



# Full wwPDB NMR Structure Validation Report ⓘ

Jun 5, 2023 – 12:46 AM EDT

PDB ID : 2LZJ  
BMRB ID : 18758  
Title : Refined solution structure and dynamics of First Catalytic Cysteine Half-domain from mouse E1 enzyme  
Authors : Jaremko, M.; Jaremko, L.; Nowakowski, M.; Szczepanowski, R.H.; Filipek, R.; Wojciechowski, M.; Bochtler, M.; Ejchart, A.  
Deposited on : 2012-10-03

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ 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) : 2.33

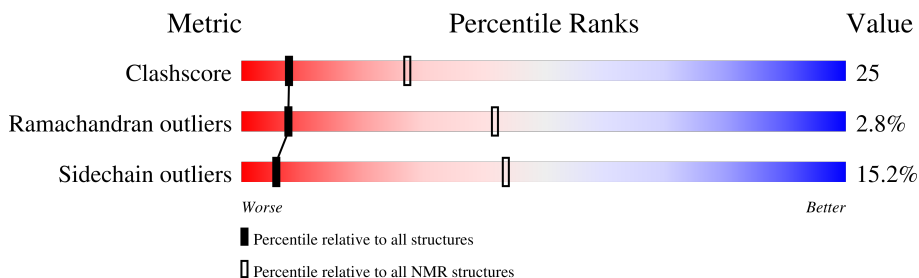
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*SOLUTION NMR*

The overall completeness of chemical shifts assignment is 94%.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and a grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | A     | 112    |                  |

## 2 Ensemble composition and analysis

This entry contains 20 models. Model 15 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:217-A:294 (78)      | 0.43              | 15           |

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 3 clusters and 2 single-model clusters were found.

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

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

There is only 1 type of molecule in this entry. The entry contains 1687 atoms, of which 836 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Ubiquitin-like modifier-activating enzyme 1.

| Mol | Chain | Residues | Atoms |     |     |     |     |   | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|---|-------|
|     |       |          | Total | C   | H   | N   | O   | S |       |
| 1   | A     | 112      | 1687  | 536 | 836 | 135 | 172 | 8 | 0     |

There is a discrepancy between the modelled and reference sequences:

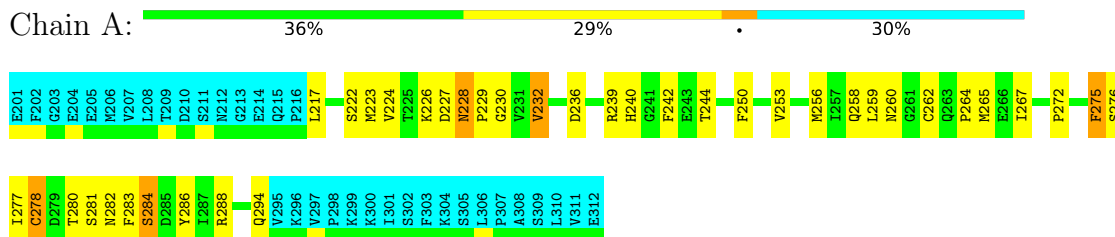
| Chain | Residue | Modelled | Actual | Comment        | Reference  |
|-------|---------|----------|--------|----------------|------------|
| A     | 201     | GLU      | -      | expression tag | UNP Q02053 |

## 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: Ubiquitin-like modifier-activating enzyme 1

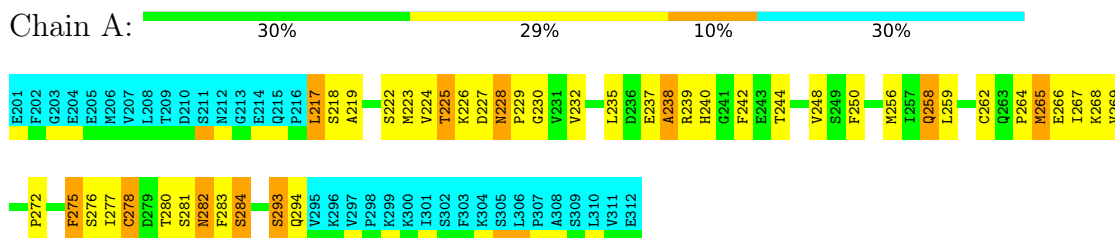


### 4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

#### 4.2.1 Score per residue for model 1

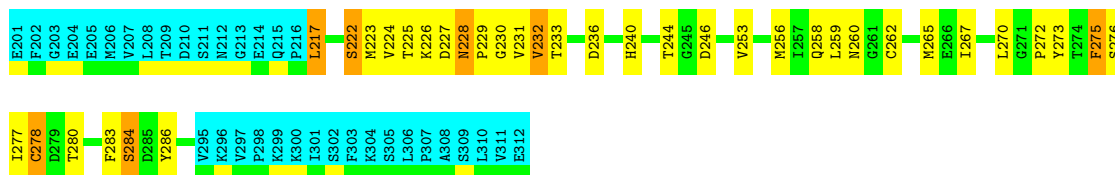
- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



#### 4.2.2 Score per residue for model 2

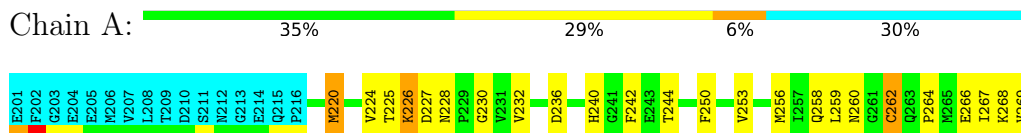
- Molecule 1: Ubiquitin-like modifier-activating enzyme 1





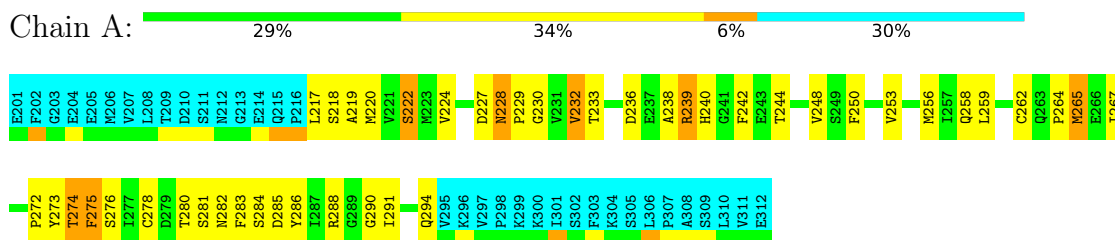
#### 4.2.3 Score per residue for model 3

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



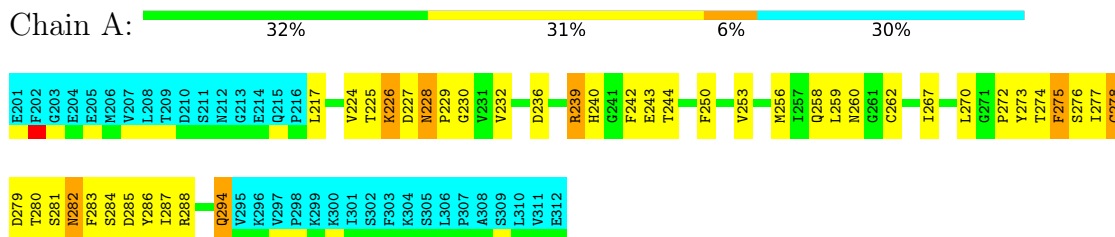
#### 4.2.4 Score per residue for model 4

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



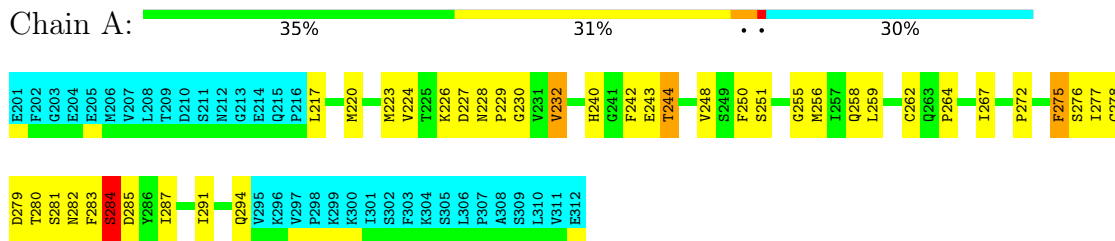
#### 4.2.5 Score per residue for model 5

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



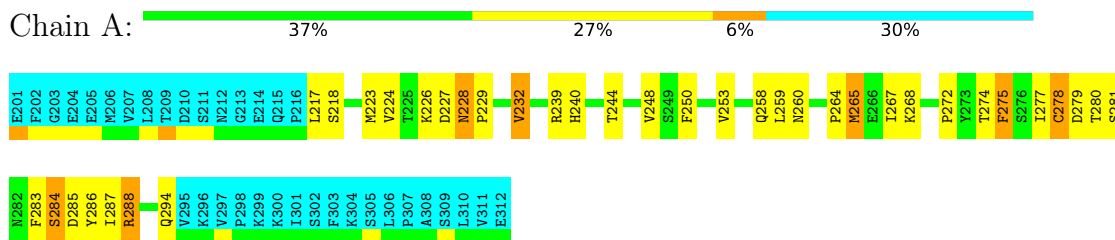
#### 4.2.6 Score per residue for model 6

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



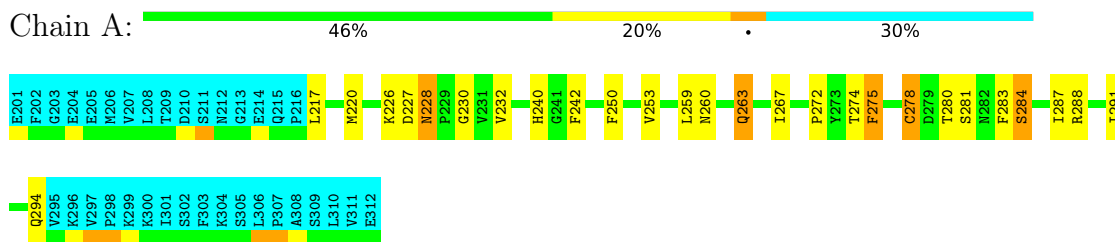
#### 4.2.7 Score per residue for model 7

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



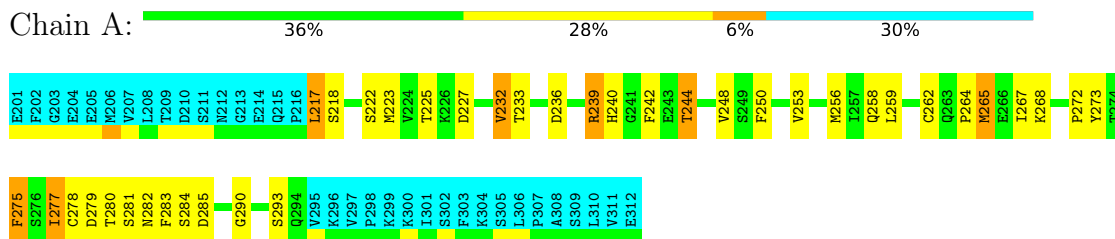
#### 4.2.8 Score per residue for model 8

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



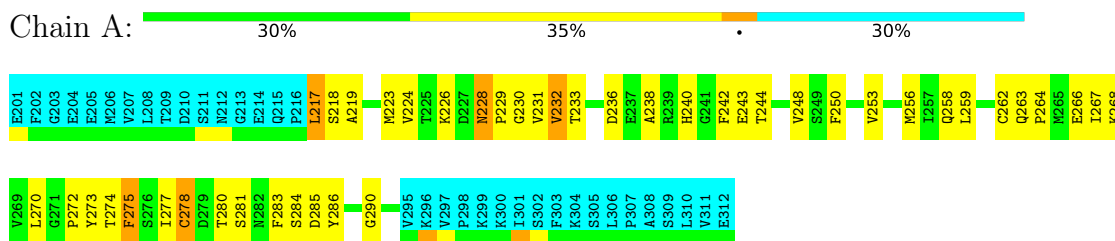
#### 4.2.9 Score per residue for model 9

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



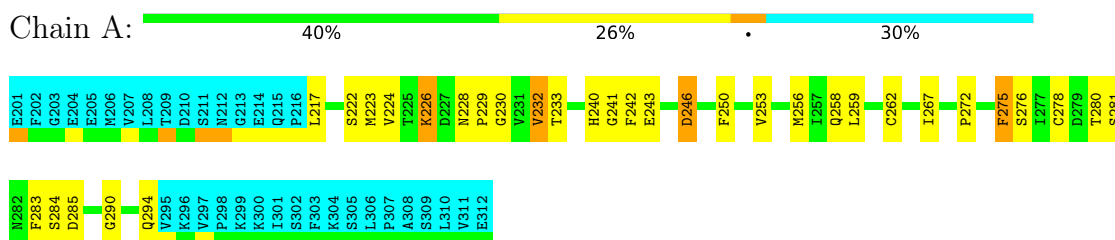
#### 4.2.10 Score per residue for model 10

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



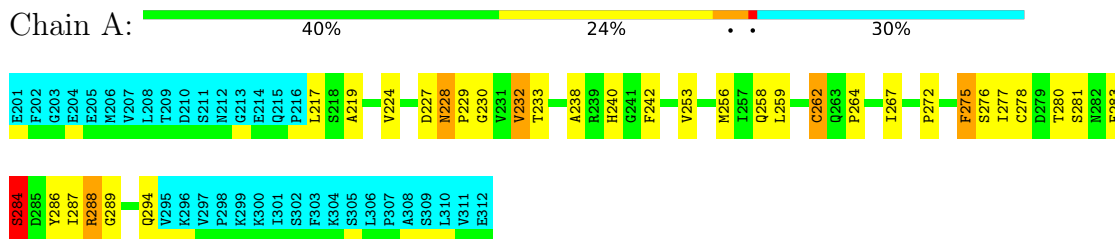
#### 4.2.11 Score per residue for model 11

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



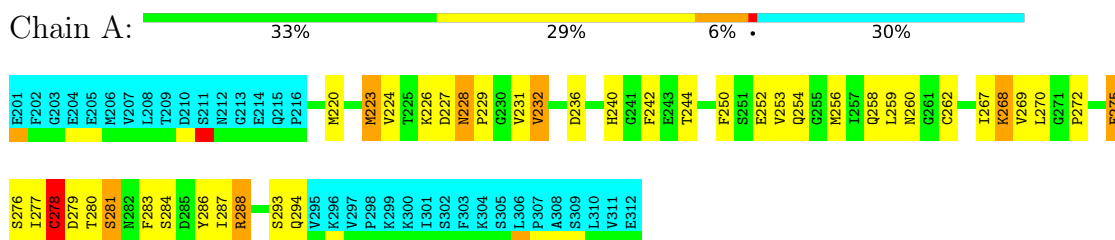
#### 4.2.12 Score per residue for model 12

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



#### 4.2.13 Score per residue for model 13

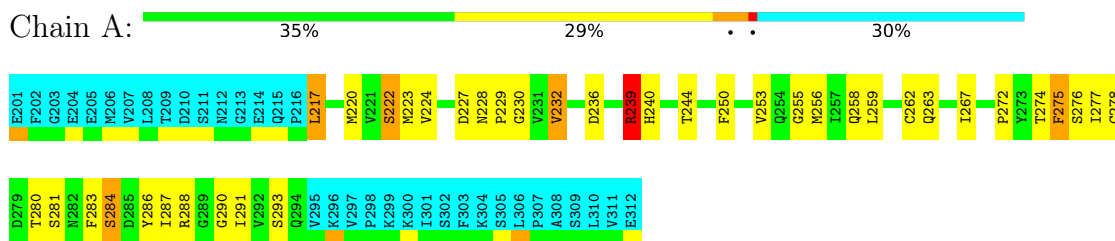
- Molecule 1: Ubiquitin-like modifier-activating enzyme 1





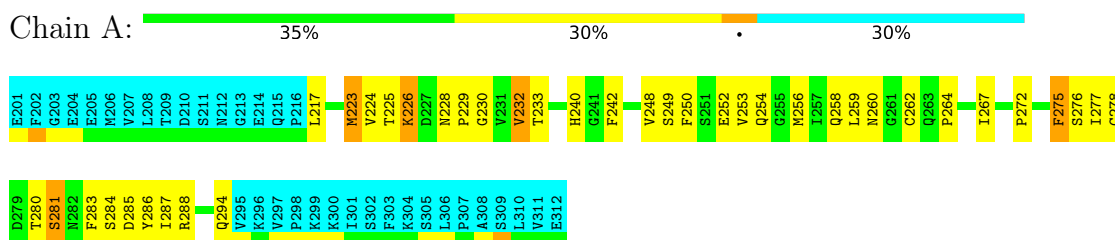
#### 4.2.14 Score per residue for model 14

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



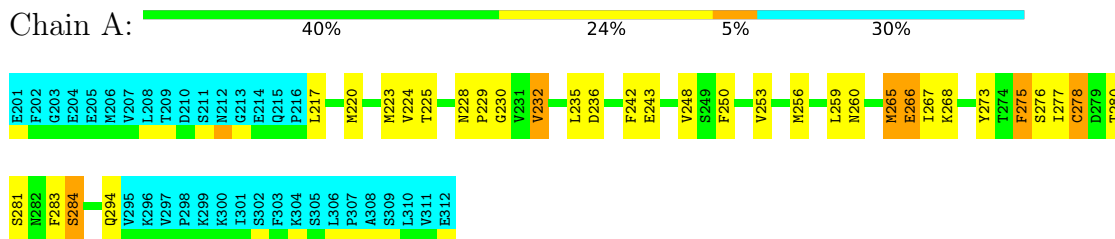
#### 4.2.15 Score per residue for model 15 (medoid)

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



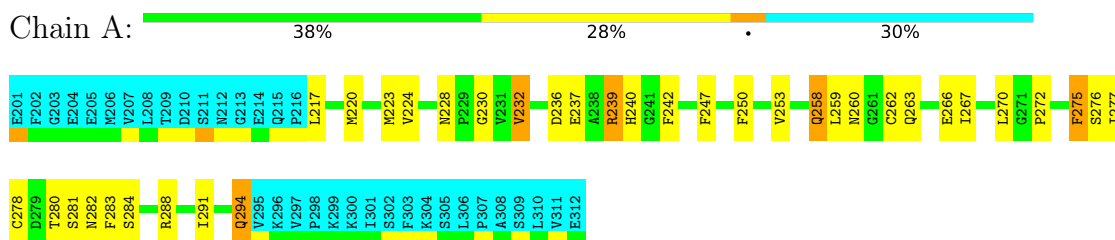
#### 4.2.16 Score per residue for model 16

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



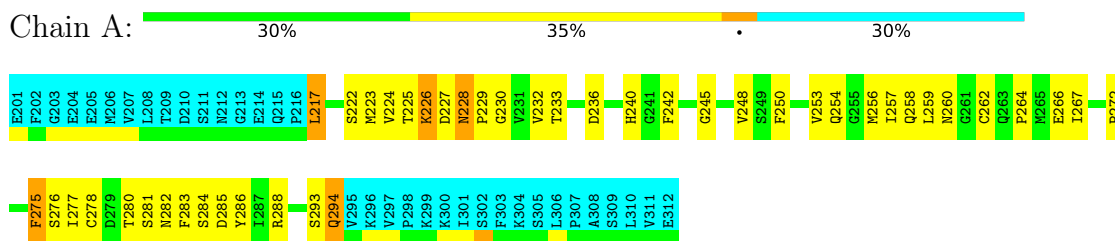
#### 4.2.17 Score per residue for model 17

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



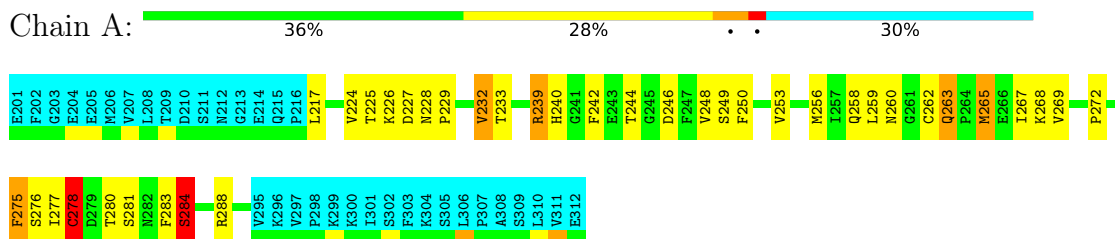
### 4.2.18 Score per residue for model 18

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



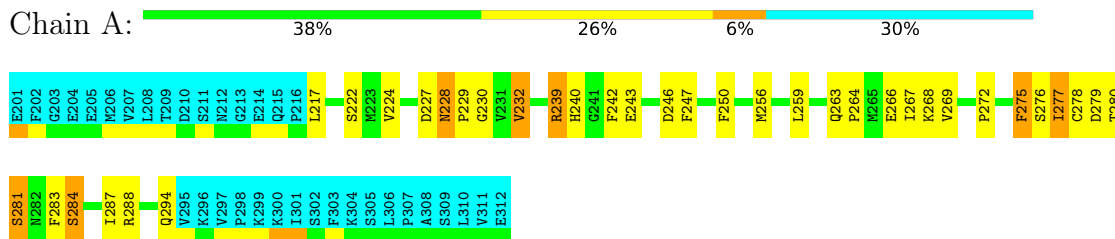
### 4.2.19 Score per residue for model 19

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



### 4.2.20 Score per residue for model 20

- Molecule 1: Ubiquitin-like modifier-activating enzyme 1



## 5 Refinement protocol and experimental data overview

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

Of the 200 calculated structures, 20 were deposited, based on the following criterion: *structures with the lowest energy*.

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

| Software name | Classification     | Version |
|---------------|--------------------|---------|
| X-PLOR NIH    | structure solution | 2.26    |
| X-PLOR NIH    | refinement         | 2.26    |

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                       | 1348           |
| Number of shifts mapped to atoms             | 1348           |
| Number of unparsed shifts                    | 0              |
| Number of shifts with mapping errors         | 0              |
| Number of shifts with mapping warnings       | 0              |
| Assignment completeness (well-defined parts) | 94%            |

## 6 Model quality i

### 6.1 Standard geometry i

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

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 6.2 Too-close contacts 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     | 589   | 568      | 568      | 29±6    |
| All | All   | 11780 | 11360    | 11360    | 582     |

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 25.

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

| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:259:LEU:HD21 | 1:A:283:PHE:CE2  | 0.94     | 1.98        | 3      | 18    |
| 1:A:259:LEU:HD21 | 1:A:283:PHE:CZ   | 0.76     | 2.15        | 15     | 18    |
| 1:A:224:VAL:HG22 | 1:A:232:VAL:HB   | 0.70     | 1.63        | 19     | 11    |
| 1:A:280:THR:HA   | 1:A:283:PHE:CD2  | 0.70     | 2.20        | 3      | 19    |
| 1:A:220:MET:SD   | 1:A:220:MET:N    | 0.69     | 2.66        | 3      | 1     |
| 1:A:217:LEU:HD13 | 1:A:218:SER:N    | 0.69     | 2.03        | 4      | 3     |
| 1:A:219:ALA:HB1  | 1:A:238:ALA:HB1  | 0.68     | 1.66        | 1      | 3     |
| 1:A:267:ILE:C    | 1:A:267:ILE:HD12 | 0.67     | 2.10        | 12     | 19    |
| 1:A:224:VAL:HG13 | 1:A:232:VAL:HG12 | 0.67     | 1.66        | 14     | 9     |
| 1:A:259:LEU:HD21 | 1:A:283:PHE:CD2  | 0.67     | 2.24        | 6      | 10    |
| 1:A:277:ILE:C    | 1:A:277:ILE:HD12 | 0.67     | 2.09        | 5      | 5     |
| 1:A:240:HIS:NE2  | 1:A:272:PRO:O    | 0.66     | 2.27        | 18     | 18    |
| 1:A:223:MET:SD   | 1:A:223:MET:C    | 0.66     | 2.74        | 11     | 5     |
| 1:A:265:MET:SD   | 1:A:265:MET:N    | 0.66     | 2.69        | 19     | 6     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:224:VAL:HG11 | 1:A:256:MET:SD   | 0.65     | 2.31        | 18     | 8     |
| 1:A:256:MET:SD   | 1:A:259:LEU:CD1  | 0.62     | 2.88        | 12     | 4     |
| 1:A:256:MET:SD   | 1:A:259:LEU:HD11 | 0.61     | 2.35        | 12     | 4     |
| 1:A:227:ASP:N    | 1:A:280:THR:OG1  | 0.60     | 2.34        | 20     | 13    |
| 1:A:258:GLN:O    | 1:A:262:CYS:SG   | 0.60     | 2.59        | 4      | 9     |
| 1:A:258:GLN:HG3  | 1:A:262:CYS:SG   | 0.60     | 2.37        | 3      | 6     |
| 1:A:220:MET:SD   | 1:A:291:ILE:HG12 | 0.60     | 2.37        | 4      | 4     |
| 1:A:244:THR:OG1  | 1:A:269:VAL:HG22 | 0.60     | 1.95        | 3      | 3     |
| 1:A:224:VAL:HG13 | 1:A:232:VAL:CG1  | 0.59     | 2.27        | 2      | 6     |
| 1:A:231:VAL:HG23 | 1:A:270:LEU:CD1  | 0.59     | 2.27        | 13     | 1     |
| 1:A:286:TYR:CZ   | 1:A:288:ARG:HA   | 0.59     | 2.32        | 3      | 2     |
| 1:A:242:PHE:HB3  | 1:A:267:ILE:HD11 | 0.59     | 1.75        | 9      | 1     |
| 1:A:277:ILE:HD13 | 1:A:283:PHE:CZ   | 0.58     | 2.33        | 6      | 5     |
| 1:A:220:MET:SD   | 1:A:235:LEU:HD22 | 0.58     | 2.38        | 16     | 1     |
| 1:A:239:ARG:NH2  | 1:A:273:TYR:OH   | 0.58     | 2.37        | 5      | 1     |
| 1:A:275:PHE:C    | 1:A:275:PHE:CD1  | 0.58     | 2.77        | 12     | 20    |
| 1:A:242:PHE:CD1  | 1:A:294:GLN:HB3  | 0.57     | 2.34        | 1      | 4     |
| 1:A:242:PHE:CD2  | 1:A:248:VAL:HG11 | 0.57     | 2.35        | 19     | 1     |
| 1:A:224:VAL:CG1  | 1:A:256:MET:SD   | 0.56     | 2.93        | 1      | 3     |
| 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 0.55     | 1.78        | 4      | 2     |
| 1:A:253:VAL:HG22 | 1:A:290:GLY:CA   | 0.55     | 2.32        | 10     | 4     |
| 1:A:239:ARG:NH1  | 1:A:242:PHE:O    | 0.55     | 2.39        | 20     | 1     |
| 1:A:263:GLN:H    | 1:A:263:GLN:CD   | 0.55     | 2.04        | 19     | 1     |
| 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 0.55     | 1.79        | 14     | 5     |
| 1:A:253:VAL:O    | 1:A:260:ASN:ND2  | 0.54     | 2.41        | 16     | 11    |
| 1:A:236:ASP:O    | 1:A:239:ARG:NH2  | 0.54     | 2.37        | 14     | 2     |
| 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 0.54     | 1.78        | 15     | 12    |
| 1:A:287:ILE:O    | 1:A:288:ARG:HB3  | 0.54     | 2.02        | 12     | 2     |
| 1:A:250:PHE:CG   | 1:A:259:LEU:HB3  | 0.53     | 2.38        | 4      | 13    |
| 1:A:244:THR:HG23 | 1:A:268:LYS:HG2  | 0.53     | 1.80        | 13     | 1     |
| 1:A:228:ASN:O    | 1:A:228:ASN:ND2  | 0.53     | 2.40        | 8      | 1     |
| 1:A:256:MET:N    | 1:A:285:ASP:O    | 0.53     | 2.41        | 18     | 6     |
| 1:A:250:PHE:CD2  | 1:A:259:LEU:HD22 | 0.53     | 2.39        | 19     | 1     |
| 1:A:250:PHE:CD1  | 1:A:259:LEU:HD22 | 0.53     | 2.39        | 7      | 10    |
| 1:A:228:ASN:HA   | 1:A:229:PRO:C    | 0.53     | 2.23        | 14     | 16    |
| 1:A:240:HIS:H    | 1:A:240:HIS:CD2  | 0.53     | 2.20        | 3      | 3     |
| 1:A:253:VAL:HG13 | 1:A:286:TYR:CE1  | 0.53     | 2.39        | 12     | 2     |
| 1:A:250:PHE:CE1  | 1:A:259:LEU:HD22 | 0.52     | 2.40        | 13     | 8     |
| 1:A:266:GLU:OE2  | 1:A:268:LYS:NZ   | 0.52     | 2.42        | 16     | 5     |
| 1:A:239:ARG:O    | 1:A:239:ARG:NH1  | 0.52     | 2.41        | 19     | 1     |
| 1:A:237:GLU:O    | 1:A:239:ARG:NH1  | 0.52     | 2.41        | 17     | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:287:ILE:O    | 1:A:288:ARG:HG3  | 0.52     | 2.04        | 14     | 3     |
| 1:A:217:LEU:HD11 | 1:A:239:ARG:NH2  | 0.52     | 2.20        | 9      | 1     |
| 1:A:240:HIS:HB2  | 1:A:242:PHE:CG   | 0.52     | 2.40        | 1      | 1     |
| 1:A:250:PHE:CB   | 1:A:259:LEU:HB3  | 0.51     | 2.35        | 17     | 11    |
| 1:A:226:LYS:NZ   | 1:A:281:SER:OG   | 0.51     | 2.36        | 8      | 1     |
| 1:A:263:GLN:N    | 1:A:263:GLN:CD   | 0.51     | 2.64        | 8      | 2     |
| 1:A:240:HIS:HB2  | 1:A:242:PHE:CD2  | 0.50     | 2.42        | 19     | 6     |
| 1:A:233:THR:HG22 | 1:A:274:THR:HG22 | 0.50     | 1.82        | 4      | 1     |
| 1:A:226:LYS:NZ   | 1:A:285:ASP:OD1  | 0.49     | 2.43        | 18     | 3     |
| 1:A:242:PHE:CD1  | 1:A:242:PHE:N    | 0.49     | 2.79        | 4      | 12    |
| 1:A:233:THR:HG22 | 1:A:274:THR:CG2  | 0.49     | 2.38        | 4      | 1     |
| 1:A:279:ASP:O    | 1:A:282:ASN:ND2  | 0.49     | 2.35        | 5      | 1     |
| 1:A:222:SER:OG   | 1:A:223:MET:N    | 0.49     | 2.45        | 14     | 2     |
| 1:A:248:VAL:O    | 1:A:264:PRO:HA   | 0.49     | 2.08        | 4      | 7     |
| 1:A:253:VAL:HG22 | 1:A:290:GLY:HA3  | 0.49     | 1.84        | 9      | 1     |
| 1:A:224:VAL:HG21 | 1:A:286:TYR:CE2  | 0.49     | 2.42        | 13     | 1     |
| 1:A:258:GLN:HG3  | 1:A:262:CYS:HG   | 0.49     | 1.68        | 14     | 1     |
| 1:A:277:ILE:HD12 | 1:A:283:PHE:CZ   | 0.49     | 2.43        | 7      | 1     |
| 1:A:223:MET:SD   | 1:A:224:VAL:N    | 0.48     | 2.86        | 6      | 3     |
| 1:A:263:GLN:CD   | 1:A:263:GLN:H    | 0.48     | 2.10        | 8      | 2     |
| 1:A:256:MET:SD   | 1:A:284:SER:C    | 0.48     | 2.91        | 6      | 1     |
| 1:A:227:ASP:OD1  | 1:A:228:ASN:N    | 0.48     | 2.46        | 12     | 4     |
| 1:A:282:ASN:C    | 1:A:282:ASN:ND2  | 0.48     | 2.67        | 1      | 1     |
| 1:A:227:ASP:H    | 1:A:280:THR:HG1  | 0.48     | 1.45        | 9      | 1     |
| 1:A:267:ILE:HG21 | 1:A:275:PHE:CE2  | 0.48     | 2.44        | 5      | 4     |
| 1:A:220:MET:SD   | 1:A:291:ILE:HD12 | 0.48     | 2.49        | 8      | 1     |
| 1:A:254:GLN:NE2  | 1:A:254:GLN:N    | 0.48     | 2.62        | 15     | 1     |
| 1:A:267:ILE:C    | 1:A:267:ILE:CD1  | 0.48     | 2.82        | 12     | 7     |
| 1:A:277:ILE:C    | 1:A:277:ILE:CD1  | 0.47     | 2.81        | 5      | 4     |
| 1:A:288:ARG:HG3  | 1:A:289:GLY:N    | 0.47     | 2.23        | 12     | 1     |
| 1:A:286:TYR:CD2  | 1:A:286:TYR:O    | 0.47     | 2.68        | 14     | 2     |
| 1:A:277:ILE:CD1  | 1:A:283:PHE:CZ   | 0.47     | 2.97        | 14     | 2     |
| 1:A:248:VAL:O    | 1:A:265:MET:SD   | 0.47     | 2.72        | 7      | 3     |
| 1:A:284:SER:OG   | 1:A:285:ASP:N    | 0.47     | 2.45        | 7      | 1     |
| 1:A:268:LYS:NZ   | 1:A:269:VAL:O    | 0.47     | 2.39        | 13     | 1     |
| 1:A:230:GLY:O    | 1:A:276:SER:HA   | 0.47     | 2.09        | 1      | 14    |
| 1:A:277:ILE:HD12 | 1:A:278:CYS:N    | 0.47     | 2.25        | 19     | 1     |
| 1:A:288:ARG:NE   | 1:A:288:ARG:HA   | 0.47     | 2.25        | 5      | 1     |
| 1:A:222:SER:CB   | 1:A:233:THR:HG1  | 0.47     | 2.23        | 4      | 1     |
| 1:A:243:GLU:N    | 1:A:246:ASP:OD2  | 0.47     | 2.46        | 11     | 1     |
| 1:A:217:LEU:O    | 1:A:293:SER:HA   | 0.46     | 2.11        | 14     | 3     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:240:HIS:HB2  | 1:A:242:PHE:CD1  | 0.46     | 2.44        | 1      | 1     |
| 1:A:247:PHE:CZ   | 1:A:266:GLU:HB2  | 0.46     | 2.45        | 17     | 1     |
| 1:A:252:GLU:O    | 1:A:254:GLN:NE2  | 0.46     | 2.46        | 13     | 1     |
| 1:A:223:MET:SD   | 1:A:233:THR:CB   | 0.46     | 3.03        | 15     | 1     |
| 1:A:270:LEU:HD11 | 1:A:276:SER:OG   | 0.46     | 2.10        | 5      | 1     |
| 1:A:242:PHE:CE1  | 1:A:294:GLN:HB3  | 0.46     | 2.45        | 17     | 1     |
| 1:A:270:LEU:HD11 | 1:A:276:SER:HB3  | 0.46     | 1.86        | 17     | 1     |
| 1:A:244:THR:HG23 | 1:A:268:LYS:HA   | 0.46     | 1.87        | 3      | 3     |
| 1:A:268:LYS:NZ   | 1:A:276:SER:OG   | 0.46     | 2.46        | 19     | 1     |
| 1:A:255:GLY:CA   | 1:A:287:ILE:HD12 | 0.46     | 2.41        | 14     | 2     |
| 1:A:267:ILE:HD12 | 1:A:267:ILE:O    | 0.46     | 2.10        | 15     | 3     |
| 1:A:225:THR:O    | 1:A:280:THR:OG1  | 0.46     | 2.29        | 1      | 3     |
| 1:A:226:LYS:O    | 1:A:226:LYS:NZ   | 0.46     | 2.42        | 3      | 1     |
| 1:A:242:PHE:CE1  | 1:A:294:GLN:HG3  | 0.45     | 2.47        | 3      | 1     |
| 1:A:231:VAL:HG23 | 1:A:270:LEU:HD12 | 0.45     | 1.86        | 10     | 2     |
| 1:A:259:LEU:HD21 | 1:A:283:PHE:CE1  | 0.45     | 2.46        | 4      | 2     |
| 1:A:232:VAL:HG22 | 1:A:275:PHE:CD1  | 0.45     | 2.46        | 4      | 4     |
| 1:A:230:GLY:N    | 1:A:277:ILE:O    | 0.45     | 2.42        | 10     | 3     |
| 1:A:226:LYS:NZ   | 1:A:285:ASP:OD2  | 0.45     | 2.43        | 10     | 1     |
| 1:A:236:ASP:HA   | 1:A:273:TYR:CE1  | 0.45     | 2.47        | 3      | 2     |
| 1:A:279:ASP:HB2  | 1:A:282:ASN:CB   | 0.45     | 2.42        | 6      | 1     |
| 1:A:237:GLU:O    | 1:A:239:ARG:N    | 0.45     | 2.46        | 1      | 1     |
| 1:A:258:GLN:O    | 1:A:262:CYS:N    | 0.45     | 2.49        | 17     | 5     |
| 1:A:253:VAL:HG13 | 1:A:286:TYR:CE2  | 0.44     | 2.47        | 13     | 1     |
| 1:A:279:ASP:OD1  | 1:A:281:SER:N    | 0.44     | 2.48        | 13     | 2     |
| 1:A:223:MET:SD   | 1:A:233:THR:HB   | 0.44     | 2.52        | 15     | 1     |
| 1:A:285:ASP:OD1  | 1:A:286:TYR:N    | 0.44     | 2.50        | 10     | 2     |
| 1:A:240:HIS:ND1  | 1:A:241:GLY:N    | 0.44     | 2.66        | 11     | 1     |
| 1:A:256:MET:SD   | 1:A:285:ASP:N    | 0.44     | 2.91        | 6      | 1     |
| 1:A:246:ASP:OD1  | 1:A:247:PHE:N    | 0.44     | 2.50        | 20     | 1     |
| 1:A:279:ASP:HB3  | 1:A:282:ASN:HD22 | 0.44     | 1.72        | 9      | 1     |
| 1:A:236:ASP:O    | 1:A:273:TYR:CZ   | 0.44     | 2.71        | 2      | 2     |
| 1:A:223:MET:SD   | 1:A:223:MET:O    | 0.44     | 2.75        | 15     | 1     |
| 1:A:236:ASP:O    | 1:A:273:TYR:CE1  | 0.44     | 2.71        | 5      | 3     |
| 1:A:287:ILE:O    | 1:A:288:ARG:CG   | 0.43     | 2.66        | 15     | 3     |
| 1:A:248:VAL:CG1  | 1:A:267:ILE:HD13 | 0.43     | 2.42        | 9      | 1     |
| 1:A:277:ILE:O    | 1:A:278:CYS:C    | 0.43     | 2.56        | 10     | 4     |
| 1:A:226:LYS:HE3  | 1:A:281:SER:HA   | 0.43     | 1.89        | 15     | 1     |
| 1:A:239:ARG:HH11 | 1:A:240:HIS:CE1  | 0.43     | 2.31        | 20     | 1     |
| 1:A:287:ILE:C    | 1:A:288:ARG:HG2  | 0.43     | 2.33        | 5      | 1     |
| 1:A:258:GLN:NE2  | 1:A:283:PHE:O    | 0.43     | 2.39        | 7      | 1     |

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| Atom-1           | Atom-2           | Clash(Å) | Distance(Å) | Models |       |
|------------------|------------------|----------|-------------|--------|-------|
|                  |                  |          |             | Worst  | Total |
| 1:A:217:LEU:HB3  | 1:A:240:HIS:O    | 0.43     | 2.13        | 2      | 1     |
| 1:A:218:SER:OG   | 1:A:293:SER:OG   | 0.43     | 2.33        | 9      | 1     |
| 1:A:240:HIS:CD2  | 1:A:272:PRO:O    | 0.43     | 2.72        | 2      | 1     |
| 1:A:217:LEU:HD13 | 1:A:217:LEU:C    | 0.43     | 2.34        | 4      | 1     |
| 1:A:219:ALA:CB   | 1:A:238:ALA:HB1  | 0.43     | 2.43        | 4      | 2     |
| 1:A:228:ASN:ND2  | 1:A:228:ASN:C    | 0.43     | 2.72        | 7      | 1     |
| 1:A:240:HIS:CD2  | 1:A:240:HIS:H    | 0.43     | 2.32        | 15     | 3     |
| 1:A:236:ASP:O    | 1:A:239:ARG:NH1  | 0.43     | 2.36        | 17     | 1     |
| 1:A:240:HIS:HB2  | 1:A:242:PHE:CE2  | 0.42     | 2.49        | 19     | 1     |
| 1:A:283:PHE:C    | 1:A:284:SER:OG   | 0.42     | 2.57        | 19     | 1     |
| 1:A:226:LYS:CE   | 1:A:284:SER:O    | 0.42     | 2.67        | 6      | 1     |
| 1:A:226:LYS:HA   | 1:A:280:THR:OG1  | 0.42     | 2.14        | 7      | 1     |
| 1:A:254:GLN:HE22 | 1:A:288:ARG:CZ   | 0.42     | 2.27        | 18     | 1     |
| 1:A:265:MET:SD   | 1:A:278:CYS:SG   | 0.42     | 3.18        | 2      | 1     |
| 1:A:226:LYS:O    | 1:A:226:LYS:HG3  | 0.42     | 2.15        | 3      | 1     |
| 1:A:239:ARG:NH2  | 1:A:243:GLU:OE2  | 0.42     | 2.50        | 20     | 1     |
| 1:A:225:THR:O    | 1:A:280:THR:HG21 | 0.42     | 2.14        | 15     | 2     |
| 1:A:227:ASP:O    | 1:A:280:THR:OG1  | 0.42     | 2.38        | 13     | 1     |
| 1:A:233:THR:HA   | 1:A:273:TYR:O    | 0.42     | 2.15        | 2      | 1     |
| 1:A:256:MET:HG3  | 1:A:286:TYR:N    | 0.42     | 2.30        | 2      | 1     |
| 1:A:294:GLN:O    | 1:A:294:GLN:NE2  | 0.42     | 2.53        | 6      | 1     |
| 1:A:235:LEU:O    | 1:A:238:ALA:HB3  | 0.42     | 2.15        | 1      | 1     |
| 1:A:251:SER:N    | 1:A:291:ILE:O    | 0.42     | 2.49        | 6      | 1     |
| 1:A:222:SER:HG   | 1:A:233:THR:C    | 0.42     | 2.18        | 9      | 1     |
| 1:A:269:VAL:HG23 | 1:A:269:VAL:O    | 0.41     | 2.15        | 20     | 3     |
| 1:A:282:ASN:O    | 1:A:282:ASN:ND2  | 0.41     | 2.45        | 3      | 1     |
| 1:A:239:ARG:O    | 1:A:240:HIS:C    | 0.41     | 2.58        | 4      | 1     |
| 1:A:242:PHE:CE1  | 1:A:294:GLN:HB2  | 0.41     | 2.50        | 13     | 1     |
| 1:A:282:ASN:ND2  | 1:A:282:ASN:O    | 0.41     | 2.50        | 1      | 1     |
| 1:A:259:LEU:HD21 | 1:A:283:PHE:CG   | 0.41     | 2.51        | 2      | 1     |
| 1:A:266:GLU:HG2  | 1:A:267:ILE:N    | 0.41     | 2.31        | 16     | 1     |
| 1:A:232:VAL:HG22 | 1:A:275:PHE:CE1  | 0.41     | 2.51        | 4      | 1     |
| 1:A:278:CYS:SG   | 1:A:279:ASP:N    | 0.41     | 2.94        | 7      | 1     |
| 1:A:248:VAL:HG13 | 1:A:267:ILE:HD13 | 0.41     | 1.93        | 9      | 1     |
| 1:A:257:ILE:O    | 1:A:260:ASN:HB2  | 0.41     | 2.16        | 18     | 1     |
| 1:A:286:TYR:OH   | 1:A:288:ARG:NH2  | 0.41     | 2.36        | 5      | 1     |
| 1:A:256:MET:CE   | 1:A:284:SER:O    | 0.41     | 2.69        | 12     | 1     |
| 1:A:243:GLU:OE1  | 1:A:244:THR:N    | 0.40     | 2.51        | 6      | 1     |
| 1:A:268:LYS:O    | 1:A:276:SER:N    | 0.40     | 2.53        | 16     | 1     |
| 1:A:222:SER:OG   | 1:A:233:THR:C    | 0.40     | 2.60        | 18     | 1     |
| 1:A:245:GLY:HA2  | 1:A:266:GLU:CG   | 0.40     | 2.47        | 18     | 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     | 78/112 (70%)    | 72±1 (92±2%) | 4±2 (6±2%) | 2±1 (3±1%) | 8           | 42 |
| All | All   | 1560/2240 (70%) | 1430 (92%)   | 86 (6%)    | 44 (3%)    | 8           | 42 |

All 6 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 278 | CYS  | 20             |
| 1   | A     | 284 | SER  | 18             |
| 1   | A     | 288 | ARG  | 3              |
| 1   | A     | 238 | ALA  | 1              |
| 1   | A     | 277 | ILE  | 1              |
| 1   | A     | 239 | ARG  | 1              |

### 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     | 68/99 (69%)     | 58±2 (85±3%) | 10±2 (15±3%) | 6           | 44 |
| All | All   | 1360/1980 (69%) | 1153 (85%)   | 207 (15%)    | 6           | 44 |

All 34 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     | 232 | VAL  | 20             |
| 1   | A     | 275 | PHE  | 20             |
| 1   | A     | 281 | SER  | 18             |
| 1   | A     | 217 | LEU  | 17             |

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| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 228 | ASN  | 13             |
| 1   | A     | 284 | SER  | 12             |
| 1   | A     | 226 | LYS  | 9              |
| 1   | A     | 239 | ARG  | 8              |
| 1   | A     | 223 | MET  | 7              |
| 1   | A     | 244 | THR  | 7              |
| 1   | A     | 274 | THR  | 7              |
| 1   | A     | 294 | GLN  | 7              |
| 1   | A     | 222 | SER  | 6              |
| 1   | A     | 265 | MET  | 6              |
| 1   | A     | 282 | ASN  | 6              |
| 1   | A     | 225 | THR  | 5              |
| 1   | A     | 278 | CYS  | 5              |
| 1   | A     | 263 | GLN  | 5              |
| 1   | A     | 233 | THR  | 4              |
| 1   | A     | 288 | ARG  | 3              |
| 1   | A     | 243 | GLU  | 3              |
| 1   | A     | 258 | GLN  | 2              |
| 1   | A     | 293 | SER  | 2              |
| 1   | A     | 220 | MET  | 2              |
| 1   | A     | 262 | CYS  | 2              |
| 1   | A     | 277 | ILE  | 2              |
| 1   | A     | 236 | ASP  | 2              |
| 1   | A     | 218 | SER  | 1              |
| 1   | A     | 246 | ASP  | 1              |
| 1   | A     | 268 | LYS  | 1              |
| 1   | A     | 276 | SER  | 1              |
| 1   | A     | 252 | GLU  | 1              |
| 1   | A     | 266 | GLU  | 1              |
| 1   | A     | 249 | SER  | 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 94% for the well-defined parts and 93% for the entire structure.

### 7.1 Chemical shift list 1

File name: working\_cs.cif

Chemical shift list name: *assigned\_chem\_shift\_list\_1*

#### 7.1.1 Bookkeeping (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                  | 1348 |
| Number of shifts mapped to atoms        | 1348 |
| Number of unparsed shifts               | 0    |
| Number of shifts with mapping errors    | 0    |
| Number of shifts with mapping warnings  | 0    |
| Number of shift outliers (ShiftChecker) | 1    |

#### 7.1.2 Chemical shift referencing (i)

The following table shows the suggested chemical shift referencing corrections.

| Nucleus                | # values | Correction $\pm$ precision, ppm | Suggested action        |
|------------------------|----------|---------------------------------|-------------------------|
| $^{13}\text{C}_\alpha$ | 111      | $0.03 \pm 0.27$                 | None needed (< 0.5 ppm) |
| $^{13}\text{C}_\beta$  | 101      | $0.08 \pm 0.15$                 | None needed (< 0.5 ppm) |
| $^{13}\text{C}'$       | 100      | $0.16 \pm 0.16$                 | None needed (< 0.5 ppm) |
| $^{15}\text{N}$        | 104      | $-0.14 \pm 0.91$                | None needed (< 0.5 ppm) |

#### 7.1.3 Completeness of resonance assignments (i)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 94%, i.e. 935 atoms were assigned a chemical shift out of a possible 997. 0 out of 12 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

|           | Total         | $^1\text{H}$   | $^{13}\text{C}$ | $^{15}\text{N}$ |
|-----------|---------------|----------------|-----------------|-----------------|
| Backbone  | 388/392 (99%) | 161/161 (100%) | 152/156 (97%)   | 75/75 (100%)    |
| Sidechain | 490/530 (92%) | 335/347 (97%)  | 149/168 (89%)   | 6/15 (40%)      |

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|          | <b>Total</b>  | <b><sup>1</sup>H</b> | <b><sup>13</sup>C</b> | <b><sup>15</sup>N</b> |
|----------|---------------|----------------------|-----------------------|-----------------------|
| Aromatic | 57/75 (76%)   | 35/37 (95%)          | 22/37 (59%)           | 0/1 (0%)              |
| Overall  | 935/997 (94%) | 531/545 (97%)        | 323/361 (89%)         | 81/91 (89%)           |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 93%, i.e. 1348 atoms were assigned a chemical shift out of a possible 1448. 0 out of 19 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

|           | <b>Total</b>    | <b><sup>1</sup>H</b> | <b><sup>13</sup>C</b> | <b><sup>15</sup>N</b> |
|-----------|-----------------|----------------------|-----------------------|-----------------------|
| Backbone  | 540/558 (97%)   | 225/228 (99%)        | 211/224 (94%)         | 104/106 (98%)         |
| Sidechain | 731/795 (92%)   | 499/519 (96%)        | 226/255 (89%)         | 6/21 (29%)            |
| Aromatic  | 77/95 (81%)     | 45/47 (96%)          | 32/47 (68%)           | 0/1 (0%)              |
| Overall   | 1348/1448 (93%) | 769/794 (97%)        | 469/526 (89%)         | 110/128 (86%)         |

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

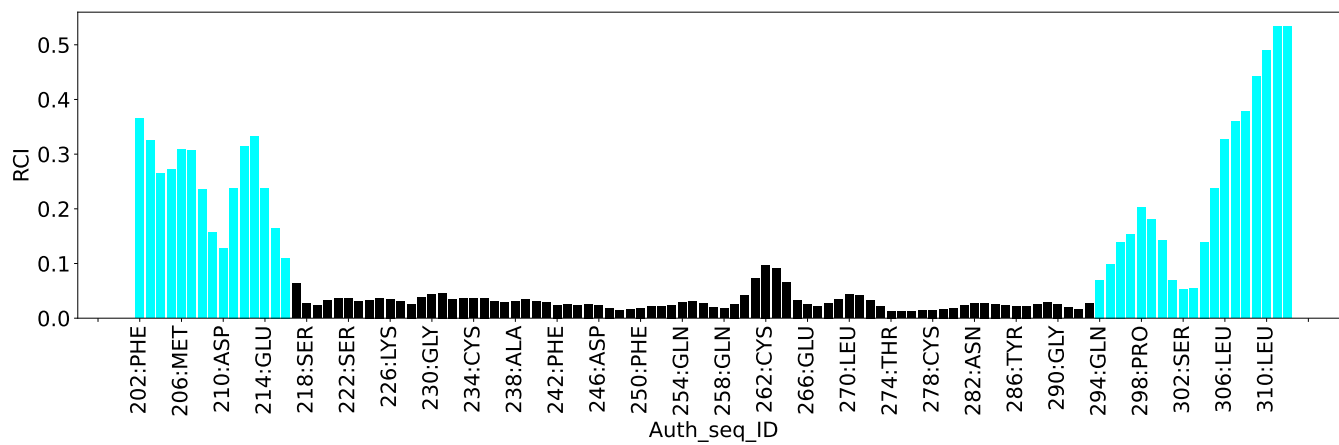
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

| List Id | Chain | Res | Type | Atom | Shift, ppm | Expected range, ppm | Z-score |
|---------|-------|-----|------|------|------------|---------------------|---------|
| 1       | A     | 258 | GLN  | HB2  | 0.47       | 0.80 – 3.29         | -6.3    |

#### 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                                | 1626  |
| Intra-residue ( $ i-j =0$ )                              | 330   |
| Sequential ( $ i-j =1$ )                                 | 457   |
| Medium range ( $ i-j >1$ and $ i-j <5$ )                 | 150   |
| Long range ( $ i-j \geq 5$ )                             | 621   |
| Inter-chain  | 0     |
| Hydrogen bond restraints                                 | 68    |
| Disulfide bond restraints                                | 0     |
| Total dihedral-angle restraints                          | 184   |
| Number of unmapped restraints                            | 0     |
| Number of restraints per residue                         | 16.2  |
| Number of long range restraints per residue <sup>1</sup> | 6.0   |

<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)  | 48.4                                   | 0.2     |
| 0.2-0.5 (Medium) | 18.9                                   | 0.5     |
| >0.5 (Large)     | 45.0                                   | 4.62    |

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

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

| Bins (°)           | Average number of violations per model | Max (°) |
|--------------------|--|---------|
| 1.0-10.0 (Small)   | 11.2                                   | 9.7     |
| 10.0-20.0 (Medium) | 4.5                                    | 19.8    |
| >20.0 (Large)      | 13.3                                   | 147.6   |



## 9 Distance violation analysis

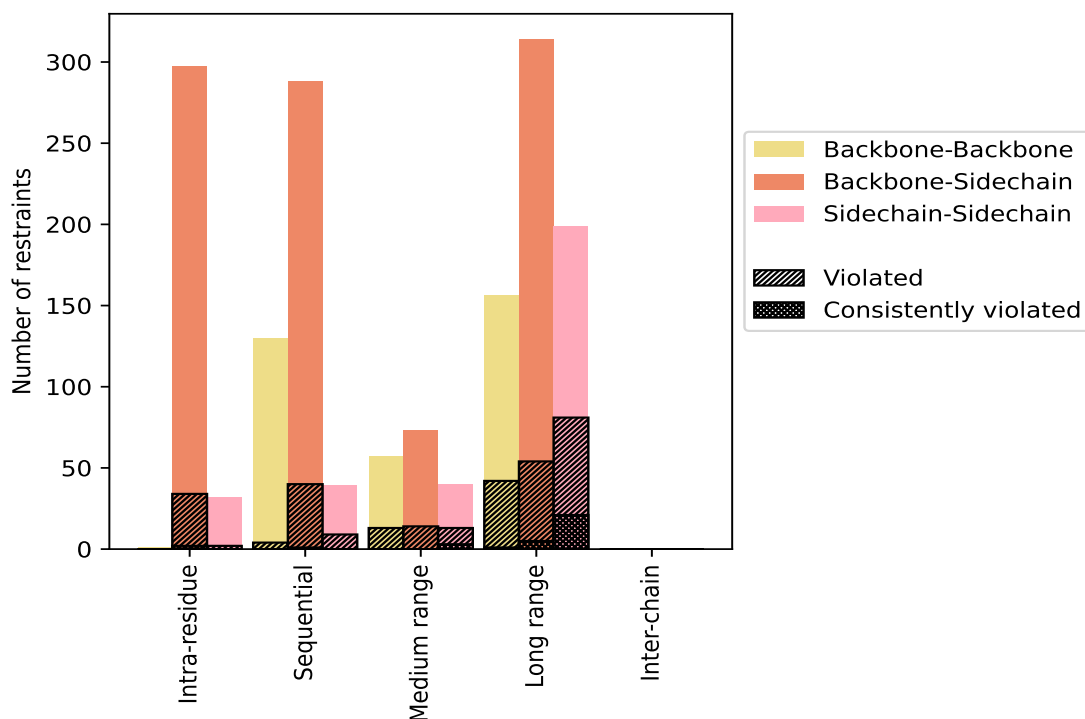
### 9.1 Summary of distance violations

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

| 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>330</b>  | <b>20.3</b>    | <b>36</b>             | <b>10.9</b>    | <b>2.2</b>     | <b>2</b>                           | <b>0.6</b>     | <b>0.1</b>     |
| Backbone-Backbone   | 1           | 0.1            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain  | 297         | 18.3           | 34                    | 11.4           | 2.1            | 2                                  | 0.7            | 0.1            |
| Sidechain-Sidechain   | 32          | 2.0            | 2                     | 6.2            | 0.1            | 0                                  | 0.0            | 0.0            |
| <b>Sequential (<math> i-j =1</math>)</b>                                    | <b>457</b>  | <b>28.1</b>    | <b>53</b>             | <b>11.6</b>    | <b>3.3</b>     | <b>1</b>                           | <b>0.2</b>     | <b>0.1</b>     |
| Backbone-Backbone   | 130         | 8.0            | 4                     | 3.1            | 0.2            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain  | 288         | 17.7           | 40                    | 13.9           | 2.5            | 1                                  | 0.3            | 0.1            |
| Sidechain-Sidechain   | 39          | 2.4            | 9                     | 23.1           | 0.6            | 0                                  | 0.0            | 0.0            |
| <b>Medium range (<math> i-j &gt;1</math> &amp; <math> i-j &lt;5</math>)</b> | <b>150</b>  | <b>9.2</b>     | <b>31</b>             | <b>20.7</b>    | <b>1.9</b>     | <b>3</b>                           | <b>2.0</b>     | <b>0.2</b>     |
| Backbone-Backbone   | 37          | 2.3            | 4                     | 10.8           | 0.2            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain  | 73          | 4.5            | 14                    | 19.2           | 0.9            | 0                                  | 0.0            | 0.0            |
| Sidechain-Sidechain   | 40          | 2.5            | 13                    | 32.5           | 0.8            | 3                                  | 7.5            | 0.2            |
| <b>Long range (<math> i-j \geq 5</math>)</b>                                | <b>621</b>  | <b>38.2</b>    | <b>144</b>            | <b>23.2</b>    | <b>8.9</b>     | <b>26</b>                          | <b>4.2</b>     | <b>1.6</b>     |
| Backbone-Backbone   | 108         | 6.6            | 9                     | 8.3            | 0.6            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain  | 314         | 19.3           | 54                    | 17.2           | 3.3            | 5                                  | 1.6            | 0.3            |
| Sidechain-Sidechain   | 199         | 12.2           | 81                    | 40.7           | 5.0            | 21                                 | 10.6           | 1.3            |
| <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>68</b>   | <b>4.2</b>     | <b>42</b>             | <b>61.8</b>    | <b>2.6</b>     | <b>1</b>                           | <b>1.5</b>     | <b>0.1</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>1626</b> | <b>100.0</b>   | <b>306</b>            | <b>18.8</b>    | <b>18.8</b>    | <b>33</b>                          | <b>2.0</b>     | <b>2.0</b>     |
| Backbone-Backbone   | 344         | 21.2           | 59                    | 17.2           | 3.6            | 1                                  | 0.3            | 0.1            |
| Backbone-Sidechain  | 972         | 59.8           | 142                   | 14.6           | 8.7            | 8                                  | 0.8            | 0.5            |
| Sidechain-Sidechain   | 310         | 19.1           | 105                   | 33.9           | 6.5            | 24                                 | 7.7            | 1.5            |

<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        | 7                    | 15              | 17              | 82              | 0               | 121   | 0.79     | 4.55    | 0.98                | 0.25       |
| 2        | 8                    | 9               | 21              | 77              | 0               | 115   | 0.83     | 4.54    | 0.97                | 0.23       |
| 3        | 8                    | 10              | 18              | 83              | 0               | 119   | 0.78     | 4.47    | 0.93                | 0.27       |
| 4        | 9                    | 11              | 16              | 81              | 0               | 117   | 0.87     | 4.52    | 1.06                | 0.25       |
| 5        | 4                    | 11              | 14              | 79              | 0               | 108   | 0.84     | 4.47    | 1.04                | 0.22       |
| 6        | 4                    | 12              | 21              | 75              | 0               | 112   | 0.86     | 4.38    | 1.0                 | 0.27       |
| 7        | 7                    | 11              | 15              | 73              | 0               | 106   | 0.83     | 4.39    | 1.01                | 0.24       |
| 8        | 12                   | 11              | 19              | 84              | 0               | 126   | 0.87     | 4.45    | 1.03                | 0.22       |
| 9        | 7                    | 12              | 16              | 75              | 0               | 110   | 0.84     | 4.55    | 1.02                | 0.3        |
| 10       | 10                   | 11              | 15              | 83              | 0               | 119   | 0.84     | 4.48    | 1.04                | 0.25       |
| 11       | 9                    | 9               | 18              | 79              | 0               | 115   | 0.87     | 4.51    | 1.06                | 0.23       |

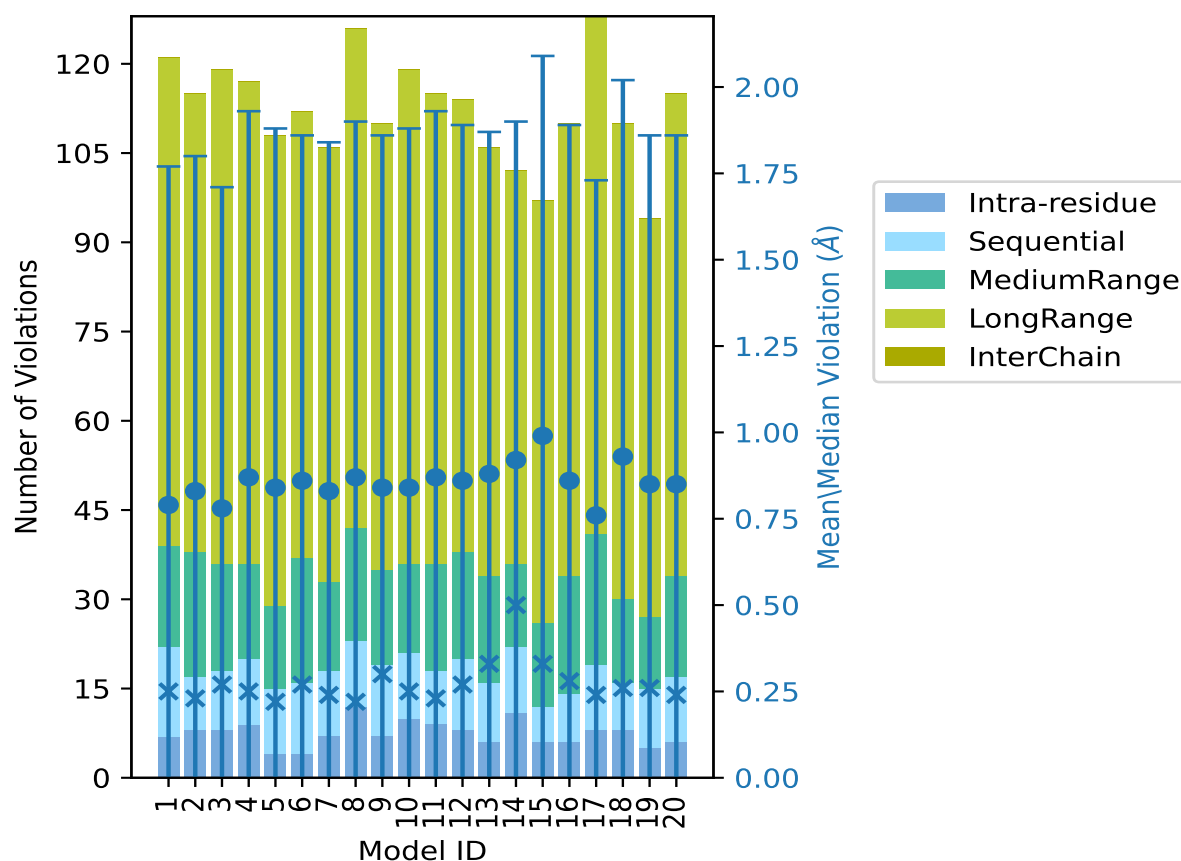
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| Model ID | Number of violations |                 |                 |                 |                 | Total | Mean (Å) | Max (Å) | SD <sup>6</sup> (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
|          | IR <sup>1</sup>      | SQ <sup>2</sup> | MR <sup>3</sup> | LR <sup>4</sup> | IC <sup>5</sup> |       |          |         |                     |            |
| 12       | 8                    | 12              | 18              | 76              | 0               | 114   | 0.86     | 4.62    | 1.03                | 0.27       |
| 13       | 6                    | 10              | 18              | 72              | 0               | 106   | 0.88     | 4.42    | 0.99                | 0.33       |
| 14       | 11                   | 11              | 14              | 66              | 0               | 102   | 0.92     | 4.35    | 0.98                | 0.5        |
| 15       | 6                    | 6               | 14              | 71              | 0               | 97    | 0.99     | 4.48    | 1.1                 | 0.33       |
| 16       | 6                    | 8               | 20              | 76              | 0               | 110   | 0.86     | 4.41    | 1.03                | 0.28       |
| 17       | 8                    | 11              | 22              | 87              | 0               | 128   | 0.76     | 4.43    | 0.97                | 0.24       |
| 18       | 8                    | 8               | 14              | 80              | 0               | 110   | 0.93     | 4.54    | 1.09                | 0.26       |
| 19       | 5                    | 10              | 12              | 67              | 0               | 94    | 0.85     | 4.37    | 1.01                | 0.26       |
| 20       | 6                    | 11              | 17              | 81              | 0               | 115   | 0.85     | 4.26    | 1.01                | 0.24       |

<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

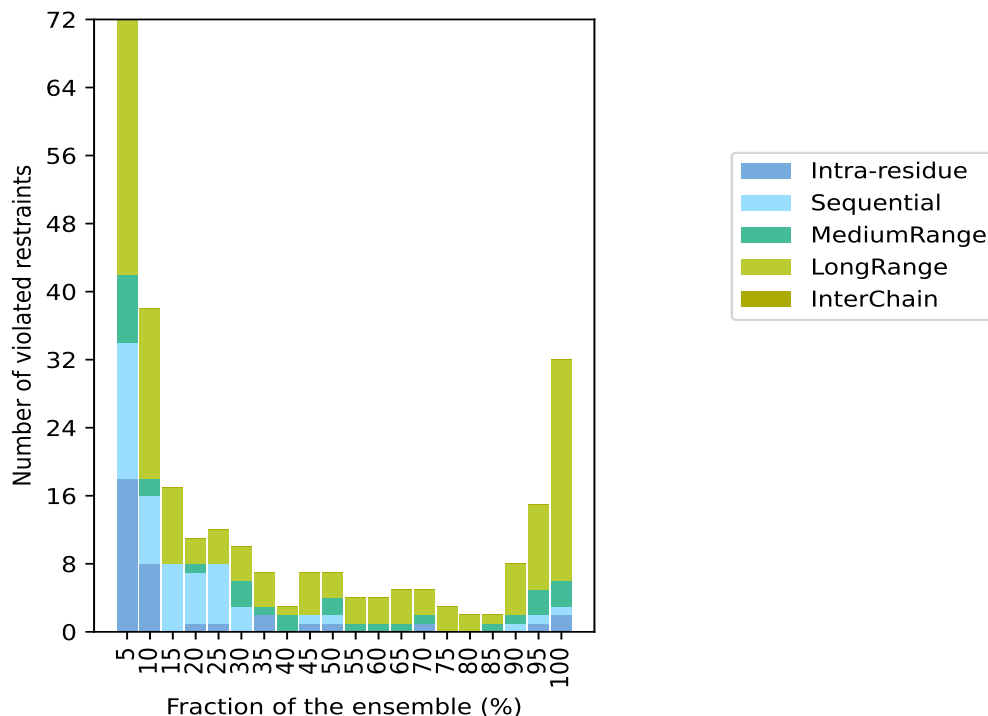
### 9.3 Distance violation statistics for the ensemble

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, 1294(IR:294, SQ:404, MR:119, LR:477, 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>       | %     |
| 18                            | 16              | 8               | 30              | 0               | 72    | 1                        | 5.0   |
| 8                             | 8               | 2               | 20              | 0               | 38    | 2                        | 10.0  |
| 0                             | 8               | 0               | 9               | 0               | 17    | 3                        | 15.0  |
| 1                             | 6               | 1               | 3               | 0               | 11    | 4                        | 20.0  |
| 1                             | 7               | 0               | 4               | 0               | 12    | 5                        | 25.0  |
| 0                             | 3               | 3               | 4               | 0               | 10    | 6                        | 30.0  |
| 2                             | 0               | 1               | 4               | 0               | 7     | 7                        | 35.0  |
| 0                             | 0               | 2               | 1               | 0               | 3     | 8                        | 40.0  |
| 1                             | 1               | 0               | 5               | 0               | 7     | 9                        | 45.0  |
| 1                             | 1               | 2               | 3               | 0               | 7     | 10                       | 50.0  |
| 0                             | 0               | 1               | 3               | 0               | 4     | 11                       | 55.0  |
| 0                             | 0               | 1               | 3               | 0               | 4     | 12                       | 60.0  |
| 0                             | 0               | 1               | 4               | 0               | 5     | 13                       | 65.0  |
| 1                             | 0               | 1               | 3               | 0               | 5     | 14                       | 70.0  |
| 0                             | 0               | 0               | 3               | 0               | 3     | 15                       | 75.0  |
| 0                             | 0               | 0               | 2               | 0               | 2     | 16                       | 80.0  |
| 0                             | 0               | 1               | 1               | 0               | 2     | 17                       | 85.0  |
| 0                             | 1               | 1               | 6               | 0               | 8     | 18                       | 90.0  |
| 1                             | 1               | 3               | 10              | 0               | 15    | 19                       | 95.0  |
| 2                             | 1               | 3               | 26              | 0               | 32    | 20                       | 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

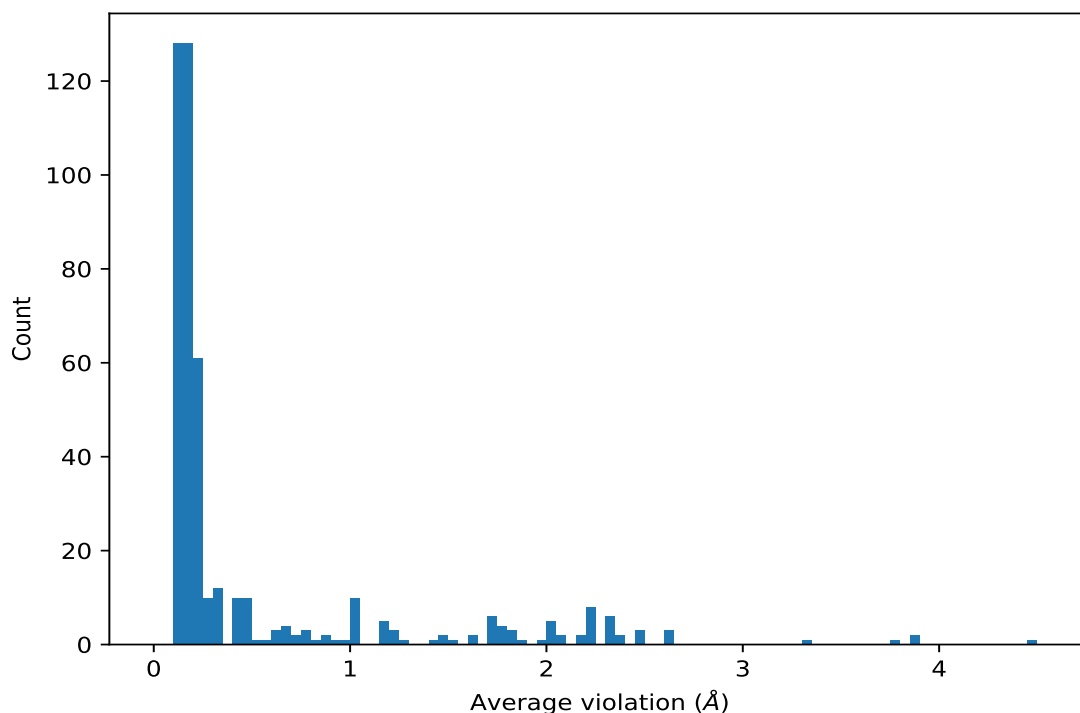
### 9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



## 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) |
|----------|------------------|-----------------|---------------------|----------|---------------------|------------|
| (1,1281) | 1:A:275:PHE:HD1  | 1:A:242:PHE:HD1 | 20                  | 4.46     | 0.08                | 4.47       |
| (1,1285) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HD1 | 20                  | 3.87     | 0.16                | 3.85       |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 20                  | 3.86     | 0.45                | 3.94       |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 20                  | 3.75     | 0.19                | 3.77       |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 20                  | 3.34     | 0.58                | 3.52       |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1 | 20                  | 2.37     | 0.18                | 2.38       |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2 | 20                  | 2.35     | 0.26                | 2.37       |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 20                  | 2.24     | 0.61                | 2.06       |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 20                  | 2.23     | 0.05                | 2.22       |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 20                  | 2.23     | 0.05                | 2.22       |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 20                  | 2.23     | 0.05                | 2.22       |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2 | 20                  | 2.16     | 0.12                | 2.18       |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 20                  | 2.08     | 0.17                | 2.08       |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 20                  | 2.05     | 0.27                | 2.06       |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 20                  | 2.01     | 0.3                 | 1.96       |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 20                  | 2.01     | 0.3                 | 1.96       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 20                  | 2.01     | 0.3                 | 1.96       |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 20                  | 1.99     | 0.25                | 1.96       |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 20                  | 1.88     | 0.28                | 1.8        |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 20                  | 1.75     | 0.25                | 1.84       |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 20                  | 1.75     | 0.25                | 1.84       |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 20                  | 1.75     | 0.25                | 1.84       |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1  | 20                  | 1.74     | 0.14                | 1.72       |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1  | 20                  | 1.74     | 0.14                | 1.72       |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1  | 20                  | 1.74     | 0.14                | 1.72       |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 20                  | 1.64     | 0.29                | 1.72       |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 20                  | 1.63     | 0.06                | 1.63       |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 20                  | 1.48     | 0.09                | 1.47       |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 20                  | 1.02     | 0.13                | 1.02       |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 20                  | 1.02     | 0.13                | 1.02       |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 20                  | 1.02     | 0.13                | 1.02       |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 20                  | 1.01     | 0.06                | 1.01       |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 20                  | 0.96     | 0.18                | 0.96       |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 20                  | 0.78     | 0.11                | 0.78       |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 20                  | 0.78     | 0.11                | 0.78       |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 20                  | 0.78     | 0.11                | 0.78       |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 20                  | 0.7      | 0.1                 | 0.72       |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 20                  | 0.66     | 0.13                | 0.67       |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 20                  | 0.61     | 0.12                | 0.6        |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 20                  | 0.61     | 0.12                | 0.6        |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 20                  | 0.61     | 0.12                | 0.6        |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 20                  | 0.48     | 0.16                | 0.44       |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 20                  | 0.48     | 0.16                | 0.44       |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 20                  | 0.48     | 0.16                | 0.44       |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 20                  | 0.41     | 0.13                | 0.44       |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 20                  | 0.41     | 0.13                | 0.44       |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 20                  | 0.41     | 0.13                | 0.44       |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 20                  | 0.3      | 0.04                | 0.29       |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 20                  | 0.3      | 0.04                | 0.29       |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 20                  | 0.3      | 0.04                | 0.29       |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 20                  | 0.22     | 0.06                | 0.19       |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 20                  | 0.22     | 0.06                | 0.19       |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 20                  | 0.22     | 0.06                | 0.19       |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 20                  | 0.22     | 0.06                | 0.19       |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 20                  | 0.22     | 0.06                | 0.19       |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 20                  | 0.22     | 0.06                | 0.19       |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 20                  | 0.22     | 0.06                | 0.19       |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 20                  | 0.22     | 0.06                | 0.19       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 20                  | 0.22     | 0.06                | 0.19       |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 20                  | 0.2      | 0.02                | 0.2        |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 20                  | 0.2      | 0.05                | 0.19       |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 19                  | 2.48     | 0.37                | 2.48       |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 19                  | 2.48     | 0.37                | 2.48       |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 19                  | 2.48     | 0.37                | 2.48       |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 19                  | 2.34     | 0.22                | 2.31       |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 19                  | 2.34     | 0.22                | 2.31       |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 19                  | 2.34     | 0.22                | 2.31       |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 19                  | 2.3      | 0.31                | 2.22       |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 19                  | 2.3      | 0.31                | 2.22       |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 19                  | 2.3      | 0.31                | 2.22       |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 19                  | 2.24     | 0.27                | 2.19       |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 19                  | 2.24     | 0.27                | 2.19       |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 19                  | 2.24     | 0.27                | 2.19       |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 19                  | 2.04     | 0.19                | 2.02       |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 19                  | 1.83     | 0.57                | 1.85       |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 19                  | 1.83     | 0.57                | 1.85       |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 19                  | 1.83     | 0.57                | 1.85       |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 19                  | 1.18     | 0.21                | 1.2        |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 19                  | 1.16     | 0.27                | 1.04       |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 19                  | 1.16     | 0.27                | 1.04       |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 19                  | 1.16     | 0.27                | 1.04       |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 19                  | 1.04     | 0.1                 | 1.06       |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 19                  | 1.04     | 0.1                 | 1.06       |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 19                  | 1.04     | 0.1                 | 1.06       |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 19                  | 0.59     | 0.16                | 0.62       |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 19                  | 0.5      | 0.26                | 0.44       |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 19                  | 0.49     | 0.08                | 0.49       |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 19                  | 0.49     | 0.08                | 0.49       |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 19                  | 0.49     | 0.08                | 0.49       |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 19                  | 0.25     | 0.08                | 0.24       |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 19                  | 0.18     | 0.04                | 0.18       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 19                  | 0.18     | 0.04                | 0.18       |
| (1,768)  | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 19                  | 0.17     | 0.01                | 0.16       |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 19                  | 0.16     | 0.03                | 0.16       |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 18                  | 1.28     | 0.72                | 1.48       |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 18                  | 0.45     | 0.21                | 0.46       |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 18                  | 0.3      | 0.16                | 0.29       |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 18                  | 0.22     | 0.06                | 0.22       |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 18                  | 0.22     | 0.04                | 0.21       |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 18                  | 0.18     | 0.04                | 0.16       |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 18                  | 0.17     | 0.03                | 0.18       |
| (1,756)  | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 18                  | 0.17     | 0.04                | 0.16       |
| (1,563)  | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 18                  | 0.16     | 0.03                | 0.16       |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 17                  | 2.62     | 0.91                | 2.81       |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 17                  | 2.62     | 0.91                | 2.81       |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 17                  | 2.62     | 0.91                | 2.81       |
| (1,778)  | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 17                  | 0.15     | 0.02                | 0.15       |
| (1,778)  | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 17                  | 0.15     | 0.02                | 0.15       |
| (1,778)  | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 17                  | 0.15     | 0.02                | 0.15       |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 16                  | 1.71     | 0.5                 | 1.69       |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 16                  | 1.71     | 0.5                 | 1.69       |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 16                  | 1.71     | 0.5                 | 1.69       |
| (1,772)  | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 16                  | 0.18     | 0.03                | 0.18       |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O    | 16                  | 0.17     | 0.02                | 0.16       |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 15                  | 1.77     | 0.39                | 1.83       |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 15                  | 1.19     | 0.35                | 1.28       |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 15                  | 0.22     | 0.05                | 0.24       |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O    | 15                  | 0.16     | 0.03                | 0.16       |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 14                  | 1.01     | 0.24                | 1.02       |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 14                  | 1.01     | 0.24                | 1.02       |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 14                  | 1.01     | 0.24                | 1.02       |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 14                  | 0.72     | 0.27                | 0.68       |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 14                  | 0.22     | 0.06                | 0.2        |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 14                  | 0.22     | 0.06                | 0.2        |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 14                  | 0.21     | 0.05                | 0.21       |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 14                  | 0.19     | 0.05                | 0.18       |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 13                  | 1.49     | 0.24                | 1.51       |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 13                  | 0.44     | 0.19                | 0.46       |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 13                  | 0.44     | 0.19                | 0.46       |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 13                  | 0.44     | 0.19                | 0.46       |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 13                  | 0.28     | 0.16                | 0.32       |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 13                  | 0.28     | 0.16                | 0.32       |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 13                  | 0.28     | 0.16                | 0.32       |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 13                  | 0.2      | 0.06                | 0.19       |
| (1,971)  | 1:A:257:ILE:H    | 1:A:284:SER:H    | 13                  | 0.19     | 0.08                | 0.18       |
| (1,795)  | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 13                  | 0.17     | 0.04                | 0.15       |
| (2,16)   | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 13                  | 0.15     | 0.02                | 0.15       |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 12                  | 0.45     | 0.44                | 0.28       |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 12                  | 0.45     | 0.44                | 0.28       |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 12                  | 0.45     | 0.44                | 0.28       |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 12                  | 0.43     | 0.12                | 0.44       |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 12                  | 0.43     | 0.12                | 0.44       |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 12                  | 0.43     | 0.12                | 0.44       |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 12                  | 0.33     | 0.13                | 0.34       |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 12                  | 0.33     | 0.13                | 0.34       |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 12                  | 0.33     | 0.13                | 0.34       |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 12                  | 0.15     | 0.04                | 0.14       |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 12                  | 0.14     | 0.03                | 0.14       |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 11                  | 0.32     | 0.1                 | 0.33       |
| (1,736)  | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 11                  | 0.21     | 0.08                | 0.2        |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 11                  | 0.17     | 0.05                | 0.16       |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 11                  | 0.17     | 0.05                | 0.16       |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 11                  | 0.17     | 0.05                | 0.16       |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O    | 11                  | 0.17     | 0.04                | 0.16       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 11                  | 0.16     | 0.03                | 0.15       |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 11                  | 0.16     | 0.03                | 0.15       |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 11                  | 0.16     | 0.03                | 0.15       |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 11                  | 0.15     | 0.03                | 0.14       |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 11                  | 0.14     | 0.03                | 0.13       |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 10                  | 0.31     | 0.16                | 0.3        |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 10                  | 0.2      | 0.07                | 0.16       |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 10                  | 0.16     | 0.03                | 0.16       |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 10                  | 0.16     | 0.04                | 0.15       |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 10                  | 0.16     | 0.04                | 0.15       |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 10                  | 0.16     | 0.04                | 0.15       |
| (2,19)   | 1:A:238:ALA:H    | 1:A:235:LEU:O    | 10                  | 0.15     | 0.02                | 0.15       |
| (2,13)   | 1:A:233:THR:H    | 1:A:223:MET:O    | 10                  | 0.14     | 0.02                | 0.14       |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 10                  | 0.14     | 0.02                | 0.14       |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 10                  | 0.13     | 0.02                | 0.12       |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 10                  | 0.13     | 0.02                | 0.12       |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 10                  | 0.13     | 0.02                | 0.12       |
| (1,176)  | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 10                  | 0.13     | 0.01                | 0.13       |
| (2,27)   | 1:A:249:SER:H    | 1:A:293:SER:O    | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 9                   | 0.26     | 0.11                | 0.22       |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 9                   | 0.26     | 0.11                | 0.22       |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 9                   | 0.26     | 0.11                | 0.22       |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 9                   | 0.23     | 0.05                | 0.26       |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 9                   | 0.23     | 0.12                | 0.17       |
| (1,906)  | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 9                   | 0.16     | 0.03                | 0.16       |
| (1,906)  | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 9                   | 0.16     | 0.03                | 0.16       |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 9                   | 0.15     | 0.04                | 0.12       |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 9                   | 0.15     | 0.04                | 0.12       |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 9                   | 0.15     | 0.04                | 0.12       |
| (1,867)  | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 9                   | 0.14     | 0.02                | 0.13       |
| (1,867)  | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 9                   | 0.14     | 0.02                | 0.13       |
| (1,867)  | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 9                   | 0.14     | 0.02                | 0.13       |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 9                   | 0.13     | 0.02                | 0.13       |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 9                   | 0.13     | 0.02                | 0.13       |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 9                   | 0.13     | 0.02                | 0.13       |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 9                   | 0.13     | 0.01                | 0.13       |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 8                   | 0.19     | 0.05                | 0.18       |
| (1,852)  | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 8                   | 0.17     | 0.04                | 0.16       |
| (1,852)  | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 8                   | 0.17     | 0.04                | 0.16       |
| (1,852)  | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 8                   | 0.17     | 0.04                | 0.16       |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1  | 8                   | 0.13     | 0.02                | 0.12       |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2  | 8                   | 0.13     | 0.02                | 0.12       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3  | 8                   | 0.13     | 0.02                | 0.12       |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1  | 8                   | 0.13     | 0.02                | 0.12       |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2  | 8                   | 0.13     | 0.02                | 0.12       |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3  | 8                   | 0.13     | 0.02                | 0.12       |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1  | 8                   | 0.13     | 0.02                | 0.12       |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2  | 8                   | 0.13     | 0.02                | 0.12       |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3  | 8                   | 0.13     | 0.02                | 0.12       |
| (2,22)   | 1:A:245:GLY:N    | 1:A:267:ILE:O    | 8                   | 0.12     | 0.01                | 0.13       |
| (1,325)  | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 7                   | 0.24     | 0.13                | 0.14       |
| (1,325)  | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 7                   | 0.24     | 0.13                | 0.14       |
| (1,946)  | 1:A:256:MET:HE1  | 1:A:280:THR:HB   | 7                   | 0.18     | 0.04                | 0.18       |
| (1,946)  | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 7                   | 0.18     | 0.04                | 0.18       |
| (1,946)  | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 7                   | 0.18     | 0.04                | 0.18       |
| (1,425)  | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 7                   | 0.16     | 0.03                | 0.15       |
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 7                   | 0.16     | 0.03                | 0.15       |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O    | 7                   | 0.15     | 0.03                | 0.17       |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 7                   | 0.14     | 0.02                | 0.15       |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 7                   | 0.14     | 0.02                | 0.15       |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 7                   | 0.14     | 0.02                | 0.15       |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 7                   | 0.14     | 0.02                | 0.15       |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 7                   | 0.14     | 0.02                | 0.15       |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 7                   | 0.14     | 0.02                | 0.15       |
| (1,568)  | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 7                   | 0.13     | 0.02                | 0.12       |
| (1,395)  | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 7                   | 0.12     | 0.01                | 0.12       |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 7                   | 0.12     | 0.01                | 0.12       |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 7                   | 0.12     | 0.01                | 0.12       |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 7                   | 0.12     | 0.01                | 0.12       |
| (1,1491) | 1:A:294:GLN:HB2  | 1:A:295:VAL:H    | 6                   | 0.27     | 0.03                | 0.28       |
| (1,1495) | 1:A:294:GLN:HE22 | 1:A:295:VAL:H    | 6                   | 0.2      | 0.09                | 0.18       |
| (1,925)  | 1:A:256:MET:HB2  | 1:A:286:TYR:H    | 6                   | 0.19     | 0.07                | 0.16       |
| (1,880)  | 1:A:254:GLN:HB2  | 1:A:288:ARG:H    | 6                   | 0.16     | 0.04                | 0.16       |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB1  | 6                   | 0.16     | 0.03                | 0.16       |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB2  | 6                   | 0.16     | 0.03                | 0.16       |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB3  | 6                   | 0.16     | 0.03                | 0.16       |
| (1,1034) | 1:A:259:LEU:HD21 | 1:A:278:CYS:H    | 6                   | 0.16     | 0.02                | 0.16       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1034) | 1:A:259:LEU:HD22 | 1:A:278:CYS:H    | 6                   | 0.16     | 0.02                | 0.16       |
| (1,1034) | 1:A:259:LEU:HD23 | 1:A:278:CYS:H    | 6                   | 0.16     | 0.02                | 0.16       |
| (1,592)  | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 6                   | 0.14     | 0.02                | 0.15       |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG11 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG12 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG13 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG11 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG12 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG13 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG11 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG12 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG13 | 6                   | 0.14     | 0.02                | 0.14       |
| (1,489)  | 1:A:235:LEU:HG   | 1:A:237:GLU:H    | 6                   | 0.13     | 0.03                | 0.12       |
| (1,585)  | 1:A:243:GLU:H    | 1:A:246:ASP:HB2  | 6                   | 0.12     | 0.01                | 0.12       |
| (1,236)  | 1:A:223:MET:HA   | 1:A:286:TYR:HD2  | 5                   | 0.85     | 0.85                | 0.47       |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB2  | 5                   | 0.2      | 0.02                | 0.2        |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB3  | 5                   | 0.2      | 0.02                | 0.2        |
| (1,868)  | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA3  | 5                   | 0.17     | 0.03                | 0.19       |
| (1,868)  | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA3  | 5                   | 0.17     | 0.03                | 0.19       |
| (1,868)  | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA3  | 5                   | 0.17     | 0.03                | 0.19       |
| (1,1395) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 5                   | 0.16     | 0.01                | 0.16       |
| (1,1395) | 1:A:284:SER:HB3  | 1:A:285:ASP:H    | 5                   | 0.16     | 0.01                | 0.16       |
| (1,220)  | 1:A:222:SER:HB2  | 1:A:236:ASP:H    | 5                   | 0.16     | 0.03                | 0.16       |
| (1,256)  | 1:A:224:VAL:H    | 1:A:225:THR:HG21 | 5                   | 0.15     | 0.02                | 0.15       |
| (1,256)  | 1:A:224:VAL:H    | 1:A:225:THR:HG22 | 5                   | 0.15     | 0.02                | 0.15       |
| (1,256)  | 1:A:224:VAL:H    | 1:A:225:THR:HG23 | 5                   | 0.15     | 0.02                | 0.15       |
| (1,1443) | 1:A:288:ARG:HB2  | 1:A:289:GLY:H    | 5                   | 0.15     | 0.01                | 0.15       |
| (1,1342) | 1:A:278:CYS:HB2  | 1:A:279:ASP:H    | 5                   | 0.15     | 0.02                | 0.15       |
| (1,1342) | 1:A:278:CYS:HB3  | 1:A:279:ASP:H    | 5                   | 0.15     | 0.02                | 0.15       |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD2  | 5                   | 0.15     | 0.02                | 0.15       |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD3  | 5                   | 0.15     | 0.02                | 0.15       |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD2  | 5                   | 0.15     | 0.02                | 0.15       |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD3  | 5                   | 0.15     | 0.02                | 0.15       |
| (1,123)  | 1:A:219:ALA:HB1  | 1:A:240:HIS:HA   | 5                   | 0.15     | 0.03                | 0.15       |
| (1,123)  | 1:A:219:ALA:HB2  | 1:A:240:HIS:HA   | 5                   | 0.15     | 0.03                | 0.15       |
| (1,123)  | 1:A:219:ALA:HB3  | 1:A:240:HIS:HA   | 5                   | 0.15     | 0.03                | 0.15       |
| (2,35)   | 1:A:261:GLY:H    | 1:A:257:ILE:O    | 5                   | 0.14     | 0.03                | 0.14       |
| (2,6)    | 1:A:222:SER:N    | 1:A:233:THR:O    | 5                   | 0.13     | 0.02                | 0.13       |
| (2,46)   | 1:A:270:LEU:N    | 1:A:274:THR:O    | 5                   | 0.13     | 0.01                | 0.14       |
| (1,565)  | 1:A:242:PHE:HA   | 1:A:242:PHE:HD1  | 5                   | 0.13     | 0.02                | 0.12       |
| (1,1393) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 5                   | 0.13     | 0.02                | 0.12       |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD11 | 4                   | 1.2      | 0.34                | 1.18       |

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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:A:250:PHE:HE2  | 1:A:277:ILE:HD12 | 4                   | 1.2      | 0.34                | 1.18       |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD13 | 4                   | 1.2      | 0.34                | 1.18       |
| (1,1409) | 1:A:286:TYR:HD2  | 1:A:287:ILE:H    | 4                   | 0.42     | 0.09                | 0.44       |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG21 | 4                   | 0.22     | 0.02                | 0.23       |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG22 | 4                   | 0.22     | 0.02                | 0.23       |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG23 | 4                   | 0.22     | 0.02                | 0.23       |
| (1,79)   | 1:A:217:LEU:HD11 | 1:A:219:ALA:H    | 4                   | 0.22     | 0.09                | 0.22       |
| (1,79)   | 1:A:217:LEU:HD12 | 1:A:219:ALA:H    | 4                   | 0.22     | 0.09                | 0.22       |
| (1,79)   | 1:A:217:LEU:HD13 | 1:A:219:ALA:H    | 4                   | 0.22     | 0.09                | 0.22       |
| (1,1318) | 1:A:277:ILE:HB   | 1:A:278:CYS:H    | 4                   | 0.18     | 0.06                | 0.18       |
| (1,593)  | 1:A:243:GLU:HG2  | 1:A:244:THR:H    | 4                   | 0.16     | 0.02                | 0.16       |
| (1,593)  | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 4                   | 0.16     | 0.02                | 0.16       |
| (1,78)   | 1:A:217:LEU:HD11 | 1:A:218:SER:H    | 4                   | 0.15     | 0.03                | 0.15       |
| (1,78)   | 1:A:217:LEU:HD12 | 1:A:218:SER:H    | 4                   | 0.15     | 0.03                | 0.15       |
| (1,78)   | 1:A:217:LEU:HD13 | 1:A:218:SER:H    | 4                   | 0.15     | 0.03                | 0.15       |
| (1,528)  | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 4                   | 0.15     | 0.04                | 0.14       |
| (1,528)  | 1:A:239:ARG:H    | 1:A:239:ARG:HG3  | 4                   | 0.15     | 0.04                | 0.14       |
| (1,1444) | 1:A:288:ARG:HB3  | 1:A:289:GLY:H    | 4                   | 0.15     | 0.03                | 0.14       |
| (2,18)   | 1:A:235:LEU:N    | 1:A:220:MET:O    | 4                   | 0.13     | 0.02                | 0.13       |
| (1,843)  | 1:A:253:VAL:HA   | 1:A:290:GLY:HA2  | 4                   | 0.13     | 0.02                | 0.12       |
| (1,1456) | 1:A:290:GLY:HA2  | 1:A:291:ILE:H    | 4                   | 0.11     | 0.0                 | 0.11       |
| (1,126)  | 1:A:219:ALA:HB1  | 1:A:242:PHE:HE1  | 3                   | 0.33     | 0.15                | 0.37       |
| (1,126)  | 1:A:219:ALA:HB2  | 1:A:242:PHE:HE1  | 3                   | 0.33     | 0.15                | 0.37       |
| (1,126)  | 1:A:219:ALA:HB3  | 1:A:242:PHE:HE1  | 3                   | 0.33     | 0.15                | 0.37       |
| (1,367)  | 1:A:229:PRO:HG2  | 1:A:230:GLY:H    | 3                   | 0.23     | 0.02                | 0.24       |
| (1,1418) | 1:A:287:ILE:H    | 1:A:288:ARG:HG3  | 3                   | 0.22     | 0.07                | 0.24       |
| (1,1446) | 1:A:288:ARG:HD3  | 1:A:289:GLY:H    | 3                   | 0.2      | 0.05                | 0.19       |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG21 | 3                   | 0.17     | 0.03                | 0.17       |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG22 | 3                   | 0.17     | 0.03                | 0.17       |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG23 | 3                   | 0.17     | 0.03                | 0.17       |
| (1,614)  | 1:A:245:GLY:H    | 1:A:246:ASP:HB3  | 3                   | 0.16     | 0.02                | 0.16       |
| (2,2)    | 1:A:219:ALA:N    | 1:A:292:VAL:O    | 3                   | 0.15     | 0.01                | 0.14       |
| (1,275)  | 1:A:224:VAL:HG11 | 1:A:256:MET:HE1  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG11 | 1:A:256:MET:HE2  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG11 | 1:A:256:MET:HE3  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG12 | 1:A:256:MET:HE1  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG12 | 1:A:256:MET:HE2  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG12 | 1:A:256:MET:HE3  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG13 | 1:A:256:MET:HE1  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG13 | 1:A:256:MET:HE2  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,275)  | 1:A:224:VAL:HG13 | 1:A:256:MET:HE3  | 3                   | 0.15     | 0.02                | 0.13       |
| (1,638)  | 1:A:246:ASP:H    | 1:A:269:VAL:H    | 3                   | 0.14     | 0.02                | 0.16       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,825)  | 1:A:252:GLU:HG2  | 1:A:291:ILE:H    | 3                   | 0.14     | 0.02                | 0.14       |
| (1,825)  | 1:A:252:GLU:HG3  | 1:A:291:ILE:H    | 3                   | 0.14     | 0.02                | 0.14       |
| (2,66)   | 1:A:293:SER:N    | 1:A:249:SER:O    | 3                   | 0.13     | 0.01                | 0.13       |
| (1,989)  | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE21 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,989)  | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE22 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,989)  | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE21 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,989)  | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE22 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,989)  | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE21 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,989)  | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE22 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,60)   | 1:A:217:LEU:H    | 1:A:294:GLN:HB3  | 3                   | 0.13     | 0.01                | 0.13       |
| (1,1301) | 1:A:275:PHE:HZ   | 1:A:292:VAL:HB   | 3                   | 0.13     | 0.01                | 0.12       |
| (1,222)  | 1:A:222:SER:HB3  | 1:A:223:MET:HB3  | 3                   | 0.12     | 0.02                | 0.11       |
| (1,264)  | 1:A:224:VAL:HB   | 1:A:286:TYR:HB2  | 3                   | 0.12     | 0.01                | 0.12       |
| (1,738)  | 1:A:249:SER:H    | 1:A:265:MET:HE1  | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,738)  | 1:A:249:SER:H    | 1:A:265:MET:HE2  | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,738)  | 1:A:249:SER:H    | 1:A:265:MET:HE3  | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,834)  | 1:A:253:VAL:H    | 1:A:260:ASN:HD22 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,988)  | 1:A:257:ILE:HD11 | 1:A:258:GLN:HA   | 3                   | 0.12     | 0.01                | 0.12       |
| (1,988)  | 1:A:257:ILE:HD12 | 1:A:258:GLN:HA   | 3                   | 0.12     | 0.01                | 0.12       |
| (1,988)  | 1:A:257:ILE:HD13 | 1:A:258:GLN:HA   | 3                   | 0.12     | 0.01                | 0.12       |
| (2,3)    | 1:A:221:VAL:H    | 1:A:290:GLY:O    | 3                   | 0.12     | 0.01                | 0.12       |
| (2,51)   | 1:A:276:SER:H    | 1:A:268:LYS:O    | 3                   | 0.11     | 0.0                 | 0.11       |
| (1,680)  | 1:A:247:PHE:HD2  | 1:A:265:MET:H    | 2                   | 2.22     | 0.29                | 2.22       |
| (1,682)  | 1:A:247:PHE:HE2  | 1:A:266:GLU:H    | 2                   | 2.17     | 0.41                | 2.17       |
| (1,681)  | 1:A:247:PHE:HD2  | 1:A:266:GLU:H    | 2                   | 2.02     | 0.31                | 2.02       |
| (1,652)  | 1:A:247:PHE:H    | 1:A:247:PHE:HE1  | 2                   | 1.51     | 0.12                | 1.51       |
| (1,240)  | 1:A:223:MET:HB2  | 1:A:286:TYR:HD2  | 2                   | 1.42     | 1.31                | 1.42       |
| (1,260)  | 1:A:224:VAL:H    | 1:A:286:TYR:HD2  | 2                   | 0.94     | 0.62                | 0.94       |
| (1,651)  | 1:A:247:PHE:H    | 1:A:247:PHE:HD1  | 2                   | 0.86     | 0.06                | 0.86       |
| (1,679)  | 1:A:247:PHE:HD2  | 1:A:248:VAL:H    | 2                   | 0.84     | 0.04                | 0.84       |
| (1,1326) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HD1  | 2                   | 0.66     | 0.03                | 0.66       |
| (1,1326) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HD1  | 2                   | 0.66     | 0.03                | 0.66       |
| (1,1326) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HD1  | 2                   | 0.66     | 0.03                | 0.66       |
| (1,938)  | 1:A:256:MET:HG2  | 1:A:283:PHE:HD1  | 2                   | 0.28     | 0.01                | 0.28       |
| (1,1287) | 1:A:275:PHE:HE1  | 1:A:250:PHE:HE1  | 2                   | 0.25     | 0.06                | 0.25       |
| (1,1417) | 1:A:287:ILE:H    | 1:A:288:ARG:HG2  | 2                   | 0.21     | 0.07                | 0.21       |
| (1,556)  | 1:A:240:HIS:HE1  | 1:A:242:PHE:HD1  | 2                   | 0.2      | 0.08                | 0.2        |
| (1,224)  | 1:A:222:SER:HB3  | 1:A:235:LEU:H    | 2                   | 0.18     | 0.05                | 0.18       |
| (1,209)  | 1:A:222:SER:H    | 1:A:223:MET:HB3  | 2                   | 0.18     | 0.02                | 0.18       |
| (1,214)  | 1:A:222:SER:H    | 1:A:234:CYS:HA   | 2                   | 0.16     | 0.01                | 0.16       |
| (1,1228) | 1:A:270:LEU:HD11 | 1:A:276:SER:HB3  | 2                   | 0.16     | 0.06                | 0.16       |
| (1,1228) | 1:A:270:LEU:HD12 | 1:A:276:SER:HB3  | 2                   | 0.16     | 0.06                | 0.16       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1228) | 1:A:270:LEU:HD13 | 1:A:276:SER:HB3  | 2                   | 0.16     | 0.06                | 0.16       |
| (1,750)  | 1:A:249:SER:HB3  | 1:A:265:MET:H    | 2                   | 0.16     | 0.03                | 0.16       |
| (1,1445) | 1:A:288:ARG:HD2  | 1:A:289:GLY:H    | 2                   | 0.16     | 0.03                | 0.16       |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG21 | 2                   | 0.15     | 0.01                | 0.15       |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG22 | 2                   | 0.15     | 0.01                | 0.15       |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG23 | 2                   | 0.15     | 0.01                | 0.15       |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG11 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG12 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG13 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG21 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG22 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG23 | 2                   | 0.15     | 0.0                 | 0.15       |
| (1,1086) | 1:A:264:PRO:HG2  | 1:A:295:VAL:HB   | 2                   | 0.14     | 0.03                | 0.14       |
| (1,1086) | 1:A:264:PRO:HG3  | 1:A:295:VAL:HB   | 2                   | 0.14     | 0.03                | 0.14       |
| (1,306)  | 1:A:225:THR:HB   | 1:A:231:VAL:HG11 | 2                   | 0.14     | 0.01                | 0.14       |
| (1,306)  | 1:A:225:THR:HB   | 1:A:231:VAL:HG12 | 2                   | 0.14     | 0.01                | 0.14       |
| (1,306)  | 1:A:225:THR:HB   | 1:A:231:VAL:HG13 | 2                   | 0.14     | 0.01                | 0.14       |
| (1,955)  | 1:A:256:MET:HE1  | 1:A:286:TYR:H    | 2                   | 0.14     | 0.02                | 0.14       |
| (1,955)  | 1:A:256:MET:HE2  | 1:A:286:TYR:H    | 2                   | 0.14     | 0.02                | 0.14       |
| (1,955)  | 1:A:256:MET:HE3  | 1:A:286:TYR:H    | 2                   | 0.14     | 0.02                | 0.14       |
| (2,67)   | 1:A:294:GLN:H    | 1:A:217:LEU:O    | 2                   | 0.14     | 0.01                | 0.14       |
| (1,161)  | 1:A:220:MET:HG3  | 1:A:221:VAL:H    | 2                   | 0.13     | 0.02                | 0.13       |
| (1,213)  | 1:A:222:SER:H    | 1:A:233:THR:HG21 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,213)  | 1:A:222:SER:H    | 1:A:233:THR:HG22 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,213)  | 1:A:222:SER:H    | 1:A:233:THR:HG23 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,295)  | 1:A:225:THR:H    | 1:A:230:GLY:HA3  | 2                   | 0.13     | 0.0                 | 0.13       |
| (1,309)  | 1:A:225:THR:HG21 | 1:A:231:VAL:HB   | 2                   | 0.13     | 0.01                | 0.13       |
| (1,309)  | 1:A:225:THR:HG22 | 1:A:231:VAL:HB   | 2                   | 0.13     | 0.01                | 0.13       |
| (1,309)  | 1:A:225:THR:HG23 | 1:A:231:VAL:HB   | 2                   | 0.13     | 0.01                | 0.13       |
| (1,477)  | 1:A:235:LEU:HA   | 1:A:235:LEU:HD11 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,477)  | 1:A:235:LEU:HA   | 1:A:235:LEU:HD12 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,477)  | 1:A:235:LEU:HA   | 1:A:235:LEU:HD13 | 2                   | 0.13     | 0.01                | 0.13       |
| (1,524)  | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 2                   | 0.13     | 0.01                | 0.13       |
| (1,1090) | 1:A:265:MET:H    | 1:A:265:MET:HG2  | 2                   | 0.12     | 0.02                | 0.12       |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD21 | 2                   | 0.12     | 0.02                | 0.12       |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD22 | 2                   | 0.12     | 0.02                | 0.12       |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD23 | 2                   | 0.12     | 0.02                | 0.12       |
| (1,1502) | 1:A:295:VAL:HA   | 1:A:297:VAL:H    | 2                   | 0.12     | 0.01                | 0.12       |
| (1,1530) | 1:A:297:VAL:HA   | 1:A:298:PRO:HD3  | 2                   | 0.12     | 0.01                | 0.12       |
| (1,1320) | 1:A:277:ILE:HG13 | 1:A:278:CYS:H    | 2                   | 0.12     | 0.0                 | 0.12       |
| (2,39)   | 1:A:265:MET:H    | 1:A:248:VAL:O    | 2                   | 0.12     | 0.01                | 0.12       |
| (1,712)  | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG21 | 2                   | 0.12     | 0.0                 | 0.12       |

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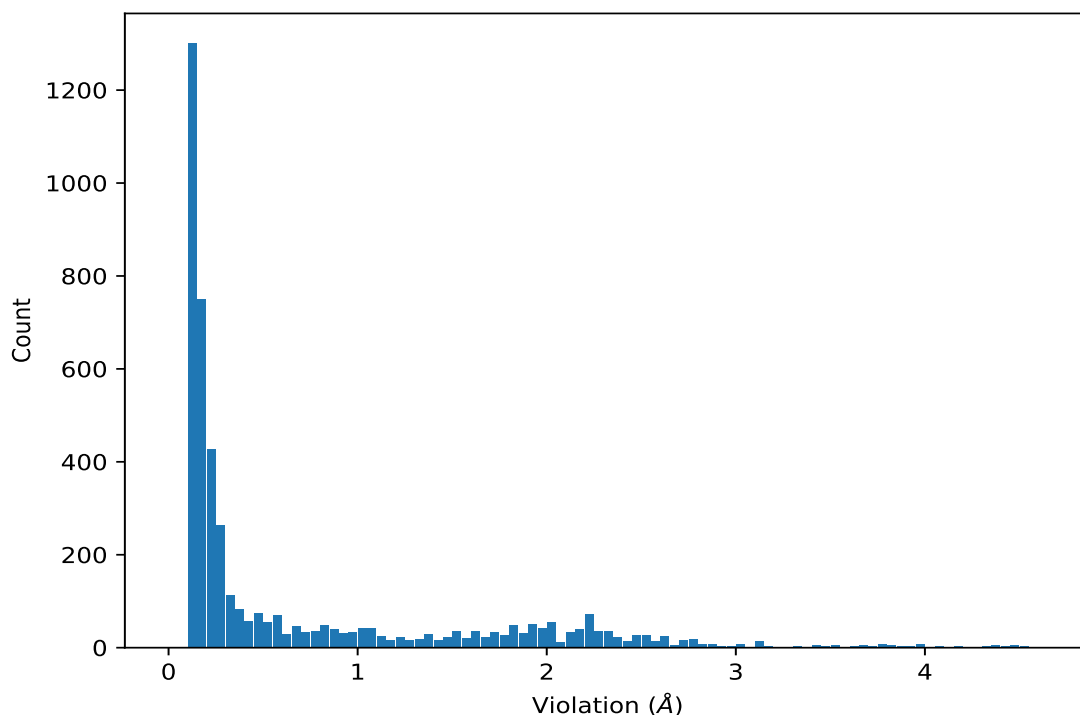
| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,712)  | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG22 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,712)  | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG23 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,712)  | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG21 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,712)  | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG22 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,712)  | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG23 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,712)  | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG21 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,712)  | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG22 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,712)  | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG23 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1515) | 1:A:296:LYS:HA   | 1:A:296:LYS:HD2  | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1515) | 1:A:296:LYS:HA   | 1:A:296:LYS:HD3  | 2                   | 0.12     | 0.0                 | 0.12       |
| (2,17)   | 1:A:235:LEU:H    | 1:A:220:MET:O    | 2                   | 0.12     | 0.0                 | 0.12       |
| (2,31)   | 1:A:256:MET:H    | 1:A:254:GLN:O    | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,576)  | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG11 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,576)  | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG12 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,576)  | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG13 | 2                   | 0.11     | 0.0                 | 0.11       |
| (2,15)   | 1:A:234:CYS:H    | 1:A:273:TYR:O    | 2                   | 0.11     | 0.0                 | 0.11       |
| (2,21)   | 1:A:245:GLY:H    | 1:A:267:ILE:O    | 2                   | 0.11     | 0.0                 | 0.11       |
| (2,29)   | 1:A:254:GLN:H    | 1:A:288:ARG:O    | 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) |
|----------|-----------------|-----------------|----------|---------------|
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 12       | 4.62          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 1        | 4.55          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 9        | 4.55          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 2        | 4.54          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 18       | 4.54          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 4        | 4.52          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 11       | 4.51          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 10       | 4.48          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 15       | 4.48          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 3        | 4.47          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 5        | 4.47          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 8        | 4.45          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 17       | 4.43          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 13       | 4.42          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 16       | 4.41          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 7        | 4.39          |

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| Key      | Atom-1          | Atom-2          | Model ID | Violation (Å) |
|----------|-----------------|-----------------|----------|---------------|
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 5        | 4.38          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 8        | 4.38          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 6        | 4.38          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 19       | 4.37          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 14       | 4.35          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 9        | 4.34          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 6        | 4.32          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 15       | 4.32          |
| (1,1281) | 1:A:275:PHE:HD1 | 1:A:242:PHE:HD1 | 20       | 4.26          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 17       | 4.22          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 12       | 4.17          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 16       | 4.16          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 9        | 4.16          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 12       | 4.14          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 20       | 4.09          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 17       | 4.06          |
| (1,72)   | 1:A:217:LEU:HB2 | 1:A:242:PHE:HE2 | 16       | 4.05          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 4        | 4.04          |
| (1,1286) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HE1 | 17       | 4.0           |
| (1,1286) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HE1 | 4        | 3.99          |
| (1,1286) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HE1 | 12       | 3.98          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 2        | 3.98          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 11       | 3.98          |
| (1,1286) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HE1 | 9        | 3.97          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 18       | 3.97          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 4        | 3.95          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 7        | 3.95          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 5        | 3.94          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 19       | 3.93          |
| (1,1286) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HE1 | 11       | 3.92          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 18       | 3.91          |
| (1,72)   | 1:A:217:LEU:HB2 | 1:A:242:PHE:HE2 | 4        | 3.9           |
| (1,1286) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HE1 | 5        | 3.89          |
| (1,72)   | 1:A:217:LEU:HB2 | 1:A:242:PHE:HE2 | 9        | 3.88          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 15       | 3.86          |
| (1,59)   | 1:A:217:LEU:H   | 1:A:242:PHE:HE2 | 7        | 3.84          |
| (1,1286) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HE1 | 8        | 3.84          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 1        | 3.84          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 10       | 3.84          |
| (1,72)   | 1:A:217:LEU:HB2 | 1:A:242:PHE:HE2 | 15       | 3.82          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 8        | 3.81          |
| (1,1285) | 1:A:275:PHE:HE1 | 1:A:242:PHE:HD1 | 3        | 3.8           |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 10       | 3.79          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 18       | 3.78          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 10       | 3.77          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 2        | 3.77          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 3        | 3.77          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 7        | 3.77          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 1        | 3.75          |
| (1,1285) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HD1 | 13       | 3.74          |
| (1,1285) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HD1 | 16       | 3.74          |
| (1,1285) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HD1 | 14       | 3.73          |
| (1,1285) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HD1 | 19       | 3.71          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 20       | 3.68          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 1        | 3.68          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 6        | 3.67          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 8        | 3.67          |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 11       | 3.67          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 16       | 3.65          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 13       | 3.64          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 15       | 3.61          |
| (1,1285) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HD1 | 6        | 3.58          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 14       | 3.57          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 19       | 3.55          |
| (1,1285) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HD1 | 20       | 3.55          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 5        | 3.54          |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 2        | 3.51          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 12       | 3.5           |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 18       | 3.49          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 18       | 3.49          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 18       | 3.49          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 7        | 3.44          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 10       | 3.41          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 10       | 3.41          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 10       | 3.41          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 20       | 3.41          |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 1        | 3.36          |
| (1,1286) | 1:A:275:PHE:HE1  | 1:A:242:PHE:HE1 | 6        | 3.33          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 18       | 3.32          |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 10       | 3.32          |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 13       | 3.29          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 19       | 3.28          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 11       | 3.17          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 11       | 3.17          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 11       | 3.17          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 19       | 3.13          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 19       | 3.13          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 19       | 3.13          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 10       | 3.13          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 10       | 3.13          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 10       | 3.13          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 15       | 3.13          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 17       | 3.12          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 8        | 3.11          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 8        | 3.11          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 8        | 3.11          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 14       | 3.11          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 14       | 3.11          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 14       | 3.11          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 5        | 3.09          |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 14       | 3.08          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 4        | 3.04          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 4        | 3.04          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 4        | 3.04          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 11       | 3.01          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 11       | 3.01          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 11       | 3.01          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 11       | 3.01          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 7        | 3.01          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 18       | 2.99          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 18       | 2.99          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 18       | 2.99          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 2        | 2.95          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 11       | 2.94          |
| (1,59)   | 1:A:217:LEU:H    | 1:A:242:PHE:HE2 | 3        | 2.93          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 16       | 2.93          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2 | 6        | 2.9           |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2 | 6        | 2.9           |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2 | 6        | 2.9           |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 13       | 2.89          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 20       | 2.86          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 20       | 2.86          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 20       | 2.86          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2 | 4        | 2.83          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1 | 18       | 2.82          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1 | 18       | 2.82          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 18       | 2.82          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 3        | 2.81          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 3        | 2.81          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 3        | 2.81          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 10       | 2.79          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 8        | 2.77          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 8        | 2.77          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 8        | 2.77          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 11       | 2.77          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 11       | 2.77          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 11       | 2.77          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 13       | 2.76          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 13       | 2.76          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 13       | 2.76          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 8        | 2.76          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 8        | 2.76          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 8        | 2.76          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 20       | 2.75          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 20       | 2.75          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 20       | 2.75          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 10       | 2.75          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 10       | 2.75          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 10       | 2.75          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 3        | 2.74          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 17       | 2.74          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 1        | 2.72          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 1        | 2.72          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 1        | 2.72          |
| (1,240)  | 1:A:223:MET:HB2  | 1:A:286:TYR:HD2  | 13       | 2.72          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 18       | 2.71          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 11       | 2.71          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 11       | 2.71          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 11       | 2.71          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 4        | 2.71          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 4        | 2.71          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 4        | 2.71          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 10       | 2.71          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 10       | 2.71          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 10       | 2.71          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 17       | 2.69          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 17       | 2.69          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 17       | 2.69          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 10       | 2.69          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 10       | 2.69          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 10       | 2.69          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 20       | 2.65          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 20       | 2.65          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 20       | 2.65          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 4        | 2.65          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 16       | 2.64          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 16       | 2.64          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 16       | 2.64          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 3        | 2.64          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 3        | 2.64          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 3        | 2.64          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 14       | 2.64          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 14       | 2.64          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 14       | 2.64          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 15       | 2.63          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 15       | 2.63          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 15       | 2.63          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 1        | 2.62          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 16       | 2.62          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 15       | 2.61          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 15       | 2.61          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 15       | 2.61          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 1        | 2.6           |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 1        | 2.6           |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 1        | 2.6           |
| (1,682)  | 1:A:247:PHE:HE2  | 1:A:266:GLU:H    | 12       | 2.59          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 11       | 2.59          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 11       | 2.59          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 11       | 2.59          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 2        | 2.58          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 2        | 2.58          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 2        | 2.58          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 6        | 2.58          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 6        | 2.58          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 6        | 2.58          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 14       | 2.57          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 14       | 2.57          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 14       | 2.57          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 13       | 2.57          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 4        | 2.55          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 4        | 2.55          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 4        | 2.55          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 15       | 2.55          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 15       | 2.55          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 15       | 2.55          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2  | 14       | 2.55          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 1        | 2.55          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 15       | 2.54          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 15       | 2.54          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 15       | 2.54          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 18       | 2.53          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 18       | 2.53          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 18       | 2.53          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 1        | 2.53          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 19       | 2.52          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 18       | 2.52          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 3        | 2.51          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 3        | 2.51          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 3        | 2.51          |
| (1,680)  | 1:A:247:PHE:HD2  | 1:A:265:MET:H    | 12       | 2.51          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 4        | 2.5           |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 4        | 2.5           |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 4        | 2.5           |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 11       | 2.5           |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 20       | 2.5           |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 2        | 2.49          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 2        | 2.49          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 2        | 2.49          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 8        | 2.49          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 8        | 2.49          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 8        | 2.49          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 5        | 2.48          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 5        | 2.48          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 5        | 2.48          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 9        | 2.48          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 9        | 2.48          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 9        | 2.48          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 13       | 2.48          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 13       | 2.48          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 13       | 2.48          |
| (1,236)  | 1:A:223:MET:HA   | 1:A:286:TYR:HD2  | 13       | 2.48          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 16       | 2.47          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 2        | 2.47          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 2        | 2.47          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 2        | 2.47          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 3        | 2.47          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 8        | 2.46          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 6        | 2.46          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 6        | 2.46          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 6        | 2.46          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 10       | 2.46          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 14       | 2.45          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 18       | 2.43          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 18       | 2.43          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 18       | 2.43          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 18       | 2.43          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 18       | 2.43          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 18       | 2.43          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 13       | 2.42          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 17       | 2.42          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 11       | 2.41          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 8        | 2.41          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 8        | 2.41          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 8        | 2.41          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 4        | 2.41          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 5        | 2.41          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 11       | 2.4           |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 11       | 2.4           |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 11       | 2.4           |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 12       | 2.4           |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 17       | 2.4           |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 9        | 2.4           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 14       | 2.39          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 14       | 2.39          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 14       | 2.39          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 6        | 2.38          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 19       | 2.38          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 20       | 2.37          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 20       | 2.37          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 20       | 2.37          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 9        | 2.36          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 12       | 2.36          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 12       | 2.36          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 12       | 2.36          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 17       | 2.36          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 8        | 2.36          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 4        | 2.36          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 19       | 2.35          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 16       | 2.35          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 4        | 2.34          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 9        | 2.34          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 9        | 2.34          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 9        | 2.34          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 7        | 2.34          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 7        | 2.34          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 7        | 2.34          |
| (1,681)  | 1:A:247:PHE:HD2  | 1:A:266:GLU:H    | 12       | 2.33          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 13       | 2.33          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 13       | 2.33          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 13       | 2.33          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 15       | 2.33          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 15       | 2.33          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 15       | 2.33          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 20       | 2.33          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 20       | 2.33          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 20       | 2.33          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 19       | 2.33          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 19       | 2.33          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 19       | 2.33          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 18       | 2.33          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 9        | 2.32          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 6        | 2.32          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 8        | 2.32          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 20       | 2.32          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 12       | 2.31          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 14       | 2.31          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 14       | 2.31          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 14       | 2.31          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 18       | 2.31          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 18       | 2.31          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 18       | 2.31          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 5        | 2.31          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 5        | 2.31          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 5        | 2.31          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 19       | 2.31          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 5        | 2.3           |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 17       | 2.29          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 17       | 2.29          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 17       | 2.29          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 20       | 2.29          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 20       | 2.29          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 20       | 2.29          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2 | 7        | 2.29          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1 | 6        | 2.29          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2 | 14       | 2.28          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1 | 17       | 2.27          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2 | 17       | 2.27          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3 | 17       | 2.27          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 18       | 2.27          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 19       | 2.27          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 19       | 2.27          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 19       | 2.27          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 10       | 2.27          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1 | 4        | 2.26          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1 | 4        | 2.26          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1 | 4        | 2.26          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1 | 1        | 2.26          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1 | 1        | 2.26          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1 | 1        | 2.26          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1 | 2        | 2.26          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 1        | 2.26          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2 | 7        | 2.25          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1 | 7        | 2.25          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2 | 7        | 2.25          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3 | 7        | 2.25          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 16       | 2.25          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 16       | 2.25          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 16       | 2.25          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2 | 13       | 2.25          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1 | 15       | 2.25          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 6        | 2.24          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 6        | 2.24          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 6        | 2.24          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2 | 20       | 2.24          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 12       | 2.24          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 13       | 2.23          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 13       | 2.23          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 13       | 2.23          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1 | 14       | 2.23          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2 | 14       | 2.23          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3 | 14       | 2.23          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 11       | 2.23          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2 | 2        | 2.23          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 16       | 2.23          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 16       | 2.23          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 16       | 2.23          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 4        | 2.23          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 5        | 2.23          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 11       | 2.23          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 1        | 2.22          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 1        | 2.22          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 1        | 2.22          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 7        | 2.22          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 7        | 2.22          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 7        | 2.22          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 11       | 2.22          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 11       | 2.22          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 11       | 2.22          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 12       | 2.22          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 12       | 2.22          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 12       | 2.22          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 9        | 2.22          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 9        | 2.22          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 9        | 2.22          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1 | 6        | 2.22          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1 | 6        | 2.22          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1 | 6        | 2.22          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1 | 12       | 2.22          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1 | 12       | 2.22          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1 | 12       | 2.22          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 4        | 2.22          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 5        | 2.22          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 13       | 2.22          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2 | 2        | 2.21          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 4        | 2.21          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 4        | 2.21          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 4        | 2.21          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2 | 14       | 2.21          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2 | 14       | 2.21          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2 | 14       | 2.21          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 15       | 2.21          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 17       | 2.21          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 18       | 2.2           |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 18       | 2.2           |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 18       | 2.2           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 1        | 2.2           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 1        | 2.2           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 1        | 2.2           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 17       | 2.2           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 17       | 2.2           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 17       | 2.2           |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 3        | 2.2           |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 3        | 2.2           |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 3        | 2.2           |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 10       | 2.2           |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 10       | 2.2           |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 10       | 2.2           |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 15       | 2.2           |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 15       | 2.2           |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 15       | 2.2           |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 5        | 2.2           |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 5        | 2.2           |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 5        | 2.2           |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 8        | 2.19          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 6        | 2.19          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 16       | 2.19          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 16       | 2.19          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 16       | 2.19          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 15       | 2.19          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 12       | 2.19          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 12       | 2.19          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 12       | 2.19          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 16       | 2.19          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 16       | 2.19          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 16       | 2.19          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 12       | 2.19          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 11       | 2.19          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 5        | 2.19          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 18       | 2.18          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 18       | 2.18          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 18       | 2.18          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 2        | 2.18          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 2        | 2.18          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 2        | 2.18          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 18       | 2.18          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 18       | 2.18          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 18       | 2.18          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 16       | 2.18          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 9        | 2.17          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 7        | 2.17          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 15       | 2.17          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 15       | 2.16          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 5        | 2.16          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 5        | 2.16          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 5        | 2.16          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 7        | 2.16          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 7        | 2.16          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 7        | 2.16          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 8        | 2.16          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 8        | 2.16          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 8        | 2.16          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 1        | 2.16          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 20       | 2.15          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 7        | 2.14          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 7        | 2.14          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 7        | 2.14          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 8        | 2.14          |
| (1,426)  | 1:A:232:VAL:HG11 | 1:A:275:PHE:HE2  | 9        | 2.13          |
| (1,426)  | 1:A:232:VAL:HG12 | 1:A:275:PHE:HE2  | 9        | 2.13          |
| (1,426)  | 1:A:232:VAL:HG13 | 1:A:275:PHE:HE2  | 9        | 2.13          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 9        | 2.13          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1  | 2        | 2.13          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1  | 2        | 2.13          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1  | 2        | 2.13          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 13       | 2.13          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 7        | 2.13          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 2        | 2.13          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 2        | 2.13          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 18       | 2.12          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 4        | 2.12          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 4        | 2.12          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 4        | 2.12          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 15       | 2.12          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 15       | 2.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 15       | 2.12          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 12       | 2.12          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 11       | 2.11          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 5        | 2.1           |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 15       | 2.1           |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 15       | 2.1           |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 15       | 2.1           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 13       | 2.1           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 13       | 2.1           |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 13       | 2.1           |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 16       | 2.1           |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 18       | 2.1           |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1  | 14       | 2.1           |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 3        | 2.09          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 3        | 2.09          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 3        | 2.09          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 17       | 2.09          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 11       | 2.08          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 18       | 2.08          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 4        | 2.07          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 5        | 2.07          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 14       | 2.07          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 7        | 2.07          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 11       | 2.07          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 10       | 2.06          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 5        | 2.05          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 5        | 2.05          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 5        | 2.05          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 20       | 2.05          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 16       | 2.05          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 2        | 2.05          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 2        | 2.05          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 2        | 2.05          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 3        | 2.04          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 3        | 2.04          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 3        | 2.04          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 8        | 2.04          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 8        | 2.04          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 8        | 2.04          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 8        | 2.04          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 15       | 2.04          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 16       | 2.04          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 16       | 2.04          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 16       | 2.04          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 2        | 2.04          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 12       | 2.04          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 10       | 2.03          |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2  | 13       | 2.03          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 5        | 2.03          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 5        | 2.03          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 5        | 2.03          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1  | 6        | 2.03          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 2        | 2.03          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2  | 20       | 2.02          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 2        | 2.02          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H    | 12       | 2.02          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 2        | 2.02          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 2        | 2.02          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 2        | 2.02          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 3        | 2.02          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 10       | 2.02          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 4        | 2.02          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 10       | 2.01          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 10       | 2.01          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 10       | 2.01          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG11 | 3        | 2.01          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG12 | 3        | 2.01          |
| (1,779)  | 1:A:250:PHE:HD1  | 1:A:253:VAL:HG13 | 3        | 2.01          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 6        | 2.01          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 6        | 2.01          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 6        | 2.01          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 7        | 2.01          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 12       | 2.0           |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 12       | 2.0           |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3  | 12       | 2.0           |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 8        | 2.0           |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2  | 18       | 2.0           |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1  | 17       | 2.0           |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1  | 17       | 2.0           |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1  | 17       | 2.0           |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 15       | 1.99          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 10       | 1.99          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1  | 10       | 1.98          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2  | 10       | 1.98          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3 | 10       | 1.98          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2 | 3        | 1.98          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 1        | 1.98          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 1        | 1.98          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 1        | 1.98          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1 | 13       | 1.98          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1 | 13       | 1.98          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1 | 13       | 1.98          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 11       | 1.97          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 11       | 1.97          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 11       | 1.97          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 20       | 1.97          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 20       | 1.97          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 20       | 1.97          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2 | 8        | 1.97          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2 | 8        | 1.97          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2 | 8        | 1.97          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 20       | 1.97          |
| (1,1300) | 1:A:275:PHE:HZ   | 1:A:283:PHE:HE1 | 9        | 1.97          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 15       | 1.97          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 20       | 1.96          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 20       | 1.96          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 20       | 1.96          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 9        | 1.96          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 9        | 1.96          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 9        | 1.96          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 12       | 1.96          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 12       | 1.96          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 12       | 1.96          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 16       | 1.96          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 16       | 1.96          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 16       | 1.96          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 17       | 1.96          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 17       | 1.96          |
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 17       | 1.96          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 8        | 1.96          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 18       | 1.96          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 8        | 1.95          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 8        | 1.95          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 8        | 1.95          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2 | 3        | 1.95          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 9        | 1.95          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 20       | 1.95          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1 | 3        | 1.95          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1 | 3        | 1.95          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1 | 3        | 1.95          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 10       | 1.95          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 14       | 1.95          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 4        | 1.94          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 4        | 1.94          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 4        | 1.94          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 8        | 1.93          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 8        | 1.93          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 8        | 1.93          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2 | 16       | 1.93          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1 | 14       | 1.93          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1 | 14       | 1.93          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1 | 14       | 1.93          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 7        | 1.93          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 7        | 1.93          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 7        | 1.93          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 12       | 1.93          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 12       | 1.93          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 12       | 1.93          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 1        | 1.93          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2 | 2        | 1.92          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1 | 6        | 1.92          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2 | 6        | 1.92          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3 | 6        | 1.92          |
| (1,680)  | 1:A:247:PHE:HD2  | 1:A:265:MET:H   | 8        | 1.92          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2 | 17       | 1.92          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2 | 17       | 1.92          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2 | 17       | 1.92          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 3        | 1.92          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 15       | 1.92          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 19       | 1.92          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 5        | 1.92          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 20       | 1.92          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 2        | 1.91          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 2        | 1.91          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 2        | 1.91          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1 | 20       | 1.91          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2 | 20       | 1.91          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3 | 20       | 1.91          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 16       | 1.91          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2 | 7        | 1.91          |
| (1,423)  | 1:A:232:VAL:HB   | 1:A:275:PHE:HE2 | 4        | 1.91          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 15       | 1.9           |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 15       | 1.9           |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 15       | 1.9           |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 13       | 1.9           |
| (1,72)   | 1:A:217:LEU:HB2  | 1:A:242:PHE:HE2 | 3        | 1.9           |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 17       | 1.9           |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 17       | 1.9           |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 17       | 1.9           |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 14       | 1.9           |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 9        | 1.89          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 3        | 1.89          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 4        | 1.88          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 8        | 1.88          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 8        | 1.88          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 8        | 1.88          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 17       | 1.87          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 17       | 1.87          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 17       | 1.87          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 6        | 1.87          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 7        | 1.87          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 1        | 1.86          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 1        | 1.86          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 1        | 1.86          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 15       | 1.86          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 15       | 1.86          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 15       | 1.86          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 1        | 1.86          |
| (1,89)   | 1:A:218:SER:H    | 1:A:242:PHE:HE2 | 17       | 1.85          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1 | 7        | 1.85          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1 | 7        | 1.85          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1 | 7        | 1.85          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2 | 11       | 1.84          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 17       | 1.84          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 17       | 1.84          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 17       | 1.84          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 3        | 1.84          |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 17       | 1.84          |
| (1,285)  | 1:A:224:VAL:HG21 | 1:A:250:PHE:HD1 | 3        | 1.84          |
| (1,285)  | 1:A:224:VAL:HG22 | 1:A:250:PHE:HD1 | 3        | 1.84          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,285)  | 1:A:224:VAL:HG23 | 1:A:250:PHE:HD1 | 3        | 1.84          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 18       | 1.84          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 18       | 1.84          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 18       | 1.84          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 2        | 1.84          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 15       | 1.84          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 19       | 1.84          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 19       | 1.84          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2 | 2        | 1.84          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2 | 10       | 1.83          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2 | 14       | 1.83          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 6        | 1.83          |
| (1,197)  | 1:A:221:VAL:HG21 | 1:A:250:PHE:HD1 | 9        | 1.83          |
| (1,197)  | 1:A:221:VAL:HG22 | 1:A:250:PHE:HD1 | 9        | 1.83          |
| (1,197)  | 1:A:221:VAL:HG23 | 1:A:250:PHE:HD1 | 9        | 1.83          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2 | 10       | 1.83          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2 | 10       | 1.83          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2 | 10       | 1.83          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 18       | 1.83          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2 | 6        | 1.83          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2 | 1        | 1.82          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2 | 1        | 1.82          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2 | 1        | 1.82          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2 | 20       | 1.82          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 14       | 1.81          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 14       | 1.81          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 14       | 1.81          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 7        | 1.81          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 7        | 1.81          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 7        | 1.81          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE1 | 11       | 1.81          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE2 | 11       | 1.81          |
| (1,787)  | 1:A:250:PHE:HD2  | 1:A:265:MET:HE3 | 11       | 1.81          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 13       | 1.81          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 7        | 1.81          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 8        | 1.8           |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2 | 18       | 1.8           |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1 | 12       | 1.8           |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1 | 12       | 1.8           |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1 | 12       | 1.8           |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 19       | 1.8           |
| (1,782)  | 1:A:250:PHE:HD1  | 1:A:292:VAL:H   | 1        | 1.79          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2 | 4        | 1.78          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 6        | 1.78          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 6        | 1.78          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 6        | 1.78          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ  | 6        | 1.78          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2 | 2        | 1.78          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2 | 1        | 1.78          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2 | 13       | 1.78          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2 | 14       | 1.78          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 1        | 1.77          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 6        | 1.77          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 6        | 1.77          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 6        | 1.77          |
| (1,682)  | 1:A:247:PHE:HE2  | 1:A:266:GLU:H   | 8        | 1.76          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 5        | 1.76          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 5        | 1.76          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 5        | 1.76          |
| (1,1363) | 1:A:280:THR:HB   | 1:A:283:PHE:HD1 | 14       | 1.76          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2 | 9        | 1.76          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 17       | 1.76          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 1        | 1.75          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 1        | 1.75          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 1        | 1.75          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 10       | 1.75          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2 | 12       | 1.75          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2 | 16       | 1.74          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2 | 19       | 1.73          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2 | 19       | 1.73          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2 | 19       | 1.73          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 18       | 1.73          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1 | 13       | 1.73          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1 | 13       | 1.73          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1 | 13       | 1.73          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 16       | 1.73          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 16       | 1.73          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 16       | 1.73          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2 | 12       | 1.73          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 4        | 1.72          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 4        | 1.72          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 4        | 1.72          |
| (1,681)  | 1:A:247:PHE:HD2  | 1:A:266:GLU:H   | 8        | 1.72          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 13       | 1.72          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1  | 13       | 1.72          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1  | 13       | 1.72          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 6        | 1.72          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD11 | 5        | 1.71          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD12 | 5        | 1.71          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD13 | 5        | 1.71          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1  | 9        | 1.71          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1  | 9        | 1.71          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1  | 9        | 1.71          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1  | 11       | 1.71          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1  | 11       | 1.71          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1  | 11       | 1.71          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1  | 20       | 1.71          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1  | 20       | 1.71          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1  | 20       | 1.71          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 14       | 1.71          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 5        | 1.7           |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 11       | 1.7           |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 11       | 1.7           |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 11       | 1.7           |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 16       | 1.7           |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 14       | 1.69          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 14       | 1.69          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 14       | 1.69          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 15       | 1.69          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 7        | 1.68          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 7        | 1.68          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 7        | 1.68          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 1        | 1.68          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 5        | 1.68          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 9        | 1.68          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 12       | 1.67          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 8        | 1.67          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 19       | 1.67          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 15       | 1.66          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 15       | 1.66          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 15       | 1.66          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 3        | 1.66          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 19       | 1.66          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 10       | 1.65          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 10       | 1.65          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 10       | 1.65          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 1        | 1.65          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 8        | 1.65          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 12       | 1.65          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 18       | 1.64          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 17       | 1.64          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 10       | 1.64          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 10       | 1.64          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 10       | 1.64          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 11       | 1.64          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 11       | 1.64          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 11       | 1.64          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1  | 10       | 1.64          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1  | 10       | 1.64          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1  | 10       | 1.64          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 11       | 1.64          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 12       | 1.64          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 17       | 1.64          |
| (1,652)  | 1:A:247:PHE:H    | 1:A:247:PHE:HE1  | 8        | 1.63          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 6        | 1.63          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 20       | 1.63          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 20       | 1.63          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 20       | 1.63          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 7        | 1.63          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 13       | 1.62          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 14       | 1.62          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 3        | 1.61          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 10       | 1.61          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 10       | 1.61          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 2        | 1.6           |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 2        | 1.6           |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 2        | 1.6           |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2  | 18       | 1.6           |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 8        | 1.6           |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 9        | 1.59          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 6        | 1.58          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 19       | 1.57          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 19       | 1.57          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 19       | 1.57          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2  | 16       | 1.57          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 2        | 1.56          |
| (1,260)  | 1:A:224:VAL:H    | 1:A:286:TYR:HD2  | 13       | 1.56          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 16       | 1.56          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2 | 16       | 1.56          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2 | 16       | 1.56          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 19       | 1.56          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 19       | 1.56          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 19       | 1.56          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2 | 4        | 1.56          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2 | 6        | 1.56          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2 | 8        | 1.56          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2 | 20       | 1.56          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2 | 11       | 1.55          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1 | 20       | 1.55          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 2        | 1.54          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 1        | 1.54          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 1        | 1.54          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 1        | 1.54          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 2        | 1.54          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 2        | 1.54          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 2        | 1.54          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 14       | 1.54          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 14       | 1.54          |
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1 | 14       | 1.54          |
| (1,1275) | 1:A:275:PHE:H    | 1:A:275:PHE:HE2 | 16       | 1.54          |
| (1,1011) | 1:A:258:GLN:HG2  | 1:A:283:PHE:HD2 | 3        | 1.54          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 13       | 1.53          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 13       | 1.53          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 13       | 1.53          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2 | 13       | 1.53          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1 | 5        | 1.53          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1 | 5        | 1.53          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1 | 5        | 1.53          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2 | 4        | 1.53          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2 | 4        | 1.53          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2 | 4        | 1.53          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1 | 16       | 1.52          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1 | 16       | 1.52          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1 | 16       | 1.52          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2 | 3        | 1.52          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 7        | 1.51          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2 | 11       | 1.51          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2 | 15       | 1.51          |
| (1,1366) | 1:A:280:THR:HG21 | 1:A:283:PHE:HD1 | 3        | 1.51          |
| (1,1366) | 1:A:280:THR:HG22 | 1:A:283:PHE:HD1 | 3        | 1.51          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1366) | 1:A:280:THR:HG23 | 1:A:283:PHE:HD1  | 3        | 1.51          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 18       | 1.51          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 10       | 1.5           |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 3        | 1.5           |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 14       | 1.5           |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 13       | 1.49          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 8        | 1.49          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 16       | 1.49          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 20       | 1.49          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 20       | 1.49          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 20       | 1.49          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 9        | 1.49          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 14       | 1.48          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 8        | 1.47          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 5        | 1.47          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 4        | 1.47          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 7        | 1.47          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 18       | 1.47          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 20       | 1.47          |
| (1,1296) | 1:A:275:PHE:HZ   | 1:A:242:PHE:HE1  | 6        | 1.47          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 9        | 1.46          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 9        | 1.46          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 9        | 1.46          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 1        | 1.46          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 9        | 1.46          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 8        | 1.46          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 17       | 1.46          |
| (1,1295) | 1:A:275:PHE:HE2  | 1:A:283:PHE:HZ   | 9        | 1.46          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 11       | 1.45          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 16       | 1.44          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 16       | 1.44          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 16       | 1.44          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 20       | 1.43          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 20       | 1.43          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 20       | 1.43          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 7        | 1.43          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 5        | 1.42          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 10       | 1.42          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 19       | 1.41          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 15       | 1.41          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 15       | 1.41          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 15       | 1.41          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 12       | 1.41          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 14       | 1.41          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 6        | 1.41          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 5        | 1.4           |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 5        | 1.4           |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 5        | 1.4           |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 19       | 1.4           |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 19       | 1.4           |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 19       | 1.4           |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 6        | 1.39          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 6        | 1.39          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 6        | 1.39          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 6        | 1.39          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 6        | 1.39          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 6        | 1.39          |
| (1,652)  | 1:A:247:PHE:H    | 1:A:247:PHE:HE1  | 12       | 1.39          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 1        | 1.39          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 6        | 1.39          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 6        | 1.39          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 6        | 1.39          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 16       | 1.39          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 4        | 1.37          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 20       | 1.37          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 4        | 1.36          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 9        | 1.36          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 9        | 1.36          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 9        | 1.36          |
| (1,84)   | 1:A:217:LEU:HD11 | 1:A:242:PHE:HD2  | 4        | 1.35          |
| (1,84)   | 1:A:217:LEU:HD12 | 1:A:242:PHE:HD2  | 4        | 1.35          |
| (1,84)   | 1:A:217:LEU:HD13 | 1:A:242:PHE:HD2  | 4        | 1.35          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 12       | 1.35          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 8        | 1.34          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 8        | 1.34          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 8        | 1.34          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 14       | 1.34          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 14       | 1.34          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 14       | 1.34          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 9        | 1.33          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 9        | 1.33          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 9        | 1.33          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 18       | 1.31          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 18       | 1.31          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 18       | 1.31          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 4        | 1.3           |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 4        | 1.3           |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 4        | 1.3           |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 16       | 1.3           |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 3        | 1.3           |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 3        | 1.3           |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 3        | 1.3           |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 17       | 1.29          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 20       | 1.28          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 9        | 1.28          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 9        | 1.28          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 9        | 1.28          |
| (1,414)  | 1:A:232:VAL:H    | 1:A:275:PHE:HE2  | 9        | 1.28          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 18       | 1.28          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 18       | 1.28          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 18       | 1.28          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 19       | 1.28          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 9        | 1.27          |
| (1,951)  | 1:A:256:MET:HE1  | 1:A:283:PHE:HD1  | 12       | 1.26          |
| (1,951)  | 1:A:256:MET:HE2  | 1:A:283:PHE:HD1  | 12       | 1.26          |
| (1,951)  | 1:A:256:MET:HE3  | 1:A:283:PHE:HD1  | 12       | 1.26          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 8        | 1.25          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 8        | 1.25          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 8        | 1.25          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 2        | 1.24          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 5        | 1.23          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 5        | 1.23          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 5        | 1.23          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 10       | 1.23          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 10       | 1.23          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 10       | 1.23          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD11 | 14       | 1.22          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD12 | 14       | 1.22          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD13 | 14       | 1.22          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 3        | 1.22          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 19       | 1.22          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 19       | 1.22          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 19       | 1.22          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 20       | 1.21          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 17       | 1.21          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 17       | 1.21          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 17       | 1.21          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 15       | 1.21          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 15       | 1.21          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 15       | 1.21          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 2        | 1.21          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 1        | 1.2           |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 17       | 1.2           |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 1        | 1.19          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 1        | 1.19          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 1        | 1.19          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 7        | 1.19          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 3        | 1.18          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 14       | 1.18          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 15       | 1.16          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 13       | 1.16          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 13       | 1.16          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 13       | 1.16          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 17       | 1.16          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 17       | 1.16          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 17       | 1.16          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 5        | 1.16          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 2        | 1.15          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD11 | 6        | 1.14          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD12 | 6        | 1.14          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD13 | 6        | 1.14          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 13       | 1.14          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 13       | 1.14          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 13       | 1.14          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 15       | 1.13          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 15       | 1.13          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 15       | 1.13          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 13       | 1.13          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 8        | 1.12          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 8        | 1.12          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 8        | 1.12          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 14       | 1.12          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 14       | 1.12          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 14       | 1.12          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 20       | 1.12          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 20       | 1.12          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 20       | 1.12          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 18       | 1.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 18       | 1.11          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 18       | 1.11          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 10       | 1.11          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 8        | 1.1           |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 5        | 1.09          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 5        | 1.09          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 5        | 1.09          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 8        | 1.09          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 8        | 1.09          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 8        | 1.09          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 15       | 1.09          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 17       | 1.09          |
| (1,1012) | 1:A:258:GLN:HG3  | 1:A:283:PHE:HD2  | 3        | 1.09          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 10       | 1.08          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 10       | 1.08          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 10       | 1.08          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 9        | 1.08          |
| (1,76)   | 1:A:217:LEU:HB3  | 1:A:242:PHE:HE2  | 13       | 1.07          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 3        | 1.07          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 3        | 1.07          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 3        | 1.07          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 6        | 1.07          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 6        | 1.07          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 6        | 1.07          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 5        | 1.07          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 15       | 1.07          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 19       | 1.07          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 10       | 1.06          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 10       | 1.06          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 10       | 1.06          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 11       | 1.06          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 11       | 1.06          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 11       | 1.06          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 11       | 1.06          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 11       | 1.06          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 11       | 1.06          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 16       | 1.06          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 16       | 1.06          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 16       | 1.06          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 20       | 1.06          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 2        | 1.06          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 2        | 1.06          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 2        | 1.06          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 5        | 1.05          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 14       | 1.05          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 19       | 1.05          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 9        | 1.04          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 9        | 1.04          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 9        | 1.04          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 19       | 1.04          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 19       | 1.04          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 19       | 1.04          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 1        | 1.04          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 1        | 1.04          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 1        | 1.04          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 2        | 1.04          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 13       | 1.04          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 14       | 1.04          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 17       | 1.04          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 17       | 1.03          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 17       | 1.03          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 17       | 1.03          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 1        | 1.03          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 1        | 1.03          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 1        | 1.03          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 4        | 1.03          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 4        | 1.03          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 4        | 1.03          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 7        | 1.03          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 13       | 1.02          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 13       | 1.02          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 13       | 1.02          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 6        | 1.02          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 11       | 1.02          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 14       | 1.01          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 14       | 1.01          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 14       | 1.01          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 4        | 1.0           |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 4        | 1.0           |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 4        | 1.0           |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 20       | 1.0           |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 20       | 1.0           |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 20       | 1.0           |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 8        | 1.0           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 1        | 1.0           |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 10       | 1.0           |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 18       | 1.0           |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 17       | 0.99          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 17       | 0.99          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 17       | 0.99          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 12       | 0.99          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 18       | 0.98          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 18       | 0.98          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 18       | 0.98          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 19       | 0.98          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 19       | 0.98          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 19       | 0.98          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 11       | 0.98          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 11       | 0.98          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 11       | 0.98          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 3        | 0.98          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 1        | 0.98          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 9        | 0.98          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 9        | 0.98          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 9        | 0.98          |
| (1,1007) | 1:A:258:GLN:HB2  | 1:A:283:PHE:HD2  | 4        | 0.98          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 6        | 0.97          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 7        | 0.97          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 7        | 0.97          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 7        | 0.97          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 16       | 0.97          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 16       | 0.97          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 16       | 0.97          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 4        | 0.97          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 4        | 0.97          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 4        | 0.97          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 6        | 0.97          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 20       | 0.97          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 15       | 0.97          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 6        | 0.96          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 10       | 0.95          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 7        | 0.95          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 7        | 0.95          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 7        | 0.95          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 8        | 0.95          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 12       | 0.94          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 12       | 0.94          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 12       | 0.94          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 18       | 0.94          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 12       | 0.94          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 12       | 0.94          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 12       | 0.94          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 2        | 0.93          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 2        | 0.93          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 2        | 0.93          |
| (1,651)  | 1:A:247:PHE:H    | 1:A:247:PHE:HD1  | 8        | 0.93          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 13       | 0.93          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 7        | 0.92          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 7        | 0.92          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 7        | 0.92          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 13       | 0.92          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 9        | 0.92          |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 4        | 0.92          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 6        | 0.92          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 11       | 0.91          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 14       | 0.9           |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 14       | 0.9           |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 14       | 0.9           |
| (1,1274) | 1:A:275:PHE:H    | 1:A:275:PHE:HD2  | 16       | 0.9           |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 10       | 0.9           |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 10       | 0.9           |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 10       | 0.9           |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 3        | 0.89          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 3        | 0.89          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 15       | 0.89          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 15       | 0.89          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 15       | 0.89          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 3        | 0.89          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 3        | 0.89          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 3        | 0.89          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 18       | 0.89          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 14       | 0.89          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 14       | 0.89          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 14       | 0.89          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 1        | 0.88          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 1        | 0.88          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 1        | 0.88          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 2        | 0.88          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 2        | 0.88          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 2        | 0.88          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 11       | 0.88          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 1        | 0.88          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 1        | 0.88          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 1        | 0.88          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 6        | 0.88          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 6        | 0.88          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 6        | 0.88          |
| (1,679)  | 1:A:247:PHE:HD2  | 1:A:248:VAL:H    | 12       | 0.88          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 5        | 0.88          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 9        | 0.88          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 15       | 0.87          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 14       | 0.87          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 20       | 0.87          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 20       | 0.87          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 20       | 0.87          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 14       | 0.87          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 14       | 0.87          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 14       | 0.87          |
| (1,735)  | 1:A:249:SER:H    | 1:A:250:PHE:HD2  | 20       | 0.86          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 2        | 0.86          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 2        | 0.86          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 2        | 0.86          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 16       | 0.85          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 5        | 0.85          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 5        | 0.85          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 5        | 0.85          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 12       | 0.85          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD11 | 12       | 0.85          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD12 | 12       | 0.85          |
| (1,575)  | 1:A:242:PHE:HE1  | 1:A:267:ILE:HD13 | 12       | 0.85          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 2        | 0.85          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 2        | 0.85          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 2        | 0.85          |
| (1,236)  | 1:A:223:MET:HA   | 1:A:286:TYR:HD2  | 18       | 0.85          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 5        | 0.85          |
| (1,872)  | 1:A:254:GLN:H    | 1:A:286:TYR:HD2  | 15       | 0.84          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 3        | 0.84          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 3        | 0.84          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 3        | 0.84          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG21 | 16       | 0.84          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG22 | 16       | 0.84          |
| (1,789)  | 1:A:250:PHE:HE1  | 1:A:253:VAL:HG23 | 16       | 0.84          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 7        | 0.84          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 19       | 0.84          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 19       | 0.84          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 19       | 0.84          |
| (1,274)  | 1:A:224:VAL:HG11 | 1:A:250:PHE:HE1  | 3        | 0.83          |
| (1,274)  | 1:A:224:VAL:HG12 | 1:A:250:PHE:HE1  | 3        | 0.83          |
| (1,274)  | 1:A:224:VAL:HG13 | 1:A:250:PHE:HE1  | 3        | 0.83          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 5        | 0.83          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 3        | 0.83          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 4        | 0.81          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 10       | 0.81          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 6        | 0.81          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 6        | 0.81          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 6        | 0.81          |
| (1,651)  | 1:A:247:PHE:H    | 1:A:247:PHE:HD1  | 12       | 0.8           |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 2        | 0.8           |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 14       | 0.8           |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 1        | 0.8           |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 1        | 0.8           |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 1        | 0.8           |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 11       | 0.8           |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 11       | 0.8           |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 11       | 0.8           |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 12       | 0.8           |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 12       | 0.8           |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 12       | 0.8           |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 9        | 0.8           |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 9        | 0.8           |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 9        | 0.8           |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 1        | 0.79          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 2        | 0.79          |
| (1,679)  | 1:A:247:PHE:HD2  | 1:A:248:VAL:H    | 8        | 0.79          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 2        | 0.79          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 17       | 0.79          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 8        | 0.79          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 8        | 0.79          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 8        | 0.79          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 15       | 0.79          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 15       | 0.79          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 15       | 0.79          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 3        | 0.78          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 3        | 0.78          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 3        | 0.78          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 13       | 0.78          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 13       | 0.78          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 13       | 0.78          |
| (1,713)  | 1:A:248:VAL:HG11 | 1:A:275:PHE:HE1  | 17       | 0.77          |
| (1,713)  | 1:A:248:VAL:HG12 | 1:A:275:PHE:HE1  | 17       | 0.77          |
| (1,713)  | 1:A:248:VAL:HG13 | 1:A:275:PHE:HE1  | 17       | 0.77          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 6        | 0.77          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 19       | 0.77          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 2        | 0.76          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 8        | 0.76          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 17       | 0.76          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 12       | 0.76          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD11 | 15       | 0.75          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD12 | 15       | 0.75          |
| (1,790)  | 1:A:250:PHE:HE2  | 1:A:277:ILE:HD13 | 15       | 0.75          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 18       | 0.75          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 3        | 0.75          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 3        | 0.75          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 3        | 0.75          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 5        | 0.75          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 10       | 0.75          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 9        | 0.75          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 14       | 0.74          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 13       | 0.74          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 13       | 0.74          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 13       | 0.74          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 1        | 0.74          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 12       | 0.74          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 15       | 0.74          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 8        | 0.74          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 17       | 0.74          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 17       | 0.74          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 17       | 0.74          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 2        | 0.74          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 2        | 0.74          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 2        | 0.74          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 7        | 0.74          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 7        | 0.74          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 7        | 0.74          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 5        | 0.73          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 5        | 0.73          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 5        | 0.73          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 7        | 0.73          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 7        | 0.73          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 7        | 0.73          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 2        | 0.73          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 2        | 0.73          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 2        | 0.73          |
| (1,916)  | 1:A:256:MET:H    | 1:A:286:TYR:HD2  | 17       | 0.72          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 12       | 0.72          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 1        | 0.71          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 6        | 0.71          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 6        | 0.71          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 6        | 0.71          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 6        | 0.71          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 18       | 0.7           |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 18       | 0.7           |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 18       | 0.7           |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 18       | 0.7           |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 13       | 0.69          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 11       | 0.69          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 11       | 0.69          |
| (1,1326) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HD1  | 20       | 0.69          |
| (1,1326) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HD1  | 20       | 0.69          |
| (1,1326) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HD1  | 20       | 0.69          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 16       | 0.69          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 19       | 0.69          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 19       | 0.69          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 19       | 0.69          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 2        | 0.69          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 7        | 0.68          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 9        | 0.68          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 5        | 0.68          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 5        | 0.68          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 5        | 0.68          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 9        | 0.68          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 20       | 0.68          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 20       | 0.68          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 20       | 0.68          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 14       | 0.68          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 14       | 0.68          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 14       | 0.68          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 7        | 0.68          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 17       | 0.67          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 17       | 0.67          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 17       | 0.67          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 7        | 0.67          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 11       | 0.67          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 17       | 0.67          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 6        | 0.67          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 6        | 0.67          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 6        | 0.67          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 15       | 0.67          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 15       | 0.67          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 15       | 0.67          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 16       | 0.66          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 20       | 0.66          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 16       | 0.66          |
| (1,1164) | 1:A:268:LYS:H    | 1:A:275:PHE:HD1  | 4        | 0.66          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 15       | 0.65          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 16       | 0.65          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 19       | 0.65          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 4        | 0.64          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 4        | 0.64          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 4        | 0.64          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 14       | 0.63          |
| (1,1326) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HD1  | 9        | 0.63          |
| (1,1326) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HD1  | 9        | 0.63          |
| (1,1326) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HD1  | 9        | 0.63          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 19       | 0.63          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 19       | 0.63          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 19       | 0.63          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 5        | 0.62          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 1        | 0.62          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 1        | 0.62          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 1        | 0.62          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 5        | 0.62          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 5        | 0.62          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 5        | 0.62          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 9        | 0.61          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 9        | 0.61          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 9        | 0.61          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 6        | 0.61          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 6        | 0.61          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 6        | 0.61          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 11       | 0.61          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 11       | 0.61          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 11       | 0.61          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 13       | 0.61          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 13       | 0.61          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 13       | 0.61          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 2        | 0.6           |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 2        | 0.6           |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 2        | 0.6           |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 3        | 0.6           |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 12       | 0.6           |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 12       | 0.6           |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 12       | 0.6           |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 2        | 0.6           |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 14       | 0.59          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 2        | 0.59          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 7        | 0.59          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 13       | 0.59          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 1        | 0.59          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 1        | 0.59          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 1        | 0.59          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 17       | 0.58          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 16       | 0.58          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 16       | 0.58          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 16       | 0.58          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 4        | 0.58          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 4        | 0.58          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 4        | 0.58          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 18       | 0.58          |
| (1,1150) | 1:A:267:ILE:HG21 | 1:A:275:PHE:HD1  | 16       | 0.58          |
| (1,1150) | 1:A:267:ILE:HG22 | 1:A:275:PHE:HD1  | 16       | 0.58          |
| (1,1150) | 1:A:267:ILE:HG23 | 1:A:275:PHE:HD1  | 16       | 0.58          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 11       | 0.58          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 8        | 0.57          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 1        | 0.57          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 7        | 0.57          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 7        | 0.57          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 7        | 0.57          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 16       | 0.57          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 16       | 0.57          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 16       | 0.57          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 3        | 0.57          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 10       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 10       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 10       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 17       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 17       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 17       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 18       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 18       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 18       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 20       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 20       | 0.57          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 20       | 0.57          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 15       | 0.57          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 15       | 0.57          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 15       | 0.57          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 13       | 0.56          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 20       | 0.56          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 20       | 0.56          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 20       | 0.56          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 8        | 0.56          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 8        | 0.56          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 8        | 0.56          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 3        | 0.55          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 3        | 0.55          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 3        | 0.55          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 2        | 0.55          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 2        | 0.55          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 2        | 0.55          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 14       | 0.55          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 14       | 0.55          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 14       | 0.55          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 14       | 0.55          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 7        | 0.55          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 7        | 0.55          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 7        | 0.55          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 13       | 0.54          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 13       | 0.54          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 13       | 0.54          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 19       | 0.54          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 19       | 0.54          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 19       | 0.54          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 10       | 0.54          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 4        | 0.54          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 12       | 0.54          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 10       | 0.53          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 3        | 0.53          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 3        | 0.53          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 3        | 0.53          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 14       | 0.53          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 4        | 0.52          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 13       | 0.52          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 13       | 0.52          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 13       | 0.52          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 1        | 0.52          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 1        | 0.52          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 1        | 0.52          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 14       | 0.52          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 14       | 0.52          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 14       | 0.52          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 6        | 0.51          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 6        | 0.51          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 6        | 0.51          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 11       | 0.51          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 11       | 0.51          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 11       | 0.51          |
| (1,1409) | 1:A:286:TYR:HD2  | 1:A:287:ILE:H    | 14       | 0.51          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 11       | 0.51          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 12       | 0.51          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 19       | 0.51          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 7        | 0.5           |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 7        | 0.5           |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 7        | 0.5           |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 16       | 0.5           |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 16       | 0.5           |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 16       | 0.5           |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 5        | 0.5           |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 5        | 0.5           |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 5        | 0.5           |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 15       | 0.5           |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 15       | 0.5           |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 15       | 0.5           |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 4        | 0.5           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 4        | 0.5           |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 4        | 0.5           |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 17       | 0.5           |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 17       | 0.5           |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 17       | 0.5           |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 16       | 0.5           |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 16       | 0.5           |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 16       | 0.5           |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 2        | 0.49          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 2        | 0.49          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 2        | 0.49          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 10       | 0.49          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 3        | 0.49          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 3        | 0.49          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 3        | 0.49          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 18       | 0.49          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 18       | 0.49          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 18       | 0.49          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 8        | 0.49          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 8        | 0.49          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 8        | 0.49          |
| (1,126)  | 1:A:219:ALA:HB1  | 1:A:242:PHE:HE1  | 20       | 0.49          |
| (1,126)  | 1:A:219:ALA:HB2  | 1:A:242:PHE:HE1  | 20       | 0.49          |
| (1,126)  | 1:A:219:ALA:HB3  | 1:A:242:PHE:HE1  | 20       | 0.49          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 1        | 0.49          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 1        | 0.49          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 1        | 0.49          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 4        | 0.48          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 14       | 0.48          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 1        | 0.47          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 1        | 0.47          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 1        | 0.47          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 17       | 0.47          |
| (1,236)  | 1:A:223:MET:HA   | 1:A:286:TYR:HD2  | 19       | 0.47          |
| (1,1409) | 1:A:286:TYR:HD2  | 1:A:287:ILE:H    | 13       | 0.47          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 11       | 0.47          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 11       | 0.47          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 11       | 0.47          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 17       | 0.47          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 8        | 0.47          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 4        | 0.47          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 4        | 0.47          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 4        | 0.47          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 5        | 0.47          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 5        | 0.47          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 5        | 0.47          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 20       | 0.47          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 3        | 0.46          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 3        | 0.46          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 3        | 0.46          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 20       | 0.46          |
| (1,574)  | 1:A:242:PHE:HD2  | 1:A:243:GLU:H    | 9        | 0.46          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 10       | 0.46          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 10       | 0.46          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 10       | 0.46          |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 4        | 0.46          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 18       | 0.46          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 18       | 0.46          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 18       | 0.46          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 13       | 0.46          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 13       | 0.46          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 13       | 0.46          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 12       | 0.46          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 12       | 0.46          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 12       | 0.46          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 12       | 0.45          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 12       | 0.45          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 12       | 0.45          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 10       | 0.45          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 4        | 0.45          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 4        | 0.45          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 4        | 0.45          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 8        | 0.45          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 8        | 0.45          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 8        | 0.45          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 1        | 0.45          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 1        | 0.45          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 1        | 0.45          |
| (1,292)  | 1:A:224:VAL:HG21 | 1:A:286:TYR:HD2  | 6        | 0.45          |
| (1,292)  | 1:A:224:VAL:HG22 | 1:A:286:TYR:HD2  | 6        | 0.45          |
| (1,292)  | 1:A:224:VAL:HG23 | 1:A:286:TYR:HD2  | 6        | 0.45          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 20       | 0.45          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 15       | 0.44          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 15       | 0.44          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 15       | 0.44          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 13       | 0.44          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 13       | 0.44          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 13       | 0.44          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 20       | 0.44          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 20       | 0.44          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 20       | 0.44          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 17       | 0.44          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 4        | 0.44          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 18       | 0.43          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 17       | 0.43          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 17       | 0.43          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 17       | 0.43          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 13       | 0.43          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 17       | 0.43          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 17       | 0.43          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 17       | 0.43          |
| (1,1284) | 1:A:275:PHE:HD2  | 1:A:242:PHE:HD1  | 16       | 0.43          |
| (1,971)  | 1:A:257:ILE:H    | 1:A:284:SER:H    | 9        | 0.42          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 7        | 0.42          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 7        | 0.42          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 7        | 0.42          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 19       | 0.42          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 19       | 0.42          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 19       | 0.42          |
| (1,1409) | 1:A:286:TYR:HD2  | 1:A:287:ILE:H    | 4        | 0.42          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 4        | 0.42          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 4        | 0.42          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 4        | 0.42          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 4        | 0.42          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 3        | 0.42          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 3        | 0.42          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 3        | 0.42          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 11       | 0.42          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 11       | 0.42          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 11       | 0.42          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 6        | 0.42          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 9        | 0.41          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 9        | 0.41          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 9        | 0.41          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 19       | 0.41          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 17       | 0.4           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 17       | 0.4           |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 17       | 0.4           |
| (1,325)  | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 6        | 0.4           |
| (1,325)  | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 6        | 0.4           |
| (1,325)  | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 17       | 0.4           |
| (1,325)  | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 17       | 0.4           |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 11       | 0.4           |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 3        | 0.4           |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 19       | 0.4           |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 13       | 0.4           |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 13       | 0.4           |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 13       | 0.4           |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 8        | 0.4           |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 11       | 0.39          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 5        | 0.39          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 5        | 0.39          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 5        | 0.39          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 12       | 0.39          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 12       | 0.39          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 12       | 0.39          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 16       | 0.39          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 16       | 0.39          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 16       | 0.39          |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 20       | 0.39          |
| (1,1495) | 1:A:294:GLN:HE22 | 1:A:295:VAL:H    | 4        | 0.39          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 4        | 0.39          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 16       | 0.39          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 16       | 0.39          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 16       | 0.39          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 18       | 0.38          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 18       | 0.38          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 18       | 0.38          |
| (1,1410) | 1:A:286:TYR:HD2  | 1:A:288:ARG:H    | 1        | 0.38          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 5        | 0.38          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 10       | 0.38          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 10       | 0.38          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 10       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 20       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 20       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 20       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 20       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 20       | 0.38          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 20       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 20       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 20       | 0.38          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 20       | 0.38          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 9        | 0.38          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 1        | 0.37          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 1        | 0.37          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 1        | 0.37          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 16       | 0.37          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 16       | 0.37          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 16       | 0.37          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 6        | 0.37          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 11       | 0.37          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 2        | 0.37          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 2        | 0.37          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 2        | 0.37          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD11 | 12       | 0.37          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD12 | 12       | 0.37          |
| (1,573)  | 1:A:242:PHE:HD1  | 1:A:267:ILE:HD13 | 12       | 0.37          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 11       | 0.37          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 11       | 0.37          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 11       | 0.37          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 3        | 0.37          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 3        | 0.37          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 3        | 0.37          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 13       | 0.37          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 13       | 0.37          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 13       | 0.37          |
| (1,126)  | 1:A:219:ALA:HB1  | 1:A:242:PHE:HE1  | 15       | 0.37          |
| (1,126)  | 1:A:219:ALA:HB2  | 1:A:242:PHE:HE1  | 15       | 0.37          |
| (1,126)  | 1:A:219:ALA:HB3  | 1:A:242:PHE:HE1  | 15       | 0.37          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 10       | 0.37          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 10       | 0.37          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 10       | 0.37          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 12       | 0.36          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 12       | 0.36          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 12       | 0.36          |
| (1,325)  | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 9        | 0.36          |
| (1,325)  | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 9        | 0.36          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 10       | 0.36          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 10       | 0.36          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 10       | 0.36          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 10       | 0.36          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 10       | 0.36          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 10       | 0.36          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 10       | 0.36          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 10       | 0.36          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 10       | 0.36          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 17       | 0.36          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 17       | 0.36          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 17       | 0.36          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 20       | 0.36          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 20       | 0.36          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 20       | 0.36          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 9        | 0.35          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 9        | 0.35          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 9        | 0.35          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 1        | 0.35          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 1        | 0.35          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 1        | 0.35          |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 9        | 0.35          |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 13       | 0.35          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 2        | 0.35          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 2        | 0.35          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 2        | 0.35          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 3        | 0.35          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 3        | 0.35          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 3        | 0.35          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 8        | 0.35          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 8        | 0.35          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 8        | 0.35          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 18       | 0.35          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 13       | 0.34          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 13       | 0.34          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 13       | 0.34          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 9        | 0.34          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 9        | 0.34          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 9        | 0.34          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 17       | 0.34          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 5        | 0.34          |
| (1,1145) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HE1  | 9        | 0.34          |
| (1,1145) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HE1  | 9        | 0.34          |
| (1,1145) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HE1  | 9        | 0.34          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 17       | 0.33          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,736)  | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 15       | 0.33          |
| (1,572)  | 1:A:242:PHE:HB3  | 1:A:267:ILE:HD11 | 9        | 0.33          |
| (1,572)  | 1:A:242:PHE:HB3  | 1:A:267:ILE:HD12 | 9        | 0.33          |
| (1,572)  | 1:A:242:PHE:HB3  | 1:A:267:ILE:HD13 | 9        | 0.33          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 8        | 0.33          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 8        | 0.33          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 8        | 0.33          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 17       | 0.33          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 17       | 0.33          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 17       | 0.33          |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 19       | 0.33          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 12       | 0.33          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 17       | 0.33          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 17       | 0.33          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 17       | 0.33          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 18       | 0.33          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 18       | 0.33          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 18       | 0.33          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 6        | 0.33          |
| (1,925)  | 1:A:256:MET:HB2  | 1:A:286:TYR:H    | 7        | 0.32          |
| (1,79)   | 1:A:217:LEU:HD11 | 1:A:219:ALA:H    | 13       | 0.32          |
| (1,79)   | 1:A:217:LEU:HD12 | 1:A:219:ALA:H    | 13       | 0.32          |
| (1,79)   | 1:A:217:LEU:HD13 | 1:A:219:ALA:H    | 13       | 0.32          |
| (1,783)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HA   | 15       | 0.32          |
| (1,736)  | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 13       | 0.32          |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 10       | 0.32          |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 18       | 0.32          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 17       | 0.32          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 6        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 9        | 0.32          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 9        | 0.32          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 1        | 0.32          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 1        | 0.32          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 1        | 0.32          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 1        | 0.32          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 15       | 0.32          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 7        | 0.32          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 9        | 0.32          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 9        | 0.32          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 9        | 0.32          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 16       | 0.32          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 16       | 0.32          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 16       | 0.32          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 19       | 0.32          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 8        | 0.32          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 8        | 0.32          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 8        | 0.32          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 7        | 0.32          |
| (1,736)  | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 10       | 0.31          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 3        | 0.31          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 3        | 0.31          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 3        | 0.31          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 10       | 0.31          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 10       | 0.31          |
| (1,260)  | 1:A:224:VAL:H    | 1:A:286:TYR:HD2  | 18       | 0.31          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 3        | 0.31          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 3        | 0.31          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 12       | 0.31          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 1        | 0.31          |
| (1,1287) | 1:A:275:PHE:HE1  | 1:A:250:PHE:HE1  | 10       | 0.31          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 6        | 0.31          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 1        | 0.3           |
| (1,79)   | 1:A:217:LEU:HD11 | 1:A:219:ALA:H    | 3        | 0.3           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,79)   | 1:A:217:LEU:HD12 | 1:A:219:ALA:H    | 3        | 0.3           |
| (1,79)   | 1:A:217:LEU:HD13 | 1:A:219:ALA:H    | 3        | 0.3           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 3        | 0.3           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 3        | 0.3           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 3        | 0.3           |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 11       | 0.3           |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 11       | 0.3           |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 11       | 0.3           |
| (1,218)  | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 3        | 0.3           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 11       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 14       | 0.3           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 14       | 0.3           |
| (1,1491) | 1:A:294:GLN:HB2  | 1:A:295:VAL:H    | 11       | 0.3           |
| (1,1491) | 1:A:294:GLN:HB2  | 1:A:295:VAL:H    | 13       | 0.3           |
| (1,1418) | 1:A:287:ILE:H    | 1:A:288:ARG:HG3  | 5        | 0.3           |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 7        | 0.3           |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 13       | 0.3           |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 13       | 0.3           |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 13       | 0.3           |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 12       | 0.3           |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 19       | 0.3           |
| (1,938)  | 1:A:256:MET:HG2  | 1:A:283:PHE:HD1  | 2        | 0.29          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 10       | 0.29          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 10       | 0.29          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 10       | 0.29          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 10       | 0.29          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 10       | 0.29          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 10       | 0.29          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 10       | 0.29          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 10       | 0.29          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 10       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 16       | 0.29          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 16       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 4        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 4        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 4        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 5        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 5        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 5        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 7        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 7        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 7        | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 12       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 12       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 12       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 14       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 14       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 14       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 19       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 19       | 0.29          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 19       | 0.29          |
| (1,236)  | 1:A:223:MET:HA   | 1:A:286:TYR:HD2  | 8        | 0.29          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 3        | 0.29          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 2        | 0.29          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 1        | 0.29          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 5        | 0.29          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 15       | 0.29          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 17       | 0.29          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 11       | 0.28          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 13       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 12       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 12       | 0.28          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 12       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 12       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 12       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 12       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 12       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 12       | 0.28          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 12       | 0.28          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 12       | 0.28          |
| (1,556)  | 1:A:240:HIS:HE1  | 1:A:242:PHE:HD1  | 1        | 0.28          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 8        | 0.28          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 8        | 0.28          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 8        | 0.28          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 16       | 0.28          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 16       | 0.28          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 16       | 0.28          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 17       | 0.28          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 2        | 0.28          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 2        | 0.28          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 2        | 0.28          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 16       | 0.28          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 16       | 0.28          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 16       | 0.28          |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 6        | 0.28          |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 15       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 18       | 0.28          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 18       | 0.28          |
| (1,1491) | 1:A:294:GLN:HB2  | 1:A:295:VAL:H    | 2        | 0.28          |
| (1,1491) | 1:A:294:GLN:HB2  | 1:A:295:VAL:H    | 10       | 0.28          |
| (1,1417) | 1:A:287:ILE:H    | 1:A:288:ARG:HG2  | 14       | 0.28          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 8        | 0.28          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 9        | 0.28          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 16       | 0.28          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 16       | 0.28          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 16       | 0.28          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 16       | 0.28          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 3        | 0.28          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 14       | 0.28          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 11       | 0.28          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 9        | 0.27          |
| (1,865)  | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 7        | 0.27          |
| (1,865)  | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 7        | 0.27          |
| (1,865)  | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 7        | 0.27          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 1        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 6        | 0.27          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 6        | 0.27          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 18       | 0.27          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 18       | 0.27          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 18       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 10       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 10       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 10       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 15       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 15       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 15       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 20       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 20       | 0.27          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 20       | 0.27          |
| (1,1446) | 1:A:288:ARG:HD3  | 1:A:289:GLY:H    | 10       | 0.27          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 3        | 0.27          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 6        | 0.27          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 9        | 0.27          |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O    | 6        | 0.26          |
| (1,938)  | 1:A:256:MET:HG2  | 1:A:283:PHE:HD1  | 1        | 0.26          |
| (1,925)  | 1:A:256:MET:HB2  | 1:A:286:TYR:H    | 1        | 0.26          |
| (1,795)  | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 10       | 0.26          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 4        | 0.26          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 14       | 0.26          |
| (1,435)  | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 10       | 0.26          |
| (1,435)  | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 10       | 0.26          |
| (1,435)  | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 10       | 0.26          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 8        | 0.26          |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 12       | 0.26          |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 16       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 13       | 0.26          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 13       | 0.26          |
| (1,1409) | 1:A:286:TYR:HD2  | 1:A:287:ILE:H    | 19       | 0.26          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 17       | 0.26          |
| (1,1319) | 1:A:277:ILE:HB   | 1:A:279:ASP:H    | 7        | 0.26          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 3        | 0.26          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 16       | 0.26          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 16       | 0.26          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 16       | 0.26          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 19       | 0.25          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 20       | 0.25          |
| (1,971)  | 1:A:257:ILE:H    | 1:A:284:SER:H    | 20       | 0.25          |
| (1,852)  | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 13       | 0.25          |
| (1,852)  | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 13       | 0.25          |
| (1,852)  | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 13       | 0.25          |
| (1,756)  | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 19       | 0.25          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 10       | 0.25          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 19       | 0.25          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 1        | 0.25          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 1        | 0.25          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 13       | 0.25          |
| (1,367)  | 1:A:229:PRO:HG2  | 1:A:230:GLY:H    | 14       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 17       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 17       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 17       | 0.25          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 17       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 17       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 17       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 17       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 17       | 0.25          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 17       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 19       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 20       | 0.25          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 20       | 0.25          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 4        | 0.25          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 7        | 0.25          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 4        | 0.25          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 4        | 0.25          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 4        | 0.25          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 12       | 0.25          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 12       | 0.25          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 12       | 0.25          |
| (1,1318) | 1:A:277:ILE:HB   | 1:A:278:CYS:H    | 9        | 0.25          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 10       | 0.25          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 17       | 0.25          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 17       | 0.25          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 17       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 16       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 16       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 16       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 16       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 16       | 0.25          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 16       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 16       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 16       | 0.25          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 16       | 0.25          |
| (1,1144) | 1:A:267:ILE:HD11 | 1:A:275:PHE:HD1  | 4        | 0.25          |
| (1,1144) | 1:A:267:ILE:HD12 | 1:A:275:PHE:HD1  | 4        | 0.25          |
| (1,1144) | 1:A:267:ILE:HD13 | 1:A:275:PHE:HD1  | 4        | 0.25          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG21 | 3        | 0.25          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG22 | 3        | 0.25          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG23 | 3        | 0.25          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 10       | 0.24          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 12       | 0.24          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 4        | 0.24          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 4        | 0.24          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 4        | 0.24          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 17       | 0.24          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 17       | 0.24          |
| (1,786)  | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 17       | 0.24          |
| (1,75)   | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 17       | 0.24          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 16       | 0.24          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 18       | 0.24          |
| (1,367)  | 1:A:229:PRO:HG2  | 1:A:230:GLY:H    | 10       | 0.24          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 8        | 0.24          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 8        | 0.24          |
| (1,224)  | 1:A:222:SER:HB3  | 1:A:235:LEU:H    | 5        | 0.24          |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 7        | 0.24          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 7        | 0.24          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 7        | 0.24          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 7        | 0.24          |
| (1,1418) | 1:A:287:ILE:H    | 1:A:288:ARG:HG3  | 7        | 0.24          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 17       | 0.24          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 2        | 0.24          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 13       | 0.24          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 7        | 0.24          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 15       | 0.24          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 20       | 0.24          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 3        | 0.24          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 3        | 0.24          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 1        | 0.24          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 13       | 0.24          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG21 | 20       | 0.24          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG22 | 20       | 0.24          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG23 | 20       | 0.24          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 16       | 0.23          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 4        | 0.23          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 7        | 0.23          |
| (1,946)  | 1:A:256:MET:HE1  | 1:A:280:THR:HB   | 7        | 0.23          |
| (1,946)  | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 7        | 0.23          |
| (1,946)  | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 7        | 0.23          |
| (1,946)  | 1:A:256:MET:HE1  | 1:A:280:THR:HB   | 19       | 0.23          |
| (1,946)  | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 19       | 0.23          |
| (1,946)  | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 19       | 0.23          |
| (1,880)  | 1:A:254:GLN:HB2  | 1:A:288:ARG:H    | 8        | 0.23          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 1        | 0.23          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 14       | 0.23          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 14       | 0.23          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 11       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 14       | 0.23          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 14       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 15       | 0.23          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 15       | 0.23          |
| (1,1491) | 1:A:294:GLN:HB2  | 1:A:295:VAL:H    | 12       | 0.23          |
| (1,1491) | 1:A:294:GLN:HB2  | 1:A:295:VAL:H    | 19       | 0.23          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 5        | 0.23          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 11       | 0.23          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 11       | 0.23          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 11       | 0.23          |
| (1,1318) | 1:A:277:ILE:HB   | 1:A:278:CYS:H    | 7        | 0.23          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 12       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 2        | 0.23          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 20       | 0.23          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 20       | 0.23          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 8        | 0.22          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 12       | 0.22          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,62)  | 1:A:291:ILE:N    | 1:A:251:SER:O    | 13       | 0.22          |
| (2,62)  | 1:A:291:ILE:N    | 1:A:251:SER:O    | 15       | 0.22          |
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 16       | 0.22          |
| (2,37)  | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 8        | 0.22          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 13       | 0.22          |
| (1,98)  | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 19       | 0.22          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 7        | 0.22          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 8        | 0.22          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 8        | 0.22          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 5        | 0.22          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 5        | 0.22          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 5        | 0.22          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 16       | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 2        | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 8        | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 15       | 0.22          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 15       | 0.22          |
| (1,58)  | 1:A:217:LEU:H    | 1:A:218:SER:HB2  | 7        | 0.22          |
| (1,58)  | 1:A:217:LEU:H    | 1:A:218:SER:HB3  | 7        | 0.22          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 19       | 0.22          |
| (1,425)  | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 8        | 0.22          |
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 8        | 0.22          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 2        | 0.22          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 3        | 0.22          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 3        | 0.22          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 3        | 0.22          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG21 | 6        | 0.22          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG22 | 6        | 0.22          |
| (1,257)  | 1:A:224:VAL:H    | 1:A:232:VAL:HG23 | 6        | 0.22          |
| (1,1495) | 1:A:294:GLN:HE22 | 1:A:295:VAL:H    | 8        | 0.22          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 12       | 0.22          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 4        | 0.22          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 14       | 0.22          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 2        | 0.22          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 11       | 0.22          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 3        | 0.22          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 3        | 0.22          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 18       | 0.22          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 18       | 0.22          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 18       | 0.22          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 11       | 0.22          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 5        | 0.22          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 5        | 0.22          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 5        | 0.22          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 2        | 0.22          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 18       | 0.22          |
| (1,1228) | 1:A:270:LEU:HD11 | 1:A:276:SER:HB3  | 17       | 0.22          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1228) | 1:A:270:LEU:HD12 | 1:A:276:SER:HB3  | 17       | 0.22          |
| (1,1228) | 1:A:270:LEU:HD13 | 1:A:276:SER:HB3  | 17       | 0.22          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 4        | 0.22          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 16       | 0.22          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 2        | 0.22          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG21 | 12       | 0.22          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG22 | 12       | 0.22          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG23 | 12       | 0.22          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 3        | 0.22          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 7        | 0.21          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 9        | 0.21          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 17       | 0.21          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 10       | 0.21          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 20       | 0.21          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 10       | 0.21          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 17       | 0.21          |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O    | 4        | 0.21          |
| (2,19)   | 1:A:238:ALA:H    | 1:A:235:LEU:O    | 19       | 0.21          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 16       | 0.21          |
| (1,852)  | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 12       | 0.21          |
| (1,852)  | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 12       | 0.21          |
| (1,852)  | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 12       | 0.21          |
| (1,795)  | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 14       | 0.21          |
| (1,772)  | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 6        | 0.21          |
| (1,772)  | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 17       | 0.21          |
| (1,756)  | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 11       | 0.21          |
| (1,736)  | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 5        | 0.21          |
| (1,736)  | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 19       | 0.21          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 3        | 0.21          |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 3        | 0.21          |
| (1,722)  | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 6        | 0.21          |
| (1,722)  | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 6        | 0.21          |
| (1,722)  | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 6        | 0.21          |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB2  | 2        | 0.21          |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB3  | 2        | 0.21          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,563)  | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 2        | 0.21          |
| (1,563)  | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 17       | 0.21          |
| (1,528)  | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 19       | 0.21          |
| (1,528)  | 1:A:239:ARG:H    | 1:A:239:ARG:HG3  | 19       | 0.21          |
| (1,400)  | 1:A:231:VAL:HG11 | 1:A:276:SER:HB2  | 5        | 0.21          |
| (1,400)  | 1:A:231:VAL:HG12 | 1:A:276:SER:HB2  | 5        | 0.21          |
| (1,400)  | 1:A:231:VAL:HG13 | 1:A:276:SER:HB2  | 5        | 0.21          |
| (1,1537) | 1:A:297:VAL:HG11 | 1:A:298:PRO:HD2  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG11 | 1:A:298:PRO:HD3  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG12 | 1:A:298:PRO:HD2  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG12 | 1:A:298:PRO:HD3  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG13 | 1:A:298:PRO:HD2  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG13 | 1:A:298:PRO:HD3  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG21 | 1:A:298:PRO:HD2  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG21 | 1:A:298:PRO:HD3  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG22 | 1:A:298:PRO:HD2  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG22 | 1:A:298:PRO:HD3  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG23 | 1:A:298:PRO:HD2  | 13       | 0.21          |
| (1,1537) | 1:A:297:VAL:HG23 | 1:A:298:PRO:HD3  | 13       | 0.21          |
| (1,1504) | 1:A:295:VAL:HG11 | 1:A:297:VAL:H    | 3        | 0.21          |
| (1,1504) | 1:A:295:VAL:HG12 | 1:A:297:VAL:H    | 3        | 0.21          |
| (1,1504) | 1:A:295:VAL:HG13 | 1:A:297:VAL:H    | 3        | 0.21          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 12       | 0.21          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 13       | 0.21          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 12       | 0.21          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 20       | 0.21          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 20       | 0.21          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 20       | 0.21          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 20       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 13       | 0.21          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 13       | 0.21          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 2        | 0.21          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 2        | 0.21          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 2        | 0.21          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 8        | 0.21          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 8        | 0.21          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 8        | 0.21          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 8        | 0.21          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG21 | 5        | 0.21          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG22 | 5        | 0.21          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG23 | 5        | 0.21          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 9        | 0.21          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 11       | 0.21          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 9        | 0.21          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 19       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 12       | 0.21          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 12       | 0.21          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 16       | 0.21          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 4        | 0.2           |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 1        | 0.2           |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 2        | 0.2           |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 6        | 0.2           |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 13       | 0.2           |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 20       | 0.2           |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O    | 20       | 0.2           |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 20       | 0.2           |
| (2,16)   | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 17       | 0.2           |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O    | 9        | 0.2           |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 5        | 0.2           |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 6        | 0.2           |
| (1,971)  | 1:A:257:ILE:H    | 1:A:284:SER:H    | 12       | 0.2           |
| (1,946)  | 1:A:256:MET:HE1  | 1:A:280:THR:HB   | 1        | 0.2           |
| (1,946)  | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 1        | 0.2           |
| (1,946)  | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 1        | 0.2           |
| (1,880)  | 1:A:254:GLN:HB2  | 1:A:288:ARG:H    | 10       | 0.2           |
| (1,868)  | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA3  | 13       | 0.2           |
| (1,868)  | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA3  | 13       | 0.2           |
| (1,868)  | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA3  | 13       | 0.2           |
| (1,795)  | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 19       | 0.2           |
| (1,778)  | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 14       | 0.2           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,778)  | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 14       | 0.2           |
| (1,778)  | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 14       | 0.2           |
| (1,772)  | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 9        | 0.2           |
| (1,772)  | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 13       | 0.2           |
| (1,772)  | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 15       | 0.2           |
| (1,772)  | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 19       | 0.2           |
| (1,736)  | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 4        | 0.2           |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 14       | 0.2           |
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 14       | 0.2           |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB2  | 3        | 0.2           |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB3  | 3        | 0.2           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 1        | 0.2           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 1        | 0.2           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 1        | 0.2           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 13       | 0.2           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 13       | 0.2           |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 13       | 0.2           |
| (1,371)  | 1:A:229:PRO:HG3  | 1:A:276:SER:HB3  | 14       | 0.2           |
| (1,367)  | 1:A:229:PRO:HG2  | 1:A:230:GLY:H    | 5        | 0.2           |
| (1,220)  | 1:A:222:SER:HB2  | 1:A:236:ASP:H    | 1        | 0.2           |
| (1,209)  | 1:A:222:SER:H    | 1:A:223:MET:HB3  | 7        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 4        | 0.2           |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 4        | 0.2           |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 2        | 0.2           |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 2        | 0.2           |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 2        | 0.2           |
| (1,1444) | 1:A:288:ARG:HB3  | 1:A:289:GLY:H    | 1        | 0.2           |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB1  | 6        | 0.2           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB2  | 6        | 0.2           |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB3  | 6        | 0.2           |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 4        | 0.2           |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 18       | 0.2           |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 8        | 0.2           |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 16       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 1        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 2        | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 10       | 0.2           |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 10       | 0.2           |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 14       | 0.2           |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 10       | 0.2           |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 10       | 0.2           |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 10       | 0.2           |
| (1,123)  | 1:A:219:ALA:HB1  | 1:A:240:HIS:HA   | 3        | 0.2           |
| (1,123)  | 1:A:219:ALA:HB2  | 1:A:240:HIS:HA   | 3        | 0.2           |
| (1,123)  | 1:A:219:ALA:HB3  | 1:A:240:HIS:HA   | 3        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 4        | 0.2           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 4        | 0.2           |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 18       | 0.2           |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 18       | 0.2           |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 10       | 0.2           |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 1        | 0.2           |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 10       | 0.19          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 16       | 0.19          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 20       | 0.19          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 4        | 0.19          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 5        | 0.19          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 14       | 0.19          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 8        | 0.19          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 18       | 0.19          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 7        | 0.19          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 9        | 0.19          |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O    | 7        | 0.19          |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O    | 19       | 0.19          |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 5        | 0.19          |
| (2,35)   | 1:A:261:GLY:H    | 1:A:257:ILE:O    | 2        | 0.19          |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O    | 19       | 0.19          |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O    | 18       | 0.19          |
| (2,13)   | 1:A:233:THR:H    | 1:A:223:MET:O    | 13       | 0.19          |
| (1,971)  | 1:A:257:ILE:H    | 1:A:284:SER:H    | 6        | 0.19          |
| (1,906)  | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 3        | 0.19          |
| (1,906)  | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 3        | 0.19          |
| (1,868)  | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA3  | 7        | 0.19          |
| (1,868)  | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA3  | 7        | 0.19          |
| (1,868)  | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA3  | 7        | 0.19          |
| (1,868)  | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA3  | 9        | 0.19          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,868) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA3  | 9        | 0.19          |
| (1,868) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA3  | 9        | 0.19          |
| (1,865) | 1:A:253:VAL:HG21 | 1:A:286:TYR:HD2  | 12       | 0.19          |
| (1,865) | 1:A:253:VAL:HG22 | 1:A:286:TYR:HD2  | 12       | 0.19          |
| (1,865) | 1:A:253:VAL:HG23 | 1:A:286:TYR:HD2  | 12       | 0.19          |
| (1,852) | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 14       | 0.19          |
| (1,852) | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 14       | 0.19          |
| (1,852) | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 14       | 0.19          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 9        | 0.19          |
| (1,78)  | 1:A:217:LEU:HD11 | 1:A:218:SER:H    | 10       | 0.19          |
| (1,78)  | 1:A:217:LEU:HD12 | 1:A:218:SER:H    | 10       | 0.19          |
| (1,78)  | 1:A:217:LEU:HD13 | 1:A:218:SER:H    | 10       | 0.19          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 5        | 0.19          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 5        | 0.19          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 5        | 0.19          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 3        | 0.19          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 7        | 0.19          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 9        | 0.19          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 17       | 0.19          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 6        | 0.19          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 14       | 0.19          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 17       | 0.19          |
| (1,750) | 1:A:249:SER:HB3  | 1:A:265:MET:H    | 2        | 0.19          |
| (1,75)  | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 2        | 0.19          |
| (1,75)  | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 3        | 0.19          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 18       | 0.19          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 19       | 0.19          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 19       | 0.19          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 19       | 0.19          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 19       | 0.19          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 19       | 0.19          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 19       | 0.19          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 19       | 0.19          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 19       | 0.19          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,727)  | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 19       | 0.19          |
| (1,614)  | 1:A:245:GLY:H    | 1:A:246:ASP:HB3  | 3        | 0.19          |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB2  | 4        | 0.19          |
| (1,58)   | 1:A:217:LEU:H    | 1:A:218:SER:HB3  | 4        | 0.19          |
| (1,577)  | 1:A:242:PHE:HE2  | 1:A:294:GLN:HB2  | 2        | 0.19          |
| (1,563)  | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 18       | 0.19          |
| (1,525)  | 1:A:239:ARG:H    | 1:A:239:ARG:HG3  | 19       | 0.19          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 12       | 0.19          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 12       | 0.19          |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 11       | 0.19          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 2        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 7        | 0.19          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 7        | 0.19          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 10       | 0.19          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 10       | 0.19          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 10       | 0.19          |
| (1,1446) | 1:A:288:ARG:HD3  | 1:A:289:GLY:H    | 1        | 0.19          |
| (1,1445) | 1:A:288:ARG:HD2  | 1:A:289:GLY:H    | 15       | 0.19          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB1  | 14       | 0.19          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB2  | 14       | 0.19          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB3  | 14       | 0.19          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 1        | 0.19          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 10       | 0.19          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 15       | 0.19          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 18       | 0.19          |
| (1,1342) | 1:A:278:CYS:HB2  | 1:A:279:ASP:H    | 1        | 0.19          |
| (1,1342) | 1:A:278:CYS:HB3  | 1:A:279:ASP:H    | 1        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 4        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 8        | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 11       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 12       | 0.19          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 12       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 16       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 18       | 0.19          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 18       | 0.19          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 17       | 0.19          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 17       | 0.19          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 17       | 0.19          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 18       | 0.19          |
| (1,1287) | 1:A:275:PHE:HE1  | 1:A:250:PHE:HE1  | 11       | 0.19          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 12       | 0.19          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 1        | 0.19          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 1        | 0.19          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG21 | 9        | 0.19          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG22 | 9        | 0.19          |
| (1,1083) | 1:A:264:PRO:HB3  | 1:A:295:VAL:HG23 | 9        | 0.19          |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O    | 11       | 0.18          |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O    | 19       | 0.18          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 3        | 0.18          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 11       | 0.18          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,62)  | 1:A:291:ILE:N    | 1:A:251:SER:O    | 19       | 0.18          |
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 4        | 0.18          |
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 11       | 0.18          |
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 15       | 0.18          |
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 18       | 0.18          |
| (2,45)  | 1:A:270:LEU:H    | 1:A:274:THR:O    | 14       | 0.18          |
| (2,4)   | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 10       | 0.18          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 6        | 0.18          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 12       | 0.18          |
| (2,16)  | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 2        | 0.18          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 6        | 0.18          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 19       | 0.18          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 4        | 0.18          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 15       | 0.18          |
| (1,946) | 1:A:256:MET:HE1  | 1:A:280:THR:HB   | 16       | 0.18          |
| (1,946) | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 16       | 0.18          |
| (1,946) | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 16       | 0.18          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 12       | 0.18          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 12       | 0.18          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 4        | 0.18          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 4        | 0.18          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 4        | 0.18          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 15       | 0.18          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 2        | 0.18          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 3        | 0.18          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 14       | 0.18          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 10       | 0.18          |
| (1,75)  | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 9        | 0.18          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 4        | 0.18          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 4        | 0.18          |
| (1,722) | 1:A:248:VAL:HG21 | 1:A:250:PHE:HD2  | 4        | 0.18          |
| (1,722) | 1:A:248:VAL:HG22 | 1:A:250:PHE:HD2  | 4        | 0.18          |
| (1,722) | 1:A:248:VAL:HG23 | 1:A:250:PHE:HD2  | 4        | 0.18          |
| (1,593) | 1:A:243:GLU:HG2  | 1:A:244:THR:H    | 7        | 0.18          |
| (1,593) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 7        | 0.18          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 14       | 0.18          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 16       | 0.18          |
| (1,489) | 1:A:235:LEU:HG   | 1:A:237:GLU:H    | 2        | 0.18          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 11       | 0.18          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 11       | 0.18          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 11       | 0.18          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 18       | 0.18          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 18       | 0.18          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 18       | 0.18          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 4        | 0.18          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 20       | 0.18          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 20       | 0.18          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE1  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE2  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE3  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE1  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE2  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE3  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE1  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE2  | 6        | 0.18          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE3  | 6        | 0.18          |
| (1,258) | 1:A:224:VAL:H    | 1:A:286:TYR:HB2  | 9        | 0.18          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG21 | 1        | 0.18          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG22 | 1        | 0.18          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG23 | 1        | 0.18          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG21 | 5        | 0.18          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG22 | 5        | 0.18          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,256)  | 1:A:224:VAL:H    | 1:A:225:THR:HG23 | 5        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 1        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 8        | 0.18          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 8        | 0.18          |
| (1,1495) | 1:A:294:GLN:HE22 | 1:A:295:VAL:H    | 1        | 0.18          |
| (1,1495) | 1:A:294:GLN:HE22 | 1:A:295:VAL:H    | 9        | 0.18          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 2        | 0.18          |
| (1,1395) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 6        | 0.18          |
| (1,1395) | 1:A:284:SER:HB3  | 1:A:285:ASP:H    | 6        | 0.18          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 11       | 0.18          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 3        | 0.18          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 1        | 0.18          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 1        | 0.18          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 1        | 0.18          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 3        | 0.18          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 3        | 0.18          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 3        | 0.18          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 5        | 0.18          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 5        | 0.18          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 5        | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 11       | 0.18          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 11       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 13       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 17       | 0.18          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 17       | 0.18          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 20       | 0.18          |
| (1,1034) | 1:A:259:LEU:HD21 | 1:A:278:CYS:H    | 6        | 0.18          |
| (1,1034) | 1:A:259:LEU:HD22 | 1:A:278:CYS:H    | 6        | 0.18          |
| (1,1034) | 1:A:259:LEU:HD23 | 1:A:278:CYS:H    | 6        | 0.18          |
| (1,1034) | 1:A:259:LEU:HD21 | 1:A:278:CYS:H    | 16       | 0.18          |
| (1,1034) | 1:A:259:LEU:HD22 | 1:A:278:CYS:H    | 16       | 0.18          |
| (1,1034) | 1:A:259:LEU:HD23 | 1:A:278:CYS:H    | 16       | 0.18          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 11       | 0.17          |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O    | 13       | 0.17          |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O    | 17       | 0.17          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 2        | 0.17          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 9        | 0.17          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 17       | 0.17          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 1        | 0.17          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 8        | 0.17          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 14       | 0.17          |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 3        | 0.17          |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O    | 14       | 0.17          |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O    | 3        | 0.17          |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O    | 10       | 0.17          |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O    | 11       | 0.17          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 2        | 0.17          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,98)  | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 17       | 0.17          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 5        | 0.17          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 5        | 0.17          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 5        | 0.17          |
| (1,852) | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 16       | 0.17          |
| (1,852) | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 16       | 0.17          |
| (1,852) | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 16       | 0.17          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 3        | 0.17          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 3        | 0.17          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 3        | 0.17          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 6        | 0.17          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 6        | 0.17          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 6        | 0.17          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 11       | 0.17          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 14       | 0.17          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 4        | 0.17          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 5        | 0.17          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 12       | 0.17          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 13       | 0.17          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 4        | 0.17          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 5        | 0.17          |
| (1,75)  | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 12       | 0.17          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 5        | 0.17          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 5        | 0.17          |
| (1,592) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 4        | 0.17          |
| (1,58)  | 1:A:217:LEU:H    | 1:A:218:SER:HB2  | 11       | 0.17          |
| (1,58)  | 1:A:217:LEU:H    | 1:A:218:SER:HB3  | 11       | 0.17          |
| (1,565) | 1:A:242:PHE:HA   | 1:A:242:PHE:HD1  | 2        | 0.17          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 6        | 0.17          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 10       | 0.17          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 11       | 0.17          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 11       | 0.17          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 11       | 0.17          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 11       | 0.17          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 11       | 0.17          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 11       | 0.17          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 11       | 0.17          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 11       | 0.17          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 11       | 0.17          |
| (1,416) | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 4        | 0.17          |
| (1,416) | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 19       | 0.17          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 6        | 0.17          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 6        | 0.17          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 6        | 0.17          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 10       | 0.17          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 10       | 0.17          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 10       | 0.17          |
| (1,320) | 1:A:226:LYS:HB2  | 1:A:256:MET:HE1  | 12       | 0.17          |
| (1,320) | 1:A:226:LYS:HB2  | 1:A:256:MET:HE2  | 12       | 0.17          |
| (1,320) | 1:A:226:LYS:HB2  | 1:A:256:MET:HE3  | 12       | 0.17          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 6        | 0.17          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 6        | 0.17          |
| (1,236) | 1:A:223:MET:HA   | 1:A:286:TYR:HD2  | 17       | 0.17          |
| (1,220) | 1:A:222:SER:HB2  | 1:A:236:ASP:H    | 12       | 0.17          |
| (1,214) | 1:A:222:SER:H    | 1:A:234:CYS:HA   | 18       | 0.17          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 6        | 0.17          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 17       | 0.17          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 17       | 0.17          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 17       | 0.17          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 17       | 0.17          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 17       | 0.17          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 17       | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 17       | 0.17          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 17       | 0.17          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 17       | 0.17          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 8        | 0.17          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 8        | 0.17          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 8        | 0.17          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 8        | 0.17          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 8        | 0.17          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 8        | 0.17          |
| (1,1533) | 1:A:297:VAL:HG11 | 1:A:298:PRO:HD2  | 13       | 0.17          |
| (1,1533) | 1:A:297:VAL:HG12 | 1:A:298:PRO:HD2  | 13       | 0.17          |
| (1,1533) | 1:A:297:VAL:HG13 | 1:A:298:PRO:HD2  | 13       | 0.17          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 11       | 0.17          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 11       | 0.17          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 11       | 0.17          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 17       | 0.17          |
| (1,1395) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 19       | 0.17          |
| (1,1395) | 1:A:284:SER:HB3  | 1:A:285:ASP:H    | 19       | 0.17          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB1  | 17       | 0.17          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB2  | 17       | 0.17          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB3  | 17       | 0.17          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 8        | 0.17          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 13       | 0.17          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 4        | 0.17          |
| (1,1294) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HE1  | 6        | 0.17          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG21 | 14       | 0.17          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG22 | 14       | 0.17          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG23 | 14       | 0.17          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 20       | 0.17          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 5        | 0.17          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 7        | 0.17          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 11       | 0.17          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 11       | 0.17          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 11       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 5        | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 5        | 0.17          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 15       | 0.17          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 15       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG11 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG12 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG13 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG11 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG12 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG13 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG11 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG12 | 11       | 0.17          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG13 | 11       | 0.17          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 12       | 0.17          |
| (1,1086) | 1:A:264:PRO:HG2  | 1:A:295:VAL:HB   | 3        | 0.17          |
| (1,1086) | 1:A:264:PRO:HG3  | 1:A:295:VAL:HB   | 3        | 0.17          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD2  | 8        | 0.17          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD3  | 8        | 0.17          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD2  | 8        | 0.17          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD3  | 8        | 0.17          |
| (1,1034) | 1:A:259:LEU:HD21 | 1:A:278:CYS:H    | 3        | 0.17          |
| (1,1034) | 1:A:259:LEU:HD22 | 1:A:278:CYS:H    | 3        | 0.17          |
| (1,1034) | 1:A:259:LEU:HD23 | 1:A:278:CYS:H    | 3        | 0.17          |
| (2,62)   | 1:A:291:ILE:N    | 1:A:251:SER:O    | 18       | 0.16          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 4        | 0.16          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 7        | 0.16          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 15       | 0.16          |
| (2,6)    | 1:A:222:SER:N    | 1:A:233:THR:O    | 2        | 0.16          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 9        | 0.16          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 17       | 0.16          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 5        | 0.16          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 12       | 0.16          |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O    | 11       | 0.16          |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O    | 16       | 0.16          |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 9        | 0.16          |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 17       | 0.16          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,37)  | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 19       | 0.16          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 1        | 0.16          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 2        | 0.16          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 7        | 0.16          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 8        | 0.16          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 17       | 0.16          |
| (2,27)  | 1:A:249:SER:H    | 1:A:293:SER:O    | 19       | 0.16          |
| (2,2)   | 1:A:219:ALA:N    | 1:A:292:VAL:O    | 18       | 0.16          |
| (2,19)  | 1:A:238:ALA:H    | 1:A:235:LEU:O    | 11       | 0.16          |
| (2,19)  | 1:A:238:ALA:H    | 1:A:235:LEU:O    | 12       | 0.16          |
| (2,16)  | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 5        | 0.16          |
| (2,16)  | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 13       | 0.16          |
| (2,16)  | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 15       | 0.16          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 5        | 0.16          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 12       | 0.16          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 20       | 0.16          |
| (2,12)  | 1:A:232:VAL:N    | 1:A:275:PHE:O    | 6        | 0.16          |
| (1,99)  | 1:A:218:SER:HA   | 1:A:293:SER:HB2  | 17       | 0.16          |
| (1,98)  | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 11       | 0.16          |
| (1,98)  | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 18       | 0.16          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 3        | 0.16          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 18       | 0.16          |
| (1,925) | 1:A:256:MET:HB2  | 1:A:286:TYR:H    | 10       | 0.16          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 7        | 0.16          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 7        | 0.16          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 10       | 0.16          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 10       | 0.16          |
| (1,880) | 1:A:254:GLN:HB2  | 1:A:288:ARG:H    | 11       | 0.16          |
| (1,868) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA3  | 17       | 0.16          |
| (1,868) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA3  | 17       | 0.16          |
| (1,868) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA3  | 17       | 0.16          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 15       | 0.16          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 15       | 0.16          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 15       | 0.16          |
| (1,843) | 1:A:253:VAL:HA   | 1:A:290:GLY:HA2  | 1        | 0.16          |
| (1,825) | 1:A:252:GLU:HG2  | 1:A:291:ILE:H    | 2        | 0.16          |
| (1,825) | 1:A:252:GLU:HG3  | 1:A:291:ILE:H    | 2        | 0.16          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 8        | 0.16          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 8        | 0.16          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 8        | 0.16          |
| (1,78)  | 1:A:217:LEU:HD11 | 1:A:218:SER:H    | 1        | 0.16          |
| (1,78)  | 1:A:217:LEU:HD12 | 1:A:218:SER:H    | 1        | 0.16          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,78)  | 1:A:217:LEU:HD13 | 1:A:218:SER:H    | 1        | 0.16          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 1        | 0.16          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 10       | 0.16          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 1        | 0.16          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 6        | 0.16          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 7        | 0.16          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 8        | 0.16          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 15       | 0.16          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 16       | 0.16          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 18       | 0.16          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 15       | 0.16          |
| (1,75)  | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 6        | 0.16          |
| (1,736) | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 12       | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 7        | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 9        | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 11       | 0.16          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 11       | 0.16          |
| (1,67)  | 1:A:217:LEU:HA   | 1:A:217:LEU:HD21 | 20       | 0.16          |
| (1,67)  | 1:A:217:LEU:HA   | 1:A:217:LEU:HD22 | 20       | 0.16          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,67)  | 1:A:217:LEU:HA   | 1:A:217:LEU:HD23 | 20       | 0.16          |
| (1,638) | 1:A:246:ASP:H    | 1:A:269:VAL:H    | 2        | 0.16          |
| (1,638) | 1:A:246:ASP:H    | 1:A:269:VAL:H    | 3        | 0.16          |
| (1,614) | 1:A:245:GLY:H    | 1:A:246:ASP:HB3  | 5        | 0.16          |
| (1,593) | 1:A:243:GLU:HG2  | 1:A:244:THR:H    | 12       | 0.16          |
| (1,593) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 12       | 0.16          |
| (1,593) | 1:A:243:GLU:HG2  | 1:A:244:THR:H    | 20       | 0.16          |
| (1,593) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 20       | 0.16          |
| (1,568) | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 16       | 0.16          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 4        | 0.16          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 5        | 0.16          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 11       | 0.16          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 4        | 0.16          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 4        | 0.16          |
| (1,416) | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 7        | 0.16          |
| (1,416) | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 15       | 0.16          |
| (1,388) | 1:A:231:VAL:H    | 1:A:231:VAL:HG11 | 10       | 0.16          |
| (1,388) | 1:A:231:VAL:H    | 1:A:231:VAL:HG12 | 10       | 0.16          |
| (1,388) | 1:A:231:VAL:H    | 1:A:231:VAL:HG13 | 10       | 0.16          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 16       | 0.16          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 16       | 0.16          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 16       | 0.16          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 1        | 0.16          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 5        | 0.16          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 5        | 0.16          |
| (1,276) | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 5        | 0.16          |
| (1,276) | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 5        | 0.16          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 5        | 0.16          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 5        | 0.16          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 5        | 0.16          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 5        | 0.16          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 5        | 0.16          |
| (1,220)  | 1:A:222:SER:HB2  | 1:A:236:ASP:H    | 17       | 0.16          |
| (1,214)  | 1:A:222:SER:H    | 1:A:234:CYS:HA   | 10       | 0.16          |
| (1,209)  | 1:A:222:SER:H    | 1:A:223:MET:HB3  | 1        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 5        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 9        | 0.16          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 9        | 0.16          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 18       | 0.16          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 18       | 0.16          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 18       | 0.16          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 18       | 0.16          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 18       | 0.16          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 18       | 0.16          |
| (1,1503) | 1:A:295:VAL:HG11 | 1:A:296:LYS:H    | 3        | 0.16          |
| (1,1503) | 1:A:295:VAL:HG12 | 1:A:296:LYS:H    | 3        | 0.16          |
| (1,1503) | 1:A:295:VAL:HG13 | 1:A:296:LYS:H    | 3        | 0.16          |
| (1,1443) | 1:A:288:ARG:HB2  | 1:A:289:GLY:H    | 12       | 0.16          |
| (1,1443) | 1:A:288:ARG:HB2  | 1:A:289:GLY:H    | 13       | 0.16          |
| (1,1395) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 17       | 0.16          |
| (1,1395) | 1:A:284:SER:HB3  | 1:A:285:ASP:H    | 17       | 0.16          |
| (1,1393) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 6        | 0.16          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 16       | 0.16          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 5        | 0.16          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 7        | 0.16          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 9        | 0.16          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 19       | 0.16          |
| (1,1342) | 1:A:278:CYS:HB2  | 1:A:279:ASP:H    | 10       | 0.16          |
| (1,1342) | 1:A:278:CYS:HB3  | 1:A:279:ASP:H    | 10       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD11 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD12 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG21 | 1:A:277:ILE:HD13 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD11 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD12 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG22 | 1:A:277:ILE:HD13 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD11 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD12 | 17       | 0.16          |
| (1,1329) | 1:A:277:ILE:HG23 | 1:A:277:ILE:HD13 | 17       | 0.16          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 3        | 0.16          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 3        | 0.16          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 3        | 0.16          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 12       | 0.16          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 12       | 0.16          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 12       | 0.16          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 17       | 0.16          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 18       | 0.16          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 18       | 0.16          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 18       | 0.16          |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG21 | 8        | 0.16          |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG22 | 8        | 0.16          |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG23 | 8        | 0.16          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 6        | 0.16          |
| (1,123)  | 1:A:219:ALA:HB1  | 1:A:240:HIS:HA   | 15       | 0.16          |
| (1,123)  | 1:A:219:ALA:HB2  | 1:A:240:HIS:HA   | 15       | 0.16          |
| (1,123)  | 1:A:219:ALA:HB3  | 1:A:240:HIS:HA   | 15       | 0.16          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 7        | 0.16          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 7        | 0.16          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 8        | 0.16          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD2  | 7        | 0.16          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD3 | 7        | 0.16          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD2 | 7        | 0.16          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD3 | 7        | 0.16          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2 | 16       | 0.16          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3 | 16       | 0.16          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O   | 6        | 0.15          |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O   | 2        | 0.15          |
| (2,66)   | 1:A:293:SER:N    | 1:A:249:SER:O   | 13       | 0.15          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O   | 5        | 0.15          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O   | 11       | 0.15          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O   | 16       | 0.15          |
| (2,6)    | 1:A:222:SER:N    | 1:A:233:THR:O   | 5        | 0.15          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O   | 8        | 0.15          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O   | 13       | 0.15          |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O   | 1        | 0.15          |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O   | 18       | 0.15          |
| (2,22)   | 1:A:245:GLY:N    | 1:A:267:ILE:O   | 17       | 0.15          |
| (2,19)   | 1:A:238:ALA:H    | 1:A:235:LEU:O   | 3        | 0.15          |
| (2,19)   | 1:A:238:ALA:H    | 1:A:235:LEU:O   | 5        | 0.15          |
| (2,19)   | 1:A:238:ALA:H    | 1:A:235:LEU:O   | 17       | 0.15          |
| (2,18)   | 1:A:235:LEU:N    | 1:A:220:MET:O   | 20       | 0.15          |
| (2,16)   | 1:A:234:CYS:N    | 1:A:273:TYR:O   | 10       | 0.15          |
| (2,16)   | 1:A:234:CYS:N    | 1:A:273:TYR:O   | 18       | 0.15          |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O   | 7        | 0.15          |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O   | 16       | 0.15          |
| (2,13)   | 1:A:233:THR:H    | 1:A:223:MET:O   | 18       | 0.15          |
| (2,13)   | 1:A:233:THR:H    | 1:A:223:MET:O   | 19       | 0.15          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA  | 3        | 0.15          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA  | 8        | 0.15          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA  | 10       | 0.15          |
| (1,98)   | 1:A:218:SER:HA   | 1:A:293:SER:HA  | 20       | 0.15          |
| (1,955)  | 1:A:256:MET:HE1  | 1:A:286:TYR:H   | 7        | 0.15          |
| (1,955)  | 1:A:256:MET:HE2  | 1:A:286:TYR:H   | 7        | 0.15          |
| (1,955)  | 1:A:256:MET:HE3  | 1:A:286:TYR:H   | 7        | 0.15          |
| (1,946)  | 1:A:256:MET:HE1  | 1:A:280:THR:HB  | 12       | 0.15          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,946) | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 12       | 0.15          |
| (1,946) | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 12       | 0.15          |
| (1,925) | 1:A:256:MET:HB2  | 1:A:286:TYR:H    | 18       | 0.15          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 13       | 0.15          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 13       | 0.15          |
| (1,880) | 1:A:254:GLN:HB2  | 1:A:288:ARG:H    | 1        | 0.15          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 10       | 0.15          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 10       | 0.15          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 10       | 0.15          |
| (1,852) | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 15       | 0.15          |
| (1,852) | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 15       | 0.15          |
| (1,852) | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 15       | 0.15          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 4        | 0.15          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 6        | 0.15          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 18       | 0.15          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD21 | 7        | 0.15          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD22 | 7        | 0.15          |
| (1,786) | 1:A:250:PHE:HD2  | 1:A:259:LEU:HD23 | 7        | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 2        | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 2        | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 2        | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 8        | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 8        | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 8        | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 10       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 10       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 10       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 13       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 13       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 13       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 18       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 18       | 0.15          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 18       | 0.15          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 5        | 0.15          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 10       | 0.15          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 11       | 0.15          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 18       | 0.15          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 20       | 0.15          |
| (1,75)  | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 7        | 0.15          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 13       | 0.15          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 13       | 0.15          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 16       | 0.15          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 16       | 0.15          |
| (1,66)  | 1:A:217:LEU:HA   | 1:A:217:LEU:HD11 | 17       | 0.15          |
| (1,66)  | 1:A:217:LEU:HA   | 1:A:217:LEU:HD12 | 17       | 0.15          |
| (1,66)  | 1:A:217:LEU:HA   | 1:A:217:LEU:HD13 | 17       | 0.15          |
| (1,592) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 1        | 0.15          |
| (1,592) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 3        | 0.15          |
| (1,592) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 13       | 0.15          |
| (1,568) | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 9        | 0.15          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 7        | 0.15          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 8        | 0.15          |
| (1,528) | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 17       | 0.15          |
| (1,528) | 1:A:239:ARG:H    | 1:A:239:ARG:HG3  | 17       | 0.15          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 10       | 0.15          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 15       | 0.15          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 15       | 0.15          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 15       | 0.15          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 15       | 0.15          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 15       | 0.15          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 15       | 0.15          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 15       | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 15       | 0.15          |
| (1,425)  | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 15       | 0.15          |
| (1,416)  | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 11       | 0.15          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 8        | 0.15          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 8        | 0.15          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 8        | 0.15          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 15       | 0.15          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 15       | 0.15          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 15       | 0.15          |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 17       | 0.15          |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 17       | 0.15          |
| (1,377)  | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 17       | 0.15          |
| (1,256)  | 1:A:224:VAL:H    | 1:A:225:THR:HG21 | 9        | 0.15          |
| (1,256)  | 1:A:224:VAL:H    | 1:A:225:THR:HG22 | 9        | 0.15          |
| (1,256)  | 1:A:224:VAL:H    | 1:A:225:THR:HG23 | 9        | 0.15          |
| (1,223)  | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 17       | 0.15          |
| (1,222)  | 1:A:222:SER:HB3  | 1:A:223:MET:HB3  | 19       | 0.15          |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG11 | 16       | 0.15          |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG12 | 16       | 0.15          |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG13 | 16       | 0.15          |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG21 | 16       | 0.15          |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG22 | 16       | 0.15          |
| (1,20)   | 1:A:207:VAL:H    | 1:A:207:VAL:HG23 | 16       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 12       | 0.15          |
| (1,191)  | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 12       | 0.15          |
| (1,161)  | 1:A:220:MET:HG3  | 1:A:221:VAL:H    | 1        | 0.15          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 5        | 0.15          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 5        | 0.15          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 5        | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 5        | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 5        | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 5        | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 5        | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 5        | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 5        | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 10       | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 10       | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 10       | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 10       | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 10       | 0.15          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 10       | 0.15          |
| (1,1557) | 1:A:310:LEU:H    | 1:A:310:LEU:HD11 | 1        | 0.15          |
| (1,1557) | 1:A:310:LEU:H    | 1:A:310:LEU:HD12 | 1        | 0.15          |
| (1,1557) | 1:A:310:LEU:H    | 1:A:310:LEU:HD13 | 1        | 0.15          |
| (1,1557) | 1:A:310:LEU:H    | 1:A:310:LEU:HD21 | 1        | 0.15          |
| (1,1557) | 1:A:310:LEU:H    | 1:A:310:LEU:HD22 | 1        | 0.15          |
| (1,1557) | 1:A:310:LEU:H    | 1:A:310:LEU:HD23 | 1        | 0.15          |
| (1,1542) | 1:A:300:LYS:HD2  | 1:A:301:ILE:H    | 17       | 0.15          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 10       | 0.15          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 10       | 0.15          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 10       | 0.15          |
| (1,1446) | 1:A:288:ARG:HD3  | 1:A:289:GLY:H    | 11       | 0.15          |
| (1,1443) | 1:A:288:ARG:HB2  | 1:A:289:GLY:H    | 6        | 0.15          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 6        | 0.15          |
| (1,1395) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 8        | 0.15          |
| (1,1395) | 1:A:284:SER:HB3  | 1:A:285:ASP:H    | 8        | 0.15          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB1  | 12       | 0.15          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB2  | 12       | 0.15          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB3  | 12       | 0.15          |
| (1,1347) | 1:A:279:ASP:H    | 1:A:281:SER:H    | 10       | 0.15          |
| (1,1342) | 1:A:278:CYS:HB2  | 1:A:279:ASP:H    | 4        | 0.15          |
| (1,1342) | 1:A:278:CYS:HB3  | 1:A:279:ASP:H    | 4        | 0.15          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 12       | 0.15          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 12       | 0.15          |
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 12       | 0.15          |
| (1,1324) | 1:A:277:ILE:HD11 | 1:A:280:THR:H    | 2        | 0.15          |
| (1,1324) | 1:A:277:ILE:HD12 | 1:A:280:THR:H    | 2        | 0.15          |
| (1,1324) | 1:A:277:ILE:HD13 | 1:A:280:THR:H    | 2        | 0.15          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 9        | 0.15          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 9        | 0.15          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 9        | 0.15          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 1        | 0.15          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 19       | 0.15          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 4        | 0.15          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG21 | 9        | 0.15          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG22 | 9        | 0.15          |
| (1,1292) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG23 | 9        | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 9        | 0.15          |
| (1,123)  | 1:A:219:ALA:HB1  | 1:A:240:HIS:HA   | 20       | 0.15          |
| (1,123)  | 1:A:219:ALA:HB2  | 1:A:240:HIS:HA   | 20       | 0.15          |
| (1,123)  | 1:A:219:ALA:HB3  | 1:A:240:HIS:HA   | 20       | 0.15          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 18       | 0.15          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 3        | 0.15          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 14       | 0.15          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 14       | 0.15          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 14       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 10       | 0.15          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 10       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG11 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG12 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG13 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG11 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG12 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG13 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG11 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG12 | 12       | 0.15          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG13 | 12       | 0.15          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD2  | 6        | 0.15          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD3  | 6        | 0.15          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD2  | 6        | 0.15          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD3  | 6        | 0.15          |
| (1,1034) | 1:A:259:LEU:HD21 | 1:A:278:CYS:H    | 7        | 0.15          |
| (1,1034) | 1:A:259:LEU:HD22 | 1:A:278:CYS:H    | 7        | 0.15          |
| (1,1034) | 1:A:259:LEU:HD23 | 1:A:278:CYS:H    | 7        | 0.15          |
| (2,67)   | 1:A:294:GLN:H    | 1:A:217:LEU:O    | 19       | 0.14          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 6        | 0.14          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 14       | 0.14          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 19       | 0.14          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 11       | 0.14          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 14       | 0.14          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 7        | 0.14          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 11       | 0.14          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,54)  | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 18       | 0.14          |
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 19       | 0.14          |
| (2,46)  | 1:A:270:LEU:N    | 1:A:274:THR:O    | 4        | 0.14          |
| (2,46)  | 1:A:270:LEU:N    | 1:A:274:THR:O    | 8        | 0.14          |
| (2,46)  | 1:A:270:LEU:N    | 1:A:274:THR:O    | 10       | 0.14          |
| (2,45)  | 1:A:270:LEU:H    | 1:A:274:THR:O    | 1        | 0.14          |
| (2,45)  | 1:A:270:LEU:H    | 1:A:274:THR:O    | 9        | 0.14          |
| (2,45)  | 1:A:270:LEU:H    | 1:A:274:THR:O    | 12       | 0.14          |
| (2,4)   | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 15       | 0.14          |
| (2,37)  | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 7        | 0.14          |
| (2,35)  | 1:A:261:GLY:H    | 1:A:257:ILE:O    | 6        | 0.14          |
| (2,35)  | 1:A:261:GLY:H    | 1:A:257:ILE:O    | 11       | 0.14          |
| (2,2)   | 1:A:219:ALA:N    | 1:A:292:VAL:O    | 1        | 0.14          |
| (2,2)   | 1:A:219:ALA:N    | 1:A:292:VAL:O    | 17       | 0.14          |
| (2,19)  | 1:A:238:ALA:H    | 1:A:235:LEU:O    | 6        | 0.14          |
| (2,19)  | 1:A:238:ALA:H    | 1:A:235:LEU:O    | 13       | 0.14          |
| (2,18)  | 1:A:235:LEU:N    | 1:A:220:MET:O    | 13       | 0.14          |
| (2,16)  | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 1        | 0.14          |
| (2,16)  | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 20       | 0.14          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 4        | 0.14          |
| (2,13)  | 1:A:233:THR:H    | 1:A:223:MET:O    | 3        | 0.14          |
| (2,13)  | 1:A:233:THR:H    | 1:A:223:MET:O    | 9        | 0.14          |
| (2,13)  | 1:A:233:THR:H    | 1:A:223:MET:O    | 10       | 0.14          |
| (2,13)  | 1:A:233:THR:H    | 1:A:223:MET:O    | 11       | 0.14          |
| (1,989) | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE21 | 18       | 0.14          |
| (1,989) | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE22 | 18       | 0.14          |
| (1,989) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE21 | 18       | 0.14          |
| (1,989) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE22 | 18       | 0.14          |
| (1,989) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE21 | 18       | 0.14          |
| (1,989) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE22 | 18       | 0.14          |
| (1,98)  | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 15       | 0.14          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 18       | 0.14          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 18       | 0.14          |
| (1,852) | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 18       | 0.14          |
| (1,852) | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 18       | 0.14          |
| (1,852) | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 18       | 0.14          |
| (1,825) | 1:A:252:GLU:HG2  | 1:A:291:ILE:H    | 20       | 0.14          |
| (1,825) | 1:A:252:GLU:HG3  | 1:A:291:ILE:H    | 20       | 0.14          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 5        | 0.14          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 7        | 0.14          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 13       | 0.14          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 17       | 0.14          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,79)  | 1:A:217:LEU:HD11 | 1:A:219:ALA:H    | 6        | 0.14          |
| (1,79)  | 1:A:217:LEU:HD12 | 1:A:219:ALA:H    | 6        | 0.14          |
| (1,79)  | 1:A:217:LEU:HD13 | 1:A:219:ALA:H    | 6        | 0.14          |
| (1,78)  | 1:A:217:LEU:HD11 | 1:A:218:SER:H    | 7        | 0.14          |
| (1,78)  | 1:A:217:LEU:HD12 | 1:A:218:SER:H    | 7        | 0.14          |
| (1,78)  | 1:A:217:LEU:HD13 | 1:A:218:SER:H    | 7        | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 1        | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 1        | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 1        | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 12       | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 12       | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 12       | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 15       | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 15       | 0.14          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 15       | 0.14          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 12       | 0.14          |
| (1,768) | 1:A:250:PHE:HB2  | 1:A:250:PHE:HE2  | 20       | 0.14          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 9        | 0.14          |
| (1,75)  | 1:A:217:LEU:HB3  | 1:A:241:GLY:H    | 5        | 0.14          |
| (1,736) | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 6        | 0.14          |
| (1,614) | 1:A:245:GLY:H    | 1:A:246:ASP:HB3  | 11       | 0.14          |
| (1,60)  | 1:A:217:LEU:H    | 1:A:294:GLN:HB3  | 10       | 0.14          |
| (1,558) | 1:A:240:HIS:HE1  | 1:A:269:VAL:HG21 | 10       | 0.14          |
| (1,558) | 1:A:240:HIS:HE1  | 1:A:269:VAL:HG22 | 10       | 0.14          |
| (1,558) | 1:A:240:HIS:HE1  | 1:A:269:VAL:HG23 | 10       | 0.14          |
| (1,551) | 1:A:240:HIS:HB3  | 1:A:242:PHE:HE1  | 3        | 0.14          |
| (1,524) | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 17       | 0.14          |
| (1,507) | 1:A:237:GLU:H    | 1:A:237:GLU:HG2  | 4        | 0.14          |
| (1,507) | 1:A:237:GLU:H    | 1:A:237:GLU:HG3  | 4        | 0.14          |
| (1,489) | 1:A:235:LEU:HG   | 1:A:237:GLU:H    | 15       | 0.14          |
| (1,477) | 1:A:235:LEU:HA   | 1:A:235:LEU:HD11 | 8        | 0.14          |
| (1,477) | 1:A:235:LEU:HA   | 1:A:235:LEU:HD12 | 8        | 0.14          |
| (1,477) | 1:A:235:LEU:HA   | 1:A:235:LEU:HD13 | 8        | 0.14          |
| (1,395) | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 10       | 0.14          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 2        | 0.14          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 2        | 0.14          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 2        | 0.14          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 10       | 0.14          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 10       | 0.14          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 10       | 0.14          |
| (1,325) | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 7        | 0.14          |
| (1,325) | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 7        | 0.14          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,309) | 1:A:225:THR:HG21 | 1:A:231:VAL:HB   | 1        | 0.14          |
| (1,309) | 1:A:225:THR:HG22 | 1:A:231:VAL:HB   | 1        | 0.14          |
| (1,309) | 1:A:225:THR:HG23 | 1:A:231:VAL:HB   | 1        | 0.14          |
| (1,306) | 1:A:225:THR:HB   | 1:A:231:VAL:HG11 | 3        | 0.14          |
| (1,306) | 1:A:225:THR:HB   | 1:A:231:VAL:HG12 | 3        | 0.14          |
| (1,306) | 1:A:225:THR:HB   | 1:A:231:VAL:HG13 | 3        | 0.14          |
| (1,264) | 1:A:224:VAL:HB   | 1:A:286:TYR:HB2  | 4        | 0.14          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG21 | 18       | 0.14          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG22 | 18       | 0.14          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG23 | 18       | 0.14          |
| (1,213) | 1:A:222:SER:H    | 1:A:233:THR:HG21 | 2        | 0.14          |
| (1,213) | 1:A:222:SER:H    | 1:A:233:THR:HG22 | 2        | 0.14          |
| (1,213) | 1:A:222:SER:H    | 1:A:233:THR:HG23 | 2        | 0.14          |
| (1,210) | 1:A:222:SER:H    | 1:A:223:MET:HG2  | 10       | 0.14          |
| (1,210) | 1:A:222:SER:H    | 1:A:223:MET:HG3  | 10       | 0.14          |
| (1,20)  | 1:A:207:VAL:H    | 1:A:207:VAL:HG11 | 11       | 0.14          |
| (1,20)  | 1:A:207:VAL:H    | 1:A:207:VAL:HG12 | 11       | 0.14          |
| (1,20)  | 1:A:207:VAL:H    | 1:A:207:VAL:HG13 | 11       | 0.14          |
| (1,20)  | 1:A:207:VAL:H    | 1:A:207:VAL:HG21 | 11       | 0.14          |
| (1,20)  | 1:A:207:VAL:H    | 1:A:207:VAL:HG22 | 11       | 0.14          |
| (1,20)  | 1:A:207:VAL:H    | 1:A:207:VAL:HG23 | 11       | 0.14          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 15       | 0.14          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG21 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG22 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG11 | 1:A:224:VAL:HG23 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG21 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG22 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG12 | 1:A:224:VAL:HG23 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG21 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG22 | 16       | 0.14          |
| (1,191) | 1:A:221:VAL:HG13 | 1:A:224:VAL:HG23 | 16       | 0.14          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 16       | 0.14          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 13       | 0.14          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 13       | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 13       | 0.14          |
| (1,1546) | 1:A:300:LYS:HB2  | 1:A:301:ILE:H    | 20       | 0.14          |
| (1,1546) | 1:A:300:LYS:HB3  | 1:A:301:ILE:H    | 20       | 0.14          |
| (1,1507) | 1:A:296:LYS:H    | 1:A:296:LYS:HD3  | 14       | 0.14          |
| (1,1444) | 1:A:288:ARG:HB3  | 1:A:289:GLY:H    | 15       | 0.14          |
| (1,1443) | 1:A:288:ARG:HB2  | 1:A:289:GLY:H    | 2        | 0.14          |
| (1,1443) | 1:A:288:ARG:HB2  | 1:A:289:GLY:H    | 19       | 0.14          |
| (1,1417) | 1:A:287:ILE:H    | 1:A:288:ARG:HG2  | 20       | 0.14          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 9        | 0.14          |
| (1,1395) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 9        | 0.14          |
| (1,1395) | 1:A:284:SER:HB3  | 1:A:285:ASP:H    | 9        | 0.14          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB1  | 7        | 0.14          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB2  | 7        | 0.14          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB3  | 7        | 0.14          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 18       | 0.14          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 18       | 0.14          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 18       | 0.14          |
| (1,1301) | 1:A:275:PHE:HZ   | 1:A:292:VAL:HB   | 8        | 0.14          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 9        | 0.14          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 2        | 0.14          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 2        | 0.14          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 2        | 0.14          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 11       | 0.14          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 11       | 0.14          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 11       | 0.14          |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG21 | 14       | 0.14          |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG22 | 14       | 0.14          |
| (1,1264) | 1:A:273:TYR:HD2  | 1:A:274:THR:HG23 | 14       | 0.14          |
| (1,126)  | 1:A:219:ALA:HB1  | 1:A:242:PHE:HE1  | 8        | 0.14          |
| (1,126)  | 1:A:219:ALA:HB2  | 1:A:242:PHE:HE1  | 8        | 0.14          |
| (1,126)  | 1:A:219:ALA:HB3  | 1:A:242:PHE:HE1  | 8        | 0.14          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 16       | 0.14          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 19       | 0.14          |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD21 | 11       | 0.14          |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD22 | 11       | 0.14          |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD23 | 11       | 0.14          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 5        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 8        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 8        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 8        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 8        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 8        | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 8        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 8        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 8        | 0.14          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 8        | 0.14          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG11 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG12 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG13 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG11 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG12 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG13 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG11 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG12 | 14       | 0.14          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG13 | 14       | 0.14          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 18       | 0.14          |
| (1,1090) | 1:A:265:MET:H    | 1:A:265:MET:HG2  | 13       | 0.14          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD2  | 16       | 0.14          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD3  | 16       | 0.14          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD2  | 16       | 0.14          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD3  | 16       | 0.14          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2  | 8        | 0.14          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3  | 8        | 0.14          |
| (1,1023) | 1:A:259:LEU:HB2  | 1:A:265:MET:HE1  | 3        | 0.14          |
| (1,1023) | 1:A:259:LEU:HB2  | 1:A:265:MET:HE2  | 3        | 0.14          |
| (1,1023) | 1:A:259:LEU:HB2  | 1:A:265:MET:HE3  | 3        | 0.14          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 12       | 0.13          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 13       | 0.13          |
| (2,67)   | 1:A:294:GLN:H    | 1:A:217:LEU:O    | 17       | 0.13          |
| (2,66)   | 1:A:293:SER:N    | 1:A:249:SER:O    | 17       | 0.13          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 3        | 0.13          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O    | 12       | 0.13          |
| (2,6)    | 1:A:222:SER:N    | 1:A:233:THR:O    | 16       | 0.13          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 1        | 0.13          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 12       | 0.13          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 1        | 0.13          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 8        | 0.13          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 2        | 0.13          |
| (2,52)  | 1:A:276:SER:N    | 1:A:268:LYS:O    | 20       | 0.13          |
| (2,46)  | 1:A:270:LEU:N    | 1:A:274:THR:O    | 17       | 0.13          |
| (2,4)   | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 16       | 0.13          |
| (2,39)  | 1:A:265:MET:H    | 1:A:248:VAL:O    | 20       | 0.13          |
| (2,37)  | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 13       | 0.13          |
| (2,37)  | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 15       | 0.13          |
| (2,35)  | 1:A:261:GLY:H    | 1:A:257:ILE:O    | 3        | 0.13          |
| (2,3)   | 1:A:221:VAL:H    | 1:A:290:GLY:O    | 9        | 0.13          |
| (2,28)  | 1:A:249:SER:N    | 1:A:293:SER:O    | 13       | 0.13          |
| (2,27)  | 1:A:249:SER:H    | 1:A:293:SER:O    | 2        | 0.13          |
| (2,27)  | 1:A:249:SER:H    | 1:A:293:SER:O    | 4        | 0.13          |
| (2,27)  | 1:A:249:SER:H    | 1:A:293:SER:O    | 8        | 0.13          |
| (2,27)  | 1:A:249:SER:H    | 1:A:293:SER:O    | 14       | 0.13          |
| (2,22)  | 1:A:245:GLY:N    | 1:A:267:ILE:O    | 1        | 0.13          |
| (2,22)  | 1:A:245:GLY:N    | 1:A:267:ILE:O    | 4        | 0.13          |
| (2,22)  | 1:A:245:GLY:N    | 1:A:267:ILE:O    | 9        | 0.13          |
| (2,22)  | 1:A:245:GLY:N    | 1:A:267:ILE:O    | 16       | 0.13          |
| (2,19)  | 1:A:238:ALA:H    | 1:A:235:LEU:O    | 14       | 0.13          |
| (2,16)  | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 4        | 0.13          |
| (2,14)  | 1:A:233:THR:N    | 1:A:223:MET:O    | 17       | 0.13          |
| (2,13)  | 1:A:233:THR:H    | 1:A:223:MET:O    | 6        | 0.13          |
| (2,13)  | 1:A:233:THR:H    | 1:A:223:MET:O    | 20       | 0.13          |
| (2,1)   | 1:A:219:ALA:H    | 1:A:292:VAL:O    | 18       | 0.13          |
| (1,989) | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE21 | 19       | 0.13          |
| (1,989) | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE22 | 19       | 0.13          |
| (1,989) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE21 | 19       | 0.13          |
| (1,989) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE22 | 19       | 0.13          |
| (1,989) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE21 | 19       | 0.13          |
| (1,989) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE22 | 19       | 0.13          |
| (1,988) | 1:A:257:ILE:HD11 | 1:A:258:GLN:HA   | 17       | 0.13          |
| (1,988) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HA   | 17       | 0.13          |
| (1,988) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HA   | 17       | 0.13          |
| (1,98)  | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 9        | 0.13          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 10       | 0.13          |
| (1,946) | 1:A:256:MET:HE1  | 1:A:280:THR:HB   | 5        | 0.13          |
| (1,946) | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 5        | 0.13          |
| (1,946) | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 5        | 0.13          |
| (1,925) | 1:A:256:MET:HB2  | 1:A:286:TYR:H    | 2        | 0.13          |
| (1,880) | 1:A:254:GLN:HB2  | 1:A:288:ARG:H    | 20       | 0.13          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 1        | 0.13          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 1        | 0.13          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 1        | 0.13          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 2        | 0.13          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 2        | 0.13          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 2        | 0.13          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 18       | 0.13          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 18       | 0.13          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 18       | 0.13          |
| (1,852) | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 8        | 0.13          |
| (1,852) | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 8        | 0.13          |
| (1,852) | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 8        | 0.13          |
| (1,852) | 1:A:253:VAL:HG11 | 1:A:256:MET:HB3  | 20       | 0.13          |
| (1,852) | 1:A:253:VAL:HG12 | 1:A:256:MET:HB3  | 20       | 0.13          |
| (1,852) | 1:A:253:VAL:HG13 | 1:A:256:MET:HB3  | 20       | 0.13          |
| (1,834) | 1:A:253:VAL:H    | 1:A:260:ASN:HD22 | 1        | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 9        | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 9        | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 9        | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 11       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 11       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 11       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 16       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 16       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 16       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 17       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 17       | 0.13          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 17       | 0.13          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 20       | 0.13          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 1        | 0.13          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 3        | 0.13          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 12       | 0.13          |
| (1,750) | 1:A:249:SER:HB3  | 1:A:265:MET:H    | 11       | 0.13          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE1  | 15       | 0.13          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE2  | 15       | 0.13          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE3  | 15       | 0.13          |
| (1,736) | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 8        | 0.13          |
| (1,736) | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 9        | 0.13          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 20       | 0.13          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 20       | 0.13          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 20       | 0.13          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 20       | 0.13          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 20       | 0.13          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 20       | 0.13          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 20       | 0.13          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 20       | 0.13          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 20       | 0.13          |
| (1,60)  | 1:A:217:LEU:H    | 1:A:294:GLN:HB3  | 5        | 0.13          |
| (1,593) | 1:A:243:GLU:HG2  | 1:A:244:THR:H    | 15       | 0.13          |
| (1,593) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 15       | 0.13          |
| (1,585) | 1:A:243:GLU:H    | 1:A:246:ASP:HB2  | 7        | 0.13          |
| (1,585) | 1:A:243:GLU:H    | 1:A:246:ASP:HB2  | 18       | 0.13          |
| (1,585) | 1:A:243:GLU:H    | 1:A:246:ASP:HB2  | 20       | 0.13          |
| (1,568) | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 11       | 0.13          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 13       | 0.13          |
| (1,556) | 1:A:240:HIS:HE1  | 1:A:242:PHE:HD1  | 2        | 0.13          |
| (1,528) | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 14       | 0.13          |
| (1,528) | 1:A:239:ARG:H    | 1:A:239:ARG:HG3  | 14       | 0.13          |
| (1,493) | 1:A:235:LEU:HD21 | 1:A:238:ALA:HB1  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD21 | 1:A:238:ALA:HB2  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD21 | 1:A:238:ALA:HB3  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD22 | 1:A:238:ALA:HB1  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD22 | 1:A:238:ALA:HB2  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD22 | 1:A:238:ALA:HB3  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD23 | 1:A:238:ALA:HB1  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD23 | 1:A:238:ALA:HB2  | 9        | 0.13          |
| (1,493) | 1:A:235:LEU:HD23 | 1:A:238:ALA:HB3  | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 9        | 0.13          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 9        | 0.13          |
| (1,395) | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 9        | 0.13          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 5        | 0.13          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 5        | 0.13          |
| (1,386) | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 5        | 0.13          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 8        | 0.13          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 8        | 0.13          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 8        | 0.13          |
| (1,330) | 1:A:226:LYS:HG2  | 1:A:281:SER:HB2  | 15       | 0.13          |
| (1,330) | 1:A:226:LYS:HG2  | 1:A:281:SER:HB3  | 15       | 0.13          |
| (1,330) | 1:A:226:LYS:HG3  | 1:A:281:SER:HB2  | 15       | 0.13          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,330) | 1:A:226:LYS:HG3  | 1:A:281:SER:HB3  | 15       | 0.13          |
| (1,325) | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 20       | 0.13          |
| (1,325) | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 20       | 0.13          |
| (1,308) | 1:A:225:THR:HG21 | 1:A:231:VAL:H    | 3        | 0.13          |
| (1,308) | 1:A:225:THR:HG22 | 1:A:231:VAL:H    | 3        | 0.13          |
| (1,308) | 1:A:225:THR:HG23 | 1:A:231:VAL:H    | 3        | 0.13          |
| (1,306) | 1:A:225:THR:HB   | 1:A:231:VAL:HG11 | 5        | 0.13          |
| (1,306) | 1:A:225:THR:HB   | 1:A:231:VAL:HG12 | 5        | 0.13          |
| (1,306) | 1:A:225:THR:HB   | 1:A:231:VAL:HG13 | 5        | 0.13          |
| (1,295) | 1:A:225:THR:H    | 1:A:230:GLY:HA3  | 9        | 0.13          |
| (1,295) | 1:A:225:THR:H    | 1:A:230:GLY:HA3  | 19       | 0.13          |
| (1,293) | 1:A:225:THR:H    | 1:A:225:THR:HG21 | 18       | 0.13          |
| (1,293) | 1:A:225:THR:H    | 1:A:225:THR:HG22 | 18       | 0.13          |
| (1,293) | 1:A:225:THR:H    | 1:A:225:THR:HG23 | 18       | 0.13          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE1  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE2  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE3  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE1  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE2  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE3  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE1  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE2  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE3  | 5        | 0.13          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE1  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE2  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG11 | 1:A:256:MET:HE3  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE1  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE2  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG12 | 1:A:256:MET:HE3  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE1  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE2  | 20       | 0.13          |
| (1,275) | 1:A:224:VAL:HG13 | 1:A:256:MET:HE3  | 20       | 0.13          |
| (1,224) | 1:A:222:SER:HB3  | 1:A:235:LEU:H    | 8        | 0.13          |
| (1,223) | 1:A:222:SER:HB3  | 1:A:234:CYS:H    | 20       | 0.13          |
| (1,220) | 1:A:222:SER:HB2  | 1:A:236:ASP:H    | 7        | 0.13          |
| (1,218) | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 14       | 0.13          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 2        | 0.13          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 12       | 0.13          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 15       | 0.13          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 17       | 0.13          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 20       | 0.13          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 7        | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 7        | 0.13          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 7        | 0.13          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 19       | 0.13          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 19       | 0.13          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 19       | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 1        | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 1        | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 1        | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 1        | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 1        | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 1        | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 11       | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 11       | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 11       | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 11       | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 11       | 0.13          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 11       | 0.13          |
| (1,1530) | 1:A:297:VAL:HA   | 1:A:298:PRO:HD3  | 16       | 0.13          |
| (1,1502) | 1:A:295:VAL:HA   | 1:A:297:VAL:H    | 8        | 0.13          |
| (1,1495) | 1:A:294:GLN:HE22 | 1:A:295:VAL:H    | 3        | 0.13          |
| (1,1484) | 1:A:293:SER:HB2  | 1:A:294:GLN:H    | 1        | 0.13          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 3        | 0.13          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 3        | 0.13          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 3        | 0.13          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 17       | 0.13          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 17       | 0.13          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 17       | 0.13          |
| (1,1445) | 1:A:288:ARG:HD2  | 1:A:289:GLY:H    | 14       | 0.13          |
| (1,1444) | 1:A:288:ARG:HB3  | 1:A:289:GLY:H    | 8        | 0.13          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB1  | 2        | 0.13          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB2  | 2        | 0.13          |
| (1,139)  | 1:A:220:MET:H    | 1:A:238:ALA:HB3  | 2        | 0.13          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 20       | 0.13          |
| (1,1384) | 1:A:283:PHE:HB2  | 1:A:285:ASP:H    | 19       | 0.13          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 16       | 0.13          |
| (1,1342) | 1:A:278:CYS:HB2  | 1:A:279:ASP:H    | 20       | 0.13          |
| (1,1342) | 1:A:278:CYS:HB3  | 1:A:279:ASP:H    | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD11 | 1:A:280:THR:HG21 | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD11 | 1:A:280:THR:HG22 | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD11 | 1:A:280:THR:HG23 | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD12 | 1:A:280:THR:HG21 | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD12 | 1:A:280:THR:HG22 | 20       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1325) | 1:A:277:ILE:HD12 | 1:A:280:THR:HG23 | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD13 | 1:A:280:THR:HG21 | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD13 | 1:A:280:THR:HG22 | 20       | 0.13          |
| (1,1325) | 1:A:277:ILE:HD13 | 1:A:280:THR:HG23 | 20       | 0.13          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 10       | 0.13          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 10       | 0.13          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 10       | 0.13          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 16       | 0.13          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 16       | 0.13          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 16       | 0.13          |
| (1,1318) | 1:A:277:ILE:HB   | 1:A:278:CYS:H    | 14       | 0.13          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 3        | 0.13          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 5        | 0.13          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 16       | 0.13          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG21 | 10       | 0.13          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG22 | 10       | 0.13          |
| (1,1262) | 1:A:273:TYR:HB3  | 1:A:274:THR:HG23 | 10       | 0.13          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 17       | 0.13          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 8        | 0.13          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 17       | 0.13          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 4        | 0.13          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 8        | 0.13          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 20       | 0.13          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 8        | 0.13          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 8        | 0.13          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 8        | 0.13          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 9        | 0.13          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 9        | 0.13          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 6        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 9        | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 9        | 0.13          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 9        | 0.13          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG11 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG12 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG13 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG11 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG12 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG13 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG11 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG12 | 16       | 0.13          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG13 | 16       | 0.13          |
| (1,1095) | 1:A:265:MET:H    | 1:A:295:VAL:HG21 | 16       | 0.13          |
| (1,1095) | 1:A:265:MET:H    | 1:A:295:VAL:HG22 | 16       | 0.13          |
| (1,1095) | 1:A:265:MET:H    | 1:A:295:VAL:HG23 | 16       | 0.13          |
| (1,1034) | 1:A:259:LEU:HD21 | 1:A:278:CYS:H    | 17       | 0.13          |
| (1,1034) | 1:A:259:LEU:HD22 | 1:A:278:CYS:H    | 17       | 0.13          |
| (1,1034) | 1:A:259:LEU:HD23 | 1:A:278:CYS:H    | 17       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD21 | 1:A:277:ILE:HD11 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD21 | 1:A:277:ILE:HD12 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD21 | 1:A:277:ILE:HD13 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD22 | 1:A:277:ILE:HD11 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD22 | 1:A:277:ILE:HD12 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD22 | 1:A:277:ILE:HD13 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD23 | 1:A:277:ILE:HD11 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD23 | 1:A:277:ILE:HD12 | 14       | 0.13          |
| (1,1033) | 1:A:259:LEU:HD23 | 1:A:277:ILE:HD13 | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3  | 10       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1  | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2  | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3  | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1  | 14       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2  | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3  | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1  | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2  | 14       | 0.13          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3  | 14       | 0.13          |
| (1,1010) | 1:A:258:GLN:HB3  | 1:A:283:PHE:HD2  | 10       | 0.13          |
| (2,9)    | 1:A:227:ASP:H    | 1:A:225:THR:O    | 5        | 0.12          |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O    | 14       | 0.12          |
| (2,66)   | 1:A:293:SER:N    | 1:A:249:SER:O    | 6        | 0.12          |
| (2,65)   | 1:A:293:SER:H    | 1:A:249:SER:O    | 13       | 0.12          |
| (2,64)   | 1:A:292:VAL:N    | 1:A:219:ALA:O    | 13       | 0.12          |
| (2,6)    | 1:A:222:SER:N    | 1:A:233:THR:O    | 17       | 0.12          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 7        | 0.12          |
| (2,59)   | 1:A:290:GLY:H    | 1:A:252:GLU:O    | 10       | 0.12          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 3        | 0.12          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O    | 17       | 0.12          |
| (2,52)   | 1:A:276:SER:N    | 1:A:268:LYS:O    | 6        | 0.12          |
| (2,51)   | 1:A:276:SER:H    | 1:A:268:LYS:O    | 18       | 0.12          |
| (2,40)   | 1:A:265:MET:N    | 1:A:248:VAL:O    | 5        | 0.12          |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 4        | 0.12          |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 5        | 0.12          |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 8        | 0.12          |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O    | 11       | 0.12          |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 6        | 0.12          |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O    | 11       | 0.12          |
| (2,36)   | 1:A:261:GLY:N    | 1:A:257:ILE:O    | 2        | 0.12          |
| (2,31)   | 1:A:256:MET:H    | 1:A:254:GLN:O    | 6        | 0.12          |
| (2,3)    | 1:A:221:VAL:H    | 1:A:290:GLY:O    | 10       | 0.12          |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O    | 3        | 0.12          |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O    | 16       | 0.12          |
| (2,28)   | 1:A:249:SER:N    | 1:A:293:SER:O    | 20       | 0.12          |
| (2,27)   | 1:A:249:SER:H    | 1:A:293:SER:O    | 1        | 0.12          |
| (2,27)   | 1:A:249:SER:H    | 1:A:293:SER:O    | 12       | 0.12          |
| (2,18)   | 1:A:235:LEU:N    | 1:A:220:MET:O    | 5        | 0.12          |
| (2,17)   | 1:A:235:LEU:H    | 1:A:220:MET:O    | 20       | 0.12          |
| (2,16)   | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 3        | 0.12          |
| (2,16)   | 1:A:234:CYS:N    | 1:A:273:TYR:O    | 7        | 0.12          |
| (2,14)   | 1:A:233:THR:N    | 1:A:223:MET:O    | 8        | 0.12          |
| (2,11)   | 1:A:232:VAL:H    | 1:A:275:PHE:O    | 6        | 0.12          |
| (1,989)  | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE21 | 9        | 0.12          |
| (1,989)  | 1:A:257:ILE:HD11 | 1:A:258:GLN:HE22 | 9        | 0.12          |
| (1,989)  | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE21 | 9        | 0.12          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,989) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HE22 | 9        | 0.12          |
| (1,989) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE21 | 9        | 0.12          |
| (1,989) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HE22 | 9        | 0.12          |
| (1,988) | 1:A:257:ILE:HD11 | 1:A:258:GLN:HA   | 9        | 0.12          |
| (1,988) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HA   | 9        | 0.12          |
| (1,988) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HA   | 9        | 0.12          |
| (1,955) | 1:A:256:MET:HE1  | 1:A:286:TYR:H    | 19       | 0.12          |
| (1,955) | 1:A:256:MET:HE2  | 1:A:286:TYR:H    | 19       | 0.12          |
| (1,955) | 1:A:256:MET:HE3  | 1:A:286:TYR:H    | 19       | 0.12          |
| (1,925) | 1:A:256:MET:HB2  | 1:A:286:TYR:H    | 19       | 0.12          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 20       | 0.12          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 20       | 0.12          |
| (1,884) | 1:A:254:GLN:HB3  | 1:A:287:ILE:HB   | 4        | 0.12          |
| (1,880) | 1:A:254:GLN:HB2  | 1:A:288:ARG:H    | 18       | 0.12          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 3        | 0.12          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 3        | 0.12          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 3        | 0.12          |
| (1,867) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA2  | 16       | 0.12          |
| (1,867) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA2  | 16       | 0.12          |
| (1,867) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA2  | 16       | 0.12          |
| (1,843) | 1:A:253:VAL:HA   | 1:A:290:GLY:HA2  | 6        | 0.12          |
| (1,843) | 1:A:253:VAL:HA   | 1:A:290:GLY:HA2  | 16       | 0.12          |
| (1,834) | 1:A:253:VAL:H    | 1:A:260:ASN:HD22 | 10       | 0.12          |
| (1,834) | 1:A:253:VAL:H    | 1:A:260:ASN:HD22 | 20       | 0.12          |
| (1,825) | 1:A:252:GLU:HG2  | 1:A:291:ILE:H    | 8        | 0.12          |
| (1,825) | 1:A:252:GLU:HG3  | 1:A:291:ILE:H    | 8        | 0.12          |
| (1,795) | 1:A:251:SER:H    | 1:A:253:VAL:HB   | 11       | 0.12          |
| (1,772) | 1:A:250:PHE:HB2  | 1:A:259:LEU:HB3  | 4        | 0.12          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 2        | 0.12          |
| (1,756) | 1:A:250:PHE:H    | 1:A:259:LEU:HB2  | 7        | 0.12          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE1  | 8        | 0.12          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE2  | 8        | 0.12          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE3  | 8        | 0.12          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE1  | 10       | 0.12          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE2  | 10       | 0.12          |
| (1,738) | 1:A:249:SER:H    | 1:A:265:MET:HE3  | 10       | 0.12          |
| (1,736) | 1:A:249:SER:H    | 1:A:264:PRO:HB2  | 18       | 0.12          |
| (1,712) | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG21 | 16       | 0.12          |
| (1,712) | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG22 | 16       | 0.12          |
| (1,712) | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG23 | 16       | 0.12          |
| (1,712) | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG21 | 16       | 0.12          |
| (1,712) | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG22 | 16       | 0.12          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,712) | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG23 | 16       | 0.12          |
| (1,712) | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG21 | 16       | 0.12          |
| (1,712) | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG22 | 16       | 0.12          |
| (1,712) | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG23 | 16       | 0.12          |
| (1,708) | 1:A:248:VAL:HB   | 1:A:292:VAL:HG21 | 17       | 0.12          |
| (1,708) | 1:A:248:VAL:HB   | 1:A:292:VAL:HG22 | 17       | 0.12          |
| (1,708) | 1:A:248:VAL:HB   | 1:A:292:VAL:HG23 | 17       | 0.12          |
| (1,620) | 1:A:245:GLY:H    | 1:A:269:VAL:HG11 | 7        | 0.12          |
| (1,620) | 1:A:245:GLY:H    | 1:A:269:VAL:HG12 | 7        | 0.12          |
| (1,620) | 1:A:245:GLY:H    | 1:A:269:VAL:HG13 | 7        | 0.12          |
| (1,585) | 1:A:243:GLU:H    | 1:A:246:ASP:HB2  | 4        | 0.12          |
| (1,568) | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 1        | 0.12          |
| (1,568) | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 13       | 0.12          |
| (1,568) | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 17       | 0.12          |
| (1,565) | 1:A:242:PHE:HA   | 1:A:242:PHE:HD1  | 3        | 0.12          |
| (1,565) | 1:A:242:PHE:HA   | 1:A:242:PHE:HD1  | 12       | 0.12          |
| (1,565) | 1:A:242:PHE:HA   | 1:A:242:PHE:HD1  | 20       | 0.12          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 1        | 0.12          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 12       | 0.12          |
| (1,524) | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 14       | 0.12          |
| (1,505) | 1:A:237:GLU:H    | 1:A:237:GLU:HG2  | 4        | 0.12          |
| (1,489) | 1:A:235:LEU:HG   | 1:A:237:GLU:H    | 20       | 0.12          |
| (1,477) | 1:A:235:LEU:HA   | 1:A:235:LEU:HD11 | 14       | 0.12          |
| (1,477) | 1:A:235:LEU:HA   | 1:A:235:LEU:HD12 | 14       | 0.12          |
| (1,477) | 1:A:235:LEU:HA   | 1:A:235:LEU:HD13 | 14       | 0.12          |
| (1,435) | 1:A:232:VAL:HG21 | 1:A:275:PHE:HE2  | 4        | 0.12          |
| (1,435) | 1:A:232:VAL:HG22 | 1:A:275:PHE:HE2  | 4        | 0.12          |
| (1,435) | 1:A:232:VAL:HG23 | 1:A:275:PHE:HE2  | 4        | 0.12          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG21 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG22 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG11 | 1:A:248:VAL:HG23 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG21 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG22 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG12 | 1:A:248:VAL:HG23 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG21 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG22 | 18       | 0.12          |
| (1,425) | 1:A:232:VAL:HG13 | 1:A:248:VAL:HG23 | 18       | 0.12          |
| (1,416) | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 8        | 0.12          |
| (1,416) | 1:A:232:VAL:H    | 1:A:276:SER:HB2  | 10       | 0.12          |
| (1,395) | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 16       | 0.12          |
| (1,395) | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 19       | 0.12          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD11 | 4        | 0.12          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD12 | 4        | 0.12          |
| (1,377) | 1:A:230:GLY:H    | 1:A:277:ILE:HD13 | 4        | 0.12          |
| (1,343) | 1:A:227:ASP:HA   | 1:A:281:SER:HB3  | 8        | 0.12          |
| (1,328) | 1:A:226:LYS:HE2  | 1:A:285:ASP:H    | 7        | 0.12          |
| (1,328) | 1:A:226:LYS:HE3  | 1:A:285:ASP:H    | 7        | 0.12          |
| (1,325) | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 4        | 0.12          |
| (1,325) | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 4        | 0.12          |
| (1,325) | 1:A:226:LYS:HD2  | 1:A:281:SER:H    | 5        | 0.12          |
| (1,325) | 1:A:226:LYS:HD3  | 1:A:281:SER:H    | 5        | 0.12          |
| (1,321) | 1:A:226:LYS:HB2  | 1:A:286:TYR:H    | 3        | 0.12          |
| (1,310) | 1:A:225:THR:HG21 | 1:A:231:VAL:HG11 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG21 | 1:A:231:VAL:HG12 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG21 | 1:A:231:VAL:HG13 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG22 | 1:A:231:VAL:HG11 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG22 | 1:A:231:VAL:HG12 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG22 | 1:A:231:VAL:HG13 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG23 | 1:A:231:VAL:HG11 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG23 | 1:A:231:VAL:HG12 | 14       | 0.12          |
| (1,310) | 1:A:225:THR:HG23 | 1:A:231:VAL:HG13 | 14       | 0.12          |
| (1,309) | 1:A:225:THR:HG21 | 1:A:231:VAL:HB   | 5        | 0.12          |
| (1,309) | 1:A:225:THR:HG22 | 1:A:231:VAL:HB   | 5        | 0.12          |
| (1,309) | 1:A:225:THR:HG23 | 1:A:231:VAL:HB   | 5        | 0.12          |
| (1,290) | 1:A:224:VAL:HG21 | 1:A:286:TYR:H    | 18       | 0.12          |
| (1,290) | 1:A:224:VAL:HG22 | 1:A:286:TYR:H    | 18       | 0.12          |
| (1,290) | 1:A:224:VAL:HG23 | 1:A:286:TYR:H    | 18       | 0.12          |
| (1,264) | 1:A:224:VAL:HB   | 1:A:286:TYR:HB2  | 1        | 0.12          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG21 | 3        | 0.12          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG22 | 3        | 0.12          |
| (1,256) | 1:A:224:VAL:H    | 1:A:225:THR:HG23 | 3        | 0.12          |
| (1,220) | 1:A:222:SER:HB2  | 1:A:236:ASP:H    | 6        | 0.12          |
| (1,218) | 1:A:222:SER:HB2  | 1:A:235:LEU:H    | 2        | 0.12          |
| (1,213) | 1:A:222:SER:H    | 1:A:233:THR:HG21 | 5        | 0.12          |
| (1,213) | 1:A:222:SER:H    | 1:A:233:THR:HG22 | 5        | 0.12          |
| (1,213) | 1:A:222:SER:H    | 1:A:233:THR:HG23 | 5        | 0.12          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 6        | 0.12          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 11       | 0.12          |
| (1,176) | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 14       | 0.12          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 9        | 0.12          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 9        | 0.12          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 9        | 0.12          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 16       | 0.12          |
| (1,159) | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 16       | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 16       | 0.12          |
| (1,1554) | 1:A:306:LEU:H    | 1:A:306:LEU:HG   | 14       | 0.12          |
| (1,1530) | 1:A:297:VAL:HA   | 1:A:298:PRO:HD3  | 1        | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 9        | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 9        | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 9        | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 12       | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 12       | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 12       | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 18       | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 18       | 0.12          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 18       | 0.12          |
| (1,1516) | 1:A:296:LYS:HA   | 1:A:297:VAL:H    | 8        | 0.12          |
| (1,1515) | 1:A:296:LYS:HA   | 1:A:296:LYS:HD2  | 16       | 0.12          |
| (1,1515) | 1:A:296:LYS:HA   | 1:A:296:LYS:HD3  | 16       | 0.12          |
| (1,1502) | 1:A:295:VAL:HA   | 1:A:297:VAL:H    | 17       | 0.12          |
| (1,150)  | 1:A:220:MET:HB2  | 1:A:235:LEU:HB2  | 5        | 0.12          |
| (1,1495) | 1:A:294:GLN:HE22 | 1:A:295:VAL:H    | 5        | 0.12          |
| (1,1486) | 1:A:294:GLN:H    | 1:A:294:GLN:HG2  | 1        | 0.12          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 2        | 0.12          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 2        | 0.12          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 2        | 0.12          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 10       | 0.12          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 10       | 0.12          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 10       | 0.12          |
| (1,1444) | 1:A:288:ARG:HB3  | 1:A:289:GLY:H    | 11       | 0.12          |
| (1,1418) | 1:A:287:ILE:H    | 1:A:288:ARG:HG3  | 12       | 0.12          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 16       | 0.12          |
| (1,1416) | 1:A:287:ILE:H    | 1:A:288:ARG:HB2  | 19       | 0.12          |
| (1,1397) | 1:A:285:ASP:H    | 1:A:285:ASP:HB3  | 7        | 0.12          |
| (1,1393) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 9        | 0.12          |
| (1,1393) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 17       | 0.12          |
| (1,1393) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 19       | 0.12          |
| (1,1386) | 1:A:283:PHE:HB3  | 1:A:285:ASP:H    | 2        | 0.12          |
| (1,1375) | 1:A:282:ASN:H    | 1:A:283:PHE:HD1  | 17       | 0.12          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 13       | 0.12          |
| (1,1362) | 1:A:280:THR:HA   | 1:A:283:PHE:HD1  | 18       | 0.12          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 8        | 0.12          |
| (1,1342) | 1:A:278:CYS:HB2  | 1:A:279:ASP:H    | 12       | 0.12          |
| (1,1342) | 1:A:278:CYS:HB3  | 1:A:279:ASP:H    | 12       | 0.12          |
| (1,1331) | 1:A:277:ILE:HG21 | 1:A:283:PHE:HE1  | 8        | 0.12          |
| (1,1331) | 1:A:277:ILE:HG22 | 1:A:283:PHE:HE1  | 8        | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1331) | 1:A:277:ILE:HG23 | 1:A:283:PHE:HE1  | 8        | 0.12          |
| (1,1320) | 1:A:277:ILE:HG13 | 1:A:278:CYS:H    | 5        | 0.12          |
| (1,1320) | 1:A:277:ILE:HG13 | 1:A:278:CYS:H    | 6        | 0.12          |
| (1,1311) | 1:A:277:ILE:H    | 1:A:277:ILE:HG13 | 14       | 0.12          |
| (1,1301) | 1:A:275:PHE:HZ   | 1:A:292:VAL:HB   | 9        | 0.12          |
| (1,1301) | 1:A:275:PHE:HZ   | 1:A:292:VAL:HB   | 17       | 0.12          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 11       | 0.12          |
| (1,1293) | 1:A:275:PHE:HE2  | 1:A:242:PHE:HD1  | 15       | 0.12          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 1        | 0.12          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 1        | 0.12          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 1        | 0.12          |
| (1,1247) | 1:A:272:PRO:HG2  | 1:A:273:TYR:HD1  | 3        | 0.12          |
| (1,1198) | 1:A:270:LEU:H    | 1:A:275:PHE:HA   | 13       | 0.12          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 12       | 0.12          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 15       | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 4        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 4        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 4        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 6        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 6        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 6        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 7        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 7        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 7        | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 15       | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 15       | 0.12          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 15       | 0.12          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG11 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG12 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG13 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG11 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG12 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG13 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG11 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG12 | 7        | 0.12          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG13 | 7        | 0.12          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD2  | 11       | 0.12          |
| (1,1076) | 1:A:263:GLN:HB2  | 1:A:264:PRO:HD3  | 11       | 0.12          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD2  | 11       | 0.12          |
| (1,1076) | 1:A:263:GLN:HB3  | 1:A:264:PRO:HD3  | 11       | 0.12          |
| (1,1034) | 1:A:259:LEU:HD21 | 1:A:278:CYS:H    | 13       | 0.12          |
| (1,1034) | 1:A:259:LEU:HD22 | 1:A:278:CYS:H    | 13       | 0.12          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,1034) | 1:A:259:LEU:HD23 | 1:A:278:CYS:H   | 13       | 0.12          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2 | 6        | 0.12          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3 | 6        | 0.12          |
| (2,68)   | 1:A:294:GLN:N    | 1:A:217:LEU:O   | 3        | 0.11          |
| (2,61)   | 1:A:291:ILE:H    | 1:A:251:SER:O   | 1        | 0.11          |
| (2,60)   | 1:A:290:GLY:N    | 1:A:252:GLU:O   | 15       | 0.11          |
| (2,6)    | 1:A:222:SER:N    | 1:A:233:THR:O   | 7        | 0.11          |
| (2,54)   | 1:A:277:ILE:N    | 1:A:230:GLY:O   | 15       | 0.11          |
| (2,51)   | 1:A:276:SER:H    | 1:A:268:LYS:O   | 11       | 0.11          |
| (2,51)   | 1:A:276:SER:H    | 1:A:268:LYS:O   | 16       | 0.11          |
| (2,47)   | 1:A:271:GLY:H    | 1:A:274:THR:O   | 17       | 0.11          |
| (2,46)   | 1:A:270:LEU:N    | 1:A:274:THR:O   | 2        | 0.11          |
| (2,45)   | 1:A:270:LEU:H    | 1:A:274:THR:O   | 3        | 0.11          |
| (2,44)   | 1:A:268:LYS:N    | 1:A:276:SER:O   | 9        | 0.11          |
| (2,4)    | 1:A:221:VAL:N    | 1:A:290:GLY:O   | 17       | 0.11          |
| (2,39)   | 1:A:265:MET:H    | 1:A:248:VAL:O   | 3        | 0.11          |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O   | 16       | 0.11          |
| (2,37)   | 1:A:262:CYS:H    | 1:A:259:LEU:O   | 20       | 0.11          |
| (2,35)   | 1:A:261:GLY:H    | 1:A:257:ILE:O   | 10       | 0.11          |
| (2,31)   | 1:A:256:MET:H    | 1:A:254:GLN:O   | 2        | 0.11          |
| (2,3)    | 1:A:221:VAL:H    | 1:A:290:GLY:O   | 3        | 0.11          |
| (2,29)   | 1:A:254:GLN:H    | 1:A:288:ARG:O   | 4        | 0.11          |
| (2,29)   | 1:A:254:GLN:H    | 1:A:288:ARG:O   | 18       | 0.11          |
| (2,27)   | 1:A:249:SER:H    | 1:A:293:SER:O   | 6        | 0.11          |
| (2,27)   | 1:A:249:SER:H    | 1:A:293:SER:O   | 13       | 0.11          |
| (2,27)   | 1:A:249:SER:H    | 1:A:293:SER:O   | 18       | 0.11          |
| (2,22)   | 1:A:245:GLY:N    | 1:A:267:ILE:O   | 5        | 0.11          |
| (2,22)   | 1:A:245:GLY:N    | 1:A:267:ILE:O   | 12       | 0.11          |
| (2,22)   | 1:A:245:GLY:N    | 1:A:267:ILE:O   | 20       | 0.11          |
| (2,21)   | 1:A:245:GLY:H    | 1:A:267:ILE:O   | 9        | 0.11          |
| (2,21)   | 1:A:245:GLY:H    | 1:A:267:ILE:O   | 17       | 0.11          |
| (2,19)   | 1:A:238:ALA:H    | 1:A:235:LEU:O   | 15       | 0.11          |
| (2,18)   | 1:A:235:LEU:N    | 1:A:220:MET:O   | 11       | 0.11          |
| (2,17)   | 1:A:235:LEU:H    | 1:A:220:MET:O   | 13       | 0.11          |
| (2,16)   | 1:A:234:CYS:N    | 1:A:273:TYR:O   | 12       | 0.11          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (2,15)  | 1:A:234:CYS:H    | 1:A:273:TYR:O    | 13       | 0.11          |
| (2,15)  | 1:A:234:CYS:H    | 1:A:273:TYR:O    | 18       | 0.11          |
| (2,13)  | 1:A:233:THR:H    | 1:A:223:MET:O    | 7        | 0.11          |
| (1,988) | 1:A:257:ILE:HD11 | 1:A:258:GLN:HA   | 20       | 0.11          |
| (1,988) | 1:A:257:ILE:HD12 | 1:A:258:GLN:HA   | 20       | 0.11          |
| (1,988) | 1:A:257:ILE:HD13 | 1:A:258:GLN:HA   | 20       | 0.11          |
| (1,98)  | 1:A:218:SER:HA   | 1:A:293:SER:HA   | 1        | 0.11          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 1        | 0.11          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 11       | 0.11          |
| (1,971) | 1:A:257:ILE:H    | 1:A:284:SER:H    | 14       | 0.11          |
| (1,963) | 1:A:257:ILE:H    | 1:A:257:ILE:HG12 | 10       | 0.11          |
| (1,963) | 1:A:257:ILE:H    | 1:A:257:ILE:HG13 | 10       | 0.11          |
| (1,946) | 1:A:256:MET:HE1  | 1:A:280:THR:HB   | 2        | 0.11          |
| (1,946) | 1:A:256:MET:HE2  | 1:A:280:THR:HB   | 2        | 0.11          |
| (1,946) | 1:A:256:MET:HE3  | 1:A:280:THR:HB   | 2        | 0.11          |
| (1,934) | 1:A:256:MET:HG2  | 1:A:258:GLN:H    | 2        | 0.11          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG12 | 19       | 0.11          |
| (1,906) | 1:A:255:GLY:HA3  | 1:A:287:ILE:HG13 | 19       | 0.11          |
| (1,90)  | 1:A:218:SER:H    | 1:A:242:PHE:HZ   | 4        | 0.11          |
| (1,868) | 1:A:253:VAL:HG21 | 1:A:290:GLY:HA3  | 12       | 0.11          |
| (1,868) | 1:A:253:VAL:HG22 | 1:A:290:GLY:HA3  | 12       | 0.11          |
| (1,868) | 1:A:253:VAL:HG23 | 1:A:290:GLY:HA3  | 12       | 0.11          |
| (1,843) | 1:A:253:VAL:HA   | 1:A:290:GLY:HA2  | 2        | 0.11          |
| (1,793) | 1:A:250:PHE:HZ   | 1:A:277:ILE:HD11 | 4        | 0.11          |
| (1,793) | 1:A:250:PHE:HZ   | 1:A:277:ILE:HD12 | 4        | 0.11          |
| (1,793) | 1:A:250:PHE:HZ   | 1:A:277:ILE:HD13 | 4        | 0.11          |
| (1,79)  | 1:A:217:LEU:HD11 | 1:A:219:ALA:H    | 20       | 0.11          |
| (1,79)  | 1:A:217:LEU:HD12 | 1:A:219:ALA:H    | 20       | 0.11          |
| (1,79)  | 1:A:217:LEU:HD13 | 1:A:219:ALA:H    | 20       | 0.11          |
| (1,78)  | 1:A:217:LEU:HD11 | 1:A:218:SER:H    | 15       | 0.11          |
| (1,78)  | 1:A:217:LEU:HD12 | 1:A:218:SER:H    | 15       | 0.11          |
| (1,78)  | 1:A:217:LEU:HD13 | 1:A:218:SER:H    | 15       | 0.11          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG21 | 4        | 0.11          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG22 | 4        | 0.11          |
| (1,778) | 1:A:250:PHE:HB3  | 1:A:253:VAL:HG23 | 4        | 0.11          |
| (1,728) | 1:A:248:VAL:HG21 | 1:A:275:PHE:HE1  | 8        | 0.11          |
| (1,728) | 1:A:248:VAL:HG22 | 1:A:275:PHE:HE1  | 8        | 0.11          |
| (1,728) | 1:A:248:VAL:HG23 | 1:A:275:PHE:HE1  | 8        | 0.11          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG21 | 17       | 0.11          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG22 | 17       | 0.11          |
| (1,727) | 1:A:248:VAL:HG21 | 1:A:267:ILE:HG23 | 17       | 0.11          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG21 | 17       | 0.11          |

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| Key     | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|---------|------------------|------------------|----------|---------------|
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG22 | 17       | 0.11          |
| (1,727) | 1:A:248:VAL:HG22 | 1:A:267:ILE:HG23 | 17       | 0.11          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG21 | 17       | 0.11          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG22 | 17       | 0.11          |
| (1,727) | 1:A:248:VAL:HG23 | 1:A:267:ILE:HG23 | 17       | 0.11          |
| (1,712) | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG21 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG22 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG11 | 1:A:267:ILE:HG23 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG21 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG22 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG12 | 1:A:267:ILE:HG23 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG21 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG22 | 1        | 0.11          |
| (1,712) | 1:A:248:VAL:HG13 | 1:A:267:ILE:HG23 | 1        | 0.11          |
| (1,638) | 1:A:246:ASP:H    | 1:A:269:VAL:H    | 14       | 0.11          |
| (1,61)  | 1:A:217:LEU:H    | 1:A:294:GLN:HE21 | 10       | 0.11          |
| (1,60)  | 1:A:217:LEU:H    | 1:A:294:GLN:HB3  | 16       | 0.11          |
| (1,592) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 7        | 0.11          |
| (1,592) | 1:A:243:GLU:HG3  | 1:A:244:THR:H    | 14       | 0.11          |
| (1,585) | 1:A:243:GLU:H    | 1:A:246:ASP:HB2  | 6        | 0.11          |
| (1,585) | 1:A:243:GLU:H    | 1:A:246:ASP:HB2  | 8        | 0.11          |
| (1,576) | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG11 | 5        | 0.11          |
| (1,576) | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG12 | 5        | 0.11          |
| (1,576) | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG13 | 5        | 0.11          |
| (1,576) | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG11 | 11       | 0.11          |
| (1,576) | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG12 | 11       | 0.11          |
| (1,576) | 1:A:242:PHE:HE1  | 1:A:292:VAL:HG13 | 11       | 0.11          |
| (1,568) | 1:A:242:PHE:HB2  | 1:A:246:ASP:H    | 8        | 0.11          |
| (1,565) | 1:A:242:PHE:HA   | 1:A:242:PHE:HD1  | 10       | 0.11          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 3        | 0.11          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 9        | 0.11          |
| (1,563) | 1:A:241:GLY:H    | 1:A:242:PHE:HB3  | 20       | 0.11          |
| (1,535) | 1:A:239:ARG:HA   | 1:A:273:TYR:HD1  | 1        | 0.11          |
| (1,528) | 1:A:239:ARG:H    | 1:A:239:ARG:HG2  | 4        | 0.11          |
| (1,528) | 1:A:239:ARG:H    | 1:A:239:ARG:HG3  | 4        | 0.11          |
| (1,489) | 1:A:235:LEU:HG   | 1:A:237:GLU:H    | 1        | 0.11          |
| (1,489) | 1:A:235:LEU:HG   | 1:A:237:GLU:H    | 3        | 0.11          |
| (1,489) | 1:A:235:LEU:HG   | 1:A:237:GLU:H    | 6        | 0.11          |
| (1,451) | 1:A:233:THR:HG21 | 1:A:273:TYR:HD2  | 6        | 0.11          |
| (1,451) | 1:A:233:THR:HG22 | 1:A:273:TYR:HD2  | 6        | 0.11          |
| (1,451) | 1:A:233:THR:HG23 | 1:A:273:TYR:HD2  | 6        | 0.11          |
| (1,417) | 1:A:232:VAL:H    | 1:A:276:SER:HB3  | 5        | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,395)  | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 8        | 0.11          |
| (1,395)  | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 15       | 0.11          |
| (1,395)  | 1:A:231:VAL:HA   | 1:A:276:SER:HA   | 20       | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 2        | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 2        | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 2        | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 16       | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 16       | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 16       | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG21 | 17       | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG22 | 17       | 0.11          |
| (1,386)  | 1:A:230:GLY:HA3  | 1:A:280:THR:HG23 | 17       | 0.11          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG21 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG22 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG11 | 1:A:280:THR:HG23 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG21 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG22 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG12 | 1:A:280:THR:HG23 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG21 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG22 | 2        | 0.11          |
| (1,276)  | 1:A:224:VAL:HG13 | 1:A:280:THR:HG23 | 2        | 0.11          |
| (1,264)  | 1:A:224:VAL:HB   | 1:A:286:TYR:HB2  | 11       | 0.11          |
| (1,240)  | 1:A:223:MET:HB2  | 1:A:286:TYR:HD2  | 5        | 0.11          |
| (1,222)  | 1:A:222:SER:HB3  | 1:A:223:MET:HB3  | 10       | 0.11          |
| (1,222)  | 1:A:222:SER:HB3  | 1:A:223:MET:HB3  | 18       | 0.11          |
| (1,193)  | 1:A:221:VAL:HG11 | 1:A:286:TYR:HD2  | 13       | 0.11          |
| (1,193)  | 1:A:221:VAL:HG12 | 1:A:286:TYR:HD2  | 13       | 0.11          |
| (1,193)  | 1:A:221:VAL:HG13 | 1:A:286:TYR:HD2  | 13       | 0.11          |
| (1,176)  | 1:A:221:VAL:HA   | 1:A:223:MET:H    | 8        | 0.11          |
| (1,165)  | 1:A:220:MET:HG2  | 1:A:221:VAL:H    | 6        | 0.11          |
| (1,165)  | 1:A:220:MET:HG3  | 1:A:221:VAL:H    | 6        | 0.11          |
| (1,161)  | 1:A:220:MET:HG3  | 1:A:221:VAL:H    | 6        | 0.11          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 1        | 0.11          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 1        | 0.11          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 1        | 0.11          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD11 | 2        | 0.11          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD12 | 2        | 0.11          |
| (1,159)  | 1:A:220:MET:HG2  | 1:A:235:LEU:HD13 | 2        | 0.11          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG11 | 2        | 0.11          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG12 | 2        | 0.11          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG13 | 2        | 0.11          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG21 | 2        | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG22 | 2        | 0.11          |
| (1,1558) | 1:A:311:VAL:H    | 1:A:311:VAL:HG23 | 2        | 0.11          |
| (1,1541) | 1:A:300:LYS:HA   | 1:A:301:ILE:H    | 17       | 0.11          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 3        | 0.11          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 3        | 0.11          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 3        | 0.11          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG21 | 15       | 0.11          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG22 | 15       | 0.11          |
| (1,1525) | 1:A:297:VAL:H    | 1:A:297:VAL:HG23 | 15       | 0.11          |
| (1,1515) | 1:A:296:LYS:HA   | 1:A:296:LYS:HD2  | 8        | 0.11          |
| (1,1515) | 1:A:296:LYS:HA   | 1:A:296:LYS:HD3  | 8        | 0.11          |
| (1,1487) | 1:A:294:GLN:H    | 1:A:294:GLN:HG3  | 15       | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 4        | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 4        | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 4        | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 13       | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 13       | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 13       | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG11 | 14       | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG12 | 14       | 0.11          |
| (1,1472) | 1:A:292:VAL:H    | 1:A:292:VAL:HG13 | 14       | 0.11          |
| (1,1456) | 1:A:290:GLY:HA2  | 1:A:291:ILE:H    | 1        | 0.11          |
| (1,1456) | 1:A:290:GLY:HA2  | 1:A:291:ILE:H    | 2        | 0.11          |
| (1,1456) | 1:A:290:GLY:HA2  | 1:A:291:ILE:H    | 16       | 0.11          |
| (1,1456) | 1:A:290:GLY:HA2  | 1:A:291:ILE:H    | 18       | 0.11          |
| (1,1433) | 1:A:287:ILE:HG21 | 1:A:288:ARG:HG2  | 4        | 0.11          |
| (1,1433) | 1:A:287:ILE:HG21 | 1:A:288:ARG:HG3  | 4        | 0.11          |
| (1,1433) | 1:A:287:ILE:HG22 | 1:A:288:ARG:HG2  | 4        | 0.11          |
| (1,1433) | 1:A:287:ILE:HG22 | 1:A:288:ARG:HG3  | 4        | 0.11          |
| (1,1433) | 1:A:287:ILE:HG23 | 1:A:288:ARG:HG2  | 4        | 0.11          |
| (1,1433) | 1:A:287:ILE:HG23 | 1:A:288:ARG:HG3  | 4        | 0.11          |
| (1,1421) | 1:A:287:ILE:HB   | 1:A:288:ARG:H    | 5        | 0.11          |
| (1,1393) | 1:A:284:SER:HB2  | 1:A:285:ASP:H    | 8        | 0.11          |
| (1,1358) | 1:A:280:THR:H    | 1:A:284:SER:H    | 15       | 0.11          |
| (1,1338) | 1:A:278:CYS:HB2  | 1:A:279:ASP:H    | 20       | 0.11          |
| (1,1327) | 1:A:277:ILE:HD11 | 1:A:283:PHE:HE1  | 8        | 0.11          |
| (1,1327) | 1:A:277:ILE:HD12 | 1:A:283:PHE:HE1  | 8        | 0.11          |
| (1,1327) | 1:A:277:ILE:HD13 | 1:A:283:PHE:HE1  | 8        | 0.11          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 4        | 0.11          |
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 4        | 0.11          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 4        | 0.11          |
| (1,1323) | 1:A:277:ILE:HD11 | 1:A:279:ASP:H    | 20       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1323) | 1:A:277:ILE:HD12 | 1:A:279:ASP:H    | 20       | 0.11          |
| (1,1323) | 1:A:277:ILE:HD13 | 1:A:279:ASP:H    | 20       | 0.11          |
| (1,1318) | 1:A:277:ILE:HB   | 1:A:278:CYS:H    | 20       | 0.11          |
| (1,1299) | 1:A:275:PHE:HZ   | 1:A:250:PHE:HZ   | 2        | 0.11          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 10       | 0.11          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 10       | 0.11          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 10       | 0.11          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG11 | 12       | 0.11          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG12 | 12       | 0.11          |
| (1,1291) | 1:A:275:PHE:HE1  | 1:A:292:VAL:HG13 | 12       | 0.11          |
| (1,1268) | 1:A:274:THR:HA   | 1:A:274:THR:HG21 | 7        | 0.11          |
| (1,1268) | 1:A:274:THR:HA   | 1:A:274:THR:HG22 | 7        | 0.11          |
| (1,1268) | 1:A:274:THR:HA   | 1:A:274:THR:HG23 | 7        | 0.11          |
| (1,1255) | 1:A:273:TYR:H    | 1:A:274:THR:H    | 4        | 0.11          |
| (1,123)  | 1:A:219:ALA:HB1  | 1:A:240:HIS:HA   | 1        | 0.11          |
| (1,123)  | 1:A:219:ALA:HB2  | 1:A:240:HIS:HA   | 1        | 0.11          |
| (1,123)  | 1:A:219:ALA:HB3  | 1:A:240:HIS:HA   | 1        | 0.11          |
| (1,123)  | 1:A:219:ALA:HB1  | 1:A:240:HIS:HA   | 6        | 0.11          |
| (1,123)  | 1:A:219:ALA:HB2  | 1:A:240:HIS:HA   | 6        | 0.11          |
| (1,123)  | 1:A:219:ALA:HB3  | 1:A:240:HIS:HA   | 6        | 0.11          |
| (1,1228) | 1:A:270:LEU:HD11 | 1:A:276:SER:HB3  | 18       | 0.11          |
| (1,1228) | 1:A:270:LEU:HD12 | 1:A:276:SER:HB3  | 18       | 0.11          |
| (1,1228) | 1:A:270:LEU:HD13 | 1:A:276:SER:HB3  | 18       | 0.11          |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD21 | 3        | 0.11          |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD22 | 3        | 0.11          |
| (1,1203) | 1:A:270:LEU:HA   | 1:A:270:LEU:HD23 | 3        | 0.11          |
| (1,1177) | 1:A:269:VAL:H    | 1:A:275:PHE:HB3  | 11       | 0.11          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 18       | 0.11          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 18       | 0.11          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 18       | 0.11          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG21 | 19       | 0.11          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG22 | 19       | 0.11          |
| (1,1174) | 1:A:269:VAL:H    | 1:A:269:VAL:HG23 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG21 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG22 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG21 | 1:A:277:ILE:HG23 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG21 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG22 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG22 | 1:A:277:ILE:HG23 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG21 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG22 | 19       | 0.11          |
| (1,1153) | 1:A:267:ILE:HG23 | 1:A:277:ILE:HG23 | 19       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG11 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG12 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD11 | 1:A:269:VAL:HG13 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG11 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG12 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD12 | 1:A:269:VAL:HG13 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG11 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG12 | 10       | 0.11          |
| (1,1141) | 1:A:267:ILE:HD13 | 1:A:269:VAL:HG13 | 10       | 0.11          |
| (1,1137) | 1:A:267:ILE:HB   | 1:A:275:PHE:HD1  | 3        | 0.11          |
| (1,1125) | 1:A:267:ILE:H    | 1:A:267:ILE:HG12 | 9        | 0.11          |
| (1,1090) | 1:A:265:MET:H    | 1:A:265:MET:HG2  | 8        | 0.11          |
| (1,1088) | 1:A:264:PRO:HG2  | 1:A:295:VAL:HG21 | 19       | 0.11          |
| (1,1088) | 1:A:264:PRO:HG2  | 1:A:295:VAL:HG22 | 19       | 0.11          |
| (1,1088) | 1:A:264:PRO:HG2  | 1:A:295:VAL:HG23 | 19       | 0.11          |
| (1,1088) | 1:A:264:PRO:HG3  | 1:A:295:VAL:HG21 | 19       | 0.11          |
| (1,1088) | 1:A:264:PRO:HG3  | 1:A:295:VAL:HG22 | 19       | 0.11          |
| (1,1088) | 1:A:264:PRO:HG3  | 1:A:295:VAL:HG23 | 19       | 0.11          |
| (1,1086) | 1:A:264:PRO:HG2  | 1:A:295:VAL:HB   | 20       | 0.11          |
| (1,1086) | 1:A:264:PRO:HG3  | 1:A:295:VAL:HB   | 20       | 0.11          |
| (1,1071) | 1:A:263:GLN:HA   | 1:A:264:PRO:HD2  | 12       | 0.11          |
| (1,1071) | 1:A:263:GLN:HA   | 1:A:264:PRO:HD3  | 12       | 0.11          |
| (1,1064) | 1:A:263:GLN:H    | 1:A:263:GLN:HG2  | 8        | 0.11          |
| (1,1064) | 1:A:263:GLN:H    | 1:A:263:GLN:HG3  | 8        | 0.11          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3  | 11       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2  | 17       | 0.11          |
| (1,1032) | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3  | 17       | 0.11          |

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| <b>Key</b> | <b>Atom-1</b>    | <b>Atom-2</b>   | <b>Model ID</b> | <b>Violation (Å)</b> |
|------------|------------------|-----------------|-----------------|----------------------|
| (1,1032)   | 1:A:259:LEU:HD21 | 1:A:265:MET:HE1 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD21 | 1:A:265:MET:HE2 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD21 | 1:A:265:MET:HE3 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD22 | 1:A:265:MET:HE1 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD22 | 1:A:265:MET:HE2 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD22 | 1:A:265:MET:HE3 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD23 | 1:A:265:MET:HE1 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD23 | 1:A:265:MET:HE2 | 20              | 0.11                 |
| (1,1032)   | 1:A:259:LEU:HD23 | 1:A:265:MET:HE3 | 20              | 0.11                 |
| (1,1001)   | 1:A:258:GLN:H    | 1:A:284:SER:H   | 4               | 0.11                 |

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

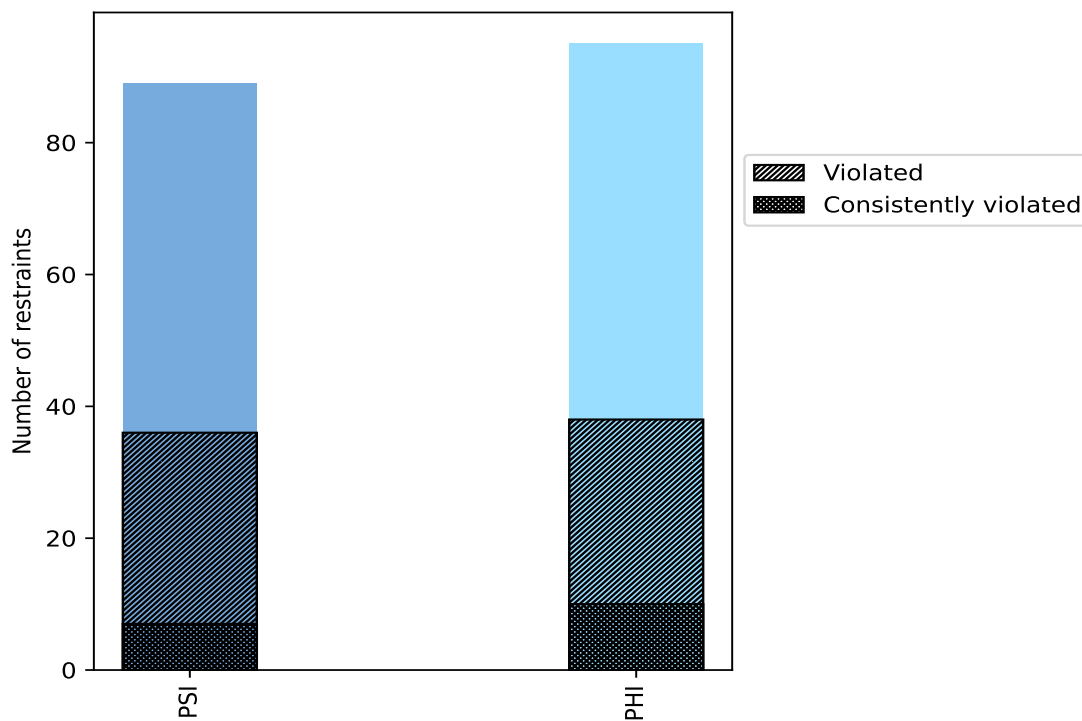
### 10.1 Summary of dihedral-angle violations [i](#)

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

| Angle type | Count | % <sup>1</sup> | Violated <sup>3</sup> |                |                | Consistently Violated <sup>4</sup> |                |                |
|------------|-------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
|            |       |                | Count                 | % <sup>2</sup> | % <sup>1</sup> | Count                              | % <sup>2</sup> | % <sup>1</sup> |
| PSI        | 89    | 48.4           | 36                    | 40.4           | 19.6           | 7                                  | 7.9            | 3.8            |
| PHI        | 95    | 51.6           | 38                    | 40.0           | 20.7           | 10                                 | 10.5           | 5.4            |
| Total      | 184   | 100.0          | 74                    | 40.2           | 40.2           | 17                                 | 9.2            | 9.2            |

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

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



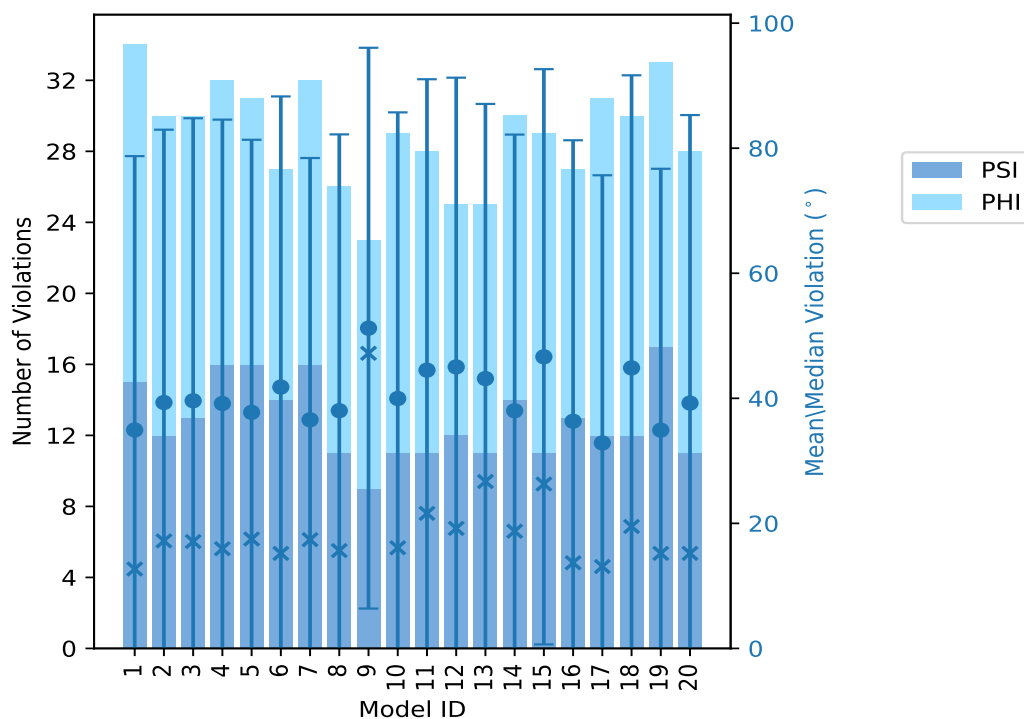
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories

## 10.2 Dihedral-angle violation statistics for each model

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

| Model ID | Number of violations |     |       | Mean (°) | Max (°) | SD (°) | Median (°) |
|----------|----------------------|-----|-------|----------|---------|--------|------------|
|          | PSI                  | PHI | Total |          |         |        |            |
| 1        | 15                   | 19  | 34    | 34.94    | 136.0   | 43.79  | 12.7       |
| 2        | 12                   | 18  | 30    | 39.33    | 130.8   | 43.63  | 17.2       |
| 3        | 13                   | 17  | 30    | 39.61    | 135.5   | 45.18  | 17.1       |
| 4        | 16                   | 16  | 32    | 39.17    | 144.1   | 45.4   | 15.95      |
| 5        | 16                   | 15  | 31    | 37.75    | 136.6   | 43.6   | 17.5       |
| 6        | 14                   | 13  | 27    | 41.8     | 137.7   | 46.48  | 15.2       |
| 7        | 16                   | 16  | 32    | 36.57    | 134.1   | 41.86  | 17.4       |
| 8        | 11                   | 15  | 26    | 38.02    | 138.6   | 44.19  | 15.65      |
| 9        | 9                    | 14  | 23    | 51.22    | 131.8   | 44.84  | 47.2       |
| 10       | 11                   | 18  | 29    | 39.97    | 147.6   | 45.76  | 16.1       |
| 11       | 11                   | 17  | 28    | 44.51    | 144.8   | 46.52  | 21.6       |
| 12       | 12                   | 13  | 25    | 45.02    | 137.2   | 46.26  | 19.2       |
| 13       | 11                   | 14  | 25    | 43.16    | 129.6   | 43.92  | 26.7       |
| 14       | 14                   | 16  | 30    | 38.01    | 134.5   | 44.17  | 18.75      |
| 15       | 11                   | 18  | 29    | 46.64    | 140.7   | 46.0   | 26.3       |
| 16       | 13                   | 14  | 27    | 36.33    | 140.7   | 44.94  | 13.7       |
| 17       | 12                   | 19  | 31    | 32.86    | 140.9   | 42.81  | 13.1       |
| 18       | 12                   | 18  | 30    | 44.86    | 147.5   | 46.8   | 19.5       |
| 19       | 17                   | 16  | 33    | 34.91    | 133.5   | 41.8   | 15.2       |
| 20       | 11                   | 17  | 28    | 39.24    | 133.1   | 46.06  | 15.2       |

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



The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

### 10.3 Dihedral-angle violation statistics for the ensemble [i](#)

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

| Number of violated restraints |     |       | Fraction of the ensemble |      |
|-------------------------------|-----|-------|--------------------------|------|
| PSI                           | PHI | Total | Count <sup>1</sup>       | %    |
| 11                            | 6   | 17    | 1                        | 5.0  |
| 4                             | 7   | 11    | 2                        | 10.0 |
| 8                             | 5   | 13    | 3                        | 15.0 |
| 0                             | 3   | 3     | 4                        | 20.0 |
| 1                             | 1   | 2     | 5                        | 25.0 |
| 0                             | 0   | 0     | 6                        | 30.0 |
| 0                             | 0   | 0     | 7                        | 35.0 |
| 0                             | 1   | 1     | 8                        | 40.0 |
| 2                             | 3   | 5     | 9                        | 45.0 |
| 0                             | 0   | 0     | 10                       | 50.0 |
| 0                             | 0   | 0     | 11                       | 55.0 |

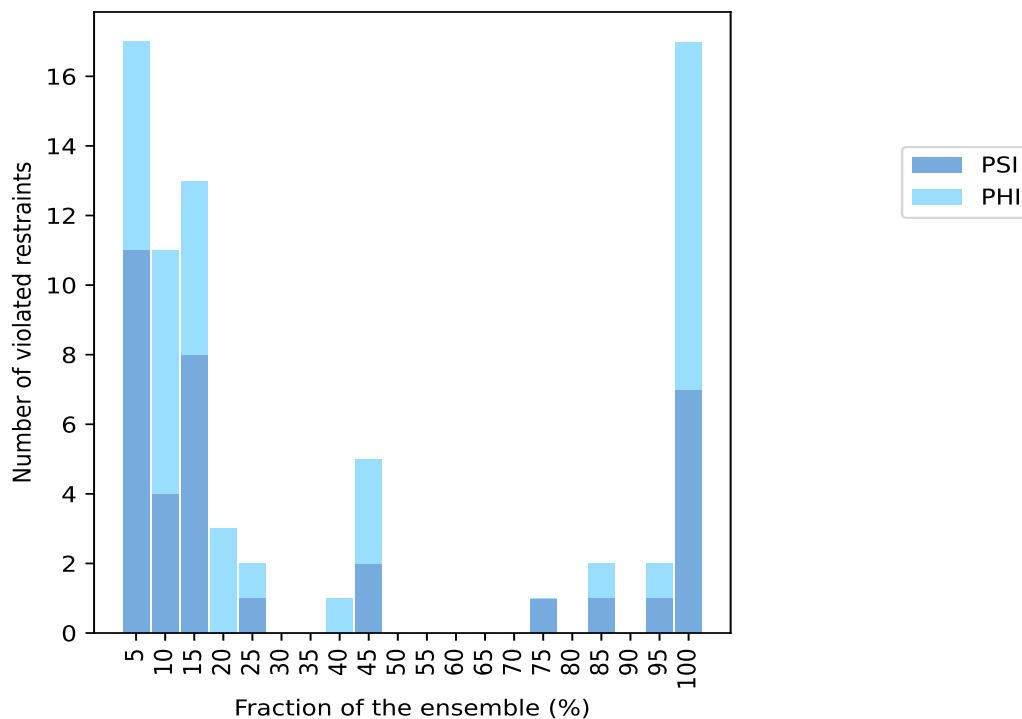
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| Number of violated restraints |     |       | Fraction of the ensemble |       |
|-------------------------------|-----|-------|--------------------------|-------|
| PSI                           | PHI | Total | Count <sup>1</sup>       | %     |
| 0                             | 0   | 0     | 12                       | 60.0  |
| 0                             | 0   | 0     | 13                       | 65.0  |
| 0                             | 0   | 0     | 14                       | 70.0  |
| 1                             | 0   | 1     | 15                       | 75.0  |
| 0                             | 0   | 0     | 16                       | 80.0  |
| 1                             | 1   | 2     | 17                       | 85.0  |
| 0                             | 0   | 0     | 18                       | 90.0  |
| 1                             | 1   | 2     | 19                       | 95.0  |
| 7                             | 10  | 17    | 20                       | 100.0 |

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

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

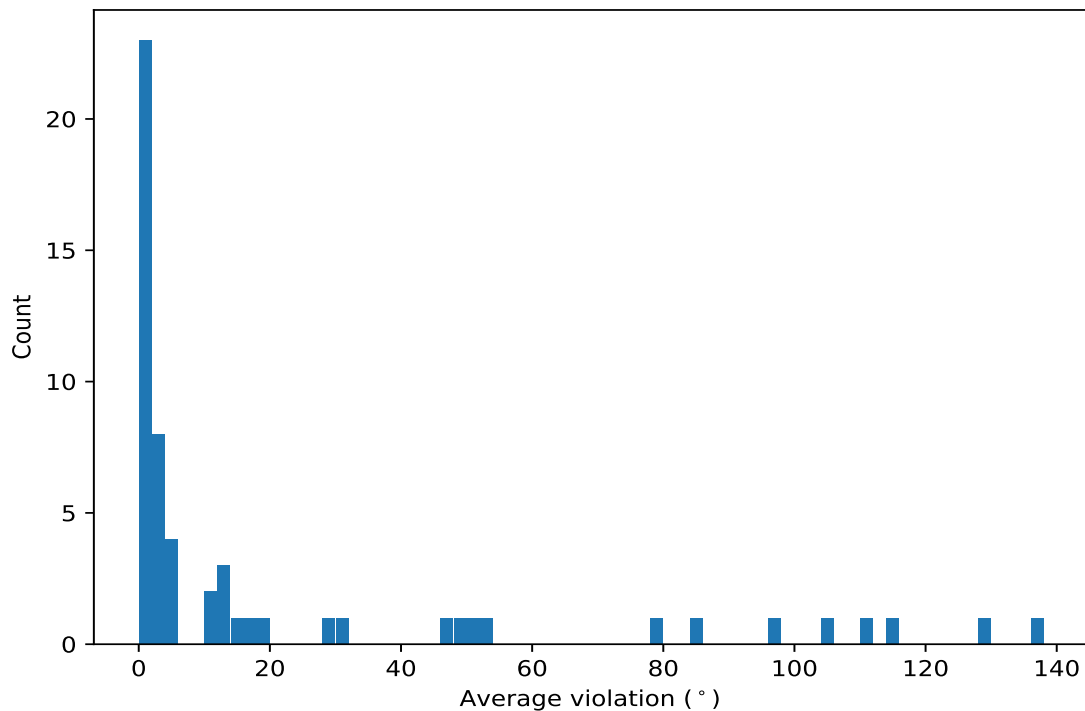


## 10.4 Most violated dihedral-angle restraints in the ensemble [i](#)

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

The following histogram shows the distribution of the average value of the violation. The average is calculated for each restraint that is violated in more than one model over all the violated models

in the ensemble



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

The following table provides the mean and the standard deviation of the violation for each restraint sorted by number of violated models and the mean value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint.

| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Models <sup>1</sup> | Mean   | SD <sup>2</sup> | Median |
|---------|---------------|----------------|----------------|---------------|---------------------|--------|-----------------|--------|
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C  | 1:A:284:SER:N | 20                  | 136.76 | 6.27            | 136.6  |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 20                  | 129.57 | 6.45            | 131.3  |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 20                  | 114.84 | 3.69            | 115.7  |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 20                  | 111.85 | 6.9             | 111.5  |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 20                  | 105.52 | 7.31            | 104.75 |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 20                  | 78.93  | 5.07            | 77.45  |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 20                  | 52.11  | 32.88           | 32.95  |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 20                  | 51.72  | 8.21            | 53.85  |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 20                  | 48.82  | 8.12            | 51.1   |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 20                  | 46.26  | 12.02           | 44.55  |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 20                  | 28.46  | 2.71            | 28.9   |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 20                  | 18.23  | 5.75            | 17.9   |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 20                  | 17.13  | 3.51            | 16.5   |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 20                  | 15.1   | 3.0             | 15.4   |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 20                  | 12.3   | 4.17            | 12.7   |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 20                  | 2.82   | 1.02            | 2.8    |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 20                  | 2.14   | 0.58            | 2.2    |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 19                  | 12.99  | 9.19            | 13.2   |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 19                  | 11.69  | 5.04            | 13.2   |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 17                  | 30.54  | 27.63           | 10.8   |

*Continued on next page...*

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Models <sup>1</sup> | Mean  | SD <sup>2</sup> | Median |
|---------|---------------|----------------|----------------|---------------|---------------------|-------|-----------------|--------|
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 17                  | 5.61  | 1.74            | 5.6    |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 15                  | 97.47 | 23.71           | 105.1  |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 9                   | 12.33 | 6.03            | 13.1   |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 9                   | 4.13  | 1.42            | 4.4    |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 9                   | 2.37  | 0.82            | 2.3    |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 9                   | 1.78  | 0.42            | 1.8    |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 9                   | 1.54  | 0.35            | 1.5    |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 8                   | 85.59 | 13.85           | 90.6   |
| (1,128) | 1:A:239:ARG:N | 1:A:239:ARG:CA | 1:A:239:ARG:C  | 1:A:240:HIS:N | 5                   | 11.1  | 9.84            | 6.3    |
| (1,47)  | 1:A:249:SER:C | 1:A:250:PHE:N  | 1:A:250:PHE:CA | 1:A:250:PHE:C | 5                   | 4.9   | 1.61            | 4.8    |
| (1,64)  | 1:A:270:LEU:C | 1:A:271:GLY:N  | 1:A:271:GLY:CA | 1:A:271:GLY:C | 4                   | 3.32  | 2.28            | 2.35   |
| (1,88)  | 1:A:302:SER:C | 1:A:303:PHE:N  | 1:A:303:PHE:CA | 1:A:303:PHE:C | 4                   | 1.9   | 0.43            | 1.95   |
| (1,31)  | 1:A:233:THR:C | 1:A:234:CYS:N  | 1:A:234:CYS:CA | 1:A:234:CYS:C | 4                   | 1.85  | 0.35            | 1.75   |
| (1,72)  | 1:A:282:ASN:C | 1:A:283:PHE:N  | 1:A:283:PHE:CA | 1:A:283:PHE:C | 3                   | 4.47  | 3.28            | 2.4    |
| (1,102) | 1:A:208:LEU:N | 1:A:208:LEU:CA | 1:A:208:LEU:C  | 1:A:209:THR:N | 3                   | 2.63  | 0.26            | 2.5    |
| (1,100) | 1:A:206:MET:N | 1:A:206:MET:CA | 1:A:206:MET:C  | 1:A:207:VAL:N | 3                   | 2.2   | 0.9             | 2.2    |
| (1,103) | 1:A:209:THR:N | 1:A:209:THR:CA | 1:A:209:THR:C  | 1:A:210:ASP:N | 3                   | 2.03  | 0.59            | 2.4    |
| (1,16)  | 1:A:217:LEU:C | 1:A:218:SER:N  | 1:A:218:SER:CA | 1:A:218:SER:C | 3                   | 1.93  | 0.39            | 2.1    |
| (1,105) | 1:A:211:SER:N | 1:A:211:SER:CA | 1:A:211:SER:C  | 1:A:212:ASN:N | 3                   | 1.93  | 0.61            | 1.9    |
| (1,108) | 1:A:214:GLU:N | 1:A:214:GLU:CA | 1:A:214:GLU:C  | 1:A:215:GLN:N | 3                   | 1.9   | 0.62            | 1.8    |
| (1,84)  | 1:A:298:PRO:C | 1:A:299:LYS:N  | 1:A:299:LYS:CA | 1:A:299:LYS:C | 3                   | 1.53  | 0.61            | 1.1    |
| (1,178) | 1:A:304:LYS:N | 1:A:304:LYS:CA | 1:A:304:LYS:C  | 1:A:305:SER:N | 3                   | 1.43  | 0.4             | 1.2    |
| (1,14)  | 1:A:214:GLU:C | 1:A:215:GLN:N  | 1:A:215:GLN:CA | 1:A:215:GLN:C | 3                   | 1.4   | 0.22            | 1.5    |
| (1,44)  | 1:A:246:ASP:C | 1:A:247:PHE:N  | 1:A:247:PHE:CA | 1:A:247:PHE:C | 3                   | 1.37  | 0.31            | 1.2    |
| (1,107) | 1:A:213:GLY:N | 1:A:213:GLY:CA | 1:A:213:GLY:C  | 1:A:214:GLU:N | 3                   | 1.33  | 0.33            | 1.1    |
| (1,122) | 1:A:232:VAL:N | 1:A:232:VAL:CA | 1:A:232:VAL:C  | 1:A:233:THR:N | 3                   | 1.1   | 0.0             | 1.1    |
| (1,176) | 1:A:302:SER:N | 1:A:302:SER:CA | 1:A:302:SER:C  | 1:A:303:PHE:N | 2                   | 3.55  | 0.85            | 3.55   |
| (1,172) | 1:A:297:VAL:N | 1:A:297:VAL:CA | 1:A:297:VAL:C  | 1:A:298:PRO:N | 2                   | 1.95  | 0.65            | 1.95   |
| (1,171) | 1:A:295:VAL:N | 1:A:295:VAL:CA | 1:A:295:VAL:C  | 1:A:296:LYS:N | 2                   | 1.9   | 0.3             | 1.9    |
| (1,83)  | 1:A:296:LYS:C | 1:A:297:VAL:N  | 1:A:297:VAL:CA | 1:A:297:VAL:C | 2                   | 1.75  | 0.55            | 1.75   |
| (1,6)   | 1:A:206:MET:C | 1:A:207:VAL:N  | 1:A:207:VAL:CA | 1:A:207:VAL:C | 2                   | 1.7   | 0.1             | 1.7    |
| (1,90)  | 1:A:304:LYS:C | 1:A:305:SER:N  | 1:A:305:SER:CA | 1:A:305:SER:C | 2                   | 1.65  | 0.45            | 1.65   |
| (1,11)  | 1:A:211:SER:C | 1:A:212:ASN:N  | 1:A:212:ASN:CA | 1:A:212:ASN:C | 2                   | 1.6   | 0.4             | 1.6    |
| (1,59)  | 1:A:265:MET:C | 1:A:266:GLU:N  | 1:A:266:GLU:CA | 1:A:266:GLU:C | 2                   | 1.5   | 0.4             | 1.5    |
| (1,92)  | 1:A:307:PRO:C | 1:A:308:ALA:N  | 1:A:308:ALA:CA | 1:A:308:ALA:C | 2                   | 1.35  | 0.25            | 1.35   |
| (1,181) | 1:A:308:ALA:N | 1:A:308:ALA:CA | 1:A:308:ALA:C  | 1:A:309:SER:N | 2                   | 1.3   | 0.2             | 1.3    |
| (1,87)  | 1:A:301:ILE:C | 1:A:302:SER:N  | 1:A:302:SER:CA | 1:A:302:SER:C | 2                   | 1.15  | 0.05            | 1.15   |

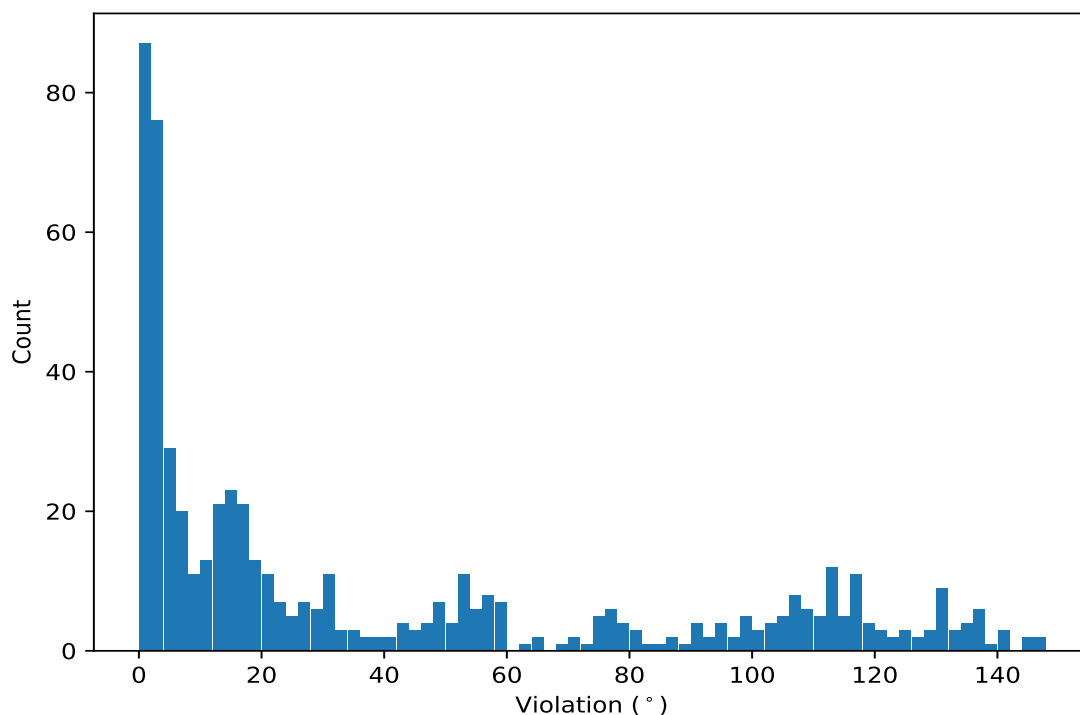
<sup>1</sup> Number of violated models, <sup>2</sup>Standard deviation, All angle values are in degree (°)

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

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

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





### 10.5.2 Table: All violated dihedral-angle restraints [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.

| Key     | Atom-1        | Atom-2         | Atom-3        | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|---------------|---------------|----------|---------------|
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 10       | 147.6         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 18       | 147.5         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 11       | 144.8         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 4        | 144.1         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 17       | 140.9         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 15       | 140.7         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 16       | 140.7         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 8        | 138.6         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 6        | 137.7         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 12       | 137.2         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1:A:289:GLY:N | 4        | 136.9         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1:A:289:GLY:N | 5        | 136.6         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1:A:289:GLY:N | 11       | 136.3         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 1        | 136.0         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 3        | 135.5         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1:A:289:GLY:N | 15       | 135.4         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1:A:289:GLY:N | 14       | 134.5         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 7        | 134.1         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1:A:289:GLY:N | 8        | 133.7         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C | 1:A:284:SER:N | 19       | 133.5         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1:A:289:GLY:N | 20       | 133.1         |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C  | 1:A:284:SER:N | 5        | 131.8         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C  | 1:A:284:SER:N | 9        | 131.8         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 1        | 131.6         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 16       | 131.5         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 10       | 131.4         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 6        | 131.2         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 17       | 131.0         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 2        | 130.8         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 7        | 130.2         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C  | 1:A:284:SER:N | 13       | 129.6         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C  | 1:A:284:SER:N | 2        | 129.4         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C  | 1:A:284:SER:N | 20       | 129.1         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 20       | 126.7         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 18       | 126.1         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 13       | 125.7         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 3        | 125.4         |
| (1,161) | 1:A:283:PHE:N | 1:A:283:PHE:CA | 1:A:283:PHE:C  | 1:A:284:SER:N | 14       | 124.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 6        | 123.6         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 6        | 123.5         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 9        | 121.5         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 4        | 121.2         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 12       | 120.0         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 1        | 119.1         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 12       | 118.8         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 15       | 118.5         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 3        | 118.0         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 14       | 117.4         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 3        | 117.3         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 7        | 117.2         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 9        | 116.9         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 16       | 116.6         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 13       | 116.5         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 19       | 116.4         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 2        | 116.3         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 3        | 116.3         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 18       | 116.1         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 11       | 116.0         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 14       | 115.3         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 10       | 115.2         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 19       | 115.2         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 17       | 114.4         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 12       | 114.1         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 6        | 113.9         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 15       | 113.9         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 5        | 113.5         |
| (1,165) | 1:A:288:ARG:N | 1:A:288:ARG:CA | 1:A:288:ARG:C  | 1:A:289:GLY:N | 12       | 113.4         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 9        | 113.3         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 8        | 113.1         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 11       | 113.0         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 4        | 113.0         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 20       | 112.7         |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 20       | 112.2         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 11       | 112.2         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 16       | 112.2         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 18       | 111.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 16       | 111.4         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 19       | 110.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 4        | 110.2         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 5        | 110.1         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 17       | 109.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 8        | 109.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 10       | 109.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 13       | 108.8         |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 4        | 108.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 14       | 108.5         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 18       | 107.9         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 5        | 107.7         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 2        | 107.6         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 17       | 107.2         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 15       | 106.6         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 2        | 106.4         |
| (1,73)  | 1:A:283:PHE:C | 1:A:284:SER:N  | 1:A:284:SER:CA | 1:A:284:SER:C | 9        | 106.3         |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 1        | 106.1         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 7        | 105.5         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 12       | 105.1         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 14       | 105.1         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 20       | 104.8         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 19       | 104.7         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 15       | 103.5         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 1        | 103.3         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 10       | 103.1         |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 18       | 102.4         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 8        | 101.7         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 11       | 101.0         |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 13       | 101.0         |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 2        | 99.4          |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 5        | 99.0          |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 18       | 99.0          |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 1        | 98.8          |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 9        | 98.3          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 15       | 97.5          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 19       | 97.0          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 1        | 95.5          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 10       | 95.3          |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 7        | 95.2          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 10       | 94.2          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 2        | 93.8          |
| (1,27)  | 1:A:229:PRO:C | 1:A:230:GLY:N  | 1:A:230:GLY:CA | 1:A:230:GLY:C | 3        | 93.6          |
| (1,156) | 1:A:278:CYS:N | 1:A:278:CYS:CA | 1:A:278:CYS:C  | 1:A:279:ASP:N | 7        | 91.7          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 18       | 91.2          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 11       | 90.8          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 15       | 90.0          |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 14       | 89.0          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 3        | 86.9          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 9        | 86.7          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 6        | 84.2          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 1        | 82.1          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 6        | 81.8          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 13       | 80.5          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 7        | 80.4          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 16       | 79.8          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 18       | 79.3          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 5        | 78.4          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 9        | 78.1          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 15       | 77.5          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 4        | 77.4          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 17       | 77.1          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 3        | 77.0          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 8        | 76.8          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 19       | 76.6          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 20       | 75.9          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 2        | 75.4          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 11       | 75.2          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 12       | 75.1          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 12       | 74.4          |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 13       | 72.7          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 4        | 70.9          |
| (1,76)  | 1:A:288:ARG:C | 1:A:289:GLY:N  | 1:A:289:GLY:CA | 1:A:289:GLY:C | 5        | 70.1          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 18       | 69.5          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 13       | 64.6          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 15       | 64.0          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 10       | 62.2          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 10       | 59.7          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 20       | 59.7          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 4        | 59.6          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 6        | 58.9          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 9        | 58.8          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 11       | 58.7          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 3        | 58.0          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 11       | 57.8          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 12       | 57.1          |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 19       | 56.8          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 7        | 56.7          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 13       | 56.7          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 19       | 56.7          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 9        | 56.4          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 8        | 56.1          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 18       | 55.9          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 18       | 55.2          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 5        | 54.2          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 1        | 54.1          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 13       | 54.1          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 5        | 54.0          |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 17       | 53.8          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 18       | 53.7          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 12       | 53.7          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 16       | 53.5          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 14       | 53.5          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 19       | 53.4          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 7        | 53.3          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 3        | 52.3          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 7        | 52.2          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 10       | 52.1          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 20       | 52.0          |
| (1,1)   | 1:A:201:GLU:C | 1:A:202:PHE:N  | 1:A:202:PHE:CA | 1:A:202:PHE:C | 7        | 51.9          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 4        | 50.5          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 15       | 50.5          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 11       | 50.1          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 19       | 49.7          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 6        | 49.7          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 9        | 49.2          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 2        | 49.2          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 8        | 49.2          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 1        | 49.0          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 17       | 48.5          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 13       | 47.4          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 4        | 47.2          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 9        | 47.2          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 17       | 46.3          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 3        | 45.5          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 2        | 44.9          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 6        | 44.8          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 14       | 43.6          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 6        | 42.7          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 14       | 42.3          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 15       | 42.0          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 11       | 40.0          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 16       | 40.0          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 15       | 39.7          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 15       | 38.7          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 16       | 37.9          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 8        | 37.7          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 20       | 34.5          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 2        | 34.2          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 10       | 34.0          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 1        | 33.9          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 6        | 33.3          |
| (1,96)  | 1:A:202:PHE:N | 1:A:202:PHE:CA | 1:A:202:PHE:C  | 1:A:203:GLY:N | 4        | 33.0          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 19       | 31.4          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 17       | 31.2          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 4        | 31.1          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 9        | 30.9          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 8        | 30.7          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 10       | 30.4          |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 8        | 30.2          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 5        | 30.2          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 12       | 30.1          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 20       | 30.1          |
| (1,128) | 1:A:239:ARG:N | 1:A:239:ARG:CA | 1:A:239:ARG:C  | 1:A:240:HIS:N | 4        | 30.0          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 7        | 29.9          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 4        | 29.4          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 11       | 29.4          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 10       | 28.4          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 2        | 28.3          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 3        | 28.0          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 18       | 27.9          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 13       | 27.3          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 17       | 27.1          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 13       | 26.7          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 7        | 26.6          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 14       | 26.3          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 15       | 26.3          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 14       | 25.3          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 1        | 24.4          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 14       | 24.3          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 14       | 24.2          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 16       | 24.1          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 1        | 23.8          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 5        | 23.2          |
| (1,158) | 1:A:280:THR:N | 1:A:280:THR:CA | 1:A:280:THR:C  | 1:A:281:SER:N | 19       | 23.2          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 2        | 22.6          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 5        | 22.5          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 12       | 22.3          |
| (1,69)  | 1:A:278:CYS:C | 1:A:279:ASP:N  | 1:A:279:ASP:CA | 1:A:279:ASP:C | 7        | 22.2          |
| (1,75)  | 1:A:287:ILE:C | 1:A:288:ARG:N  | 1:A:288:ARG:CA | 1:A:288:ARG:C | 5        | 21.8          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 9        | 21.8          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 11       | 21.7          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 11       | 21.5          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 1        | 21.5          |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 2        | 21.4          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 18       | 21.0          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 16       | 20.8          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 13       | 20.4          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 15       | 20.2          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 17       | 20.1          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 5        | 19.8          |
| (1,126) | 1:A:236:ASP:N | 1:A:236:ASP:CA | 1:A:236:ASP:C  | 1:A:237:GLU:N | 20       | 19.7          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 14       | 19.5          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 12       | 19.2          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 19       | 19.2          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 2        | 18.6          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 8        | 18.6          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 3        | 18.4          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 7        | 18.4          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 7        | 18.2          |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 18       | 18.0          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 14       | 18.0          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 15       | 18.0          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 12       | 17.9          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 3        | 17.6          |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 5        | 17.5          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 20       | 17.4          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 19       | 17.4          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 17       | 17.3          |
| (1,162) | 1:A:284:SER:N | 1:A:284:SER:CA | 1:A:284:SER:C  | 1:A:285:ASP:N | 3        | 17.3          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 20       | 17.2          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 3        | 16.9          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 10       | 16.7          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 7        | 16.6          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 14       | 16.6          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 15       | 16.6          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 8        | 16.5          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 17       | 16.4          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 19       | 16.3          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 4        | 16.3          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 1        | 16.2          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 10       | 16.1          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 16       | 16.0          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 11       | 16.0          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 10       | 15.9          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 2        | 15.8          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 2        | 15.8          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 9        | 15.7          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 4        | 15.6          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 6        | 15.6          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 2        | 15.4          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 6        | 15.2          |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 19       | 15.2          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 11       | 15.1          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 2        | 15.1          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 3        | 14.9          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 8        | 14.8          |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 6        | 14.7          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 14       | 14.6          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 7        | 14.5          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 17       | 14.4          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 4        | 14.2          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 3        | 14.1          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 11       | 14.1          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 1        | 14.0          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 6        | 14.0          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 1        | 14.0          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 11       | 13.9          |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 16       | 13.8          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 15       | 13.7          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 16       | 13.7          |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 5        | 13.6          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 13       | 13.5          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 10       | 13.3          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 4        | 13.2          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 20       | 13.2          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 18       | 13.2          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 18       | 13.1          |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 17       | 13.1          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 9        | 13.0          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 16       | 12.6          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 7        | 12.4          |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 16       | 12.4          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 15       | 12.3          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 8        | 12.3          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 9        | 12.2          |
| (1,24)  | 1:A:225:THR:C | 1:A:226:LYS:N  | 1:A:226:LYS:CA | 1:A:226:LYS:C | 20       | 12.2          |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 12       | 12.2          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 7        | 11.8          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 13       | 11.6          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 8        | 11.5          |
| (1,128) | 1:A:239:ARG:N | 1:A:239:ARG:CA | 1:A:239:ARG:C  | 1:A:240:HIS:N | 1        | 11.4          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 16       | 11.1          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 20       | 11.1          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 17       | 10.8          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 5        | 10.8          |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 20       | 10.8          |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 8        | 10.4          |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 8        | 10.4          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 5        | 10.3          |
| (1,51)  | 1:A:255:GLY:C | 1:A:256:MET:N  | 1:A:256:MET:CA | 1:A:256:MET:C | 18       | 10.1          |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 3        | 9.7           |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 6        | 9.5           |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 6        | 9.4           |
| (1,72)  | 1:A:282:ASN:C | 1:A:283:PHE:N  | 1:A:283:PHE:CA | 1:A:283:PHE:C | 17       | 9.1           |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 19       | 9.1           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 1        | 8.8           |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 5        | 8.8           |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 12       | 8.3           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 20       | 8.2           |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 19       | 8.0           |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 2        | 8.0           |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 1        | 7.6           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 14       | 7.5           |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 14       | 7.4           |
| (1,50)  | 1:A:252:GLU:C | 1:A:253:VAL:N  | 1:A:253:VAL:CA | 1:A:253:VAL:C | 12       | 7.4           |
| (1,64)  | 1:A:270:LEU:C | 1:A:271:GLY:N  | 1:A:271:GLY:CA | 1:A:271:GLY:C | 2        | 7.2           |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 12       | 7.1           |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 18       | 7.1           |
| (1,36)  | 1:A:238:ALA:C | 1:A:239:ARG:N  | 1:A:239:ARG:CA | 1:A:239:ARG:C | 10       | 7.0           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 15       | 6.9           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 7        | 6.8           |

Continued on next page...



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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 12       | 6.8           |
| (1,47)  | 1:A:249:SER:C | 1:A:250:PHE:N  | 1:A:250:PHE:CA | 1:A:250:PHE:C | 5        | 6.6           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 6        | 6.6           |
| (1,47)  | 1:A:249:SER:C | 1:A:250:PHE:N  | 1:A:250:PHE:CA | 1:A:250:PHE:C | 9        | 6.5           |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 16       | 6.4           |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 2        | 6.3           |
| (1,128) | 1:A:239:ARG:N | 1:A:239:ARG:CA | 1:A:239:ARG:C  | 1:A:240:HIS:N | 14       | 6.3           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 12       | 6.2           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 16       | 6.2           |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 19       | 6.1           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 15       | 5.8           |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 16       | 5.7           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 12       | 5.7           |
| (1,32)  | 1:A:234:CYS:C | 1:A:235:LEU:N  | 1:A:235:LEU:CA | 1:A:235:LEU:C | 17       | 5.6           |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 12       | 5.6           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 5        | 5.6           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 3        | 5.4           |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 13       | 5.4           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 6        | 5.3           |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 19       | 5.2           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 9        | 5.1           |
| (1,35)  | 1:A:237:GLU:C | 1:A:238:ALA:N  | 1:A:238:ALA:CA | 1:A:238:ALA:C | 1        | 5.0           |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 20       | 4.9           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 1        | 4.9           |
| (1,47)  | 1:A:249:SER:C | 1:A:250:PHE:N  | 1:A:250:PHE:CA | 1:A:250:PHE:C | 19       | 4.8           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 4        | 4.7           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 5        | 4.6           |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 10       | 4.6           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 8        | 4.6           |
| (1,74)  | 1:A:284:SER:C | 1:A:285:ASP:N  | 1:A:285:ASP:CA | 1:A:285:ASP:C | 5        | 4.5           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 16       | 4.4           |
| (1,47)  | 1:A:249:SER:C | 1:A:250:PHE:N  | 1:A:250:PHE:CA | 1:A:250:PHE:C | 7        | 4.4           |
| (1,176) | 1:A:302:SER:N | 1:A:302:SER:CA | 1:A:302:SER:C  | 1:A:303:PHE:N | 19       | 4.4           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 12       | 4.3           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 7        | 4.2           |
| (1,128) | 1:A:239:ARG:N | 1:A:239:ARG:CA | 1:A:239:ARG:C  | 1:A:240:HIS:N | 17       | 4.2           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 19       | 4.1           |
| (1,89)  | 1:A:303:PHE:C | 1:A:304:LYS:N  | 1:A:304:LYS:CA | 1:A:304:LYS:C | 1        | 4.0           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 10       | 4.0           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 3        | 3.9           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 15       | 3.8           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 1        | 3.8           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 3        | 3.6           |
| (1,128) | 1:A:239:ARG:N | 1:A:239:ARG:CA | 1:A:239:ARG:C  | 1:A:240:HIS:N | 10       | 3.6           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 2        | 3.6           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 4        | 3.5           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 17       | 3.5           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 2        | 3.4           |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 9        | 3.4           |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 4        | 3.3           |
| (1,100) | 1:A:206:MET:N | 1:A:206:MET:CA | 1:A:206:MET:C  | 1:A:207:VAL:N | 1        | 3.3           |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,183) | 1:A:310:LEU:N | 1:A:310:LEU:CA | 1:A:310:LEU:C  | 1:A:311:VAL:N | 20       | 3.1           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 2        | 3.1           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 17       | 3.0           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 13       | 3.0           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 5        | 3.0           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 19       | 3.0           |
| (1,102) | 1:A:208:LEU:N | 1:A:208:LEU:CA | 1:A:208:LEU:C  | 1:A:209:THR:N | 18       | 3.0           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 11       | 2.9           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 4        | 2.7           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 7        | 2.7           |
| (1,176) | 1:A:302:SER:N | 1:A:302:SER:CA | 1:A:302:SER:C  | 1:A:303:PHE:N | 4        | 2.7           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 14       | 2.7           |
| (1,108) | 1:A:214:GLU:N | 1:A:214:GLU:CA | 1:A:214:GLU:C  | 1:A:215:GLN:N | 11       | 2.7           |
| (1,105) | 1:A:211:SER:N | 1:A:211:SER:CA | 1:A:211:SER:C  | 1:A:212:ASN:N | 15       | 2.7           |
| (1,64)  | 1:A:270:LEU:C | 1:A:271:GLY:N  | 1:A:271:GLY:CA | 1:A:271:GLY:C | 8        | 2.6           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 18       | 2.6           |
| (1,172) | 1:A:297:VAL:N | 1:A:297:VAL:CA | 1:A:297:VAL:C  | 1:A:298:PRO:N | 5        | 2.6           |
| (1,157) | 1:A:279:ASP:N | 1:A:279:ASP:CA | 1:A:279:ASP:C  | 1:A:280:THR:N | 6        | 2.6           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 16       | 2.6           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 13       | 2.5           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 2        | 2.5           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 11       | 2.5           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 13       | 2.5           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 17       | 2.5           |
| (1,103) | 1:A:209:THR:N | 1:A:209:THR:CA | 1:A:209:THR:C  | 1:A:210:ASP:N | 7        | 2.5           |
| (1,102) | 1:A:208:LEU:N | 1:A:208:LEU:CA | 1:A:208:LEU:C  | 1:A:209:THR:N | 19       | 2.5           |
| (1,88)  | 1:A:302:SER:C | 1:A:303:PHE:N  | 1:A:303:PHE:CA | 1:A:303:PHE:C | 3        | 2.4           |
| (1,84)  | 1:A:298:PRO:C | 1:A:299:LYS:N  | 1:A:299:LYS:CA | 1:A:299:LYS:C | 18       | 2.4           |
| (1,72)  | 1:A:282:ASN:C | 1:A:283:PHE:N  | 1:A:283:PHE:CA | 1:A:283:PHE:C | 6        | 2.4           |
| (1,31)  | 1:A:233:THR:C | 1:A:234:CYS:N  | 1:A:234:CYS:CA | 1:A:234:CYS:C | 14       | 2.4           |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 14       | 2.4           |
| (1,103) | 1:A:209:THR:N | 1:A:209:THR:CA | 1:A:209:THR:C  | 1:A:210:ASP:N | 1        | 2.4           |
| (1,102) | 1:A:208:LEU:N | 1:A:208:LEU:CA | 1:A:208:LEU:C  | 1:A:209:THR:N | 5        | 2.4           |
| (1,83)  | 1:A:296:LYS:C | 1:A:297:VAL:N  | 1:A:297:VAL:CA | 1:A:297:VAL:C | 11       | 2.3           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 3        | 2.3           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 5        | 2.3           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 16       | 2.3           |
| (1,16)  | 1:A:217:LEU:C | 1:A:218:SER:N  | 1:A:218:SER:CA | 1:A:218:SER:C | 1        | 2.3           |
| (1,138) | 1:A:250:PHE:N | 1:A:250:PHE:CA | 1:A:250:PHE:C  | 1:A:251:SER:N | 5        | 2.3           |
| (1,88)  | 1:A:302:SER:C | 1:A:303:PHE:N  | 1:A:303:PHE:CA | 1:A:303:PHE:C | 19       | 2.2           |
| (1,47)  | 1:A:249:SER:C | 1:A:250:PHE:N  | 1:A:250:PHE:CA | 1:A:250:PHE:C | 8        | 2.2           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 4        | 2.2           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 1        | 2.2           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 12       | 2.2           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 20       | 2.2           |
| (1,171) | 1:A:295:VAL:N | 1:A:295:VAL:CA | 1:A:295:VAL:C  | 1:A:296:LYS:N | 4        | 2.2           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 6        | 2.2           |
| (1,100) | 1:A:206:MET:N | 1:A:206:MET:CA | 1:A:206:MET:C  | 1:A:207:VAL:N | 19       | 2.2           |
| (1,10)  | 1:A:210:ASP:C | 1:A:211:SER:N  | 1:A:211:SER:CA | 1:A:211:SER:C | 4        | 2.2           |
| (1,90)  | 1:A:304:LYS:C | 1:A:305:SER:N  | 1:A:305:SER:CA | 1:A:305:SER:C | 18       | 2.1           |
| (1,64)  | 1:A:270:LEU:C | 1:A:271:GLY:N  | 1:A:271:GLY:CA | 1:A:271:GLY:C | 18       | 2.1           |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 10       | 2.1           |
| (1,20)  | 1:A:221:VAL:C | 1:A:222:SER:N  | 1:A:222:SER:CA | 1:A:222:SER:C | 13       | 2.1           |
| (1,163) | 1:A:285:ASP:N | 1:A:285:ASP:CA | 1:A:285:ASP:C  | 1:A:286:TYR:N | 7        | 2.1           |
| (1,16)  | 1:A:217:LEU:C | 1:A:218:SER:N  | 1:A:218:SER:CA | 1:A:218:SER:C | 10       | 2.1           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 15       | 2.0           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 1        | 2.0           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 4        | 2.0           |
| (1,178) | 1:A:304:LYS:N | 1:A:304:LYS:CA | 1:A:304:LYS:C  | 1:A:305:SER:N | 13       | 2.0           |
| (1,153) | 1:A:274:THR:N | 1:A:274:THR:CA | 1:A:274:THR:C  | 1:A:275:PHE:N | 11       | 2.0           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 8        | 2.0           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 10       | 2.0           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 15       | 2.0           |
| (1,11)  | 1:A:211:SER:C | 1:A:212:ASN:N  | 1:A:212:ASN:CA | 1:A:212:ASN:C | 10       | 2.0           |
| (1,72)  | 1:A:282:ASN:C | 1:A:283:PHE:N  | 1:A:283:PHE:CA | 1:A:283:PHE:C | 19       | 1.9           |
| (1,59)  | 1:A:265:MET:C | 1:A:266:GLU:N  | 1:A:266:GLU:CA | 1:A:266:GLU:C | 10       | 1.9           |
| (1,31)  | 1:A:233:THR:C | 1:A:234:CYS:N  | 1:A:234:CYS:CA | 1:A:234:CYS:C | 9        | 1.9           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 18       | 1.9           |
| (1,12)  | 1:A:212:ASN:C | 1:A:213:GLY:N  | 1:A:213:GLY:CA | 1:A:213:GLY:C | 16       | 1.9           |
| (1,105) | 1:A:211:SER:N | 1:A:211:SER:CA | 1:A:211:SER:C  | 1:A:212:ASN:N | 3        | 1.9           |
| (1,6)   | 1:A:206:MET:C | 1:A:207:VAL:N  | 1:A:207:VAL:CA | 1:A:207:VAL:C | 11       | 1.8           |
| (1,44)  | 1:A:246:ASP:C | 1:A:247:PHE:N  | 1:A:247:PHE:CA | 1:A:247:PHE:C | 11       | 1.8           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 6        | 1.8           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 14       | 1.8           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 17       | 1.8           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 8        | 1.8           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 14       | 1.8           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 19       | 1.8           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 13       | 1.8           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 7        | 1.8           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 18       | 1.8           |
| (1,108) | 1:A:214:GLU:N | 1:A:214:GLU:CA | 1:A:214:GLU:C  | 1:A:215:GLN:N | 7        | 1.8           |
| (1,107) | 1:A:213:GLY:N | 1:A:213:GLY:CA | 1:A:213:GLY:C  | 1:A:214:GLU:N | 4        | 1.8           |
| (1,104) | 1:A:210:ASP:N | 1:A:210:ASP:CA | 1:A:210:ASP:C  | 1:A:211:SER:N | 17       | 1.8           |
| (1,88)  | 1:A:302:SER:C | 1:A:303:PHE:N  | 1:A:303:PHE:CA | 1:A:303:PHE:C | 17       | 1.7           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 2        | 1.7           |
| (1,92)  | 1:A:307:PRO:C | 1:A:308:ALA:N  | 1:A:308:ALA:CA | 1:A:308:ALA:C | 14       | 1.6           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 11       | 1.6           |
| (1,6)   | 1:A:206:MET:C | 1:A:207:VAL:N  | 1:A:207:VAL:CA | 1:A:207:VAL:C | 15       | 1.6           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 10       | 1.6           |
| (1,31)  | 1:A:233:THR:C | 1:A:234:CYS:N  | 1:A:234:CYS:CA | 1:A:234:CYS:C | 1        | 1.6           |
| (1,171) | 1:A:295:VAL:N | 1:A:295:VAL:CA | 1:A:295:VAL:C  | 1:A:296:LYS:N | 1        | 1.6           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 10       | 1.6           |
| (1,150) | 1:A:269:VAL:N | 1:A:269:VAL:CA | 1:A:269:VAL:C  | 1:A:270:LEU:N | 6        | 1.6           |
| (1,14)  | 1:A:214:GLU:C | 1:A:215:GLN:N  | 1:A:215:GLN:CA | 1:A:215:GLN:C | 18       | 1.6           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 9        | 1.6           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 20       | 1.6           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 18       | 1.5           |
| (1,71)  | 1:A:281:SER:C | 1:A:282:ASN:N  | 1:A:282:ASN:CA | 1:A:282:ASN:C | 20       | 1.5           |
| (1,31)  | 1:A:233:THR:C | 1:A:234:CYS:N  | 1:A:234:CYS:CA | 1:A:234:CYS:C | 3        | 1.5           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 9        | 1.5           |
| (1,181) | 1:A:308:ALA:N | 1:A:308:ALA:CA | 1:A:308:ALA:C  | 1:A:309:SER:N | 5        | 1.5           |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 17       | 1.5           |
| (1,159) | 1:A:281:SER:N | 1:A:281:SER:CA | 1:A:281:SER:C  | 1:A:282:ASN:N | 7        | 1.5           |
| (1,14)  | 1:A:214:GLU:C | 1:A:215:GLN:N  | 1:A:215:GLN:CA | 1:A:215:GLN:C | 14       | 1.5           |
| (1,134) | 1:A:246:ASP:N | 1:A:246:ASP:CA | 1:A:246:ASP:C  | 1:A:247:PHE:N | 2        | 1.5           |
| (1,120) | 1:A:228:ASN:N | 1:A:228:ASN:CA | 1:A:228:ASN:C  | 1:A:229:PRO:N | 13       | 1.5           |
| (1,64)  | 1:A:270:LEU:C | 1:A:271:GLY:N  | 1:A:271:GLY:CA | 1:A:271:GLY:C | 17       | 1.4           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 12       | 1.4           |
| (1,16)  | 1:A:217:LEU:C | 1:A:218:SER:N  | 1:A:218:SER:CA | 1:A:218:SER:C | 4        | 1.4           |
| (1,88)  | 1:A:302:SER:C | 1:A:303:PHE:N  | 1:A:303:PHE:CA | 1:A:303:PHE:C | 20       | 1.3           |
| (1,61)  | 1:A:267:ILE:C | 1:A:268:LYS:N  | 1:A:268:LYS:CA | 1:A:268:LYS:C | 10       | 1.3           |
| (1,172) | 1:A:297:VAL:N | 1:A:297:VAL:CA | 1:A:297:VAL:C  | 1:A:298:PRO:N | 8        | 1.3           |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 1        | 1.3           |
| (1,90)  | 1:A:304:LYS:C | 1:A:305:SER:N  | 1:A:305:SER:CA | 1:A:305:SER:C | 3        | 1.2           |
| (1,87)  | 1:A:301:ILE:C | 1:A:302:SER:N  | 1:A:302:SER:CA | 1:A:302:SER:C | 17       | 1.2           |
| (1,83)  | 1:A:296:LYS:C | 1:A:297:VAL:N  | 1:A:297:VAL:CA | 1:A:297:VAL:C | 2        | 1.2           |
| (1,44)  | 1:A:246:ASP:C | 1:A:247:PHE:N  | 1:A:247:PHE:CA | 1:A:247:PHE:C | 20       | 1.2           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 11       | 1.2           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 6        | 1.2           |
| (1,178) | 1:A:304:LYS:N | 1:A:304:LYS:CA | 1:A:304:LYS:C  | 1:A:305:SER:N | 3        | 1.2           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 14       | 1.2           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 19       | 1.2           |
| (1,124) | 1:A:234:CYS:N | 1:A:234:CYS:CA | 1:A:234:CYS:C  | 1:A:235:LEU:N | 6        | 1.2           |
| (1,11)  | 1:A:211:SER:C | 1:A:212:ASN:N  | 1:A:212:ASN:CA | 1:A:212:ASN:C | 15       | 1.2           |
| (1,109) | 1:A:215:GLN:N | 1:A:215:GLN:CA | 1:A:215:GLN:C  | 1:A:216:PRO:N | 7        | 1.2           |
| (1,108) | 1:A:214:GLU:N | 1:A:214:GLU:CA | 1:A:214:GLU:C  | 1:A:215:GLN:N | 14       | 1.2           |
| (1,105) | 1:A:211:SER:N | 1:A:211:SER:CA | 1:A:211:SER:C  | 1:A:212:ASN:N | 7        | 1.2           |
| (1,103) | 1:A:209:THR:N | 1:A:209:THR:CA | 1:A:209:THR:C  | 1:A:210:ASP:N | 19       | 1.2           |
| (1,101) | 1:A:207:VAL:N | 1:A:207:VAL:CA | 1:A:207:VAL:C  | 1:A:208:LEU:N | 16       | 1.2           |
| (1,92)  | 1:A:307:PRO:C | 1:A:308:ALA:N  | 1:A:308:ALA:CA | 1:A:308:ALA:C | 1        | 1.1           |
| (1,87)  | 1:A:301:ILE:C | 1:A:302:SER:N  | 1:A:302:SER:CA | 1:A:302:SER:C | 20       | 1.1           |
| (1,84)  | 1:A:298:PRO:C | 1:A:299:LYS:N  | 1:A:299:LYS:CA | 1:A:299:LYS:C | 15       | 1.1           |
| (1,84)  | 1:A:298:PRO:C | 1:A:299:LYS:N  | 1:A:299:LYS:CA | 1:A:299:LYS:C | 20       | 1.1           |
| (1,59)  | 1:A:265:MET:C | 1:A:266:GLU:N  | 1:A:266:GLU:CA | 1:A:266:GLU:C | 13       | 1.1           |
| (1,44)  | 1:A:246:ASP:C | 1:A:247:PHE:N  | 1:A:247:PHE:CA | 1:A:247:PHE:C | 2        | 1.1           |
| (1,39)  | 1:A:241:GLY:C | 1:A:242:PHE:N  | 1:A:242:PHE:CA | 1:A:242:PHE:C | 8        | 1.1           |
| (1,34)  | 1:A:236:ASP:C | 1:A:237:GLU:N  | 1:A:237:GLU:CA | 1:A:237:GLU:C | 17       | 1.1           |
| (1,21)  | 1:A:222:SER:C | 1:A:223:MET:N  | 1:A:223:MET:CA | 1:A:223:MET:C | 3        | 1.1           |
| (1,181) | 1:A:308:ALA:N | 1:A:308:ALA:CA | 1:A:308:ALA:C  | 1:A:309:SER:N | 16       | 1.1           |
| (1,178) | 1:A:304:LYS:N | 1:A:304:LYS:CA | 1:A:304:LYS:C  | 1:A:305:SER:N | 5        | 1.1           |
| (1,160) | 1:A:282:ASN:N | 1:A:282:ASN:CA | 1:A:282:ASN:C  | 1:A:283:PHE:N | 16       | 1.1           |
| (1,14)  | 1:A:214:GLU:C | 1:A:215:GLN:N  | 1:A:215:GLN:CA | 1:A:215:GLN:C | 7        | 1.1           |
| (1,122) | 1:A:232:VAL:N | 1:A:232:VAL:CA | 1:A:232:VAL:C  | 1:A:233:THR:N | 3        | 1.1           |
| (1,122) | 1:A:232:VAL:N | 1:A:232:VAL:CA | 1:A:232:VAL:C  | 1:A:233:THR:N | 4        | 1.1           |
| (1,122) | 1:A:232:VAL:N | 1:A:232:VAL:CA | 1:A:232:VAL:C  | 1:A:233:THR:N | 19       | 1.1           |
| (1,118) | 1:A:226:LYS:N | 1:A:226:LYS:CA | 1:A:226:LYS:C  | 1:A:227:ASP:N | 17       | 1.1           |
| (1,111) | 1:A:218:SER:N | 1:A:218:SER:CA | 1:A:218:SER:C  | 1:A:219:ALA:N | 4        | 1.1           |
| (1,107) | 1:A:213:GLY:N | 1:A:213:GLY:CA | 1:A:213:GLY:C  | 1:A:214:GLU:N | 1        | 1.1           |
| (1,107) | 1:A:213:GLY:N | 1:A:213:GLY:CA | 1:A:213:GLY:C  | 1:A:214:GLU:N | 8        | 1.1           |
| (1,100) | 1:A:206:MET:N | 1:A:206:MET:CA | 1:A:206:MET:C  | 1:A:207:VAL:N | 18       | 1.1           |