | 1:43:A:LEU:HG   | 1        | 0.51          |
| (1,697)  | 1:11:A:PHE:HZ   | 1:51:A:TRP:HE1  | 1        | 0.51          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,544)  | 1:42:A:GLY:H    | 1:43:A:LEU:HA   | 2        | 0.51          |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD11 | 2        | 0.5           |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD12 | 2        | 0.5           |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD13 | 2        | 0.5           |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD21 | 2        | 0.5           |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD22 | 2        | 0.5           |
| (1,1795) | 1:38:A:SER:HA   | 1:43:A:LEU:HD23 | 2        | 0.5           |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG2  | 2        | 0.5           |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG3  | 2        | 0.5           |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD21 | 2        | 0.5           |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD22 | 2        | 0.5           |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD21 | 2        | 0.5           |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD22 | 2        | 0.5           |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD21 | 2        | 0.5           |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD22 | 2        | 0.5           |
| (1,867)  | 1:38:A:SER:HB3  | 1:45:A:GLU:HA   | 1        | 0.5           |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE1  | 2        | 0.5           |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE2  | 2        | 0.5           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 2        | 0.5           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 2        | 0.5           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 2        | 0.5           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 3        | 0.5           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 3        | 0.5           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 3        | 0.5           |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD11 | 3        | 0.5           |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD12 | 3        | 0.5           |
| (1,359)  | 1:44:A:ASN:H    | 1:48:A:ILE:HD13 | 3        | 0.5           |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE1  | 3        | 0.5           |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE2  | 3        | 0.5           |
| (1,1828) | 1:43:A:LEU:HD11 | 1:48:A:ILE:H    | 1        | 0.49          |
| (1,1828) | 1:43:A:LEU:HD12 | 1:48:A:ILE:H    | 1        | 0.49          |
| (1,1828) | 1:43:A:LEU:HD13 | 1:48:A:ILE:H    | 1        | 0.49          |
| (1,1828) | 1:43:A:LEU:HD21 | 1:48:A:ILE:H    | 1        | 0.49          |
| (1,1828) | 1:43:A:LEU:HD22 | 1:48:A:ILE:H    | 1        | 0.49          |
| (1,1828) | 1:43:A:LEU:HD23 | 1:48:A:ILE:H    | 1        | 0.49          |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD2  | 3        | 0.49          |
| (1,1286) | 1:19:A:LEU:HA   | 1:20:A:LYS:HD3  | 3        | 0.49          |
| (1,695)  | 1:11:A:PHE:HZ   | 1:47:A:GLN:H    | 2        | 0.49          |
| (1,665)  | 1:23:A:PHE:HD1  | 1:55:A:GLU:HA   | 2        | 0.49          |
| (1,665)  | 1:23:A:PHE:HD2  | 1:55:A:GLU:HA   | 2        | 0.49          |
| (1,661)  | 1:23:A:PHE:HB3  | 1:51:A:TRP:HE3  | 3        | 0.49          |
| (1,291)  | 1:34:A:ARG:HB3  | 1:45:A:GLU:H    | 3        | 0.49          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,108)  | 1:10:A:ALA:H    | 1:47:A:GLN:HE22 | 3        | 0.49          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD11 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD12 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD13 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD21 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD22 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD23 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD11 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD12 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD13 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD21 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD22 | 3        | 0.48          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD23 | 3        | 0.48          |
| (1,1734) | 1:29:A:LEU:HD11 | 1:52:A:PHE:HA   | 1        | 0.48          |
| (1,1734) | 1:29:A:LEU:HD12 | 1:52:A:PHE:HA   | 1        | 0.48          |
| (1,1734) | 1:29:A:LEU:HD13 | 1:52:A:PHE:HA   | 1        | 0.48          |
| (1,1734) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HA   | 1        | 0.48          |
| (1,1734) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HA   | 1        | 0.48          |
| (1,1734) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HA   | 1        | 0.48          |
| (1,1731) | 1:29:A:LEU:HD11 | 1:49:A:LYS:HB2  | 2        | 0.48          |
| (1,1731) | 1:29:A:LEU:HD12 | 1:49:A:LYS:HB2  | 2        | 0.48          |
| (1,1731) | 1:29:A:LEU:HD13 | 1:49:A:LYS:HB2  | 2        | 0.48          |
| (1,1731) | 1:29:A:LEU:HD21 | 1:49:A:LYS:HB2  | 2        | 0.48          |
| (1,1731) | 1:29:A:LEU:HD22 | 1:49:A:LYS:HB2  | 2        | 0.48          |
| (1,1731) | 1:29:A:LEU:HD23 | 1:49:A:LYS:HB2  | 2        | 0.48          |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB2  | 3        | 0.48          |
| (1,1634) | 1:21:A:ARG:HA   | 1:24:A:ASN:HB3  | 3        | 0.48          |
| (1,1301) | 1:25:A:GLU:HG2  | 1:26:A:ASN:H    | 3        | 0.48          |
| (1,1245) | 1:37:A:LEU:HB2  | 1:48:A:ILE:HG12 | 2        | 0.48          |
| (1,1245) | 1:37:A:LEU:HB2  | 1:48:A:ILE:HG13 | 2        | 0.48          |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD2  | 2        | 0.48          |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD3  | 2        | 0.48          |
| (1,903)  | 1:34:A:ARG:HD3  | 1:49:A:LYS:HD3  | 3        | 0.48          |
| (1,762)  | 1:20:A:LYS:HA   | 1:51:A:TRP:HZ3  | 3        | 0.48          |
| (1,753)  | 1:20:A:LYS:H    | 1:51:A:TRP:HZ2  | 1        | 0.48          |
| (1,681)  | 1:39:A:SER:HA   | 1:43:A:LEU:H    | 1        | 0.48          |
| (1,581)  | 1:17:A:ALA:HB1  | 1:18:A:ARG:H    | 3        | 0.48          |
| (1,581)  | 1:17:A:ALA:HB2  | 1:18:A:ARG:H    | 3        | 0.48          |
| (1,581)  | 1:17:A:ALA:HB3  | 1:18:A:ARG:H    | 3        | 0.48          |
| (1,108)  | 1:10:A:ALA:H    | 1:47:A:GLN:HE22 | 1        | 0.48          |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD2  | 2        | 0.47          |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD3  | 2        | 0.47          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1013) | 1:41:A:LEU:H    | 1:43:A:LEU:HG   | 2        | 0.47          |
| (1,1013) | 1:41:A:LEU:H    | 1:43:A:LEU:HG   | 3        | 0.47          |
| (1,977)  | 1:37:A:LEU:HB3  | 1:48:A:ILE:HG21 | 1        | 0.47          |
| (1,977)  | 1:37:A:LEU:HB3  | 1:48:A:ILE:HG22 | 1        | 0.47          |
| (1,977)  | 1:37:A:LEU:HB3  | 1:48:A:ILE:HG23 | 1        | 0.47          |
| (1,931)  | 1:27:A:ARG:HB2  | 1:56:A:ARG:HD3  | 2        | 0.47          |
| (1,295)  | 1:13:A:SER:H    | 1:17:A:ALA:H    | 1        | 0.47          |
| (1,294)  | 1:12:A:SER:H    | 1:16:A:LEU:H    | 3        | 0.47          |
| (1,291)  | 1:34:A:ARG:HB3  | 1:45:A:GLU:H    | 2        | 0.47          |
| (1,1815) | 1:41:A:LEU:HD11 | 1:42:A:GLY:H    | 2        | 0.46          |
| (1,1815) | 1:41:A:LEU:HD12 | 1:42:A:GLY:H    | 2        | 0.46          |
| (1,1815) | 1:41:A:LEU:HD13 | 1:42:A:GLY:H    | 2        | 0.46          |
| (1,1815) | 1:41:A:LEU:HD21 | 1:42:A:GLY:H    | 2        | 0.46          |
| (1,1815) | 1:41:A:LEU:HD22 | 1:42:A:GLY:H    | 2        | 0.46          |
| (1,1815) | 1:41:A:LEU:HD23 | 1:42:A:GLY:H    | 2        | 0.46          |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD2  | 3        | 0.46          |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD3  | 3        | 0.46          |
| (1,1367) | 1:44:A:ASN:HD21 | 1:47:A:GLN:H    | 2        | 0.46          |
| (1,1366) | 1:56:A:ARG:H    | 1:56:A:ARG:HE   | 1        | 0.46          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG21 | 1        | 0.46          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG22 | 1        | 0.46          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG23 | 1        | 0.46          |
| (1,820)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:HA   | 2        | 0.46          |
| (1,818)  | 1:48:A:ILE:HA   | 1:51:A:TRP:HD1  | 1        | 0.46          |
| (1,530)  | 1:28:A:TYR:HD1  | 1:56:A:ARG:HE   | 2        | 0.46          |
| (1,530)  | 1:28:A:TYR:HD2  | 1:56:A:ARG:HE   | 2        | 0.46          |
| (1,495)  | 1:20:A:LYS:HB3  | 1:24:A:ASN:H    | 3        | 0.46          |
| (1,295)  | 1:13:A:SER:H    | 1:17:A:ALA:H    | 2        | 0.46          |
| (1,1854) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD21 | 1        | 0.45          |
| (1,1854) | 1:51:A:TRP:HA   | 1:54:A:ASN:HD22 | 1        | 0.45          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD11 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD12 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD13 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD21 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD22 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB2  | 1:41:A:LEU:HD23 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD11 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD12 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD13 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD21 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD22 | 2        | 0.45          |
| (1,1797) | 1:38:A:SER:HB3  | 1:41:A:LEU:HD23 | 2        | 0.45          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1734) | 1:29:A:LEU:HD11 | 1:52:A:PHE:HA   | 2        | 0.45          |
| (1,1734) | 1:29:A:LEU:HD12 | 1:52:A:PHE:HA   | 2        | 0.45          |
| (1,1734) | 1:29:A:LEU:HD13 | 1:52:A:PHE:HA   | 2        | 0.45          |
| (1,1734) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HA   | 2        | 0.45          |
| (1,1734) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HA   | 2        | 0.45          |
| (1,1734) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HA   | 2        | 0.45          |
| (1,1730) | 1:29:A:LEU:HD11 | 1:49:A:LYS:HA   | 2        | 0.45          |
| (1,1730) | 1:29:A:LEU:HD12 | 1:49:A:LYS:HA   | 2        | 0.45          |
| (1,1730) | 1:29:A:LEU:HD13 | 1:49:A:LYS:HA   | 2        | 0.45          |
| (1,1730) | 1:29:A:LEU:HD21 | 1:49:A:LYS:HA   | 2        | 0.45          |
| (1,1730) | 1:29:A:LEU:HD22 | 1:49:A:LYS:HA   | 2        | 0.45          |
| (1,1730) | 1:29:A:LEU:HD23 | 1:49:A:LYS:HA   | 2        | 0.45          |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE1  | 2        | 0.45          |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE2  | 2        | 0.45          |
| (1,1052) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HD11 | 2        | 0.45          |
| (1,1052) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HD12 | 2        | 0.45          |
| (1,1052) | 1:15:A:GLN:HE21 | 1:43:A:LEU:HD13 | 2        | 0.45          |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG21 | 2        | 0.45          |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG22 | 2        | 0.45          |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG23 | 2        | 0.45          |
| (1,297)  | 1:11:A:PHE:HE1  | 1:12:A:SER:H    | 1        | 0.45          |
| (1,297)  | 1:11:A:PHE:HE2  | 1:12:A:SER:H    | 1        | 0.45          |
| (1,1494) | 1:6:A:ARG:HB2   | 1:7:A:PRO:HG2   | 3        | 0.44          |
| (1,1494) | 1:6:A:ARG:HB3   | 1:7:A:PRO:HG2   | 3        | 0.44          |
| (1,1403) | 1:23:A:PHE:HD1  | 1:27:A:ARG:H    | 2        | 0.44          |
| (1,1403) | 1:23:A:PHE:HD2  | 1:27:A:ARG:H    | 2        | 0.44          |
| (1,1222) | 1:57:A:ALA:HB1  | 1:58:A:LYS:H    | 1        | 0.44          |
| (1,1222) | 1:57:A:ALA:HB2  | 1:58:A:LYS:H    | 1        | 0.44          |
| (1,1222) | 1:57:A:ALA:HB3  | 1:58:A:LYS:H    | 1        | 0.44          |
| (1,1012) | 1:30:A:THR:HG21 | 1:32:A:ARG:H    | 2        | 0.44          |
| (1,1012) | 1:30:A:THR:HG22 | 1:32:A:ARG:H    | 2        | 0.44          |
| (1,1012) | 1:30:A:THR:HG23 | 1:32:A:ARG:H    | 2        | 0.44          |
| (1,789)  | 1:19:A:LEU:HA   | 1:22:A:GLU:HA   | 1        | 0.44          |
| (1,665)  | 1:23:A:PHE:HD1  | 1:55:A:GLU:HA   | 1        | 0.44          |
| (1,665)  | 1:23:A:PHE:HD2  | 1:55:A:GLU:HA   | 1        | 0.44          |
| (1,394)  | 1:44:A:ASN:HD21 | 1:46:A:ALA:H    | 2        | 0.44          |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD2  | 3        | 0.43          |
| (1,1839) | 1:49:A:LYS:HA   | 1:49:A:LYS:HD3  | 3        | 0.43          |
| (1,1472) | 1:44:A:ASN:H    | 1:47:A:GLN:HE21 | 3        | 0.43          |
| (1,1213) | 1:28:A:TYR:HA   | 1:29:A:LEU:HB3  | 2        | 0.43          |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD21 | 3        | 0.43          |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD22 | 3        | 0.43          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD23 | 3        | 0.43          |
| (1,1116) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG3  | 1        | 0.43          |
| (1,1116) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG3  | 1        | 0.43          |
| (1,1116) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG3  | 1        | 0.43          |
| (1,1012) | 1:30:A:THR:HG21 | 1:32:A:ARG:H    | 3        | 0.43          |
| (1,1012) | 1:30:A:THR:HG22 | 1:32:A:ARG:H    | 3        | 0.43          |
| (1,1012) | 1:30:A:THR:HG23 | 1:32:A:ARG:H    | 3        | 0.43          |
| (1,775)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HG2  | 2        | 0.43          |
| (1,762)  | 1:20:A:LYS:HA   | 1:51:A:TRP:HZ3  | 1        | 0.43          |
| (1,665)  | 1:23:A:PHE:HD1  | 1:55:A:GLU:HA   | 3        | 0.43          |
| (1,665)  | 1:23:A:PHE:HD2  | 1:55:A:GLU:HA   | 3        | 0.43          |
| (1,490)  | 1:9:A:THR:HG21  | 1:11:A:PHE:H    | 2        | 0.43          |
| (1,490)  | 1:9:A:THR:HG22  | 1:11:A:PHE:H    | 2        | 0.43          |
| (1,490)  | 1:9:A:THR:HG23  | 1:11:A:PHE:H    | 2        | 0.43          |
| (1,443)  | 1:38:A:SER:H    | 1:40:A:GLU:H    | 3        | 0.43          |
| (1,298)  | 1:11:A:PHE:HD1  | 1:12:A:SER:H    | 3        | 0.43          |
| (1,298)  | 1:11:A:PHE:HD2  | 1:12:A:SER:H    | 3        | 0.43          |
| (1,1815) | 1:41:A:LEU:HD11 | 1:42:A:GLY:H    | 3        | 0.42          |
| (1,1815) | 1:41:A:LEU:HD12 | 1:42:A:GLY:H    | 3        | 0.42          |
| (1,1815) | 1:41:A:LEU:HD13 | 1:42:A:GLY:H    | 3        | 0.42          |
| (1,1815) | 1:41:A:LEU:HD21 | 1:42:A:GLY:H    | 3        | 0.42          |
| (1,1815) | 1:41:A:LEU:HD22 | 1:42:A:GLY:H    | 3        | 0.42          |
| (1,1815) | 1:41:A:LEU:HD23 | 1:42:A:GLY:H    | 3        | 0.42          |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG12 | 3        | 0.42          |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG13 | 3        | 0.42          |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 3        | 0.42          |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 3        | 0.42          |
| (1,1387) | 1:54:A:ASN:HD22 | 1:55:A:GLU:HA   | 3        | 0.42          |
| (1,1343) | 1:22:A:GLU:HG2  | 1:37:A:LEU:H    | 1        | 0.42          |
| (1,1343) | 1:22:A:GLU:HG3  | 1:37:A:LEU:H    | 1        | 0.42          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB1  | 3        | 0.42          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB2  | 3        | 0.42          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB3  | 3        | 0.42          |
| (1,1174) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HG   | 3        | 0.42          |
| (1,1174) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HG   | 3        | 0.42          |
| (1,1174) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HG   | 3        | 0.42          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD11 | 2        | 0.42          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD12 | 2        | 0.42          |
| (1,1085) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD13 | 2        | 0.42          |
| (1,1065) | 1:19:A:LEU:HD21 | 1:48:A:ILE:HB   | 1        | 0.42          |
| (1,1065) | 1:19:A:LEU:HD22 | 1:48:A:ILE:HB   | 1        | 0.42          |
| (1,1065) | 1:19:A:LEU:HD23 | 1:48:A:ILE:HB   | 1        | 0.42          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,891)  | 1:18:A:ARG:HB2  | 1:37:A:LEU:HA   | 2        | 0.42          |
| (1,891)  | 1:18:A:ARG:HB3  | 1:37:A:LEU:HA   | 2        | 0.42          |
| (1,834)  | 1:30:A:THR:H    | 1:34:A:ARG:HD3  | 2        | 0.42          |
| (1,490)  | 1:9:A:THR:HG21  | 1:11:A:PHE:H    | 1        | 0.42          |
| (1,490)  | 1:9:A:THR:HG22  | 1:11:A:PHE:H    | 1        | 0.42          |
| (1,490)  | 1:9:A:THR:HG23  | 1:11:A:PHE:H    | 1        | 0.42          |
| (1,488)  | 1:29:A:LEU:HB3  | 1:34:A:ARG:HE   | 3        | 0.42          |
| (1,422)  | 1:61:A:LYS:H    | 1:62:A:SER:HB2  | 2        | 0.42          |
| (1,422)  | 1:61:A:LYS:H    | 1:62:A:SER:HB3  | 2        | 0.42          |
| (1,347)  | 1:31:A:GLU:H    | 1:32:A:ARG:HA   | 1        | 0.42          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD11 | 1        | 0.42          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD12 | 1        | 0.42          |
| (1,307)  | 1:12:A:SER:H    | 1:19:A:LEU:HD13 | 1        | 0.42          |
| (1,262)  | 1:15:A:GLN:H    | 1:15:A:GLN:HE21 | 3        | 0.42          |
| (1,35)   | 1:20:A:LYS:HG2  | 1:51:A:TRP:HH2  | 3        | 0.42          |
| (1,35)   | 1:20:A:LYS:HG3  | 1:51:A:TRP:HH2  | 3        | 0.42          |
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG2  | 2        | 0.41          |
| (1,1884) | 1:56:A:ARG:H    | 1:58:A:LYS:HG3  | 2        | 0.41          |
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD21 | 2        | 0.41          |
| (1,1856) | 1:51:A:TRP:HD1  | 1:54:A:ASN:HD22 | 2        | 0.41          |
| (1,1364) | 1:30:A:THR:H    | 1:33:A:ARG:HE   | 1        | 0.41          |
| (1,1173) | 1:19:A:LEU:HD21 | 1:37:A:LEU:HG   | 3        | 0.41          |
| (1,1173) | 1:19:A:LEU:HD22 | 1:37:A:LEU:HG   | 3        | 0.41          |
| (1,1173) | 1:19:A:LEU:HD23 | 1:37:A:LEU:HG   | 3        | 0.41          |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD11 | 1        | 0.41          |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD12 | 1        | 0.41          |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD13 | 1        | 0.41          |
| (1,888)  | 1:53:A:GLN:HG2  | 1:54:A:ASN:HA   | 2        | 0.41          |
| (1,867)  | 1:38:A:SER:HB3  | 1:45:A:GLU:HA   | 2        | 0.41          |
| (1,813)  | 1:15:A:GLN:HA   | 1:41:A:LEU:HA   | 2        | 0.41          |
| (1,544)  | 1:42:A:GLY:H    | 1:43:A:LEU:HA   | 3        | 0.41          |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG21 | 1        | 0.41          |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG22 | 1        | 0.41          |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG23 | 1        | 0.41          |
| (1,381)  | 1:18:A:ARG:HE   | 1:22:A:GLU:HB2  | 2        | 0.41          |
| (1,297)  | 1:11:A:PHE:HE1  | 1:12:A:SER:H    | 2        | 0.41          |
| (1,297)  | 1:11:A:PHE:HE2  | 1:12:A:SER:H    | 2        | 0.41          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD11 | 1        | 0.4           |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD12 | 1        | 0.4           |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD13 | 1        | 0.4           |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD21 | 1        | 0.4           |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD22 | 1        | 0.4           |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD23 | 1        | 0.4           |
| (1,1750) | 1:32:A:ARG:HB2  | 1:33:A:ARG:H    | 1        | 0.4           |
| (1,1750) | 1:32:A:ARG:HB3  | 1:33:A:ARG:H    | 1        | 0.4           |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD2  | 2        | 0.4           |
| (1,1690) | 1:27:A:ARG:H    | 1:56:A:ARG:HD3  | 2        | 0.4           |
| (1,1366) | 1:56:A:ARG:H    | 1:56:A:ARG:HE   | 3        | 0.4           |
| (1,1284) | 1:33:A:ARG:HD3  | 1:36:A:GLN:HB2  | 2        | 0.4           |
| (1,764)  | 1:24:A:ASN:H    | 1:51:A:TRP:HZ3  | 1        | 0.4           |
| (1,674)  | 1:23:A:PHE:HE1  | 1:56:A:ARG:HA   | 3        | 0.4           |
| (1,674)  | 1:23:A:PHE:HE2  | 1:56:A:ARG:HA   | 3        | 0.4           |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD1  | 3        | 0.4           |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD2  | 3        | 0.4           |
| (1,184)  | 1:8:A:ARG:HA    | 1:8:A:ARG:HD2   | 3        | 0.4           |
| (1,184)  | 1:8:A:ARG:HA    | 1:8:A:ARG:HD3   | 3        | 0.4           |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD11 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD12 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD13 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD21 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD22 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HD23 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD11 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD12 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD13 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD21 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD22 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HD23 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD11 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD12 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD13 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD21 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD22 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HD23 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD11 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD12 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD13 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD21 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD22 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HD23 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD11 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD12 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD13 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD21 | 3        | 0.39          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD22 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HD23 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD11 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD12 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD13 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD21 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD22 | 3        | 0.39          |
| (1,1819) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HD23 | 3        | 0.39          |
| (1,1818) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HG   | 1        | 0.39          |
| (1,1818) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HG   | 1        | 0.39          |
| (1,1818) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HG   | 1        | 0.39          |
| (1,1818) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HG   | 1        | 0.39          |
| (1,1818) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HG   | 1        | 0.39          |
| (1,1818) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HG   | 1        | 0.39          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD11 | 1        | 0.39          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD12 | 1        | 0.39          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD13 | 1        | 0.39          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD21 | 1        | 0.39          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD22 | 1        | 0.39          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD23 | 1        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD2  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD3  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD2  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD3  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD2  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD3  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD2  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD3  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD2  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD3  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD2  | 3        | 0.39          |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD3  | 3        | 0.39          |
| (1,1494) | 1:6:A:ARG:HB2   | 1:7:A:PRO:HG2   | 2        | 0.39          |
| (1,1494) | 1:6:A:ARG:HB3   | 1:7:A:PRO:HG2   | 2        | 0.39          |
| (1,1418) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB3  | 3        | 0.39          |
| (1,901)  | 1:6:A:ARG:HD2   | 1:7:A:PRO:HD3   | 3        | 0.39          |
| (1,901)  | 1:6:A:ARG:HD3   | 1:7:A:PRO:HD3   | 3        | 0.39          |
| (1,760)  | 1:24:A:ASN:H    | 1:51:A:TRP:HH2  | 2        | 0.39          |
| (1,717)  | 1:50:A:ILE:HG21 | 1:51:A:TRP:HD1  | 1        | 0.39          |
| (1,717)  | 1:50:A:ILE:HG22 | 1:51:A:TRP:HD1  | 1        | 0.39          |
| (1,717)  | 1:50:A:ILE:HG23 | 1:51:A:TRP:HD1  | 1        | 0.39          |
| (1,689)  | 1:23:A:PHE:HE1  | 1:27:A:ARG:H    | 2        | 0.39          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,689)  | 1:23:A:PHE:HE2  | 1:27:A:ARG:H    | 2        | 0.39          |
| (1,617)  | 1:34:A:ARG:HD2  | 1:48:A:ILE:H    | 3        | 0.39          |
| (1,609)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HB2  | 1        | 0.39          |
| (1,609)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HB2  | 1        | 0.39          |
| (1,526)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:H    | 1        | 0.39          |
| (1,315)  | 1:44:A:ASN:H    | 1:47:A:GLN:HB3  | 1        | 0.39          |
| (1,1770) | 1:34:A:ARG:HD3  | 1:49:A:LYS:HD2  | 1        | 0.38          |
| (1,1770) | 1:34:A:ARG:HD3  | 1:49:A:LYS:HD3  | 1        | 0.38          |
| (1,1699) | 1:27:A:ARG:HG2  | 1:56:A:ARG:HD2  | 3        | 0.38          |
| (1,1699) | 1:27:A:ARG:HG2  | 1:56:A:ARG:HD3  | 3        | 0.38          |
| (1,1699) | 1:27:A:ARG:HG3  | 1:56:A:ARG:HD2  | 3        | 0.38          |
| (1,1699) | 1:27:A:ARG:HG3  | 1:56:A:ARG:HD3  | 3        | 0.38          |
| (1,1482) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB2  | 3        | 0.38          |
| (1,1432) | 1:47:A:GLN:H    | 1:49:A:LYS:HB3  | 1        | 0.38          |
| (1,1328) | 1:28:A:TYR:HE1  | 1:53:A:GLN:HG3  | 3        | 0.38          |
| (1,1328) | 1:28:A:TYR:HE2  | 1:53:A:GLN:HG3  | 3        | 0.38          |
| (1,1233) | 1:30:A:THR:HG21 | 1:34:A:ARG:H    | 3        | 0.38          |
| (1,1233) | 1:30:A:THR:HG22 | 1:34:A:ARG:H    | 3        | 0.38          |
| (1,1233) | 1:30:A:THR:HG23 | 1:34:A:ARG:H    | 3        | 0.38          |
| (1,1213) | 1:28:A:TYR:HA   | 1:29:A:LEU:HB3  | 3        | 0.38          |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD11 | 3        | 0.38          |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD12 | 3        | 0.38          |
| (1,1155) | 1:47:A:GLN:HE21 | 1:50:A:ILE:HD13 | 3        | 0.38          |
| (1,1064) | 1:19:A:LEU:HD21 | 1:22:A:GLU:HB3  | 2        | 0.38          |
| (1,1064) | 1:19:A:LEU:HD22 | 1:22:A:GLU:HB3  | 2        | 0.38          |
| (1,1064) | 1:19:A:LEU:HD23 | 1:22:A:GLU:HB3  | 2        | 0.38          |
| (1,832)  | 1:53:A:GLN:HA   | 1:53:A:GLN:HE22 | 3        | 0.38          |
| (1,707)  | 1:29:A:LEU:HD21 | 1:51:A:TRP:HE3  | 2        | 0.38          |
| (1,707)  | 1:29:A:LEU:HD22 | 1:51:A:TRP:HE3  | 2        | 0.38          |
| (1,707)  | 1:29:A:LEU:HD23 | 1:51:A:TRP:HE3  | 2        | 0.38          |
| (1,661)  | 1:23:A:PHE:HB3  | 1:51:A:TRP:HE3  | 1        | 0.38          |
| (1,655)  | 1:10:A:ALA:HB1  | 1:11:A:PHE:HE1  | 3        | 0.38          |
| (1,655)  | 1:10:A:ALA:HB1  | 1:11:A:PHE:HE2  | 3        | 0.38          |
| (1,655)  | 1:10:A:ALA:HB2  | 1:11:A:PHE:HE1  | 3        | 0.38          |
| (1,655)  | 1:10:A:ALA:HB2  | 1:11:A:PHE:HE2  | 3        | 0.38          |
| (1,655)  | 1:10:A:ALA:HB3  | 1:11:A:PHE:HE1  | 3        | 0.38          |
| (1,655)  | 1:10:A:ALA:HB3  | 1:11:A:PHE:HE2  | 3        | 0.38          |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD1  | 2        | 0.38          |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD2  | 2        | 0.38          |
| (1,530)  | 1:28:A:TYR:HD1  | 1:56:A:ARG:HE   | 3        | 0.38          |
| (1,530)  | 1:28:A:TYR:HD2  | 1:56:A:ARG:HE   | 3        | 0.38          |
| (1,405)  | 1:29:A:LEU:HA   | 1:34:A:ARG:H    | 1        | 0.38          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,118)  | 1:28:A:TYR:H    | 1:28:A:TYR:HD1  | 2        | 0.38          |
| (1,118)  | 1:28:A:TYR:H    | 1:28:A:TYR:HD2  | 2        | 0.38          |
| (1,1855) | 1:51:A:TRP:HB2  | 1:54:A:ASN:HD21 | 1        | 0.37          |
| (1,1855) | 1:51:A:TRP:HB2  | 1:54:A:ASN:HD22 | 1        | 0.37          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD11 | 1        | 0.37          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD12 | 1        | 0.37          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD13 | 1        | 0.37          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD21 | 1        | 0.37          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD22 | 1        | 0.37          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD23 | 1        | 0.37          |
| (1,1738) | 1:29:A:LEU:HD11 | 1:53:A:GLN:H    | 1        | 0.37          |
| (1,1738) | 1:29:A:LEU:HD12 | 1:53:A:GLN:H    | 1        | 0.37          |
| (1,1738) | 1:29:A:LEU:HD13 | 1:53:A:GLN:H    | 1        | 0.37          |
| (1,1738) | 1:29:A:LEU:HD21 | 1:53:A:GLN:H    | 1        | 0.37          |
| (1,1738) | 1:29:A:LEU:HD22 | 1:53:A:GLN:H    | 1        | 0.37          |
| (1,1738) | 1:29:A:LEU:HD23 | 1:53:A:GLN:H    | 1        | 0.37          |
| (1,1699) | 1:27:A:ARG:HG2  | 1:56:A:ARG:HD2  | 1        | 0.37          |
| (1,1699) | 1:27:A:ARG:HG2  | 1:56:A:ARG:HD3  | 1        | 0.37          |
| (1,1699) | 1:27:A:ARG:HG3  | 1:56:A:ARG:HD2  | 1        | 0.37          |
| (1,1699) | 1:27:A:ARG:HG3  | 1:56:A:ARG:HD3  | 1        | 0.37          |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD21 | 1        | 0.37          |
| (1,1630) | 1:20:A:LYS:HG2  | 1:24:A:ASN:HD22 | 1        | 0.37          |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD21 | 1        | 0.37          |
| (1,1630) | 1:20:A:LYS:HG3  | 1:24:A:ASN:HD22 | 1        | 0.37          |
| (1,1287) | 1:19:A:LEU:HA   | 1:22:A:GLU:HB3  | 1        | 0.37          |
| (1,1042) | 1:29:A:LEU:HD11 | 1:30:A:THR:H    | 2        | 0.37          |
| (1,1042) | 1:29:A:LEU:HD12 | 1:30:A:THR:H    | 2        | 0.37          |
| (1,1042) | 1:29:A:LEU:HD13 | 1:30:A:THR:H    | 2        | 0.37          |
| (1,834)  | 1:30:A:THR:H    | 1:34:A:ARG:HD3  | 1        | 0.37          |
| (1,777)  | 1:15:A:GLN:HA   | 1:19:A:LEU:HG   | 3        | 0.37          |
| (1,717)  | 1:50:A:ILE:HG21 | 1:51:A:TRP:HD1  | 2        | 0.37          |
| (1,717)  | 1:50:A:ILE:HG22 | 1:51:A:TRP:HD1  | 2        | 0.37          |
| (1,717)  | 1:50:A:ILE:HG23 | 1:51:A:TRP:HD1  | 2        | 0.37          |
| (1,717)  | 1:50:A:ILE:HG21 | 1:51:A:TRP:HD1  | 3        | 0.37          |
| (1,717)  | 1:50:A:ILE:HG22 | 1:51:A:TRP:HD1  | 3        | 0.37          |
| (1,717)  | 1:50:A:ILE:HG23 | 1:51:A:TRP:HD1  | 3        | 0.37          |
| (1,705)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:HB2  | 3        | 0.37          |
| (1,674)  | 1:23:A:PHE:HE1  | 1:56:A:ARG:HA   | 1        | 0.37          |
| (1,674)  | 1:23:A:PHE:HE2  | 1:56:A:ARG:HA   | 1        | 0.37          |
| (1,455)  | 1:49:A:LYS:HD2  | 1:50:A:ILE:H    | 2        | 0.37          |
| (1,411)  | 1:19:A:LEU:HD11 | 1:51:A:TRP:H    | 1        | 0.37          |
| (1,411)  | 1:19:A:LEU:HD12 | 1:51:A:TRP:H    | 1        | 0.37          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,411)  | 1:19:A:LEU:HD13 | 1:51:A:TRP:H    | 1        | 0.37          |
| (1,405)  | 1:29:A:LEU:HA   | 1:34:A:ARG:H    | 3        | 0.37          |
| (1,381)  | 1:18:A:ARG:HE   | 1:22:A:GLU:HB2  | 1        | 0.37          |
| (1,364)  | 1:48:A:ILE:HB   | 1:52:A:PHE:H    | 1        | 0.37          |
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD2  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HD3  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD2  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HD3  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD2  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HD3  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD2  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD21 | 1:33:A:ARG:HD3  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD2  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD22 | 1:33:A:ARG:HD3  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD2  | 2        | 0.36          |
| (1,1712) | 1:29:A:LEU:HD23 | 1:33:A:ARG:HD3  | 2        | 0.36          |
| (1,1669) | 1:24:A:ASN:HD21 | 1:25:A:GLU:HA   | 2        | 0.36          |
| (1,1669) | 1:24:A:ASN:HD22 | 1:25:A:GLU:HA   | 2        | 0.36          |
| (1,1662) | 1:24:A:ASN:H    | 1:24:A:ASN:HD21 | 3        | 0.36          |
| (1,1662) | 1:24:A:ASN:H    | 1:24:A:ASN:HD22 | 3        | 0.36          |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD21 | 1        | 0.36          |
| (1,1628) | 1:20:A:LYS:HA   | 1:24:A:ASN:HD22 | 1        | 0.36          |
| (1,1412) | 1:51:A:TRP:HH2  | 1:55:A:GLU:HG3  | 2        | 0.36          |
| (1,1404) | 1:34:A:ARG:HD3  | 1:45:A:GLU:HA   | 2        | 0.36          |
| (1,1354) | 1:11:A:PHE:HB2  | 1:12:A:SER:HA   | 1        | 0.36          |
| (1,1252) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HB   | 2        | 0.36          |
| (1,1186) | 1:11:A:PHE:HE1  | 1:43:A:LEU:HG   | 2        | 0.36          |
| (1,1186) | 1:11:A:PHE:HE2  | 1:43:A:LEU:HG   | 2        | 0.36          |
| (1,1157) | 1:50:A:ILE:HG21 | 1:53:A:GLN:HE22 | 3        | 0.36          |
| (1,1157) | 1:50:A:ILE:HG22 | 1:53:A:GLN:HE22 | 3        | 0.36          |
| (1,1157) | 1:50:A:ILE:HG23 | 1:53:A:GLN:HE22 | 3        | 0.36          |
| (1,1101) | 1:18:A:ARG:H    | 1:19:A:LEU:HB2  | 2        | 0.36          |
| (1,1101) | 1:18:A:ARG:H    | 1:19:A:LEU:HB3  | 2        | 0.36          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD11 | 1        | 0.36          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD12 | 1        | 0.36          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD13 | 1        | 0.36          |
| (1,1056) | 1:43:A:LEU:HD11 | 1:47:A:GLN:HE22 | 3        | 0.36          |
| (1,1056) | 1:43:A:LEU:HD12 | 1:47:A:GLN:HE22 | 3        | 0.36          |
| (1,1056) | 1:43:A:LEU:HD13 | 1:47:A:GLN:HE22 | 3        | 0.36          |
| (1,888)  | 1:53:A:GLN:HG2  | 1:54:A:ASN:HA   | 3        | 0.36          |
| (1,818)  | 1:48:A:ILE:HA   | 1:51:A:TRP:HD1  | 3        | 0.36          |
| (1,789)  | 1:19:A:LEU:HA   | 1:22:A:GLU:HA   | 2        | 0.36          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,716)  | 1:50:A:ILE:HD11 | 1:53:A:GLN:HE21 | 1        | 0.36          |
| (1,716)  | 1:50:A:ILE:HD12 | 1:53:A:GLN:HE21 | 1        | 0.36          |
| (1,716)  | 1:50:A:ILE:HD13 | 1:53:A:GLN:HE21 | 1        | 0.36          |
| (1,693)  | 1:24:A:ASN:H    | 1:52:A:PHE:HZ   | 1        | 0.36          |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD1  | 1        | 0.36          |
| (1,561)  | 1:22:A:GLU:HB2  | 1:52:A:PHE:HD2  | 1        | 0.36          |
| (1,542)  | 1:44:A:ASN:HD21 | 1:47:A:GLN:HG2  | 1        | 0.36          |
| (1,471)  | 1:13:A:SER:HA   | 1:17:A:ALA:H    | 3        | 0.36          |
| (1,463)  | 1:51:A:TRP:HE3  | 1:53:A:GLN:H    | 1        | 0.36          |
| (1,364)  | 1:48:A:ILE:HB   | 1:52:A:PHE:H    | 2        | 0.36          |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE1  | 3        | 0.36          |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE2  | 3        | 0.36          |
| (1,189)  | 1:44:A:ASN:HA   | 1:44:A:ASN:HD21 | 2        | 0.36          |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD2  | 1        | 0.35          |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD3  | 1        | 0.35          |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD2  | 3        | 0.35          |
| (1,1911) | 1:61:A:LYS:HA   | 1:61:A:LYS:HD3  | 3        | 0.35          |
| (1,1666) | 1:24:A:ASN:HB2  | 1:25:A:GLU:H    | 3        | 0.35          |
| (1,1666) | 1:24:A:ASN:HB3  | 1:25:A:GLU:H    | 3        | 0.35          |
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB2  | 3        | 0.35          |
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB3  | 3        | 0.35          |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG21  | 1        | 0.35          |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG22  | 1        | 0.35          |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG23  | 1        | 0.35          |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG21  | 1        | 0.35          |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG22  | 1        | 0.35          |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG23  | 1        | 0.35          |
| (1,1403) | 1:23:A:PHE:HD1  | 1:27:A:ARG:H    | 1        | 0.35          |
| (1,1403) | 1:23:A:PHE:HD2  | 1:27:A:ARG:H    | 1        | 0.35          |
| (1,1373) | 1:23:A:PHE:HE1  | 1:27:A:ARG:HD2  | 3        | 0.35          |
| (1,1373) | 1:23:A:PHE:HE2  | 1:27:A:ARG:HD2  | 3        | 0.35          |
| (1,1363) | 1:18:A:ARG:H    | 1:21:A:ARG:H    | 1        | 0.35          |
| (1,1252) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HB   | 1        | 0.35          |
| (1,1047) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HB2  | 3        | 0.35          |
| (1,1047) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HB2  | 3        | 0.35          |
| (1,1047) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HB2  | 3        | 0.35          |
| (1,650)  | 1:23:A:PHE:HE1  | 1:55:A:GLU:HB2  | 3        | 0.35          |
| (1,650)  | 1:23:A:PHE:HE2  | 1:55:A:GLU:HB2  | 3        | 0.35          |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE1  | 3        | 0.35          |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE2  | 3        | 0.35          |
| (1,441)  | 1:16:A:LEU:H    | 1:18:A:ARG:H    | 1        | 0.35          |
| (1,273)  | 1:11:A:PHE:HZ   | 1:51:A:TRP:HD1  | 1        | 0.35          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1666) | 1:24:A:ASN:HB2  | 1:25:A:GLU:H    | 2        | 0.34          |
| (1,1666) | 1:24:A:ASN:HB3  | 1:25:A:GLU:H    | 2        | 0.34          |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB2  | 3        | 0.34          |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB3  | 3        | 0.34          |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB2  | 3        | 0.34          |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB3  | 3        | 0.34          |
| (1,1587) | 1:16:A:LEU:HD11 | 1:19:A:LEU:HA   | 1        | 0.34          |
| (1,1587) | 1:16:A:LEU:HD12 | 1:19:A:LEU:HA   | 1        | 0.34          |
| (1,1587) | 1:16:A:LEU:HD13 | 1:19:A:LEU:HA   | 1        | 0.34          |
| (1,1587) | 1:16:A:LEU:HD21 | 1:19:A:LEU:HA   | 1        | 0.34          |
| (1,1587) | 1:16:A:LEU:HD22 | 1:19:A:LEU:HA   | 1        | 0.34          |
| (1,1587) | 1:16:A:LEU:HD23 | 1:19:A:LEU:HA   | 1        | 0.34          |
| (1,1377) | 1:49:A:LYS:HB2  | 1:50:A:ILE:HA   | 3        | 0.34          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB1  | 2        | 0.34          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB2  | 2        | 0.34          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB3  | 2        | 0.34          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG21 | 2        | 0.34          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG22 | 2        | 0.34          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG23 | 2        | 0.34          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD11 | 1        | 0.34          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD12 | 1        | 0.34          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD13 | 1        | 0.34          |
| (1,962)  | 1:45:A:GLU:HA   | 1:45:A:GLU:HG2  | 3        | 0.34          |
| (1,891)  | 1:18:A:ARG:HB2  | 1:37:A:LEU:HA   | 1        | 0.34          |
| (1,891)  | 1:18:A:ARG:HB3  | 1:37:A:LEU:HA   | 1        | 0.34          |
| (1,789)  | 1:19:A:LEU:HA   | 1:22:A:GLU:HA   | 3        | 0.34          |
| (1,783)  | 1:6:A:ARG:HB3   | 1:7:A:PRO:HD3   | 3        | 0.34          |
| (1,779)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HB3  | 1        | 0.34          |
| (1,695)  | 1:11:A:PHE:HZ   | 1:47:A:GLN:H    | 1        | 0.34          |
| (1,526)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:H    | 3        | 0.34          |
| (1,454)  | 1:8:A:ARG:HG2   | 1:9:A:THR:H     | 1        | 0.34          |
| (1,422)  | 1:61:A:LYS:H    | 1:62:A:SER:HB2  | 1        | 0.34          |
| (1,422)  | 1:61:A:LYS:H    | 1:62:A:SER:HB3  | 1        | 0.34          |
| (1,357)  | 1:44:A:ASN:H    | 1:47:A:GLN:HG2  | 3        | 0.34          |
| (1,346)  | 1:44:A:ASN:H    | 1:47:A:GLN:HA   | 2        | 0.34          |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB2  | 1        | 0.33          |
| (1,1640) | 1:21:A:ARG:HB2  | 1:24:A:ASN:HB3  | 1        | 0.33          |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB2  | 1        | 0.33          |
| (1,1640) | 1:21:A:ARG:HB3  | 1:24:A:ASN:HB3  | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD11 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD12 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD13 | 1        | 0.33          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD21 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD22 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD23 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD11 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD12 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD13 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD21 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD22 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD23 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD11 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD12 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD13 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD21 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD22 | 1        | 0.33          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD23 | 1        | 0.33          |
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB2  | 1        | 0.33          |
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB3  | 1        | 0.33          |
| (1,1437) | 1:15:A:GLN:HA   | 1:19:A:LEU:H    | 3        | 0.33          |
| (1,1406) | 1:51:A:TRP:HB2  | 1:52:A:PHE:HA   | 3        | 0.33          |
| (1,1256) | 1:34:A:ARG:HA   | 1:48:A:ILE:HB   | 1        | 0.33          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD21 | 1        | 0.33          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD22 | 1        | 0.33          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD23 | 1        | 0.33          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG21 | 3        | 0.33          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG22 | 3        | 0.33          |
| (1,1168) | 1:37:A:LEU:HG   | 1:48:A:ILE:HG23 | 3        | 0.33          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD21 | 3        | 0.33          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD22 | 3        | 0.33          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD23 | 3        | 0.33          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD21 | 3        | 0.33          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD22 | 3        | 0.33          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD23 | 3        | 0.33          |
| (1,861)  | 1:53:A:GLN:HA   | 1:56:A:ARG:HH11 | 3        | 0.33          |
| (1,795)  | 1:5:A:LYS:HA    | 1:6:A:ARG:HD2   | 1        | 0.33          |
| (1,795)  | 1:5:A:LYS:HA    | 1:6:A:ARG:HD3   | 1        | 0.33          |
| (1,564)  | 1:47:A:GLN:HA   | 1:47:A:GLN:HE21 | 2        | 0.33          |
| (1,521)  | 1:53:A:GLN:HA   | 1:55:A:GLU:H    | 1        | 0.33          |
| (1,467)  | 1:54:A:ASN:HD22 | 1:55:A:GLU:H    | 3        | 0.33          |
| (1,467)  | 1:54:A:ASN:HD21 | 1:55:A:GLU:H    | 3        | 0.33          |
| (1,381)  | 1:18:A:ARG:HE   | 1:22:A:GLU:HB2  | 3        | 0.33          |
| (1,293)  | 1:11:A:PHE:HE1  | 1:51:A:TRP:HE1  | 1        | 0.33          |
| (1,293)  | 1:11:A:PHE:HE2  | 1:51:A:TRP:HE1  | 1        | 0.33          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,225)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD21 | 1        | 0.33          |
| (1,225)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD22 | 1        | 0.33          |
| (1,225)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD23 | 1        | 0.33          |
| (1,204)  | 1:41:A:LEU:HB2  | 1:43:A:LEU:H    | 2        | 0.33          |
| (1,102)  | 1:29:A:LEU:HA   | 1:33:A:ARG:HE   | 1        | 0.33          |
| (1,1734) | 1:29:A:LEU:HD11 | 1:52:A:PHE:HA   | 3        | 0.32          |
| (1,1734) | 1:29:A:LEU:HD12 | 1:52:A:PHE:HA   | 3        | 0.32          |
| (1,1734) | 1:29:A:LEU:HD13 | 1:52:A:PHE:HA   | 3        | 0.32          |
| (1,1734) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HA   | 3        | 0.32          |
| (1,1734) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HA   | 3        | 0.32          |
| (1,1734) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HA   | 3        | 0.32          |
| (1,1463) | 1:11:A:PHE:HB3  | 1:15:A:GLN:H    | 3        | 0.32          |
| (1,1355) | 1:33:A:ARG:H    | 1:35:A:GLN:HB3  | 1        | 0.32          |
| (1,1354) | 1:11:A:PHE:HB2  | 1:12:A:SER:HA   | 3        | 0.32          |
| (1,1287) | 1:19:A:LEU:HA   | 1:22:A:GLU:HB3  | 2        | 0.32          |
| (1,1157) | 1:50:A:ILE:HG21 | 1:53:A:GLN:HE22 | 2        | 0.32          |
| (1,1157) | 1:50:A:ILE:HG22 | 1:53:A:GLN:HE22 | 2        | 0.32          |
| (1,1157) | 1:50:A:ILE:HG23 | 1:53:A:GLN:HE22 | 2        | 0.32          |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD2  | 1        | 0.32          |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD3  | 1        | 0.32          |
| (1,768)  | 1:29:A:LEU:HG   | 1:34:A:ARG:HA   | 3        | 0.32          |
| (1,601)  | 1:20:A:LYS:HG2  | 1:51:A:TRP:HZ2  | 1        | 0.32          |
| (1,601)  | 1:20:A:LYS:HG3  | 1:51:A:TRP:HZ2  | 1        | 0.32          |
| (1,463)  | 1:51:A:TRP:HE3  | 1:53:A:GLN:H    | 2        | 0.32          |
| (1,405)  | 1:29:A:LEU:HA   | 1:34:A:ARG:H    | 2        | 0.32          |
| (1,348)  | 1:49:A:LYS:HA   | 1:52:A:PHE:H    | 3        | 0.32          |
| (1,347)  | 1:31:A:GLU:H    | 1:32:A:ARG:HA   | 2        | 0.32          |
| (1,319)  | 1:44:A:ASN:HD22 | 1:45:A:GLU:H    | 2        | 0.32          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB1  | 1        | 0.32          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB2  | 1        | 0.32          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB3  | 1        | 0.32          |
| (1,293)  | 1:11:A:PHE:HE1  | 1:51:A:TRP:HE1  | 3        | 0.32          |
| (1,293)  | 1:11:A:PHE:HE2  | 1:51:A:TRP:HE1  | 3        | 0.32          |
| (1,95)   | 1:22:A:GLU:H    | 1:23:A:PHE:HB3  | 2        | 0.32          |
| (1,49)   | 1:34:A:ARG:H    | 1:36:A:GLN:H    | 3        | 0.32          |
| (1,20)   | 1:15:A:GLN:HA   | 1:15:A:GLN:HE21 | 3        | 0.32          |
| (1,1818) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HG   | 2        | 0.31          |
| (1,1818) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HG   | 2        | 0.31          |
| (1,1818) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HG   | 2        | 0.31          |
| (1,1818) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HG   | 2        | 0.31          |
| (1,1818) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HG   | 2        | 0.31          |
| (1,1818) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HG   | 2        | 0.31          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB2  | 2        | 0.31          |
| (1,1514) | 1:11:A:PHE:HB2  | 1:15:A:GLN:HB3  | 2        | 0.31          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD11 | 1        | 0.31          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD12 | 1        | 0.31          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD13 | 1        | 0.31          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD21 | 1        | 0.31          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD22 | 1        | 0.31          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD23 | 1        | 0.31          |
| (1,1406) | 1:51:A:TRP:HB2  | 1:52:A:PHE:HA   | 2        | 0.31          |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD11 | 2        | 0.31          |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD12 | 2        | 0.31          |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD13 | 2        | 0.31          |
| (1,1394) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HB3  | 1        | 0.31          |
| (1,1394) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HB3  | 1        | 0.31          |
| (1,1328) | 1:28:A:TYR:HE1  | 1:53:A:GLN:HG3  | 1        | 0.31          |
| (1,1328) | 1:28:A:TYR:HE2  | 1:53:A:GLN:HG3  | 1        | 0.31          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD11 | 2        | 0.31          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD12 | 2        | 0.31          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD13 | 2        | 0.31          |
| (1,1186) | 1:11:A:PHE:HE1  | 1:43:A:LEU:HG   | 3        | 0.31          |
| (1,1186) | 1:11:A:PHE:HE2  | 1:43:A:LEU:HG   | 3        | 0.31          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG21 | 1        | 0.31          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG22 | 1        | 0.31          |
| (1,1153) | 1:11:A:PHE:HZ   | 1:48:A:ILE:HG23 | 1        | 0.31          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD11 | 2        | 0.31          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD12 | 2        | 0.31          |
| (1,1074) | 1:45:A:GLU:HG2  | 1:48:A:ILE:HD13 | 2        | 0.31          |
| (1,1053) | 1:23:A:PHE:HD1  | 1:55:A:GLU:HB2  | 3        | 0.31          |
| (1,1053) | 1:23:A:PHE:HD2  | 1:55:A:GLU:HB2  | 3        | 0.31          |
| (1,832)  | 1:53:A:GLN:HA   | 1:53:A:GLN:HE22 | 1        | 0.31          |
| (1,813)  | 1:15:A:GLN:HA   | 1:41:A:LEU:HA   | 3        | 0.31          |
| (1,755)  | 1:51:A:TRP:HD1  | 1:52:A:PHE:H    | 1        | 0.31          |
| (1,693)  | 1:24:A:ASN:H    | 1:52:A:PHE:HZ   | 2        | 0.31          |
| (1,654)  | 1:48:A:ILE:HG21 | 1:51:A:TRP:HE3  | 1        | 0.31          |
| (1,654)  | 1:48:A:ILE:HG22 | 1:51:A:TRP:HE3  | 1        | 0.31          |
| (1,654)  | 1:48:A:ILE:HG23 | 1:51:A:TRP:HE3  | 1        | 0.31          |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE1  | 1        | 0.31          |
| (1,627)  | 1:9:A:THR:HA    | 1:11:A:PHE:HE2  | 1        | 0.31          |
| (1,575)  | 1:29:A:LEU:HG   | 1:30:A:THR:H    | 3        | 0.31          |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD1  | 1        | 0.31          |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD2  | 1        | 0.31          |
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD1  | 1        | 0.31          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD2  | 1        | 0.31          |
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD1  | 1        | 0.31          |
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD2  | 1        | 0.31          |
| (1,449)  | 1:23:A:PHE:HZ   | 1:56:A:ARG:H    | 2        | 0.31          |
| (1,372)  | 1:44:A:ASN:H    | 1:46:A:ALA:H    | 1        | 0.31          |
| (1,319)  | 1:44:A:ASN:HD22 | 1:45:A:GLU:H    | 1        | 0.31          |
| (1,1687) | 1:26:A:ASN:HD21 | 1:27:A:ARG:H    | 3        | 0.3           |
| (1,1687) | 1:26:A:ASN:HD22 | 1:27:A:ARG:H    | 3        | 0.3           |
| (1,1492) | 1:5:A:LYS:HB2   | 1:6:A:ARG:H     | 3        | 0.3           |
| (1,1492) | 1:5:A:LYS:HB3   | 1:6:A:ARG:H     | 3        | 0.3           |
| (1,1463) | 1:11:A:PHE:HB3  | 1:15:A:GLN:H    | 1        | 0.3           |
| (1,1459) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HA   | 1        | 0.3           |
| (1,1459) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HA   | 1        | 0.3           |
| (1,1459) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HA   | 1        | 0.3           |
| (1,1418) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB3  | 2        | 0.3           |
| (1,1341) | 1:56:A:ARG:H    | 1:56:A:ARG:HD2  | 2        | 0.3           |
| (1,1287) | 1:19:A:LEU:HA   | 1:22:A:GLU:HB3  | 3        | 0.3           |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE1  | 1        | 0.3           |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE2  | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG21 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG22 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG23 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG21 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG22 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG23 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG21 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG22 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG23 | 1        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG21 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG22 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD11 | 1:48:A:ILE:HG23 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG21 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG22 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD12 | 1:48:A:ILE:HG23 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG21 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG22 | 3        | 0.3           |
| (1,1172) | 1:19:A:LEU:HD13 | 1:48:A:ILE:HG23 | 3        | 0.3           |
| (1,1043) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HE   | 3        | 0.3           |
| (1,1043) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HE   | 3        | 0.3           |
| (1,1043) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HE   | 3        | 0.3           |
| (1,821)  | 1:23:A:PHE:HB3  | 1:51:A:TRP:HZ2  | 2        | 0.3           |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD11 | 1        | 0.3           |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD12 | 1        | 0.3           |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD13 | 1        | 0.3           |
| (1,713)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD11 | 1        | 0.3           |
| (1,713)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD12 | 1        | 0.3           |
| (1,713)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD13 | 1        | 0.3           |
| (1,630)  | 1:51:A:TRP:HH2  | 1:52:A:PHE:HE1  | 2        | 0.3           |
| (1,630)  | 1:51:A:TRP:HH2  | 1:52:A:PHE:HE2  | 2        | 0.3           |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD1  | 2        | 0.3           |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD2  | 2        | 0.3           |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD1  | 3        | 0.3           |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD2  | 3        | 0.3           |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD1  | 3        | 0.3           |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD2  | 3        | 0.3           |
| (1,516)  | 1:33:A:ARG:H    | 1:34:A:ARG:HA   | 3        | 0.3           |
| (1,385)  | 1:54:A:ASN:H    | 1:55:A:GLU:HA   | 1        | 0.3           |
| (1,361)  | 1:19:A:LEU:HD21 | 1:52:A:PHE:H    | 1        | 0.3           |
| (1,361)  | 1:19:A:LEU:HD22 | 1:52:A:PHE:H    | 1        | 0.3           |
| (1,361)  | 1:19:A:LEU:HD23 | 1:52:A:PHE:H    | 1        | 0.3           |
| (1,301)  | 1:11:A:PHE:HB2  | 1:12:A:SER:H    | 3        | 0.3           |
| (1,300)  | 1:12:A:SER:H    | 1:15:A:GLN:HA   | 3        | 0.3           |
| (1,244)  | 1:59:A:ILE:H    | 1:60:A:LYS:H    | 1        | 0.3           |
| (1,38)   | 1:23:A:PHE:HA   | 1:51:A:TRP:HH2  | 2        | 0.3           |
| (1,34)   | 1:16:A:LEU:HD11 | 1:51:A:TRP:HH2  | 2        | 0.3           |
| (1,34)   | 1:16:A:LEU:HD12 | 1:51:A:TRP:HH2  | 2        | 0.3           |
| (1,34)   | 1:16:A:LEU:HD13 | 1:51:A:TRP:HH2  | 2        | 0.3           |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD11 | 1        | 0.29          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD12 | 1        | 0.29          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD13 | 1        | 0.29          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD21 | 1        | 0.29          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD22 | 1        | 0.29          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD23 | 1        | 0.29          |
| (1,1480) | 1:19:A:LEU:HG   | 1:51:A:TRP:HE3  | 3        | 0.29          |
| (1,1477) | 1:51:A:TRP:HB3  | 1:52:A:PHE:HA   | 2        | 0.29          |
| (1,1367) | 1:44:A:ASN:HD21 | 1:47:A:GLN:H    | 1        | 0.29          |
| (1,1308) | 1:19:A:LEU:HB2  | 1:22:A:GLU:HG2  | 2        | 0.29          |
| (1,1308) | 1:19:A:LEU:HB2  | 1:22:A:GLU:HG3  | 2        | 0.29          |
| (1,1308) | 1:19:A:LEU:HB3  | 1:22:A:GLU:HG2  | 2        | 0.29          |
| (1,1308) | 1:19:A:LEU:HB3  | 1:22:A:GLU:HG3  | 2        | 0.29          |
| (1,1269) | 1:33:A:ARG:HE   | 1:36:A:GLN:HB3  | 2        | 0.29          |
| (1,1252) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HB   | 3        | 0.29          |
| (1,1180) | 1:38:A:SER:HA   | 1:43:A:LEU:HG   | 2        | 0.29          |
| (1,1042) | 1:29:A:LEU:HD11 | 1:30:A:THR:H    | 3        | 0.29          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1042) | 1:29:A:LEU:HD12 | 1:30:A:THR:H    | 3        | 0.29          |
| (1,1042) | 1:29:A:LEU:HD13 | 1:30:A:THR:H    | 3        | 0.29          |
| (1,770)  | 1:52:A:PHE:HA   | 1:55:A:GLU:HG3  | 3        | 0.29          |
| (1,760)  | 1:24:A:ASN:H    | 1:51:A:TRP:HH2  | 3        | 0.29          |
| (1,753)  | 1:20:A:LYS:H    | 1:51:A:TRP:HZ2  | 3        | 0.29          |
| (1,426)  | 1:19:A:LEU:HD21 | 1:20:A:LYS:H    | 2        | 0.29          |
| (1,426)  | 1:19:A:LEU:HD22 | 1:20:A:LYS:H    | 2        | 0.29          |
| (1,426)  | 1:19:A:LEU:HD23 | 1:20:A:LYS:H    | 2        | 0.29          |
| (1,317)  | 1:45:A:GLU:H    | 1:46:A:ALA:HA   | 1        | 0.29          |
| (1,303)  | 1:12:A:SER:H    | 1:15:A:GLN:HB3  | 2        | 0.29          |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG21 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG22 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG23 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG21 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG22 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG23 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG21 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG22 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG23 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG21 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG22 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG23 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG21 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG22 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG23 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG21 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG22 | 3        | 0.28          |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG23 | 3        | 0.28          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD11 | 2        | 0.28          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD12 | 2        | 0.28          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD13 | 2        | 0.28          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD21 | 2        | 0.28          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD22 | 2        | 0.28          |
| (1,1794) | 1:38:A:SER:HA   | 1:41:A:LEU:HD23 | 2        | 0.28          |
| (1,1748) | 1:32:A:ARG:HA   | 1:32:A:ARG:HD2  | 3        | 0.28          |
| (1,1748) | 1:32:A:ARG:HA   | 1:32:A:ARG:HD3  | 3        | 0.28          |
| (1,1731) | 1:29:A:LEU:HD11 | 1:49:A:LYS:HB2  | 1        | 0.28          |
| (1,1731) | 1:29:A:LEU:HD12 | 1:49:A:LYS:HB2  | 1        | 0.28          |
| (1,1731) | 1:29:A:LEU:HD13 | 1:49:A:LYS:HB2  | 1        | 0.28          |
| (1,1731) | 1:29:A:LEU:HD21 | 1:49:A:LYS:HB2  | 1        | 0.28          |
| (1,1731) | 1:29:A:LEU:HD22 | 1:49:A:LYS:HB2  | 1        | 0.28          |
| (1,1731) | 1:29:A:LEU:HD23 | 1:49:A:LYS:HB2  | 1        | 0.28          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1717) | 1:29:A:LEU:HD11 | 1:34:A:ARG:HB2  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD12 | 1:34:A:ARG:HB2  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD13 | 1:34:A:ARG:HB2  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD21 | 1:34:A:ARG:HB2  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD22 | 1:34:A:ARG:HB2  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD23 | 1:34:A:ARG:HB2  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD11 | 1:34:A:ARG:HB3  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD12 | 1:34:A:ARG:HB3  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD13 | 1:34:A:ARG:HB3  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD21 | 1:34:A:ARG:HB3  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD22 | 1:34:A:ARG:HB3  | 2        | 0.28          |
| (1,1717) | 1:29:A:LEU:HD23 | 1:34:A:ARG:HB3  | 2        | 0.28          |
| (1,1669) | 1:24:A:ASN:HD21 | 1:25:A:GLU:HA   | 3        | 0.28          |
| (1,1669) | 1:24:A:ASN:HD22 | 1:25:A:GLU:HA   | 3        | 0.28          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD11 | 3        | 0.28          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD12 | 3        | 0.28          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD13 | 3        | 0.28          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD21 | 3        | 0.28          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD22 | 3        | 0.28          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD23 | 3        | 0.28          |
| (1,1451) | 1:54:A:ASN:H    | 1:57:A:ALA:H    | 2        | 0.28          |
| (1,1439) | 1:7:A:PRO:HD2   | 1:8:A:ARG:H     | 1        | 0.28          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD11 | 1        | 0.28          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD12 | 1        | 0.28          |
| (1,1243) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HD13 | 1        | 0.28          |
| (1,1122) | 1:50:A:ILE:HG21 | 1:54:A:ASN:HB2  | 2        | 0.28          |
| (1,1122) | 1:50:A:ILE:HG22 | 1:54:A:ASN:HB2  | 2        | 0.28          |
| (1,1122) | 1:50:A:ILE:HG23 | 1:54:A:ASN:HB2  | 2        | 0.28          |
| (1,1061) | 1:12:A:SER:H    | 1:43:A:LEU:HD11 | 2        | 0.28          |
| (1,1061) | 1:12:A:SER:H    | 1:43:A:LEU:HD12 | 2        | 0.28          |
| (1,1061) | 1:12:A:SER:H    | 1:43:A:LEU:HD13 | 2        | 0.28          |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD11 | 3        | 0.28          |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD12 | 3        | 0.28          |
| (1,1050) | 1:38:A:SER:HA   | 1:43:A:LEU:HD13 | 3        | 0.28          |
| (1,905)  | 1:9:A:THR:HG21  | 1:51:A:TRP:HB2  | 2        | 0.28          |
| (1,905)  | 1:9:A:THR:HG22  | 1:51:A:TRP:HB2  | 2        | 0.28          |
| (1,905)  | 1:9:A:THR:HG23  | 1:51:A:TRP:HB2  | 2        | 0.28          |
| (1,775)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HG2  | 3        | 0.28          |
| (1,602)  | 1:16:A:LEU:HB3  | 1:51:A:TRP:HZ2  | 2        | 0.28          |
| (1,341)  | 1:12:A:SER:HB3  | 1:14:A:GLU:H    | 3        | 0.28          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB1  | 3        | 0.28          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB2  | 3        | 0.28          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB3  | 3        | 0.28          |
| (1,293)  | 1:11:A:PHE:HE1  | 1:51:A:TRP:HE1  | 2        | 0.28          |
| (1,293)  | 1:11:A:PHE:HE2  | 1:51:A:TRP:HE1  | 2        | 0.28          |
| (1,277)  | 1:10:A:ALA:H    | 1:11:A:PHE:H    | 1        | 0.28          |
| (1,1861) | 1:52:A:PHE:HA   | 1:55:A:GLU:HG2  | 2        | 0.27          |
| (1,1861) | 1:52:A:PHE:HA   | 1:55:A:GLU:HG3  | 2        | 0.27          |
| (1,1731) | 1:29:A:LEU:HD11 | 1:49:A:LYS:HB2  | 3        | 0.27          |
| (1,1731) | 1:29:A:LEU:HD12 | 1:49:A:LYS:HB2  | 3        | 0.27          |
| (1,1731) | 1:29:A:LEU:HD13 | 1:49:A:LYS:HB2  | 3        | 0.27          |
| (1,1731) | 1:29:A:LEU:HD21 | 1:49:A:LYS:HB2  | 3        | 0.27          |
| (1,1731) | 1:29:A:LEU:HD22 | 1:49:A:LYS:HB2  | 3        | 0.27          |
| (1,1731) | 1:29:A:LEU:HD23 | 1:49:A:LYS:HB2  | 3        | 0.27          |
| (1,1476) | 1:51:A:TRP:HB3  | 1:52:A:PHE:HB2  | 1        | 0.27          |
| (1,1421) | 1:52:A:PHE:HA   | 1:55:A:GLU:HA   | 1        | 0.27          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD21 | 2        | 0.27          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD22 | 2        | 0.27          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD23 | 2        | 0.27          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD21 | 2        | 0.27          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD22 | 2        | 0.27          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD23 | 2        | 0.27          |
| (1,1054) | 1:19:A:LEU:HD21 | 1:23:A:PHE:HD1  | 2        | 0.27          |
| (1,1054) | 1:19:A:LEU:HD21 | 1:23:A:PHE:HD2  | 2        | 0.27          |
| (1,1054) | 1:19:A:LEU:HD22 | 1:23:A:PHE:HD1  | 2        | 0.27          |
| (1,1054) | 1:19:A:LEU:HD22 | 1:23:A:PHE:HD2  | 2        | 0.27          |
| (1,1054) | 1:19:A:LEU:HD23 | 1:23:A:PHE:HD1  | 2        | 0.27          |
| (1,1054) | 1:19:A:LEU:HD23 | 1:23:A:PHE:HD2  | 2        | 0.27          |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD2  | 3        | 0.27          |
| (1,1008) | 1:20:A:LYS:H    | 1:20:A:LYS:HD3  | 3        | 0.27          |
| (1,898)  | 1:21:A:ARG:HD2  | 1:22:A:GLU:H    | 1        | 0.27          |
| (1,898)  | 1:21:A:ARG:HD3  | 1:22:A:GLU:H    | 1        | 0.27          |
| (1,680)  | 1:23:A:PHE:HE1  | 1:28:A:TYR:HA   | 2        | 0.27          |
| (1,680)  | 1:23:A:PHE:HE2  | 1:28:A:TYR:HA   | 2        | 0.27          |
| (1,618)  | 1:16:A:LEU:HA   | 1:18:A:ARG:H    | 1        | 0.27          |
| (1,611)  | 1:58:A:LYS:HB2  | 1:59:A:ILE:H    | 3        | 0.27          |
| (1,546)  | 1:24:A:ASN:H    | 1:24:A:ASN:HD22 | 1        | 0.27          |
| (1,544)  | 1:42:A:GLY:H    | 1:43:A:LEU:HA   | 1        | 0.27          |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD1  | 2        | 0.27          |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD2  | 2        | 0.27          |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD1  | 2        | 0.27          |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD2  | 2        | 0.27          |
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD1  | 2        | 0.27          |
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD2  | 2        | 0.27          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD1  | 2        | 0.27          |
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD2  | 2        | 0.27          |
| (1,505)  | 1:44:A:ASN:HA   | 1:47:A:GLN:H    | 1        | 0.27          |
| (1,490)  | 1:9:A:THR:HG21  | 1:11:A:PHE:H    | 3        | 0.27          |
| (1,490)  | 1:9:A:THR:HG22  | 1:11:A:PHE:H    | 3        | 0.27          |
| (1,490)  | 1:9:A:THR:HG23  | 1:11:A:PHE:H    | 3        | 0.27          |
| (1,16)   | 1:12:A:SER:H    | 1:15:A:GLN:H    | 2        | 0.27          |
| (1,1894) | 1:58:A:LYS:HA   | 1:58:A:LYS:HE2  | 1        | 0.26          |
| (1,1894) | 1:58:A:LYS:HA   | 1:58:A:LYS:HE3  | 1        | 0.26          |
| (1,1790) | 1:37:A:LEU:HD11 | 1:51:A:TRP:HB3  | 2        | 0.26          |
| (1,1790) | 1:37:A:LEU:HD12 | 1:51:A:TRP:HB3  | 2        | 0.26          |
| (1,1790) | 1:37:A:LEU:HD13 | 1:51:A:TRP:HB3  | 2        | 0.26          |
| (1,1790) | 1:37:A:LEU:HD21 | 1:51:A:TRP:HB3  | 2        | 0.26          |
| (1,1790) | 1:37:A:LEU:HD22 | 1:51:A:TRP:HB3  | 2        | 0.26          |
| (1,1790) | 1:37:A:LEU:HD23 | 1:51:A:TRP:HB3  | 2        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD11 | 1:40:A:GLU:HG2  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD11 | 1:40:A:GLU:HG3  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD12 | 1:40:A:GLU:HG2  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD12 | 1:40:A:GLU:HG3  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD13 | 1:40:A:GLU:HG2  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD13 | 1:40:A:GLU:HG3  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD21 | 1:40:A:GLU:HG2  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD21 | 1:40:A:GLU:HG3  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD22 | 1:40:A:GLU:HG2  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD22 | 1:40:A:GLU:HG3  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD23 | 1:40:A:GLU:HG2  | 1        | 0.26          |
| (1,1788) | 1:37:A:LEU:HD23 | 1:40:A:GLU:HG3  | 1        | 0.26          |
| (1,1666) | 1:24:A:ASN:HB2  | 1:25:A:GLU:H    | 1        | 0.26          |
| (1,1666) | 1:24:A:ASN:HB3  | 1:25:A:GLU:H    | 1        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD11 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD12 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD13 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD21 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD22 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD21 | 1:43:A:LEU:HD23 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD11 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD12 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD13 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD21 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD22 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD22 | 1:43:A:LEU:HD23 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD11 | 3        | 0.26          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD12 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD13 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD21 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD22 | 3        | 0.26          |
| (1,1627) | 1:19:A:LEU:HD23 | 1:43:A:LEU:HD23 | 3        | 0.26          |
| (1,1431) | 1:45:A:GLU:HB3  | 1:47:A:GLN:H    | 1        | 0.26          |
| (1,1406) | 1:51:A:TRP:HB2  | 1:52:A:PHE:HA   | 1        | 0.26          |
| (1,1319) | 1:20:A:LYS:HA   | 1:23:A:PHE:HB2  | 3        | 0.26          |
| (1,1301) | 1:25:A:GLU:HG2  | 1:26:A:ASN:H    | 2        | 0.26          |
| (1,1300) | 1:35:A:GLN:HE22 | 1:36:A:GLN:HB2  | 2        | 0.26          |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG12 | 3        | 0.26          |
| (1,1131) | 1:34:A:ARG:HA   | 1:48:A:ILE:HG13 | 3        | 0.26          |
| (1,1099) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HB2  | 3        | 0.26          |
| (1,1099) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HB3  | 3        | 0.26          |
| (1,1099) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HB2  | 3        | 0.26          |
| (1,1099) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HB3  | 3        | 0.26          |
| (1,1072) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD21 | 3        | 0.26          |
| (1,1072) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD22 | 3        | 0.26          |
| (1,1072) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD23 | 3        | 0.26          |
| (1,1064) | 1:19:A:LEU:HD21 | 1:22:A:GLU:HB3  | 3        | 0.26          |
| (1,1064) | 1:19:A:LEU:HD22 | 1:22:A:GLU:HB3  | 3        | 0.26          |
| (1,1064) | 1:19:A:LEU:HD23 | 1:22:A:GLU:HB3  | 3        | 0.26          |
| (1,1054) | 1:19:A:LEU:HD21 | 1:23:A:PHE:HD1  | 1        | 0.26          |
| (1,1054) | 1:19:A:LEU:HD21 | 1:23:A:PHE:HD2  | 1        | 0.26          |
| (1,1054) | 1:19:A:LEU:HD22 | 1:23:A:PHE:HD1  | 1        | 0.26          |
| (1,1054) | 1:19:A:LEU:HD22 | 1:23:A:PHE:HD2  | 1        | 0.26          |
| (1,1054) | 1:19:A:LEU:HD23 | 1:23:A:PHE:HD1  | 1        | 0.26          |
| (1,1054) | 1:19:A:LEU:HD23 | 1:23:A:PHE:HD2  | 1        | 0.26          |
| (1,1042) | 1:29:A:LEU:HD11 | 1:30:A:THR:H    | 1        | 0.26          |
| (1,1042) | 1:29:A:LEU:HD12 | 1:30:A:THR:H    | 1        | 0.26          |
| (1,1042) | 1:29:A:LEU:HD13 | 1:30:A:THR:H    | 1        | 0.26          |
| (1,1009) | 1:5:A:LYS:H     | 1:5:A:LYS:HD2   | 3        | 0.26          |
| (1,1009) | 1:5:A:LYS:H     | 1:5:A:LYS:HD3   | 3        | 0.26          |
| (1,899)  | 1:29:A:LEU:H    | 1:52:A:PHE:HB2  | 3        | 0.26          |
| (1,722)  | 1:23:A:PHE:HE1  | 1:27:A:ARG:HB2  | 2        | 0.26          |
| (1,722)  | 1:23:A:PHE:HE2  | 1:27:A:ARG:HB2  | 2        | 0.26          |
| (1,720)  | 1:23:A:PHE:HD1  | 1:27:A:ARG:HB2  | 2        | 0.26          |
| (1,720)  | 1:23:A:PHE:HD2  | 1:27:A:ARG:HB2  | 2        | 0.26          |
| (1,666)  | 1:23:A:PHE:HD1  | 1:52:A:PHE:HB2  | 1        | 0.26          |
| (1,666)  | 1:23:A:PHE:HD2  | 1:52:A:PHE:HB2  | 1        | 0.26          |
| (1,666)  | 1:23:A:PHE:HD1  | 1:52:A:PHE:HB2  | 2        | 0.26          |
| (1,666)  | 1:23:A:PHE:HD2  | 1:52:A:PHE:HB2  | 2        | 0.26          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,661)  | 1:23:A:PHE:HB3  | 1:51:A:TRP:HE3  | 2        | 0.26          |
| (1,622)  | 1:11:A:PHE:HZ   | 1:48:A:ILE:HA   | 3        | 0.26          |
| (1,394)  | 1:44:A:ASN:HD21 | 1:46:A:ALA:H    | 3        | 0.26          |
| (1,332)  | 1:23:A:PHE:H    | 1:51:A:TRP:HZ3  | 3        | 0.26          |
| (1,314)  | 1:45:A:GLU:H    | 1:48:A:ILE:HB   | 2        | 0.26          |
| (1,251)  | 1:32:A:ARG:H    | 1:33:A:ARG:HB2  | 1        | 0.26          |
| (1,251)  | 1:32:A:ARG:H    | 1:33:A:ARG:HB3  | 1        | 0.26          |
| (1,247)  | 1:34:A:ARG:HG2  | 1:49:A:LYS:H    | 3        | 0.26          |
| (1,247)  | 1:34:A:ARG:HG3  | 1:49:A:LYS:H    | 3        | 0.26          |
| (1,165)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HA   | 2        | 0.26          |
| (1,165)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HA   | 2        | 0.26          |
| (1,155)  | 1:35:A:GLN:HA   | 1:35:A:GLN:HE21 | 3        | 0.26          |
| (1,1609) | 1:18:A:ARG:HD2  | 1:22:A:GLU:H    | 3        | 0.25          |
| (1,1609) | 1:18:A:ARG:HD3  | 1:22:A:GLU:H    | 3        | 0.25          |
| (1,1394) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HB3  | 2        | 0.25          |
| (1,1394) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HB3  | 2        | 0.25          |
| (1,1343) | 1:22:A:GLU:HG2  | 1:37:A:LEU:H    | 3        | 0.25          |
| (1,1343) | 1:22:A:GLU:HG3  | 1:37:A:LEU:H    | 3        | 0.25          |
| (1,1295) | 1:44:A:ASN:HA   | 1:45:A:GLU:HG2  | 1        | 0.25          |
| (1,1226) | 1:57:A:ALA:HB1  | 1:59:A:ILE:H    | 1        | 0.25          |
| (1,1226) | 1:57:A:ALA:HB2  | 1:59:A:ILE:H    | 1        | 0.25          |
| (1,1226) | 1:57:A:ALA:HB3  | 1:59:A:ILE:H    | 1        | 0.25          |
| (1,1186) | 1:11:A:PHE:HE1  | 1:43:A:LEU:HG   | 1        | 0.25          |
| (1,1186) | 1:11:A:PHE:HE2  | 1:43:A:LEU:HG   | 1        | 0.25          |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD11 | 1        | 0.25          |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD12 | 1        | 0.25          |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD13 | 1        | 0.25          |
| (1,1038) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HA   | 3        | 0.25          |
| (1,1038) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HA   | 3        | 0.25          |
| (1,1038) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HA   | 3        | 0.25          |
| (1,1024) | 1:15:A:GLN:H    | 1:15:A:GLN:HG2  | 3        | 0.25          |
| (1,748)  | 1:44:A:ASN:HD22 | 1:47:A:GLN:HE21 | 3        | 0.25          |
| (1,689)  | 1:23:A:PHE:HE1  | 1:27:A:ARG:H    | 1        | 0.25          |
| (1,689)  | 1:23:A:PHE:HE2  | 1:27:A:ARG:H    | 1        | 0.25          |
| (1,654)  | 1:48:A:ILE:HG21 | 1:51:A:TRP:HE3  | 3        | 0.25          |
| (1,654)  | 1:48:A:ILE:HG22 | 1:51:A:TRP:HE3  | 3        | 0.25          |
| (1,654)  | 1:48:A:ILE:HG23 | 1:51:A:TRP:HE3  | 3        | 0.25          |
| (1,644)  | 1:19:A:LEU:HD11 | 1:51:A:TRP:HZ2  | 3        | 0.25          |
| (1,644)  | 1:19:A:LEU:HD12 | 1:51:A:TRP:HZ2  | 3        | 0.25          |
| (1,644)  | 1:19:A:LEU:HD13 | 1:51:A:TRP:HZ2  | 3        | 0.25          |
| (1,626)  | 1:11:A:PHE:HE1  | 1:47:A:GLN:HA   | 2        | 0.25          |
| (1,626)  | 1:11:A:PHE:HE2  | 1:47:A:GLN:HA   | 2        | 0.25          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,594)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HE1  | 3        | 0.25          |
| (1,594)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HE2  | 3        | 0.25          |
| (1,439)  | 1:27:A:ARG:H    | 1:28:A:TYR:HE1  | 1        | 0.25          |
| (1,439)  | 1:27:A:ARG:H    | 1:28:A:TYR:HE2  | 1        | 0.25          |
| (1,331)  | 1:23:A:PHE:H    | 1:24:A:ASN:HA   | 1        | 0.25          |
| (1,209)  | 1:57:A:ALA:HB1  | 1:58:A:LYS:HA   | 1        | 0.25          |
| (1,209)  | 1:57:A:ALA:HB2  | 1:58:A:LYS:HA   | 1        | 0.25          |
| (1,209)  | 1:57:A:ALA:HB3  | 1:58:A:LYS:HA   | 1        | 0.25          |
| (1,66)   | 1:23:A:PHE:HB3  | 1:52:A:PHE:HE1  | 1        | 0.25          |
| (1,66)   | 1:23:A:PHE:HB3  | 1:52:A:PHE:HE2  | 1        | 0.25          |
| (1,1894) | 1:58:A:LYS:HA   | 1:58:A:LYS:HE2  | 3        | 0.24          |
| (1,1894) | 1:58:A:LYS:HA   | 1:58:A:LYS:HE3  | 3        | 0.24          |
| (1,1851) | 1:50:A:ILE:HD11 | 1:53:A:GLN:HE21 | 2        | 0.24          |
| (1,1851) | 1:50:A:ILE:HD11 | 1:53:A:GLN:HE22 | 2        | 0.24          |
| (1,1851) | 1:50:A:ILE:HD12 | 1:53:A:GLN:HE21 | 2        | 0.24          |
| (1,1851) | 1:50:A:ILE:HD12 | 1:53:A:GLN:HE22 | 2        | 0.24          |
| (1,1851) | 1:50:A:ILE:HD13 | 1:53:A:GLN:HE21 | 2        | 0.24          |
| (1,1851) | 1:50:A:ILE:HD13 | 1:53:A:GLN:HE22 | 2        | 0.24          |
| (1,1818) | 1:41:A:LEU:HD11 | 1:43:A:LEU:HG   | 3        | 0.24          |
| (1,1818) | 1:41:A:LEU:HD12 | 1:43:A:LEU:HG   | 3        | 0.24          |
| (1,1818) | 1:41:A:LEU:HD13 | 1:43:A:LEU:HG   | 3        | 0.24          |
| (1,1818) | 1:41:A:LEU:HD21 | 1:43:A:LEU:HG   | 3        | 0.24          |
| (1,1818) | 1:41:A:LEU:HD22 | 1:43:A:LEU:HG   | 3        | 0.24          |
| (1,1818) | 1:41:A:LEU:HD23 | 1:43:A:LEU:HG   | 3        | 0.24          |
| (1,1662) | 1:24:A:ASN:H    | 1:24:A:ASN:HD21 | 1        | 0.24          |
| (1,1662) | 1:24:A:ASN:H    | 1:24:A:ASN:HD22 | 1        | 0.24          |
| (1,1651) | 1:23:A:PHE:HD1  | 1:59:A:ILE:HG12 | 1        | 0.24          |
| (1,1651) | 1:23:A:PHE:HD1  | 1:59:A:ILE:HG13 | 1        | 0.24          |
| (1,1651) | 1:23:A:PHE:HD2  | 1:59:A:ILE:HG12 | 1        | 0.24          |
| (1,1651) | 1:23:A:PHE:HD2  | 1:59:A:ILE:HG13 | 1        | 0.24          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD11 | 3        | 0.24          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD12 | 3        | 0.24          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD13 | 3        | 0.24          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD21 | 3        | 0.24          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD22 | 3        | 0.24          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD23 | 3        | 0.24          |
| (1,1476) | 1:51:A:TRP:HB3  | 1:52:A:PHE:HB2  | 2        | 0.24          |
| (1,1357) | 1:16:A:LEU:HA   | 1:20:A:LYS:HB2  | 1        | 0.24          |
| (1,1235) | 1:45:A:GLU:H    | 1:46:A:ALA:HB1  | 1        | 0.24          |
| (1,1235) | 1:45:A:GLU:H    | 1:46:A:ALA:HB2  | 1        | 0.24          |
| (1,1235) | 1:45:A:GLU:H    | 1:46:A:ALA:HB3  | 1        | 0.24          |
| (1,1213) | 1:28:A:TYR:HA   | 1:29:A:LEU:HB3  | 1        | 0.24          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB1  | 1        | 0.24          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB2  | 1        | 0.24          |
| (1,1210) | 1:13:A:SER:HA   | 1:17:A:ALA:HB3  | 1        | 0.24          |
| (1,1174) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HG   | 1        | 0.24          |
| (1,1174) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HG   | 1        | 0.24          |
| (1,1174) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HG   | 1        | 0.24          |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG12 | 3        | 0.24          |
| (1,1160) | 1:38:A:SER:H    | 1:48:A:ILE:HG13 | 3        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD21 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD22 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HD23 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD21 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD22 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HD23 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD21 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD22 | 1        | 0.24          |
| (1,1110) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HD23 | 1        | 0.24          |
| (1,1038) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HA   | 1        | 0.24          |
| (1,1038) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HA   | 1        | 0.24          |
| (1,1038) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HA   | 1        | 0.24          |
| (1,1038) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HA   | 2        | 0.24          |
| (1,1038) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HA   | 2        | 0.24          |
| (1,1038) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HA   | 2        | 0.24          |
| (1,750)  | 1:11:A:PHE:HD1  | 1:15:A:GLN:HE22 | 1        | 0.24          |
| (1,750)  | 1:11:A:PHE:HD2  | 1:15:A:GLN:HE22 | 1        | 0.24          |
| (1,733)  | 1:23:A:PHE:HD1  | 1:56:A:ARG:HA   | 3        | 0.24          |
| (1,733)  | 1:23:A:PHE:HD2  | 1:56:A:ARG:HA   | 3        | 0.24          |
| (1,697)  | 1:11:A:PHE:HZ   | 1:51:A:TRP:HE1  | 2        | 0.24          |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD1  | 1        | 0.24          |
| (1,583)  | 1:29:A:LEU:HB3  | 1:52:A:PHE:HD2  | 1        | 0.24          |
| (1,399)  | 1:8:A:ARG:H     | 1:9:A:THR:HG21  | 2        | 0.24          |
| (1,399)  | 1:8:A:ARG:H     | 1:9:A:THR:HG22  | 2        | 0.24          |
| (1,399)  | 1:8:A:ARG:H     | 1:9:A:THR:HG23  | 2        | 0.24          |
| (1,247)  | 1:34:A:ARG:HG2  | 1:49:A:LYS:H    | 1        | 0.24          |
| (1,247)  | 1:34:A:ARG:HG3  | 1:49:A:LYS:H    | 1        | 0.24          |
| (1,236)  | 1:59:A:ILE:H    | 1:59:A:ILE:HB   | 3        | 0.24          |
| (1,29)   | 1:19:A:LEU:HD11 | 1:51:A:TRP:HH2  | 3        | 0.24          |
| (1,29)   | 1:19:A:LEU:HD12 | 1:51:A:TRP:HH2  | 3        | 0.24          |
| (1,29)   | 1:19:A:LEU:HD13 | 1:51:A:TRP:HH2  | 3        | 0.24          |
| (1,25)   | 1:15:A:GLN:H    | 1:17:A:ALA:H    | 2        | 0.24          |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG2  | 1        | 0.23          |
| (1,1740) | 1:30:A:THR:HA   | 1:31:A:GLU:HG3  | 1        | 0.23          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1585) | 1:16:A:LEU:HD11 | 1:18:A:ARG:H    | 2        | 0.23          |
| (1,1585) | 1:16:A:LEU:HD12 | 1:18:A:ARG:H    | 2        | 0.23          |
| (1,1585) | 1:16:A:LEU:HD13 | 1:18:A:ARG:H    | 2        | 0.23          |
| (1,1585) | 1:16:A:LEU:HD21 | 1:18:A:ARG:H    | 2        | 0.23          |
| (1,1585) | 1:16:A:LEU:HD22 | 1:18:A:ARG:H    | 2        | 0.23          |
| (1,1585) | 1:16:A:LEU:HD23 | 1:18:A:ARG:H    | 2        | 0.23          |
| (1,1540) | 1:12:A:SER:HB2  | 1:15:A:GLN:H    | 3        | 0.23          |
| (1,1540) | 1:12:A:SER:HB3  | 1:15:A:GLN:H    | 3        | 0.23          |
| (1,1482) | 1:11:A:PHE:HB2  | 1:16:A:LEU:HB2  | 2        | 0.23          |
| (1,1480) | 1:19:A:LEU:HG   | 1:51:A:TRP:HE3  | 1        | 0.23          |
| (1,1431) | 1:45:A:GLU:HB3  | 1:47:A:GLN:H    | 2        | 0.23          |
| (1,1365) | 1:38:A:SER:H    | 1:42:A:GLY:H    | 2        | 0.23          |
| (1,1256) | 1:34:A:ARG:HA   | 1:48:A:ILE:HB   | 2        | 0.23          |
| (1,1142) | 1:9:A:THR:HG21  | 1:10:A:ALA:HA   | 2        | 0.23          |
| (1,1142) | 1:9:A:THR:HG22  | 1:10:A:ALA:HA   | 2        | 0.23          |
| (1,1142) | 1:9:A:THR:HG23  | 1:10:A:ALA:HA   | 2        | 0.23          |
| (1,1141) | 1:50:A:ILE:HG21 | 1:54:A:ASN:HA   | 1        | 0.23          |
| (1,1141) | 1:50:A:ILE:HG22 | 1:54:A:ASN:HA   | 1        | 0.23          |
| (1,1141) | 1:50:A:ILE:HG23 | 1:54:A:ASN:HA   | 1        | 0.23          |
| (1,1105) | 1:41:A:LEU:HD21 | 1:42:A:GLY:H    | 1        | 0.23          |
| (1,1105) | 1:41:A:LEU:HD22 | 1:42:A:GLY:H    | 1        | 0.23          |
| (1,1105) | 1:41:A:LEU:HD23 | 1:42:A:GLY:H    | 1        | 0.23          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD21 | 1        | 0.23          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD22 | 1        | 0.23          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD23 | 1        | 0.23          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD21 | 1        | 0.23          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD22 | 1        | 0.23          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD23 | 1        | 0.23          |
| (1,1049) | 1:19:A:LEU:HD21 | 1:37:A:LEU:HA   | 2        | 0.23          |
| (1,1049) | 1:19:A:LEU:HD22 | 1:37:A:LEU:HA   | 2        | 0.23          |
| (1,1049) | 1:19:A:LEU:HD23 | 1:37:A:LEU:HA   | 2        | 0.23          |
| (1,1005) | 1:60:A:LYS:H    | 1:60:A:LYS:HD2  | 1        | 0.23          |
| (1,1005) | 1:60:A:LYS:H    | 1:60:A:LYS:HD3  | 1        | 0.23          |
| (1,953)  | 1:53:A:GLN:H    | 1:53:A:GLN:HB3  | 1        | 0.23          |
| (1,733)  | 1:23:A:PHE:HD1  | 1:56:A:ARG:HA   | 1        | 0.23          |
| (1,733)  | 1:23:A:PHE:HD2  | 1:56:A:ARG:HA   | 1        | 0.23          |
| (1,692)  | 1:58:A:LYS:H    | 1:60:A:LYS:H    | 1        | 0.23          |
| (1,650)  | 1:23:A:PHE:HE1  | 1:55:A:GLU:HB2  | 1        | 0.23          |
| (1,650)  | 1:23:A:PHE:HE2  | 1:55:A:GLU:HB2  | 1        | 0.23          |
| (1,640)  | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD11 | 1        | 0.23          |
| (1,640)  | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD12 | 1        | 0.23          |
| (1,640)  | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD13 | 1        | 0.23          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,563)  | 1:22:A:GLU:HA   | 1:52:A:PHE:HE1  | 2        | 0.23          |
| (1,563)  | 1:22:A:GLU:HA   | 1:52:A:PHE:HE2  | 2        | 0.23          |
| (1,563)  | 1:22:A:GLU:HA   | 1:52:A:PHE:HE1  | 3        | 0.23          |
| (1,563)  | 1:22:A:GLU:HA   | 1:52:A:PHE:HE2  | 3        | 0.23          |
| (1,517)  | 1:15:A:GLN:H    | 1:16:A:LEU:HA   | 2        | 0.23          |
| (1,464)  | 1:24:A:ASN:H    | 1:26:A:ASN:H    | 1        | 0.23          |
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD11 | 1        | 0.23          |
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD12 | 1        | 0.23          |
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD13 | 1        | 0.23          |
| (1,372)  | 1:44:A:ASN:H    | 1:46:A:ALA:H    | 2        | 0.23          |
| (1,333)  | 1:23:A:PHE:H    | 1:51:A:TRP:HH2  | 3        | 0.23          |
| (1,262)  | 1:15:A:GLN:H    | 1:15:A:GLN:HE21 | 1        | 0.23          |
| (1,108)  | 1:10:A:ALA:H    | 1:47:A:GLN:HE22 | 2        | 0.23          |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD11 | 3        | 0.22          |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD12 | 3        | 0.22          |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD13 | 3        | 0.22          |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD21 | 3        | 0.22          |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD22 | 3        | 0.22          |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD23 | 3        | 0.22          |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG12 | 2        | 0.22          |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG13 | 2        | 0.22          |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 2        | 0.22          |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 2        | 0.22          |
| (1,1687) | 1:26:A:ASN:HD21 | 1:27:A:ARG:H    | 2        | 0.22          |
| (1,1687) | 1:26:A:ASN:HD22 | 1:27:A:ARG:H    | 2        | 0.22          |
| (1,1613) | 1:18:A:ARG:HE   | 1:37:A:LEU:HD11 | 1        | 0.22          |
| (1,1613) | 1:18:A:ARG:HE   | 1:37:A:LEU:HD12 | 1        | 0.22          |
| (1,1613) | 1:18:A:ARG:HE   | 1:37:A:LEU:HD13 | 1        | 0.22          |
| (1,1613) | 1:18:A:ARG:HE   | 1:37:A:LEU:HD21 | 1        | 0.22          |
| (1,1613) | 1:18:A:ARG:HE   | 1:37:A:LEU:HD22 | 1        | 0.22          |
| (1,1613) | 1:18:A:ARG:HE   | 1:37:A:LEU:HD23 | 1        | 0.22          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD11 | 1        | 0.22          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD12 | 1        | 0.22          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD13 | 1        | 0.22          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD21 | 1        | 0.22          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD22 | 1        | 0.22          |
| (1,1562) | 1:15:A:GLN:H    | 1:41:A:LEU:HD23 | 1        | 0.22          |
| (1,1540) | 1:12:A:SER:HB2  | 1:15:A:GLN:H    | 1        | 0.22          |
| (1,1540) | 1:12:A:SER:HB3  | 1:15:A:GLN:H    | 1        | 0.22          |
| (1,1431) | 1:45:A:GLU:HB3  | 1:47:A:GLN:H    | 3        | 0.22          |
| (1,1411) | 1:26:A:ASN:HA   | 1:27:A:ARG:HG2  | 1        | 0.22          |
| (1,1404) | 1:34:A:ARG:HD3  | 1:45:A:GLU:HA   | 1        | 0.22          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1377) | 1:49:A:LYS:HB2  | 1:50:A:ILE:HA   | 2        | 0.22          |
| (1,1331) | 1:11:A:PHE:HE1  | 1:47:A:GLN:HG3  | 3        | 0.22          |
| (1,1331) | 1:11:A:PHE:HE2  | 1:47:A:GLN:HG3  | 3        | 0.22          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD11 | 2        | 0.22          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD12 | 2        | 0.22          |
| (1,1060) | 1:41:A:LEU:H    | 1:43:A:LEU:HD13 | 2        | 0.22          |
| (1,1047) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HB2  | 1        | 0.22          |
| (1,1047) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HB2  | 1        | 0.22          |
| (1,1047) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HB2  | 1        | 0.22          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD11 | 2        | 0.22          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD12 | 2        | 0.22          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD13 | 2        | 0.22          |
| (1,942)  | 1:32:A:ARG:HA   | 1:32:A:ARG:HG3  | 3        | 0.22          |
| (1,817)  | 1:11:A:PHE:HD1  | 1:15:A:GLN:HA   | 3        | 0.22          |
| (1,817)  | 1:11:A:PHE:HD2  | 1:15:A:GLN:HA   | 3        | 0.22          |
| (1,720)  | 1:23:A:PHE:HD1  | 1:27:A:ARG:HB2  | 3        | 0.22          |
| (1,720)  | 1:23:A:PHE:HD2  | 1:27:A:ARG:HB2  | 3        | 0.22          |
| (1,674)  | 1:23:A:PHE:HE1  | 1:56:A:ARG:HA   | 2        | 0.22          |
| (1,674)  | 1:23:A:PHE:HE2  | 1:56:A:ARG:HA   | 2        | 0.22          |
| (1,629)  | 1:21:A:ARG:H    | 1:51:A:TRP:HH2  | 1        | 0.22          |
| (1,626)  | 1:11:A:PHE:HE1  | 1:47:A:GLN:HA   | 3        | 0.22          |
| (1,626)  | 1:11:A:PHE:HE2  | 1:47:A:GLN:HA   | 3        | 0.22          |
| (1,575)  | 1:29:A:LEU:HG   | 1:30:A:THR:H    | 2        | 0.22          |
| (1,539)  | 1:32:A:ARG:HB3  | 1:33:A:ARG:H    | 1        | 0.22          |
| (1,488)  | 1:29:A:LEU:HB3  | 1:34:A:ARG:HE   | 2        | 0.22          |
| (1,410)  | 1:19:A:LEU:HD11 | 1:20:A:LYS:H    | 3        | 0.22          |
| (1,410)  | 1:19:A:LEU:HD12 | 1:20:A:LYS:H    | 3        | 0.22          |
| (1,410)  | 1:19:A:LEU:HD13 | 1:20:A:LYS:H    | 3        | 0.22          |
| (1,341)  | 1:12:A:SER:HB3  | 1:14:A:GLU:H    | 1        | 0.22          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB1  | 2        | 0.22          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB2  | 2        | 0.22          |
| (1,310)  | 1:44:A:ASN:H    | 1:46:A:ALA:HB3  | 2        | 0.22          |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE1  | 2        | 0.22          |
| (1,269)  | 1:11:A:PHE:H    | 1:11:A:PHE:HE2  | 2        | 0.22          |
| (1,189)  | 1:44:A:ASN:HA   | 1:44:A:ASN:HD21 | 1        | 0.22          |
| (1,55)   | 1:39:A:SER:H    | 1:39:A:SER:HB2  | 2        | 0.22          |
| (1,55)   | 1:39:A:SER:H    | 1:39:A:SER:HB3  | 2        | 0.22          |
| (1,35)   | 1:20:A:LYS:HG2  | 1:51:A:TRP:HH2  | 1        | 0.22          |
| (1,35)   | 1:20:A:LYS:HG3  | 1:51:A:TRP:HH2  | 1        | 0.22          |
| (1,20)   | 1:15:A:GLN:HA   | 1:15:A:GLN:HE21 | 1        | 0.22          |
| (1,16)   | 1:12:A:SER:H    | 1:15:A:GLN:H    | 3        | 0.22          |
| (1,1843) | 1:49:A:LYS:HG2  | 1:50:A:ILE:HA   | 1        | 0.21          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1843) | 1:49:A:LYS:HG3  | 1:50:A:ILE:HA   | 1        | 0.21          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD11 | 2        | 0.21          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD12 | 2        | 0.21          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD13 | 2        | 0.21          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD21 | 2        | 0.21          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD22 | 2        | 0.21          |
| (1,1782) | 1:37:A:LEU:HA   | 1:43:A:LEU:HD23 | 2        | 0.21          |
| (1,1738) | 1:29:A:LEU:HD11 | 1:53:A:GLN:H    | 3        | 0.21          |
| (1,1738) | 1:29:A:LEU:HD12 | 1:53:A:GLN:H    | 3        | 0.21          |
| (1,1738) | 1:29:A:LEU:HD13 | 1:53:A:GLN:H    | 3        | 0.21          |
| (1,1738) | 1:29:A:LEU:HD21 | 1:53:A:GLN:H    | 3        | 0.21          |
| (1,1738) | 1:29:A:LEU:HD22 | 1:53:A:GLN:H    | 3        | 0.21          |
| (1,1738) | 1:29:A:LEU:HD23 | 1:53:A:GLN:H    | 3        | 0.21          |
| (1,1539) | 1:12:A:SER:HB2  | 1:14:A:GLU:HB2  | 2        | 0.21          |
| (1,1539) | 1:12:A:SER:HB3  | 1:14:A:GLU:HB2  | 2        | 0.21          |
| (1,1539) | 1:12:A:SER:HB2  | 1:14:A:GLU:HB3  | 2        | 0.21          |
| (1,1539) | 1:12:A:SER:HB3  | 1:14:A:GLU:HB3  | 2        | 0.21          |
| (1,1497) | 1:6:A:ARG:HD2   | 1:7:A:PRO:HD2   | 3        | 0.21          |
| (1,1497) | 1:6:A:ARG:HD2   | 1:7:A:PRO:HD3   | 3        | 0.21          |
| (1,1497) | 1:6:A:ARG:HD3   | 1:7:A:PRO:HD2   | 3        | 0.21          |
| (1,1497) | 1:6:A:ARG:HD3   | 1:7:A:PRO:HD3   | 3        | 0.21          |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB1  | 2        | 0.21          |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB2  | 2        | 0.21          |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB3  | 2        | 0.21          |
| (1,1346) | 1:11:A:PHE:HB2  | 1:19:A:LEU:HD11 | 3        | 0.21          |
| (1,1346) | 1:11:A:PHE:HB2  | 1:19:A:LEU:HD12 | 3        | 0.21          |
| (1,1346) | 1:11:A:PHE:HB2  | 1:19:A:LEU:HD13 | 3        | 0.21          |
| (1,1284) | 1:33:A:ARG:HD3  | 1:36:A:GLN:HB2  | 1        | 0.21          |
| (1,1115) | 1:34:A:ARG:HG2  | 1:48:A:ILE:HG12 | 2        | 0.21          |
| (1,1115) | 1:34:A:ARG:HG2  | 1:48:A:ILE:HG13 | 2        | 0.21          |
| (1,1115) | 1:34:A:ARG:HG3  | 1:48:A:ILE:HG12 | 2        | 0.21          |
| (1,1115) | 1:34:A:ARG:HG3  | 1:48:A:ILE:HG13 | 2        | 0.21          |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD11 | 2        | 0.21          |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD12 | 2        | 0.21          |
| (1,1104) | 1:39:A:SER:H    | 1:48:A:ILE:HD13 | 2        | 0.21          |
| (1,1049) | 1:19:A:LEU:HD21 | 1:37:A:LEU:HA   | 1        | 0.21          |
| (1,1049) | 1:19:A:LEU:HD22 | 1:37:A:LEU:HA   | 1        | 0.21          |
| (1,1049) | 1:19:A:LEU:HD23 | 1:37:A:LEU:HA   | 1        | 0.21          |
| (1,1048) | 1:19:A:LEU:HD21 | 1:48:A:ILE:HA   | 1        | 0.21          |
| (1,1048) | 1:19:A:LEU:HD22 | 1:48:A:ILE:HA   | 1        | 0.21          |
| (1,1048) | 1:19:A:LEU:HD23 | 1:48:A:ILE:HA   | 1        | 0.21          |
| (1,942)  | 1:32:A:ARG:HA   | 1:32:A:ARG:HG3  | 1        | 0.21          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,838)  | 1:51:A:TRP:H    | 1:52:A:PHE:HA   | 3        | 0.21          |
| (1,791)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HA   | 1        | 0.21          |
| (1,755)  | 1:51:A:TRP:HD1  | 1:52:A:PHE:H    | 2        | 0.21          |
| (1,707)  | 1:29:A:LEU:HD21 | 1:51:A:TRP:HE3  | 1        | 0.21          |
| (1,707)  | 1:29:A:LEU:HD22 | 1:51:A:TRP:HE3  | 1        | 0.21          |
| (1,707)  | 1:29:A:LEU:HD23 | 1:51:A:TRP:HE3  | 1        | 0.21          |
| (1,654)  | 1:48:A:ILE:HG21 | 1:51:A:TRP:HE3  | 2        | 0.21          |
| (1,654)  | 1:48:A:ILE:HG22 | 1:51:A:TRP:HE3  | 2        | 0.21          |
| (1,654)  | 1:48:A:ILE:HG23 | 1:51:A:TRP:HE3  | 2        | 0.21          |
| (1,633)  | 1:33:A:ARG:H    | 1:35:A:GLN:H    | 1        | 0.21          |
| (1,393)  | 1:18:A:ARG:H    | 1:20:A:LYS:H    | 1        | 0.21          |
| (1,393)  | 1:18:A:ARG:H    | 1:20:A:LYS:H    | 2        | 0.21          |
| (1,342)  | 1:44:A:ASN:HA   | 1:46:A:ALA:H    | 1        | 0.21          |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE1  | 1        | 0.21          |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE2  | 1        | 0.21          |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE1  | 2        | 0.21          |
| (1,270)  | 1:11:A:PHE:HA   | 1:11:A:PHE:HE2  | 2        | 0.21          |
| (1,145)  | 1:34:A:ARG:HA   | 1:34:A:ARG:HE   | 2        | 0.21          |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD11 | 1        | 0.2           |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD12 | 1        | 0.2           |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD13 | 1        | 0.2           |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD21 | 1        | 0.2           |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD22 | 1        | 0.2           |
| (1,1813) | 1:41:A:LEU:HB2  | 1:43:A:LEU:HD23 | 1        | 0.2           |
| (1,1810) | 1:41:A:LEU:HA   | 1:41:A:LEU:HD11 | 1        | 0.2           |
| (1,1810) | 1:41:A:LEU:HA   | 1:41:A:LEU:HD12 | 1        | 0.2           |
| (1,1810) | 1:41:A:LEU:HA   | 1:41:A:LEU:HD13 | 1        | 0.2           |
| (1,1810) | 1:41:A:LEU:HA   | 1:41:A:LEU:HD21 | 1        | 0.2           |
| (1,1810) | 1:41:A:LEU:HA   | 1:41:A:LEU:HD22 | 1        | 0.2           |
| (1,1810) | 1:41:A:LEU:HA   | 1:41:A:LEU:HD23 | 1        | 0.2           |
| (1,1642) | 1:21:A:ARG:HD2  | 1:24:A:ASN:HD21 | 2        | 0.2           |
| (1,1642) | 1:21:A:ARG:HD2  | 1:24:A:ASN:HD22 | 2        | 0.2           |
| (1,1642) | 1:21:A:ARG:HD3  | 1:24:A:ASN:HD21 | 2        | 0.2           |
| (1,1642) | 1:21:A:ARG:HD3  | 1:24:A:ASN:HD22 | 2        | 0.2           |
| (1,1590) | 1:16:A:LEU:HD11 | 1:20:A:LYS:HA   | 3        | 0.2           |
| (1,1590) | 1:16:A:LEU:HD12 | 1:20:A:LYS:HA   | 3        | 0.2           |
| (1,1590) | 1:16:A:LEU:HD13 | 1:20:A:LYS:HA   | 3        | 0.2           |
| (1,1590) | 1:16:A:LEU:HD21 | 1:20:A:LYS:HA   | 3        | 0.2           |
| (1,1590) | 1:16:A:LEU:HD22 | 1:20:A:LYS:HA   | 3        | 0.2           |
| (1,1590) | 1:16:A:LEU:HD23 | 1:20:A:LYS:HA   | 3        | 0.2           |
| (1,1477) | 1:51:A:TRP:HB3  | 1:52:A:PHE:HA   | 1        | 0.2           |
| (1,1458) | 1:16:A:LEU:HA   | 1:51:A:TRP:HH2  | 3        | 0.2           |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1351) | 1:34:A:ARG:HG2  | 1:49:A:LYS:HE2  | 2        | 0.2           |
| (1,1351) | 1:34:A:ARG:HG2  | 1:49:A:LYS:HE3  | 2        | 0.2           |
| (1,1351) | 1:34:A:ARG:HG3  | 1:49:A:LYS:HE2  | 2        | 0.2           |
| (1,1351) | 1:34:A:ARG:HG3  | 1:49:A:LYS:HE3  | 2        | 0.2           |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB1  | 3        | 0.2           |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB2  | 3        | 0.2           |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB3  | 3        | 0.2           |
| (1,1341) | 1:56:A:ARG:H    | 1:56:A:ARG:HD2  | 3        | 0.2           |
| (1,1271) | 1:20:A:LYS:HB3  | 1:24:A:ASN:HD21 | 3        | 0.2           |
| (1,1269) | 1:33:A:ARG:HE   | 1:36:A:GLN:HB3  | 3        | 0.2           |
| (1,1174) | 1:19:A:LEU:HD21 | 1:41:A:LEU:HG   | 2        | 0.2           |
| (1,1174) | 1:19:A:LEU:HD22 | 1:41:A:LEU:HG   | 2        | 0.2           |
| (1,1174) | 1:19:A:LEU:HD23 | 1:41:A:LEU:HG   | 2        | 0.2           |
| (1,1142) | 1:9:A:THR:HG21  | 1:10:A:ALA:HA   | 1        | 0.2           |
| (1,1142) | 1:9:A:THR:HG22  | 1:10:A:ALA:HA   | 1        | 0.2           |
| (1,1142) | 1:9:A:THR:HG23  | 1:10:A:ALA:HA   | 1        | 0.2           |
| (1,1126) | 1:48:A:ILE:HG21 | 1:51:A:TRP:HB2  | 3        | 0.2           |
| (1,1126) | 1:48:A:ILE:HG22 | 1:51:A:TRP:HB2  | 3        | 0.2           |
| (1,1126) | 1:48:A:ILE:HG23 | 1:51:A:TRP:HB2  | 3        | 0.2           |
| (1,1059) | 1:55:A:GLU:HB2  | 1:56:A:ARG:H    | 2        | 0.2           |
| (1,1058) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HD1  | 2        | 0.2           |
| (1,1058) | 1:29:A:LEU:HD21 | 1:52:A:PHE:HD2  | 2        | 0.2           |
| (1,1058) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HD1  | 2        | 0.2           |
| (1,1058) | 1:29:A:LEU:HD22 | 1:52:A:PHE:HD2  | 2        | 0.2           |
| (1,1058) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HD1  | 2        | 0.2           |
| (1,1058) | 1:29:A:LEU:HD23 | 1:52:A:PHE:HD2  | 2        | 0.2           |
| (1,899)  | 1:29:A:LEU:H    | 1:52:A:PHE:HB2  | 2        | 0.2           |
| (1,820)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:HA   | 3        | 0.2           |
| (1,747)  | 1:23:A:PHE:HD1  | 1:51:A:TRP:HH2  | 2        | 0.2           |
| (1,747)  | 1:23:A:PHE:HD2  | 1:51:A:TRP:HH2  | 2        | 0.2           |
| (1,728)  | 1:16:A:LEU:HA   | 1:51:A:TRP:HZ2  | 3        | 0.2           |
| (1,607)  | 1:43:A:LEU:HB2  | 1:47:A:GLN:HE22 | 2        | 0.2           |
| (1,607)  | 1:43:A:LEU:HB3  | 1:47:A:GLN:HE22 | 2        | 0.2           |
| (1,546)  | 1:24:A:ASN:H    | 1:24:A:ASN:HD22 | 3        | 0.2           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD21 | 1        | 0.2           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD22 | 1        | 0.2           |
| (1,536)  | 1:42:A:GLY:H    | 1:43:A:LEU:HD23 | 1        | 0.2           |
| (1,478)  | 1:45:A:GLU:HA   | 1:47:A:GLN:H    | 1        | 0.2           |
| (1,440)  | 1:22:A:GLU:H    | 1:52:A:PHE:HZ   | 2        | 0.2           |
| (1,426)  | 1:19:A:LEU:HD21 | 1:20:A:LYS:H    | 1        | 0.2           |
| (1,426)  | 1:19:A:LEU:HD22 | 1:20:A:LYS:H    | 1        | 0.2           |
| (1,426)  | 1:19:A:LEU:HD23 | 1:20:A:LYS:H    | 1        | 0.2           |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD11 | 2        | 0.2           |
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD12 | 2        | 0.2           |
| (1,407)  | 1:18:A:ARG:HE   | 1:41:A:LEU:HD13 | 2        | 0.2           |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD11 | 2        | 0.2           |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD12 | 2        | 0.2           |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD13 | 2        | 0.2           |
| (1,189)  | 1:44:A:ASN:HA   | 1:44:A:ASN:HD21 | 3        | 0.2           |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG21 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG22 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD11 | 1:48:A:ILE:HG23 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG21 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG22 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD12 | 1:48:A:ILE:HG23 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG21 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG22 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD13 | 1:48:A:ILE:HG23 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG21 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG22 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD21 | 1:48:A:ILE:HG23 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG21 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG22 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD22 | 1:48:A:ILE:HG23 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG21 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG22 | 1        | 0.19          |
| (1,1831) | 1:43:A:LEU:HD23 | 1:48:A:ILE:HG23 | 1        | 0.19          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD11 | 3        | 0.19          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD12 | 3        | 0.19          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD13 | 3        | 0.19          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD21 | 3        | 0.19          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD22 | 3        | 0.19          |
| (1,1778) | 1:37:A:LEU:H    | 1:41:A:LEU:HD23 | 3        | 0.19          |
| (1,1747) | 1:32:A:ARG:HA   | 1:32:A:ARG:HG2  | 3        | 0.19          |
| (1,1747) | 1:32:A:ARG:HA   | 1:32:A:ARG:HG3  | 3        | 0.19          |
| (1,1614) | 1:18:A:ARG:HE   | 1:41:A:LEU:HD11 | 1        | 0.19          |
| (1,1614) | 1:18:A:ARG:HE   | 1:41:A:LEU:HD12 | 1        | 0.19          |
| (1,1614) | 1:18:A:ARG:HE   | 1:41:A:LEU:HD13 | 1        | 0.19          |
| (1,1614) | 1:18:A:ARG:HE   | 1:41:A:LEU:HD21 | 1        | 0.19          |
| (1,1614) | 1:18:A:ARG:HE   | 1:41:A:LEU:HD22 | 1        | 0.19          |
| (1,1614) | 1:18:A:ARG:HE   | 1:41:A:LEU:HD23 | 1        | 0.19          |
| (1,1597) | 1:18:A:ARG:H    | 1:18:A:ARG:HD2  | 3        | 0.19          |
| (1,1597) | 1:18:A:ARG:H    | 1:18:A:ARG:HD3  | 3        | 0.19          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD11 | 2        | 0.19          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD12 | 2        | 0.19          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD13 | 2        | 0.19          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD21 | 2        | 0.19          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD22 | 2        | 0.19          |
| (1,1512) | 1:11:A:PHE:HA   | 1:16:A:LEU:HD23 | 2        | 0.19          |
| (1,1425) | 1:20:A:LYS:HB3  | 1:24:A:ASN:HD22 | 3        | 0.19          |
| (1,1363) | 1:18:A:ARG:H    | 1:21:A:ARG:H    | 3        | 0.19          |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB1  | 1        | 0.19          |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB2  | 1        | 0.19          |
| (1,1350) | 1:44:A:ASN:HB3  | 1:46:A:ALA:HB3  | 1        | 0.19          |
| (1,1341) | 1:56:A:ARG:H    | 1:56:A:ARG:HD2  | 1        | 0.19          |
| (1,1319) | 1:20:A:LYS:HA   | 1:23:A:PHE:HB2  | 1        | 0.19          |
| (1,1298) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HB2  | 3        | 0.19          |
| (1,1053) | 1:23:A:PHE:HD1  | 1:55:A:GLU:HB2  | 1        | 0.19          |
| (1,1053) | 1:23:A:PHE:HD2  | 1:55:A:GLU:HB2  | 1        | 0.19          |
| (1,880)  | 1:22:A:GLU:HG2  | 1:37:A:LEU:HA   | 1        | 0.19          |
| (1,880)  | 1:22:A:GLU:HG3  | 1:37:A:LEU:HA   | 1        | 0.19          |
| (1,797)  | 1:38:A:SER:HA   | 1:45:A:GLU:HA   | 2        | 0.19          |
| (1,705)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:HB2  | 1        | 0.19          |
| (1,694)  | 1:23:A:PHE:HE1  | 1:28:A:TYR:H    | 1        | 0.19          |
| (1,694)  | 1:23:A:PHE:HE2  | 1:28:A:TYR:H    | 1        | 0.19          |
| (1,625)  | 1:19:A:LEU:HA   | 1:52:A:PHE:HE1  | 2        | 0.19          |
| (1,625)  | 1:19:A:LEU:HA   | 1:52:A:PHE:HE2  | 2        | 0.19          |
| (1,410)  | 1:19:A:LEU:HD11 | 1:20:A:LYS:H    | 1        | 0.19          |
| (1,410)  | 1:19:A:LEU:HD12 | 1:20:A:LYS:H    | 1        | 0.19          |
| (1,410)  | 1:19:A:LEU:HD13 | 1:20:A:LYS:H    | 1        | 0.19          |
| (1,387)  | 1:38:A:SER:HA   | 1:40:A:GLU:H    | 3        | 0.19          |
| (1,372)  | 1:44:A:ASN:H    | 1:46:A:ALA:H    | 3        | 0.19          |
| (1,322)  | 1:44:A:ASN:H    | 1:48:A:ILE:H    | 1        | 0.19          |
| (1,303)  | 1:12:A:SER:H    | 1:15:A:GLN:HB3  | 3        | 0.19          |
| (1,102)  | 1:29:A:LEU:HA   | 1:33:A:ARG:HE   | 3        | 0.19          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD11 | 2        | 0.18          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD12 | 2        | 0.18          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD13 | 2        | 0.18          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD21 | 2        | 0.18          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD22 | 2        | 0.18          |
| (1,1811) | 1:41:A:LEU:HA   | 1:43:A:LEU:HD23 | 2        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD11 | 1:37:A:LEU:HB2  | 1        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD12 | 1:37:A:LEU:HB2  | 1        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD13 | 1:37:A:LEU:HB2  | 1        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD21 | 1:37:A:LEU:HB2  | 1        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD22 | 1:37:A:LEU:HB2  | 1        | 0.18          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1722) | 1:29:A:LEU:HD23 | 1:37:A:LEU:HB2  | 1        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD11 | 1:37:A:LEU:HB2  | 3        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD12 | 1:37:A:LEU:HB2  | 3        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD13 | 1:37:A:LEU:HB2  | 3        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD21 | 1:37:A:LEU:HB2  | 3        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD22 | 1:37:A:LEU:HB2  | 3        | 0.18          |
| (1,1722) | 1:29:A:LEU:HD23 | 1:37:A:LEU:HB2  | 3        | 0.18          |
| (1,1606) | 1:18:A:ARG:HD2  | 1:19:A:LEU:H    | 2        | 0.18          |
| (1,1606) | 1:18:A:ARG:HD3  | 1:19:A:LEU:H    | 2        | 0.18          |
| (1,1477) | 1:51:A:TRP:HB3  | 1:52:A:PHE:HA   | 3        | 0.18          |
| (1,1403) | 1:23:A:PHE:HD1  | 1:27:A:ARG:H    | 3        | 0.18          |
| (1,1403) | 1:23:A:PHE:HD2  | 1:27:A:ARG:H    | 3        | 0.18          |
| (1,1295) | 1:44:A:ASN:HA   | 1:45:A:GLU:HG2  | 2        | 0.18          |
| (1,1206) | 1:34:A:ARG:HG2  | 1:45:A:GLU:HA   | 3        | 0.18          |
| (1,1206) | 1:34:A:ARG:HG3  | 1:45:A:GLU:HA   | 3        | 0.18          |
| (1,1162) | 1:50:A:ILE:HD11 | 1:51:A:TRP:H    | 2        | 0.18          |
| (1,1162) | 1:50:A:ILE:HD12 | 1:51:A:TRP:H    | 2        | 0.18          |
| (1,1162) | 1:50:A:ILE:HD13 | 1:51:A:TRP:H    | 2        | 0.18          |
| (1,1126) | 1:48:A:ILE:HG21 | 1:51:A:TRP:HB2  | 1        | 0.18          |
| (1,1126) | 1:48:A:ILE:HG22 | 1:51:A:TRP:HB2  | 1        | 0.18          |
| (1,1126) | 1:48:A:ILE:HG23 | 1:51:A:TRP:HB2  | 1        | 0.18          |
| (1,839)  | 1:51:A:TRP:HB2  | 1:53:A:GLN:H    | 1        | 0.18          |
| (1,814)  | 1:53:A:GLN:HA   | 1:54:A:ASN:HA   | 1        | 0.18          |
| (1,705)  | 1:23:A:PHE:HZ   | 1:55:A:GLU:HB2  | 2        | 0.18          |
| (1,697)  | 1:11:A:PHE:HZ   | 1:51:A:TRP:HE1  | 3        | 0.18          |
| (1,670)  | 1:48:A:ILE:HA   | 1:51:A:TRP:HE3  | 2        | 0.18          |
| (1,633)  | 1:33:A:ARG:H    | 1:35:A:GLN:H    | 2        | 0.18          |
| (1,602)  | 1:16:A:LEU:HB3  | 1:51:A:TRP:HZ2  | 1        | 0.18          |
| (1,517)  | 1:15:A:GLN:H    | 1:16:A:LEU:HA   | 1        | 0.18          |
| (1,410)  | 1:19:A:LEU:HD11 | 1:20:A:LYS:H    | 2        | 0.18          |
| (1,410)  | 1:19:A:LEU:HD12 | 1:20:A:LYS:H    | 2        | 0.18          |
| (1,410)  | 1:19:A:LEU:HD13 | 1:20:A:LYS:H    | 2        | 0.18          |
| (1,313)  | 1:43:A:LEU:HB2  | 1:45:A:GLU:H    | 2        | 0.18          |
| (1,313)  | 1:43:A:LEU:HB3  | 1:45:A:GLU:H    | 2        | 0.18          |
| (1,294)  | 1:12:A:SER:H    | 1:16:A:LEU:H    | 1        | 0.18          |
| (1,202)  | 1:47:A:GLN:HG2  | 1:47:A:GLN:HE22 | 2        | 0.18          |
| (1,181)  | 1:8:A:ARG:H     | 1:8:A:ARG:HB2   | 2        | 0.18          |
| (1,72)   | 1:17:A:ALA:H    | 1:18:A:ARG:H    | 1        | 0.18          |
| (1,63)   | 1:44:A:ASN:H    | 1:45:A:GLU:H    | 2        | 0.18          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD11 | 2        | 0.17          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD12 | 2        | 0.17          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD13 | 2        | 0.17          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD21 | 2        | 0.17          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD22 | 2        | 0.17          |
| (1,1808) | 1:41:A:LEU:H    | 1:41:A:LEU:HD23 | 2        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD11 | 1:40:A:GLU:HG2  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD11 | 1:40:A:GLU:HG3  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD12 | 1:40:A:GLU:HG2  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD12 | 1:40:A:GLU:HG3  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD13 | 1:40:A:GLU:HG2  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD13 | 1:40:A:GLU:HG3  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD21 | 1:40:A:GLU:HG2  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD21 | 1:40:A:GLU:HG3  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD22 | 1:40:A:GLU:HG2  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD22 | 1:40:A:GLU:HG3  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD23 | 1:40:A:GLU:HG2  | 3        | 0.17          |
| (1,1788) | 1:37:A:LEU:HD23 | 1:40:A:GLU:HG3  | 3        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD11 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD12 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD13 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD21 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD22 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD2  | 1:37:A:LEU:HD23 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD11 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD12 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD13 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD21 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD22 | 1        | 0.17          |
| (1,1764) | 1:33:A:ARG:HD3  | 1:37:A:LEU:HD23 | 1        | 0.17          |
| (1,1648) | 1:23:A:PHE:HA   | 1:26:A:ASN:HB2  | 1        | 0.17          |
| (1,1648) | 1:23:A:PHE:HA   | 1:26:A:ASN:HB3  | 1        | 0.17          |
| (1,1606) | 1:18:A:ARG:HD2  | 1:19:A:LEU:H    | 1        | 0.17          |
| (1,1606) | 1:18:A:ARG:HD3  | 1:19:A:LEU:H    | 1        | 0.17          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD11 | 1        | 0.17          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD12 | 1        | 0.17          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD13 | 1        | 0.17          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD21 | 1        | 0.17          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD22 | 1        | 0.17          |
| (1,1579) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD23 | 1        | 0.17          |
| (1,1471) | 1:23:A:PHE:HD1  | 1:56:A:ARG:H    | 2        | 0.17          |
| (1,1471) | 1:23:A:PHE:HD2  | 1:56:A:ARG:H    | 2        | 0.17          |
| (1,1361) | 1:57:A:ALA:H    | 1:59:A:ILE:H    | 2        | 0.17          |
| (1,1237) | 1:42:A:GLY:H    | 1:43:A:LEU:HB2  | 3        | 0.17          |
| (1,1237) | 1:42:A:GLY:H    | 1:43:A:LEU:HB3  | 3        | 0.17          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1183) | 1:10:A:ALA:HB1  | 1:11:A:PHE:HA   | 3        | 0.17          |
| (1,1183) | 1:10:A:ALA:HB2  | 1:11:A:PHE:HA   | 3        | 0.17          |
| (1,1183) | 1:10:A:ALA:HB3  | 1:11:A:PHE:HA   | 3        | 0.17          |
| (1,1057) | 1:19:A:LEU:HD21 | 1:48:A:ILE:H    | 3        | 0.17          |
| (1,1057) | 1:19:A:LEU:HD22 | 1:48:A:ILE:H    | 3        | 0.17          |
| (1,1057) | 1:19:A:LEU:HD23 | 1:48:A:ILE:H    | 3        | 0.17          |
| (1,1051) | 1:11:A:PHE:HA   | 1:43:A:LEU:HD11 | 2        | 0.17          |
| (1,1051) | 1:11:A:PHE:HA   | 1:43:A:LEU:HD12 | 2        | 0.17          |
| (1,1051) | 1:11:A:PHE:HA   | 1:43:A:LEU:HD13 | 2        | 0.17          |
| (1,1005) | 1:60:A:LYS:H    | 1:60:A:LYS:HD2  | 2        | 0.17          |
| (1,1005) | 1:60:A:LYS:H    | 1:60:A:LYS:HD3  | 2        | 0.17          |
| (1,818)  | 1:48:A:ILE:HA   | 1:51:A:TRP:HD1  | 2        | 0.17          |
| (1,731)  | 1:20:A:LYS:HA   | 1:23:A:PHE:HD1  | 3        | 0.17          |
| (1,731)  | 1:20:A:LYS:HA   | 1:23:A:PHE:HD2  | 3        | 0.17          |
| (1,720)  | 1:23:A:PHE:HD1  | 1:27:A:ARG:HB2  | 1        | 0.17          |
| (1,720)  | 1:23:A:PHE:HD2  | 1:27:A:ARG:HB2  | 1        | 0.17          |
| (1,670)  | 1:48:A:ILE:HA   | 1:51:A:TRP:HE3  | 1        | 0.17          |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD1  | 3        | 0.17          |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD2  | 3        | 0.17          |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD1  | 3        | 0.17          |
| (1,508)  | 1:19:A:LEU:HD11 | 1:52:A:PHE:HD2  | 3        | 0.17          |
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD1  | 3        | 0.17          |
| (1,508)  | 1:19:A:LEU:HD12 | 1:52:A:PHE:HD2  | 3        | 0.17          |
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD1  | 3        | 0.17          |
| (1,508)  | 1:19:A:LEU:HD13 | 1:52:A:PHE:HD2  | 3        | 0.17          |
| (1,377)  | 1:37:A:LEU:H    | 1:40:A:GLU:H    | 2        | 0.17          |
| (1,365)  | 1:50:A:ILE:HB   | 1:52:A:PHE:H    | 3        | 0.17          |
| (1,325)  | 1:20:A:LYS:HD2  | 1:23:A:PHE:H    | 1        | 0.17          |
| (1,325)  | 1:20:A:LYS:HD3  | 1:23:A:PHE:H    | 1        | 0.17          |
| (1,317)  | 1:45:A:GLU:H    | 1:46:A:ALA:HA   | 3        | 0.17          |
| (1,300)  | 1:12:A:SER:H    | 1:15:A:GLN:HA   | 1        | 0.17          |
| (1,190)  | 1:23:A:PHE:HB2  | 1:51:A:TRP:HE3  | 3        | 0.17          |
| (1,109)  | 1:23:A:PHE:HD1  | 1:26:A:ASN:H    | 1        | 0.17          |
| (1,109)  | 1:23:A:PHE:HD2  | 1:26:A:ASN:H    | 1        | 0.17          |
| (1,34)   | 1:16:A:LEU:HD11 | 1:51:A:TRP:HH2  | 3        | 0.17          |
| (1,34)   | 1:16:A:LEU:HD12 | 1:51:A:TRP:HH2  | 3        | 0.17          |
| (1,34)   | 1:16:A:LEU:HD13 | 1:51:A:TRP:HH2  | 3        | 0.17          |
| (1,1880) | 1:55:A:GLU:HA   | 1:58:A:LYS:HG2  | 1        | 0.16          |
| (1,1880) | 1:55:A:GLU:HA   | 1:58:A:LYS:HG3  | 1        | 0.16          |
| (1,1747) | 1:32:A:ARG:HA   | 1:32:A:ARG:HG2  | 1        | 0.16          |
| (1,1747) | 1:32:A:ARG:HA   | 1:32:A:ARG:HG3  | 1        | 0.16          |
| (1,1732) | 1:29:A:LEU:HD11 | 1:51:A:TRP:HE3  | 1        | 0.16          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1732) | 1:29:A:LEU:HD12 | 1:51:A:TRP:HE3  | 1        | 0.16          |
| (1,1732) | 1:29:A:LEU:HD13 | 1:51:A:TRP:HE3  | 1        | 0.16          |
| (1,1732) | 1:29:A:LEU:HD21 | 1:51:A:TRP:HE3  | 1        | 0.16          |
| (1,1732) | 1:29:A:LEU:HD22 | 1:51:A:TRP:HE3  | 1        | 0.16          |
| (1,1732) | 1:29:A:LEU:HD23 | 1:51:A:TRP:HE3  | 1        | 0.16          |
| (1,1700) | 1:27:A:ARG:HD2  | 1:28:A:TYR:HE1  | 1        | 0.16          |
| (1,1700) | 1:27:A:ARG:HD2  | 1:28:A:TYR:HE2  | 1        | 0.16          |
| (1,1700) | 1:27:A:ARG:HD3  | 1:28:A:TYR:HE1  | 1        | 0.16          |
| (1,1700) | 1:27:A:ARG:HD3  | 1:28:A:TYR:HE2  | 1        | 0.16          |
| (1,1506) | 1:8:A:ARG:HG2   | 1:9:A:THR:H     | 1        | 0.16          |
| (1,1506) | 1:8:A:ARG:HG3   | 1:9:A:THR:H     | 1        | 0.16          |
| (1,1442) | 1:50:A:ILE:HG13 | 1:51:A:TRP:H    | 3        | 0.16          |
| (1,1421) | 1:52:A:PHE:HA   | 1:55:A:GLU:HA   | 2        | 0.16          |
| (1,1373) | 1:23:A:PHE:HE1  | 1:27:A:ARG:HD2  | 2        | 0.16          |
| (1,1373) | 1:23:A:PHE:HE2  | 1:27:A:ARG:HD2  | 2        | 0.16          |
| (1,1363) | 1:18:A:ARG:H    | 1:21:A:ARG:H    | 2        | 0.16          |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE1  | 3        | 0.16          |
| (1,1225) | 1:37:A:LEU:HG   | 1:52:A:PHE:HE2  | 3        | 0.16          |
| (1,1220) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HB2  | 1        | 0.16          |
| (1,1220) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HB3  | 1        | 0.16          |
| (1,1220) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HB2  | 1        | 0.16          |
| (1,1220) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HB3  | 1        | 0.16          |
| (1,1141) | 1:50:A:ILE:HG21 | 1:54:A:ASN:HA   | 2        | 0.16          |
| (1,1141) | 1:50:A:ILE:HG22 | 1:54:A:ASN:HA   | 2        | 0.16          |
| (1,1141) | 1:50:A:ILE:HG23 | 1:54:A:ASN:HA   | 2        | 0.16          |
| (1,1118) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HG21 | 2        | 0.16          |
| (1,1118) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HG22 | 2        | 0.16          |
| (1,1118) | 1:34:A:ARG:HB3  | 1:48:A:ILE:HG23 | 2        | 0.16          |
| (1,1043) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HE   | 1        | 0.16          |
| (1,1043) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HE   | 1        | 0.16          |
| (1,1043) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HE   | 1        | 0.16          |
| (1,910)  | 1:37:A:LEU:H    | 1:37:A:LEU:HB3  | 3        | 0.16          |
| (1,896)  | 1:34:A:ARG:HD2  | 1:45:A:GLU:HG3  | 3        | 0.16          |
| (1,839)  | 1:51:A:TRP:HB2  | 1:53:A:GLN:H    | 3        | 0.16          |
| (1,817)  | 1:11:A:PHE:HD1  | 1:15:A:GLN:HA   | 2        | 0.16          |
| (1,817)  | 1:11:A:PHE:HD2  | 1:15:A:GLN:HA   | 2        | 0.16          |
| (1,779)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HB3  | 2        | 0.16          |
| (1,779)  | 1:55:A:GLU:HA   | 1:58:A:LYS:HB3  | 3        | 0.16          |
| (1,722)  | 1:23:A:PHE:HE1  | 1:27:A:ARG:HB2  | 1        | 0.16          |
| (1,722)  | 1:23:A:PHE:HE2  | 1:27:A:ARG:HB2  | 1        | 0.16          |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD21 | 3        | 0.16          |
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD22 | 3        | 0.16          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,708)  | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD23 | 3        | 0.16          |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD21 | 3        | 0.16          |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD22 | 3        | 0.16          |
| (1,708)  | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD23 | 3        | 0.16          |
| (1,694)  | 1:23:A:PHE:HE1  | 1:28:A:TYR:H    | 2        | 0.16          |
| (1,694)  | 1:23:A:PHE:HE2  | 1:28:A:TYR:H    | 2        | 0.16          |
| (1,644)  | 1:19:A:LEU:HD11 | 1:51:A:TRP:HZ2  | 1        | 0.16          |
| (1,644)  | 1:19:A:LEU:HD12 | 1:51:A:TRP:HZ2  | 1        | 0.16          |
| (1,644)  | 1:19:A:LEU:HD13 | 1:51:A:TRP:HZ2  | 1        | 0.16          |
| (1,567)  | 1:52:A:PHE:H    | 1:52:A:PHE:HE1  | 1        | 0.16          |
| (1,567)  | 1:52:A:PHE:H    | 1:52:A:PHE:HE2  | 1        | 0.16          |
| (1,567)  | 1:52:A:PHE:H    | 1:52:A:PHE:HE1  | 2        | 0.16          |
| (1,567)  | 1:52:A:PHE:H    | 1:52:A:PHE:HE2  | 2        | 0.16          |
| (1,535)  | 1:41:A:LEU:HD11 | 1:42:A:GLY:H    | 3        | 0.16          |
| (1,535)  | 1:41:A:LEU:HD12 | 1:42:A:GLY:H    | 3        | 0.16          |
| (1,535)  | 1:41:A:LEU:HD13 | 1:42:A:GLY:H    | 3        | 0.16          |
| (1,426)  | 1:19:A:LEU:HD21 | 1:20:A:LYS:H    | 3        | 0.16          |
| (1,426)  | 1:19:A:LEU:HD22 | 1:20:A:LYS:H    | 3        | 0.16          |
| (1,426)  | 1:19:A:LEU:HD23 | 1:20:A:LYS:H    | 3        | 0.16          |
| (1,398)  | 1:46:A:ALA:H    | 1:50:A:ILE:HD11 | 1        | 0.16          |
| (1,398)  | 1:46:A:ALA:H    | 1:50:A:ILE:HD12 | 1        | 0.16          |
| (1,398)  | 1:46:A:ALA:H    | 1:50:A:ILE:HD13 | 1        | 0.16          |
| (1,353)  | 1:7:A:PRO:HD3   | 1:8:A:ARG:H     | 1        | 0.16          |
| (1,314)  | 1:45:A:GLU:H    | 1:48:A:ILE:HB   | 3        | 0.16          |
| (1,288)  | 1:45:A:GLU:H    | 1:47:A:GLN:H    | 1        | 0.16          |
| (1,9)    | 1:14:A:GLU:H    | 1:17:A:ALA:H    | 1        | 0.16          |
| (1,1861) | 1:52:A:PHE:HA   | 1:55:A:GLU:HG2  | 1        | 0.15          |
| (1,1861) | 1:52:A:PHE:HA   | 1:55:A:GLU:HG3  | 1        | 0.15          |
| (1,1798) | 1:38:A:SER:HB2  | 1:43:A:LEU:HD11 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB2  | 1:43:A:LEU:HD12 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB2  | 1:43:A:LEU:HD13 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB2  | 1:43:A:LEU:HD21 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB2  | 1:43:A:LEU:HD22 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB2  | 1:43:A:LEU:HD23 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB3  | 1:43:A:LEU:HD11 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB3  | 1:43:A:LEU:HD12 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB3  | 1:43:A:LEU:HD13 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB3  | 1:43:A:LEU:HD21 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB3  | 1:43:A:LEU:HD22 | 3        | 0.15          |
| (1,1798) | 1:38:A:SER:HB3  | 1:43:A:LEU:HD23 | 3        | 0.15          |
| (1,1609) | 1:18:A:ARG:HD2  | 1:22:A:GLU:H    | 2        | 0.15          |
| (1,1609) | 1:18:A:ARG:HD3  | 1:22:A:GLU:H    | 2        | 0.15          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1543) | 1:12:A:SER:HB2  | 1:15:A:GLN:HE21 | 2        | 0.15          |
| (1,1543) | 1:12:A:SER:HB3  | 1:15:A:GLN:HE21 | 2        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD11 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD12 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD13 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD21 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD22 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD23 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD11 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD12 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD13 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD21 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD22 | 1        | 0.15          |
| (1,1521) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD23 | 1        | 0.15          |
| (1,1488) | 1:4:A:GLU:HB2   | 1:5:A:LYS:H     | 3        | 0.15          |
| (1,1488) | 1:4:A:GLU:HB3   | 1:5:A:LYS:H     | 3        | 0.15          |
| (1,1480) | 1:19:A:LEU:HG   | 1:51:A:TRP:HE3  | 2        | 0.15          |
| (1,1144) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HA   | 2        | 0.15          |
| (1,1144) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HA   | 2        | 0.15          |
| (1,1144) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HA   | 2        | 0.15          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD21 | 3        | 0.15          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD22 | 3        | 0.15          |
| (1,1080) | 1:22:A:GLU:HG2  | 1:41:A:LEU:HD23 | 3        | 0.15          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD21 | 3        | 0.15          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD22 | 3        | 0.15          |
| (1,1080) | 1:22:A:GLU:HG3  | 1:41:A:LEU:HD23 | 3        | 0.15          |
| (1,1075) | 1:47:A:GLN:HB3  | 1:50:A:ILE:HD11 | 2        | 0.15          |
| (1,1075) | 1:47:A:GLN:HB3  | 1:50:A:ILE:HD12 | 2        | 0.15          |
| (1,1075) | 1:47:A:GLN:HB3  | 1:50:A:ILE:HD13 | 2        | 0.15          |
| (1,1068) | 1:19:A:LEU:HD21 | 1:51:A:TRP:HB2  | 1        | 0.15          |
| (1,1068) | 1:19:A:LEU:HD22 | 1:51:A:TRP:HB2  | 1        | 0.15          |
| (1,1068) | 1:19:A:LEU:HD23 | 1:51:A:TRP:HB2  | 1        | 0.15          |
| (1,920)  | 1:21:A:ARG:H    | 1:21:A:ARG:HB3  | 2        | 0.15          |
| (1,880)  | 1:22:A:GLU:HG2  | 1:37:A:LEU:HA   | 3        | 0.15          |
| (1,880)  | 1:22:A:GLU:HG3  | 1:37:A:LEU:HA   | 3        | 0.15          |
| (1,875)  | 1:48:A:ILE:HG21 | 1:49:A:LYS:HA   | 2        | 0.15          |
| (1,875)  | 1:48:A:ILE:HG22 | 1:49:A:LYS:HA   | 2        | 0.15          |
| (1,875)  | 1:48:A:ILE:HG23 | 1:49:A:LYS:HA   | 2        | 0.15          |
| (1,694)  | 1:23:A:PHE:HE1  | 1:28:A:TYR:H    | 3        | 0.15          |
| (1,694)  | 1:23:A:PHE:HE2  | 1:28:A:TYR:H    | 3        | 0.15          |
| (1,660)  | 1:22:A:GLU:HG2  | 1:52:A:PHE:HZ   | 2        | 0.15          |
| (1,660)  | 1:22:A:GLU:HG3  | 1:52:A:PHE:HZ   | 2        | 0.15          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,659)  | 1:11:A:PHE:HZ   | 1:47:A:GLN:HG3  | 3        | 0.15          |
| (1,609)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HB2  | 2        | 0.15          |
| (1,609)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HB2  | 2        | 0.15          |
| (1,590)  | 1:45:A:GLU:HA   | 1:48:A:ILE:H    | 3        | 0.15          |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD1  | 1        | 0.15          |
| (1,559)  | 1:29:A:LEU:H    | 1:52:A:PHE:HD2  | 1        | 0.15          |
| (1,527)  | 1:23:A:PHE:HZ   | 1:56:A:ARG:HE   | 1        | 0.15          |
| (1,451)  | 1:17:A:ALA:H    | 1:20:A:LYS:H    | 3        | 0.15          |
| (1,416)  | 1:22:A:GLU:H    | 1:23:A:PHE:HA   | 2        | 0.15          |
| (1,415)  | 1:5:A:LYS:HA    | 1:6:A:ARG:H     | 1        | 0.15          |
| (1,402)  | 1:34:A:ARG:H    | 1:35:A:GLN:HG3  | 2        | 0.15          |
| (1,320)  | 1:45:A:GLU:H    | 1:48:A:ILE:H    | 3        | 0.15          |
| (1,228)  | 1:43:A:LEU:H    | 1:44:A:ASN:H    | 3        | 0.15          |
| (1,181)  | 1:8:A:ARG:H     | 1:8:A:ARG:HB2   | 3        | 0.15          |
| (1,101)  | 1:24:A:ASN:H    | 1:24:A:ASN:HD21 | 3        | 0.15          |
| (1,1859) | 1:51:A:TRP:HZ2  | 1:55:A:GLU:HG2  | 2        | 0.14          |
| (1,1859) | 1:51:A:TRP:HZ2  | 1:55:A:GLU:HG3  | 2        | 0.14          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD11 | 3        | 0.14          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD12 | 3        | 0.14          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD13 | 3        | 0.14          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD21 | 3        | 0.14          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD22 | 3        | 0.14          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD23 | 3        | 0.14          |
| (1,1708) | 1:29:A:LEU:HD11 | 1:30:A:THR:H    | 1        | 0.14          |
| (1,1708) | 1:29:A:LEU:HD12 | 1:30:A:THR:H    | 1        | 0.14          |
| (1,1708) | 1:29:A:LEU:HD13 | 1:30:A:THR:H    | 1        | 0.14          |
| (1,1708) | 1:29:A:LEU:HD21 | 1:30:A:THR:H    | 1        | 0.14          |
| (1,1708) | 1:29:A:LEU:HD22 | 1:30:A:THR:H    | 1        | 0.14          |
| (1,1708) | 1:29:A:LEU:HD23 | 1:30:A:THR:H    | 1        | 0.14          |
| (1,1687) | 1:26:A:ASN:HD21 | 1:27:A:ARG:H    | 1        | 0.14          |
| (1,1687) | 1:26:A:ASN:HD22 | 1:27:A:ARG:H    | 1        | 0.14          |
| (1,1678) | 1:26:A:ASN:H    | 1:26:A:ASN:HD21 | 3        | 0.14          |
| (1,1678) | 1:26:A:ASN:H    | 1:26:A:ASN:HD22 | 3        | 0.14          |
| (1,1606) | 1:18:A:ARG:HD2  | 1:19:A:LEU:H    | 3        | 0.14          |
| (1,1606) | 1:18:A:ARG:HD3  | 1:19:A:LEU:H    | 3        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD11 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD12 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD13 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD21 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD22 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD1  | 1:41:A:LEU:HD23 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD2  | 1:41:A:LEU:HD11 | 1        | 0.14          |

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| Key      | Atom-1         | Atom-2          | Model ID | Violation (Å) |
|----------|----------------|-----------------|----------|---------------|
| (1,1522) | 1:11:A:PHE:HD2 | 1:41:A:LEU:HD12 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD2 | 1:41:A:LEU:HD13 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD2 | 1:41:A:LEU:HD21 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD2 | 1:41:A:LEU:HD22 | 1        | 0.14          |
| (1,1522) | 1:11:A:PHE:HD2 | 1:41:A:LEU:HD23 | 1        | 0.14          |
| (1,1462) | 1:41:A:LEU:H   | 1:42:A:GLY:HA2  | 2        | 0.14          |
| (1,1401) | 1:20:A:LYS:H   | 1:23:A:PHE:HB3  | 1        | 0.14          |
| (1,1401) | 1:20:A:LYS:H   | 1:23:A:PHE:HB3  | 2        | 0.14          |
| (1,1357) | 1:16:A:LEU:HA  | 1:20:A:LYS:HB2  | 3        | 0.14          |
| (1,1345) | 1:20:A:LYS:HE2 | 1:51:A:TRP:HE1  | 2        | 0.14          |
| (1,1345) | 1:20:A:LYS:HE3 | 1:51:A:TRP:HE1  | 2        | 0.14          |
| (1,1329) | 1:23:A:PHE:HB2 | 1:51:A:TRP:HZ2  | 2        | 0.14          |
| (1,1308) | 1:19:A:LEU:HB2 | 1:22:A:GLU:HG2  | 1        | 0.14          |
| (1,1308) | 1:19:A:LEU:HB2 | 1:22:A:GLU:HG3  | 1        | 0.14          |
| (1,1308) | 1:19:A:LEU:HB3 | 1:22:A:GLU:HG2  | 1        | 0.14          |
| (1,1308) | 1:19:A:LEU:HB3 | 1:22:A:GLU:HG3  | 1        | 0.14          |
| (1,1181) | 1:28:A:TYR:HA  | 1:29:A:LEU:HB2  | 1        | 0.14          |
| (1,1082) | 1:19:A:LEU:HB2 | 1:23:A:PHE:HB3  | 2        | 0.14          |
| (1,1082) | 1:19:A:LEU:HB3 | 1:23:A:PHE:HB3  | 2        | 0.14          |
| (1,1075) | 1:47:A:GLN:HB3 | 1:50:A:ILE:HD11 | 3        | 0.14          |
| (1,1075) | 1:47:A:GLN:HB3 | 1:50:A:ILE:HD12 | 3        | 0.14          |
| (1,1075) | 1:47:A:GLN:HB3 | 1:50:A:ILE:HD13 | 3        | 0.14          |
| (1,950)  | 1:35:A:GLN:HA  | 1:35:A:GLN:HG3  | 1        | 0.14          |
| (1,910)  | 1:37:A:LEU:H   | 1:37:A:LEU:HB3  | 1        | 0.14          |
| (1,821)  | 1:23:A:PHE:HB3 | 1:51:A:TRP:HZ2  | 1        | 0.14          |
| (1,768)  | 1:29:A:LEU:HG  | 1:34:A:ARG:HA   | 2        | 0.14          |
| (1,750)  | 1:11:A:PHE:HD1 | 1:15:A:GLN:HE22 | 2        | 0.14          |
| (1,750)  | 1:11:A:PHE:HD2 | 1:15:A:GLN:HE22 | 2        | 0.14          |
| (1,708)  | 1:11:A:PHE:HD1 | 1:43:A:LEU:HD21 | 2        | 0.14          |
| (1,708)  | 1:11:A:PHE:HD1 | 1:43:A:LEU:HD22 | 2        | 0.14          |
| (1,708)  | 1:11:A:PHE:HD1 | 1:43:A:LEU:HD23 | 2        | 0.14          |
| (1,708)  | 1:11:A:PHE:HD2 | 1:43:A:LEU:HD21 | 2        | 0.14          |
| (1,708)  | 1:11:A:PHE:HD2 | 1:43:A:LEU:HD22 | 2        | 0.14          |
| (1,708)  | 1:11:A:PHE:HD2 | 1:43:A:LEU:HD23 | 2        | 0.14          |
| (1,693)  | 1:24:A:ASN:H   | 1:52:A:PHE:HZ   | 3        | 0.14          |
| (1,543)  | 1:30:A:THR:HA  | 1:33:A:ARG:H    | 3        | 0.14          |
| (1,477)  | 1:47:A:GLN:H   | 1:48:A:ILE:HA   | 3        | 0.14          |
| (1,377)  | 1:37:A:LEU:H   | 1:40:A:GLU:H    | 3        | 0.14          |
| (1,357)  | 1:44:A:ASN:H   | 1:47:A:GLN:HG2  | 2        | 0.14          |
| (1,267)  | 1:11:A:PHE:H   | 1:12:A:SER:H    | 2        | 0.14          |
| (1,254)  | 1:4:A:GLU:H    | 1:4:A:GLU:HG2   | 1        | 0.14          |
| (1,254)  | 1:4:A:GLU:H    | 1:4:A:GLU:HG3   | 1        | 0.14          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1873) | 1:54:A:ASN:HB2  | 1:55:A:GLU:H    | 2        | 0.13          |
| (1,1873) | 1:54:A:ASN:HB3  | 1:55:A:GLU:H    | 2        | 0.13          |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG12 | 1        | 0.13          |
| (1,1802) | 1:38:A:SER:HB2  | 1:48:A:ILE:HG13 | 1        | 0.13          |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG12 | 1        | 0.13          |
| (1,1802) | 1:38:A:SER:HB3  | 1:48:A:ILE:HG13 | 1        | 0.13          |
| (1,1668) | 1:24:A:ASN:HD21 | 1:25:A:GLU:H    | 3        | 0.13          |
| (1,1668) | 1:24:A:ASN:HD22 | 1:25:A:GLU:H    | 3        | 0.13          |
| (1,1493) | 1:6:A:ARG:H     | 1:6:A:ARG:HB2   | 1        | 0.13          |
| (1,1493) | 1:6:A:ARG:H     | 1:6:A:ARG:HB3   | 1        | 0.13          |
| (1,1443) | 1:56:A:ARG:H    | 1:56:A:ARG:HG2  | 2        | 0.13          |
| (1,1397) | 1:19:A:LEU:HD11 | 1:48:A:ILE:H    | 3        | 0.13          |
| (1,1397) | 1:19:A:LEU:HD12 | 1:48:A:ILE:H    | 3        | 0.13          |
| (1,1397) | 1:19:A:LEU:HD13 | 1:48:A:ILE:H    | 3        | 0.13          |
| (1,1389) | 1:35:A:GLN:HE21 | 1:36:A:GLN:HG2  | 1        | 0.13          |
| (1,1389) | 1:35:A:GLN:HE21 | 1:36:A:GLN:HG3  | 1        | 0.13          |
| (1,1357) | 1:16:A:LEU:HA   | 1:20:A:LYS:HB2  | 2        | 0.13          |
| (1,1273) | 1:14:A:GLU:HB2  | 1:15:A:GLN:H    | 1        | 0.13          |
| (1,1212) | 1:29:A:LEU:HA   | 1:30:A:THR:HG21 | 2        | 0.13          |
| (1,1212) | 1:29:A:LEU:HA   | 1:30:A:THR:HG22 | 2        | 0.13          |
| (1,1212) | 1:29:A:LEU:HA   | 1:30:A:THR:HG23 | 2        | 0.13          |
| (1,1142) | 1:9:A:THR:HG21  | 1:10:A:ALA:HA   | 3        | 0.13          |
| (1,1142) | 1:9:A:THR:HG22  | 1:10:A:ALA:HA   | 3        | 0.13          |
| (1,1142) | 1:9:A:THR:HG23  | 1:10:A:ALA:HA   | 3        | 0.13          |
| (1,1082) | 1:19:A:LEU:HB2  | 1:23:A:PHE:HB3  | 1        | 0.13          |
| (1,1082) | 1:19:A:LEU:HB3  | 1:23:A:PHE:HB3  | 1        | 0.13          |
| (1,1043) | 1:29:A:LEU:HD11 | 1:33:A:ARG:HE   | 2        | 0.13          |
| (1,1043) | 1:29:A:LEU:HD12 | 1:33:A:ARG:HE   | 2        | 0.13          |
| (1,1043) | 1:29:A:LEU:HD13 | 1:33:A:ARG:HE   | 2        | 0.13          |
| (1,950)  | 1:35:A:GLN:HA   | 1:35:A:GLN:HG3  | 2        | 0.13          |
| (1,854)  | 1:37:A:LEU:H    | 1:38:A:SER:HA   | 3        | 0.13          |
| (1,838)  | 1:51:A:TRP:H    | 1:52:A:PHE:HA   | 1        | 0.13          |
| (1,829)  | 1:51:A:TRP:HB2  | 1:51:A:TRP:HE3  | 1        | 0.13          |
| (1,799)  | 1:45:A:GLU:HA   | 1:46:A:ALA:HA   | 1        | 0.13          |
| (1,790)  | 1:51:A:TRP:HA   | 1:55:A:GLU:HA   | 2        | 0.13          |
| (1,784)  | 1:15:A:GLN:HA   | 1:41:A:LEU:HB2  | 2        | 0.13          |
| (1,715)  | 1:23:A:PHE:HZ   | 1:59:A:ILE:HD11 | 2        | 0.13          |
| (1,715)  | 1:23:A:PHE:HZ   | 1:59:A:ILE:HD12 | 2        | 0.13          |
| (1,715)  | 1:23:A:PHE:HZ   | 1:59:A:ILE:HD13 | 2        | 0.13          |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD11 | 2        | 0.13          |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD12 | 2        | 0.13          |
| (1,713)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HD13 | 2        | 0.13          |

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| Key     | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|---------|-----------------|-----------------|----------|---------------|
| (1,713) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD11 | 2        | 0.13          |
| (1,713) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD12 | 2        | 0.13          |
| (1,713) | 1:11:A:PHE:HD2  | 1:16:A:LEU:HD13 | 2        | 0.13          |
| (1,709) | 1:43:A:LEU:HD21 | 1:47:A:GLN:HE22 | 1        | 0.13          |
| (1,709) | 1:43:A:LEU:HD22 | 1:47:A:GLN:HE22 | 1        | 0.13          |
| (1,709) | 1:43:A:LEU:HD23 | 1:47:A:GLN:HE22 | 1        | 0.13          |
| (1,709) | 1:43:A:LEU:HD21 | 1:47:A:GLN:HE22 | 2        | 0.13          |
| (1,709) | 1:43:A:LEU:HD22 | 1:47:A:GLN:HE22 | 2        | 0.13          |
| (1,709) | 1:43:A:LEU:HD23 | 1:47:A:GLN:HE22 | 2        | 0.13          |
| (1,707) | 1:29:A:LEU:HD21 | 1:51:A:TRP:HE3  | 3        | 0.13          |
| (1,707) | 1:29:A:LEU:HD22 | 1:51:A:TRP:HE3  | 3        | 0.13          |
| (1,707) | 1:29:A:LEU:HD23 | 1:51:A:TRP:HE3  | 3        | 0.13          |
| (1,640) | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD11 | 2        | 0.13          |
| (1,640) | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD12 | 2        | 0.13          |
| (1,640) | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD13 | 2        | 0.13          |
| (1,640) | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD11 | 3        | 0.13          |
| (1,640) | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD12 | 3        | 0.13          |
| (1,640) | 1:11:A:PHE:HZ   | 1:19:A:LEU:HD13 | 3        | 0.13          |
| (1,639) | 1:19:A:LEU:HD11 | 1:52:A:PHE:HE1  | 2        | 0.13          |
| (1,639) | 1:19:A:LEU:HD11 | 1:52:A:PHE:HE2  | 2        | 0.13          |
| (1,639) | 1:19:A:LEU:HD12 | 1:52:A:PHE:HE1  | 2        | 0.13          |
| (1,639) | 1:19:A:LEU:HD12 | 1:52:A:PHE:HE2  | 2        | 0.13          |
| (1,639) | 1:19:A:LEU:HD13 | 1:52:A:PHE:HE1  | 2        | 0.13          |
| (1,639) | 1:19:A:LEU:HD13 | 1:52:A:PHE:HE2  | 2        | 0.13          |
| (1,631) | 1:23:A:PHE:HD1  | 1:55:A:GLU:H    | 1        | 0.13          |
| (1,631) | 1:23:A:PHE:HD2  | 1:55:A:GLU:H    | 1        | 0.13          |
| (1,512) | 1:23:A:PHE:HB2  | 1:24:A:ASN:H    | 2        | 0.13          |
| (1,443) | 1:38:A:SER:H    | 1:40:A:GLU:H    | 1        | 0.13          |
| (1,398) | 1:46:A:ALA:H    | 1:50:A:ILE:HD11 | 3        | 0.13          |
| (1,398) | 1:46:A:ALA:H    | 1:50:A:ILE:HD12 | 3        | 0.13          |
| (1,398) | 1:46:A:ALA:H    | 1:50:A:ILE:HD13 | 3        | 0.13          |
| (1,309) | 1:12:A:SER:H    | 1:16:A:LEU:HD11 | 3        | 0.13          |
| (1,309) | 1:12:A:SER:H    | 1:16:A:LEU:HD12 | 3        | 0.13          |
| (1,309) | 1:12:A:SER:H    | 1:16:A:LEU:HD13 | 3        | 0.13          |
| (1,309) | 1:12:A:SER:H    | 1:16:A:LEU:HD21 | 3        | 0.13          |
| (1,309) | 1:12:A:SER:H    | 1:16:A:LEU:HD22 | 3        | 0.13          |
| (1,309) | 1:12:A:SER:H    | 1:16:A:LEU:HD23 | 3        | 0.13          |
| (1,210) | 1:48:A:ILE:HA   | 1:48:A:ILE:HD11 | 3        | 0.13          |
| (1,210) | 1:48:A:ILE:HA   | 1:48:A:ILE:HD12 | 3        | 0.13          |
| (1,210) | 1:48:A:ILE:HA   | 1:48:A:ILE:HD13 | 3        | 0.13          |
| (1,184) | 1:8:A:ARG:HA    | 1:8:A:ARG:HD2   | 2        | 0.13          |
| (1,184) | 1:8:A:ARG:HA    | 1:8:A:ARG:HD3   | 2        | 0.13          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,23)   | 1:15:A:GLN:HA   | 1:17:A:ALA:H    | 2        | 0.13          |
| (1,4)    | 1:55:A:GLU:H    | 1:57:A:ALA:H    | 2        | 0.13          |
| (1,1902) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG2  | 2        | 0.12          |
| (1,1902) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG3  | 2        | 0.12          |
| (1,1902) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG2  | 2        | 0.12          |
| (1,1902) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG3  | 2        | 0.12          |
| (1,1902) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG2  | 2        | 0.12          |
| (1,1902) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG3  | 2        | 0.12          |
| (1,1847) | 1:50:A:ILE:H    | 1:53:A:GLN:HE21 | 3        | 0.12          |
| (1,1847) | 1:50:A:ILE:H    | 1:53:A:GLN:HE22 | 3        | 0.12          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD11 | 2        | 0.12          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD12 | 2        | 0.12          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD13 | 2        | 0.12          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD21 | 2        | 0.12          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD22 | 2        | 0.12          |
| (1,1821) | 1:43:A:LEU:H    | 1:43:A:LEU:HD23 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB2  | 1:41:A:LEU:HD11 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB2  | 1:41:A:LEU:HD12 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB2  | 1:41:A:LEU:HD13 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB2  | 1:41:A:LEU:HD21 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB2  | 1:41:A:LEU:HD22 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB2  | 1:41:A:LEU:HD23 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB3  | 1:41:A:LEU:HD11 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB3  | 1:41:A:LEU:HD12 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB3  | 1:41:A:LEU:HD13 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB3  | 1:41:A:LEU:HD21 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB3  | 1:41:A:LEU:HD22 | 2        | 0.12          |
| (1,1806) | 1:40:A:GLU:HB3  | 1:41:A:LEU:HD23 | 2        | 0.12          |
| (1,1781) | 1:37:A:LEU:HA   | 1:41:A:LEU:HD11 | 1        | 0.12          |
| (1,1781) | 1:37:A:LEU:HA   | 1:41:A:LEU:HD12 | 1        | 0.12          |
| (1,1781) | 1:37:A:LEU:HA   | 1:41:A:LEU:HD13 | 1        | 0.12          |
| (1,1781) | 1:37:A:LEU:HA   | 1:41:A:LEU:HD21 | 1        | 0.12          |
| (1,1781) | 1:37:A:LEU:HA   | 1:41:A:LEU:HD22 | 1        | 0.12          |
| (1,1781) | 1:37:A:LEU:HA   | 1:41:A:LEU:HD23 | 1        | 0.12          |
| (1,1733) | 1:29:A:LEU:HD11 | 1:52:A:PHE:H    | 2        | 0.12          |
| (1,1733) | 1:29:A:LEU:HD12 | 1:52:A:PHE:H    | 2        | 0.12          |
| (1,1733) | 1:29:A:LEU:HD13 | 1:52:A:PHE:H    | 2        | 0.12          |
| (1,1733) | 1:29:A:LEU:HD21 | 1:52:A:PHE:H    | 2        | 0.12          |
| (1,1733) | 1:29:A:LEU:HD22 | 1:52:A:PHE:H    | 2        | 0.12          |
| (1,1733) | 1:29:A:LEU:HD23 | 1:52:A:PHE:H    | 2        | 0.12          |
| (1,1708) | 1:29:A:LEU:HD11 | 1:30:A:THR:H    | 3        | 0.12          |
| (1,1708) | 1:29:A:LEU:HD12 | 1:30:A:THR:H    | 3        | 0.12          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1708) | 1:29:A:LEU:HD13 | 1:30:A:THR:H    | 3        | 0.12          |
| (1,1708) | 1:29:A:LEU:HD21 | 1:30:A:THR:H    | 3        | 0.12          |
| (1,1708) | 1:29:A:LEU:HD22 | 1:30:A:THR:H    | 3        | 0.12          |
| (1,1708) | 1:29:A:LEU:HD23 | 1:30:A:THR:H    | 3        | 0.12          |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG21  | 2        | 0.12          |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG22  | 2        | 0.12          |
| (1,1505) | 1:8:A:ARG:HB2   | 1:9:A:THR:HG23  | 2        | 0.12          |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG21  | 2        | 0.12          |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG22  | 2        | 0.12          |
| (1,1505) | 1:8:A:ARG:HB3   | 1:9:A:THR:HG23  | 2        | 0.12          |
| (1,1462) | 1:41:A:LEU:H    | 1:42:A:GLY:HA2  | 3        | 0.12          |
| (1,1372) | 1:32:A:ARG:H    | 1:34:A:ARG:H    | 1        | 0.12          |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB1  | 1        | 0.12          |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB2  | 1        | 0.12          |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB3  | 1        | 0.12          |
| (1,1220) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HB2  | 2        | 0.12          |
| (1,1220) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HB3  | 2        | 0.12          |
| (1,1220) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HB2  | 2        | 0.12          |
| (1,1220) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HB3  | 2        | 0.12          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD21 | 2        | 0.12          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD22 | 2        | 0.12          |
| (1,1197) | 1:19:A:LEU:HG   | 1:41:A:LEU:HD23 | 2        | 0.12          |
| (1,1135) | 1:37:A:LEU:HA   | 1:48:A:ILE:HG12 | 2        | 0.12          |
| (1,1135) | 1:37:A:LEU:HA   | 1:48:A:ILE:HG13 | 2        | 0.12          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD21 | 2        | 0.12          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD22 | 2        | 0.12          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD23 | 2        | 0.12          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD21 | 2        | 0.12          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD22 | 2        | 0.12          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD23 | 2        | 0.12          |
| (1,1045) | 1:29:A:LEU:HD21 | 1:34:A:ARG:HG2  | 1        | 0.12          |
| (1,1045) | 1:29:A:LEU:HD21 | 1:34:A:ARG:HG3  | 1        | 0.12          |
| (1,1045) | 1:29:A:LEU:HD22 | 1:34:A:ARG:HG2  | 1        | 0.12          |
| (1,1045) | 1:29:A:LEU:HD22 | 1:34:A:ARG:HG3  | 1        | 0.12          |
| (1,1045) | 1:29:A:LEU:HD23 | 1:34:A:ARG:HG2  | 1        | 0.12          |
| (1,1045) | 1:29:A:LEU:HD23 | 1:34:A:ARG:HG3  | 1        | 0.12          |
| (1,939)  | 1:30:A:THR:H    | 1:30:A:THR:HG21 | 2        | 0.12          |
| (1,939)  | 1:30:A:THR:H    | 1:30:A:THR:HG22 | 2        | 0.12          |
| (1,939)  | 1:30:A:THR:H    | 1:30:A:THR:HG23 | 2        | 0.12          |
| (1,925)  | 1:24:A:ASN:H    | 1:24:A:ASN:HB2  | 3        | 0.12          |
| (1,867)  | 1:38:A:SER:HB3  | 1:45:A:GLU:HA   | 3        | 0.12          |
| (1,859)  | 1:31:A:GLU:HA   | 1:33:A:ARG:H    | 2        | 0.12          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,633)  | 1:33:A:ARG:H    | 1:35:A:GLN:H    | 3        | 0.12          |
| (1,631)  | 1:23:A:PHE:HD1  | 1:55:A:GLU:H    | 2        | 0.12          |
| (1,631)  | 1:23:A:PHE:HD2  | 1:55:A:GLU:H    | 2        | 0.12          |
| (1,607)  | 1:43:A:LEU:HB2  | 1:47:A:GLN:HE22 | 1        | 0.12          |
| (1,607)  | 1:43:A:LEU:HB3  | 1:47:A:GLN:HE22 | 1        | 0.12          |
| (1,575)  | 1:29:A:LEU:HG   | 1:30:A:THR:H    | 1        | 0.12          |
| (1,484)  | 1:47:A:GLN:H    | 1:48:A:ILE:HB   | 1        | 0.12          |
| (1,441)  | 1:16:A:LEU:H    | 1:18:A:ARG:H    | 3        | 0.12          |
| (1,365)  | 1:50:A:ILE:HB   | 1:52:A:PHE:H    | 1        | 0.12          |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD11 | 3        | 0.12          |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD12 | 3        | 0.12          |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD13 | 3        | 0.12          |
| (1,204)  | 1:41:A:LEU:HB2  | 1:43:A:LEU:H    | 3        | 0.12          |
| (1,164)  | 1:51:A:TRP:HB3  | 1:51:A:TRP:HZ3  | 1        | 0.12          |
| (1,1902) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG2  | 3        | 0.11          |
| (1,1902) | 1:59:A:ILE:HG21 | 1:61:A:LYS:HG3  | 3        | 0.11          |
| (1,1902) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG2  | 3        | 0.11          |
| (1,1902) | 1:59:A:ILE:HG22 | 1:61:A:LYS:HG3  | 3        | 0.11          |
| (1,1902) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG2  | 3        | 0.11          |
| (1,1902) | 1:59:A:ILE:HG23 | 1:61:A:LYS:HG3  | 3        | 0.11          |
| (1,1773) | 1:36:A:GLN:HA   | 1:37:A:LEU:HD11 | 2        | 0.11          |
| (1,1773) | 1:36:A:GLN:HA   | 1:37:A:LEU:HD12 | 2        | 0.11          |
| (1,1773) | 1:36:A:GLN:HA   | 1:37:A:LEU:HD13 | 2        | 0.11          |
| (1,1773) | 1:36:A:GLN:HA   | 1:37:A:LEU:HD21 | 2        | 0.11          |
| (1,1773) | 1:36:A:GLN:HA   | 1:37:A:LEU:HD22 | 2        | 0.11          |
| (1,1773) | 1:36:A:GLN:HA   | 1:37:A:LEU:HD23 | 2        | 0.11          |
| (1,1767) | 1:34:A:ARG:H    | 1:37:A:LEU:HD11 | 1        | 0.11          |
| (1,1767) | 1:34:A:ARG:H    | 1:37:A:LEU:HD12 | 1        | 0.11          |
| (1,1767) | 1:34:A:ARG:H    | 1:37:A:LEU:HD13 | 1        | 0.11          |
| (1,1767) | 1:34:A:ARG:H    | 1:37:A:LEU:HD21 | 1        | 0.11          |
| (1,1767) | 1:34:A:ARG:H    | 1:37:A:LEU:HD22 | 1        | 0.11          |
| (1,1767) | 1:34:A:ARG:H    | 1:37:A:LEU:HD23 | 1        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG2  | 1:37:A:LEU:HD11 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG2  | 1:37:A:LEU:HD12 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG2  | 1:37:A:LEU:HD13 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG2  | 1:37:A:LEU:HD21 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG2  | 1:37:A:LEU:HD22 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG2  | 1:37:A:LEU:HD23 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG3  | 1:37:A:LEU:HD11 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG3  | 1:37:A:LEU:HD12 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG3  | 1:37:A:LEU:HD13 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG3  | 1:37:A:LEU:HD21 | 3        | 0.11          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1759) | 1:33:A:ARG:HG3  | 1:37:A:LEU:HD22 | 3        | 0.11          |
| (1,1759) | 1:33:A:ARG:HG3  | 1:37:A:LEU:HD23 | 3        | 0.11          |
| (1,1557) | 1:14:A:GLU:HA   | 1:14:A:GLU:HG2  | 1        | 0.11          |
| (1,1557) | 1:14:A:GLU:HA   | 1:14:A:GLU:HG3  | 1        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD11 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD12 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD13 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD21 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD22 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD1  | 1:43:A:LEU:HD23 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD11 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD12 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD13 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD21 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD22 | 2        | 0.11          |
| (1,1523) | 1:11:A:PHE:HD2  | 1:43:A:LEU:HD23 | 2        | 0.11          |
| (1,1506) | 1:8:A:ARG:HG2   | 1:9:A:THR:H     | 2        | 0.11          |
| (1,1506) | 1:8:A:ARG:HG3   | 1:9:A:THR:H     | 2        | 0.11          |
| (1,1435) | 1:49:A:LYS:HA   | 1:53:A:GLN:H    | 3        | 0.11          |
| (1,1422) | 1:34:A:ARG:HD2  | 1:46:A:ALA:HA   | 1        | 0.11          |
| (1,1361) | 1:57:A:ALA:H    | 1:59:A:ILE:H    | 3        | 0.11          |
| (1,1289) | 1:33:A:ARG:HA   | 1:36:A:GLN:HB2  | 3        | 0.11          |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB1  | 3        | 0.11          |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB2  | 3        | 0.11          |
| (1,1234) | 1:14:A:GLU:H    | 1:17:A:ALA:HB3  | 3        | 0.11          |
| (1,1224) | 1:10:A:ALA:HB1  | 1:47:A:GLN:HE21 | 1        | 0.11          |
| (1,1224) | 1:10:A:ALA:HB2  | 1:47:A:GLN:HE21 | 1        | 0.11          |
| (1,1224) | 1:10:A:ALA:HB3  | 1:47:A:GLN:HE21 | 1        | 0.11          |
| (1,1169) | 1:9:A:THR:HG21  | 1:16:A:LEU:HD11 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG21  | 1:16:A:LEU:HD12 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG21  | 1:16:A:LEU:HD13 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG22  | 1:16:A:LEU:HD11 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG22  | 1:16:A:LEU:HD12 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG22  | 1:16:A:LEU:HD13 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG23  | 1:16:A:LEU:HD11 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG23  | 1:16:A:LEU:HD12 | 2        | 0.11          |
| (1,1169) | 1:9:A:THR:HG23  | 1:16:A:LEU:HD13 | 2        | 0.11          |
| (1,1099) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HB2  | 1        | 0.11          |
| (1,1099) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HB3  | 1        | 0.11          |
| (1,1099) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HB2  | 1        | 0.11          |
| (1,1099) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HB3  | 1        | 0.11          |
| (1,1065) | 1:19:A:LEU:HD21 | 1:48:A:ILE:HB   | 3        | 0.11          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1065) | 1:19:A:LEU:HD22 | 1:48:A:ILE:HB   | 3        | 0.11          |
| (1,1065) | 1:19:A:LEU:HD23 | 1:48:A:ILE:HB   | 3        | 0.11          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD21 | 1        | 0.11          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD22 | 1        | 0.11          |
| (1,1055) | 1:11:A:PHE:HD1  | 1:19:A:LEU:HD23 | 1        | 0.11          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD21 | 1        | 0.11          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD22 | 1        | 0.11          |
| (1,1055) | 1:11:A:PHE:HD2  | 1:19:A:LEU:HD23 | 1        | 0.11          |
| (1,1014) | 1:16:A:LEU:H    | 1:16:A:LEU:HD11 | 3        | 0.11          |
| (1,1014) | 1:16:A:LEU:H    | 1:16:A:LEU:HD12 | 3        | 0.11          |
| (1,1014) | 1:16:A:LEU:H    | 1:16:A:LEU:HD13 | 3        | 0.11          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD11 | 3        | 0.11          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD12 | 3        | 0.11          |
| (1,993)  | 1:41:A:LEU:H    | 1:41:A:LEU:HD13 | 3        | 0.11          |
| (1,901)  | 1:6:A:ARG:HD2   | 1:7:A:PRO:HD3   | 2        | 0.11          |
| (1,901)  | 1:6:A:ARG:HD3   | 1:7:A:PRO:HD3   | 2        | 0.11          |
| (1,856)  | 1:14:A:GLU:H    | 1:15:A:GLN:HA   | 1        | 0.11          |
| (1,854)  | 1:37:A:LEU:H    | 1:38:A:SER:HA   | 2        | 0.11          |
| (1,849)  | 1:16:A:LEU:H    | 1:17:A:ALA:HA   | 2        | 0.11          |
| (1,829)  | 1:51:A:TRP:HB2  | 1:51:A:TRP:HE3  | 2        | 0.11          |
| (1,630)  | 1:51:A:TRP:HH2  | 1:52:A:PHE:HE1  | 1        | 0.11          |
| (1,630)  | 1:51:A:TRP:HH2  | 1:52:A:PHE:HE2  | 1        | 0.11          |
| (1,625)  | 1:19:A:LEU:HA   | 1:52:A:PHE:HE1  | 1        | 0.11          |
| (1,625)  | 1:19:A:LEU:HA   | 1:52:A:PHE:HE2  | 1        | 0.11          |
| (1,609)  | 1:11:A:PHE:HD1  | 1:16:A:LEU:HB2  | 3        | 0.11          |
| (1,609)  | 1:11:A:PHE:HD2  | 1:16:A:LEU:HB2  | 3        | 0.11          |
| (1,592)  | 1:59:A:ILE:H    | 1:60:A:LYS:HA   | 1        | 0.11          |
| (1,553)  | 1:51:A:TRP:HB2  | 1:52:A:PHE:HD1  | 1        | 0.11          |
| (1,553)  | 1:51:A:TRP:HB2  | 1:52:A:PHE:HD2  | 1        | 0.11          |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD1  | 1        | 0.11          |
| (1,523)  | 1:29:A:LEU:HA   | 1:52:A:PHE:HD2  | 1        | 0.11          |
| (1,474)  | 1:38:A:SER:HA   | 1:42:A:GLY:H    | 3        | 0.11          |
| (1,365)  | 1:50:A:ILE:HB   | 1:52:A:PHE:H    | 2        | 0.11          |
| (1,331)  | 1:23:A:PHE:H    | 1:24:A:ASN:HA   | 2        | 0.11          |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD11 | 1        | 0.11          |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD12 | 1        | 0.11          |
| (1,260)  | 1:16:A:LEU:HA   | 1:16:A:LEU:HD13 | 1        | 0.11          |
| (1,164)  | 1:51:A:TRP:HB3  | 1:51:A:TRP:HZ3  | 2        | 0.11          |
| (1,1878) | 1:55:A:GLU:H    | 1:55:A:GLU:HG2  | 2        | 0.1           |
| (1,1878) | 1:55:A:GLU:H    | 1:55:A:GLU:HG3  | 2        | 0.1           |
| (1,1730) | 1:29:A:LEU:HD11 | 1:49:A:LYS:HA   | 3        | 0.1           |
| (1,1730) | 1:29:A:LEU:HD12 | 1:49:A:LYS:HA   | 3        | 0.1           |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1730) | 1:29:A:LEU:HD13 | 1:49:A:LYS:HA   | 3        | 0.1           |
| (1,1730) | 1:29:A:LEU:HD21 | 1:49:A:LYS:HA   | 3        | 0.1           |
| (1,1730) | 1:29:A:LEU:HD22 | 1:49:A:LYS:HA   | 3        | 0.1           |
| (1,1730) | 1:29:A:LEU:HD23 | 1:49:A:LYS:HA   | 3        | 0.1           |
| (1,1667) | 1:24:A:ASN:HB2  | 1:25:A:GLU:HB2  | 1        | 0.1           |
| (1,1667) | 1:24:A:ASN:HB2  | 1:25:A:GLU:HB3  | 1        | 0.1           |
| (1,1667) | 1:24:A:ASN:HB3  | 1:25:A:GLU:HB2  | 1        | 0.1           |
| (1,1667) | 1:24:A:ASN:HB3  | 1:25:A:GLU:HB3  | 1        | 0.1           |
| (1,1440) | 1:8:A:ARG:HG3   | 1:9:A:THR:H     | 2        | 0.1           |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD11 | 3        | 0.1           |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD12 | 3        | 0.1           |
| (1,1398) | 1:17:A:ALA:H    | 1:19:A:LEU:HD13 | 3        | 0.1           |
| (1,1355) | 1:33:A:ARG:H    | 1:35:A:GLN:HB3  | 3        | 0.1           |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD21 | 1        | 0.1           |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD22 | 1        | 0.1           |
| (1,1151) | 1:15:A:GLN:HE21 | 1:41:A:LEU:HD23 | 1        | 0.1           |
| (1,962)  | 1:45:A:GLU:HA   | 1:45:A:GLU:HG2  | 2        | 0.1           |
| (1,900)  | 1:30:A:THR:H    | 1:33:A:ARG:HD3  | 2        | 0.1           |
| (1,891)  | 1:18:A:ARG:HB2  | 1:37:A:LEU:HA   | 3        | 0.1           |
| (1,891)  | 1:18:A:ARG:HB3  | 1:37:A:LEU:HA   | 3        | 0.1           |
| (1,553)  | 1:51:A:TRP:HB2  | 1:52:A:PHE:HD1  | 3        | 0.1           |
| (1,553)  | 1:51:A:TRP:HB2  | 1:52:A:PHE:HD2  | 3        | 0.1           |
| (1,517)  | 1:15:A:GLN:H    | 1:16:A:LEU:HA   | 3        | 0.1           |
| (1,499)  | 1:54:A:ASN:HB3  | 1:55:A:GLU:H    | 2        | 0.1           |
| (1,433)  | 1:26:A:ASN:HB2  | 1:27:A:ARG:H    | 3        | 0.1           |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG21 | 3        | 0.1           |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG22 | 3        | 0.1           |
| (1,397)  | 1:34:A:ARG:H    | 1:48:A:ILE:HG23 | 3        | 0.1           |
| (1,347)  | 1:31:A:GLU:H    | 1:32:A:ARG:HA   | 3        | 0.1           |
| (1,291)  | 1:34:A:ARG:HB3  | 1:45:A:GLU:H    | 1        | 0.1           |
| (1,202)  | 1:47:A:GLN:HG2  | 1:47:A:GLN:HE22 | 1        | 0.1           |

## 10 Dihedral-angle violation analysis

No dihedral-angle restraints found