



## Full wwPDB EM Validation Report ⓘ

Nov 19, 2022 – 02:30 pm GMT

PDB ID : 5MVY  
EMDB ID : EMD-3578  
Title : Thin Filament at low calcium concentration  
Authors : Paul, D.M.; Squire, J.M.; Morris, E.P.  
Deposited on : 2017-01-17  
Resolution : 28.40 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp>

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>.

---

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

EMDB validation analysis : 0.0.1.dev43  
Mogul : 1.8.4, CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.2

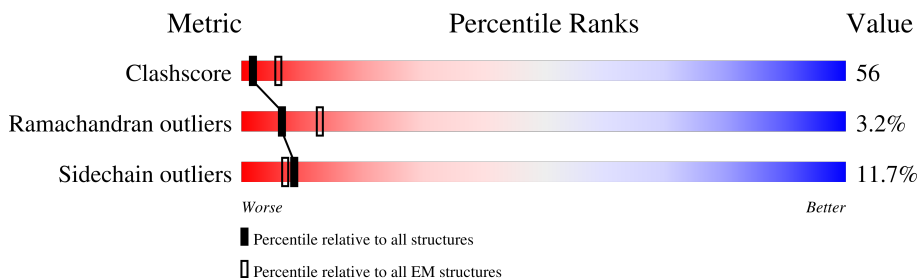
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 28.40 Å.

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



| Metric                | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|--------------------------|--------------------------|
| Clashscore            | 158937                   | 4297                     |
| Ramachandran outliers | 154571                   | 4023                     |
| Sidechain outliers    | 154315                   | 3826                     |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain     |
|-----|-------|--------|----------------------|
| 1   | A     | 375    | 80%<br>56% 34% 10% . |
| 1   | B     | 375    | 70%<br>56% 34% 10% . |
| 1   | C     | 375    | 9%<br>55% 35% 9% .   |
| 1   | D     | 375    | 56%<br>56% 35% 9% .  |
| 1   | E     | 375    | 6%<br>55% 34% 10% .  |
| 1   | F     | 375    | 48%<br>56% 34% 9% .  |
| 1   | G     | 375    | 20%<br>56% 34% 9% .  |
| 1   | H     | 375    | 36%<br>55% 35% 9% .  |

Continued on next page...

Continued from previous page...

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | I     | 375    |                  |
| 1   | J     | 375    |                  |
| 1   | K     | 375    |                  |
| 1   | L     | 375    |                  |
| 1   | M     | 375    |                  |
| 1   | N     | 375    |                  |
| 1   | O     | 375    |                  |
| 1   | P     | 375    |                  |
| 1   | Q     | 375    |                  |
| 1   | R     | 375    |                  |
| 1   | S     | 375    |                  |
| 1   | T     | 375    |                  |
| 1   | U     | 375    |                  |
| 1   | V     | 375    |                  |
| 1   | W     | 375    |                  |

## 2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 68103 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Actin, alpha skeletal muscle.

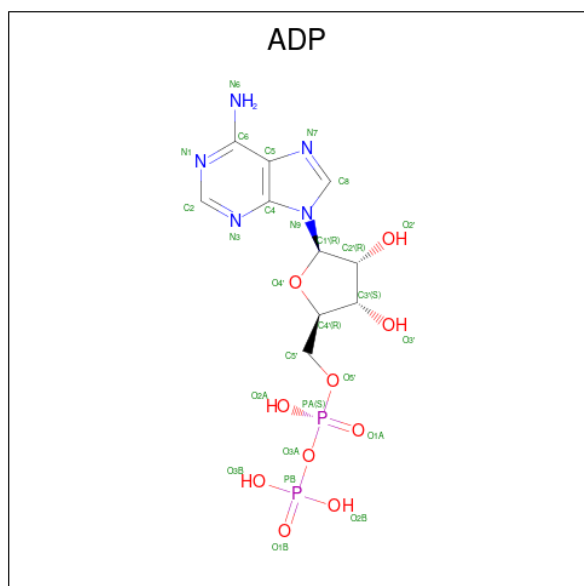
| Mol | Chain | Residues | Atoms |      |     |     |    | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
|     |       |          | Total | C    | N   | O   | S  |         |       |
| 1   | A     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | B     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | C     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | D     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | E     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | F     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | G     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | H     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | I     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | J     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | K     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | L     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | M     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | N     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | O     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | P     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |
| 1   | Q     | 375      | 2934  | 1855 | 493 | 565 | 21 | 0       | 0     |

*Continued on next page...*

Continued from previous page...

| Mol | Chain | Residues | Atoms |      |     |     |    | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 1   | R     | 375      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2934  | 1855 | 493 | 565 | 21 |         |       |
| 1   | S     | 375      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2934  | 1855 | 493 | 565 | 21 |         |       |
| 1   | T     | 375      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2934  | 1855 | 493 | 565 | 21 |         |       |
| 1   | U     | 375      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2934  | 1855 | 493 | 565 | 21 |         |       |
| 1   | V     | 375      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2934  | 1855 | 493 | 565 | 21 |         |       |
| 1   | W     | 375      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2934  | 1855 | 493 | 565 | 21 |         |       |

- Molecule 2 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula:  $C_{10}H_{15}N_5O_{10}P_2$ ).



| Mol | Chain | Residues | Atoms |    |   |    |   | AltConf |
|-----|-------|----------|-------|----|---|----|---|---------|
| 2   | A     | 1        | Total | C  | N | O  | P | 0       |
|     |       |          | 27    | 10 | 5 | 10 | 2 |         |
| 2   | B     | 1        | Total | C  | N | O  | P | 0       |
|     |       |          | 27    | 10 | 5 | 10 | 2 |         |
| 2   | C     | 1        | Total | C  | N | O  | P | 0       |
|     |       |          | 27    | 10 | 5 | 10 | 2 |         |
| 2   | D     | 1        | Total | C  | N | O  | P | 0       |
|     |       |          | 27    | 10 | 5 | 10 | 2 |         |
| 2   | E     | 1        | Total | C  | N | O  | P | 0       |
|     |       |          | 27    | 10 | 5 | 10 | 2 |         |

Continued on next page...

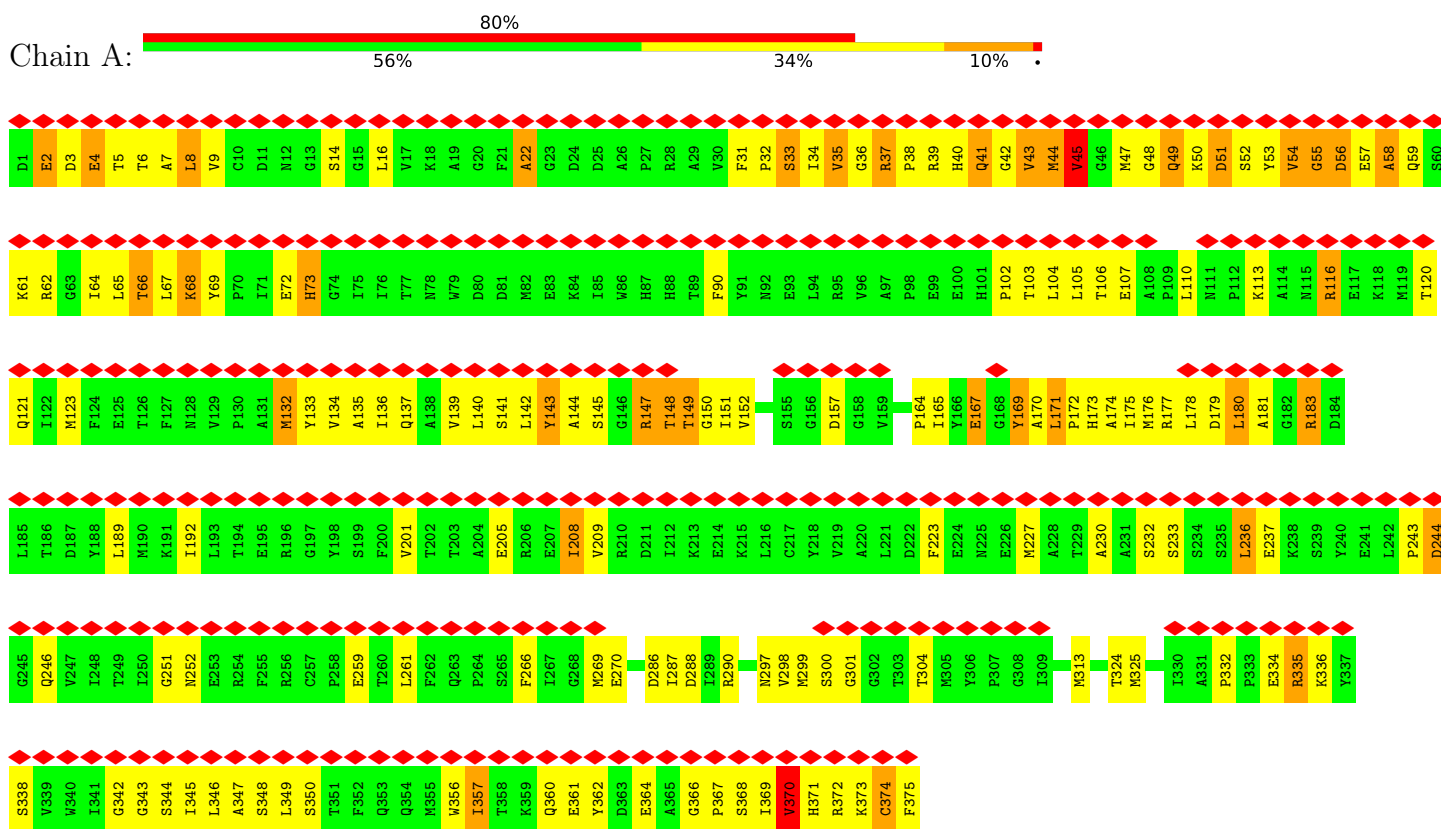
*Continued from previous page...*

| Mol | Chain | Residues | Atoms       |         |        |         |        | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
|     |       |          | Total       | C       | N      | O       | P      |         |
| 2   | F     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | G     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | H     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | I     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | J     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | K     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | L     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | M     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | N     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | O     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | P     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | Q     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | R     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | S     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | T     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | U     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | V     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |
| 2   | W     | 1        | Total<br>27 | C<br>10 | N<br>5 | O<br>10 | P<br>2 | 0       |

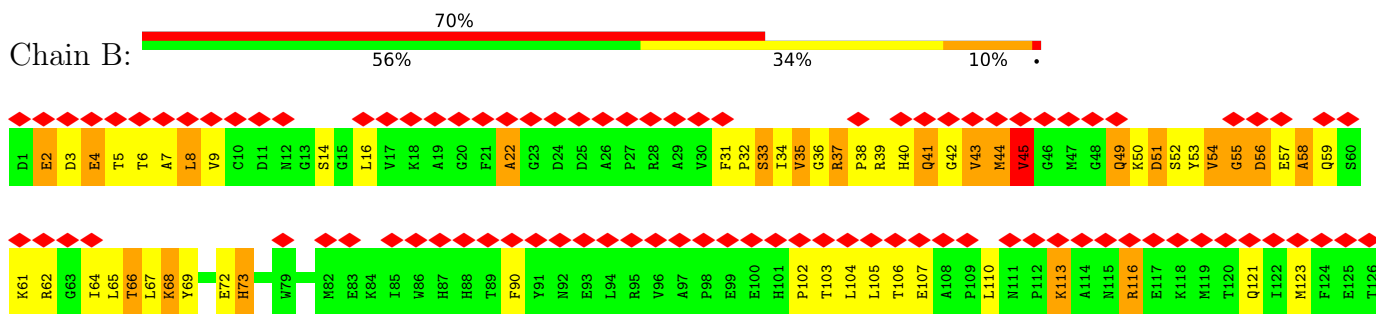
### 3 Residue-property plots

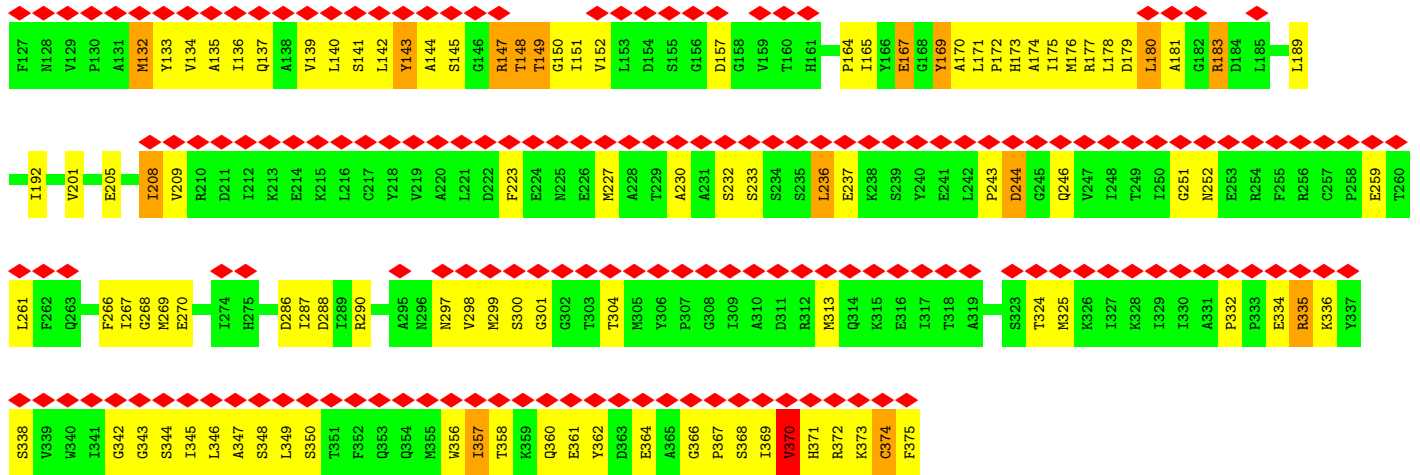
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: Actin, alpha skeletal muscle

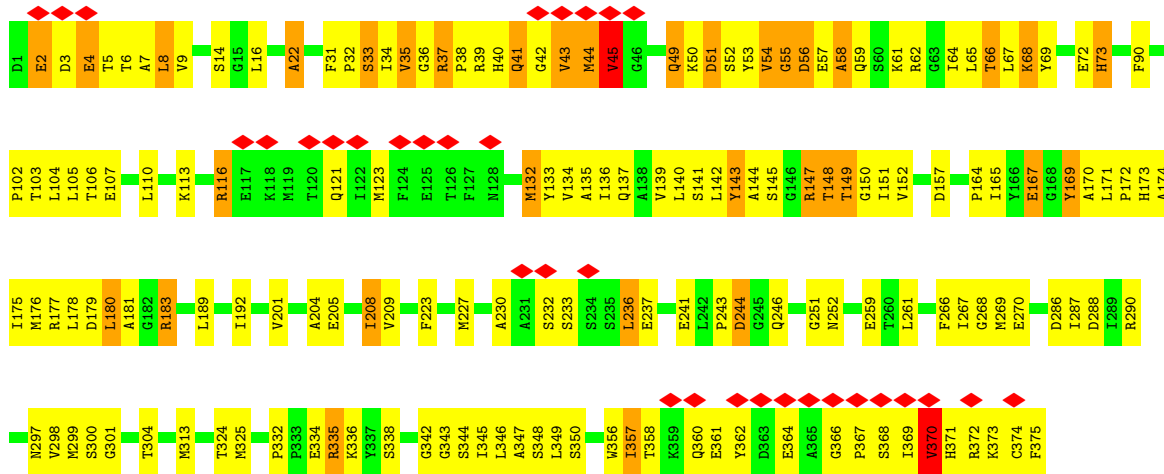


- Molecule 1: Actin, alpha skeletal muscle

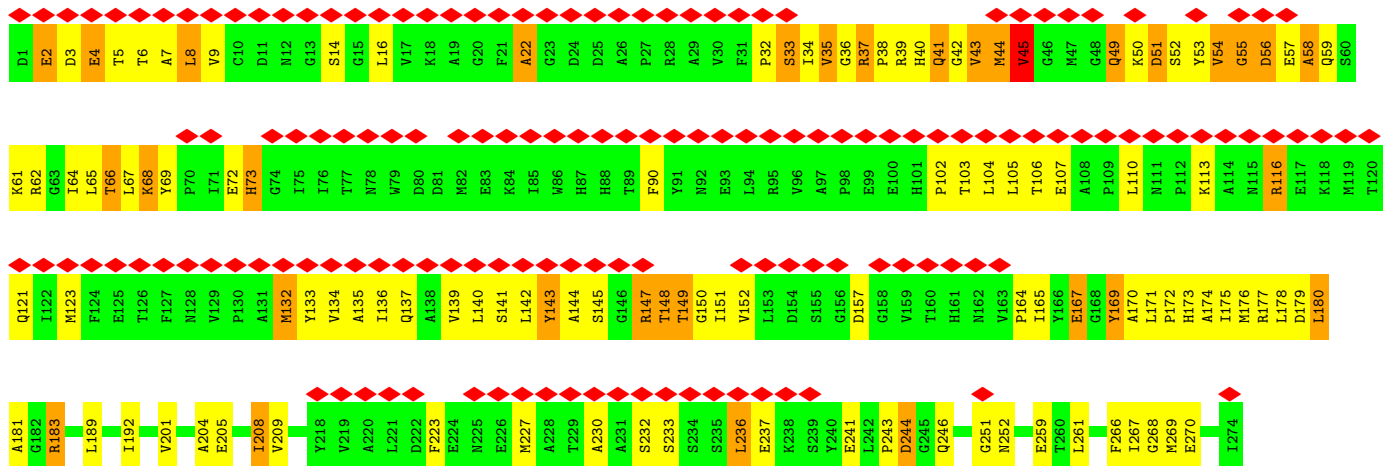




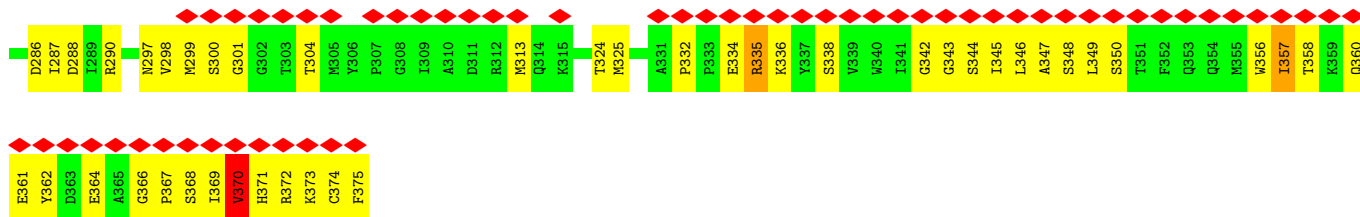
• Molecule 1: Actin, alpha skeletal muscle



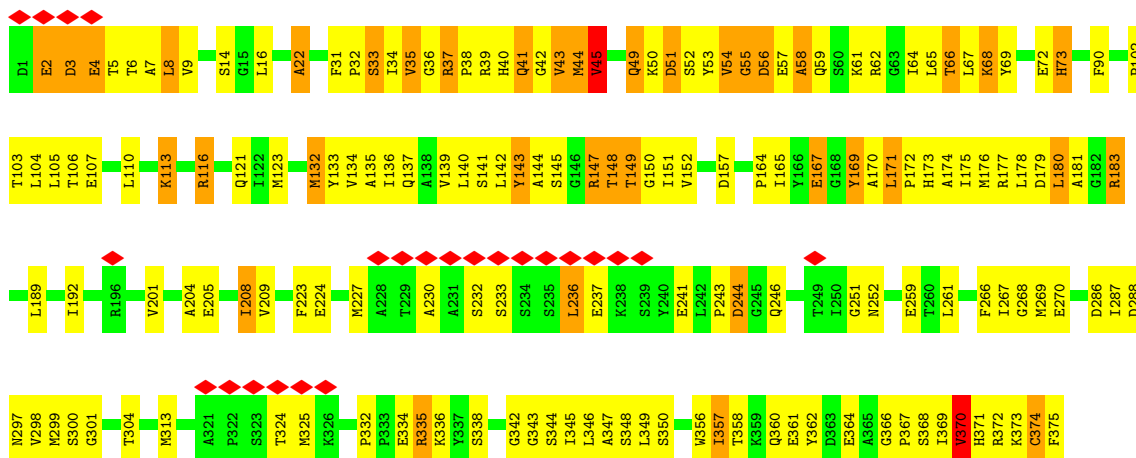
• Molecule 1: Actin, alpha skeletal muscle



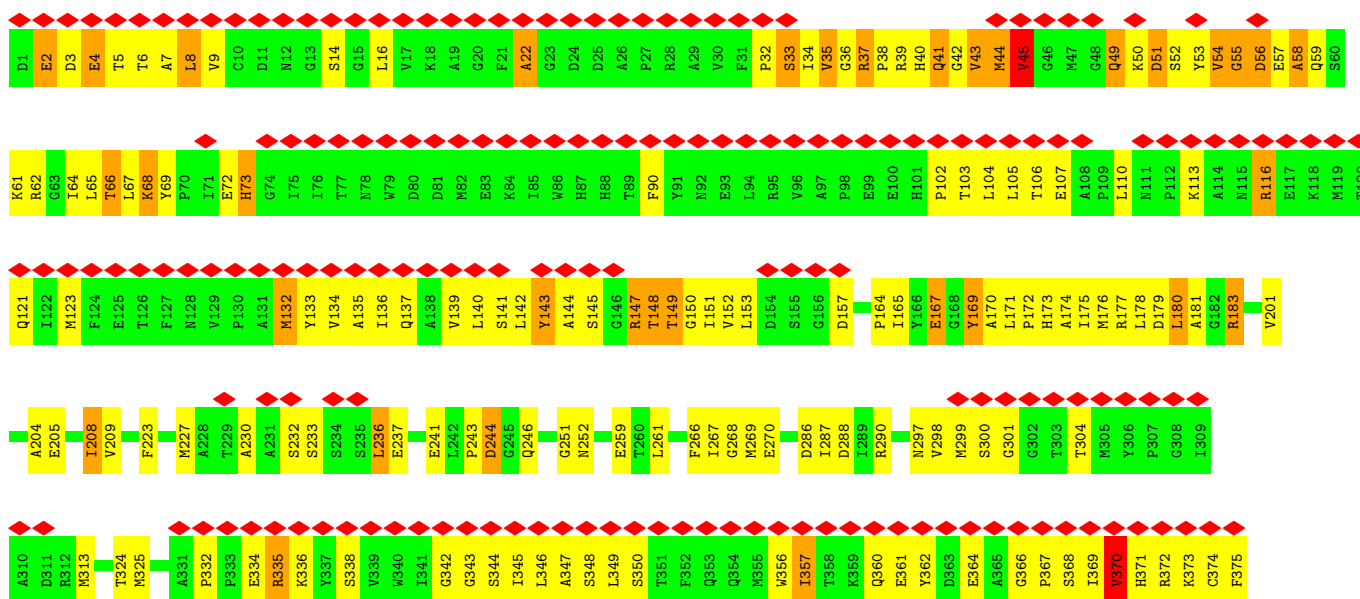




• Molecule 1: Actin, alpha skeletal muscle

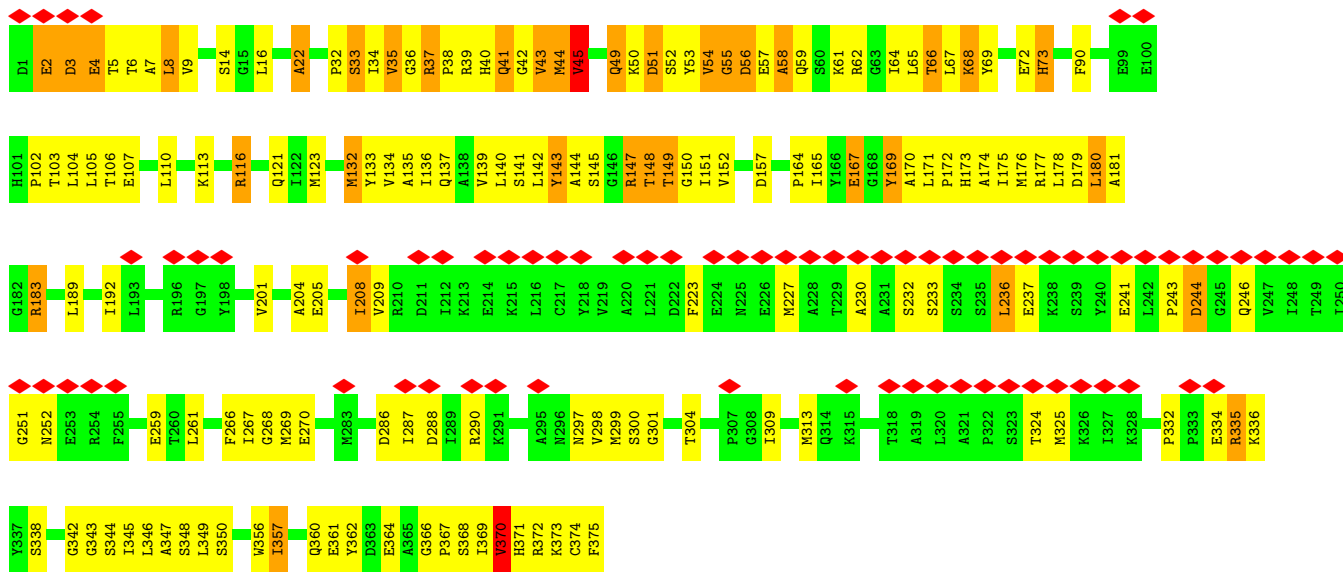


• Molecule 1: Actin, alpha skeletal muscle

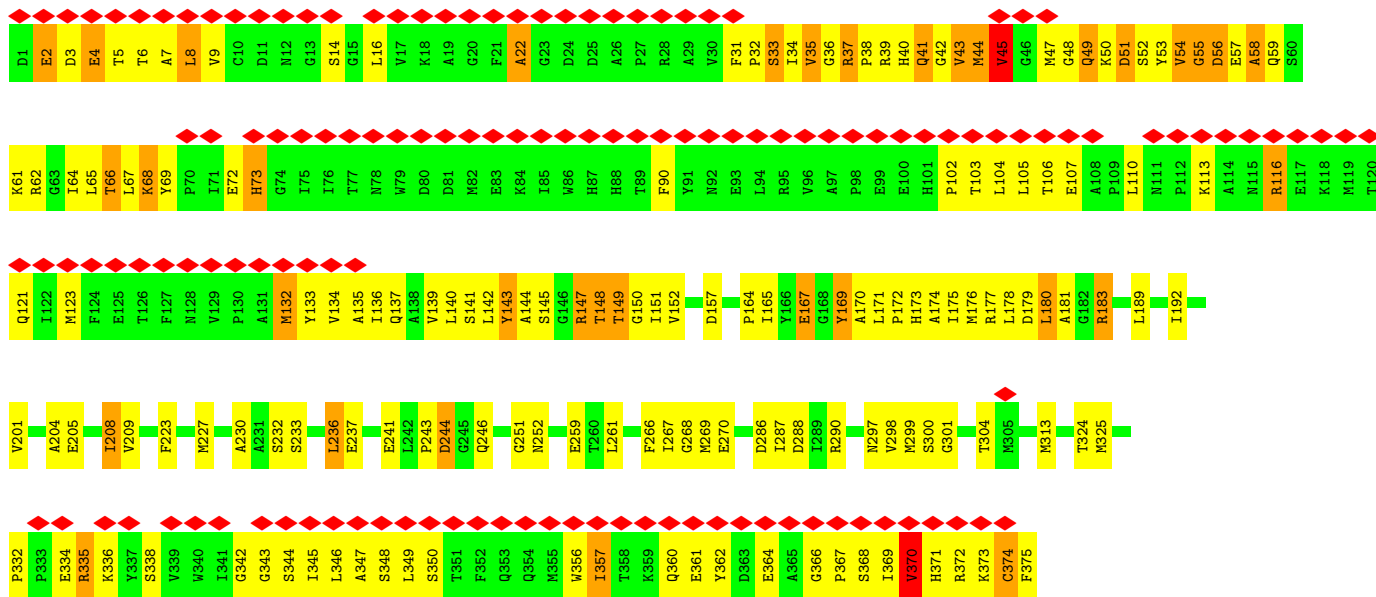


• Molecule 1: Actin, alpha skeletal muscle

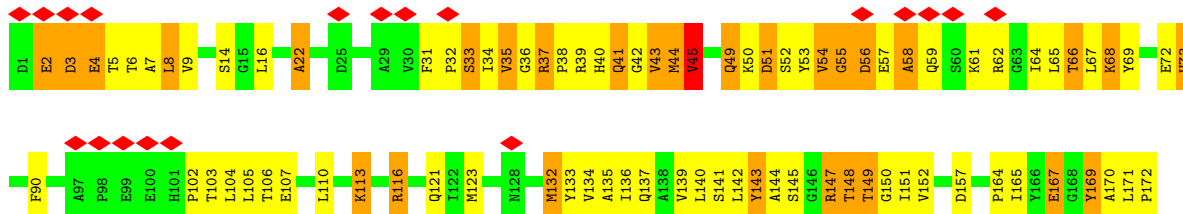


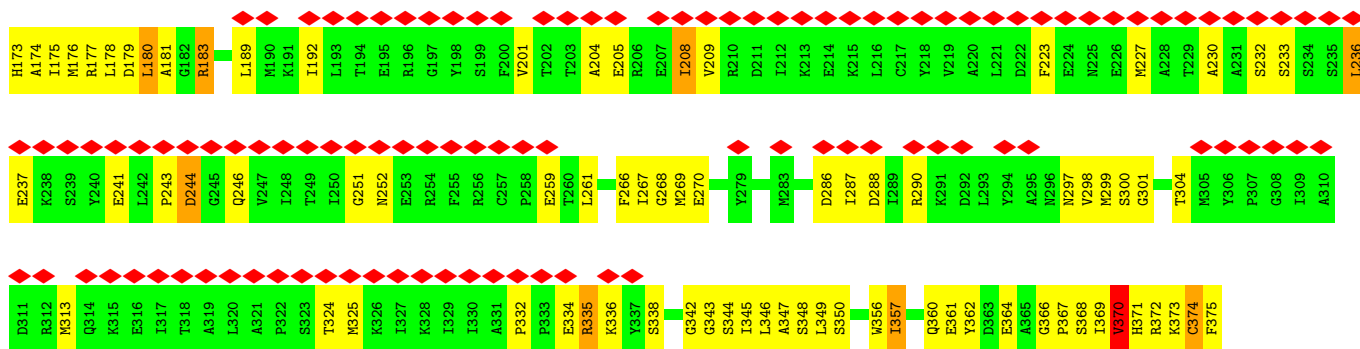


• Molecule 1: Actin, alpha skeletal muscle

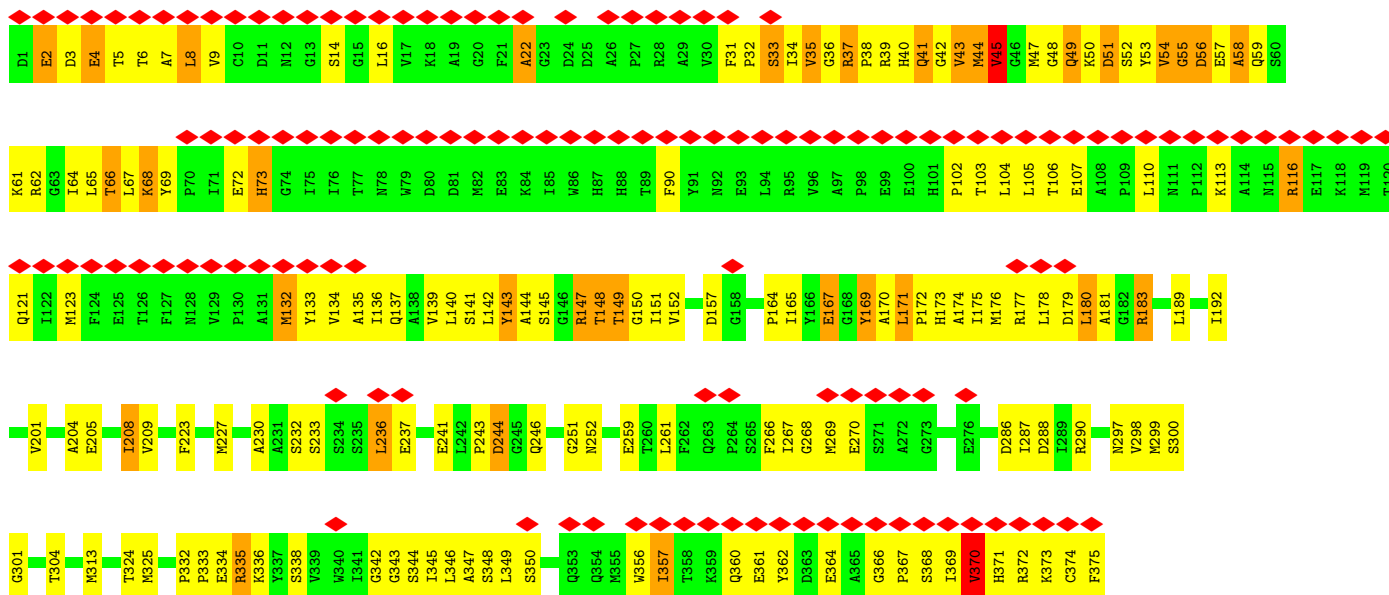


• Molecule 1: Actin, alpha skeletal muscle

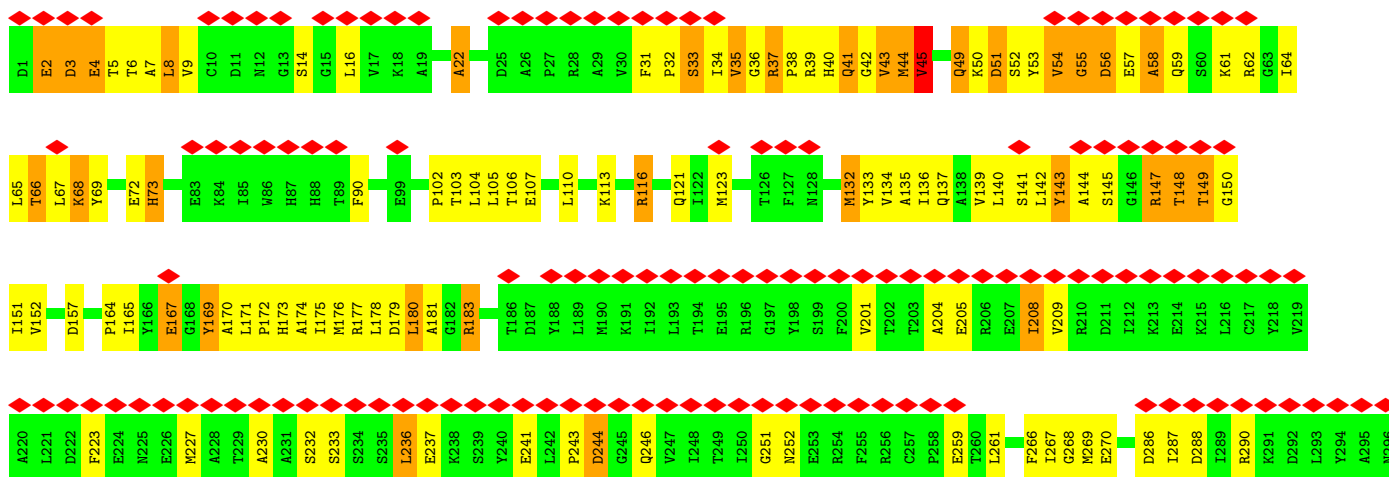


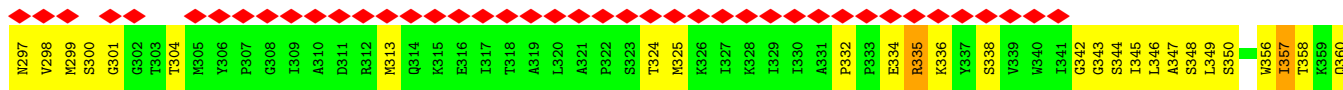


• Molecule 1: Actin, alpha skeletal muscle

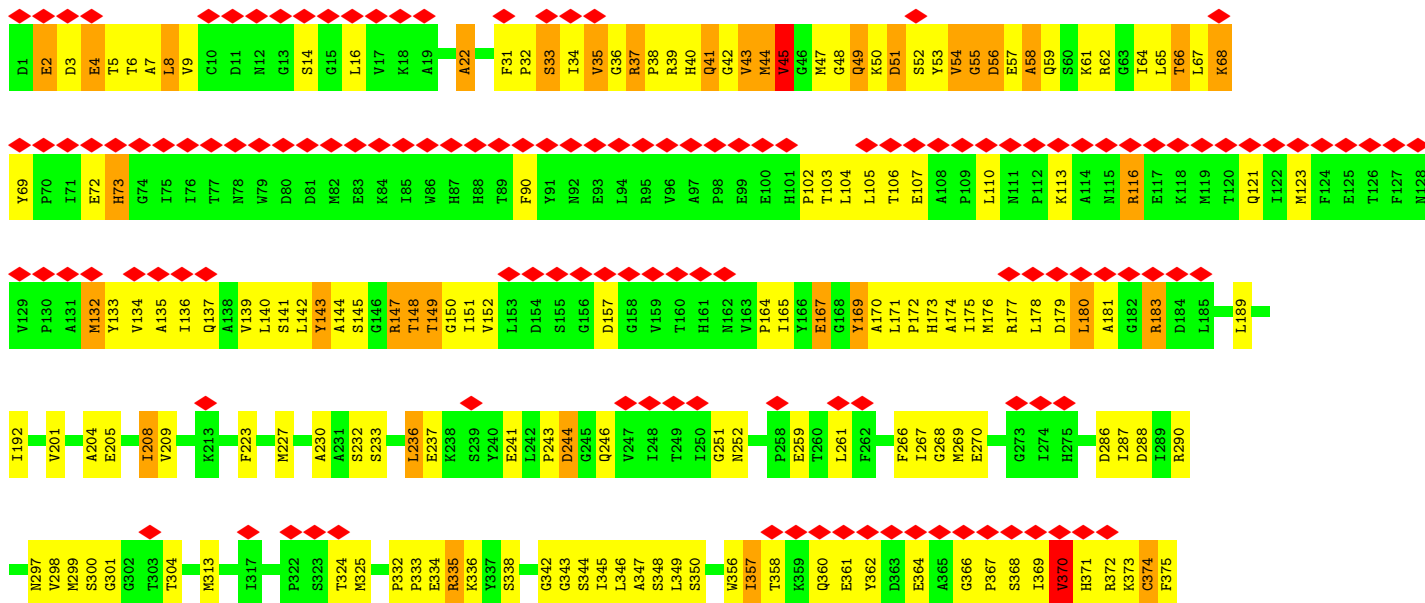


• Molecule 1: Actin, alpha skeletal muscle

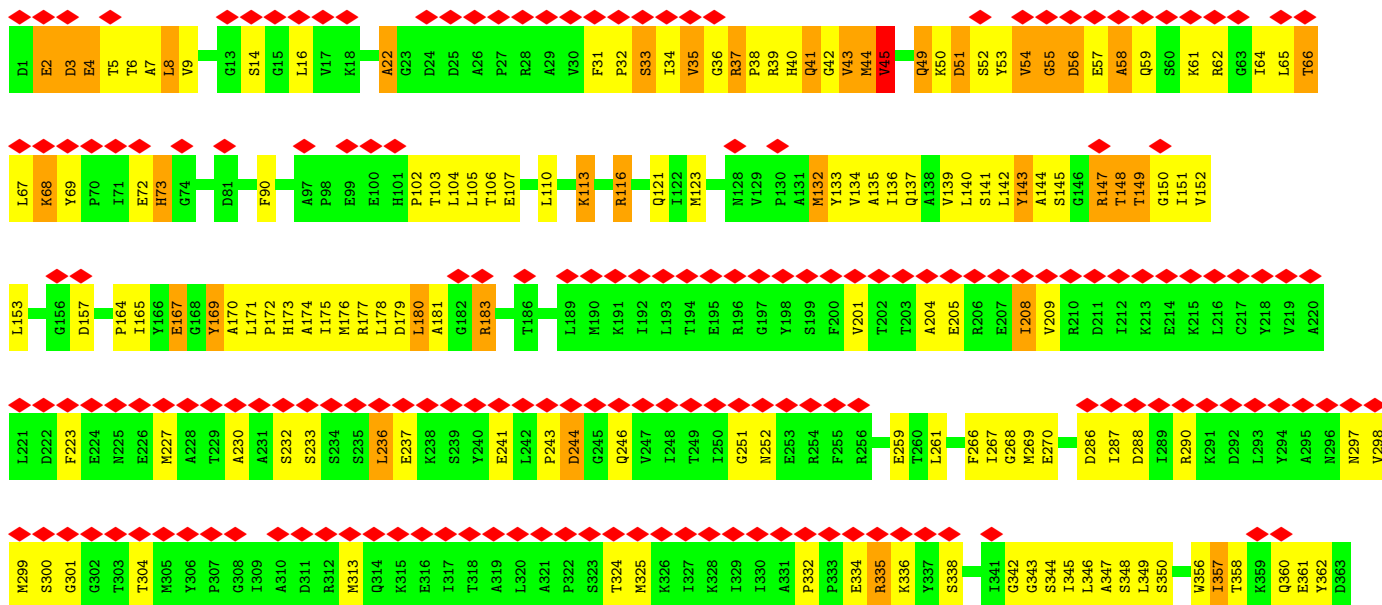




• Molecule 1: Actin, alpha skeletal muscle

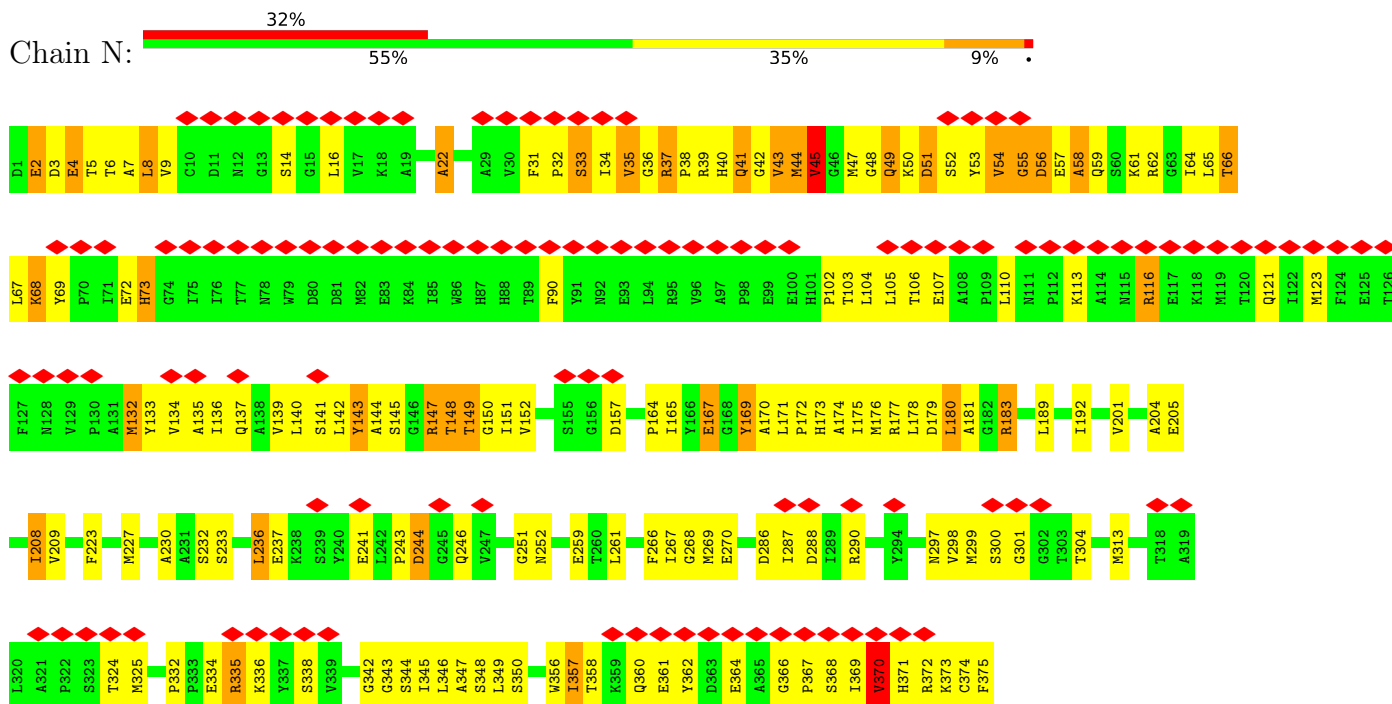


• Molecule 1: Actin, alpha skeletal muscle

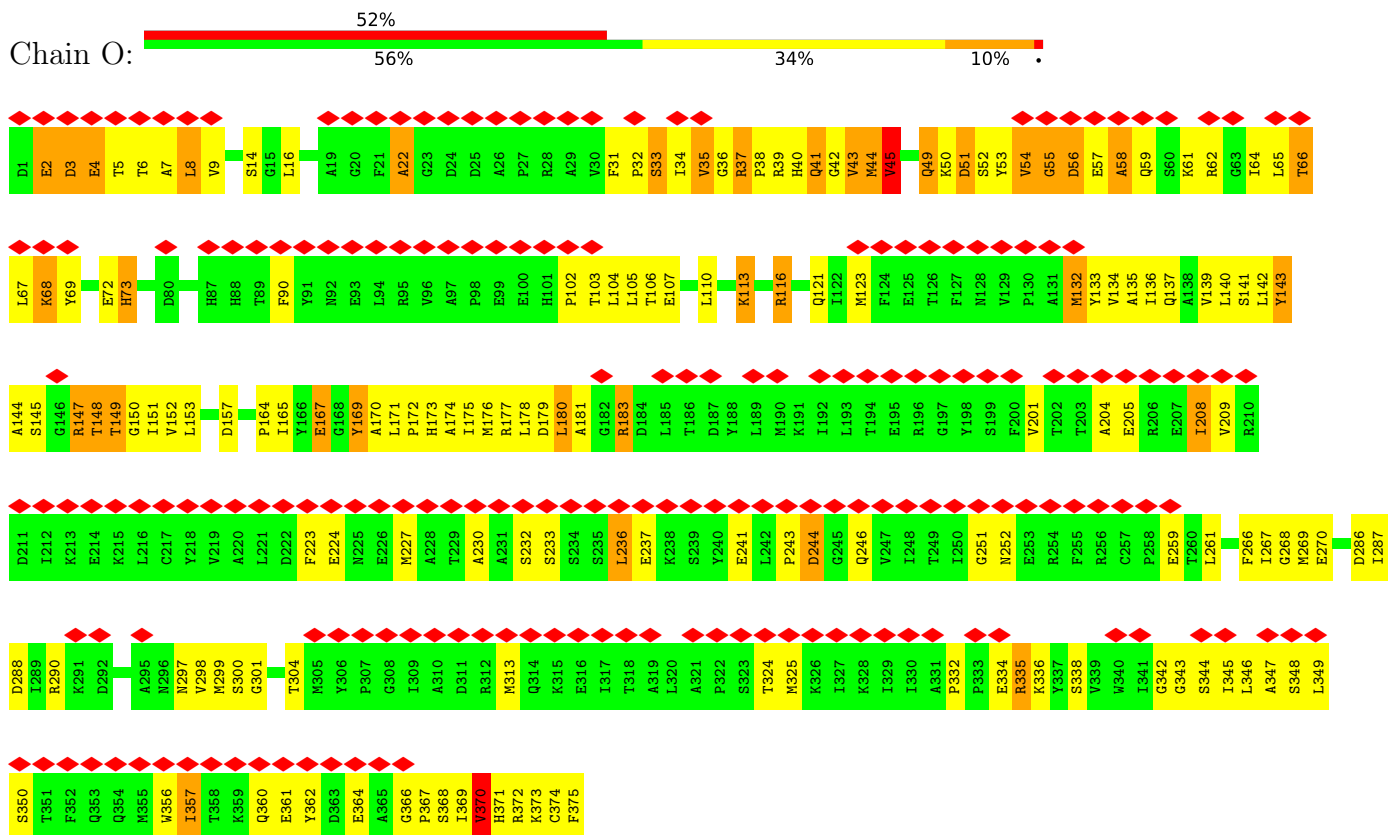


E364  
A365  
G366  
P367  
S368  
I369  
V370  
H371  
R372  
K373  
C374  
F375

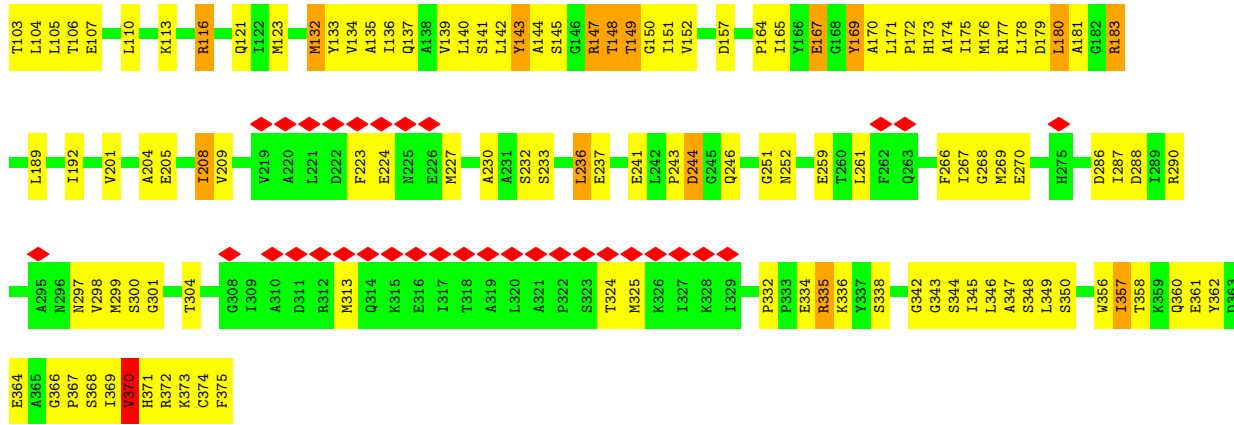
• Molecule 1: Actin, alpha skeletal muscle



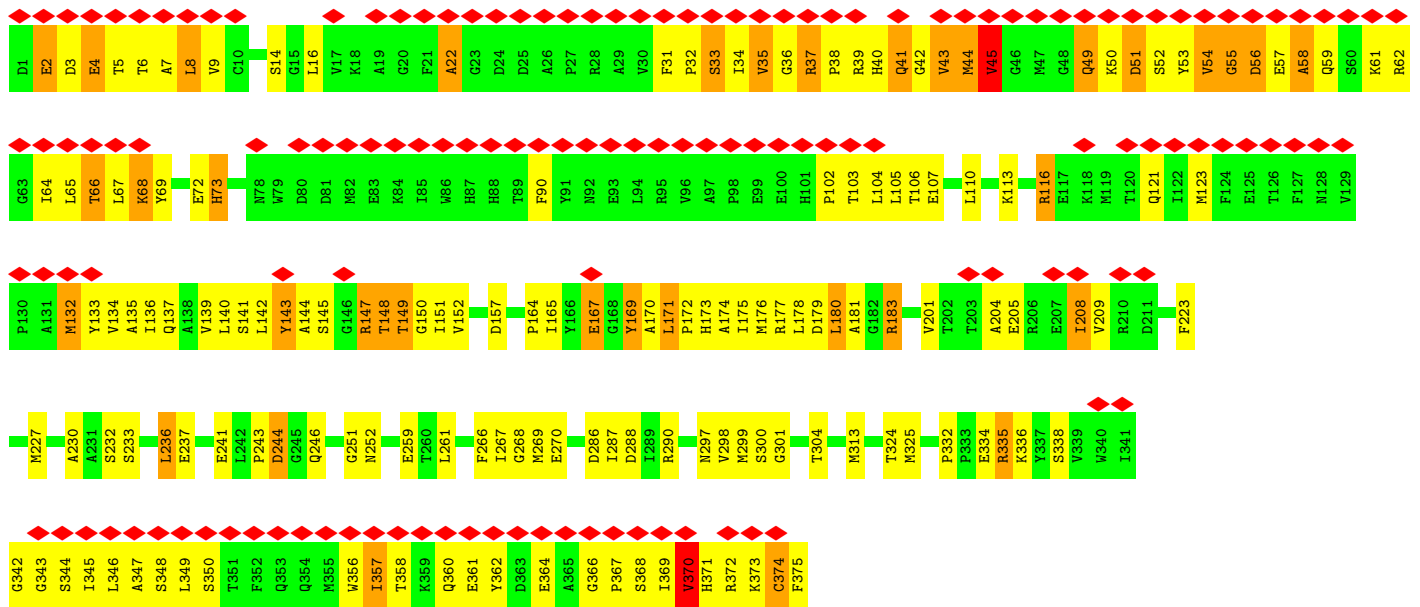
• Molecule 1: Actin, alpha skeletal muscle



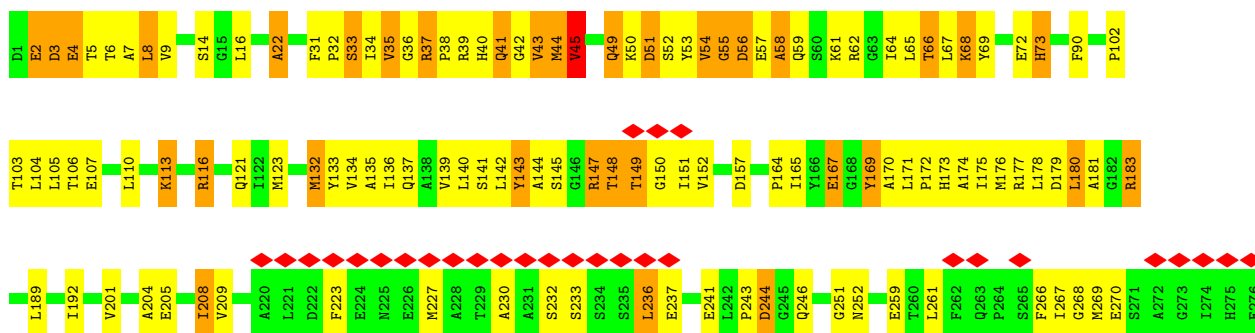


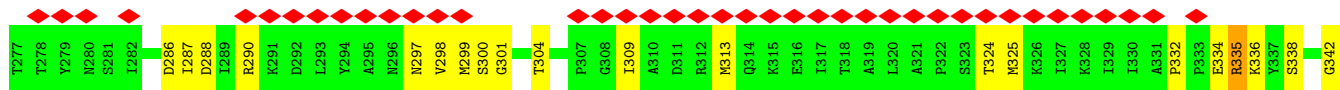


• Molecule 1: Actin, alpha skeletal muscle

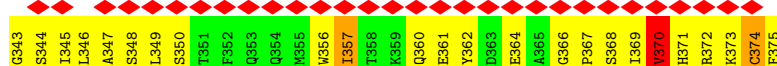
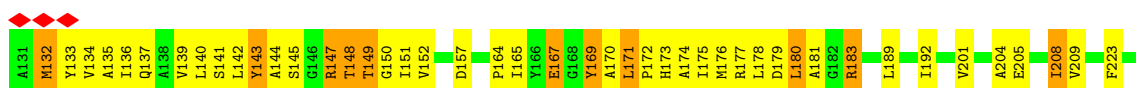
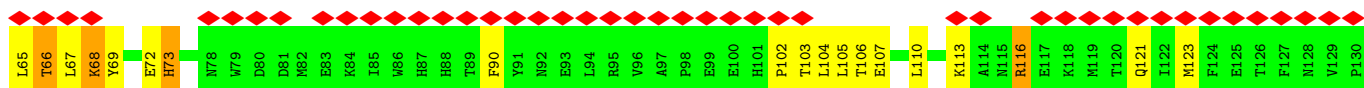
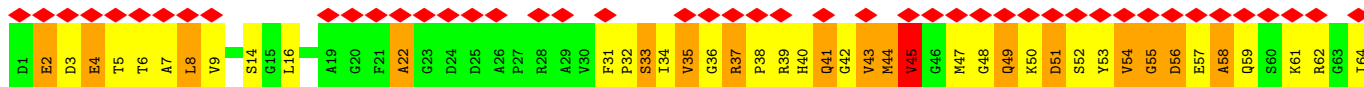


• Molecule 1: Actin, alpha skeletal muscle

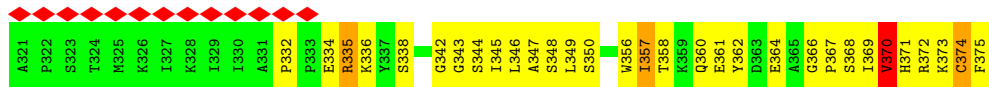
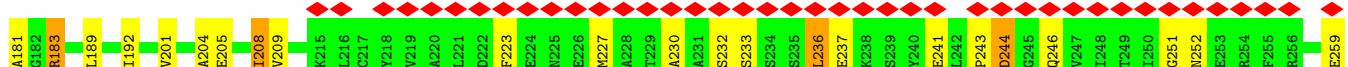




• Molecule 1: Actin, alpha skeletal muscle

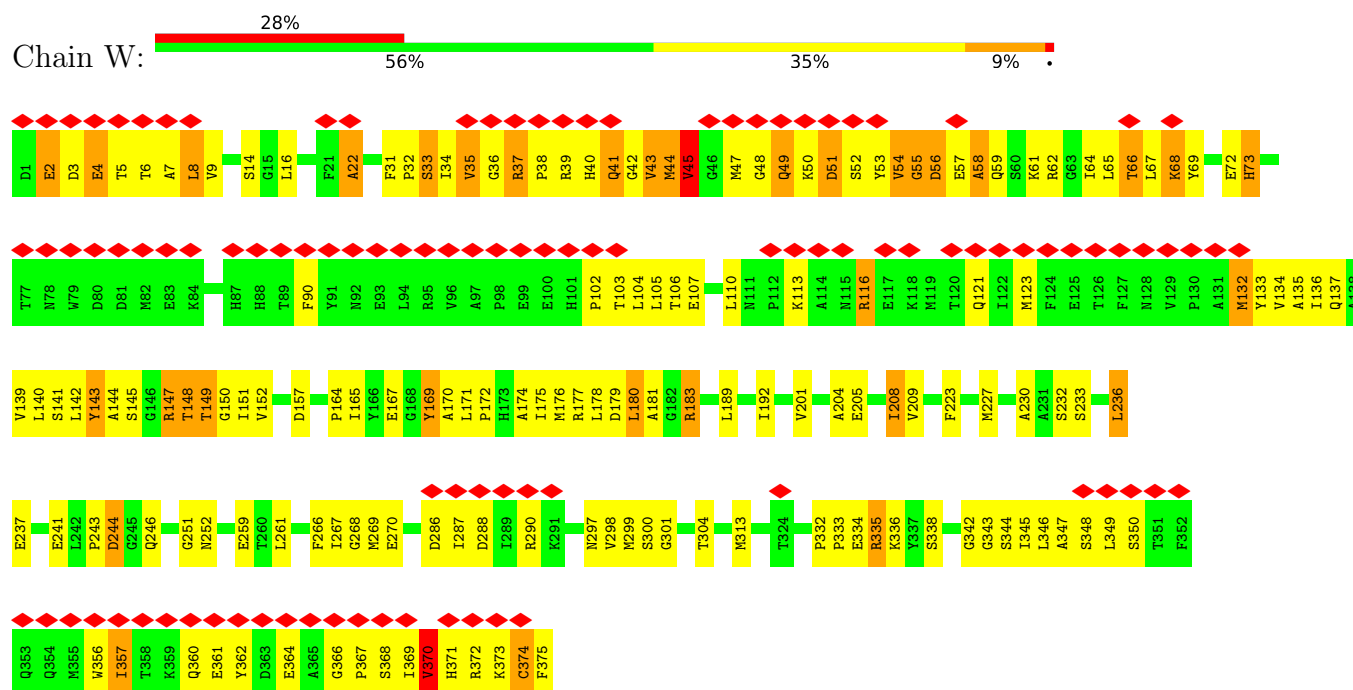


• Molecule 1: Actin, alpha skeletal muscle





- Molecule 1: Actin, alpha skeletal muscle



## 4 Experimental information

| Property                             | Value               | Source    |
|--------------------------------------|---------------------|-----------|
| EM reconstruction method             | SINGLE PARTICLE     | Depositor |
| Imposed symmetry                     | POINT, Not provided |           |
| Number of particles used             | 1360                | Depositor |
| Resolution determination method      | FSC 0.5 CUT-OFF     | Depositor |
| CTF correction method                | NONE                | Depositor |
| Microscope                           | FEI/PHILIPS CM12    | Depositor |
| Voltage (kV)                         | 120                 | Depositor |
| Electron dose ( $e^-/\text{\AA}^2$ ) | 12                  | Depositor |
| Minimum defocus (nm)                 | Not provided        |           |
| Maximum defocus (nm)                 | Not provided        |           |
| Magnification                        | Not provided        |           |
| Image detector                       | AGFA SCIENTA FILM   | Depositor |
| Maximum map value                    | 20.259              | Depositor |
| Minimum map value                    | -11.152             | Depositor |
| Average map value                    | 0.011               | Depositor |
| Map value standard deviation         | 0.947               | Depositor |
| Recommended contour level            | 1.8                 | Depositor |
| Map size ( $\text{\AA}$ )            | 633.6, 633.6, 633.6 | wwPDB     |
| Map dimensions                       | 96, 96, 96          | wwPDB     |
| Map angles ( $^\circ$ )              | 90.0, 90.0, 90.0    | wwPDB     |
| Pixel spacing ( $\text{\AA}$ )       | 6.6, 6.6, 6.6       | Depositor |

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: ADP, HIC

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

| Mol | Chain | Bond lengths |         | Bond angles |                  |
|-----|-------|--------------|---------|-------------|------------------|
|     |       | RMSZ         | # Z  >5 | RMSZ        | # Z  >5          |
| 1   | A     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | B     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | C     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | D     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | E     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | F     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | G     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | H     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | I     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | J     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | K     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | L     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | M     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | N     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | O     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | P     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | Q     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | R     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | S     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | T     | 0.65         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | U     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | V     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| 1   | W     | 0.66         | 0/2984  | 1.09        | 7/4040 (0.2%)    |
| All | All   | 0.66         | 0/68632 | 1.09        | 161/92920 (0.2%) |

There are no bond length outliers.

All (161) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 1   | B     | 201 | VAL  | O-C-N | -5.82 | 113.39      | 122.70   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | O     | 201 | VAL  | O-C-N     | -5.81 | 113.40      | 122.70   |
| 1   | G     | 201 | VAL  | O-C-N     | -5.80 | 113.42      | 122.70   |
| 1   | M     | 201 | VAL  | O-C-N     | -5.80 | 113.42      | 122.70   |
| 1   | K     | 201 | VAL  | O-C-N     | -5.80 | 113.42      | 122.70   |
| 1   | F     | 201 | VAL  | O-C-N     | -5.80 | 113.42      | 122.70   |
| 1   | H     | 201 | VAL  | O-C-N     | -5.79 | 113.43      | 122.70   |
| 1   | V     | 201 | VAL  | O-C-N     | -5.79 | 113.43      | 122.70   |
| 1   | A     | 201 | VAL  | O-C-N     | -5.79 | 113.44      | 122.70   |
| 1   | Q     | 201 | VAL  | O-C-N     | -5.79 | 113.44      | 122.70   |
| 1   | U     | 201 | VAL  | O-C-N     | -5.79 | 113.44      | 122.70   |
| 1   | N     | 201 | VAL  | O-C-N     | -5.78 | 113.45      | 122.70   |
| 1   | C     | 201 | VAL  | O-C-N     | -5.78 | 113.45      | 122.70   |
| 1   | R     | 201 | VAL  | O-C-N     | -5.77 | 113.46      | 122.70   |
| 1   | T     | 201 | VAL  | O-C-N     | -5.77 | 113.46      | 122.70   |
| 1   | E     | 201 | VAL  | O-C-N     | -5.77 | 113.47      | 122.70   |
| 1   | D     | 201 | VAL  | O-C-N     | -5.77 | 113.47      | 122.70   |
| 1   | L     | 201 | VAL  | O-C-N     | -5.77 | 113.47      | 122.70   |
| 1   | W     | 201 | VAL  | O-C-N     | -5.77 | 113.47      | 122.70   |
| 1   | I     | 201 | VAL  | O-C-N     | -5.76 | 113.48      | 122.70   |
| 1   | P     | 201 | VAL  | O-C-N     | -5.76 | 113.48      | 122.70   |
| 1   | S     | 201 | VAL  | O-C-N     | -5.75 | 113.50      | 122.70   |
| 1   | J     | 201 | VAL  | O-C-N     | -5.75 | 113.50      | 122.70   |
| 1   | W     | 169 | TYR  | CB-CG-CD2 | -5.68 | 117.59      | 121.00   |
| 1   | E     | 169 | TYR  | CB-CG-CD2 | -5.65 | 117.61      | 121.00   |
| 1   | L     | 169 | TYR  | CB-CG-CD2 | -5.65 | 117.61      | 121.00   |
| 1   | I     | 169 | TYR  | CB-CG-CD2 | -5.65 | 117.61      | 121.00   |
| 1   | J     | 169 | TYR  | CB-CG-CD2 | -5.64 | 117.61      | 121.00   |
| 1   | F     | 201 | VAL  | CA-C-N    | 5.63  | 129.59      | 117.20   |
| 1   | B     | 201 | VAL  | CA-C-N    | 5.63  | 129.59      | 117.20   |
| 1   | N     | 169 | TYR  | CB-CG-CD2 | -5.63 | 117.62      | 121.00   |
| 1   | H     | 201 | VAL  | CA-C-N    | 5.63  | 129.59      | 117.20   |
| 1   | V     | 169 | TYR  | CB-CG-CD2 | -5.63 | 117.62      | 121.00   |
| 1   | P     | 169 | TYR  | CB-CG-CD2 | -5.62 | 117.63      | 121.00   |
| 1   | O     | 169 | TYR  | CB-CG-CD2 | -5.62 | 117.63      | 121.00   |
| 1   | U     | 201 | VAL  | CA-C-N    | 5.62  | 129.57      | 117.20   |
| 1   | O     | 201 | VAL  | CA-C-N    | 5.62  | 129.56      | 117.20   |
| 1   | U     | 169 | TYR  | CB-CG-CD2 | -5.62 | 117.63      | 121.00   |
| 1   | G     | 201 | VAL  | CA-C-N    | 5.62  | 129.55      | 117.20   |
| 1   | N     | 201 | VAL  | CA-C-N    | 5.62  | 129.55      | 117.20   |
| 1   | G     | 169 | TYR  | CB-CG-CD2 | -5.61 | 117.63      | 121.00   |
| 1   | M     | 169 | TYR  | CB-CG-CD2 | -5.61 | 117.63      | 121.00   |
| 1   | W     | 116 | ARG  | NE-CZ-NH2 | -5.61 | 117.49      | 120.30   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | B     | 169 | TYR  | CB-CG-CD2 | -5.61 | 117.63      | 121.00   |
| 1   | W     | 201 | VAL  | CA-C-N    | 5.61  | 129.55      | 117.20   |
| 1   | T     | 169 | TYR  | CB-CG-CD2 | -5.61 | 117.63      | 121.00   |
| 1   | T     | 201 | VAL  | CA-C-N    | 5.61  | 129.54      | 117.20   |
| 1   | K     | 201 | VAL  | CA-C-N    | 5.61  | 129.54      | 117.20   |
| 1   | Q     | 201 | VAL  | CA-C-N    | 5.61  | 129.54      | 117.20   |
| 1   | A     | 201 | VAL  | CA-C-N    | 5.61  | 129.54      | 117.20   |
| 1   | P     | 201 | VAL  | CA-C-N    | 5.61  | 129.54      | 117.20   |
| 1   | R     | 201 | VAL  | CA-C-N    | 5.61  | 129.54      | 117.20   |
| 1   | D     | 201 | VAL  | CA-C-N    | 5.60  | 129.53      | 117.20   |
| 1   | I     | 201 | VAL  | CA-C-N    | 5.60  | 129.53      | 117.20   |
| 1   | S     | 201 | VAL  | CA-C-N    | 5.60  | 129.53      | 117.20   |
| 1   | V     | 201 | VAL  | CA-C-N    | 5.60  | 129.52      | 117.20   |
| 1   | C     | 201 | VAL  | CA-C-N    | 5.60  | 129.52      | 117.20   |
| 1   | D     | 169 | TYR  | CB-CG-CD2 | -5.60 | 117.64      | 121.00   |
| 1   | J     | 201 | VAL  | CA-C-N    | 5.60  | 129.52      | 117.20   |
| 1   | L     | 201 | VAL  | CA-C-N    | 5.60  | 129.51      | 117.20   |
| 1   | C     | 169 | TYR  | CB-CG-CD2 | -5.59 | 117.64      | 121.00   |
| 1   | M     | 201 | VAL  | CA-C-N    | 5.59  | 129.50      | 117.20   |
| 1   | K     | 169 | TYR  | CB-CG-CD2 | -5.59 | 117.65      | 121.00   |
| 1   | E     | 201 | VAL  | CA-C-N    | 5.59  | 129.49      | 117.20   |
| 1   | F     | 169 | TYR  | CB-CG-CD2 | -5.59 | 117.65      | 121.00   |
| 1   | Q     | 169 | TYR  | CB-CG-CD2 | -5.58 | 117.65      | 121.00   |
| 1   | S     | 169 | TYR  | CB-CG-CD2 | -5.58 | 117.65      | 121.00   |
| 1   | E     | 116 | ARG  | NE-CZ-NH2 | -5.56 | 117.52      | 120.30   |
| 1   | G     | 116 | ARG  | NE-CZ-NH2 | -5.56 | 117.52      | 120.30   |
| 1   | A     | 169 | TYR  | CB-CG-CD2 | -5.55 | 117.67      | 121.00   |
| 1   | H     | 169 | TYR  | CB-CG-CD2 | -5.55 | 117.67      | 121.00   |
| 1   | K     | 116 | ARG  | NE-CZ-NH2 | -5.54 | 117.53      | 120.30   |
| 1   | B     | 116 | ARG  | NE-CZ-NH2 | -5.54 | 117.53      | 120.30   |
| 1   | L     | 116 | ARG  | NE-CZ-NH2 | -5.52 | 117.54      | 120.30   |
| 1   | R     | 169 | TYR  | CB-CG-CD2 | -5.51 | 117.69      | 121.00   |
| 1   | O     | 116 | ARG  | NE-CZ-NH2 | -5.50 | 117.55      | 120.30   |
| 1   | M     | 116 | ARG  | NE-CZ-NH2 | -5.50 | 117.55      | 120.30   |
| 1   | S     | 116 | ARG  | NE-CZ-NH2 | -5.50 | 117.55      | 120.30   |
| 1   | C     | 116 | ARG  | NE-CZ-NH2 | -5.49 | 117.56      | 120.30   |
| 1   | T     | 116 | ARG  | NE-CZ-NH2 | -5.49 | 117.56      | 120.30   |
| 1   | D     | 116 | ARG  | NE-CZ-NH2 | -5.48 | 117.56      | 120.30   |
| 1   | J     | 116 | ARG  | NE-CZ-NH2 | -5.48 | 117.56      | 120.30   |
| 1   | U     | 116 | ARG  | NE-CZ-NH2 | -5.46 | 117.57      | 120.30   |
| 1   | N     | 116 | ARG  | NE-CZ-NH2 | -5.46 | 117.57      | 120.30   |
| 1   | A     | 116 | ARG  | NE-CZ-NH2 | -5.46 | 117.57      | 120.30   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | P     | 116 | ARG  | NE-CZ-NH2 | -5.45 | 117.58      | 120.30   |
| 1   | A     | 205 | GLU  | CG-CD-OE2 | -5.45 | 107.41      | 118.30   |
| 1   | Q     | 116 | ARG  | NE-CZ-NH2 | -5.45 | 117.58      | 120.30   |
| 1   | R     | 116 | ARG  | NE-CZ-NH2 | -5.44 | 117.58      | 120.30   |
| 1   | E     | 205 | GLU  | CG-CD-OE2 | -5.44 | 107.42      | 118.30   |
| 1   | S     | 205 | GLU  | CG-CD-OE2 | -5.44 | 107.43      | 118.30   |
| 1   | V     | 116 | ARG  | NE-CZ-NH2 | -5.44 | 117.58      | 120.30   |
| 1   | B     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.43      | 118.30   |
| 1   | C     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.44      | 118.30   |
| 1   | D     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.44      | 118.30   |
| 1   | J     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.44      | 118.30   |
| 1   | P     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.44      | 118.30   |
| 1   | G     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.45      | 118.30   |
| 1   | L     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.45      | 118.30   |
| 1   | N     | 205 | GLU  | CG-CD-OE2 | -5.43 | 107.45      | 118.30   |
| 1   | F     | 205 | GLU  | CG-CD-OE2 | -5.42 | 107.45      | 118.30   |
| 1   | I     | 205 | GLU  | CG-CD-OE2 | -5.42 | 107.45      | 118.30   |
| 1   | H     | 116 | ARG  | NE-CZ-NH2 | -5.42 | 117.59      | 120.30   |
| 1   | M     | 205 | GLU  | CG-CD-OE2 | -5.42 | 107.46      | 118.30   |
| 1   | W     | 205 | GLU  | CG-CD-OE2 | -5.42 | 107.46      | 118.30   |
| 1   | O     | 205 | GLU  | CG-CD-OE2 | -5.42 | 107.46      | 118.30   |
| 1   | H     | 205 | GLU  | CG-CD-OE2 | -5.42 | 107.47      | 118.30   |
| 1   | T     | 205 | GLU  | CG-CD-OE2 | -5.41 | 107.47      | 118.30   |
| 1   | Q     | 205 | GLU  | CG-CD-OE2 | -5.41 | 107.48      | 118.30   |
| 1   | R     | 205 | GLU  | CG-CD-OE2 | -5.41 | 107.47      | 118.30   |
| 1   | E     | 313 | MET  | CG-SD-CE  | 5.41  | 108.86      | 100.20   |
| 1   | K     | 205 | GLU  | CG-CD-OE2 | -5.41 | 107.48      | 118.30   |
| 1   | V     | 205 | GLU  | CG-CD-OE2 | -5.41 | 107.48      | 118.30   |
| 1   | A     | 313 | MET  | CG-SD-CE  | 5.41  | 108.85      | 100.20   |
| 1   | K     | 313 | MET  | CG-SD-CE  | 5.40  | 108.85      | 100.20   |
| 1   | U     | 205 | GLU  | CG-CD-OE2 | -5.40 | 107.49      | 118.30   |
| 1   | B     | 313 | MET  | CG-SD-CE  | 5.40  | 108.84      | 100.20   |
| 1   | F     | 116 | ARG  | NE-CZ-NH2 | -5.40 | 117.60      | 120.30   |
| 1   | I     | 116 | ARG  | NE-CZ-NH2 | -5.40 | 117.60      | 120.30   |
| 1   | G     | 313 | MET  | CG-SD-CE  | 5.40  | 108.83      | 100.20   |
| 1   | V     | 313 | MET  | CG-SD-CE  | 5.40  | 108.84      | 100.20   |
| 1   | J     | 313 | MET  | CG-SD-CE  | 5.39  | 108.83      | 100.20   |
| 1   | N     | 313 | MET  | CG-SD-CE  | 5.39  | 108.82      | 100.20   |
| 1   | O     | 313 | MET  | CG-SD-CE  | 5.39  | 108.82      | 100.20   |
| 1   | C     | 313 | MET  | CG-SD-CE  | 5.38  | 108.82      | 100.20   |
| 1   | M     | 313 | MET  | CG-SD-CE  | 5.38  | 108.81      | 100.20   |
| 1   | U     | 313 | MET  | CG-SD-CE  | 5.38  | 108.81      | 100.20   |

*Continued on next page...*

Continued from previous page...

| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 1   | W     | 313 | MET  | CG-SD-CE | 5.38  | 108.80      | 100.20   |
| 1   | F     | 313 | MET  | CG-SD-CE | 5.38  | 108.80      | 100.20   |
| 1   | Q     | 313 | MET  | CG-SD-CE | 5.38  | 108.80      | 100.20   |
| 1   | L     | 313 | MET  | CG-SD-CE | 5.37  | 108.80      | 100.20   |
| 1   | S     | 313 | MET  | CG-SD-CE | 5.37  | 108.80      | 100.20   |
| 1   | T     | 313 | MET  | CG-SD-CE | 5.37  | 108.80      | 100.20   |
| 1   | H     | 313 | MET  | CG-SD-CE | 5.37  | 108.79      | 100.20   |
| 1   | P     | 313 | MET  | CG-SD-CE | 5.37  | 108.79      | 100.20   |
| 1   | I     | 313 | MET  | CG-SD-CE | 5.37  | 108.79      | 100.20   |
| 1   | R     | 313 | MET  | CG-SD-CE | 5.36  | 108.78      | 100.20   |
| 1   | D     | 313 | MET  | CG-SD-CE | 5.36  | 108.77      | 100.20   |
| 1   | I     | 22  | ALA  | C-N-CA   | -5.16 | 111.47      | 122.30   |
| 1   | B     | 22  | ALA  | C-N-CA   | -5.16 | 111.47      | 122.30   |
| 1   | U     | 22  | ALA  | C-N-CA   | -5.15 | 111.48      | 122.30   |
| 1   | E     | 22  | ALA  | C-N-CA   | -5.15 | 111.48      | 122.30   |
| 1   | T     | 22  | ALA  | C-N-CA   | -5.15 | 111.48      | 122.30   |
| 1   | J     | 22  | ALA  | C-N-CA   | -5.15 | 111.49      | 122.30   |
| 1   | V     | 22  | ALA  | C-N-CA   | -5.15 | 111.49      | 122.30   |
| 1   | K     | 22  | ALA  | C-N-CA   | -5.14 | 111.50      | 122.30   |
| 1   | M     | 22  | ALA  | C-N-CA   | -5.14 | 111.50      | 122.30   |
| 1   | H     | 22  | ALA  | C-N-CA   | -5.14 | 111.50      | 122.30   |
| 1   | C     | 22  | ALA  | C-N-CA   | -5.14 | 111.51      | 122.30   |
| 1   | F     | 22  | ALA  | C-N-CA   | -5.14 | 111.51      | 122.30   |
| 1   | L     | 22  | ALA  | C-N-CA   | -5.14 | 111.51      | 122.30   |
| 1   | Q     | 22  | ALA  | C-N-CA   | -5.14 | 111.51      | 122.30   |
| 1   | A     | 22  | ALA  | C-N-CA   | -5.13 | 111.52      | 122.30   |
| 1   | P     | 22  | ALA  | C-N-CA   | -5.13 | 111.52      | 122.30   |
| 1   | R     | 22  | ALA  | C-N-CA   | -5.13 | 111.52      | 122.30   |
| 1   | W     | 22  | ALA  | C-N-CA   | -5.13 | 111.53      | 122.30   |
| 1   | G     | 22  | ALA  | C-N-CA   | -5.12 | 111.54      | 122.30   |
| 1   | S     | 22  | ALA  | C-N-CA   | -5.12 | 111.54      | 122.30   |
| 1   | D     | 22  | ALA  | C-N-CA   | -5.12 | 111.54      | 122.30   |
| 1   | N     | 22  | ALA  | C-N-CA   | -5.11 | 111.56      | 122.30   |
| 1   | O     | 22  | ALA  | C-N-CA   | -5.11 | 111.56      | 122.30   |

There are no chirality outliers.

There are no planarity outliers.

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

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | A     | 2934  | 0        | 2895     | 333     | 0            |
| 1   | B     | 2934  | 0        | 2895     | 337     | 0            |
| 1   | C     | 2934  | 0        | 2895     | 376     | 0            |
| 1   | D     | 2934  | 0        | 2895     | 372     | 0            |
| 1   | E     | 2934  | 0        | 2895     | 379     | 0            |
| 1   | F     | 2934  | 0        | 2895     | 372     | 0            |
| 1   | G     | 2934  | 0        | 2895     | 372     | 0            |
| 1   | H     | 2934  | 0        | 2895     | 370     | 0            |
| 1   | I     | 2934  | 0        | 2895     | 369     | 0            |
| 1   | J     | 2934  | 0        | 2895     | 372     | 0            |
| 1   | K     | 2934  | 0        | 2895     | 366     | 0            |
| 1   | L     | 2934  | 0        | 2895     | 380     | 0            |
| 1   | M     | 2934  | 0        | 2895     | 372     | 0            |
| 1   | N     | 2934  | 0        | 2895     | 374     | 0            |
| 1   | O     | 2934  | 0        | 2895     | 373     | 0            |
| 1   | P     | 2934  | 0        | 2895     | 369     | 0            |
| 1   | Q     | 2934  | 0        | 2895     | 376     | 0            |
| 1   | R     | 2934  | 0        | 2895     | 367     | 0            |
| 1   | S     | 2934  | 0        | 2895     | 376     | 0            |
| 1   | T     | 2934  | 0        | 2895     | 371     | 0            |
| 1   | U     | 2934  | 0        | 2895     | 375     | 0            |
| 1   | V     | 2934  | 0        | 2895     | 335     | 0            |
| 1   | W     | 2934  | 0        | 2895     | 330     | 0            |
| 2   | A     | 27    | 0        | 12       | 4       | 0            |
| 2   | B     | 27    | 0        | 12       | 4       | 0            |
| 2   | C     | 27    | 0        | 12       | 4       | 0            |
| 2   | D     | 27    | 0        | 12       | 4       | 0            |
| 2   | E     | 27    | 0        | 12       | 4       | 0            |
| 2   | F     | 27    | 0        | 12       | 5       | 0            |
| 2   | G     | 27    | 0        | 12       | 4       | 0            |
| 2   | H     | 27    | 0        | 12       | 4       | 0            |
| 2   | I     | 27    | 0        | 12       | 4       | 0            |
| 2   | J     | 27    | 0        | 12       | 4       | 0            |
| 2   | K     | 27    | 0        | 12       | 4       | 0            |
| 2   | L     | 27    | 0        | 12       | 4       | 0            |
| 2   | M     | 27    | 0        | 12       | 5       | 0            |
| 2   | N     | 27    | 0        | 12       | 4       | 0            |
| 2   | O     | 27    | 0        | 12       | 5       | 0            |
| 2   | P     | 27    | 0        | 12       | 4       | 0            |
| 2   | Q     | 27    | 0        | 12       | 4       | 0            |
| 2   | R     | 27    | 0        | 12       | 4       | 0            |

*Continued on next page...*



Continued from previous page...

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 2   | S     | 27    | 0        | 12       | 4       | 0            |
| 2   | T     | 27    | 0        | 12       | 4       | 0            |
| 2   | U     | 27    | 0        | 12       | 4       | 0            |
| 2   | V     | 27    | 0        | 12       | 4       | 0            |
| 2   | W     | 27    | 0        | 12       | 4       | 0            |
| All | All   | 68103 | 0        | 66861    | 7529    | 0            |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 56.

All (7529) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:F:290:ARG:HD2 | 1:H:244:ASP:HB2  | 1.22                     | 1.20              |
| 1:D:290:ARG:HD2 | 1:F:244:ASP:HB2  | 1.21                     | 1.20              |
| 1:H:290:ARG:HD2 | 1:J:244:ASP:HB2  | 1.21                     | 1.20              |
| 1:G:59:GLN:O    | 1:G:62:ARG:HG3   | 1.43                     | 1.19              |
| 1:N:59:GLN:O    | 1:N:62:ARG:HG3   | 1.43                     | 1.19              |
| 1:U:59:GLN:O    | 1:U:62:ARG:HG3   | 1.43                     | 1.19              |
| 1:P:59:GLN:O    | 1:P:62:ARG:HG3   | 1.43                     | 1.19              |
| 1:I:59:GLN:O    | 1:I:62:ARG:HG3   | 1.43                     | 1.18              |
| 1:W:59:GLN:O    | 1:W:62:ARG:HG3   | 1.43                     | 1.18              |
| 1:E:59:GLN:O    | 1:E:62:ARG:HG3   | 1.43                     | 1.18              |
| 1:L:59:GLN:O    | 1:L:62:ARG:HG3   | 1.43                     | 1.18              |
| 1:S:59:GLN:O    | 1:S:62:ARG:HG3   | 1.43                     | 1.18              |
| 1:B:290:ARG:HD2 | 1:D:244:ASP:HB2  | 1.22                     | 1.18              |
| 1:B:59:GLN:O    | 1:B:62:ARG:HG3   | 1.43                     | 1.17              |
| 1:F:59:GLN:O    | 1:F:62:ARG:HG3   | 1.43                     | 1.17              |
| 1:J:59:GLN:O    | 1:J:62:ARG:HG3   | 1.43                     | 1.17              |
| 1:J:290:ARG:HD2 | 1:L:244:ASP:HB2  | 1.21                     | 1.17              |
| 1:D:59:GLN:O    | 1:D:62:ARG:HG3   | 1.43                     | 1.17              |
| 1:R:59:GLN:O    | 1:R:62:ARG:HG3   | 1.43                     | 1.17              |
| 1:K:59:GLN:O    | 1:K:62:ARG:HG3   | 1.43                     | 1.17              |
| 1:Q:59:GLN:O    | 1:Q:62:ARG:HG3   | 1.43                     | 1.16              |
| 1:V:59:GLN:O    | 1:V:62:ARG:HG3   | 1.43                     | 1.16              |
| 1:C:59:GLN:O    | 1:C:62:ARG:HG3   | 1.43                     | 1.16              |
| 1:T:59:GLN:O    | 1:T:62:ARG:HG3   | 1.43                     | 1.16              |
| 1:K:361:GLU:HB3 | 1:K:369:ILE:HD13 | 1.19                     | 1.16              |
| 1:A:59:GLN:O    | 1:A:62:ARG:HG3   | 1.43                     | 1.15              |
| 1:H:59:GLN:O    | 1:H:62:ARG:HG3   | 1.43                     | 1.15              |
| 1:M:59:GLN:O    | 1:M:62:ARG:HG3   | 1.43                     | 1.15              |

Continued on next page...

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:290:ARG:HD2  | 1:N:244:ASP:HB2  | 1.21                     | 1.14              |
| 1:O:59:GLN:O     | 1:O:62:ARG:HG3   | 1.43                     | 1.14              |
| 1:O:361:GLU:HB3  | 1:O:369:ILE:HD13 | 1.19                     | 1.14              |
| 1:M:43:VAL:HG13  | 1:M:44:MET:N     | 1.54                     | 1.14              |
| 1:N:34:ILE:HB    | 1:N:54:VAL:HG11  | 1.30                     | 1.14              |
| 1:A:34:ILE:HB    | 1:A:54:VAL:HG11  | 1.30                     | 1.13              |
| 1:D:361:GLU:HB3  | 1:D:369:ILE:HD13 | 1.19                     | 1.13              |
| 1:V:361:GLU:HB3  | 1:V:369:ILE:HD13 | 1.19                     | 1.13              |
| 1:C:34:ILE:HB    | 1:C:54:VAL:HG11  | 1.30                     | 1.13              |
| 1:J:43:VAL:HG13  | 1:J:44:MET:N     | 1.54                     | 1.13              |
| 1:L:43:VAL:HG13  | 1:L:44:MET:N     | 1.54                     | 1.13              |
| 1:Q:361:GLU:HB3  | 1:Q:369:ILE:HD13 | 1.19                     | 1.13              |
| 1:S:357:ILE:HG12 | 1:S:370:VAL:HG23 | 1.13                     | 1.13              |
| 1:D:357:ILE:HG12 | 1:D:370:VAL:HG23 | 1.13                     | 1.13              |
| 1:I:357:ILE:HG12 | 1:I:370:VAL:HG23 | 1.13                     | 1.13              |
| 1:M:357:ILE:HG12 | 1:M:370:VAL:HG23 | 1.13                     | 1.13              |
| 1:F:357:ILE:HG12 | 1:F:370:VAL:HG23 | 1.13                     | 1.12              |
| 1:H:43:VAL:HG13  | 1:H:44:MET:N     | 1.54                     | 1.13              |
| 1:O:357:ILE:HG12 | 1:O:370:VAL:HG23 | 1.13                     | 1.12              |
| 1:P:34:ILE:HB    | 1:P:54:VAL:HG11  | 1.30                     | 1.13              |
| 1:W:43:VAL:HG13  | 1:W:44:MET:N     | 1.54                     | 1.13              |
| 1:U:357:ILE:HG12 | 1:U:370:VAL:HG23 | 1.13                     | 1.12              |
| 1:G:361:GLU:HB3  | 1:G:369:ILE:HD13 | 1.19                     | 1.12              |
| 1:H:357:ILE:HG12 | 1:H:370:VAL:HG23 | 1.13                     | 1.12              |
| 1:V:357:ILE:HG12 | 1:V:370:VAL:HG23 | 1.13                     | 1.12              |
| 1:K:43:VAL:HG13  | 1:K:44:MET:N     | 1.54                     | 1.12              |
| 1:K:290:ARG:HD2  | 1:M:244:ASP:HB2  | 1.21                     | 1.12              |
| 1:M:290:ARG:HD2  | 1:O:244:ASP:HB2  | 1.21                     | 1.12              |
| 1:N:43:VAL:HG13  | 1:N:44:MET:N     | 1.54                     | 1.12              |
| 1:L:34:ILE:HB    | 1:L:54:VAL:HG11  | 1.30                     | 1.12              |
| 1:M:361:GLU:HB3  | 1:M:369:ILE:HD13 | 1.19                     | 1.12              |
| 1:T:34:ILE:HB    | 1:T:54:VAL:HG11  | 1.30                     | 1.12              |
| 1:T:357:ILE:HG12 | 1:T:370:VAL:HG23 | 1.13                     | 1.12              |
| 1:W:357:ILE:HG12 | 1:W:370:VAL:HG23 | 1.13                     | 1.12              |
| 1:N:361:GLU:HB3  | 1:N:369:ILE:HD13 | 1.19                     | 1.12              |
| 1:A:43:VAL:HG13  | 1:A:44:MET:N     | 1.54                     | 1.11              |
| 1:G:34:ILE:HB    | 1:G:54:VAL:HG11  | 1.30                     | 1.11              |
| 1:G:357:ILE:HG12 | 1:G:370:VAL:HG23 | 1.13                     | 1.11              |
| 1:U:43:VAL:HG13  | 1:U:44:MET:N     | 1.54                     | 1.11              |
| 1:B:357:ILE:HG12 | 1:B:370:VAL:HG23 | 1.13                     | 1.11              |
| 1:E:357:ILE:HG12 | 1:E:370:VAL:HG23 | 1.13                     | 1.11              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:43:VAL:HG13  | 1:F:44:MET:N     | 1.54                     | 1.11              |
| 1:I:290:ARG:HD2  | 1:K:244:ASP:HB2  | 1.21                     | 1.11              |
| 1:J:357:ILE:HG12 | 1:J:370:VAL:HG23 | 1.13                     | 1.11              |
| 1:K:357:ILE:HG12 | 1:K:370:VAL:HG23 | 1.13                     | 1.11              |
| 1:L:357:ILE:HG12 | 1:L:370:VAL:HG23 | 1.13                     | 1.11              |
| 1:N:290:ARG:HD2  | 1:P:244:ASP:HB2  | 1.21                     | 1.11              |
| 1:O:290:ARG:HD2  | 1:Q:244:ASP:HB2  | 1.21                     | 1.11              |
| 1:E:34:ILE:HB    | 1:E:54:VAL:HG11  | 1.30                     | 1.11              |
| 1:R:34:ILE:HB    | 1:R:54:VAL:HG11  | 1.30                     | 1.11              |
| 1:U:290:ARG:HD2  | 1:W:244:ASP:HB2  | 1.21                     | 1.11              |
| 1:D:43:VAL:HG13  | 1:D:44:MET:N     | 1.54                     | 1.11              |
| 1:Q:357:ILE:HG12 | 1:Q:370:VAL:HG23 | 1.13                     | 1.11              |
| 1:A:361:GLU:HB3  | 1:A:369:ILE:HD13 | 1.19                     | 1.11              |
| 1:P:357:ILE:HG12 | 1:P:370:VAL:HG23 | 1.13                     | 1.11              |
| 1:A:357:ILE:HG12 | 1:A:370:VAL:HG23 | 1.13                     | 1.10              |
| 1:F:361:GLU:HB3  | 1:F:369:ILE:HD13 | 1.20                     | 1.10              |
| 1:G:290:ARG:HD2  | 1:I:244:ASP:HB2  | 1.22                     | 1.10              |
| 1:I:43:VAL:HG13  | 1:I:44:MET:N     | 1.54                     | 1.10              |
| 1:Q:180:LEU:HD21 | 1:Q:261:LEU:HD23 | 1.34                     | 1.10              |
| 1:C:43:VAL:HG13  | 1:C:44:MET:N     | 1.54                     | 1.10              |
| 1:E:180:LEU:HD21 | 1:E:261:LEU:HD23 | 1.34                     | 1.10              |
| 1:J:34:ILE:HB    | 1:J:54:VAL:HG11  | 1.30                     | 1.10              |
| 1:J:361:GLU:HB3  | 1:J:369:ILE:HD13 | 1.19                     | 1.10              |
| 1:P:43:VAL:HG13  | 1:P:44:MET:N     | 1.54                     | 1.10              |
| 1:R:180:LEU:HD21 | 1:R:261:LEU:HD23 | 1.34                     | 1.10              |
| 1:A:290:ARG:HD2  | 1:C:244:ASP:HB2  | 1.21                     | 1.10              |
| 1:D:180:LEU:HD21 | 1:D:261:LEU:HD23 | 1.34                     | 1.10              |
| 1:E:290:ARG:HD2  | 1:G:244:ASP:HB2  | 1.21                     | 1.10              |
| 1:P:361:GLU:HB3  | 1:P:369:ILE:HD13 | 1.19                     | 1.10              |
| 1:Q:290:ARG:HD2  | 1:S:244:ASP:HB2  | 1.21                     | 1.10              |
| 1:U:361:GLU:HB3  | 1:U:369:ILE:HD13 | 1.19                     | 1.10              |
| 1:V:34:ILE:HB    | 1:V:54:VAL:HG11  | 1.30                     | 1.10              |
| 1:W:361:GLU:HB3  | 1:W:369:ILE:HD13 | 1.19                     | 1.10              |
| 1:C:290:ARG:HD2  | 1:E:244:ASP:HB2  | 1.21                     | 1.10              |
| 1:F:180:LEU:HD21 | 1:F:261:LEU:HD23 | 1.34                     | 1.10              |
| 1:I:34:ILE:HB    | 1:I:54:VAL:HG11  | 1.30                     | 1.10              |
| 1:L:361:GLU:HB3  | 1:L:369:ILE:HD13 | 1.19                     | 1.10              |
| 1:R:357:ILE:HG12 | 1:R:370:VAL:HG23 | 1.13                     | 1.10              |
| 1:S:290:ARG:HD2  | 1:U:244:ASP:HB2  | 1.21                     | 1.10              |
| 1:T:180:LEU:HD21 | 1:T:261:LEU:HD23 | 1.33                     | 1.10              |
| 1:B:361:GLU:HB3  | 1:B:369:ILE:HD13 | 1.19                     | 1.10              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:180:LEU:HD21 | 1:G:261:LEU:HD23 | 1.34                     | 1.10              |
| 1:H:34:ILE:HB    | 1:H:54:VAL:HG11  | 1.30                     | 1.10              |
| 1:N:357:ILE:HG12 | 1:N:370:VAL:HG23 | 1.13                     | 1.10              |
| 1:S:43:VAL:HG13  | 1:S:44:MET:N     | 1.54                     | 1.10              |
| 1:S:180:LEU:HD21 | 1:S:261:LEU:HD23 | 1.34                     | 1.10              |
| 1:C:361:GLU:HB3  | 1:C:369:ILE:HD13 | 1.19                     | 1.09              |
| 1:J:208:ILE:HD11 | 1:J:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:K:180:LEU:HD21 | 1:K:261:LEU:HD23 | 1.34                     | 1.09              |
| 1:R:361:GLU:HB3  | 1:R:369:ILE:HD13 | 1.19                     | 1.09              |
| 1:B:208:ILE:HD11 | 1:B:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:M:180:LEU:HD21 | 1:M:261:LEU:HD23 | 1.34                     | 1.09              |
| 1:O:208:ILE:HD11 | 1:O:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:P:208:ILE:HD11 | 1:P:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:V:180:LEU:HD21 | 1:V:261:LEU:HD23 | 1.34                     | 1.09              |
| 1:W:34:ILE:HB    | 1:W:54:VAL:HG11  | 1.30                     | 1.09              |
| 1:D:208:ILE:HD11 | 1:D:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:L:43:VAL:HG13  | 1:L:44:MET:H     | 0.92                     | 1.09              |
| 1:M:208:ILE:HD11 | 1:M:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:O:180:LEU:HD21 | 1:O:261:LEU:HD23 | 1.34                     | 1.09              |
| 1:U:34:ILE:HB    | 1:U:54:VAL:HG11  | 1.30                     | 1.09              |
| 1:U:208:ILE:HD11 | 1:U:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:C:180:LEU:HD21 | 1:C:261:LEU:HD23 | 1.34                     | 1.09              |
| 1:C:357:ILE:HG12 | 1:C:370:VAL:HG23 | 1.13                     | 1.09              |
| 1:E:361:GLU:HB3  | 1:E:369:ILE:HD13 | 1.19                     | 1.09              |
| 1:P:180:LEU:HD21 | 1:P:261:LEU:HD23 | 1.34                     | 1.09              |
| 1:S:208:ILE:HD11 | 1:S:243:PRO:HD2  | 1.34                     | 1.09              |
| 1:A:43:VAL:HG13  | 1:A:44:MET:H     | 0.92                     | 1.09              |
| 1:A:180:LEU:HD21 | 1:A:261:LEU:HD23 | 1.34                     | 1.09              |
| 1:G:43:VAL:HG13  | 1:G:44:MET:N     | 1.54                     | 1.09              |
| 1:C:43:VAL:HG13  | 1:C:44:MET:H     | 0.92                     | 1.08              |
| 1:E:43:VAL:HG13  | 1:E:44:MET:N     | 1.54                     | 1.08              |
| 1:H:361:GLU:HB3  | 1:H:369:ILE:HD13 | 1.19                     | 1.08              |
| 1:I:208:ILE:HD11 | 1:I:243:PRO:HD2  | 1.34                     | 1.08              |
| 1:L:180:LEU:HD21 | 1:L:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:S:361:GLU:HB3  | 1:S:369:ILE:HD13 | 1.19                     | 1.08              |
| 1:U:43:VAL:HG13  | 1:U:44:MET:H     | 0.92                     | 1.08              |
| 1:W:180:LEU:HD21 | 1:W:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:I:180:LEU:HD21 | 1:I:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:J:180:LEU:HD21 | 1:J:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:N:208:ILE:HD11 | 1:N:243:PRO:HD2  | 1.34                     | 1.08              |
| 1:R:43:VAL:HG13  | 1:R:44:MET:N     | 1.54                     | 1.08              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:43:VAL:HG13  | 1:T:44:MET:H     | 0.92                     | 1.08              |
| 1:T:208:ILE:HD11 | 1:T:243:PRO:HD2  | 1.34                     | 1.08              |
| 1:W:43:VAL:HG13  | 1:W:44:MET:H     | 0.92                     | 1.08              |
| 1:B:43:VAL:HG13  | 1:B:44:MET:N     | 1.54                     | 1.08              |
| 1:B:180:LEU:HD21 | 1:B:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:C:208:ILE:HD11 | 1:C:243:PRO:HD2  | 1.34                     | 1.08              |
| 1:E:208:ILE:HD11 | 1:E:243:PRO:HD2  | 1.34                     | 1.08              |
| 1:H:180:LEU:HD21 | 1:H:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:H:208:ILE:HD11 | 1:H:243:PRO:HD2  | 1.34                     | 1.08              |
| 1:J:43:VAL:HG13  | 1:J:44:MET:H     | 0.92                     | 1.08              |
| 1:P:290:ARG:HD2  | 1:R:244:ASP:HB2  | 1.21                     | 1.08              |
| 1:I:361:GLU:HB3  | 1:I:369:ILE:HD13 | 1.19                     | 1.08              |
| 1:N:180:LEU:HD21 | 1:N:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:O:35:VAL:HG12  | 1:O:68:LYS:HB2   | 1.36                     | 1.08              |
| 1:H:35:VAL:HG12  | 1:H:68:LYS:HB2   | 1.36                     | 1.08              |
| 1:R:43:VAL:HG13  | 1:R:44:MET:H     | 0.92                     | 1.08              |
| 1:S:35:VAL:HG12  | 1:S:68:LYS:HB2   | 1.36                     | 1.08              |
| 1:U:180:LEU:HD21 | 1:U:261:LEU:HD23 | 1.34                     | 1.08              |
| 1:D:35:VAL:HG12  | 1:D:68:LYS:HB2   | 1.36                     | 1.07              |
| 1:N:43:VAL:HG13  | 1:N:44:MET:H     | 0.92                     | 1.07              |
| 1:Q:34:ILE:HB    | 1:Q:54:VAL:HG11  | 1.30                     | 1.07              |
| 1:D:43:VAL:HG13  | 1:D:44:MET:H     | 0.92                     | 1.07              |
| 1:F:34:ILE:HB    | 1:F:54:VAL:HG11  | 1.30                     | 1.07              |
| 1:Q:43:VAL:HG13  | 1:Q:44:MET:N     | 1.54                     | 1.07              |
| 1:T:290:ARG:HD2  | 1:V:244:ASP:HB2  | 1.21                     | 1.07              |
| 1:T:361:GLU:HB3  | 1:T:369:ILE:HD13 | 1.20                     | 1.07              |
| 1:K:43:VAL:HG13  | 1:K:44:MET:H     | 0.92                     | 1.07              |
| 1:R:290:ARG:HD2  | 1:T:244:ASP:HB2  | 1.21                     | 1.07              |
| 1:S:34:ILE:HB    | 1:S:54:VAL:HG11  | 1.30                     | 1.07              |
| 1:V:43:VAL:HG13  | 1:V:44:MET:H     | 0.92                     | 1.07              |
| 1:B:43:VAL:HG13  | 1:B:44:MET:H     | 0.92                     | 1.07              |
| 1:I:35:VAL:HG12  | 1:I:68:LYS:HB2   | 1.36                     | 1.07              |
| 1:K:35:VAL:HG12  | 1:K:68:LYS:HB2   | 1.36                     | 1.07              |
| 1:O:34:ILE:HB    | 1:O:54:VAL:HG11  | 1.30                     | 1.07              |
| 1:S:43:VAL:HG13  | 1:S:44:MET:H     | 0.92                     | 1.07              |
| 1:I:43:VAL:HG13  | 1:I:44:MET:H     | 0.92                     | 1.07              |
| 1:V:35:VAL:HG12  | 1:V:68:LYS:HB2   | 1.36                     | 1.07              |
| 1:K:34:ILE:HB    | 1:K:54:VAL:HG11  | 1.30                     | 1.06              |
| 1:A:208:ILE:HD11 | 1:A:243:PRO:HD2  | 1.34                     | 1.06              |
| 1:B:34:ILE:HB    | 1:B:54:VAL:HG11  | 1.30                     | 1.06              |
| 1:L:208:ILE:HD11 | 1:L:243:PRO:HD2  | 1.34                     | 1.06              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:M:43:VAL:HG13  | 1:M:44:MET:H    | 0.92                     | 1.06              |
| 1:E:43:VAL:HG13  | 1:E:44:MET:H    | 0.92                     | 1.06              |
| 1:F:43:VAL:HG13  | 1:F:44:MET:H    | 0.92                     | 1.06              |
| 1:M:34:ILE:HB    | 1:M:54:VAL:HG11 | 1.30                     | 1.06              |
| 1:T:35:VAL:HG12  | 1:T:68:LYS:HB2  | 1.36                     | 1.06              |
| 1:U:35:VAL:HG12  | 1:U:68:LYS:HB2  | 1.36                     | 1.06              |
| 1:T:43:VAL:HG13  | 1:T:44:MET:N    | 1.54                     | 1.06              |
| 1:B:35:VAL:HG12  | 1:B:68:LYS:HB2  | 1.36                     | 1.06              |
| 1:O:43:VAL:HG13  | 1:O:44:MET:N    | 1.54                     | 1.06              |
| 1:J:35:VAL:HG12  | 1:J:68:LYS:HB2  | 1.36                     | 1.05              |
| 1:N:35:VAL:HG12  | 1:N:68:LYS:HB2  | 1.36                     | 1.05              |
| 1:G:43:VAL:HG13  | 1:G:44:MET:H    | 0.92                     | 1.05              |
| 1:H:43:VAL:HG13  | 1:H:44:MET:H    | 0.92                     | 1.05              |
| 1:K:37:ARG:HG3   | 1:K:38:PRO:HD2  | 1.37                     | 1.05              |
| 1:P:34:ILE:HB    | 1:P:54:VAL:CG1  | 1.87                     | 1.05              |
| 1:V:208:ILE:HD11 | 1:V:243:PRO:HD2 | 1.34                     | 1.05              |
| 1:W:208:ILE:HD11 | 1:W:243:PRO:HD2 | 1.34                     | 1.05              |
| 1:D:34:ILE:HB    | 1:D:54:VAL:HG11 | 1.30                     | 1.05              |
| 1:E:35:VAL:HG12  | 1:E:68:LYS:HB2  | 1.36                     | 1.05              |
| 1:N:34:ILE:HB    | 1:N:54:VAL:CG1  | 1.87                     | 1.05              |
| 1:R:34:ILE:HB    | 1:R:54:VAL:CG1  | 1.87                     | 1.05              |
| 1:C:35:VAL:HG12  | 1:C:68:LYS:HB2  | 1.36                     | 1.05              |
| 1:I:37:ARG:HG3   | 1:I:38:PRO:HD2  | 1.37                     | 1.05              |
| 1:K:208:ILE:HD11 | 1:K:243:PRO:HD2 | 1.34                     | 1.05              |
| 1:L:34:ILE:HB    | 1:L:54:VAL:CG1  | 1.87                     | 1.05              |
| 1:L:37:ARG:HG3   | 1:L:38:PRO:HD2  | 1.37                     | 1.05              |
| 1:O:43:VAL:HG13  | 1:O:44:MET:H    | 0.92                     | 1.05              |
| 1:Q:208:ILE:HD11 | 1:Q:243:PRO:HD2 | 1.34                     | 1.05              |
| 1:F:208:ILE:HD11 | 1:F:243:PRO:HD2 | 1.34                     | 1.05              |
| 1:G:208:ILE:HD11 | 1:G:243:PRO:HD2 | 1.34                     | 1.05              |
| 1:M:35:VAL:HG12  | 1:M:68:LYS:HB2  | 1.36                     | 1.05              |
| 1:M:37:ARG:HG3   | 1:M:38:PRO:HD2  | 1.37                     | 1.05              |
| 1:P:43:VAL:HG13  | 1:P:44:MET:H    | 0.92                     | 1.05              |
| 1:T:34:ILE:HB    | 1:T:54:VAL:CG1  | 1.87                     | 1.05              |
| 1:U:34:ILE:HB    | 1:U:54:VAL:CG1  | 1.87                     | 1.05              |
| 1:W:35:VAL:HG12  | 1:W:68:LYS:HB2  | 1.36                     | 1.05              |
| 1:J:34:ILE:HB    | 1:J:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:J:37:ARG:HG3   | 1:J:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:S:34:ILE:HB    | 1:S:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:V:43:VAL:HG13  | 1:V:44:MET:N    | 1.54                     | 1.04              |
| 1:W:34:ILE:HB    | 1:W:54:VAL:CG1  | 1.87                     | 1.04              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:G:34:ILE:HB    | 1:G:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:M:34:ILE:HG21  | 1:M:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:N:37:ARG:HG3   | 1:N:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:P:34:ILE:HG21  | 1:P:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:U:37:ARG:HG3   | 1:U:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:V:34:ILE:HG21  | 1:V:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:A:34:ILE:HB    | 1:A:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:C:34:ILE:HG21  | 1:C:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:G:34:ILE:HG21  | 1:G:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:G:37:ARG:HG3   | 1:G:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:H:37:ARG:HG3   | 1:H:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:I:34:ILE:HB    | 1:I:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:I:34:ILE:HG21  | 1:I:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:P:35:VAL:HG12  | 1:P:68:LYS:HB2  | 1.36                     | 1.04              |
| 1:Q:34:ILE:HB    | 1:Q:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:R:34:ILE:HG21  | 1:R:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:U:45:VAL:O     | 1:U:45:VAL:HG22 | 1.57                     | 1.04              |
| 1:W:37:ARG:HG3   | 1:W:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:A:45:VAL:HG22  | 1:A:45:VAL:O    | 1.57                     | 1.04              |
| 1:E:34:ILE:HB    | 1:E:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:F:37:ARG:HG3   | 1:F:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:J:45:VAL:O     | 1:J:45:VAL:HG22 | 1.57                     | 1.04              |
| 1:K:34:ILE:HB    | 1:K:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:L:35:VAL:HG12  | 1:L:68:LYS:HB2  | 1.36                     | 1.04              |
| 1:A:34:ILE:HG21  | 1:A:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:A:37:ARG:HG3   | 1:A:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:H:34:ILE:HB    | 1:H:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:M:34:ILE:HB    | 1:M:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:O:34:ILE:HB    | 1:O:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:O:34:ILE:HG21  | 1:O:67:LEU:HD22 | 1.40                     | 1.04              |
| 1:R:208:ILE:HD11 | 1:R:243:PRO:HD2 | 1.34                     | 1.04              |
| 1:S:37:ARG:HG3   | 1:S:38:PRO:HD2  | 1.37                     | 1.04              |
| 1:V:34:ILE:HB    | 1:V:54:VAL:CG1  | 1.87                     | 1.04              |
| 1:K:34:ILE:HG21  | 1:K:67:LEU:HD22 | 1.40                     | 1.03              |
| 1:N:45:VAL:HG22  | 1:N:45:VAL:O    | 1.57                     | 1.03              |
| 1:O:37:ARG:HG3   | 1:O:38:PRO:HD2  | 1.37                     | 1.03              |
| 1:Q:43:VAL:HG13  | 1:Q:44:MET:H    | 0.92                     | 1.03              |
| 1:Q:45:VAL:HG22  | 1:Q:45:VAL:O    | 1.57                     | 1.03              |
| 1:T:34:ILE:HG21  | 1:T:67:LEU:HD22 | 1.40                     | 1.03              |
| 1:B:34:ILE:HG21  | 1:B:67:LEU:HD22 | 1.40                     | 1.03              |
| 1:C:34:ILE:HB    | 1:C:54:VAL:CG1  | 1.87                     | 1.03              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:F:35:VAL:HG12  | 1:F:68:LYS:HB2  | 1.36                     | 1.03              |
| 1:H:45:VAL:O     | 1:H:45:VAL:HG22 | 1.57                     | 1.03              |
| 1:Q:35:VAL:HG12  | 1:Q:68:LYS:HB2  | 1.36                     | 1.03              |
| 1:E:34:ILE:HG21  | 1:E:67:LEU:HD22 | 1.40                     | 1.03              |
| 1:N:34:ILE:HG21  | 1:N:67:LEU:HD22 | 1.40                     | 1.03              |
| 1:D:34:ILE:HG21  | 1:D:67:LEU:HD22 | 1.40                     | 1.03              |
| 1:F:34:ILE:HB    | 1:F:54:VAL:CG1  | 1.87                     | 1.03              |
| 1:D:45:VAL:HG22  | 1:D:45:VAL:O    | 1.57                     | 1.03              |
| 1:E:37:ARG:HG3   | 1:E:38:PRO:HD2  | 1.37                     | 1.03              |
| 1:F:45:VAL:HG22  | 1:F:45:VAL:O    | 1.57                     | 1.03              |
| 1:W:45:VAL:O     | 1:W:45:VAL:HG22 | 1.57                     | 1.03              |
| 1:B:34:ILE:HB    | 1:B:54:VAL:CG1  | 1.87                     | 1.02              |
| 1:F:34:ILE:HG21  | 1:F:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:A:35:VAL:HG12  | 1:A:68:LYS:HB2  | 1.36                     | 1.02              |
| 1:D:34:ILE:HB    | 1:D:54:VAL:CG1  | 1.87                     | 1.02              |
| 1:D:37:ARG:HG3   | 1:D:38:PRO:HD2  | 1.37                     | 1.02              |
| 1:G:35:VAL:HG12  | 1:G:68:LYS:HB2  | 1.36                     | 1.02              |
| 1:H:34:ILE:HG21  | 1:H:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:J:34:ILE:HG21  | 1:J:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:P:37:ARG:HG3   | 1:P:38:PRO:HD2  | 1.37                     | 1.02              |
| 1:S:34:ILE:HG21  | 1:S:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:W:34:ILE:HG21  | 1:W:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:B:45:VAL:O     | 1:B:45:VAL:HG22 | 1.57                     | 1.02              |
| 1:L:45:VAL:HG22  | 1:L:45:VAL:O    | 1.57                     | 1.02              |
| 1:Q:34:ILE:HG21  | 1:Q:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:U:34:ILE:HG21  | 1:U:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:L:34:ILE:HG21  | 1:L:67:LEU:HD22 | 1.40                     | 1.02              |
| 1:Q:37:ARG:HG3   | 1:Q:38:PRO:HD2  | 1.37                     | 1.02              |
| 1:P:45:VAL:O     | 1:P:45:VAL:HG22 | 1.57                     | 1.01              |
| 1:R:35:VAL:HG12  | 1:R:68:LYS:HB2  | 1.36                     | 1.01              |
| 1:C:37:ARG:HG3   | 1:C:38:PRO:HD2  | 1.37                     | 1.01              |
| 1:S:45:VAL:O     | 1:S:45:VAL:HG22 | 1.57                     | 1.01              |
| 1:T:37:ARG:HG3   | 1:T:38:PRO:HD2  | 1.37                     | 1.01              |
| 1:T:45:VAL:HG22  | 1:T:45:VAL:O    | 1.57                     | 1.01              |
| 1:V:37:ARG:HG3   | 1:V:38:PRO:HD2  | 1.37                     | 1.01              |
| 1:D:43:VAL:CG1   | 1:D:44:MET:H    | 1.74                     | 1.01              |
| 1:K:45:VAL:O     | 1:K:45:VAL:HG22 | 1.57                     | 1.01              |
| 1:O:45:VAL:O     | 1:O:45:VAL:HG22 | 1.57                     | 1.01              |
| 1:R:37:ARG:HG3   | 1:R:38:PRO:HD2  | 1.37                     | 1.01              |
| 1:B:43:VAL:CG1   | 1:B:44:MET:H    | 1.74                     | 1.00              |
| 1:D:208:ILE:HD11 | 1:D:243:PRO:CD  | 1.92                     | 1.00              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:E:45:VAL:O     | 1:E:45:VAL:HG22 | 1.57                     | 1.00              |
| 1:F:43:VAL:CG1   | 1:F:44:MET:H    | 1.74                     | 1.00              |
| 1:I:8:LEU:HD12   | 1:I:90:PHE:HE1  | 1.26                     | 1.00              |
| 1:I:43:VAL:CG1   | 1:I:44:MET:H    | 1.74                     | 1.00              |
| 1:A:208:ILE:HD11 | 1:A:243:PRO:CD  | 1.92                     | 1.00              |
| 1:B:208:ILE:HD11 | 1:B:243:PRO:CD  | 1.92                     | 1.00              |
| 1:F:208:ILE:HD11 | 1:F:243:PRO:CD  | 1.92                     | 1.00              |
| 1:G:45:VAL:O     | 1:G:45:VAL:HG22 | 1.57                     | 1.00              |
| 1:M:208:ILE:HD11 | 1:M:243:PRO:CD  | 1.92                     | 1.00              |
| 1:S:8:LEU:HD12   | 1:S:90:PHE:HE1  | 1.26                     | 1.00              |
| 1:C:208:ILE:HD11 | 1:C:243:PRO:CD  | 1.92                     | 1.00              |
| 1:H:43:VAL:CG1   | 1:H:44:MET:H    | 1.74                     | 1.00              |
| 1:K:208:ILE:HD11 | 1:K:243:PRO:CD  | 1.92                     | 1.00              |
| 1:O:8:LEU:HD12   | 1:O:90:PHE:HE1  | 1.27                     | 1.00              |
| 1:R:43:VAL:CG1   | 1:R:44:MET:H    | 1.74                     | 1.00              |
| 1:T:208:ILE:HD11 | 1:T:243:PRO:CD  | 1.92                     | 1.00              |
| 1:H:208:ILE:HD11 | 1:H:243:PRO:CD  | 1.92                     | 1.00              |
| 1:O:208:ILE:HD11 | 1:O:243:PRO:CD  | 1.92                     | 1.00              |
| 1:R:208:ILE:HD11 | 1:R:243:PRO:CD  | 1.92                     | 1.00              |
| 1:B:37:ARG:HG3   | 1:B:38:PRO:HD2  | 1.37                     | 1.00              |
| 1:D:8:LEU:HD12   | 1:D:90:PHE:HE1  | 1.27                     | 1.00              |
| 1:E:8:LEU:HD12   | 1:E:90:PHE:HE1  | 1.27                     | 1.00              |
| 1:T:8:LEU:HD12   | 1:T:90:PHE:HE1  | 1.27                     | 1.00              |
| 1:V:208:ILE:HD11 | 1:V:243:PRO:CD  | 1.92                     | 1.00              |
| 1:A:43:VAL:CG1   | 1:A:44:MET:H    | 1.74                     | 1.00              |
| 1:H:8:LEU:HD12   | 1:H:90:PHE:HE1  | 1.27                     | 1.00              |
| 1:C:45:VAL:O     | 1:C:45:VAL:HG22 | 1.57                     | 1.00              |
| 1:M:45:VAL:O     | 1:M:45:VAL:HG22 | 1.57                     | 0.99              |
| 1:W:208:ILE:HD11 | 1:W:243:PRO:CD  | 1.92                     | 0.99              |
| 1:B:8:LEU:HD12   | 1:B:90:PHE:HE1  | 1.27                     | 0.99              |
| 1:G:43:VAL:CG1   | 1:G:44:MET:H    | 1.74                     | 0.99              |
| 1:J:208:ILE:HD11 | 1:J:243:PRO:CD  | 1.92                     | 0.99              |
| 1:P:8:LEU:HD12   | 1:P:90:PHE:HE1  | 1.27                     | 0.99              |
| 1:I:208:ILE:HD11 | 1:I:243:PRO:CD  | 1.92                     | 0.99              |
| 1:R:45:VAL:O     | 1:R:45:VAL:HG22 | 1.57                     | 0.99              |
| 1:V:45:VAL:HG22  | 1:V:45:VAL:O    | 1.57                     | 0.99              |
| 1:E:208:ILE:HD11 | 1:E:243:PRO:CD  | 1.92                     | 0.99              |
| 1:I:45:VAL:HG22  | 1:I:45:VAL:O    | 1.57                     | 0.99              |
| 1:J:43:VAL:CG1   | 1:J:44:MET:H    | 1.74                     | 0.99              |
| 1:P:208:ILE:HD11 | 1:P:243:PRO:CD  | 1.92                     | 0.99              |
| 1:Q:208:ILE:HD11 | 1:Q:243:PRO:CD  | 1.92                     | 0.99              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2         | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|----------------|--------------------------|-------------------|
| 1:P:43:VAL:CG1   | 1:P:44:MET:H   | 1.74                     | 0.99              |
| 1:U:208:ILE:HD11 | 1:U:243:PRO:CD | 1.92                     | 0.99              |
| 1:L:8:LEU:HD12   | 1:L:90:PHE:HE1 | 1.27                     | 0.99              |
| 1:L:208:ILE:HD11 | 1:L:243:PRO:CD | 1.92                     | 0.99              |
| 1:M:8:LEU:HD12   | 1:M:90:PHE:HE1 | 1.27                     | 0.99              |
| 1:V:8:LEU:HD12   | 1:V:90:PHE:HE1 | 1.27                     | 0.99              |
| 1:W:8:LEU:HD12   | 1:W:90:PHE:HE1 | 1.27                     | 0.99              |
| 1:W:43:VAL:CG1   | 1:W:44:MET:H   | 1.74                     | 0.99              |
| 1:G:208:ILE:HD11 | 1:G:243:PRO:CD | 1.92                     | 0.98              |
| 1:N:208:ILE:HD11 | 1:N:243:PRO:CD | 1.92                     | 0.98              |
| 1:S:208:ILE:HD11 | 1:S:243:PRO:CD | 1.92                     | 0.98              |
| 1:A:8:LEU:HD12   | 1:A:90:PHE:HE1 | 1.27                     | 0.98              |
| 1:U:43:VAL:CG1   | 1:U:44:MET:H   | 1.74                     | 0.98              |
| 1:K:8:LEU:HD12   | 1:K:90:PHE:HE1 | 1.27                     | 0.98              |
| 1:L:43:VAL:CG1   | 1:L:44:MET:H   | 1.74                     | 0.98              |
| 1:N:43:VAL:CG1   | 1:N:44:MET:H   | 1.74                     | 0.98              |
| 1:E:43:VAL:CG1   | 1:E:44:MET:H   | 1.74                     | 0.98              |
| 1:F:8:LEU:HD12   | 1:F:90:PHE:HE1 | 1.27                     | 0.98              |
| 1:R:8:LEU:HD12   | 1:R:90:PHE:HE1 | 1.27                     | 0.97              |
| 1:S:43:VAL:CG1   | 1:S:44:MET:H   | 1.74                     | 0.97              |
| 1:C:8:LEU:HD12   | 1:C:90:PHE:HE1 | 1.27                     | 0.97              |
| 1:N:8:LEU:HD12   | 1:N:90:PHE:HE1 | 1.27                     | 0.97              |
| 1:U:8:LEU:HD12   | 1:U:90:PHE:HE1 | 1.27                     | 0.97              |
| 1:Q:8:LEU:HD12   | 1:Q:90:PHE:HE1 | 1.27                     | 0.97              |
| 1:G:8:LEU:HD12   | 1:G:90:PHE:HE1 | 1.27                     | 0.96              |
| 1:Q:43:VAL:CG1   | 1:Q:44:MET:H   | 1.74                     | 0.96              |
| 1:C:43:VAL:CG1   | 1:C:44:MET:H   | 1.74                     | 0.96              |
| 1:H:300:SER:HA   | 1:H:335:ARG:CG | 1.96                     | 0.96              |
| 1:W:300:SER:HA   | 1:W:335:ARG:CG | 1.96                     | 0.96              |
| 1:A:300:SER:HA   | 1:A:335:ARG:CG | 1.96                     | 0.96              |
| 1:L:300:SER:HA   | 1:L:335:ARG:CG | 1.96                     | 0.96              |
| 1:N:300:SER:HA   | 1:N:335:ARG:CG | 1.96                     | 0.96              |
| 1:S:300:SER:HA   | 1:S:335:ARG:CG | 1.96                     | 0.96              |
| 1:J:8:LEU:HD12   | 1:J:90:PHE:HE1 | 1.27                     | 0.95              |
| 1:R:300:SER:HA   | 1:R:335:ARG:CG | 1.96                     | 0.95              |
| 1:P:300:SER:HA   | 1:P:335:ARG:CG | 1.96                     | 0.95              |
| 1:C:300:SER:HA   | 1:C:335:ARG:CG | 1.96                     | 0.95              |
| 1:J:300:SER:HA   | 1:J:335:ARG:CG | 1.96                     | 0.95              |
| 1:I:300:SER:HA   | 1:I:335:ARG:CG | 1.96                     | 0.95              |
| 1:K:300:SER:HA   | 1:K:335:ARG:CG | 1.96                     | 0.95              |
| 1:E:300:SER:HA   | 1:E:335:ARG:CG | 1.96                     | 0.95              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1         | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|-----------------|--------------------------|-------------------|
| 1:G:300:SER:HA | 1:G:335:ARG:CG  | 1.96                     | 0.95              |
| 1:B:300:SER:HA | 1:B:335:ARG:CG  | 1.96                     | 0.95              |
| 1:O:43:VAL:CG1 | 1:O:44:MET:H    | 1.74                     | 0.95              |
| 1:U:300:SER:HA | 1:U:335:ARG:CG  | 1.96                     | 0.95              |
| 1:V:43:VAL:CG1 | 1:V:44:MET:H    | 1.74                     | 0.95              |
| 1:C:39:ARG:HE  | 1:C:66:THR:HB   | 1.32                     | 0.94              |
| 1:T:300:SER:HA | 1:T:335:ARG:CG  | 1.96                     | 0.94              |
| 1:D:300:SER:HA | 1:D:335:ARG:CG  | 1.96                     | 0.94              |
| 1:E:39:ARG:HE  | 1:E:66:THR:HB   | 1.32                     | 0.94              |
| 1:Q:300:SER:HA | 1:Q:335:ARG:CG  | 1.96                     | 0.94              |
| 1:V:39:ARG:HE  | 1:V:66:THR:HB   | 1.32                     | 0.94              |
| 1:O:300:SER:HA | 1:O:335:ARG:CG  | 1.96                     | 0.94              |
| 1:F:43:VAL:CG1 | 1:F:44:MET:N    | 2.30                     | 0.94              |
| 1:L:133:TYR:CZ | 1:L:375:PHE:HB2 | 2.03                     | 0.94              |
| 1:N:133:TYR:CZ | 1:N:375:PHE:HB2 | 2.03                     | 0.94              |
| 1:M:300:SER:HA | 1:M:335:ARG:CG  | 1.96                     | 0.94              |
| 1:V:300:SER:HA | 1:V:335:ARG:CG  | 1.96                     | 0.94              |
| 1:A:39:ARG:HE  | 1:A:66:THR:HB   | 1.32                     | 0.94              |
| 1:C:133:TYR:CZ | 1:C:375:PHE:HB2 | 2.03                     | 0.94              |
| 1:F:300:SER:HA | 1:F:335:ARG:CG  | 1.96                     | 0.94              |
| 1:J:133:TYR:CZ | 1:J:375:PHE:HB2 | 2.03                     | 0.94              |
| 1:A:133:TYR:CZ | 1:A:375:PHE:HB2 | 2.03                     | 0.94              |
| 1:L:43:VAL:CG1 | 1:L:44:MET:N    | 2.30                     | 0.94              |
| 1:O:133:TYR:CZ | 1:O:375:PHE:HB2 | 2.03                     | 0.94              |
| 1:P:133:TYR:CZ | 1:P:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:T:39:ARG:HE  | 1:T:66:THR:HB   | 1.32                     | 0.93              |
| 1:W:133:TYR:CZ | 1:W:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:E:133:TYR:CZ | 1:E:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:M:133:TYR:CZ | 1:M:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:U:43:VAL:CG1 | 1:U:44:MET:N    | 2.30                     | 0.93              |
| 1:H:133:TYR:CZ | 1:H:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:G:39:ARG:HE  | 1:G:66:THR:HB   | 1.32                     | 0.93              |
| 1:L:39:ARG:HE  | 1:L:66:THR:HB   | 1.32                     | 0.93              |
| 1:Q:133:TYR:CZ | 1:Q:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:N:39:ARG:HE  | 1:N:66:THR:HB   | 1.32                     | 0.93              |
| 1:V:133:TYR:CZ | 1:V:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:M:43:VAL:CG1 | 1:M:44:MET:H    | 1.74                     | 0.93              |
| 1:N:300:SER:HA | 1:N:335:ARG:HG3 | 1.51                     | 0.93              |
| 1:P:300:SER:HA | 1:P:335:ARG:HG3 | 1.51                     | 0.93              |
| 1:T:133:TYR:CZ | 1:T:375:PHE:HB2 | 2.03                     | 0.93              |
| 1:R:133:TYR:CZ | 1:R:375:PHE:HB2 | 2.03                     | 0.93              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:U:133:TYR:CZ  | 1:U:375:PHE:HB2  | 2.03                     | 0.93              |
| 1:A:43:VAL:CG1  | 1:A:44:MET:N     | 2.30                     | 0.93              |
| 1:G:133:TYR:CZ  | 1:G:375:PHE:HB2  | 2.02                     | 0.93              |
| 1:L:300:SER:HA  | 1:L:335:ARG:HG3  | 1.51                     | 0.93              |
| 1:M:34:ILE:CB   | 1:M:54:VAL:HG11  | 1.99                     | 0.93              |
| 1:T:43:VAL:CG1  | 1:T:44:MET:H     | 1.74                     | 0.93              |
| 1:B:133:TYR:CZ  | 1:B:375:PHE:HB2  | 2.03                     | 0.92              |
| 1:K:133:TYR:CZ  | 1:K:375:PHE:HB2  | 2.03                     | 0.92              |
| 1:R:300:SER:HA  | 1:R:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:S:133:TYR:CZ  | 1:S:375:PHE:HB2  | 2.03                     | 0.92              |
| 1:K:34:ILE:CB   | 1:K:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:O:34:ILE:CB   | 1:O:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:O:357:ILE:CG1 | 1:O:370:VAL:HG23 | 2.00                     | 0.92              |
| 1:S:39:ARG:HE   | 1:S:66:THR:HB    | 1.32                     | 0.92              |
| 1:W:300:SER:HA  | 1:W:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:F:34:ILE:CB   | 1:F:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:J:39:ARG:HE   | 1:J:66:THR:HB    | 1.32                     | 0.92              |
| 1:D:34:ILE:CB   | 1:D:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:F:133:TYR:CZ  | 1:F:375:PHE:HB2  | 2.03                     | 0.92              |
| 1:M:39:ARG:HE   | 1:M:66:THR:HB    | 1.32                     | 0.92              |
| 1:Q:39:ARG:HE   | 1:Q:66:THR:HB    | 1.32                     | 0.92              |
| 1:U:39:ARG:HE   | 1:U:66:THR:HB    | 1.32                     | 0.92              |
| 1:D:43:VAL:CG1  | 1:D:44:MET:N     | 2.30                     | 0.92              |
| 1:D:357:ILE:CG1 | 1:D:370:VAL:HG23 | 2.00                     | 0.92              |
| 1:J:300:SER:HA  | 1:J:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:P:39:ARG:HE   | 1:P:66:THR:HB    | 1.32                     | 0.92              |
| 1:P:43:VAL:CG1  | 1:P:44:MET:N     | 2.30                     | 0.92              |
| 1:C:300:SER:HA  | 1:C:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:E:300:SER:HA  | 1:E:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:I:133:TYR:CZ  | 1:I:375:PHE:HB2  | 2.03                     | 0.92              |
| 1:K:39:ARG:HE   | 1:K:66:THR:HB    | 1.32                     | 0.92              |
| 1:O:39:ARG:HE   | 1:O:66:THR:HB    | 1.32                     | 0.92              |
| 1:Q:34:ILE:CB   | 1:Q:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:R:39:ARG:HE   | 1:R:66:THR:HB    | 1.32                     | 0.92              |
| 1:D:133:TYR:CZ  | 1:D:375:PHE:HB2  | 2.03                     | 0.92              |
| 1:H:34:ILE:CB   | 1:H:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:A:300:SER:HA  | 1:A:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:I:34:ILE:CB   | 1:I:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:T:34:ILE:CB   | 1:T:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:T:300:SER:HA  | 1:T:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:V:34:ILE:CB   | 1:V:54:VAL:HG11  | 1.99                     | 0.92              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:B:34:ILE:CB   | 1:B:54:VAL:HG11  | 1.99                     | 0.92              |
| 1:B:39:ARG:HE   | 1:B:66:THR:HB    | 1.32                     | 0.92              |
| 1:U:300:SER:HA  | 1:U:335:ARG:HG3  | 1.51                     | 0.92              |
| 1:G:300:SER:HA  | 1:G:335:ARG:HG3  | 1.51                     | 0.91              |
| 1:J:43:VAL:CG1  | 1:J:44:MET:N     | 2.30                     | 0.91              |
| 1:P:34:ILE:CB   | 1:P:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:C:357:ILE:CG1 | 1:C:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:I:39:ARG:HE   | 1:I:66:THR:HB    | 1.32                     | 0.91              |
| 1:M:357:ILE:CG1 | 1:M:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:N:34:ILE:CB   | 1:N:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:B:357:ILE:CG1 | 1:B:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:D:39:ARG:HE   | 1:D:66:THR:HB    | 1.32                     | 0.91              |
| 1:H:39:ARG:HE   | 1:H:66:THR:HB    | 1.32                     | 0.91              |
| 1:R:34:ILE:CB   | 1:R:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:E:357:ILE:CG1 | 1:E:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:J:34:ILE:CB   | 1:J:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:N:357:ILE:CG1 | 1:N:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:S:34:ILE:CB   | 1:S:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:S:43:VAL:CG1  | 1:S:44:MET:N     | 2.30                     | 0.91              |
| 1:W:34:ILE:CB   | 1:W:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:A:34:ILE:CB   | 1:A:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:H:300:SER:HA  | 1:H:335:ARG:HG3  | 1.51                     | 0.91              |
| 1:L:357:ILE:CG1 | 1:L:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:P:357:ILE:CG1 | 1:P:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:S:357:ILE:CG1 | 1:S:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:U:34:ILE:CB   | 1:U:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:A:357:ILE:CG1 | 1:A:370:VAL:HG23 | 2.00                     | 0.91              |
| 1:I:300:SER:HA  | 1:I:335:ARG:HG3  | 1.51                     | 0.91              |
| 1:O:300:SER:HA  | 1:O:335:ARG:HG3  | 1.51                     | 0.91              |
| 1:C:34:ILE:CB   | 1:C:54:VAL:HG11  | 1.99                     | 0.91              |
| 1:W:39:ARG:HE   | 1:W:66:THR:HB    | 1.32                     | 0.91              |
| 1:B:300:SER:HA  | 1:B:335:ARG:HG3  | 1.51                     | 0.90              |
| 1:G:34:ILE:CB   | 1:G:54:VAL:HG11  | 1.99                     | 0.90              |
| 1:G:290:ARG:HD2 | 1:I:244:ASP:CB   | 2.01                     | 0.90              |
| 1:L:34:ILE:CB   | 1:L:54:VAL:HG11  | 1.99                     | 0.90              |
| 1:P:290:ARG:HD2 | 1:R:244:ASP:CB   | 2.01                     | 0.90              |
| 1:A:290:ARG:HD2 | 1:C:244:ASP:CB   | 2.01                     | 0.90              |
| 1:E:290:ARG:HD2 | 1:G:244:ASP:CB   | 2.01                     | 0.90              |
| 1:M:290:ARG:HD2 | 1:O:244:ASP:CB   | 2.01                     | 0.90              |
| 1:H:357:ILE:CG1 | 1:H:370:VAL:HG23 | 2.00                     | 0.90              |
| 1:K:290:ARG:HD2 | 1:M:244:ASP:CB   | 2.01                     | 0.90              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:K:300:SER:HA  | 1:K:335:ARG:HG3  | 1.51                     | 0.90              |
| 1:L:290:ARG:HD2 | 1:N:244:ASP:CB   | 2.01                     | 0.90              |
| 1:M:300:SER:HA  | 1:M:335:ARG:HG3  | 1.51                     | 0.90              |
| 1:R:290:ARG:HD2 | 1:T:244:ASP:CB   | 2.01                     | 0.90              |
| 1:V:300:SER:HA  | 1:V:335:ARG:HG3  | 1.51                     | 0.90              |
| 1:E:34:ILE:CB   | 1:E:54:VAL:HG11  | 1.99                     | 0.90              |
| 1:F:39:ARG:HE   | 1:F:66:THR:HB    | 1.32                     | 0.90              |
| 1:J:290:ARG:HD2 | 1:L:244:ASP:CB   | 2.02                     | 0.90              |
| 1:S:300:SER:HA  | 1:S:335:ARG:HG3  | 1.51                     | 0.90              |
| 1:G:357:ILE:CG1 | 1:G:370:VAL:HG23 | 2.00                     | 0.90              |
| 1:Q:290:ARG:HD2 | 1:S:244:ASP:CB   | 2.01                     | 0.90              |
| 1:Q:300:SER:HA  | 1:Q:335:ARG:HG3  | 1.51                     | 0.90              |
| 1:T:357:ILE:CG1 | 1:T:370:VAL:HG23 | 2.00                     | 0.90              |
| 1:B:290:ARG:HD2 | 1:D:244:ASP:CB   | 2.01                     | 0.90              |
| 1:F:290:ARG:HD2 | 1:H:244:ASP:CB   | 2.02                     | 0.90              |
| 1:L:104:LEU:HB2 | 1:L:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:S:73:HIC:HA   | 1:S:183:ARG:HH12 | 1.36                     | 0.90              |
| 1:W:357:ILE:CG1 | 1:W:370:VAL:HG23 | 2.00                     | 0.90              |
| 1:J:104:LEU:HB2 | 1:J:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:J:357:ILE:CG1 | 1:J:370:VAL:HG23 | 2.00                     | 0.90              |
| 1:N:104:LEU:HB2 | 1:N:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:Q:73:HIC:HA   | 1:Q:183:ARG:HH12 | 1.36                     | 0.90              |
| 1:D:300:SER:HA  | 1:D:335:ARG:HG3  | 1.51                     | 0.90              |
| 1:E:43:VAL:CG1  | 1:E:44:MET:N     | 2.30                     | 0.90              |
| 1:F:104:LEU:HB2 | 1:F:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:H:34:ILE:HG21 | 1:H:67:LEU:CD2   | 2.02                     | 0.90              |
| 1:V:357:ILE:CG1 | 1:V:370:VAL:HG23 | 2.00                     | 0.90              |
| 1:H:104:LEU:HB2 | 1:H:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:P:104:LEU:HB2 | 1:P:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:R:104:LEU:HB2 | 1:R:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:U:290:ARG:HD2 | 1:W:244:ASP:CB   | 2.02                     | 0.90              |
| 1:W:34:ILE:HG21 | 1:W:67:LEU:CD2   | 2.02                     | 0.90              |
| 1:B:34:ILE:HG21 | 1:B:67:LEU:CD2   | 2.02                     | 0.90              |
| 1:D:104:LEU:HB2 | 1:D:356:TRP:CH2  | 2.07                     | 0.90              |
| 1:Q:34:ILE:HG21 | 1:Q:67:LEU:CD2   | 2.02                     | 0.90              |
| 1:R:357:ILE:CG1 | 1:R:370:VAL:HG23 | 2.00                     | 0.90              |
| 1:N:34:ILE:HG21 | 1:N:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:O:34:ILE:HG21 | 1:O:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:U:34:ILE:HG21 | 1:U:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:B:104:LEU:HB2 | 1:B:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:F:34:ILE:HG21 | 1:F:67:LEU:CD2   | 2.02                     | 0.89              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:73:HIC:HA    | 1:F:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:G:104:LEU:HB2  | 1:G:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:H:73:HIC:HA    | 1:H:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:I:104:LEU:HB2  | 1:I:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:K:43:VAL:CG1   | 1:K:44:MET:N     | 2.30                     | 0.89              |
| 1:K:104:LEU:HB2  | 1:K:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:N:290:ARG:HD2  | 1:P:244:ASP:CB   | 2.01                     | 0.89              |
| 1:I:290:ARG:HD2  | 1:K:244:ASP:CB   | 2.01                     | 0.89              |
| 1:T:104:LEU:HB2  | 1:T:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:U:357:ILE:CG1  | 1:U:370:VAL:HG23 | 2.00                     | 0.89              |
| 1:E:73:HIC:HA    | 1:E:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:E:104:LEU:HB2  | 1:E:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:G:236:LEU:HD13 | 1:G:251:GLY:CA   | 2.02                     | 0.89              |
| 1:H:8:LEU:HD12   | 1:H:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:J:73:HIC:HA    | 1:J:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:M:104:LEU:HB2  | 1:M:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:U:73:HIC:HA    | 1:U:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:A:236:LEU:HD13 | 1:A:251:GLY:CA   | 2.02                     | 0.89              |
| 1:C:73:HIC:HA    | 1:C:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:C:290:ARG:HD2  | 1:E:244:ASP:CB   | 2.01                     | 0.89              |
| 1:I:236:LEU:HD13 | 1:I:251:GLY:CA   | 2.02                     | 0.89              |
| 1:L:34:ILE:HG21  | 1:L:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:O:236:LEU:HD13 | 1:O:251:GLY:CA   | 2.02                     | 0.89              |
| 1:S:8:LEU:HD12   | 1:S:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:S:290:ARG:HD2  | 1:U:244:ASP:CB   | 2.01                     | 0.89              |
| 1:W:236:LEU:HD13 | 1:W:251:GLY:CA   | 2.02                     | 0.89              |
| 1:D:290:ARG:HD2  | 1:F:244:ASP:CB   | 2.01                     | 0.89              |
| 1:F:300:SER:HA   | 1:F:335:ARG:HG3  | 1.51                     | 0.89              |
| 1:O:104:LEU:HB2  | 1:O:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:Q:236:LEU:HD13 | 1:Q:251:GLY:CA   | 2.02                     | 0.89              |
| 1:S:104:LEU:HB2  | 1:S:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:U:104:LEU:HB2  | 1:U:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:A:8:LEU:HD12   | 1:A:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:A:34:ILE:HG21  | 1:A:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:C:104:LEU:HB2  | 1:C:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:E:236:LEU:HD13 | 1:E:251:GLY:CA   | 2.02                     | 0.89              |
| 1:H:290:ARG:HD2  | 1:J:244:ASP:CB   | 2.01                     | 0.89              |
| 1:L:8:LEU:HD12   | 1:L:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:O:73:HIC:HA    | 1:O:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:R:8:LEU:HD12   | 1:R:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:T:290:ARG:HD2  | 1:V:244:ASP:CB   | 2.01                     | 0.89              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:236:LEU:HD13 | 1:U:251:GLY:CA   | 2.02                     | 0.89              |
| 1:B:43:VAL:CG1   | 1:B:44:MET:N     | 2.30                     | 0.89              |
| 1:M:236:LEU:HD13 | 1:M:251:GLY:CA   | 2.02                     | 0.89              |
| 1:O:290:ARG:HD2  | 1:Q:244:ASP:CB   | 2.01                     | 0.89              |
| 1:P:34:ILE:HG21  | 1:P:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:Q:104:LEU:HB2  | 1:Q:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:S:236:LEU:HD13 | 1:S:251:GLY:CA   | 2.03                     | 0.89              |
| 1:V:104:LEU:HB2  | 1:V:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:A:104:LEU:HB2  | 1:A:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:D:8:LEU:HD12   | 1:D:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:G:34:ILE:HG21  | 1:G:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:I:34:ILE:HG21  | 1:I:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:I:357:ILE:CG1  | 1:I:370:VAL:HG23 | 2.00                     | 0.89              |
| 1:P:236:LEU:HD13 | 1:P:251:GLY:CA   | 2.02                     | 0.89              |
| 1:B:8:LEU:HD12   | 1:B:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:D:34:ILE:HG21  | 1:D:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:G:8:LEU:HD12   | 1:G:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:G:73:HIC:HA    | 1:G:183:ARG:HH12 | 1.36                     | 0.89              |
| 1:J:34:ILE:HG21  | 1:J:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:N:8:LEU:HD12   | 1:N:90:PHE:CE1   | 2.08                     | 0.89              |
| 1:T:43:VAL:CG1   | 1:T:44:MET:N     | 2.30                     | 0.89              |
| 1:V:34:ILE:HG21  | 1:V:67:LEU:CD2   | 2.02                     | 0.89              |
| 1:W:104:LEU:HB2  | 1:W:356:TRP:CH2  | 2.07                     | 0.89              |
| 1:K:236:LEU:HD13 | 1:K:251:GLY:CA   | 2.02                     | 0.88              |
| 1:K:357:ILE:CG1  | 1:K:370:VAL:HG23 | 2.00                     | 0.88              |
| 1:N:236:LEU:HD13 | 1:N:251:GLY:CA   | 2.02                     | 0.88              |
| 1:W:8:LEU:HD12   | 1:W:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:C:8:LEU:HD12   | 1:C:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:L:73:HIC:HA    | 1:L:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:M:8:LEU:HD12   | 1:M:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:Q:357:ILE:CG1  | 1:Q:370:VAL:HG23 | 2.00                     | 0.88              |
| 1:R:236:LEU:HD13 | 1:R:251:GLY:CA   | 2.02                     | 0.88              |
| 1:U:8:LEU:HD12   | 1:U:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:C:236:LEU:HD13 | 1:C:251:GLY:CA   | 2.02                     | 0.88              |
| 1:E:8:LEU:HD12   | 1:E:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:H:236:LEU:HD13 | 1:H:251:GLY:CA   | 2.02                     | 0.88              |
| 1:J:236:LEU:HD13 | 1:J:251:GLY:CA   | 2.02                     | 0.88              |
| 1:K:34:ILE:HG21  | 1:K:67:LEU:CD2   | 2.02                     | 0.88              |
| 1:O:8:LEU:HD12   | 1:O:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:P:8:LEU:HD12   | 1:P:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:S:34:ILE:HG21  | 1:S:67:LEU:CD2   | 2.02                     | 0.88              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:43:VAL:CG1   | 1:N:44:MET:N     | 2.30                     | 0.88              |
| 1:V:236:LEU:HD13 | 1:V:251:GLY:CA   | 2.02                     | 0.88              |
| 1:E:34:ILE:HG21  | 1:E:67:LEU:CD2   | 2.02                     | 0.88              |
| 1:L:236:LEU:HD13 | 1:L:251:GLY:CA   | 2.02                     | 0.88              |
| 1:H:43:VAL:CG1   | 1:H:44:MET:N     | 2.30                     | 0.88              |
| 1:M:34:ILE:HG21  | 1:M:67:LEU:CD2   | 2.02                     | 0.88              |
| 1:R:73:HIC:HA    | 1:R:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:T:73:HIC:HA    | 1:T:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:V:8:LEU:HD12   | 1:V:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:V:73:HIC:HA    | 1:V:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:A:73:HIC:HA    | 1:A:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:D:73:HIC:HA    | 1:D:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:F:8:LEU:HD12   | 1:F:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:F:236:LEU:HD13 | 1:F:251:GLY:CA   | 2.02                     | 0.88              |
| 1:J:8:LEU:HD12   | 1:J:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:I:8:LEU:HD12   | 1:I:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:T:8:LEU:HD12   | 1:T:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:T:34:ILE:HG21  | 1:T:67:LEU:CD2   | 2.02                     | 0.88              |
| 1:W:73:HIC:HA    | 1:W:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:Q:8:LEU:HD12   | 1:Q:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:B:236:LEU:HD13 | 1:B:251:GLY:CA   | 2.02                     | 0.88              |
| 1:F:357:ILE:CG1  | 1:F:370:VAL:HG23 | 2.00                     | 0.88              |
| 1:K:8:LEU:HD12   | 1:K:90:PHE:CE1   | 2.08                     | 0.88              |
| 1:N:73:HIC:HA    | 1:N:183:ARG:HH12 | 1.36                     | 0.88              |
| 1:T:236:LEU:HD13 | 1:T:251:GLY:CA   | 2.02                     | 0.88              |
| 1:B:73:HIC:HA    | 1:B:183:ARG:HH12 | 1.36                     | 0.87              |
| 1:D:236:LEU:HD13 | 1:D:251:GLY:CA   | 2.02                     | 0.87              |
| 1:P:73:HIC:HA    | 1:P:183:ARG:HH12 | 1.36                     | 0.87              |
| 1:M:73:HIC:HA    | 1:M:183:ARG:HH12 | 1.36                     | 0.87              |
| 1:Q:43:VAL:CG1   | 1:Q:44:MET:N     | 2.30                     | 0.87              |
| 1:R:34:ILE:HG21  | 1:R:67:LEU:CD2   | 2.02                     | 0.87              |
| 1:C:34:ILE:HG21  | 1:C:67:LEU:CD2   | 2.02                     | 0.87              |
| 1:I:73:HIC:HA    | 1:I:183:ARG:HH12 | 1.36                     | 0.87              |
| 1:W:43:VAL:CG1   | 1:W:44:MET:N     | 2.30                     | 0.87              |
| 1:J:134:VAL:O    | 1:J:375:PHE:HB3  | 1.76                     | 0.86              |
| 1:W:134:VAL:O    | 1:W:375:PHE:HB3  | 1.76                     | 0.86              |
| 1:L:134:VAL:O    | 1:L:375:PHE:HB3  | 1.76                     | 0.86              |
| 1:A:134:VAL:O    | 1:A:375:PHE:HB3  | 1.76                     | 0.86              |
| 1:H:134:VAL:O    | 1:H:375:PHE:HB3  | 1.76                     | 0.86              |
| 1:N:134:VAL:O    | 1:N:375:PHE:HB3  | 1.76                     | 0.86              |
| 1:U:134:VAL:O    | 1:U:375:PHE:HB3  | 1.76                     | 0.86              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:361:GLU:CB   | 1:M:369:ILE:HD13 | 2.06                     | 0.85              |
| 1:P:134:VAL:O    | 1:P:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:C:43:VAL:CG1   | 1:C:44:MET:N     | 2.30                     | 0.85              |
| 1:C:134:VAL:O    | 1:C:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:D:361:GLU:CB   | 1:D:369:ILE:HD13 | 2.06                     | 0.85              |
| 1:F:134:VAL:O    | 1:F:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:F:361:GLU:CB   | 1:F:369:ILE:HD13 | 2.06                     | 0.85              |
| 1:V:361:GLU:CB   | 1:V:369:ILE:HD13 | 2.06                     | 0.85              |
| 1:K:73:HIC:HA    | 1:K:183:ARG:HH12 | 1.36                     | 0.85              |
| 1:S:134:VAL:O    | 1:S:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:I:43:VAL:CG1   | 1:I:44:MET:N     | 2.30                     | 0.85              |
| 1:H:361:GLU:CB   | 1:H:369:ILE:HD13 | 2.06                     | 0.85              |
| 1:D:134:VAL:O    | 1:D:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:H:236:LEU:HD13 | 1:H:251:GLY:HA3  | 1.58                     | 0.85              |
| 1:R:134:VAL:O    | 1:R:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:U:236:LEU:HD13 | 1:U:251:GLY:HA3  | 1.58                     | 0.85              |
| 1:J:236:LEU:HD13 | 1:J:251:GLY:HA3  | 1.58                     | 0.85              |
| 1:K:361:GLU:CB   | 1:K:369:ILE:HD13 | 2.06                     | 0.85              |
| 1:Q:134:VAL:O    | 1:Q:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:B:361:GLU:CB   | 1:B:369:ILE:HD13 | 2.06                     | 0.85              |
| 1:E:134:VAL:O    | 1:E:375:PHE:HB3  | 1.76                     | 0.85              |
| 1:I:236:LEU:HD13 | 1:I:251:GLY:HA3  | 1.58                     | 0.85              |
| 1:W:236:LEU:HD13 | 1:W:251:GLY:HA3  | 1.58                     | 0.85              |
| 1:B:134:VAL:O    | 1:B:375:PHE:HB3  | 1.76                     | 0.84              |
| 1:E:361:GLU:CB   | 1:E:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:G:134:VAL:O    | 1:G:375:PHE:HB3  | 1.76                     | 0.84              |
| 1:O:134:VAL:O    | 1:O:375:PHE:HB3  | 1.76                     | 0.84              |
| 1:T:134:VAL:O    | 1:T:375:PHE:HB3  | 1.76                     | 0.84              |
| 1:T:361:GLU:CB   | 1:T:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:C:361:GLU:CB   | 1:C:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:J:361:GLU:CB   | 1:J:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:M:134:VAL:O    | 1:M:375:PHE:HB3  | 1.76                     | 0.84              |
| 1:A:361:GLU:CB   | 1:A:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:F:236:LEU:HD13 | 1:F:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:I:134:VAL:O    | 1:I:375:PHE:HB3  | 1.76                     | 0.84              |
| 1:M:8:LEU:CD1    | 1:M:90:PHE:HE1   | 1.90                     | 0.84              |
| 1:T:236:LEU:HD13 | 1:T:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:V:134:VAL:O    | 1:V:375:PHE:HB3  | 1.76                     | 0.84              |
| 1:G:236:LEU:HD13 | 1:G:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:K:43:VAL:CG1   | 1:K:44:MET:H     | 1.74                     | 0.84              |
| 1:K:134:VAL:O    | 1:K:375:PHE:HB3  | 1.76                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:236:LEU:HD13 | 1:S:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:V:8:LEU:CD1    | 1:V:90:PHE:HE1   | 1.90                     | 0.84              |
| 1:K:236:LEU:HD13 | 1:K:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:L:236:LEU:HD13 | 1:L:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:R:43:VAL:CG1   | 1:R:44:MET:N     | 2.30                     | 0.84              |
| 1:W:8:LEU:CD1    | 1:W:90:PHE:HE1   | 1.90                     | 0.84              |
| 1:D:236:LEU:HD13 | 1:D:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:D:287:ILE:HD11 | 1:F:208:ILE:HD13 | 1.60                     | 0.84              |
| 1:H:287:ILE:HD11 | 1:J:208:ILE:HD13 | 1.60                     | 0.84              |
| 1:K:8:LEU:CD1    | 1:K:90:PHE:HE1   | 1.90                     | 0.84              |
| 1:Q:236:LEU:HD13 | 1:Q:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:Q:287:ILE:HD11 | 1:S:208:ILE:HD13 | 1.60                     | 0.84              |
| 1:W:361:GLU:CB   | 1:W:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:M:43:VAL:CG1   | 1:M:44:MET:N     | 2.30                     | 0.84              |
| 1:N:236:LEU:HD13 | 1:N:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:O:8:LEU:CD1    | 1:O:90:PHE:HE1   | 1.90                     | 0.84              |
| 1:B:236:LEU:HD13 | 1:B:251:GLY:HA3  | 1.58                     | 0.84              |
| 1:B:287:ILE:HD11 | 1:D:208:ILE:HD13 | 1.60                     | 0.84              |
| 1:J:287:ILE:HD11 | 1:L:208:ILE:HD13 | 1.60                     | 0.84              |
| 1:L:361:GLU:CB   | 1:L:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:N:8:LEU:CD1    | 1:N:90:PHE:HE1   | 1.90                     | 0.84              |
| 1:N:287:ILE:HD11 | 1:P:208:ILE:HD13 | 1.60                     | 0.84              |
| 1:P:8:LEU:CD1    | 1:P:90:PHE:HE1   | 1.90                     | 0.84              |
| 1:R:361:GLU:CB   | 1:R:369:ILE:HD13 | 2.06                     | 0.84              |
| 1:A:236:LEU:HD13 | 1:A:251:GLY:HA3  | 1.58                     | 0.83              |
| 1:A:287:ILE:HD11 | 1:C:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:D:8:LEU:CD1    | 1:D:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:F:8:LEU:CD1    | 1:F:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:H:8:LEU:CD1    | 1:H:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:I:361:GLU:CB   | 1:I:369:ILE:HD13 | 2.06                     | 0.83              |
| 1:L:287:ILE:HD11 | 1:N:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:S:287:ILE:HD11 | 1:U:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:U:287:ILE:HD11 | 1:W:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:U:361:GLU:CB   | 1:U:369:ILE:HD13 | 2.06                     | 0.83              |
| 1:E:8:LEU:CD1    | 1:E:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:F:287:ILE:HD11 | 1:H:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:R:236:LEU:HD13 | 1:R:251:GLY:HA3  | 1.58                     | 0.83              |
| 1:T:8:LEU:CD1    | 1:T:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:B:8:LEU:CD1    | 1:B:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:M:236:LEU:HD13 | 1:M:251:GLY:HA3  | 1.58                     | 0.83              |
| 1:O:236:LEU:HD13 | 1:O:251:GLY:HA3  | 1.58                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:287:ILE:HD11 | 1:Q:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:U:8:LEU:CD1    | 1:U:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:C:8:LEU:CD1    | 1:C:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:L:8:LEU:CD1    | 1:L:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:N:361:GLU:CB   | 1:N:369:ILE:HD13 | 2.06                     | 0.83              |
| 1:P:287:ILE:HD11 | 1:R:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:R:8:LEU:CD1    | 1:R:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:A:8:LEU:CD1    | 1:A:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:G:8:LEU:CD1    | 1:G:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:P:236:LEU:HD13 | 1:P:251:GLY:HA3  | 1.58                     | 0.83              |
| 1:M:287:ILE:HD11 | 1:O:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:E:236:LEU:HD13 | 1:E:251:GLY:HA3  | 1.58                     | 0.83              |
| 1:I:8:LEU:CD1    | 1:I:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:J:8:LEU:CD1    | 1:J:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:P:361:GLU:CB   | 1:P:369:ILE:HD13 | 2.06                     | 0.83              |
| 1:K:287:ILE:HD11 | 1:M:208:ILE:HD13 | 1.60                     | 0.83              |
| 1:O:43:VAL:CG1   | 1:O:44:MET:N     | 2.30                     | 0.83              |
| 1:S:361:GLU:CB   | 1:S:369:ILE:HD13 | 2.06                     | 0.83              |
| 1:C:236:LEU:HD13 | 1:C:251:GLY:HA3  | 1.58                     | 0.83              |
| 1:Q:8:LEU:CD1    | 1:Q:90:PHE:HE1   | 1.90                     | 0.83              |
| 1:C:287:ILE:HD11 | 1:E:208:ILE:HD13 | 1.60                     | 0.82              |
| 1:I:287:ILE:HD11 | 1:K:208:ILE:HD13 | 1.60                     | 0.82              |
| 1:Q:35:VAL:N     | 1:Q:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:R:35:VAL:N     | 1:R:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:R:287:ILE:HD11 | 1:T:208:ILE:HD13 | 1.60                     | 0.82              |
| 1:G:287:ILE:HD11 | 1:I:208:ILE:HD13 | 1.60                     | 0.82              |
| 1:O:35:VAL:N     | 1:O:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:E:287:ILE:HD11 | 1:G:208:ILE:HD13 | 1.60                     | 0.82              |
| 1:G:35:VAL:N     | 1:G:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:G:361:GLU:CB   | 1:G:369:ILE:HD13 | 2.06                     | 0.82              |
| 1:M:35:VAL:N     | 1:M:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:S:8:LEU:CD1    | 1:S:90:PHE:HE1   | 1.90                     | 0.82              |
| 1:S:35:VAL:N     | 1:S:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:F:35:VAL:N     | 1:F:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:V:236:LEU:HD13 | 1:V:251:GLY:HA3  | 1.58                     | 0.82              |
| 1:C:35:VAL:N     | 1:C:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:T:287:ILE:HD11 | 1:V:208:ILE:HD13 | 1.60                     | 0.82              |
| 1:A:35:VAL:N     | 1:A:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:K:35:VAL:N     | 1:K:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:P:35:VAL:N     | 1:P:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:G:140:LEU:O    | 1:G:342:GLY:HA3  | 1.80                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:B:35:VAL:N    | 1:B:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:I:140:LEU:O   | 1:I:342:GLY:HA3  | 1.80                     | 0.82              |
| 1:L:35:VAL:N    | 1:L:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:N:35:VAL:N    | 1:N:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:T:35:VAL:N    | 1:T:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:U:35:VAL:N    | 1:U:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:V:35:VAL:N    | 1:V:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:W:35:VAL:N    | 1:W:54:VAL:HG21  | 1.95                     | 0.82              |
| 1:E:169:TYR:CZ  | 1:G:40:HIS:HB3   | 2.15                     | 0.81              |
| 1:I:35:VAL:N    | 1:I:54:VAL:HG21  | 1.95                     | 0.81              |
| 1:K:140:LEU:O   | 1:K:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:P:169:TYR:CZ  | 1:R:40:HIS:HB3   | 2.15                     | 0.81              |
| 1:D:35:VAL:N    | 1:D:54:VAL:HG21  | 1.95                     | 0.81              |
| 1:E:35:VAL:N    | 1:E:54:VAL:HG21  | 1.95                     | 0.81              |
| 1:G:169:TYR:CZ  | 1:I:40:HIS:HB3   | 2.15                     | 0.81              |
| 1:R:169:TYR:CZ  | 1:T:40:HIS:HB3   | 2.16                     | 0.81              |
| 1:T:169:TYR:CZ  | 1:V:40:HIS:HB3   | 2.16                     | 0.81              |
| 1:B:362:TYR:HE1 | 1:B:367:PRO:HB3  | 1.46                     | 0.81              |
| 1:E:140:LEU:O   | 1:E:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:H:140:LEU:O   | 1:H:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:M:140:LEU:O   | 1:M:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:P:140:LEU:O   | 1:P:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:Q:361:GLU:CB  | 1:Q:369:ILE:HD13 | 2.06                     | 0.81              |
| 1:U:140:LEU:O   | 1:U:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:C:169:TYR:CZ  | 1:E:40:HIS:HB3   | 2.15                     | 0.81              |
| 1:C:362:TYR:HE1 | 1:C:367:PRO:HB3  | 1.46                     | 0.81              |
| 1:E:362:TYR:HE1 | 1:E:367:PRO:HB3  | 1.46                     | 0.81              |
| 1:F:140:LEU:O   | 1:F:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:H:35:VAL:N    | 1:H:54:VAL:HG21  | 1.95                     | 0.81              |
| 1:N:140:LEU:O   | 1:N:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:N:169:TYR:CZ  | 1:P:40:HIS:HB3   | 2.16                     | 0.81              |
| 1:N:362:TYR:HE1 | 1:N:367:PRO:HB3  | 1.46                     | 0.81              |
| 1:Q:140:LEU:O   | 1:Q:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:S:140:LEU:O   | 1:S:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:W:140:LEU:O   | 1:W:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:C:140:LEU:O   | 1:C:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:D:362:TYR:HE1 | 1:D:367:PRO:HB3  | 1.46                     | 0.81              |
| 1:L:362:TYR:HE1 | 1:L:367:PRO:HB3  | 1.46                     | 0.81              |
| 1:O:140:LEU:O   | 1:O:342:GLY:HA3  | 1.80                     | 0.81              |
| 1:O:169:TYR:CZ  | 1:Q:40:HIS:HB3   | 2.15                     | 0.81              |
| 1:Q:169:TYR:CZ  | 1:S:40:HIS:HB3   | 2.16                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:V:362:TYR:HE1  | 1:V:367:PRO:HB3 | 1.46                     | 0.81              |
| 1:W:362:TYR:HE1  | 1:W:367:PRO:HB3 | 1.46                     | 0.81              |
| 1:F:362:TYR:HE1  | 1:F:367:PRO:HB3 | 1.46                     | 0.81              |
| 1:H:362:TYR:HE1  | 1:H:367:PRO:HB3 | 1.46                     | 0.81              |
| 1:J:140:LEU:O    | 1:J:342:GLY:HA3 | 1.80                     | 0.81              |
| 1:T:143:TYR:O    | 1:T:143:TYR:HD1 | 1.64                     | 0.81              |
| 1:U:143:TYR:HD1  | 1:U:143:TYR:O   | 1.64                     | 0.81              |
| 1:C:143:TYR:O    | 1:C:143:TYR:HD1 | 1.64                     | 0.81              |
| 1:D:140:LEU:O    | 1:D:342:GLY:HA3 | 1.80                     | 0.81              |
| 1:D:143:TYR:O    | 1:D:143:TYR:HD1 | 1.64                     | 0.81              |
| 1:I:169:TYR:CZ   | 1:K:40:HIS:HB3  | 2.16                     | 0.81              |
| 1:M:169:TYR:CZ   | 1:O:40:HIS:HB3  | 2.15                     | 0.81              |
| 1:S:169:TYR:CZ   | 1:U:40:HIS:HB3  | 2.15                     | 0.81              |
| 1:L:169:TYR:CZ   | 1:N:40:HIS:HB3  | 2.16                     | 0.81              |
| 1:U:169:TYR:CZ   | 1:W:40:HIS:HB3  | 2.16                     | 0.81              |
| 1:A:140:LEU:O    | 1:A:342:GLY:HA3 | 1.80                     | 0.81              |
| 1:J:35:VAL:N     | 1:J:54:VAL:HG21 | 1.95                     | 0.81              |
| 1:J:143:TYR:HD1  | 1:J:143:TYR:O   | 1.64                     | 0.81              |
| 1:K:169:TYR:CZ   | 1:M:40:HIS:HB3  | 2.16                     | 0.81              |
| 1:Q:143:TYR:O    | 1:Q:143:TYR:HD1 | 1.64                     | 0.81              |
| 1:A:169:TYR:CZ   | 1:C:40:HIS:HB3  | 2.15                     | 0.81              |
| 1:F:143:TYR:O    | 1:F:143:TYR:HD1 | 1.64                     | 0.81              |
| 1:G:362:TYR:HE1  | 1:G:367:PRO:HB3 | 1.46                     | 0.81              |
| 1:M:362:TYR:HE1  | 1:M:367:PRO:HB3 | 1.46                     | 0.81              |
| 1:R:143:TYR:HD1  | 1:R:143:TYR:O   | 1.64                     | 0.81              |
| 1:D:169:TYR:CZ   | 1:F:40:HIS:HB3  | 2.15                     | 0.80              |
| 1:E:32:PRO:HG2   | 1:E:55:GLY:O    | 1.82                     | 0.80              |
| 1:J:169:TYR:CZ   | 1:L:40:HIS:HB3  | 2.15                     | 0.80              |
| 1:N:357:ILE:HG12 | 1:N:370:VAL:CG2 | 2.07                     | 0.80              |
| 1:P:362:TYR:HE1  | 1:P:367:PRO:HB3 | 1.46                     | 0.80              |
| 1:B:140:LEU:O    | 1:B:342:GLY:HA3 | 1.80                     | 0.80              |
| 1:I:143:TYR:O    | 1:I:143:TYR:HD1 | 1.64                     | 0.80              |
| 1:J:362:TYR:HE1  | 1:J:367:PRO:HB3 | 1.46                     | 0.80              |
| 1:O:362:TYR:HE1  | 1:O:367:PRO:HB3 | 1.46                     | 0.80              |
| 1:P:357:ILE:HG12 | 1:P:370:VAL:CG2 | 2.07                     | 0.80              |
| 1:T:140:LEU:O    | 1:T:342:GLY:HA3 | 1.80                     | 0.80              |
| 1:U:362:TYR:HE1  | 1:U:367:PRO:HB3 | 1.46                     | 0.80              |
| 1:A:362:TYR:HE1  | 1:A:367:PRO:HB3 | 1.46                     | 0.80              |
| 1:B:169:TYR:CZ   | 1:D:40:HIS:HB3  | 2.15                     | 0.80              |
| 1:F:169:TYR:CZ   | 1:H:40:HIS:HB3  | 2.15                     | 0.80              |
| 1:H:169:TYR:CZ   | 1:J:40:HIS:HB3  | 2.15                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:L:140:LEU:O    | 1:L:342:GLY:HA3 | 1.80                     | 0.80              |
| 1:O:143:TYR:O    | 1:O:143:TYR:HD1 | 1.64                     | 0.80              |
| 1:T:32:PRO:HG2   | 1:T:55:GLY:O    | 1.82                     | 0.80              |
| 1:P:32:PRO:HG2   | 1:P:55:GLY:O    | 1.82                     | 0.80              |
| 1:V:140:LEU:O    | 1:V:342:GLY:HA3 | 1.80                     | 0.80              |
| 1:C:357:ILE:HG12 | 1:C:370:VAL:CG2 | 2.07                     | 0.80              |
| 1:K:143:TYR:O    | 1:K:143:TYR:HD1 | 1.64                     | 0.80              |
| 1:E:357:ILE:HG12 | 1:E:370:VAL:CG2 | 2.07                     | 0.80              |
| 1:G:39:ARG:HE    | 1:G:66:THR:CB   | 1.95                     | 0.80              |
| 1:N:32:PRO:HG2   | 1:N:55:GLY:O    | 1.82                     | 0.80              |
| 1:H:58:ALA:HB1   | 1:H:65:LEU:HD22 | 1.64                     | 0.80              |
| 1:K:32:PRO:HG2   | 1:K:55:GLY:O    | 1.82                     | 0.80              |
| 1:N:143:TYR:O    | 1:N:143:TYR:HD1 | 1.64                     | 0.80              |
| 1:P:39:ARG:HE    | 1:P:66:THR:CB   | 1.95                     | 0.80              |
| 1:P:45:VAL:O     | 1:P:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:R:39:ARG:HE    | 1:R:66:THR:CB   | 1.95                     | 0.80              |
| 1:T:362:TYR:HE1  | 1:T:367:PRO:HB3 | 1.46                     | 0.80              |
| 1:C:45:VAL:O     | 1:C:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:F:45:VAL:O     | 1:F:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:G:43:VAL:CG1   | 1:G:44:MET:N    | 2.30                     | 0.80              |
| 1:J:45:VAL:O     | 1:J:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:K:362:TYR:HE1  | 1:K:367:PRO:HB3 | 1.46                     | 0.80              |
| 1:V:32:PRO:HG2   | 1:V:55:GLY:O    | 1.82                     | 0.80              |
| 1:V:45:VAL:O     | 1:V:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:W:58:ALA:HB1   | 1:W:65:LEU:HD22 | 1.64                     | 0.80              |
| 1:A:39:ARG:HE    | 1:A:66:THR:CB   | 1.95                     | 0.80              |
| 1:A:143:TYR:O    | 1:A:143:TYR:HD1 | 1.64                     | 0.80              |
| 1:G:45:VAL:O     | 1:G:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:H:143:TYR:O    | 1:H:143:TYR:HD1 | 1.64                     | 0.80              |
| 1:L:357:ILE:HG12 | 1:L:370:VAL:CG2 | 2.07                     | 0.80              |
| 1:R:140:LEU:O    | 1:R:342:GLY:HA3 | 1.80                     | 0.80              |
| 1:S:45:VAL:O     | 1:S:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:E:39:ARG:HE    | 1:E:66:THR:CB   | 1.95                     | 0.80              |
| 1:E:143:TYR:HD1  | 1:E:143:TYR:O   | 1.64                     | 0.80              |
| 1:I:39:ARG:HE    | 1:I:66:THR:CB   | 1.95                     | 0.80              |
| 1:N:58:ALA:HB1   | 1:N:65:LEU:HD22 | 1.64                     | 0.80              |
| 1:W:45:VAL:O     | 1:W:45:VAL:CG2  | 2.30                     | 0.80              |
| 1:C:32:PRO:HG2   | 1:C:55:GLY:O    | 1.82                     | 0.79              |
| 1:J:39:ARG:HE    | 1:J:66:THR:CB   | 1.95                     | 0.79              |
| 1:J:58:ALA:HB1   | 1:J:65:LEU:HD22 | 1.64                     | 0.79              |
| 1:L:45:VAL:O     | 1:L:45:VAL:CG2  | 2.30                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:58:ALA:HB1   | 1:L:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:Q:32:PRO:HG2   | 1:Q:55:GLY:O     | 1.82                     | 0.79              |
| 1:S:58:ALA:HB1   | 1:S:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:W:143:TYR:O    | 1:W:143:TYR:HD1  | 1.64                     | 0.79              |
| 1:A:357:ILE:HG12 | 1:A:370:VAL:CG2  | 2.07                     | 0.79              |
| 1:I:45:VAL:O     | 1:I:45:VAL:CG2   | 2.30                     | 0.79              |
| 1:K:8:LEU:CD1    | 1:K:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:M:143:TYR:HD1  | 1:M:143:TYR:O    | 1.64                     | 0.79              |
| 1:R:357:ILE:HG12 | 1:R:370:VAL:CG2  | 2.07                     | 0.79              |
| 1:S:143:TYR:O    | 1:S:143:TYR:HD1  | 1.64                     | 0.79              |
| 1:T:45:VAL:O     | 1:T:45:VAL:CG2   | 2.30                     | 0.79              |
| 1:V:336:LYS:HE2  | 2:V:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:A:58:ALA:HB1   | 1:A:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:F:32:PRO:HG2   | 1:F:55:GLY:O     | 1.82                     | 0.79              |
| 1:I:8:LEU:CD1    | 1:I:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:I:32:PRO:HG2   | 1:I:55:GLY:O     | 1.82                     | 0.79              |
| 1:O:32:PRO:HG2   | 1:O:55:GLY:O     | 1.82                     | 0.79              |
| 1:S:32:PRO:HG2   | 1:S:55:GLY:O     | 1.82                     | 0.79              |
| 1:U:58:ALA:HB1   | 1:U:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:A:32:PRO:HG2   | 1:A:55:GLY:O     | 1.82                     | 0.79              |
| 1:C:58:ALA:HB1   | 1:C:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:D:58:ALA:HB1   | 1:D:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:F:58:ALA:HB1   | 1:F:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:G:143:TYR:HD1  | 1:G:143:TYR:O    | 1.64                     | 0.79              |
| 1:H:32:PRO:HG2   | 1:H:55:GLY:O     | 1.82                     | 0.79              |
| 1:H:39:ARG:HE    | 1:H:66:THR:CB    | 1.95                     | 0.79              |
| 1:H:54:VAL:HA    | 1:H:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:I:362:TYR:HE1  | 1:I:367:PRO:HB3  | 1.46                     | 0.79              |
| 1:L:143:TYR:O    | 1:L:143:TYR:HD1  | 1.64                     | 0.79              |
| 1:M:32:PRO:HG2   | 1:M:55:GLY:O     | 1.82                     | 0.79              |
| 1:O:361:GLU:CB   | 1:O:369:ILE:HD13 | 2.06                     | 0.79              |
| 1:R:45:VAL:O     | 1:R:45:VAL:CG2   | 2.30                     | 0.79              |
| 1:S:336:LYS:HE2  | 2:S:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:S:362:TYR:HE1  | 1:S:367:PRO:HB3  | 1.46                     | 0.79              |
| 1:B:8:LEU:CD1    | 1:B:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:B:143:TYR:HD1  | 1:B:143:TYR:O    | 1.64                     | 0.79              |
| 1:B:336:LYS:HE2  | 2:B:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:F:54:VAL:HA    | 1:F:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:G:32:PRO:HG2   | 1:G:55:GLY:O     | 1.82                     | 0.79              |
| 1:N:39:ARG:HE    | 1:N:66:THR:CB    | 1.95                     | 0.79              |
| 1:Q:336:LYS:HE2  | 2:Q:401:ADP:H5'2 | 1.65                     | 0.79              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:362:TYR:HE1  | 1:Q:367:PRO:HB3  | 1.46                     | 0.79              |
| 1:R:362:TYR:HE1  | 1:R:367:PRO:HB3  | 1.46                     | 0.79              |
| 1:T:8:LEU:CD1    | 1:T:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:T:39:ARG:HE    | 1:T:66:THR:CB    | 1.95                     | 0.79              |
| 1:T:336:LYS:HE2  | 2:T:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:U:54:VAL:HA    | 1:U:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:V:143:TYR:O    | 1:V:143:TYR:HD1  | 1.64                     | 0.79              |
| 1:W:54:VAL:HA    | 1:W:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:D:32:PRO:HG2   | 1:D:55:GLY:O     | 1.82                     | 0.79              |
| 1:E:45:VAL:O     | 1:E:45:VAL:CG2   | 2.30                     | 0.79              |
| 1:L:39:ARG:HE    | 1:L:66:THR:CB    | 1.95                     | 0.79              |
| 1:S:54:VAL:HA    | 1:S:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:U:45:VAL:O     | 1:U:45:VAL:CG2   | 2.30                     | 0.79              |
| 1:W:357:ILE:HG12 | 1:W:370:VAL:CG2  | 2.07                     | 0.79              |
| 1:A:45:VAL:O     | 1:A:45:VAL:CG2   | 2.30                     | 0.79              |
| 1:D:54:VAL:HA    | 1:D:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:J:32:PRO:HG2   | 1:J:55:GLY:O     | 1.82                     | 0.79              |
| 1:Q:39:ARG:HE    | 1:Q:66:THR:CB    | 1.95                     | 0.79              |
| 1:S:39:ARG:HE    | 1:S:66:THR:CB    | 1.95                     | 0.79              |
| 1:U:336:LYS:HE2  | 2:U:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:V:43:VAL:CG1   | 1:V:44:MET:N     | 2.30                     | 0.79              |
| 1:D:45:VAL:O     | 1:D:45:VAL:CG2   | 2.30                     | 0.79              |
| 1:G:357:ILE:HG12 | 1:G:370:VAL:CG2  | 2.07                     | 0.79              |
| 1:J:54:VAL:HA    | 1:J:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:O:39:ARG:HE    | 1:O:66:THR:CB    | 1.95                     | 0.79              |
| 1:O:54:VAL:HA    | 1:O:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:P:58:ALA:HB1   | 1:P:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:R:8:LEU:CD1    | 1:R:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:V:39:ARG:HE    | 1:V:66:THR:CB    | 1.95                     | 0.79              |
| 1:E:336:LYS:HE2  | 2:E:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:F:39:ARG:HE    | 1:F:66:THR:CB    | 1.95                     | 0.79              |
| 1:H:332:PRO:HG2  | 1:H:335:ARG:CZ   | 2.13                     | 0.79              |
| 1:J:332:PRO:HG2  | 1:J:335:ARG:CZ   | 2.13                     | 0.79              |
| 1:M:54:VAL:HA    | 1:M:58:ALA:HB2   | 1.65                     | 0.79              |
| 1:Q:8:LEU:CD1    | 1:Q:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:U:32:PRO:HG2   | 1:U:55:GLY:O     | 1.82                     | 0.79              |
| 1:U:332:PRO:HG2  | 1:U:335:ARG:CZ   | 2.13                     | 0.79              |
| 1:W:8:LEU:CD1    | 1:W:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:B:32:PRO:HG2   | 1:B:55:GLY:O     | 1.82                     | 0.79              |
| 1:C:8:LEU:CD1    | 1:C:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:C:336:LYS:HE2  | 2:C:401:ADP:H5'2 | 1.65                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:336:LYS:HE2  | 2:D:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:E:8:LEU:CD1    | 1:E:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:O:336:LYS:HE2  | 2:O:401:ADP:H5'2 | 1.65                     | 0.79              |
| 1:R:58:ALA:HB1   | 1:R:65:LEU:HD22  | 1.64                     | 0.79              |
| 1:U:8:LEU:CD1    | 1:U:90:PHE:CE1   | 2.66                     | 0.79              |
| 1:H:45:VAL:O     | 1:H:45:VAL:CG2   | 2.30                     | 0.78              |
| 1:K:39:ARG:HE    | 1:K:66:THR:CB    | 1.95                     | 0.78              |
| 1:L:332:PRO:HG2  | 1:L:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:N:45:VAL:O     | 1:N:45:VAL:CG2   | 2.30                     | 0.78              |
| 1:O:8:LEU:CD1    | 1:O:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:Q:54:VAL:HA    | 1:Q:58:ALA:HB2   | 1.65                     | 0.78              |
| 1:R:336:LYS:HE2  | 2:R:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:B:54:VAL:HA    | 1:B:58:ALA:HB2   | 1.65                     | 0.78              |
| 1:C:39:ARG:HE    | 1:C:66:THR:CB    | 1.95                     | 0.78              |
| 1:F:332:PRO:HG2  | 1:F:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:G:336:LYS:HE2  | 2:G:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:I:332:PRO:HG2  | 1:I:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:L:32:PRO:HG2   | 1:L:55:GLY:O     | 1.82                     | 0.78              |
| 1:M:39:ARG:HE    | 1:M:66:THR:CB    | 1.95                     | 0.78              |
| 1:Q:58:ALA:HB1   | 1:Q:65:LEU:HD22  | 1.64                     | 0.78              |
| 1:S:332:PRO:HG2  | 1:S:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:U:39:ARG:HE    | 1:U:66:THR:CB    | 1.95                     | 0.78              |
| 1:W:332:PRO:HG2  | 1:W:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:W:336:LYS:HE2  | 2:W:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:A:8:LEU:CD1    | 1:A:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:G:332:PRO:HG2  | 1:G:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:O:58:ALA:HB1   | 1:O:65:LEU:HD22  | 1.64                     | 0.78              |
| 1:W:39:ARG:HE    | 1:W:66:THR:CB    | 1.95                     | 0.78              |
| 1:A:54:VAL:HA    | 1:A:58:ALA:HB2   | 1.65                     | 0.78              |
| 1:A:236:LEU:HD12 | 1:A:237:GLU:N    | 1.99                     | 0.78              |
| 1:A:336:LYS:HE2  | 2:A:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:G:8:LEU:CD1    | 1:G:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:J:357:ILE:HG12 | 1:J:370:VAL:CG2  | 2.06                     | 0.78              |
| 1:L:54:VAL:HA    | 1:L:58:ALA:HB2   | 1.65                     | 0.78              |
| 1:P:143:TYR:O    | 1:P:143:TYR:HD1  | 1.64                     | 0.78              |
| 1:Q:45:VAL:O     | 1:Q:45:VAL:CG2   | 2.30                     | 0.78              |
| 1:D:332:PRO:HG2  | 1:D:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:E:58:ALA:HB1   | 1:E:65:LEU:HD22  | 1.64                     | 0.78              |
| 1:I:336:LYS:HE2  | 2:I:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:N:54:VAL:HA    | 1:N:58:ALA:HB2   | 1.65                     | 0.78              |
| 1:W:32:PRO:HG2   | 1:W:55:GLY:O     | 1.82                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:8:LEU:CD1    | 1:D:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:K:54:VAL:HA    | 1:K:58:ALA:HB2   | 1.65                     | 0.78              |
| 1:K:332:PRO:HG2  | 1:K:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:M:236:LEU:HD12 | 1:M:237:GLU:N    | 1.99                     | 0.78              |
| 1:N:332:PRO:HG2  | 1:N:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:R:32:PRO:HG2   | 1:R:55:GLY:O     | 1.82                     | 0.78              |
| 1:S:8:LEU:CD1    | 1:S:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:T:332:PRO:HG2  | 1:T:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:T:357:ILE:HG12 | 1:T:370:VAL:CG2  | 2.07                     | 0.78              |
| 1:B:39:ARG:HE    | 1:B:66:THR:CB    | 1.95                     | 0.78              |
| 1:B:58:ALA:HB1   | 1:B:65:LEU:HD22  | 1.64                     | 0.78              |
| 1:D:39:ARG:HE    | 1:D:66:THR:CB    | 1.95                     | 0.78              |
| 1:F:336:LYS:HE2  | 2:F:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:H:8:LEU:CD1    | 1:H:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:J:236:LEU:HD12 | 1:J:237:GLU:N    | 1.99                     | 0.78              |
| 1:M:336:LYS:HE2  | 2:M:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:O:236:LEU:HD12 | 1:O:237:GLU:N    | 1.99                     | 0.78              |
| 1:Q:332:PRO:HG2  | 1:Q:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:B:332:PRO:HG2  | 1:B:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:K:236:LEU:HD12 | 1:K:237:GLU:N    | 1.99                     | 0.78              |
| 1:L:8:LEU:CD1    | 1:L:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:M:8:LEU:CD1    | 1:M:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:P:236:LEU:HD12 | 1:P:237:GLU:N    | 1.99                     | 0.78              |
| 1:V:332:PRO:HG2  | 1:V:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:N:8:LEU:CD1    | 1:N:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:P:336:LYS:HE2  | 2:P:401:ADP:H5'2 | 1.65                     | 0.78              |
| 1:R:236:LEU:HD12 | 1:R:237:GLU:N    | 1.99                     | 0.78              |
| 1:E:332:PRO:HG2  | 1:E:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:F:8:LEU:CD1    | 1:F:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:G:58:ALA:HB1   | 1:G:65:LEU:HD22  | 1.64                     | 0.78              |
| 1:J:8:LEU:CD1    | 1:J:90:PHE:CE1   | 2.66                     | 0.78              |
| 1:R:332:PRO:HG2  | 1:R:335:ARG:CZ   | 2.13                     | 0.78              |
| 1:U:357:ILE:HG12 | 1:U:370:VAL:CG2  | 2.07                     | 0.78              |
| 1:F:236:LEU:HD12 | 1:F:237:GLU:N    | 1.99                     | 0.77              |
| 1:L:236:LEU:HD12 | 1:L:237:GLU:N    | 1.99                     | 0.77              |
| 1:N:35:VAL:HG22  | 1:N:52:SER:HB2   | 1.66                     | 0.77              |
| 1:P:332:PRO:HG2  | 1:P:335:ARG:CZ   | 2.13                     | 0.77              |
| 1:T:58:ALA:HB1   | 1:T:65:LEU:HD22  | 1.64                     | 0.77              |
| 1:V:8:LEU:CD1    | 1:V:90:PHE:CE1   | 2.66                     | 0.77              |
| 1:C:236:LEU:HD12 | 1:C:237:GLU:N    | 1.99                     | 0.77              |
| 1:D:236:LEU:HD12 | 1:D:237:GLU:N    | 1.99                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:357:ILE:HG12 | 1:H:370:VAL:CG2  | 2.07                     | 0.77              |
| 1:I:58:ALA:HB1   | 1:I:65:LEU:HD22  | 1.64                     | 0.77              |
| 1:J:35:VAL:HG22  | 1:J:52:SER:HB2   | 1.66                     | 0.77              |
| 1:M:58:ALA:HB1   | 1:M:65:LEU:HD22  | 1.64                     | 0.77              |
| 1:M:332:PRO:HG2  | 1:M:335:ARG:CZ   | 2.13                     | 0.77              |
| 1:P:54:VAL:HA    | 1:P:58:ALA:HB2   | 1.65                     | 0.77              |
| 1:V:54:VAL:HA    | 1:V:58:ALA:HB2   | 1.65                     | 0.77              |
| 1:V:58:ALA:HB1   | 1:V:65:LEU:HD22  | 1.64                     | 0.77              |
| 1:V:357:ILE:HG12 | 1:V:370:VAL:CG2  | 2.07                     | 0.77              |
| 1:I:357:ILE:HG12 | 1:I:370:VAL:CG2  | 2.07                     | 0.77              |
| 1:M:45:VAL:O     | 1:M:45:VAL:CG2   | 2.30                     | 0.77              |
| 1:P:8:LEU:CD1    | 1:P:90:PHE:CE1   | 2.66                     | 0.77              |
| 1:A:35:VAL:HG22  | 1:A:52:SER:HB2   | 1.66                     | 0.77              |
| 1:G:54:VAL:HA    | 1:G:58:ALA:HB2   | 1.65                     | 0.77              |
| 1:I:236:LEU:HD12 | 1:I:237:GLU:N    | 1.99                     | 0.77              |
| 1:N:39:ARG:NE    | 1:N:66:THR:HA    | 2.00                     | 0.77              |
| 1:O:332:PRO:HG2  | 1:O:335:ARG:CZ   | 2.13                     | 0.77              |
| 1:P:287:ILE:CD1  | 1:R:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:Q:173:HIS:CE1  | 1:R:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:W:35:VAL:HG22  | 1:W:52:SER:HB2   | 1.66                     | 0.77              |
| 1:A:287:ILE:CD1  | 1:C:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:C:54:VAL:HA    | 1:C:58:ALA:HB2   | 1.65                     | 0.77              |
| 1:D:173:HIS:CE1  | 1:E:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:E:54:VAL:HA    | 1:E:58:ALA:HB2   | 1.65                     | 0.77              |
| 1:F:173:HIS:CE1  | 1:G:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:M:287:ILE:CD1  | 1:O:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:Q:236:LEU:HD12 | 1:Q:237:GLU:N    | 1.99                     | 0.77              |
| 1:T:54:VAL:HA    | 1:T:58:ALA:HB2   | 1.65                     | 0.77              |
| 1:W:39:ARG:NE    | 1:W:66:THR:HA    | 2.00                     | 0.77              |
| 1:B:236:LEU:HD12 | 1:B:237:GLU:N    | 1.99                     | 0.77              |
| 1:G:287:ILE:CD1  | 1:I:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:H:336:LYS:HE2  | 2:H:401:ADP:H5'2 | 1.65                     | 0.77              |
| 1:O:173:HIS:CE1  | 1:P:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:O:287:ILE:CD1  | 1:Q:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:V:236:LEU:HD12 | 1:V:237:GLU:N    | 1.99                     | 0.77              |
| 1:F:287:ILE:CD1  | 1:H:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:G:236:LEU:HD12 | 1:G:237:GLU:N    | 1.99                     | 0.77              |
| 1:I:54:VAL:HA    | 1:I:58:ALA:HB2   | 1.65                     | 0.77              |
| 1:K:336:LYS:HE2  | 2:K:401:ADP:H5'2 | 1.65                     | 0.77              |
| 1:N:336:LYS:HE2  | 2:N:401:ADP:H5'2 | 1.65                     | 0.77              |
| 1:P:39:ARG:NE    | 1:P:66:THR:HA    | 2.00                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:34:ILE:C     | 1:S:54:VAL:HG21  | 2.05                     | 0.77              |
| 1:T:236:LEU:HD12 | 1:T:237:GLU:N    | 1.99                     | 0.77              |
| 1:A:332:PRO:HG2  | 1:A:335:ARG:CZ   | 2.13                     | 0.77              |
| 1:E:39:ARG:NE    | 1:E:66:THR:HA    | 2.00                     | 0.77              |
| 1:E:173:HIS:CE1  | 1:F:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:H:236:LEU:HD12 | 1:H:237:GLU:N    | 1.99                     | 0.77              |
| 1:K:58:ALA:HB1   | 1:K:65:LEU:HD22  | 1.64                     | 0.77              |
| 1:O:34:ILE:C     | 1:O:54:VAL:HG21  | 2.06                     | 0.77              |
| 1:P:173:HIS:CE1  | 1:Q:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:R:34:ILE:C     | 1:R:54:VAL:HG21  | 2.05                     | 0.77              |
| 1:R:287:ILE:CD1  | 1:T:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:U:236:LEU:HD12 | 1:U:237:GLU:N    | 1.99                     | 0.77              |
| 1:A:39:ARG:NE    | 1:A:66:THR:HA    | 2.00                     | 0.77              |
| 1:C:287:ILE:CD1  | 1:E:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:D:36:GLY:O     | 1:D:52:SER:HA    | 1.85                     | 0.77              |
| 1:F:34:ILE:C     | 1:F:54:VAL:HG21  | 2.06                     | 0.77              |
| 1:H:39:ARG:NE    | 1:H:66:THR:HA    | 2.00                     | 0.77              |
| 1:H:287:ILE:CD1  | 1:J:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:I:287:ILE:CD1  | 1:K:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:R:35:VAL:HG22  | 1:R:52:SER:HB2   | 1.66                     | 0.77              |
| 1:S:173:HIS:CE1  | 1:T:268:GLY:HA3  | 2.20                     | 0.77              |
| 1:T:173:HIS:CE1  | 1:U:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:U:287:ILE:CD1  | 1:W:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:B:34:ILE:C     | 1:B:54:VAL:HG21  | 2.06                     | 0.77              |
| 1:B:173:HIS:CE1  | 1:C:268:GLY:HA3  | 2.19                     | 0.77              |
| 1:E:34:ILE:C     | 1:E:54:VAL:HG21  | 2.06                     | 0.77              |
| 1:I:34:ILE:C     | 1:I:54:VAL:HG21  | 2.05                     | 0.77              |
| 1:L:39:ARG:NE    | 1:L:66:THR:HA    | 2.00                     | 0.77              |
| 1:N:54:VAL:HG12  | 1:N:55:GLY:N     | 2.00                     | 0.77              |
| 1:N:287:ILE:CD1  | 1:P:208:ILE:HD13 | 2.15                     | 0.77              |
| 1:O:36:GLY:O     | 1:O:52:SER:HA    | 1.85                     | 0.77              |
| 1:W:34:ILE:C     | 1:W:54:VAL:HG21  | 2.06                     | 0.77              |
| 1:C:173:HIS:CE1  | 1:D:268:GLY:HA3  | 2.19                     | 0.76              |
| 1:C:332:PRO:HG2  | 1:C:335:ARG:CZ   | 2.13                     | 0.76              |
| 1:D:287:ILE:CD1  | 1:F:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:E:36:GLY:O     | 1:E:52:SER:HA    | 1.85                     | 0.76              |
| 1:F:35:VAL:HG22  | 1:F:52:SER:HB2   | 1.66                     | 0.76              |
| 1:G:36:GLY:O     | 1:G:52:SER:HA    | 1.85                     | 0.76              |
| 1:H:173:HIS:CE1  | 1:I:268:GLY:HA3  | 2.19                     | 0.76              |
| 1:I:36:GLY:O     | 1:I:52:SER:HA    | 1.85                     | 0.76              |
| 1:J:39:ARG:NE    | 1:J:66:THR:HA    | 2.00                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:34:ILE:C     | 1:N:54:VAL:HG21  | 2.05                     | 0.76              |
| 1:N:36:GLY:O     | 1:N:52:SER:HA    | 1.85                     | 0.76              |
| 1:P:36:GLY:O     | 1:P:52:SER:HA    | 1.85                     | 0.76              |
| 1:R:37:ARG:HG3   | 1:R:38:PRO:CD    | 2.15                     | 0.76              |
| 1:R:54:VAL:HA    | 1:R:58:ALA:HB2   | 1.65                     | 0.76              |
| 1:A:173:HIS:CE1  | 1:B:268:GLY:HA3  | 2.19                     | 0.76              |
| 1:E:236:LEU:HD12 | 1:E:237:GLU:N    | 1.99                     | 0.76              |
| 1:F:357:ILE:HG12 | 1:F:370:VAL:CG2  | 2.07                     | 0.76              |
| 1:J:54:VAL:HG12  | 1:J:55:GLY:N     | 2.00                     | 0.76              |
| 1:K:34:ILE:C     | 1:K:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:L:34:ILE:C     | 1:L:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:L:336:LYS:HE2  | 2:L:401:ADP:H5'2 | 1.65                     | 0.76              |
| 1:N:173:HIS:CE1  | 1:O:268:GLY:HA3  | 2.19                     | 0.76              |
| 1:P:37:ARG:HG3   | 1:P:38:PRO:CD    | 2.15                     | 0.76              |
| 1:S:35:VAL:HG22  | 1:S:52:SER:HB2   | 1.66                     | 0.76              |
| 1:U:36:GLY:O     | 1:U:52:SER:HA    | 1.85                     | 0.76              |
| 1:U:37:ARG:HG3   | 1:U:38:PRO:CD    | 2.15                     | 0.76              |
| 1:V:34:ILE:C     | 1:V:54:VAL:HG21  | 2.05                     | 0.76              |
| 1:W:37:ARG:HG3   | 1:W:38:PRO:CD    | 2.15                     | 0.76              |
| 1:C:34:ILE:C     | 1:C:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:C:39:ARG:NE    | 1:C:66:THR:HA    | 2.00                     | 0.76              |
| 1:E:35:VAL:HG22  | 1:E:52:SER:HB2   | 1.66                     | 0.76              |
| 1:F:36:GLY:O     | 1:F:52:SER:HA    | 1.85                     | 0.76              |
| 1:K:36:GLY:O     | 1:K:52:SER:HA    | 1.85                     | 0.76              |
| 1:K:39:ARG:NE    | 1:K:66:THR:HA    | 2.00                     | 0.76              |
| 1:L:36:GLY:O     | 1:L:52:SER:HA    | 1.85                     | 0.76              |
| 1:M:173:HIS:CE1  | 1:N:268:GLY:HA3  | 2.19                     | 0.76              |
| 1:R:36:GLY:O     | 1:R:52:SER:HA    | 1.85                     | 0.76              |
| 1:S:37:ARG:HG3   | 1:S:38:PRO:CD    | 2.15                     | 0.76              |
| 1:V:173:HIS:CE1  | 1:W:268:GLY:HA3  | 2.20                     | 0.76              |
| 1:C:36:GLY:O     | 1:C:52:SER:HA    | 1.85                     | 0.76              |
| 1:C:54:VAL:HG12  | 1:C:55:GLY:N     | 2.00                     | 0.76              |
| 1:F:39:ARG:NE    | 1:F:66:THR:HA    | 2.00                     | 0.76              |
| 1:J:143:TYR:CZ   | 1:L:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:Q:37:ARG:HG3   | 1:Q:38:PRO:CD    | 2.15                     | 0.76              |
| 1:R:173:HIS:CE1  | 1:S:268:GLY:HA3  | 2.20                     | 0.76              |
| 1:S:287:ILE:CD1  | 1:U:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:W:236:LEU:HD12 | 1:W:237:GLU:N    | 1.99                     | 0.76              |
| 1:A:34:ILE:C     | 1:A:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:F:143:TYR:CZ   | 1:H:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:G:173:HIS:CE1  | 1:H:268:GLY:HA3  | 2.19                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:34:ILE:C     | 1:H:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:J:34:ILE:C     | 1:J:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:J:287:ILE:CD1  | 1:L:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:J:336:LYS:HE2  | 2:J:401:ADP:H5'2 | 1.65                     | 0.76              |
| 1:N:37:ARG:HG3   | 1:N:38:PRO:CD    | 2.15                     | 0.76              |
| 1:N:236:LEU:HD12 | 1:N:237:GLU:N    | 1.99                     | 0.76              |
| 1:O:39:ARG:NE    | 1:O:66:THR:HA    | 2.00                     | 0.76              |
| 1:P:143:TYR:CZ   | 1:R:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:Q:39:ARG:NE    | 1:Q:66:THR:HA    | 2.00                     | 0.76              |
| 1:Q:143:TYR:CZ   | 1:S:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:R:54:VAL:HG12  | 1:R:55:GLY:N     | 2.00                     | 0.76              |
| 1:S:236:LEU:HD12 | 1:S:237:GLU:N    | 1.99                     | 0.76              |
| 1:S:357:ILE:HG12 | 1:S:370:VAL:CG2  | 2.07                     | 0.76              |
| 1:T:36:GLY:O     | 1:T:52:SER:HA    | 1.85                     | 0.76              |
| 1:U:143:TYR:CZ   | 1:W:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:E:54:VAL:HG12  | 1:E:55:GLY:N     | 2.00                     | 0.76              |
| 1:G:39:ARG:NE    | 1:G:66:THR:HA    | 2.00                     | 0.76              |
| 1:G:143:TYR:CZ   | 1:I:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:I:39:ARG:NE    | 1:I:66:THR:HA    | 2.00                     | 0.76              |
| 1:I:173:HIS:CE1  | 1:J:268:GLY:HA3  | 2.20                     | 0.76              |
| 1:J:36:GLY:O     | 1:J:52:SER:HA    | 1.85                     | 0.76              |
| 1:L:173:HIS:CE1  | 1:M:268:GLY:HA3  | 2.19                     | 0.76              |
| 1:M:34:ILE:C     | 1:M:54:VAL:HG21  | 2.05                     | 0.76              |
| 1:S:36:GLY:O     | 1:S:52:SER:HA    | 1.85                     | 0.76              |
| 1:V:39:ARG:NE    | 1:V:66:THR:HA    | 2.00                     | 0.76              |
| 1:B:142:LEU:HD21 | 1:B:165:ILE:HD13 | 1.68                     | 0.76              |
| 1:D:34:ILE:C     | 1:D:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:E:143:TYR:CZ   | 1:G:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:E:287:ILE:CD1  | 1:G:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:F:142:LEU:HD21 | 1:F:165:ILE:HD13 | 1.68                     | 0.76              |
| 1:K:143:TYR:CZ   | 1:M:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:P:34:ILE:C     | 1:P:54:VAL:HG21  | 2.06                     | 0.76              |
| 1:S:142:LEU:HD21 | 1:S:165:ILE:HD13 | 1.68                     | 0.76              |
| 1:T:287:ILE:CD1  | 1:V:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:U:39:ARG:NE    | 1:U:66:THR:HA    | 2.00                     | 0.76              |
| 1:A:36:GLY:O     | 1:A:52:SER:HA    | 1.85                     | 0.76              |
| 1:A:143:TYR:CZ   | 1:C:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:B:287:ILE:CD1  | 1:D:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:K:287:ILE:CD1  | 1:M:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:M:36:GLY:O     | 1:M:52:SER:HA    | 1.85                     | 0.76              |
| 1:O:37:ARG:HG3   | 1:O:38:PRO:CD    | 2.15                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:287:ILE:CD1  | 1:S:208:ILE:HD13 | 2.15                     | 0.76              |
| 1:U:142:LEU:HD21 | 1:U:165:ILE:HD13 | 1.68                     | 0.76              |
| 1:U:173:HIS:CE1  | 1:V:268:GLY:HA3  | 2.19                     | 0.76              |
| 1:B:143:TYR:CZ   | 1:D:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:D:143:TYR:CZ   | 1:F:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:I:44:MET:HG3   | 1:I:45:VAL:H     | 1.51                     | 0.76              |
| 1:K:148:THR:O    | 1:K:165:ILE:HG22 | 1.86                     | 0.76              |
| 1:K:357:ILE:HG12 | 1:K:370:VAL:CG2  | 2.07                     | 0.76              |
| 1:M:142:LEU:HD21 | 1:M:165:ILE:HD13 | 1.68                     | 0.76              |
| 1:O:142:LEU:HD21 | 1:O:165:ILE:HD13 | 1.68                     | 0.76              |
| 1:R:143:TYR:CZ   | 1:T:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:T:39:ARG:NE    | 1:T:66:THR:HA    | 2.00                     | 0.76              |
| 1:T:54:VAL:HG12  | 1:T:55:GLY:N     | 2.00                     | 0.76              |
| 1:U:34:ILE:C     | 1:U:54:VAL:HG21  | 2.05                     | 0.76              |
| 1:U:54:VAL:HG12  | 1:U:55:GLY:N     | 2.00                     | 0.76              |
| 1:V:148:THR:O    | 1:V:165:ILE:HG22 | 1.86                     | 0.76              |
| 1:C:35:VAL:HG22  | 1:C:52:SER:HB2   | 1.66                     | 0.76              |
| 1:H:142:LEU:HD21 | 1:H:165:ILE:HD13 | 1.68                     | 0.76              |
| 1:L:143:TYR:CZ   | 1:N:45:VAL:HG21  | 2.21                     | 0.76              |
| 1:O:44:MET:HG3   | 1:O:45:VAL:H     | 1.51                     | 0.76              |
| 1:V:44:MET:HG3   | 1:V:45:VAL:H     | 1.51                     | 0.76              |
| 1:B:44:MET:HG3   | 1:B:45:VAL:H     | 1.51                     | 0.75              |
| 1:B:45:VAL:O     | 1:B:45:VAL:CG2   | 2.30                     | 0.75              |
| 1:D:39:ARG:NE    | 1:D:66:THR:HA    | 2.00                     | 0.75              |
| 1:D:357:ILE:HG12 | 1:D:370:VAL:CG2  | 2.07                     | 0.75              |
| 1:J:173:HIS:CE1  | 1:K:268:GLY:HA3  | 2.19                     | 0.75              |
| 1:L:37:ARG:HG3   | 1:L:38:PRO:CD    | 2.15                     | 0.75              |
| 1:L:287:ILE:CD1  | 1:N:208:ILE:HD13 | 2.15                     | 0.75              |
| 1:Q:36:GLY:O     | 1:Q:52:SER:HA    | 1.85                     | 0.75              |
| 1:S:39:ARG:NE    | 1:S:66:THR:HA    | 2.00                     | 0.75              |
| 1:V:36:GLY:O     | 1:V:52:SER:HA    | 1.85                     | 0.75              |
| 1:B:39:ARG:NE    | 1:B:66:THR:HA    | 2.00                     | 0.75              |
| 1:D:142:LEU:HD21 | 1:D:165:ILE:HD13 | 1.68                     | 0.75              |
| 1:H:36:GLY:O     | 1:H:52:SER:HA    | 1.85                     | 0.75              |
| 1:I:54:VAL:HG12  | 1:I:55:GLY:N     | 2.00                     | 0.75              |
| 1:K:173:HIS:CE1  | 1:L:268:GLY:HA3  | 2.19                     | 0.75              |
| 1:M:37:ARG:HG3   | 1:M:38:PRO:CD    | 2.15                     | 0.75              |
| 1:O:35:VAL:HG22  | 1:O:52:SER:HB2   | 1.66                     | 0.75              |
| 1:Q:34:ILE:C     | 1:Q:54:VAL:HG21  | 2.06                     | 0.75              |
| 1:R:39:ARG:NE    | 1:R:66:THR:HA    | 2.00                     | 0.75              |
| 1:A:54:VAL:HG12  | 1:A:55:GLY:N     | 2.00                     | 0.75              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:36:GLY:O     | 1:B:52:SER:HA    | 1.85                     | 0.75              |
| 1:B:148:THR:O    | 1:B:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:B:357:ILE:HG12 | 1:B:370:VAL:CG2  | 2.07                     | 0.75              |
| 1:H:143:TYR:CZ   | 1:J:45:VAL:HG21  | 2.21                     | 0.75              |
| 1:I:35:VAL:HG22  | 1:I:52:SER:HB2   | 1.66                     | 0.75              |
| 1:J:148:THR:O    | 1:J:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:K:142:LEU:HD11 | 1:K:165:ILE:HD11 | 1.69                     | 0.75              |
| 1:L:148:THR:O    | 1:L:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:P:54:VAL:HG12  | 1:P:55:GLY:N     | 2.01                     | 0.75              |
| 1:T:34:ILE:C     | 1:T:54:VAL:HG21  | 2.06                     | 0.75              |
| 1:F:54:VAL:HG12  | 1:F:55:GLY:N     | 2.00                     | 0.75              |
| 1:N:143:TYR:CZ   | 1:P:45:VAL:HG21  | 2.21                     | 0.75              |
| 1:O:143:TYR:CZ   | 1:Q:45:VAL:HG21  | 2.21                     | 0.75              |
| 1:F:44:MET:HG3   | 1:F:45:VAL:H     | 1.51                     | 0.75              |
| 1:G:54:VAL:HG12  | 1:G:55:GLY:N     | 2.01                     | 0.75              |
| 1:H:148:THR:O    | 1:H:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:M:39:ARG:NE    | 1:M:66:THR:HA    | 2.00                     | 0.75              |
| 1:Q:142:LEU:HD21 | 1:Q:165:ILE:HD13 | 1.68                     | 0.75              |
| 1:S:143:TYR:CZ   | 1:U:45:VAL:HG21  | 2.21                     | 0.75              |
| 1:U:35:VAL:HG22  | 1:U:52:SER:HB2   | 1.66                     | 0.75              |
| 1:E:148:THR:O    | 1:E:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:G:148:THR:O    | 1:G:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:K:35:VAL:HG22  | 1:K:52:SER:HB2   | 1.66                     | 0.75              |
| 1:L:35:VAL:HG22  | 1:L:52:SER:HB2   | 1.66                     | 0.75              |
| 1:M:143:TYR:CZ   | 1:O:45:VAL:HG21  | 2.21                     | 0.75              |
| 1:M:148:THR:O    | 1:M:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:N:290:ARG:CD   | 1:P:244:ASP:HB2  | 2.12                     | 0.75              |
| 1:Q:35:VAL:HG22  | 1:Q:52:SER:HB2   | 1.66                     | 0.75              |
| 1:Q:142:LEU:HD11 | 1:Q:165:ILE:HD11 | 1.69                     | 0.75              |
| 1:Q:148:THR:O    | 1:Q:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:R:44:MET:HG3   | 1:R:45:VAL:H     | 1.51                     | 0.75              |
| 1:V:42:GLY:O     | 1:V:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:W:54:VAL:HG12  | 1:W:55:GLY:N     | 2.00                     | 0.75              |
| 1:C:42:GLY:O     | 1:C:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:G:34:ILE:C     | 1:G:54:VAL:HG21  | 2.06                     | 0.75              |
| 1:G:142:LEU:HD11 | 1:G:165:ILE:HD11 | 1.69                     | 0.75              |
| 1:K:142:LEU:HD21 | 1:K:165:ILE:HD13 | 1.68                     | 0.75              |
| 1:L:142:LEU:HD21 | 1:L:165:ILE:HD13 | 1.68                     | 0.75              |
| 1:M:44:MET:HG3   | 1:M:45:VAL:H     | 1.51                     | 0.75              |
| 1:N:148:THR:O    | 1:N:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:T:143:TYR:CZ   | 1:V:45:VAL:HG21  | 2.21                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:V:35:VAL:HG22  | 1:V:52:SER:HB2   | 1.66                     | 0.75              |
| 1:V:142:LEU:HD11 | 1:V:165:ILE:HD11 | 1.69                     | 0.75              |
| 1:W:142:LEU:HD21 | 1:W:165:ILE:HD13 | 1.68                     | 0.75              |
| 1:D:42:GLY:O     | 1:D:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:E:42:GLY:O     | 1:E:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:F:148:THR:O    | 1:F:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:G:35:VAL:HG22  | 1:G:52:SER:HB2   | 1.66                     | 0.75              |
| 1:J:37:ARG:HG3   | 1:J:38:PRO:CD    | 2.15                     | 0.75              |
| 1:J:39:ARG:HE    | 1:J:66:THR:HA    | 1.52                     | 0.75              |
| 1:J:142:LEU:HD21 | 1:J:165:ILE:HD13 | 1.68                     | 0.75              |
| 1:K:37:ARG:HG3   | 1:K:38:PRO:CD    | 2.15                     | 0.75              |
| 1:T:42:GLY:O     | 1:T:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:U:42:GLY:O     | 1:U:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:V:54:VAL:HG12  | 1:V:55:GLY:N     | 2.00                     | 0.75              |
| 1:A:42:GLY:O     | 1:A:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:B:42:GLY:O     | 1:B:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:C:143:TYR:CZ   | 1:E:45:VAL:HG21  | 2.21                     | 0.75              |
| 1:D:142:LEU:HD11 | 1:D:165:ILE:HD11 | 1.69                     | 0.75              |
| 1:I:148:THR:O    | 1:I:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:Q:357:ILE:HG12 | 1:Q:370:VAL:CG2  | 2.07                     | 0.75              |
| 1:S:44:MET:HG3   | 1:S:45:VAL:H     | 1.51                     | 0.75              |
| 1:T:148:THR:O    | 1:T:165:ILE:HG22 | 1.86                     | 0.75              |
| 1:W:42:GLY:O     | 1:W:43:VAL:HG12  | 1.87                     | 0.75              |
| 1:A:39:ARG:HE    | 1:A:66:THR:HA    | 1.52                     | 0.74              |
| 1:B:35:VAL:HG22  | 1:B:52:SER:HB2   | 1.66                     | 0.74              |
| 1:I:142:LEU:HD21 | 1:I:165:ILE:HD13 | 1.68                     | 0.74              |
| 1:I:143:TYR:CZ   | 1:K:45:VAL:HG21  | 2.21                     | 0.74              |
| 1:M:35:VAL:HG22  | 1:M:52:SER:HB2   | 1.66                     | 0.74              |
| 1:O:45:VAL:O     | 1:O:45:VAL:CG2   | 2.30                     | 0.74              |
| 1:O:54:VAL:HG12  | 1:O:55:GLY:N     | 2.00                     | 0.74              |
| 1:O:142:LEU:HD11 | 1:O:165:ILE:HD11 | 1.69                     | 0.74              |
| 1:P:35:VAL:HG22  | 1:P:52:SER:HB2   | 1.66                     | 0.74              |
| 1:W:36:GLY:O     | 1:W:52:SER:HA    | 1.85                     | 0.74              |
| 1:E:44:MET:HG3   | 1:E:45:VAL:H     | 1.51                     | 0.74              |
| 1:F:142:LEU:HD11 | 1:F:165:ILE:HD11 | 1.69                     | 0.74              |
| 1:G:42:GLY:O     | 1:G:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:H:54:VAL:HG12  | 1:H:55:GLY:N     | 2.00                     | 0.74              |
| 1:J:290:ARG:CD   | 1:L:244:ASP:HB2  | 2.12                     | 0.74              |
| 1:M:142:LEU:HD11 | 1:M:165:ILE:HD11 | 1.69                     | 0.74              |
| 1:T:35:VAL:HG22  | 1:T:52:SER:HB2   | 1.66                     | 0.74              |
| 1:U:39:ARG:HE    | 1:U:66:THR:HA    | 1.52                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:35:VAL:HG22  | 1:D:52:SER:HB2   | 1.66                     | 0.74              |
| 1:M:357:ILE:HG12 | 1:M:370:VAL:CG2  | 2.07                     | 0.74              |
| 1:P:148:THR:O    | 1:P:165:ILE:HG22 | 1.86                     | 0.74              |
| 1:I:37:ARG:HG3   | 1:I:38:PRO:CD    | 2.15                     | 0.74              |
| 1:R:42:GLY:O     | 1:R:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:W:148:THR:O    | 1:W:165:ILE:HG22 | 1.86                     | 0.74              |
| 1:A:142:LEU:HD21 | 1:A:165:ILE:HD13 | 1.68                     | 0.74              |
| 1:G:44:MET:HG3   | 1:G:45:VAL:H     | 1.51                     | 0.74              |
| 1:H:35:VAL:HG22  | 1:H:52:SER:HB2   | 1.66                     | 0.74              |
| 1:K:44:MET:HG3   | 1:K:45:VAL:H     | 1.51                     | 0.74              |
| 1:L:54:VAL:HG12  | 1:L:55:GLY:N     | 2.00                     | 0.74              |
| 1:N:142:LEU:HD21 | 1:N:165:ILE:HD13 | 1.68                     | 0.74              |
| 1:O:357:ILE:HG12 | 1:O:370:VAL:CG2  | 2.07                     | 0.74              |
| 1:R:142:LEU:HD11 | 1:R:165:ILE:HD11 | 1.69                     | 0.74              |
| 1:S:39:ARG:HE    | 1:S:66:THR:HA    | 1.52                     | 0.74              |
| 1:S:42:GLY:O     | 1:S:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:U:142:LEU:HD11 | 1:U:165:ILE:HD11 | 1.69                     | 0.74              |
| 1:V:142:LEU:HD21 | 1:V:165:ILE:HD13 | 1.68                     | 0.74              |
| 1:A:148:THR:O    | 1:A:165:ILE:HG22 | 1.86                     | 0.74              |
| 1:D:54:VAL:HG12  | 1:D:55:GLY:N     | 2.00                     | 0.74              |
| 1:D:148:THR:O    | 1:D:165:ILE:HG22 | 1.86                     | 0.74              |
| 1:I:42:GLY:O     | 1:I:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:L:42:GLY:O     | 1:L:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:M:42:GLY:O     | 1:M:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:Q:54:VAL:HG12  | 1:Q:55:GLY:N     | 2.01                     | 0.74              |
| 1:Q:180:LEU:HD12 | 1:Q:181:ALA:N    | 2.03                     | 0.74              |
| 1:S:148:THR:O    | 1:S:165:ILE:HG22 | 1.86                     | 0.74              |
| 1:B:54:VAL:HG12  | 1:B:55:GLY:N     | 2.00                     | 0.74              |
| 1:B:142:LEU:HD11 | 1:B:165:ILE:HD11 | 1.69                     | 0.74              |
| 1:F:42:GLY:O     | 1:F:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:G:142:LEU:HD21 | 1:G:165:ILE:HD13 | 1.68                     | 0.74              |
| 1:H:37:ARG:HG3   | 1:H:38:PRO:CD    | 2.15                     | 0.74              |
| 1:H:39:ARG:HE    | 1:H:66:THR:HA    | 1.52                     | 0.74              |
| 1:M:39:ARG:HE    | 1:M:66:THR:HA    | 1.52                     | 0.74              |
| 1:M:54:VAL:HG12  | 1:M:55:GLY:N     | 2.01                     | 0.74              |
| 1:O:148:THR:O    | 1:O:165:ILE:HG22 | 1.86                     | 0.74              |
| 1:Q:290:ARG:CD   | 1:S:244:ASP:HB2  | 2.12                     | 0.74              |
| 1:S:54:VAL:HG12  | 1:S:55:GLY:N     | 2.01                     | 0.74              |
| 1:S:180:LEU:HD12 | 1:S:181:ALA:N    | 2.03                     | 0.74              |
| 1:C:44:MET:HG3   | 1:C:45:VAL:H     | 1.51                     | 0.74              |
| 1:C:148:THR:O    | 1:C:165:ILE:HG22 | 1.86                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:37:ARG:HG3   | 1:G:38:PRO:CD    | 2.15                     | 0.74              |
| 1:K:42:GLY:O     | 1:K:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:L:43:VAL:O     | 1:L:44:MET:CB    | 2.36                     | 0.74              |
| 1:O:42:GLY:O     | 1:O:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:P:42:GLY:O     | 1:P:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:R:39:ARG:HE    | 1:R:66:THR:HA    | 1.52                     | 0.74              |
| 1:T:142:LEU:HD21 | 1:T:165:ILE:HD13 | 1.68                     | 0.74              |
| 1:U:180:LEU:HD12 | 1:U:181:ALA:N    | 2.03                     | 0.74              |
| 1:J:42:GLY:O     | 1:J:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:K:39:ARG:HE    | 1:K:66:THR:HA    | 1.52                     | 0.74              |
| 1:N:42:GLY:O     | 1:N:43:VAL:HG12  | 1.87                     | 0.74              |
| 1:O:180:LEU:HD12 | 1:O:181:ALA:N    | 2.03                     | 0.74              |
| 1:U:44:MET:HG3   | 1:U:45:VAL:H     | 1.51                     | 0.74              |
| 1:U:148:THR:O    | 1:U:165:ILE:HG22 | 1.86                     | 0.74              |
| 1:J:180:LEU:HD12 | 1:J:181:ALA:N    | 2.03                     | 0.74              |
| 1:A:43:VAL:O     | 1:A:44:MET:CB    | 2.36                     | 0.73              |
| 1:C:180:LEU:HD12 | 1:C:181:ALA:N    | 2.03                     | 0.73              |
| 1:F:290:ARG:CD   | 1:H:244:ASP:HB2  | 2.12                     | 0.73              |
| 1:H:180:LEU:HD12 | 1:H:181:ALA:N    | 2.03                     | 0.73              |
| 1:J:44:MET:HG3   | 1:J:45:VAL:H     | 1.51                     | 0.73              |
| 1:K:54:VAL:HG12  | 1:K:55:GLY:N     | 2.00                     | 0.73              |
| 1:L:180:LEU:HD12 | 1:L:181:ALA:N    | 2.03                     | 0.73              |
| 1:R:148:THR:O    | 1:R:165:ILE:HG22 | 1.86                     | 0.73              |
| 1:T:44:MET:HG3   | 1:T:45:VAL:H     | 1.51                     | 0.73              |
| 1:W:43:VAL:O     | 1:W:44:MET:CB    | 2.36                     | 0.73              |
| 1:W:44:MET:HG3   | 1:W:45:VAL:H     | 1.51                     | 0.73              |
| 1:C:43:VAL:O     | 1:C:44:MET:CB    | 2.36                     | 0.73              |
| 1:D:44:MET:HG3   | 1:D:45:VAL:H     | 1.51                     | 0.73              |
| 1:D:287:ILE:HD11 | 1:F:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:E:37:ARG:HG3   | 1:E:38:PRO:CD    | 2.16                     | 0.73              |
| 1:E:142:LEU:HD11 | 1:E:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:J:43:VAL:O     | 1:J:44:MET:CB    | 2.36                     | 0.73              |
| 1:N:43:VAL:O     | 1:N:44:MET:CB    | 2.36                     | 0.73              |
| 1:N:44:MET:HG3   | 1:N:45:VAL:H     | 1.51                     | 0.73              |
| 1:P:39:ARG:HE    | 1:P:66:THR:HA    | 1.52                     | 0.73              |
| 1:P:142:LEU:HD21 | 1:P:165:ILE:HD13 | 1.68                     | 0.73              |
| 1:Q:44:MET:HG3   | 1:Q:45:VAL:H     | 1.51                     | 0.73              |
| 1:R:142:LEU:HD21 | 1:R:165:ILE:HD13 | 1.68                     | 0.73              |
| 1:U:43:VAL:O     | 1:U:44:MET:CB    | 2.36                     | 0.73              |
| 1:U:290:ARG:CD   | 1:W:244:ASP:HB2  | 2.12                     | 0.73              |
| 1:A:44:MET:HG3   | 1:A:45:VAL:H     | 1.51                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:142:LEU:HD21 | 1:E:165:ILE:HD13 | 1.68                     | 0.73              |
| 1:G:180:LEU:HD12 | 1:G:181:ALA:N    | 2.03                     | 0.73              |
| 1:H:223:PHE:CD1  | 1:H:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:I:142:LEU:HD11 | 1:I:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:J:142:LEU:HD11 | 1:J:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:K:287:ILE:HD11 | 1:M:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:M:180:LEU:HD12 | 1:M:181:ALA:N    | 2.03                     | 0.73              |
| 1:P:44:MET:HG3   | 1:P:45:VAL:H     | 1.51                     | 0.73              |
| 1:P:287:ILE:HD11 | 1:R:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:R:180:LEU:HD12 | 1:R:181:ALA:N    | 2.03                     | 0.73              |
| 1:R:287:ILE:HD11 | 1:T:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:T:142:LEU:HD11 | 1:T:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:T:142:LEU:HD11 | 1:T:165:ILE:CD1  | 2.19                     | 0.73              |
| 1:T:180:LEU:HD12 | 1:T:181:ALA:N    | 2.03                     | 0.73              |
| 1:A:142:LEU:HD11 | 1:A:165:ILE:CD1  | 2.19                     | 0.73              |
| 1:B:34:ILE:HD13  | 1:B:67:LEU:HD13  | 1.71                     | 0.73              |
| 1:B:287:ILE:HD11 | 1:D:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:C:142:LEU:HD21 | 1:C:165:ILE:HD13 | 1.68                     | 0.73              |
| 1:E:142:LEU:HD11 | 1:E:165:ILE:CD1  | 2.19                     | 0.73              |
| 1:G:287:ILE:HD11 | 1:I:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:I:287:ILE:HD11 | 1:K:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:J:223:PHE:CD1  | 1:J:259:GLU:HG2  | 2.23                     | 0.73              |
| 1:L:44:MET:HG3   | 1:L:45:VAL:H     | 1.51                     | 0.73              |
| 1:M:287:ILE:HD11 | 1:O:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:N:180:LEU:HD12 | 1:N:181:ALA:N    | 2.03                     | 0.73              |
| 1:O:39:ARG:HE    | 1:O:66:THR:HA    | 1.52                     | 0.73              |
| 1:W:180:LEU:HD12 | 1:W:181:ALA:N    | 2.03                     | 0.73              |
| 1:A:142:LEU:HD11 | 1:A:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:D:34:ILE:HD13  | 1:D:67:LEU:HD13  | 1.71                     | 0.73              |
| 1:F:287:ILE:HD11 | 1:H:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:G:167:GLU:CD   | 1:I:61:LYS:HE2   | 2.09                     | 0.73              |
| 1:I:39:ARG:HE    | 1:I:66:THR:HA    | 1.52                     | 0.73              |
| 1:M:167:GLU:CD   | 1:O:61:LYS:HE2   | 2.09                     | 0.73              |
| 1:N:287:ILE:HD11 | 1:P:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:O:208:ILE:CD1  | 1:O:243:PRO:HD2  | 2.18                     | 0.73              |
| 1:P:142:LEU:HD11 | 1:P:165:ILE:CD1  | 2.19                     | 0.73              |
| 1:E:180:LEU:HD12 | 1:E:181:ALA:N    | 2.03                     | 0.73              |
| 1:E:287:ILE:HD11 | 1:G:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:F:37:ARG:HG3   | 1:F:38:PRO:CD    | 2.15                     | 0.73              |
| 1:F:180:LEU:HD12 | 1:F:181:ALA:N    | 2.03                     | 0.73              |
| 1:F:223:PHE:CD1  | 1:F:259:GLU:HG2  | 2.24                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:44:MET:HG3   | 1:H:45:VAL:H     | 1.51                     | 0.73              |
| 1:J:142:LEU:HD11 | 1:J:165:ILE:CD1  | 2.19                     | 0.73              |
| 1:L:39:ARG:HE    | 1:L:66:THR:HA    | 1.52                     | 0.73              |
| 1:O:287:ILE:HD11 | 1:Q:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:O:290:ARG:CD   | 1:Q:244:ASP:HB2  | 2.12                     | 0.73              |
| 1:P:142:LEU:HD11 | 1:P:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:P:180:LEU:HD12 | 1:P:181:ALA:N    | 2.03                     | 0.73              |
| 1:V:39:ARG:HE    | 1:V:66:THR:HA    | 1.52                     | 0.73              |
| 1:V:180:LEU:HD12 | 1:V:181:ALA:N    | 2.03                     | 0.73              |
| 1:V:223:PHE:CD1  | 1:V:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:W:142:LEU:HD11 | 1:W:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:C:37:ARG:HG3   | 1:C:38:PRO:CD    | 2.15                     | 0.73              |
| 1:K:45:VAL:O     | 1:K:45:VAL:CG2   | 2.30                     | 0.73              |
| 1:L:142:LEU:HD11 | 1:L:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:L:142:LEU:HD11 | 1:L:165:ILE:CD1  | 2.19                     | 0.73              |
| 1:L:223:PHE:CD1  | 1:L:259:GLU:HG2  | 2.23                     | 0.73              |
| 1:N:39:ARG:HE    | 1:N:66:THR:HA    | 1.52                     | 0.73              |
| 1:N:142:LEU:HD11 | 1:N:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:O:167:GLU:CD   | 1:Q:61:LYS:HE2   | 2.09                     | 0.73              |
| 1:P:223:PHE:CD1  | 1:P:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:R:290:ARG:CD   | 1:T:244:ASP:HB2  | 2.12                     | 0.73              |
| 1:T:39:ARG:HE    | 1:T:66:THR:HA    | 1.52                     | 0.73              |
| 1:T:287:ILE:HD11 | 1:V:208:ILE:CD1  | 2.19                     | 0.73              |
| 1:D:208:ILE:CD1  | 1:D:243:PRO:HD2  | 2.18                     | 0.73              |
| 1:E:208:ILE:CD1  | 1:E:243:PRO:HD2  | 2.18                     | 0.73              |
| 1:F:34:ILE:HD13  | 1:F:67:LEU:HD13  | 1.71                     | 0.73              |
| 1:G:39:ARG:HE    | 1:G:66:THR:HA    | 1.52                     | 0.73              |
| 1:H:42:GLY:O     | 1:H:43:VAL:HG12  | 1.87                     | 0.73              |
| 1:I:167:GLU:CD   | 1:K:61:LYS:HE2   | 2.09                     | 0.73              |
| 1:N:223:PHE:CD1  | 1:N:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:O:223:PHE:CD1  | 1:O:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:Q:39:ARG:HE    | 1:Q:66:THR:HA    | 1.52                     | 0.73              |
| 1:Q:42:GLY:O     | 1:Q:43:VAL:HG12  | 1.87                     | 0.73              |
| 1:Q:223:PHE:CD1  | 1:Q:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:R:223:PHE:CD1  | 1:R:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:T:223:PHE:CD1  | 1:T:259:GLU:HG2  | 2.24                     | 0.73              |
| 1:U:167:GLU:CD   | 1:W:61:LYS:HE2   | 2.09                     | 0.73              |
| 1:A:180:LEU:HD12 | 1:A:181:ALA:N    | 2.03                     | 0.73              |
| 1:I:180:LEU:HD12 | 1:I:181:ALA:N    | 2.03                     | 0.73              |
| 1:S:142:LEU:HD11 | 1:S:165:ILE:HD11 | 1.69                     | 0.73              |
| 1:U:34:ILE:HD13  | 1:U:67:LEU:HD13  | 1.71                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:V:43:VAL:O     | 1:V:44:MET:CB   | 2.36                     | 0.73              |
| 1:B:43:VAL:O     | 1:B:44:MET:CB   | 2.36                     | 0.73              |
| 1:B:180:LEU:HD12 | 1:B:181:ALA:N   | 2.03                     | 0.73              |
| 1:D:223:PHE:CD1  | 1:D:259:GLU:HG2 | 2.24                     | 0.73              |
| 1:F:43:VAL:O     | 1:F:44:MET:CB   | 2.36                     | 0.73              |
| 1:G:142:LEU:HD11 | 1:G:165:ILE:CD1 | 2.19                     | 0.73              |
| 1:S:223:PHE:CD1  | 1:S:259:GLU:HG2 | 2.24                     | 0.73              |
| 1:V:142:LEU:HD11 | 1:V:165:ILE:CD1 | 2.19                     | 0.73              |
| 1:W:34:ILE:HD13  | 1:W:67:LEU:HD13 | 1.71                     | 0.73              |
| 1:W:223:PHE:CD1  | 1:W:259:GLU:HG2 | 2.24                     | 0.73              |
| 1:A:167:GLU:CD   | 1:C:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:C:61:LYS:O     | 1:C:64:ILE:HG22 | 1.90                     | 0.72              |
| 1:D:180:LEU:HD12 | 1:D:181:ALA:N   | 2.03                     | 0.72              |
| 1:K:142:LEU:HD11 | 1:K:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:K:180:LEU:HD12 | 1:K:181:ALA:N   | 2.03                     | 0.72              |
| 1:M:223:PHE:CD1  | 1:M:259:GLU:HG2 | 2.24                     | 0.72              |
| 1:S:34:ILE:HD13  | 1:S:67:LEU:HD13 | 1.71                     | 0.72              |
| 1:U:142:LEU:HD11 | 1:U:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:U:208:ILE:CD1  | 1:U:243:PRO:HD2 | 2.18                     | 0.72              |
| 1:U:287:ILE:HD11 | 1:W:208:ILE:CD1 | 2.19                     | 0.72              |
| 1:A:39:ARG:HE    | 1:A:66:THR:CA   | 2.03                     | 0.72              |
| 1:D:290:ARG:CD   | 1:F:244:ASP:HB2 | 2.12                     | 0.72              |
| 1:L:287:ILE:HD11 | 1:N:208:ILE:CD1 | 2.19                     | 0.72              |
| 1:P:208:ILE:CD1  | 1:P:243:PRO:HD2 | 2.18                     | 0.72              |
| 1:R:142:LEU:HD11 | 1:R:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:A:61:LYS:O     | 1:A:64:ILE:HG22 | 1.90                     | 0.72              |
| 1:C:142:LEU:HD11 | 1:C:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:C:287:ILE:HD11 | 1:E:208:ILE:CD1 | 2.19                     | 0.72              |
| 1:D:244:ASP:OD1  | 1:D:246:GLN:HG3 | 1.89                     | 0.72              |
| 1:E:43:VAL:O     | 1:E:44:MET:CB   | 2.36                     | 0.72              |
| 1:E:61:LYS:O     | 1:E:64:ILE:HG22 | 1.90                     | 0.72              |
| 1:F:142:LEU:HD11 | 1:F:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:H:244:ASP:OD1  | 1:H:246:GLN:HG3 | 1.90                     | 0.72              |
| 1:H:287:ILE:HD11 | 1:J:208:ILE:CD1 | 2.19                     | 0.72              |
| 1:I:34:ILE:HD13  | 1:I:67:LEU:HD13 | 1.71                     | 0.72              |
| 1:J:39:ARG:HE    | 1:J:66:THR:CA   | 2.03                     | 0.72              |
| 1:J:167:GLU:CD   | 1:L:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:P:43:VAL:O     | 1:P:44:MET:CB   | 2.36                     | 0.72              |
| 1:Q:287:ILE:HD11 | 1:S:208:ILE:CD1 | 2.19                     | 0.72              |
| 1:S:142:LEU:HD11 | 1:S:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:S:244:ASP:OD1  | 1:S:246:GLN:HG3 | 1.90                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:V:34:ILE:HD13  | 1:V:67:LEU:HD13  | 1.71                     | 0.72              |
| 1:W:244:ASP:OD1  | 1:W:246:GLN:HG3  | 1.89                     | 0.72              |
| 1:B:43:VAL:O     | 1:B:44:MET:HB3   | 1.90                     | 0.72              |
| 1:B:223:PHE:CD1  | 1:B:259:GLU:HG2  | 2.24                     | 0.72              |
| 1:C:142:LEU:HD11 | 1:C:165:ILE:HD11 | 1.69                     | 0.72              |
| 1:E:43:VAL:O     | 1:E:44:MET:HB3   | 1.90                     | 0.72              |
| 1:F:301:GLY:H    | 1:F:335:ARG:HG3  | 1.55                     | 0.72              |
| 1:G:61:LYS:O     | 1:G:64:ILE:HG22  | 1.90                     | 0.72              |
| 1:G:290:ARG:CD   | 1:I:244:ASP:HB2  | 2.12                     | 0.72              |
| 1:H:34:ILE:HD13  | 1:H:67:LEU:HD13  | 1.71                     | 0.72              |
| 1:H:142:LEU:HD11 | 1:H:165:ILE:HD11 | 1.69                     | 0.72              |
| 1:N:142:LEU:HD11 | 1:N:165:ILE:CD1  | 2.19                     | 0.72              |
| 1:P:39:ARG:HE    | 1:P:66:THR:CA    | 2.03                     | 0.72              |
| 1:Q:244:ASP:OD1  | 1:Q:246:GLN:HG3  | 1.90                     | 0.72              |
| 1:V:37:ARG:HG3   | 1:V:38:PRO:CD    | 2.15                     | 0.72              |
| 1:A:37:ARG:HG3   | 1:A:38:PRO:CD    | 2.15                     | 0.72              |
| 1:A:223:PHE:CD1  | 1:A:259:GLU:HG2  | 2.24                     | 0.72              |
| 1:D:37:ARG:HG3   | 1:D:38:PRO:CD    | 2.16                     | 0.72              |
| 1:D:39:ARG:HE    | 1:D:66:THR:HA    | 1.52                     | 0.72              |
| 1:D:142:LEU:HD11 | 1:D:165:ILE:CD1  | 2.19                     | 0.72              |
| 1:D:301:GLY:H    | 1:D:335:ARG:HG3  | 1.55                     | 0.72              |
| 1:G:34:ILE:HD13  | 1:G:67:LEU:HD13  | 1.71                     | 0.72              |
| 1:G:43:VAL:O     | 1:G:44:MET:HB3   | 1.90                     | 0.72              |
| 1:I:61:LYS:O     | 1:I:64:ILE:HG22  | 1.90                     | 0.72              |
| 1:J:244:ASP:OD1  | 1:J:246:GLN:HG3  | 1.90                     | 0.72              |
| 1:K:34:ILE:HD13  | 1:K:67:LEU:HD13  | 1.71                     | 0.72              |
| 1:K:167:GLU:CD   | 1:M:61:LYS:HE2   | 2.09                     | 0.72              |
| 1:K:223:PHE:CD1  | 1:K:259:GLU:HG2  | 2.24                     | 0.72              |
| 1:L:39:ARG:HE    | 1:L:66:THR:CA    | 2.03                     | 0.72              |
| 1:M:142:LEU:HD11 | 1:M:165:ILE:CD1  | 2.19                     | 0.72              |
| 1:N:301:GLY:H    | 1:N:335:ARG:HG3  | 1.55                     | 0.72              |
| 1:O:301:GLY:H    | 1:O:335:ARG:HG3  | 1.55                     | 0.72              |
| 1:P:167:GLU:CD   | 1:R:61:LYS:HE2   | 2.09                     | 0.72              |
| 1:R:39:ARG:HE    | 1:R:66:THR:CA    | 2.03                     | 0.72              |
| 1:S:167:GLU:CD   | 1:U:61:LYS:HE2   | 2.09                     | 0.72              |
| 1:T:43:VAL:O     | 1:T:44:MET:CB    | 2.36                     | 0.72              |
| 1:U:39:ARG:HE    | 1:U:66:THR:CA    | 2.03                     | 0.72              |
| 1:U:223:PHE:CD1  | 1:U:259:GLU:HG2  | 2.24                     | 0.72              |
| 1:W:142:LEU:HD11 | 1:W:165:ILE:CD1  | 2.19                     | 0.72              |
| 1:W:301:GLY:H    | 1:W:335:ARG:HG3  | 1.55                     | 0.72              |
| 1:B:39:ARG:HE    | 1:B:66:THR:HA    | 1.52                     | 0.72              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:C:301:GLY:H    | 1:C:335:ARG:HG3 | 1.55                     | 0.72              |
| 1:D:43:VAL:O     | 1:D:44:MET:CB   | 2.36                     | 0.72              |
| 1:D:43:VAL:O     | 1:D:44:MET:HB3  | 1.90                     | 0.72              |
| 1:D:167:GLU:CD   | 1:F:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:F:167:GLU:CD   | 1:H:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:H:142:LEU:HD11 | 1:H:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:H:236:LEU:HD13 | 1:H:251:GLY:HA2 | 1.72                     | 0.72              |
| 1:I:43:VAL:O     | 1:I:44:MET:CB   | 2.36                     | 0.72              |
| 1:J:208:ILE:CD1  | 1:J:243:PRO:HD2 | 2.18                     | 0.72              |
| 1:L:301:GLY:H    | 1:L:335:ARG:HG3 | 1.55                     | 0.72              |
| 1:N:39:ARG:HE    | 1:N:66:THR:CA   | 2.03                     | 0.72              |
| 1:O:142:LEU:HD11 | 1:O:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:O:244:ASP:OD1  | 1:O:246:GLN:HG3 | 1.89                     | 0.72              |
| 1:Q:34:ILE:HD13  | 1:Q:67:LEU:HD13 | 1.71                     | 0.72              |
| 1:R:167:GLU:CD   | 1:T:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:T:39:ARG:HE    | 1:T:66:THR:CA   | 2.03                     | 0.72              |
| 1:A:287:ILE:HD11 | 1:C:208:ILE:CD1 | 2.19                     | 0.72              |
| 1:A:290:ARG:CD   | 1:C:244:ASP:HB2 | 2.12                     | 0.72              |
| 1:B:142:LEU:HD11 | 1:B:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:C:43:VAL:O     | 1:C:44:MET:HB3  | 1.90                     | 0.72              |
| 1:C:167:GLU:CD   | 1:E:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:F:39:ARG:HE    | 1:F:66:THR:HA   | 1.52                     | 0.72              |
| 1:F:236:LEU:HD13 | 1:F:251:GLY:HA2 | 1.72                     | 0.72              |
| 1:H:43:VAL:O     | 1:H:44:MET:HB3  | 1.90                     | 0.72              |
| 1:K:43:VAL:O     | 1:K:44:MET:CB   | 2.36                     | 0.72              |
| 1:K:61:LYS:O     | 1:K:64:ILE:HG22 | 1.90                     | 0.72              |
| 1:M:43:VAL:O     | 1:M:44:MET:CB   | 2.36                     | 0.72              |
| 1:M:301:GLY:H    | 1:M:335:ARG:HG3 | 1.55                     | 0.72              |
| 1:N:167:GLU:CD   | 1:P:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:O:43:VAL:O     | 1:O:44:MET:CB   | 2.36                     | 0.72              |
| 1:T:167:GLU:CD   | 1:V:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:U:301:GLY:H    | 1:U:335:ARG:HG3 | 1.55                     | 0.72              |
| 1:E:34:ILE:HD13  | 1:E:67:LEU:HD13 | 1.71                     | 0.72              |
| 1:E:39:ARG:HE    | 1:E:66:THR:HA   | 1.52                     | 0.72              |
| 1:E:301:GLY:H    | 1:E:335:ARG:HG3 | 1.55                     | 0.72              |
| 1:I:39:ARG:HE    | 1:I:66:THR:CA   | 2.03                     | 0.72              |
| 1:I:43:VAL:O     | 1:I:44:MET:HB3  | 1.90                     | 0.72              |
| 1:I:142:LEU:HD11 | 1:I:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:I:223:PHE:CD1  | 1:I:259:GLU:HG2 | 2.24                     | 0.72              |
| 1:L:244:ASP:OD1  | 1:L:246:GLN:HG3 | 1.90                     | 0.72              |
| 1:M:61:LYS:O     | 1:M:64:ILE:HG22 | 1.90                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:M:236:LEU:HD13 | 1:M:251:GLY:HA2 | 1.72                     | 0.72              |
| 1:P:43:VAL:O     | 1:P:44:MET:HB3  | 1.90                     | 0.72              |
| 1:Q:43:VAL:O     | 1:Q:44:MET:CB   | 2.36                     | 0.72              |
| 1:S:39:ARG:HE    | 1:S:66:THR:CA   | 2.03                     | 0.72              |
| 1:S:43:VAL:O     | 1:S:44:MET:HB3  | 1.90                     | 0.72              |
| 1:S:287:ILE:HD11 | 1:U:208:ILE:CD1 | 2.19                     | 0.72              |
| 1:S:301:GLY:H    | 1:S:335:ARG:HG3 | 1.55                     | 0.72              |
| 1:W:61:LYS:O     | 1:W:64:ILE:HG22 | 1.90                     | 0.72              |
| 1:C:39:ARG:HE    | 1:C:66:THR:CA   | 2.03                     | 0.72              |
| 1:C:223:PHE:CD1  | 1:C:259:GLU:HG2 | 2.24                     | 0.72              |
| 1:D:236:LEU:HD13 | 1:D:251:GLY:HA2 | 1.72                     | 0.72              |
| 1:G:43:VAL:O     | 1:G:44:MET:CB   | 2.36                     | 0.72              |
| 1:H:39:ARG:HE    | 1:H:66:THR:CA   | 2.03                     | 0.72              |
| 1:H:43:VAL:O     | 1:H:44:MET:CB   | 2.36                     | 0.72              |
| 1:J:236:LEU:HD13 | 1:J:251:GLY:HA2 | 1.72                     | 0.72              |
| 1:L:167:GLU:CD   | 1:N:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:O:236:LEU:HD13 | 1:O:251:GLY:HA2 | 1.72                     | 0.72              |
| 1:Q:142:LEU:HD11 | 1:Q:165:ILE:CD1 | 2.19                     | 0.72              |
| 1:A:34:ILE:HD13  | 1:A:67:LEU:HD13 | 1.71                     | 0.72              |
| 1:C:34:ILE:HD13  | 1:C:67:LEU:HD13 | 1.71                     | 0.72              |
| 1:F:244:ASP:OD1  | 1:F:246:GLN:HG3 | 1.90                     | 0.72              |
| 1:G:39:ARG:HE    | 1:G:66:THR:CA   | 2.03                     | 0.72              |
| 1:K:43:VAL:O     | 1:K:44:MET:HB3  | 1.90                     | 0.72              |
| 1:K:236:LEU:HD13 | 1:K:251:GLY:HA2 | 1.72                     | 0.72              |
| 1:L:34:ILE:CA    | 1:L:54:VAL:HG11 | 2.20                     | 0.72              |
| 1:M:34:ILE:HD13  | 1:M:67:LEU:HD13 | 1.71                     | 0.72              |
| 1:Q:167:GLU:CD   | 1:S:61:LYS:HE2  | 2.09                     | 0.72              |
| 1:A:34:ILE:CA    | 1:A:54:VAL:HG11 | 2.20                     | 0.71              |
| 1:A:301:GLY:H    | 1:A:335:ARG:HG3 | 1.55                     | 0.71              |
| 1:B:39:ARG:HE    | 1:B:66:THR:CA   | 2.03                     | 0.71              |
| 1:B:167:GLU:CD   | 1:D:61:LYS:HE2  | 2.09                     | 0.71              |
| 1:D:61:LYS:O     | 1:D:64:ILE:HG22 | 1.90                     | 0.71              |
| 1:E:167:GLU:CD   | 1:G:61:LYS:HE2  | 2.09                     | 0.71              |
| 1:F:61:LYS:O     | 1:F:64:ILE:HG22 | 1.90                     | 0.71              |
| 1:I:208:ILE:CD1  | 1:I:243:PRO:HD2 | 2.18                     | 0.71              |
| 1:K:39:ARG:HE    | 1:K:66:THR:CA   | 2.03                     | 0.71              |
| 1:M:43:VAL:O     | 1:M:44:MET:HB3  | 1.90                     | 0.71              |
| 1:O:61:LYS:O     | 1:O:64:ILE:HG22 | 1.90                     | 0.71              |
| 1:P:301:GLY:H    | 1:P:335:ARG:HG3 | 1.55                     | 0.71              |
| 1:Q:301:GLY:H    | 1:Q:335:ARG:HG3 | 1.55                     | 0.71              |
| 1:R:61:LYS:O     | 1:R:64:ILE:HG22 | 1.89                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:61:LYS:O     | 1:U:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:V:61:LYS:O     | 1:V:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:V:301:GLY:H    | 1:V:335:ARG:HG3  | 1.55                     | 0.71              |
| 1:W:39:ARG:HE    | 1:W:66:THR:CA    | 2.03                     | 0.71              |
| 1:A:43:VAL:O     | 1:A:44:MET:HB3   | 1.90                     | 0.71              |
| 1:B:61:LYS:O     | 1:B:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:G:223:PHE:CD1  | 1:G:259:GLU:HG2  | 2.24                     | 0.71              |
| 1:H:290:ARG:CD   | 1:J:244:ASP:HB2  | 2.12                     | 0.71              |
| 1:J:287:ILE:HD11 | 1:L:208:ILE:CD1  | 2.19                     | 0.71              |
| 1:O:43:VAL:O     | 1:O:44:MET:HB3   | 1.90                     | 0.71              |
| 1:R:43:VAL:O     | 1:R:44:MET:CB    | 2.36                     | 0.71              |
| 1:T:34:ILE:HD13  | 1:T:67:LEU:HD13  | 1.71                     | 0.71              |
| 1:W:34:ILE:CA    | 1:W:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:H:167:GLU:CD   | 1:J:61:LYS:HE2   | 2.09                     | 0.71              |
| 1:I:143:TYR:CD2  | 1:I:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:N:43:VAL:O     | 1:N:44:MET:HB3   | 1.90                     | 0.71              |
| 1:T:37:ARG:HG3   | 1:T:38:PRO:CD    | 2.15                     | 0.71              |
| 1:B:37:ARG:HG3   | 1:B:38:PRO:CD    | 2.16                     | 0.71              |
| 1:B:301:GLY:H    | 1:B:335:ARG:HG3  | 1.55                     | 0.71              |
| 1:D:39:ARG:HE    | 1:D:66:THR:CA    | 2.03                     | 0.71              |
| 1:E:223:PHE:CD1  | 1:E:259:GLU:HG2  | 2.24                     | 0.71              |
| 1:J:34:ILE:CA    | 1:J:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:J:34:ILE:HD13  | 1:J:67:LEU:HD13  | 1.71                     | 0.71              |
| 1:K:143:TYR:CD2  | 1:K:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:Q:61:LYS:O     | 1:Q:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:V:39:ARG:HE    | 1:V:66:THR:CA    | 2.03                     | 0.71              |
| 1:F:43:VAL:O     | 1:F:44:MET:HB3   | 1.90                     | 0.71              |
| 1:K:34:ILE:CA    | 1:K:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:L:236:LEU:HD13 | 1:L:251:GLY:HA2  | 1.72                     | 0.71              |
| 1:M:244:ASP:OD1  | 1:M:246:GLN:HG3  | 1.90                     | 0.71              |
| 1:O:34:ILE:HD13  | 1:O:67:LEU:HD13  | 1.71                     | 0.71              |
| 1:P:143:TYR:CD2  | 1:P:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:Q:39:ARG:HE    | 1:Q:66:THR:CA    | 2.03                     | 0.71              |
| 1:R:143:TYR:CD2  | 1:R:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:U:34:ILE:CA    | 1:U:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:V:43:VAL:O     | 1:V:44:MET:HB3   | 1.90                     | 0.71              |
| 1:B:236:LEU:HD13 | 1:B:251:GLY:HA2  | 1.72                     | 0.71              |
| 1:B:244:ASP:OD1  | 1:B:246:GLN:HG3  | 1.89                     | 0.71              |
| 1:E:244:ASP:OD1  | 1:E:246:GLN:HG3  | 1.89                     | 0.71              |
| 1:F:34:ILE:CA    | 1:F:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:I:34:ILE:CA    | 1:I:54:VAL:HG11  | 2.20                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:236:LEU:HD13 | 1:I:251:GLY:HA2  | 1.72                     | 0.71              |
| 1:L:61:LYS:O     | 1:L:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:Q:43:VAL:O     | 1:Q:44:MET:HB3   | 1.90                     | 0.71              |
| 1:Q:236:LEU:HD13 | 1:Q:251:GLY:HA2  | 1.72                     | 0.71              |
| 1:S:43:VAL:O     | 1:S:44:MET:CB    | 2.36                     | 0.71              |
| 1:T:61:LYS:O     | 1:T:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:T:301:GLY:H    | 1:T:335:ARG:HG3  | 1.55                     | 0.71              |
| 1:U:244:ASP:OD1  | 1:U:246:GLN:HG3  | 1.90                     | 0.71              |
| 1:A:244:ASP:OD1  | 1:A:246:GLN:HG3  | 1.90                     | 0.71              |
| 1:G:143:TYR:CD2  | 1:G:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:H:301:GLY:H    | 1:H:335:ARG:HG3  | 1.55                     | 0.71              |
| 1:L:290:ARG:CD   | 1:N:244:ASP:HB2  | 2.12                     | 0.71              |
| 1:M:39:ARG:HE    | 1:M:66:THR:CA    | 2.03                     | 0.71              |
| 1:M:143:TYR:CD2  | 1:M:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:N:143:TYR:CD2  | 1:N:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:S:61:LYS:O     | 1:S:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:V:143:TYR:CD2  | 1:V:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:W:39:ARG:HE    | 1:W:66:THR:HA    | 1.52                     | 0.71              |
| 1:B:34:ILE:CA    | 1:B:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:G:301:GLY:H    | 1:G:335:ARG:HG3  | 1.55                     | 0.71              |
| 1:K:301:GLY:H    | 1:K:335:ARG:HG3  | 1.55                     | 0.71              |
| 1:P:34:ILE:CA    | 1:P:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:R:34:ILE:CA    | 1:R:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:R:34:ILE:HD13  | 1:R:67:LEU:HD13  | 1.71                     | 0.71              |
| 1:T:143:TYR:CD2  | 1:T:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:T:208:ILE:CD1  | 1:T:243:PRO:HD2  | 2.18                     | 0.71              |
| 1:T:244:ASP:OD1  | 1:T:246:GLN:HG3  | 1.89                     | 0.71              |
| 1:V:244:ASP:OD1  | 1:V:246:GLN:HG3  | 1.89                     | 0.71              |
| 1:B:143:TYR:CD2  | 1:B:346:LEU:HD13 | 2.26                     | 0.71              |
| 1:C:244:ASP:OD1  | 1:C:246:GLN:HG3  | 1.89                     | 0.71              |
| 1:E:39:ARG:HE    | 1:E:66:THR:CA    | 2.03                     | 0.71              |
| 1:H:61:LYS:O     | 1:H:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:J:301:GLY:H    | 1:J:335:ARG:HG3  | 1.55                     | 0.71              |
| 1:N:61:LYS:O     | 1:N:64:ILE:HG22  | 1.90                     | 0.71              |
| 1:T:43:VAL:O     | 1:T:44:MET:HB3   | 1.90                     | 0.71              |
| 1:W:43:VAL:O     | 1:W:44:MET:HB3   | 1.90                     | 0.71              |
| 1:W:236:LEU:HD13 | 1:W:251:GLY:HA2  | 1.72                     | 0.71              |
| 1:N:34:ILE:CA    | 1:N:54:VAL:HG11  | 2.20                     | 0.71              |
| 1:R:43:VAL:O     | 1:R:44:MET:HB3   | 1.90                     | 0.71              |
| 1:S:208:ILE:CD1  | 1:S:243:PRO:HD2  | 2.18                     | 0.71              |
| 1:U:43:VAL:O     | 1:U:44:MET:HB3   | 1.90                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:208:ILE:CD1  | 1:B:243:PRO:HD2  | 2.18                     | 0.70              |
| 1:C:34:ILE:CA    | 1:C:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:D:143:TYR:CD2  | 1:D:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:G:236:LEU:HD13 | 1:G:251:GLY:HA2  | 1.72                     | 0.70              |
| 1:G:244:ASP:OD1  | 1:G:246:GLN:HG3  | 1.90                     | 0.70              |
| 1:M:290:ARG:CD   | 1:O:244:ASP:HB2  | 2.12                     | 0.70              |
| 1:P:61:LYS:O     | 1:P:64:ILE:HG22  | 1.90                     | 0.70              |
| 1:S:290:ARG:CD   | 1:U:244:ASP:HB2  | 2.12                     | 0.70              |
| 1:A:143:TYR:CD2  | 1:A:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:E:143:TYR:CD2  | 1:E:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:F:39:ARG:HE    | 1:F:66:THR:CA    | 2.03                     | 0.70              |
| 1:G:34:ILE:CA    | 1:G:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:M:34:ILE:CA    | 1:M:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:T:34:ILE:CA    | 1:T:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:W:143:TYR:CD2  | 1:W:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:C:236:LEU:CD1  | 1:C:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:E:169:TYR:CE2  | 1:G:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:I:236:LEU:CD1  | 1:I:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:J:61:LYS:O     | 1:J:64:ILE:HG22  | 1.90                     | 0.70              |
| 1:K:169:TYR:CE2  | 1:M:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:K:244:ASP:OD1  | 1:K:246:GLN:HG3  | 1.90                     | 0.70              |
| 1:L:34:ILE:HD13  | 1:L:67:LEU:HD13  | 1.71                     | 0.70              |
| 1:N:236:LEU:HD13 | 1:N:251:GLY:HA2  | 1.72                     | 0.70              |
| 1:N:244:ASP:OD1  | 1:N:246:GLN:HG3  | 1.90                     | 0.70              |
| 1:P:244:ASP:OD1  | 1:P:246:GLN:HG3  | 1.89                     | 0.70              |
| 1:Q:34:ILE:CA    | 1:Q:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:T:169:TYR:CE2  | 1:V:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:V:236:LEU:CD1  | 1:V:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:B:169:TYR:CE2  | 1:D:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:E:34:ILE:CA    | 1:E:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:F:143:TYR:CD2  | 1:F:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:H:236:LEU:CD1  | 1:H:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:L:143:TYR:CD2  | 1:L:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:L:236:LEU:CD1  | 1:L:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:M:208:ILE:CD1  | 1:M:243:PRO:HD2  | 2.18                     | 0.70              |
| 1:P:236:LEU:CD1  | 1:P:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:R:169:TYR:CE2  | 1:T:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:S:236:LEU:HD13 | 1:S:251:GLY:HA2  | 1.72                     | 0.70              |
| 1:U:143:TYR:CD2  | 1:U:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:V:34:ILE:CA    | 1:V:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:D:34:ILE:CA    | 1:D:54:VAL:HG11  | 2.20                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:37:ARG:CG    | 1:F:38:PRO:HD2   | 2.20                     | 0.70              |
| 1:H:34:ILE:CA    | 1:H:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:I:37:ARG:CG    | 1:I:38:PRO:HD2   | 2.20                     | 0.70              |
| 1:I:169:TYR:CE2  | 1:K:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:L:43:VAL:O     | 1:L:44:MET:HB3   | 1.90                     | 0.70              |
| 1:M:169:TYR:CE2  | 1:O:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:P:34:ILE:HD13  | 1:P:67:LEU:HD13  | 1.71                     | 0.70              |
| 1:U:236:LEU:HD13 | 1:U:251:GLY:HA2  | 1.72                     | 0.70              |
| 1:A:169:TYR:CE2  | 1:C:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:D:169:TYR:CE2  | 1:F:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:D:236:LEU:CD1  | 1:D:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:I:244:ASP:OD1  | 1:I:246:GLN:HG3  | 1.90                     | 0.70              |
| 1:J:43:VAL:O     | 1:J:44:MET:HB3   | 1.90                     | 0.70              |
| 1:M:37:ARG:CG    | 1:M:38:PRO:HD2   | 2.20                     | 0.70              |
| 1:M:236:LEU:CD1  | 1:M:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:O:39:ARG:HE    | 1:O:66:THR:CA    | 2.03                     | 0.70              |
| 1:O:143:TYR:CD2  | 1:O:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:U:236:LEU:CD1  | 1:U:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:C:39:ARG:HE    | 1:C:66:THR:HA    | 1.52                     | 0.70              |
| 1:C:143:TYR:CD2  | 1:C:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:E:236:LEU:HD13 | 1:E:251:GLY:HA2  | 1.72                     | 0.70              |
| 1:H:208:ILE:CD1  | 1:H:243:PRO:HD2  | 2.18                     | 0.70              |
| 1:R:236:LEU:CD1  | 1:R:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:R:244:ASP:OD1  | 1:R:246:GLN:HG3  | 1.90                     | 0.70              |
| 1:S:143:TYR:CD2  | 1:S:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:A:236:LEU:HD13 | 1:A:251:GLY:HA2  | 1.72                     | 0.70              |
| 1:C:169:TYR:CE2  | 1:E:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:J:143:TYR:CE1  | 1:L:45:VAL:HG21  | 2.27                     | 0.70              |
| 1:O:236:LEU:CD1  | 1:O:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:P:143:TYR:CE1  | 1:R:45:VAL:HG21  | 2.27                     | 0.70              |
| 1:P:169:TYR:CE2  | 1:R:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:R:301:GLY:H    | 1:R:335:ARG:HG3  | 1.55                     | 0.70              |
| 1:S:34:ILE:CA    | 1:S:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:A:143:TYR:CE1  | 1:C:45:VAL:HG21  | 2.27                     | 0.70              |
| 1:B:290:ARG:CD   | 1:D:244:ASP:HB2  | 2.12                     | 0.70              |
| 1:C:236:LEU:HD13 | 1:C:251:GLY:HA2  | 1.72                     | 0.70              |
| 1:K:34:ILE:HG22  | 1:K:35:VAL:N     | 2.07                     | 0.70              |
| 1:Q:236:LEU:CD1  | 1:Q:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:U:143:TYR:CE1  | 1:W:45:VAL:HG21  | 2.27                     | 0.70              |
| 1:C:208:ILE:CD1  | 1:C:243:PRO:HD2  | 2.18                     | 0.70              |
| 1:E:143:TYR:CE1  | 1:G:45:VAL:HG21  | 2.27                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:169:TYR:CE2  | 1:H:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:G:34:ILE:HG22  | 1:G:35:VAL:N     | 2.07                     | 0.70              |
| 1:G:169:TYR:CE2  | 1:I:40:HIS:HB3   | 2.27                     | 0.70              |
| 1:G:236:LEU:CD1  | 1:G:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:H:143:TYR:CD2  | 1:H:346:LEU:HD13 | 2.26                     | 0.70              |
| 1:I:301:GLY:H    | 1:I:335:ARG:HG3  | 1.55                     | 0.70              |
| 1:N:34:ILE:HG22  | 1:N:35:VAL:N     | 2.07                     | 0.70              |
| 1:N:34:ILE:HD13  | 1:N:67:LEU:HD13  | 1.71                     | 0.70              |
| 1:O:34:ILE:CA    | 1:O:54:VAL:HG11  | 2.20                     | 0.70              |
| 1:O:143:TYR:CE1  | 1:Q:45:VAL:HG21  | 2.27                     | 0.70              |
| 1:Q:37:ARG:CG    | 1:Q:38:PRO:HD2   | 2.20                     | 0.70              |
| 1:S:236:LEU:CD1  | 1:S:237:GLU:HG2  | 2.22                     | 0.70              |
| 1:A:37:ARG:CG    | 1:A:38:PRO:HD2   | 2.20                     | 0.69              |
| 1:C:34:ILE:HG22  | 1:C:35:VAL:N     | 2.07                     | 0.69              |
| 1:D:143:TYR:CE1  | 1:F:45:VAL:HG21  | 2.27                     | 0.69              |
| 1:E:236:LEU:CD1  | 1:E:237:GLU:HG2  | 2.22                     | 0.69              |
| 1:P:236:LEU:HD13 | 1:P:251:GLY:HA2  | 1.72                     | 0.69              |
| 1:S:143:TYR:CE1  | 1:U:45:VAL:HG21  | 2.27                     | 0.69              |
| 1:V:34:ILE:HG22  | 1:V:35:VAL:N     | 2.07                     | 0.69              |
| 1:H:143:TYR:CE1  | 1:J:45:VAL:HG21  | 2.27                     | 0.69              |
| 1:N:208:ILE:CD1  | 1:N:243:PRO:HD2  | 2.18                     | 0.69              |
| 1:O:169:TYR:CE2  | 1:Q:40:HIS:HB3   | 2.27                     | 0.69              |
| 1:H:169:TYR:CE2  | 1:J:40:HIS:HB3   | 2.27                     | 0.69              |
| 1:J:34:ILE:HG22  | 1:J:35:VAL:N     | 2.07                     | 0.69              |
| 1:Q:143:TYR:CD2  | 1:Q:346:LEU:HD13 | 2.26                     | 0.69              |
| 1:R:34:ILE:HG22  | 1:R:35:VAL:N     | 2.07                     | 0.69              |
| 1:R:37:ARG:CG    | 1:R:38:PRO:HD2   | 2.20                     | 0.69              |
| 1:U:50:LYS:HG3   | 1:U:53:TYR:CE2   | 2.28                     | 0.69              |
| 1:A:236:LEU:CD1  | 1:A:237:GLU:HG2  | 2.22                     | 0.69              |
| 1:B:236:LEU:CD1  | 1:B:237:GLU:HG2  | 2.22                     | 0.69              |
| 1:E:34:ILE:HG22  | 1:E:35:VAL:N     | 2.07                     | 0.69              |
| 1:J:143:TYR:CD2  | 1:J:346:LEU:HD13 | 2.26                     | 0.69              |
| 1:K:143:TYR:CE1  | 1:M:45:VAL:HG21  | 2.27                     | 0.69              |
| 1:K:236:LEU:CD1  | 1:K:237:GLU:HG2  | 2.22                     | 0.69              |
| 1:L:143:TYR:CE1  | 1:N:45:VAL:HG21  | 2.27                     | 0.69              |
| 1:N:169:TYR:CE2  | 1:P:40:HIS:HB3   | 2.27                     | 0.69              |
| 1:O:34:ILE:HG22  | 1:O:35:VAL:N     | 2.07                     | 0.69              |
| 1:T:236:LEU:CD1  | 1:T:237:GLU:HG2  | 2.22                     | 0.69              |
| 1:F:50:LYS:HG3   | 1:F:53:TYR:CE2   | 2.28                     | 0.69              |
| 1:H:50:LYS:HG3   | 1:H:53:TYR:CE2   | 2.28                     | 0.69              |
| 1:H:58:ALA:CB    | 1:H:65:LEU:HD22  | 2.23                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:J:50:LYS:HG3   | 1:J:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:J:169:TYR:CE2  | 1:L:40:HIS:HB3  | 2.27                     | 0.69              |
| 1:Q:50:LYS:HG3   | 1:Q:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:Q:143:TYR:CE1  | 1:S:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:R:58:ALA:CB    | 1:R:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:R:236:LEU:HD13 | 1:R:251:GLY:HA2 | 1.72                     | 0.69              |
| 1:S:50:LYS:HG3   | 1:S:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:A:50:LYS:HG3   | 1:A:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:B:50:LYS:HG3   | 1:B:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:D:50:LYS:HG3   | 1:D:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:G:37:ARG:CG    | 1:G:38:PRO:HD2  | 2.20                     | 0.69              |
| 1:G:58:ALA:CB    | 1:G:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:L:50:LYS:HG3   | 1:L:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:N:50:LYS:HG3   | 1:N:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:N:143:TYR:CE1  | 1:P:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:S:58:ALA:CB    | 1:S:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:T:143:TYR:CE1  | 1:V:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:U:169:TYR:CE2  | 1:W:40:HIS:HB3  | 2.27                     | 0.69              |
| 1:W:50:LYS:HG3   | 1:W:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:A:58:ALA:CB    | 1:A:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:A:208:ILE:CD1  | 1:A:243:PRO:HD2 | 2.18                     | 0.69              |
| 1:J:236:LEU:CD1  | 1:J:237:GLU:HG2 | 2.22                     | 0.69              |
| 1:N:58:ALA:CB    | 1:N:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:N:236:LEU:CD1  | 1:N:237:GLU:HG2 | 2.22                     | 0.69              |
| 1:P:50:LYS:HG3   | 1:P:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:U:34:ILE:HG22  | 1:U:35:VAL:N    | 2.07                     | 0.69              |
| 1:B:58:ALA:CB    | 1:B:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:B:143:TYR:CE1  | 1:D:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:C:50:LYS:HG3   | 1:C:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:C:58:ALA:CB    | 1:C:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:C:143:TYR:CE1  | 1:E:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:D:34:ILE:HG22  | 1:D:35:VAL:N    | 2.07                     | 0.69              |
| 1:D:58:ALA:CB    | 1:D:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:E:50:LYS:HG3   | 1:E:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:F:143:TYR:CE1  | 1:H:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:F:236:LEU:CD1  | 1:F:237:GLU:HG2 | 2.22                     | 0.69              |
| 1:G:143:TYR:CE1  | 1:I:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:I:34:ILE:HG22  | 1:I:35:VAL:N    | 2.07                     | 0.69              |
| 1:I:301:GLY:N    | 1:I:335:ARG:HG3 | 2.08                     | 0.69              |
| 1:K:50:LYS:HG3   | 1:K:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:K:301:GLY:N    | 1:K:335:ARG:HG3 | 2.08                     | 0.69              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:L:169:TYR:CE2  | 1:N:40:HIS:HB3  | 2.27                     | 0.69              |
| 1:M:50:LYS:HG3   | 1:M:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:M:301:GLY:N    | 1:M:335:ARG:HG3 | 2.08                     | 0.69              |
| 1:N:208:ILE:HD11 | 1:N:243:PRO:CG  | 2.23                     | 0.69              |
| 1:O:50:LYS:HG3   | 1:O:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:P:208:ILE:HD11 | 1:P:243:PRO:CG  | 2.23                     | 0.69              |
| 1:P:301:GLY:N    | 1:P:335:ARG:HG3 | 2.08                     | 0.69              |
| 1:R:143:TYR:CE1  | 1:T:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:S:34:ILE:HG22  | 1:S:35:VAL:N    | 2.07                     | 0.69              |
| 1:S:169:TYR:CE2  | 1:U:40:HIS:HB3  | 2.27                     | 0.69              |
| 1:S:301:GLY:N    | 1:S:335:ARG:HG3 | 2.08                     | 0.69              |
| 1:T:50:LYS:HG3   | 1:T:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:T:236:LEU:HD13 | 1:T:251:GLY:HA2 | 1.72                     | 0.69              |
| 1:U:58:ALA:CB    | 1:U:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:V:236:LEU:HD13 | 1:V:251:GLY:HA2 | 1.72                     | 0.69              |
| 1:W:34:ILE:HG22  | 1:W:35:VAL:N    | 2.07                     | 0.69              |
| 1:W:236:LEU:CD1  | 1:W:237:GLU:HG2 | 2.22                     | 0.69              |
| 1:D:22:ALA:HB1   | 1:D:348:SER:HB3 | 1.75                     | 0.69              |
| 1:D:301:GLY:N    | 1:D:335:ARG:HG3 | 2.08                     | 0.69              |
| 1:H:22:ALA:HB1   | 1:H:348:SER:HB3 | 1.75                     | 0.69              |
| 1:L:58:ALA:CB    | 1:L:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:L:208:ILE:HD11 | 1:L:243:PRO:CG  | 2.23                     | 0.69              |
| 1:M:58:ALA:CB    | 1:M:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:R:50:LYS:HG3   | 1:R:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:A:34:ILE:HG22  | 1:A:35:VAL:N    | 2.07                     | 0.69              |
| 1:G:50:LYS:HG3   | 1:G:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:I:50:LYS:HG3   | 1:I:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:I:143:TYR:CE1  | 1:K:45:VAL:HG21 | 2.27                     | 0.69              |
| 1:O:22:ALA:HB1   | 1:O:348:SER:HB3 | 1.75                     | 0.69              |
| 1:O:58:ALA:CB    | 1:O:65:LEU:HD22 | 2.23                     | 0.69              |
| 1:P:290:ARG:CD   | 1:R:244:ASP:HB2 | 2.12                     | 0.69              |
| 1:Q:169:TYR:CE2  | 1:S:40:HIS:HB3  | 2.27                     | 0.69              |
| 1:V:50:LYS:HG3   | 1:V:53:TYR:CE2  | 2.28                     | 0.69              |
| 1:W:208:ILE:HD11 | 1:W:243:PRO:CG  | 2.23                     | 0.69              |
| 1:A:301:GLY:N    | 1:A:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:E:58:ALA:CB    | 1:E:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:G:301:GLY:N    | 1:G:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:J:58:ALA:CB    | 1:J:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:J:173:HIS:CE1  | 1:K:268:GLY:CA  | 2.77                     | 0.68              |
| 1:J:301:GLY:N    | 1:J:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:M:7:ALA:HB1    | 1:M:356:TRP:CH2 | 2.29                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:O:208:ILE:HD11 | 1:O:243:PRO:CG  | 2.23                     | 0.68              |
| 1:R:208:ILE:HD11 | 1:R:243:PRO:CG  | 2.23                     | 0.68              |
| 1:V:7:ALA:HB1    | 1:V:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:V:58:ALA:CB    | 1:V:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:W:58:ALA:CB    | 1:W:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:F:34:ILE:HG22  | 1:F:35:VAL:N    | 2.07                     | 0.68              |
| 1:I:7:ALA:HB1    | 1:I:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:I:58:ALA:CB    | 1:I:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:M:208:ILE:HD11 | 1:M:243:PRO:CG  | 2.23                     | 0.68              |
| 1:N:22:ALA:HB1   | 1:N:348:SER:HB3 | 1.76                     | 0.68              |
| 1:T:58:ALA:CB    | 1:T:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:B:7:ALA:HB1    | 1:B:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:C:22:ALA:HB1   | 1:C:348:SER:HB3 | 1.75                     | 0.68              |
| 1:C:362:TYR:CE1  | 1:C:367:PRO:HB3 | 2.28                     | 0.68              |
| 1:D:7:ALA:HB1    | 1:D:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:E:290:ARG:CD   | 1:G:244:ASP:HB2 | 2.12                     | 0.68              |
| 1:F:173:HIS:CE1  | 1:G:268:GLY:CA  | 2.77                     | 0.68              |
| 1:H:34:ILE:HG22  | 1:H:35:VAL:N    | 2.07                     | 0.68              |
| 1:K:7:ALA:HB1    | 1:K:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:K:208:ILE:HD11 | 1:K:243:PRO:CG  | 2.23                     | 0.68              |
| 1:N:173:HIS:CE1  | 1:O:268:GLY:CA  | 2.77                     | 0.68              |
| 1:O:7:ALA:HB1    | 1:O:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:O:301:GLY:N    | 1:O:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:R:301:GLY:N    | 1:R:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:T:7:ALA:HB1    | 1:T:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:U:208:ILE:HD11 | 1:U:243:PRO:CG  | 2.23                     | 0.68              |
| 1:C:173:HIS:CE1  | 1:D:268:GLY:CA  | 2.77                     | 0.68              |
| 1:J:208:ILE:HD11 | 1:J:243:PRO:CG  | 2.23                     | 0.68              |
| 1:L:34:ILE:HG22  | 1:L:35:VAL:N    | 2.07                     | 0.68              |
| 1:Q:34:ILE:HG22  | 1:Q:35:VAL:N    | 2.07                     | 0.68              |
| 1:S:22:ALA:HB1   | 1:S:348:SER:HB3 | 1.75                     | 0.68              |
| 1:U:22:ALA:HB1   | 1:U:348:SER:HB3 | 1.75                     | 0.68              |
| 1:A:173:HIS:CE1  | 1:B:268:GLY:CA  | 2.77                     | 0.68              |
| 1:A:362:TYR:CE1  | 1:A:367:PRO:HB3 | 2.28                     | 0.68              |
| 1:F:7:ALA:HB1    | 1:F:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:L:22:ALA:HB1   | 1:L:348:SER:HB3 | 1.75                     | 0.68              |
| 1:M:143:TYR:CE1  | 1:O:45:VAL:HG21 | 2.27                     | 0.68              |
| 1:P:58:ALA:CB    | 1:P:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:Q:208:ILE:HD11 | 1:Q:243:PRO:CG  | 2.23                     | 0.68              |
| 1:T:301:GLY:N    | 1:T:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:A:22:ALA:HB1   | 1:A:348:SER:HB3 | 1.75                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:B:301:GLY:N    | 1:B:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:E:208:ILE:HD11 | 1:E:243:PRO:CG  | 2.23                     | 0.68              |
| 1:E:301:GLY:N    | 1:E:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:G:7:ALA:HB1    | 1:G:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:G:208:ILE:HD11 | 1:G:243:PRO:CG  | 2.23                     | 0.68              |
| 1:G:362:TYR:O    | 1:G:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:N:38:PRO:CG    | 1:N:49:GLN:HE22 | 2.07                     | 0.68              |
| 1:R:173:HIS:CE1  | 1:S:268:GLY:CA  | 2.77                     | 0.68              |
| 1:S:173:HIS:CE1  | 1:T:268:GLY:CA  | 2.77                     | 0.68              |
| 1:T:34:ILE:HG22  | 1:T:35:VAL:N    | 2.07                     | 0.68              |
| 1:U:37:ARG:CG    | 1:U:38:PRO:HD2  | 2.20                     | 0.68              |
| 1:V:301:GLY:N    | 1:V:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:B:34:ILE:HG22  | 1:B:35:VAL:N    | 2.07                     | 0.68              |
| 1:C:7:ALA:HB1    | 1:C:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:C:208:ILE:HD11 | 1:C:243:PRO:CG  | 2.23                     | 0.68              |
| 1:E:362:TYR:O    | 1:E:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:F:58:ALA:CB    | 1:F:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:F:301:GLY:N    | 1:F:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:H:362:TYR:O    | 1:H:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:I:22:ALA:HB1   | 1:I:348:SER:HB3 | 1.75                     | 0.68              |
| 1:J:22:ALA:HB1   | 1:J:348:SER:HB3 | 1.75                     | 0.68              |
| 1:K:58:ALA:CB    | 1:K:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:L:38:PRO:CG    | 1:L:49:GLN:HE22 | 2.07                     | 0.68              |
| 1:O:362:TYR:CE1  | 1:O:367:PRO:HB3 | 2.28                     | 0.68              |
| 1:P:173:HIS:CE1  | 1:Q:268:GLY:CA  | 2.77                     | 0.68              |
| 1:T:362:TYR:O    | 1:T:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:A:7:ALA:HB1    | 1:A:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:E:7:ALA:HB1    | 1:E:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:E:173:HIS:CE1  | 1:F:268:GLY:CA  | 2.77                     | 0.68              |
| 1:G:236:LEU:HD22 | 1:G:252:ASN:N   | 2.09                     | 0.68              |
| 1:I:236:LEU:HD22 | 1:I:252:ASN:N   | 2.09                     | 0.68              |
| 1:J:38:PRO:CG    | 1:J:49:GLN:HE22 | 2.07                     | 0.68              |
| 1:N:301:GLY:N    | 1:N:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:P:34:ILE:HG22  | 1:P:35:VAL:N    | 2.07                     | 0.68              |
| 1:P:38:PRO:CG    | 1:P:49:GLN:HE22 | 2.07                     | 0.68              |
| 1:Q:58:ALA:CB    | 1:Q:65:LEU:HD22 | 2.23                     | 0.68              |
| 1:Q:301:GLY:N    | 1:Q:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:Q:362:TYR:O    | 1:Q:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:R:7:ALA:HB1    | 1:R:356:TRP:CH2 | 2.29                     | 0.68              |
| 1:S:208:ILE:HD11 | 1:S:243:PRO:CG  | 2.23                     | 0.68              |
| 1:S:362:TYR:O    | 1:S:366:GLY:HA2 | 1.94                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:U:301:GLY:N    | 1:U:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:A:236:LEU:HD22 | 1:A:252:ASN:N   | 2.09                     | 0.68              |
| 1:D:110:LEU:HD12 | 1:D:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:D:362:TYR:O    | 1:D:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:F:110:LEU:HD12 | 1:F:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:F:362:TYR:CE1  | 1:F:367:PRO:HB3 | 2.28                     | 0.68              |
| 1:I:208:ILE:HD11 | 1:I:243:PRO:CG  | 2.23                     | 0.68              |
| 1:K:110:LEU:HD12 | 1:K:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:M:34:ILE:HG22  | 1:M:35:VAL:N    | 2.07                     | 0.68              |
| 1:M:362:TYR:CE1  | 1:M:367:PRO:HB3 | 2.28                     | 0.68              |
| 1:P:236:LEU:HD22 | 1:P:252:ASN:N   | 2.09                     | 0.68              |
| 1:Q:362:TYR:CE1  | 1:Q:367:PRO:HB3 | 2.28                     | 0.68              |
| 1:R:22:ALA:HB1   | 1:R:348:SER:HB3 | 1.75                     | 0.68              |
| 1:R:236:LEU:HD22 | 1:R:252:ASN:N   | 2.09                     | 0.68              |
| 1:T:22:ALA:HB1   | 1:T:348:SER:HB3 | 1.75                     | 0.68              |
| 1:T:208:ILE:HD11 | 1:T:243:PRO:CG  | 2.23                     | 0.68              |
| 1:A:110:LEU:HD12 | 1:A:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:B:22:ALA:HB1   | 1:B:348:SER:HB3 | 1.75                     | 0.68              |
| 1:B:362:TYR:O    | 1:B:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:D:362:TYR:CE1  | 1:D:367:PRO:HB3 | 2.28                     | 0.68              |
| 1:E:110:LEU:HD12 | 1:E:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:H:110:LEU:HD12 | 1:H:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:H:301:GLY:N    | 1:H:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:J:37:ARG:CG    | 1:J:38:PRO:HD2  | 2.20                     | 0.68              |
| 1:L:173:HIS:CE1  | 1:M:268:GLY:CA  | 2.77                     | 0.68              |
| 1:L:301:GLY:N    | 1:L:335:ARG:HG3 | 2.08                     | 0.68              |
| 1:M:110:LEU:HD12 | 1:M:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:P:110:LEU:HD12 | 1:P:177:ARG:NH1 | 2.09                     | 0.68              |
| 1:Q:22:ALA:HB1   | 1:Q:348:SER:HB3 | 1.75                     | 0.68              |
| 1:Q:208:ILE:CD1  | 1:Q:243:PRO:HD2 | 2.18                     | 0.68              |
| 1:R:38:PRO:CG    | 1:R:49:GLN:HE22 | 2.07                     | 0.68              |
| 1:U:173:HIS:CE1  | 1:V:268:GLY:CA  | 2.77                     | 0.68              |
| 1:U:362:TYR:O    | 1:U:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:W:22:ALA:HB1   | 1:W:348:SER:HB3 | 1.75                     | 0.68              |
| 1:W:362:TYR:O    | 1:W:366:GLY:HA2 | 1.94                     | 0.68              |
| 1:B:58:ALA:HB1   | 1:B:65:LEU:CD2  | 2.24                     | 0.67              |
| 1:B:110:LEU:HD12 | 1:B:177:ARG:NH1 | 2.09                     | 0.67              |
| 1:B:208:ILE:HD11 | 1:B:243:PRO:CG  | 2.23                     | 0.67              |
| 1:F:34:ILE:HD13  | 1:F:67:LEU:HD22 | 1.77                     | 0.67              |
| 1:H:7:ALA:HB1    | 1:H:356:TRP:CH2 | 2.29                     | 0.67              |
| 1:H:362:TYR:CE1  | 1:H:367:PRO:HB3 | 2.28                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:362:TYR:O    | 1:I:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:K:22:ALA:HB1   | 1:K:348:SER:HB3  | 1.75                     | 0.67              |
| 1:K:236:LEU:HD22 | 1:K:252:ASN:N    | 2.09                     | 0.67              |
| 1:M:38:PRO:CG    | 1:M:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:N:236:LEU:HD22 | 1:N:252:ASN:N    | 2.09                     | 0.67              |
| 1:O:38:PRO:CG    | 1:O:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:Q:7:ALA:HB1    | 1:Q:356:TRP:CH2  | 2.29                     | 0.67              |
| 1:T:362:TYR:CE1  | 1:T:367:PRO:HB3  | 2.28                     | 0.67              |
| 1:V:362:TYR:CE1  | 1:V:367:PRO:HB3  | 2.28                     | 0.67              |
| 1:C:236:LEU:HD22 | 1:C:252:ASN:N    | 2.09                     | 0.67              |
| 1:C:301:GLY:N    | 1:C:335:ARG:HG3  | 2.08                     | 0.67              |
| 1:D:38:PRO:CG    | 1:D:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:D:58:ALA:HB1   | 1:D:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:H:208:ILE:HD11 | 1:H:243:PRO:CG   | 2.23                     | 0.67              |
| 1:K:37:ARG:CG    | 1:K:38:PRO:HD2   | 2.20                     | 0.67              |
| 1:L:362:TYR:O    | 1:L:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:O:110:LEU:HD12 | 1:O:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:P:362:TYR:O    | 1:P:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:T:143:TYR:O    | 1:T:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:V:173:HIS:CE1  | 1:W:268:GLY:CA   | 2.77                     | 0.67              |
| 1:V:362:TYR:O    | 1:V:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:A:208:ILE:HD11 | 1:A:243:PRO:CG   | 2.23                     | 0.67              |
| 1:A:362:TYR:O    | 1:A:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:B:173:HIS:CE1  | 1:C:268:GLY:CA   | 2.77                     | 0.67              |
| 1:B:236:LEU:HD22 | 1:B:252:ASN:N    | 2.09                     | 0.67              |
| 1:B:370:VAL:O    | 1:B:370:VAL:HG13 | 1.95                     | 0.67              |
| 1:E:143:TYR:O    | 1:E:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:G:58:ALA:HB1   | 1:G:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:G:208:ILE:CD1  | 1:G:243:PRO:HD2  | 2.18                     | 0.67              |
| 1:H:38:PRO:CG    | 1:H:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:I:58:ALA:HB1   | 1:I:65:LEU:CD2   | 2.24                     | 0.67              |
| 1:I:173:HIS:CE1  | 1:J:268:GLY:CA   | 2.77                     | 0.67              |
| 1:J:362:TYR:O    | 1:J:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:L:104:LEU:HB2  | 1:L:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:M:22:ALA:HB1   | 1:M:348:SER:HB3  | 1.76                     | 0.67              |
| 1:N:104:LEU:HB2  | 1:N:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:N:362:TYR:O    | 1:N:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:O:173:HIS:CE1  | 1:P:268:GLY:CA   | 2.77                     | 0.67              |
| 1:O:362:TYR:O    | 1:O:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:Q:34:ILE:HD13  | 1:Q:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:T:110:LEU:HD12 | 1:T:177:ARG:NH1  | 2.09                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:34:ILE:HD13  | 1:U:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:B:38:PRO:CG    | 1:B:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:E:236:LEU:HD22 | 1:E:252:ASN:N    | 2.09                     | 0.67              |
| 1:F:58:ALA:HB1   | 1:F:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:H:34:ILE:HD13  | 1:H:67:LEU:HD22  | 1.76                     | 0.67              |
| 1:H:173:HIS:CE1  | 1:I:268:GLY:CA   | 2.77                     | 0.67              |
| 1:I:143:TYR:O    | 1:I:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:K:104:LEU:HB2  | 1:K:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:L:110:LEU:HD12 | 1:L:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:P:104:LEU:HB2  | 1:P:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:P:143:TYR:O    | 1:P:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:R:362:TYR:CE1  | 1:R:367:PRO:HB3  | 2.28                     | 0.67              |
| 1:U:370:VAL:O    | 1:U:370:VAL:HG13 | 1.95                     | 0.67              |
| 1:W:370:VAL:HG13 | 1:W:370:VAL:O    | 1.95                     | 0.67              |
| 1:B:34:ILE:HD13  | 1:B:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:C:362:TYR:O    | 1:C:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:D:34:ILE:HD13  | 1:D:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:E:58:ALA:HB1   | 1:E:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:F:208:ILE:CD1  | 1:F:243:PRO:HD2  | 2.18                     | 0.67              |
| 1:G:22:ALA:HB1   | 1:G:348:SER:HB3  | 1.75                     | 0.67              |
| 1:I:110:LEU:HD12 | 1:I:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:J:7:ALA:HB1    | 1:J:356:TRP:CH2  | 2.29                     | 0.67              |
| 1:J:104:LEU:HB2  | 1:J:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:K:58:ALA:HB1   | 1:K:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:K:362:TYR:CE1  | 1:K:367:PRO:HB3  | 2.28                     | 0.67              |
| 1:M:58:ALA:HB1   | 1:M:65:LEU:CD2   | 2.24                     | 0.67              |
| 1:Q:110:LEU:HD12 | 1:Q:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:R:104:LEU:HB2  | 1:R:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:T:38:PRO:CG    | 1:T:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:V:37:ARG:CG    | 1:V:38:PRO:HD2   | 2.20                     | 0.67              |
| 1:V:38:PRO:CG    | 1:V:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:W:7:ALA:HB1    | 1:W:356:TRP:CH2  | 2.29                     | 0.67              |
| 1:W:34:ILE:HD13  | 1:W:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:B:362:TYR:CE1  | 1:B:367:PRO:HB3  | 2.28                     | 0.67              |
| 1:D:37:ARG:CG    | 1:D:38:PRO:HD2   | 2.20                     | 0.67              |
| 1:F:38:PRO:CG    | 1:F:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:I:104:LEU:HB2  | 1:I:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:J:110:LEU:HD12 | 1:J:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:J:370:VAL:O    | 1:J:370:VAL:HG13 | 1.95                     | 0.67              |
| 1:K:38:PRO:CG    | 1:K:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:K:362:TYR:O    | 1:K:366:GLY:HA2  | 1.94                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:104:LEU:HB2  | 1:M:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:M:370:VAL:O    | 1:M:370:VAL:HG13 | 1.95                     | 0.67              |
| 1:O:58:ALA:HB1   | 1:O:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:P:7:ALA:HB1    | 1:P:356:TRP:CH2  | 2.29                     | 0.67              |
| 1:S:34:ILE:HD13  | 1:S:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:T:236:LEU:HD22 | 1:T:252:ASN:N    | 2.09                     | 0.67              |
| 1:U:7:ALA:HB1    | 1:U:356:TRP:CH2  | 2.29                     | 0.67              |
| 1:V:208:ILE:HD11 | 1:V:243:PRO:CG   | 2.23                     | 0.67              |
| 1:W:362:TYR:CE1  | 1:W:367:PRO:HB3  | 2.28                     | 0.67              |
| 1:A:143:TYR:O    | 1:A:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:D:208:ILE:HD11 | 1:D:243:PRO:CG   | 2.23                     | 0.67              |
| 1:D:236:LEU:HD22 | 1:D:252:ASN:N    | 2.09                     | 0.67              |
| 1:F:22:ALA:HB1   | 1:F:348:SER:HB3  | 1.75                     | 0.67              |
| 1:J:34:ILE:HD13  | 1:J:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:M:34:ILE:HD13  | 1:M:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:M:362:TYR:O    | 1:M:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:O:34:ILE:HD13  | 1:O:67:LEU:HD22  | 1.77                     | 0.67              |
| 1:Q:58:ALA:HB1   | 1:Q:65:LEU:CD2   | 2.24                     | 0.67              |
| 1:Q:236:LEU:HD22 | 1:Q:252:ASN:N    | 2.09                     | 0.67              |
| 1:R:208:ILE:CD1  | 1:R:243:PRO:HD2  | 2.18                     | 0.67              |
| 1:V:22:ALA:HB1   | 1:V:348:SER:HB3  | 1.75                     | 0.67              |
| 1:C:38:PRO:CG    | 1:C:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:D:173:HIS:CE1  | 1:E:268:GLY:CA   | 2.77                     | 0.67              |
| 1:D:370:VAL:HG13 | 1:D:370:VAL:O    | 1.95                     | 0.67              |
| 1:E:22:ALA:HB1   | 1:E:348:SER:HB3  | 1.75                     | 0.67              |
| 1:G:104:LEU:HB2  | 1:G:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:G:173:HIS:CE1  | 1:H:268:GLY:CA   | 2.77                     | 0.67              |
| 1:H:104:LEU:HB2  | 1:H:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:J:362:TYR:CE1  | 1:J:367:PRO:HB3  | 2.29                     | 0.67              |
| 1:K:173:HIS:CE1  | 1:L:268:GLY:CA   | 2.77                     | 0.67              |
| 1:K:290:ARG:CD   | 1:M:244:ASP:HB2  | 2.12                     | 0.67              |
| 1:M:236:LEU:HD22 | 1:M:252:ASN:N    | 2.09                     | 0.67              |
| 1:N:143:TYR:O    | 1:N:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:O:104:LEU:HB2  | 1:O:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:O:370:VAL:HG13 | 1:O:370:VAL:O    | 1.95                     | 0.67              |
| 1:P:22:ALA:HB1   | 1:P:348:SER:HB3  | 1.75                     | 0.67              |
| 1:Q:38:PRO:CG    | 1:Q:49:GLN:HE22  | 2.07                     | 0.67              |
| 1:R:58:ALA:HB1   | 1:R:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:R:110:LEU:HD12 | 1:R:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:T:104:LEU:HB2  | 1:T:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:A:38:PRO:CG    | 1:A:49:GLN:HE22  | 2.07                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:143:TYR:O    | 1:C:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:E:104:LEU:HB2  | 1:E:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:J:236:LEU:HD22 | 1:J:252:ASN:N    | 2.09                     | 0.67              |
| 1:L:7:ALA:HB1    | 1:L:356:TRP:CH2  | 2.29                     | 0.67              |
| 1:L:236:LEU:HD22 | 1:L:252:ASN:N    | 2.09                     | 0.67              |
| 1:M:173:HIS:CE1  | 1:N:268:GLY:CA   | 2.77                     | 0.67              |
| 1:P:37:ARG:CG    | 1:P:38:PRO:HD2   | 2.20                     | 0.67              |
| 1:P:58:ALA:HB1   | 1:P:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:P:362:TYR:CE1  | 1:P:367:PRO:HB3  | 2.28                     | 0.67              |
| 1:S:7:ALA:HB1    | 1:S:356:TRP:CH2  | 2.29                     | 0.67              |
| 1:S:39:ARG:NE    | 1:S:66:THR:HB    | 2.09                     | 0.67              |
| 1:V:104:LEU:HB2  | 1:V:356:TRP:CZ3  | 2.30                     | 0.67              |
| 1:V:110:LEU:HD12 | 1:V:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:W:236:LEU:HD22 | 1:W:252:ASN:N    | 2.09                     | 0.67              |
| 1:W:301:GLY:N    | 1:W:335:ARG:HG3  | 2.08                     | 0.67              |
| 1:C:58:ALA:HB1   | 1:C:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:F:208:ILE:HD11 | 1:F:243:PRO:CG   | 2.23                     | 0.67              |
| 1:F:362:TYR:O    | 1:F:366:GLY:HA2  | 1.94                     | 0.67              |
| 1:M:143:TYR:O    | 1:M:143:TYR:CD1  | 2.48                     | 0.67              |
| 1:O:236:LEU:HD22 | 1:O:252:ASN:N    | 2.09                     | 0.67              |
| 1:Q:39:ARG:NE    | 1:Q:66:THR:HB    | 2.09                     | 0.67              |
| 1:S:110:LEU:HD12 | 1:S:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:S:236:LEU:HD22 | 1:S:252:ASN:N    | 2.09                     | 0.67              |
| 1:T:58:ALA:HB1   | 1:T:65:LEU:CD2   | 2.25                     | 0.67              |
| 1:U:236:LEU:HD22 | 1:U:252:ASN:N    | 2.09                     | 0.67              |
| 1:W:110:LEU:HD12 | 1:W:177:ARG:NH1  | 2.09                     | 0.67              |
| 1:G:110:LEU:HD12 | 1:G:177:ARG:NH1  | 2.09                     | 0.66              |
| 1:H:58:ALA:HB1   | 1:H:65:LEU:CD2   | 2.25                     | 0.66              |
| 1:H:370:VAL:O    | 1:H:370:VAL:HG13 | 1.95                     | 0.66              |
| 1:L:34:ILE:HD13  | 1:L:67:LEU:HD22  | 1.77                     | 0.66              |
| 1:L:143:TYR:O    | 1:L:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:L:370:VAL:HG13 | 1:L:370:VAL:O    | 1.95                     | 0.66              |
| 1:N:110:LEU:HD12 | 1:N:177:ARG:NH1  | 2.09                     | 0.66              |
| 1:O:34:ILE:HA    | 1:O:68:LYS:O     | 1.96                     | 0.66              |
| 1:Q:104:LEU:HB2  | 1:Q:356:TRP:CZ3  | 2.30                     | 0.66              |
| 1:R:362:TYR:O    | 1:R:366:GLY:HA2  | 1.94                     | 0.66              |
| 1:T:173:HIS:CE1  | 1:U:268:GLY:CA   | 2.77                     | 0.66              |
| 1:U:38:PRO:CG    | 1:U:49:GLN:HE22  | 2.07                     | 0.66              |
| 1:V:58:ALA:HB1   | 1:V:65:LEU:CD2   | 2.24                     | 0.66              |
| 1:V:236:LEU:HD22 | 1:V:252:ASN:N    | 2.09                     | 0.66              |
| 1:W:38:PRO:CG    | 1:W:49:GLN:HE22  | 2.07                     | 0.66              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:300:SER:CA   | 1:B:335:ARG:HG3  | 2.25                     | 0.66              |
| 1:C:104:LEU:HB2  | 1:C:356:TRP:CZ3  | 2.30                     | 0.66              |
| 1:K:34:ILE:HD13  | 1:K:67:LEU:HD22  | 1.77                     | 0.66              |
| 1:K:370:VAL:O    | 1:K:370:VAL:HG13 | 1.95                     | 0.66              |
| 1:M:300:SER:CA   | 1:M:335:ARG:HG3  | 2.25                     | 0.66              |
| 1:N:7:ALA:HB1    | 1:N:356:TRP:CH2  | 2.29                     | 0.66              |
| 1:N:58:ALA:HB1   | 1:N:65:LEU:CD2   | 2.25                     | 0.66              |
| 1:O:39:ARG:NE    | 1:O:66:THR:HB    | 2.09                     | 0.66              |
| 1:R:143:TYR:O    | 1:R:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:S:58:ALA:HB1   | 1:S:65:LEU:CD2   | 2.25                     | 0.66              |
| 1:U:362:TYR:CE1  | 1:U:367:PRO:HB3  | 2.28                     | 0.66              |
| 1:V:34:ILE:HA    | 1:V:68:LYS:O     | 1.96                     | 0.66              |
| 1:W:208:ILE:CD1  | 1:W:243:PRO:HD2  | 2.18                     | 0.66              |
| 1:C:110:LEU:HD12 | 1:C:177:ARG:NH1  | 2.09                     | 0.66              |
| 1:E:37:ARG:CG    | 1:E:38:PRO:HD2   | 2.20                     | 0.66              |
| 1:E:38:PRO:CG    | 1:E:49:GLN:HE22  | 2.07                     | 0.66              |
| 1:F:104:LEU:HB2  | 1:F:356:TRP:CZ3  | 2.30                     | 0.66              |
| 1:Q:173:HIS:CE1  | 1:R:268:GLY:CA   | 2.77                     | 0.66              |
| 1:S:370:VAL:O    | 1:S:370:VAL:HG13 | 1.95                     | 0.66              |
| 1:V:143:TYR:O    | 1:V:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:D:34:ILE:HA    | 1:D:68:LYS:O     | 1.96                     | 0.66              |
| 1:E:34:ILE:HA    | 1:E:68:LYS:O     | 1.96                     | 0.66              |
| 1:F:236:LEU:HD22 | 1:F:252:ASN:N    | 2.09                     | 0.66              |
| 1:H:236:LEU:HD22 | 1:H:252:ASN:N    | 2.09                     | 0.66              |
| 1:J:143:TYR:O    | 1:J:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:K:143:TYR:O    | 1:K:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:O:37:ARG:CG    | 1:O:38:PRO:HD2   | 2.20                     | 0.66              |
| 1:O:370:VAL:HG22 | 1:O:375:PHE:O    | 1.96                     | 0.66              |
| 1:Q:34:ILE:HA    | 1:Q:68:LYS:O     | 1.96                     | 0.66              |
| 1:S:104:LEU:HB2  | 1:S:356:TRP:CZ3  | 2.30                     | 0.66              |
| 1:U:39:ARG:NE    | 1:U:66:THR:HB    | 2.09                     | 0.66              |
| 1:U:110:LEU:HD12 | 1:U:177:ARG:NH1  | 2.09                     | 0.66              |
| 1:W:58:ALA:HB1   | 1:W:65:LEU:CD2   | 2.25                     | 0.66              |
| 1:A:104:LEU:HB2  | 1:A:356:TRP:CZ3  | 2.30                     | 0.66              |
| 1:G:143:TYR:O    | 1:G:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:I:34:ILE:HD13  | 1:I:67:LEU:HD22  | 1.76                     | 0.66              |
| 1:I:300:SER:CA   | 1:I:335:ARG:HG3  | 2.26                     | 0.66              |
| 1:J:39:ARG:NE    | 1:J:66:THR:HB    | 2.09                     | 0.66              |
| 1:K:34:ILE:HA    | 1:K:68:LYS:O     | 1.96                     | 0.66              |
| 1:N:34:ILE:HD13  | 1:N:67:LEU:HD22  | 1.77                     | 0.66              |
| 1:B:35:VAL:CG1   | 1:B:68:LYS:HB2   | 2.22                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:143:TYR:O    | 1:B:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:E:370:VAL:HG22 | 1:E:375:PHE:O    | 1.96                     | 0.66              |
| 1:G:34:ILE:HA    | 1:G:68:LYS:O     | 1.96                     | 0.66              |
| 1:G:38:PRO:CG    | 1:G:49:GLN:HE22  | 2.07                     | 0.66              |
| 1:H:370:VAL:HG22 | 1:H:375:PHE:O    | 1.96                     | 0.66              |
| 1:I:362:TYR:CE1  | 1:I:367:PRO:HB3  | 2.29                     | 0.66              |
| 1:I:370:VAL:HG22 | 1:I:375:PHE:O    | 1.96                     | 0.66              |
| 1:J:370:VAL:HG22 | 1:J:375:PHE:O    | 1.96                     | 0.66              |
| 1:M:34:ILE:HA    | 1:M:68:LYS:O     | 1.96                     | 0.66              |
| 1:S:34:ILE:HA    | 1:S:68:LYS:O     | 1.96                     | 0.66              |
| 1:U:35:VAL:CA    | 1:U:54:VAL:HG21  | 2.26                     | 0.66              |
| 1:A:370:VAL:HG22 | 1:A:375:PHE:O    | 1.96                     | 0.66              |
| 1:C:34:ILE:HA    | 1:C:68:LYS:O     | 1.96                     | 0.66              |
| 1:D:35:VAL:CG1   | 1:D:68:LYS:HB2   | 2.22                     | 0.66              |
| 1:N:370:VAL:HG13 | 1:N:370:VAL:O    | 1.95                     | 0.66              |
| 1:P:370:VAL:HG22 | 1:P:375:PHE:O    | 1.96                     | 0.66              |
| 1:S:35:VAL:CA    | 1:S:54:VAL:HG21  | 2.26                     | 0.66              |
| 1:T:34:ILE:HA    | 1:T:68:LYS:O     | 1.96                     | 0.66              |
| 1:U:104:LEU:HB2  | 1:U:356:TRP:CZ3  | 2.30                     | 0.66              |
| 1:W:35:VAL:CA    | 1:W:54:VAL:HG21  | 2.26                     | 0.66              |
| 1:W:143:TYR:O    | 1:W:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:A:58:ALA:HB1   | 1:A:65:LEU:CD2   | 2.25                     | 0.66              |
| 1:C:370:VAL:HG22 | 1:C:375:PHE:O    | 1.96                     | 0.66              |
| 1:C:370:VAL:O    | 1:C:370:VAL:HG13 | 1.95                     | 0.66              |
| 1:D:104:LEU:HB2  | 1:D:356:TRP:CZ3  | 2.30                     | 0.66              |
| 1:G:35:VAL:CA    | 1:G:54:VAL:HG21  | 2.26                     | 0.66              |
| 1:I:38:PRO:CG    | 1:I:49:GLN:HE22  | 2.07                     | 0.66              |
| 1:L:208:ILE:CD1  | 1:L:243:PRO:HD2  | 2.18                     | 0.66              |
| 1:L:362:TYR:CE1  | 1:L:367:PRO:HB3  | 2.28                     | 0.66              |
| 1:N:362:TYR:CE1  | 1:N:367:PRO:HB3  | 2.28                     | 0.66              |
| 1:Q:370:VAL:HG13 | 1:Q:370:VAL:O    | 1.95                     | 0.66              |
| 1:S:362:TYR:CE1  | 1:S:367:PRO:HB3  | 2.28                     | 0.66              |
| 1:T:300:SER:CA   | 1:T:335:ARG:HG3  | 2.26                     | 0.66              |
| 1:W:370:VAL:HG22 | 1:W:375:PHE:O    | 1.96                     | 0.66              |
| 1:E:35:VAL:CA    | 1:E:54:VAL:HG21  | 2.26                     | 0.66              |
| 1:F:143:TYR:O    | 1:F:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:I:35:VAL:CA    | 1:I:54:VAL:HG21  | 2.26                     | 0.66              |
| 1:L:58:ALA:HB1   | 1:L:65:LEU:CD2   | 2.25                     | 0.66              |
| 1:M:370:VAL:HG22 | 1:M:375:PHE:O    | 1.96                     | 0.66              |
| 1:O:300:SER:CA   | 1:O:335:ARG:HG3  | 2.25                     | 0.66              |
| 1:P:34:ILE:HA    | 1:P:68:LYS:O     | 1.96                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:35:VAL:CA    | 1:Q:54:VAL:HG21  | 2.26                     | 0.66              |
| 1:Q:143:TYR:O    | 1:Q:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:Q:300:SER:CA   | 1:Q:335:ARG:HG3  | 2.26                     | 0.66              |
| 1:Q:370:VAL:HG22 | 1:Q:375:PHE:O    | 1.96                     | 0.66              |
| 1:R:34:ILE:HA    | 1:R:68:LYS:O     | 1.96                     | 0.66              |
| 1:S:38:PRO:CG    | 1:S:49:GLN:HE22  | 2.07                     | 0.66              |
| 1:T:370:VAL:HG13 | 1:T:370:VAL:O    | 1.95                     | 0.66              |
| 1:U:58:ALA:HB1   | 1:U:65:LEU:CD2   | 2.25                     | 0.66              |
| 1:U:143:TYR:O    | 1:U:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:A:34:ILE:HD13  | 1:A:67:LEU:HD22  | 1.77                     | 0.66              |
| 1:G:370:VAL:HG13 | 1:G:370:VAL:O    | 1.95                     | 0.66              |
| 1:O:143:TYR:O    | 1:O:143:TYR:CD1  | 2.48                     | 0.66              |
| 1:P:370:VAL:O    | 1:P:370:VAL:HG13 | 1.95                     | 0.66              |
| 1:S:300:SER:CA   | 1:S:335:ARG:HG3  | 2.25                     | 0.66              |
| 1:T:370:VAL:HG22 | 1:T:375:PHE:O    | 1.96                     | 0.66              |
| 1:A:370:VAL:HG13 | 1:A:370:VAL:O    | 1.95                     | 0.65              |
| 1:B:370:VAL:HG22 | 1:B:375:PHE:O    | 1.96                     | 0.65              |
| 1:C:34:ILE:HD13  | 1:C:67:LEU:HD22  | 1.77                     | 0.65              |
| 1:I:370:VAL:HG13 | 1:I:370:VAL:O    | 1.95                     | 0.65              |
| 1:J:58:ALA:HB1   | 1:J:65:LEU:CD2   | 2.25                     | 0.65              |
| 1:L:39:ARG:NE    | 1:L:66:THR:HB    | 2.09                     | 0.65              |
| 1:L:370:VAL:HG22 | 1:L:375:PHE:O    | 1.96                     | 0.65              |
| 1:M:39:ARG:NE    | 1:M:66:THR:HB    | 2.09                     | 0.65              |
| 1:R:370:VAL:HG22 | 1:R:375:PHE:O    | 1.96                     | 0.65              |
| 1:T:34:ILE:HD13  | 1:T:67:LEU:HD22  | 1.77                     | 0.65              |
| 1:V:370:VAL:HG22 | 1:V:375:PHE:O    | 1.96                     | 0.65              |
| 1:V:370:VAL:O    | 1:V:370:VAL:HG13 | 1.95                     | 0.65              |
| 1:W:104:LEU:HB2  | 1:W:356:TRP:CZ3  | 2.30                     | 0.65              |
| 1:B:34:ILE:HA    | 1:B:68:LYS:O     | 1.96                     | 0.65              |
| 1:D:35:VAL:CA    | 1:D:54:VAL:HG21  | 2.26                     | 0.65              |
| 1:E:34:ILE:HD13  | 1:E:67:LEU:HD22  | 1.77                     | 0.65              |
| 1:F:35:VAL:CG1   | 1:F:68:LYS:HB2   | 2.22                     | 0.65              |
| 1:F:370:VAL:HG13 | 1:F:370:VAL:O    | 1.95                     | 0.65              |
| 1:H:143:TYR:O    | 1:H:143:TYR:CD1  | 2.48                     | 0.65              |
| 1:I:34:ILE:HA    | 1:I:68:LYS:O     | 1.96                     | 0.65              |
| 1:J:34:ILE:HA    | 1:J:68:LYS:O     | 1.96                     | 0.65              |
| 1:L:35:VAL:CA    | 1:L:54:VAL:HG21  | 2.26                     | 0.65              |
| 1:R:34:ILE:HD13  | 1:R:67:LEU:HD22  | 1.77                     | 0.65              |
| 1:V:35:VAL:CA    | 1:V:54:VAL:HG21  | 2.26                     | 0.65              |
| 1:B:104:LEU:HB2  | 1:B:356:TRP:CZ3  | 2.30                     | 0.65              |
| 1:F:300:SER:CA   | 1:F:335:ARG:HG3  | 2.26                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:G:300:SER:CA   | 1:G:335:ARG:HG3 | 2.25                     | 0.65              |
| 1:G:370:VAL:HG22 | 1:G:375:PHE:O   | 1.96                     | 0.65              |
| 1:H:34:ILE:HA    | 1:H:68:LYS:O    | 1.96                     | 0.65              |
| 1:K:208:ILE:CD1  | 1:K:243:PRO:HD2 | 2.18                     | 0.65              |
| 1:O:35:VAL:CA    | 1:O:54:VAL:HG21 | 2.26                     | 0.65              |
| 1:V:34:ILE:HD13  | 1:V:67:LEU:HD22 | 1.77                     | 0.65              |
| 1:V:300:SER:CA   | 1:V:335:ARG:HG3 | 2.25                     | 0.65              |
| 1:A:34:ILE:HA    | 1:A:68:LYS:O    | 1.96                     | 0.65              |
| 1:D:143:TYR:O    | 1:D:143:TYR:CD1 | 2.48                     | 0.65              |
| 1:E:369:ILE:CG2  | 1:E:370:VAL:N   | 2.60                     | 0.65              |
| 1:F:370:VAL:HG22 | 1:F:375:PHE:O   | 1.96                     | 0.65              |
| 1:G:34:ILE:HD13  | 1:G:67:LEU:HD22 | 1.77                     | 0.65              |
| 1:K:35:VAL:CA    | 1:K:54:VAL:HG21 | 2.26                     | 0.65              |
| 1:L:34:ILE:HA    | 1:L:68:LYS:O    | 1.96                     | 0.65              |
| 1:N:370:VAL:HG22 | 1:N:375:PHE:O   | 1.96                     | 0.65              |
| 1:P:34:ILE:HD13  | 1:P:67:LEU:HD22 | 1.77                     | 0.65              |
| 1:S:143:TYR:O    | 1:S:143:TYR:CD1 | 2.48                     | 0.65              |
| 1:T:290:ARG:CD   | 1:V:244:ASP:HB2 | 2.12                     | 0.65              |
| 1:U:35:VAL:CG1   | 1:U:68:LYS:HB2  | 2.22                     | 0.65              |
| 1:W:34:ILE:HA    | 1:W:68:LYS:O    | 1.96                     | 0.65              |
| 1:W:39:ARG:NE    | 1:W:66:THR:HB   | 2.09                     | 0.65              |
| 1:B:35:VAL:CA    | 1:B:54:VAL:HG21 | 2.26                     | 0.65              |
| 1:C:35:VAL:CA    | 1:C:54:VAL:HG21 | 2.26                     | 0.65              |
| 1:C:300:SER:CA   | 1:C:335:ARG:HG3 | 2.25                     | 0.65              |
| 1:E:300:SER:CA   | 1:E:335:ARG:HG3 | 2.25                     | 0.65              |
| 1:F:34:ILE:HA    | 1:F:68:LYS:O    | 1.96                     | 0.65              |
| 1:P:35:VAL:CA    | 1:P:54:VAL:HG21 | 2.26                     | 0.65              |
| 1:D:300:SER:CA   | 1:D:335:ARG:HG3 | 2.26                     | 0.65              |
| 1:K:300:SER:CA   | 1:K:335:ARG:HG3 | 2.25                     | 0.65              |
| 1:N:35:VAL:CA    | 1:N:54:VAL:HG21 | 2.26                     | 0.65              |
| 1:N:369:ILE:CG2  | 1:N:370:VAL:N   | 2.60                     | 0.65              |
| 1:T:369:ILE:CG2  | 1:T:370:VAL:N   | 2.60                     | 0.65              |
| 1:E:362:TYR:CE1  | 1:E:367:PRO:HB3 | 2.29                     | 0.65              |
| 1:H:300:SER:CA   | 1:H:335:ARG:HG3 | 2.26                     | 0.65              |
| 1:L:369:ILE:CG2  | 1:L:370:VAL:N   | 2.60                     | 0.65              |
| 1:U:370:VAL:HG22 | 1:U:375:PHE:O   | 1.96                     | 0.65              |
| 1:C:369:ILE:CG2  | 1:C:370:VAL:N   | 2.60                     | 0.65              |
| 1:G:369:ILE:CG2  | 1:G:370:VAL:N   | 2.60                     | 0.65              |
| 1:J:35:VAL:CA    | 1:J:54:VAL:HG21 | 2.26                     | 0.65              |
| 1:K:370:VAL:HG22 | 1:K:375:PHE:O   | 1.96                     | 0.65              |
| 1:N:34:ILE:HA    | 1:N:68:LYS:O    | 1.96                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:V:369:ILE:CG2  | 1:V:370:VAL:N    | 2.60                     | 0.65              |
| 1:D:58:ALA:O     | 1:D:61:LYS:N     | 2.30                     | 0.65              |
| 1:H:35:VAL:CA    | 1:H:54:VAL:HG21  | 2.26                     | 0.65              |
| 1:O:58:ALA:O     | 1:O:61:LYS:N     | 2.30                     | 0.65              |
| 1:R:35:VAL:CA    | 1:R:54:VAL:HG21  | 2.26                     | 0.65              |
| 1:R:300:SER:CA   | 1:R:335:ARG:HG3  | 2.26                     | 0.65              |
| 1:R:370:VAL:HG13 | 1:R:370:VAL:O    | 1.95                     | 0.65              |
| 1:T:35:VAL:CA    | 1:T:54:VAL:HG21  | 2.26                     | 0.65              |
| 1:W:37:ARG:CG    | 1:W:38:PRO:HD2   | 2.20                     | 0.65              |
| 1:B:39:ARG:NE    | 1:B:66:THR:HB    | 2.09                     | 0.65              |
| 1:C:58:ALA:O     | 1:C:61:LYS:N     | 2.30                     | 0.65              |
| 1:E:58:ALA:O     | 1:E:61:LYS:N     | 2.30                     | 0.65              |
| 1:E:370:VAL:O    | 1:E:370:VAL:HG13 | 1.95                     | 0.65              |
| 1:G:362:TYR:CE1  | 1:G:367:PRO:HB3  | 2.29                     | 0.65              |
| 1:N:58:ALA:O     | 1:N:61:LYS:N     | 2.30                     | 0.65              |
| 1:U:34:ILE:HA    | 1:U:68:LYS:O     | 1.96                     | 0.65              |
| 1:M:35:VAL:CA    | 1:M:54:VAL:HG21  | 2.26                     | 0.64              |
| 1:N:300:SER:CA   | 1:N:335:ARG:HG3  | 2.26                     | 0.64              |
| 1:P:369:ILE:CG2  | 1:P:370:VAL:N    | 2.60                     | 0.64              |
| 1:S:370:VAL:HG22 | 1:S:375:PHE:O    | 1.96                     | 0.64              |
| 1:T:58:ALA:O     | 1:T:61:LYS:N     | 2.30                     | 0.64              |
| 1:W:300:SER:CA   | 1:W:335:ARG:HG3  | 2.25                     | 0.64              |
| 1:W:369:ILE:CG2  | 1:W:370:VAL:N    | 2.60                     | 0.64              |
| 1:A:35:VAL:CA    | 1:A:54:VAL:HG21  | 2.26                     | 0.64              |
| 1:F:58:ALA:O     | 1:F:61:LYS:N     | 2.30                     | 0.64              |
| 1:I:58:ALA:O     | 1:I:61:LYS:N     | 2.30                     | 0.64              |
| 1:P:300:SER:CA   | 1:P:335:ARG:HG3  | 2.25                     | 0.64              |
| 1:A:39:ARG:NE    | 1:A:66:THR:HB    | 2.09                     | 0.64              |
| 1:F:7:ALA:HB1    | 1:F:356:TRP:CZ2  | 2.33                     | 0.64              |
| 1:H:35:VAL:CG1   | 1:H:68:LYS:HB2   | 2.22                     | 0.64              |
| 1:K:39:ARG:NE    | 1:K:66:THR:HB    | 2.09                     | 0.64              |
| 1:N:39:ARG:NE    | 1:N:66:THR:HB    | 2.09                     | 0.64              |
| 1:P:58:ALA:O     | 1:P:61:LYS:N     | 2.30                     | 0.64              |
| 1:Q:58:ALA:O     | 1:Q:61:LYS:N     | 2.30                     | 0.64              |
| 1:V:58:ALA:O     | 1:V:61:LYS:N     | 2.30                     | 0.64              |
| 1:A:7:ALA:HB1    | 1:A:356:TRP:CZ2  | 2.33                     | 0.64              |
| 1:D:7:ALA:HB1    | 1:D:356:TRP:CZ2  | 2.33                     | 0.64              |
| 1:F:35:VAL:CA    | 1:F:54:VAL:HG21  | 2.26                     | 0.64              |
| 1:K:58:ALA:O     | 1:K:61:LYS:N     | 2.30                     | 0.64              |
| 1:K:369:ILE:CG2  | 1:K:370:VAL:N    | 2.60                     | 0.64              |
| 1:R:369:ILE:CG2  | 1:R:370:VAL:N    | 2.60                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:V:39:ARG:NE    | 1:V:66:THR:HB   | 2.09                     | 0.64              |
| 1:W:35:VAL:CG1   | 1:W:68:LYS:HB2  | 2.22                     | 0.64              |
| 1:C:7:ALA:HB1    | 1:C:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:D:370:VAL:HG22 | 1:D:375:PHE:O   | 1.96                     | 0.64              |
| 1:E:7:ALA:HB1    | 1:E:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:H:7:ALA:HB1    | 1:H:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:K:7:ALA:HB1    | 1:K:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:K:34:ILE:HB    | 1:K:54:VAL:HG13 | 1.80                     | 0.64              |
| 1:L:7:ALA:HB1    | 1:L:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:O:369:ILE:CG2  | 1:O:370:VAL:N   | 2.60                     | 0.64              |
| 1:P:7:ALA:HB1    | 1:P:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:Q:7:ALA:HB1    | 1:Q:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:R:7:ALA:HB1    | 1:R:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:S:7:ALA:HB1    | 1:S:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:S:37:ARG:CG    | 1:S:38:PRO:HD2  | 2.20                     | 0.64              |
| 1:U:369:ILE:CG2  | 1:U:370:VAL:N   | 2.60                     | 0.64              |
| 1:A:369:ILE:CG2  | 1:A:370:VAL:N   | 2.60                     | 0.64              |
| 1:B:7:ALA:HB1    | 1:B:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:C:290:ARG:CD   | 1:E:244:ASP:HB2 | 2.12                     | 0.64              |
| 1:D:39:ARG:NE    | 1:D:66:THR:HB   | 2.09                     | 0.64              |
| 1:H:37:ARG:CG    | 1:H:38:PRO:HD2  | 2.20                     | 0.64              |
| 1:I:7:ALA:HB1    | 1:I:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:J:7:ALA:HB1    | 1:J:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:L:300:SER:CA   | 1:L:335:ARG:HG3 | 2.26                     | 0.64              |
| 1:M:369:ILE:CG2  | 1:M:370:VAL:N   | 2.60                     | 0.64              |
| 1:N:7:ALA:HB1    | 1:N:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:N:37:ARG:CG    | 1:N:38:PRO:HD2  | 2.20                     | 0.64              |
| 1:O:7:ALA:HB1    | 1:O:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:V:208:ILE:CD1  | 1:V:243:PRO:HD2 | 2.18                     | 0.64              |
| 1:A:300:SER:CA   | 1:A:335:ARG:HG3 | 2.26                     | 0.64              |
| 1:C:39:ARG:NE    | 1:C:66:THR:HB   | 2.09                     | 0.64              |
| 1:F:369:ILE:CG2  | 1:F:370:VAL:N   | 2.60                     | 0.64              |
| 1:J:369:ILE:CG2  | 1:J:370:VAL:N   | 2.60                     | 0.64              |
| 1:Q:369:ILE:CG2  | 1:Q:370:VAL:N   | 2.60                     | 0.64              |
| 1:U:7:ALA:HB1    | 1:U:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:U:300:SER:CA   | 1:U:335:ARG:HG3 | 2.26                     | 0.64              |
| 1:B:58:ALA:O     | 1:B:61:LYS:N    | 2.30                     | 0.64              |
| 1:H:369:ILE:CG2  | 1:H:370:VAL:N   | 2.60                     | 0.64              |
| 1:M:7:ALA:HB1    | 1:M:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:W:7:ALA:HB1    | 1:W:356:TRP:CZ2 | 2.33                     | 0.64              |
| 1:D:369:ILE:CG2  | 1:D:370:VAL:N   | 2.60                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:7:ALA:HB1    | 1:G:356:TRP:CZ2  | 2.33                     | 0.64              |
| 1:H:58:ALA:O     | 1:H:61:LYS:N     | 2.30                     | 0.64              |
| 1:J:300:SER:CA   | 1:J:335:ARG:HG3  | 2.26                     | 0.64              |
| 1:M:58:ALA:O     | 1:M:61:LYS:N     | 2.30                     | 0.64              |
| 1:B:369:ILE:CG2  | 1:B:370:VAL:N    | 2.60                     | 0.63              |
| 1:E:39:ARG:NE    | 1:E:66:THR:HB    | 2.09                     | 0.63              |
| 1:I:298:VAL:HG12 | 1:I:335:ARG:HH11 | 1.63                     | 0.63              |
| 1:I:334:GLU:OE2  | 1:I:334:GLU:HA   | 1.98                     | 0.63              |
| 1:I:369:ILE:CG2  | 1:I:370:VAL:N    | 2.60                     | 0.63              |
| 1:J:298:VAL:HG12 | 1:J:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:V:35:VAL:CG1   | 1:V:68:LYS:HB2   | 2.22                     | 0.63              |
| 1:J:334:GLU:HA   | 1:J:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:L:334:GLU:HA   | 1:L:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:S:334:GLU:HA   | 1:S:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:V:334:GLU:HA   | 1:V:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:E:147:ARG:HH21 | 1:E:147:ARG:CG   | 2.12                     | 0.63              |
| 1:F:334:GLU:HA   | 1:F:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:G:58:ALA:O     | 1:G:61:LYS:N     | 2.30                     | 0.63              |
| 1:G:334:GLU:HA   | 1:G:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:T:334:GLU:OE2  | 1:T:334:GLU:HA   | 1.98                     | 0.63              |
| 1:A:298:VAL:HG12 | 1:A:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:C:147:ARG:HH21 | 1:C:147:ARG:CG   | 2.12                     | 0.63              |
| 1:G:39:ARG:NE    | 1:G:66:THR:HB    | 2.09                     | 0.63              |
| 1:G:147:ARG:HH21 | 1:G:147:ARG:CG   | 2.12                     | 0.63              |
| 1:L:37:ARG:CG    | 1:L:38:PRO:HD2   | 2.20                     | 0.63              |
| 1:P:298:VAL:HG12 | 1:P:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:S:369:ILE:CG2  | 1:S:370:VAL:N    | 2.60                     | 0.63              |
| 1:T:39:ARG:NE    | 1:T:66:THR:HB    | 2.09                     | 0.63              |
| 1:V:298:VAL:HG12 | 1:V:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:W:147:ARG:HH21 | 1:W:147:ARG:CG   | 2.12                     | 0.63              |
| 1:C:298:VAL:HG12 | 1:C:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:D:34:ILE:HB    | 1:D:54:VAL:HG13  | 1.79                     | 0.63              |
| 1:F:39:ARG:NE    | 1:F:66:THR:HB    | 2.09                     | 0.63              |
| 1:G:298:VAL:HG12 | 1:G:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:J:35:VAL:CG1   | 1:J:68:LYS:HB2   | 2.22                     | 0.63              |
| 1:J:37:ARG:O     | 1:J:66:THR:HG22  | 1.99                     | 0.63              |
| 1:O:37:ARG:HB2   | 1:O:51:ASP:O     | 1.99                     | 0.63              |
| 1:Q:147:ARG:HH21 | 1:Q:147:ARG:CG   | 2.12                     | 0.63              |
| 1:T:7:ALA:HB1    | 1:T:356:TRP:CZ2  | 2.33                     | 0.63              |
| 1:T:37:ARG:HB2   | 1:T:51:ASP:O     | 1.99                     | 0.63              |
| 1:W:334:GLU:HA   | 1:W:334:GLU:OE2  | 1.98                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:298:VAL:HG12 | 1:B:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:D:334:GLU:HA   | 1:D:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:E:169:TYR:CE2  | 1:G:40:HIS:CB    | 2.82                     | 0.63              |
| 1:G:37:ARG:O     | 1:G:66:THR:HG22  | 1.99                     | 0.63              |
| 1:I:37:ARG:HB2   | 1:I:51:ASP:O     | 1.99                     | 0.63              |
| 1:K:334:GLU:HA   | 1:K:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:M:34:ILE:HB    | 1:M:54:VAL:HG13  | 1.80                     | 0.63              |
| 1:M:334:GLU:HA   | 1:M:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:O:147:ARG:HH21 | 1:O:147:ARG:CG   | 2.12                     | 0.63              |
| 1:O:298:VAL:HG12 | 1:O:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:P:39:ARG:NE    | 1:P:66:THR:HB    | 2.09                     | 0.63              |
| 1:Q:298:VAL:HG12 | 1:Q:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:U:147:ARG:HH21 | 1:U:147:ARG:CG   | 2.12                     | 0.63              |
| 1:B:169:TYR:CE2  | 1:D:40:HIS:CB    | 2.82                     | 0.63              |
| 1:C:169:TYR:CE2  | 1:E:40:HIS:CB    | 2.82                     | 0.63              |
| 1:D:37:ARG:O     | 1:D:66:THR:HG22  | 1.99                     | 0.63              |
| 1:E:37:ARG:O     | 1:E:66:THR:HG22  | 1.99                     | 0.63              |
| 1:H:37:ARG:O     | 1:H:66:THR:HG22  | 1.99                     | 0.63              |
| 1:K:37:ARG:HB2   | 1:K:51:ASP:O     | 1.99                     | 0.63              |
| 1:L:37:ARG:O     | 1:L:66:THR:HG22  | 1.99                     | 0.63              |
| 1:L:298:VAL:HG12 | 1:L:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:M:169:TYR:CE2  | 1:O:40:HIS:CB    | 2.82                     | 0.63              |
| 1:O:35:VAL:CG1   | 1:O:68:LYS:HB2   | 2.22                     | 0.63              |
| 1:O:37:ARG:O     | 1:O:66:THR:HG22  | 1.99                     | 0.63              |
| 1:R:58:ALA:O     | 1:R:61:LYS:N     | 2.30                     | 0.63              |
| 1:R:298:VAL:HG12 | 1:R:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:S:58:ALA:O     | 1:S:61:LYS:N     | 2.30                     | 0.63              |
| 1:S:147:ARG:HH21 | 1:S:147:ARG:CG   | 2.12                     | 0.63              |
| 1:V:7:ALA:HB1    | 1:V:356:TRP:CZ2  | 2.33                     | 0.63              |
| 1:V:147:ARG:HH21 | 1:V:147:ARG:CG   | 2.12                     | 0.63              |
| 1:A:37:ARG:O     | 1:A:66:THR:HG22  | 1.99                     | 0.63              |
| 1:C:37:ARG:O     | 1:C:66:THR:HG22  | 1.99                     | 0.63              |
| 1:E:334:GLU:HA   | 1:E:334:GLU:OE2  | 1.98                     | 0.63              |
| 1:F:37:ARG:O     | 1:F:66:THR:HG22  | 1.99                     | 0.63              |
| 1:G:169:TYR:CE2  | 1:I:40:HIS:CB    | 2.82                     | 0.63              |
| 1:H:298:VAL:HG12 | 1:H:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:I:290:ARG:CD   | 1:K:244:ASP:HB2  | 2.12                     | 0.63              |
| 1:K:169:TYR:CE2  | 1:M:40:HIS:CB    | 2.82                     | 0.63              |
| 1:M:35:VAL:CG1   | 1:M:68:LYS:HB2   | 2.22                     | 0.63              |
| 1:M:37:ARG:O     | 1:M:66:THR:HG22  | 1.99                     | 0.63              |
| 1:N:147:ARG:HH21 | 1:N:147:ARG:CG   | 2.12                     | 0.63              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:169:TYR:CE2  | 1:Q:40:HIS:CB    | 2.82                     | 0.63              |
| 1:Q:334:GLU:OE2  | 1:Q:334:GLU:HA   | 1.98                     | 0.63              |
| 1:T:37:ARG:CG    | 1:T:38:PRO:HD2   | 2.20                     | 0.63              |
| 1:V:34:ILE:HB    | 1:V:54:VAL:HG13  | 1.80                     | 0.63              |
| 1:W:298:VAL:HG12 | 1:W:335:ARG:HH11 | 1.64                     | 0.63              |
| 1:D:169:TYR:CE2  | 1:F:40:HIS:CB    | 2.82                     | 0.63              |
| 1:I:39:ARG:NE    | 1:I:66:THR:HB    | 2.09                     | 0.63              |
| 1:I:169:TYR:CE2  | 1:K:40:HIS:CB    | 2.82                     | 0.63              |
| 1:J:147:ARG:HH21 | 1:J:147:ARG:CG   | 2.12                     | 0.63              |
| 1:L:147:ARG:HH21 | 1:L:147:ARG:CG   | 2.12                     | 0.63              |
| 1:P:147:ARG:HH21 | 1:P:147:ARG:CG   | 2.12                     | 0.63              |
| 1:Q:35:VAL:CG1   | 1:Q:68:LYS:HB2   | 2.22                     | 0.63              |
| 1:Q:37:ARG:HB2   | 1:Q:51:ASP:O     | 1.99                     | 0.63              |
| 1:Q:37:ARG:O     | 1:Q:66:THR:HG22  | 1.99                     | 0.63              |
| 1:Q:169:TYR:CE2  | 1:S:40:HIS:CB    | 2.82                     | 0.63              |
| 1:S:37:ARG:O     | 1:S:66:THR:HG22  | 1.99                     | 0.63              |
| 1:U:37:ARG:O     | 1:U:66:THR:HG22  | 1.99                     | 0.63              |
| 1:W:37:ARG:HB2   | 1:W:51:ASP:O     | 1.99                     | 0.63              |
| 1:A:37:ARG:HB2   | 1:A:51:ASP:O     | 1.99                     | 0.62              |
| 1:A:169:TYR:CE2  | 1:C:40:HIS:CB    | 2.82                     | 0.62              |
| 1:B:362:TYR:HA   | 1:B:366:GLY:O    | 1.99                     | 0.62              |
| 1:I:147:ARG:HH21 | 1:I:147:ARG:CG   | 2.12                     | 0.62              |
| 1:T:35:VAL:CG1   | 1:T:68:LYS:HB2   | 2.22                     | 0.62              |
| 1:U:334:GLU:HA   | 1:U:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:A:147:ARG:HH21 | 1:A:147:ARG:CG   | 2.12                     | 0.62              |
| 1:D:362:TYR:HA   | 1:D:366:GLY:O    | 2.00                     | 0.62              |
| 1:E:37:ARG:HB2   | 1:E:51:ASP:O     | 1.99                     | 0.62              |
| 1:E:298:VAL:HG12 | 1:E:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:F:362:TYR:HA   | 1:F:366:GLY:O    | 2.00                     | 0.62              |
| 1:I:37:ARG:O     | 1:I:66:THR:HG22  | 1.99                     | 0.62              |
| 1:K:35:VAL:CG1   | 1:K:68:LYS:HB2   | 2.22                     | 0.62              |
| 1:L:169:TYR:CE2  | 1:N:40:HIS:CB    | 2.82                     | 0.62              |
| 1:M:147:ARG:HH21 | 1:M:147:ARG:CG   | 2.12                     | 0.62              |
| 1:N:37:ARG:O     | 1:N:66:THR:HG22  | 1.99                     | 0.62              |
| 1:N:169:TYR:CE2  | 1:P:40:HIS:CB    | 2.82                     | 0.62              |
| 1:R:334:GLU:HA   | 1:R:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:B:147:ARG:HH21 | 1:B:147:ARG:CG   | 2.12                     | 0.62              |
| 1:F:37:ARG:HB2   | 1:F:51:ASP:O     | 1.99                     | 0.62              |
| 1:O:334:GLU:HA   | 1:O:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:P:169:TYR:CE2  | 1:R:40:HIS:CB    | 2.82                     | 0.62              |
| 1:S:169:TYR:CE2  | 1:U:40:HIS:CB    | 2.82                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:298:VAL:HG12 | 1:S:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:U:37:ARG:HB2   | 1:U:51:ASP:O     | 1.99                     | 0.62              |
| 1:V:37:ARG:HB2   | 1:V:51:ASP:O     | 1.99                     | 0.62              |
| 1:V:362:TYR:HA   | 1:V:366:GLY:O    | 2.00                     | 0.62              |
| 1:C:37:ARG:CG    | 1:C:38:PRO:HD2   | 2.20                     | 0.62              |
| 1:C:37:ARG:HB2   | 1:C:51:ASP:O     | 1.99                     | 0.62              |
| 1:H:334:GLU:HA   | 1:H:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:J:169:TYR:CE2  | 1:L:40:HIS:CB    | 2.82                     | 0.62              |
| 1:M:37:ARG:HB2   | 1:M:51:ASP:O     | 1.99                     | 0.62              |
| 1:M:362:TYR:HA   | 1:M:366:GLY:O    | 2.00                     | 0.62              |
| 1:R:39:ARG:NE    | 1:R:66:THR:HB    | 2.09                     | 0.62              |
| 1:T:147:ARG:HH21 | 1:T:147:ARG:CG   | 2.12                     | 0.62              |
| 1:A:58:ALA:O     | 1:A:61:LYS:N     | 2.30                     | 0.62              |
| 1:B:334:GLU:HA   | 1:B:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:D:37:ARG:HB2   | 1:D:51:ASP:O     | 1.99                     | 0.62              |
| 1:D:133:TYR:HB2  | 1:D:356:TRP:CE3  | 2.35                     | 0.62              |
| 1:F:133:TYR:HB2  | 1:F:356:TRP:CE3  | 2.35                     | 0.62              |
| 1:F:298:VAL:HG12 | 1:F:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:G:362:TYR:HA   | 1:G:366:GLY:O    | 1.99                     | 0.62              |
| 1:J:58:ALA:O     | 1:J:61:LYS:N     | 2.30                     | 0.62              |
| 1:P:334:GLU:HA   | 1:P:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:Q:362:TYR:HA   | 1:Q:366:GLY:O    | 2.00                     | 0.62              |
| 1:T:169:TYR:CE2  | 1:V:40:HIS:CB    | 2.82                     | 0.62              |
| 1:T:298:VAL:HG12 | 1:T:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:V:37:ARG:O     | 1:V:66:THR:HG22  | 1.99                     | 0.62              |
| 1:V:133:TYR:HB2  | 1:V:356:TRP:CE3  | 2.35                     | 0.62              |
| 1:B:133:TYR:HB2  | 1:B:356:TRP:CE3  | 2.35                     | 0.62              |
| 1:C:334:GLU:HA   | 1:C:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:D:298:VAL:HG12 | 1:D:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:E:362:TYR:HA   | 1:E:366:GLY:O    | 2.00                     | 0.62              |
| 1:H:362:TYR:HA   | 1:H:366:GLY:O    | 2.00                     | 0.62              |
| 1:K:147:ARG:HH21 | 1:K:147:ARG:CG   | 2.12                     | 0.62              |
| 1:K:298:VAL:HG12 | 1:K:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:M:298:VAL:HG12 | 1:M:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:N:298:VAL:HG12 | 1:N:335:ARG:HH11 | 1.64                     | 0.62              |
| 1:N:334:GLU:HA   | 1:N:334:GLU:OE2  | 1.98                     | 0.62              |
| 1:P:104:LEU:HB2  | 1:P:356:TRP:HH2  | 1.63                     | 0.62              |
| 1:Q:104:LEU:HB2  | 1:Q:356:TRP:HH2  | 1.63                     | 0.62              |
| 1:S:35:VAL:CG1   | 1:S:68:LYS:HB2   | 2.22                     | 0.62              |
| 1:T:362:TYR:HA   | 1:T:366:GLY:O    | 1.99                     | 0.62              |
| 1:U:169:TYR:CE2  | 1:W:40:HIS:CB    | 2.82                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:W:133:TYR:HB2  | 1:W:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:A:35:VAL:CG1   | 1:A:68:LYS:HB2  | 2.22                     | 0.62              |
| 1:B:37:ARG:HB2   | 1:B:51:ASP:O    | 1.99                     | 0.62              |
| 1:H:169:TYR:CE2  | 1:J:40:HIS:CB   | 2.82                     | 0.62              |
| 1:I:35:VAL:CG1   | 1:I:68:LYS:HB2  | 2.22                     | 0.62              |
| 1:J:34:ILE:HB    | 1:J:54:VAL:HG13 | 1.79                     | 0.62              |
| 1:M:44:MET:HG3   | 1:M:45:VAL:N    | 2.15                     | 0.62              |
| 1:N:104:LEU:HB2  | 1:N:356:TRP:HH2 | 1.63                     | 0.62              |
| 1:P:37:ARG:O     | 1:P:66:THR:HG22 | 1.99                     | 0.62              |
| 1:R:44:MET:HG3   | 1:R:45:VAL:N    | 2.15                     | 0.62              |
| 1:R:147:ARG:HH21 | 1:R:147:ARG:CG  | 2.12                     | 0.62              |
| 1:T:133:TYR:HB2  | 1:T:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:W:37:ARG:O     | 1:W:66:THR:HG22 | 1.99                     | 0.62              |
| 1:A:44:MET:HG3   | 1:A:45:VAL:N    | 2.15                     | 0.62              |
| 1:C:362:TYR:HA   | 1:C:366:GLY:O   | 2.00                     | 0.62              |
| 1:F:169:TYR:CE2  | 1:H:40:HIS:CB   | 2.82                     | 0.62              |
| 1:H:133:TYR:HB2  | 1:H:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:I:362:TYR:HA   | 1:I:366:GLY:O   | 2.00                     | 0.62              |
| 1:R:169:TYR:CE2  | 1:T:40:HIS:CB   | 2.82                     | 0.62              |
| 1:S:37:ARG:HB2   | 1:S:51:ASP:O    | 1.99                     | 0.62              |
| 1:V:44:MET:HG3   | 1:V:45:VAL:N    | 2.15                     | 0.62              |
| 1:B:37:ARG:CG    | 1:B:38:PRO:HD2  | 2.20                     | 0.62              |
| 1:B:37:ARG:O     | 1:B:66:THR:HG22 | 1.99                     | 0.62              |
| 1:C:133:TYR:HB2  | 1:C:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:E:44:MET:HG3   | 1:E:45:VAL:N    | 2.15                     | 0.62              |
| 1:E:133:TYR:HB2  | 1:E:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:I:44:MET:HG3   | 1:I:45:VAL:N    | 2.15                     | 0.62              |
| 1:N:44:MET:HG3   | 1:N:45:VAL:N    | 2.15                     | 0.62              |
| 1:P:34:ILE:HB    | 1:P:54:VAL:HG13 | 1.79                     | 0.62              |
| 1:R:37:ARG:HB2   | 1:R:51:ASP:O    | 1.99                     | 0.62              |
| 1:A:133:TYR:HB2  | 1:A:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:A:334:GLU:OE2  | 1:A:334:GLU:HA  | 1.98                     | 0.62              |
| 1:F:34:ILE:HB    | 1:F:54:VAL:HG13 | 1.79                     | 0.62              |
| 1:G:133:TYR:HB2  | 1:G:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:H:39:ARG:NE    | 1:H:66:THR:HB   | 2.09                     | 0.62              |
| 1:I:133:TYR:OH   | 1:I:375:PHE:HB2 | 2.00                     | 0.62              |
| 1:J:362:TYR:HA   | 1:J:366:GLY:O   | 2.00                     | 0.62              |
| 1:K:362:TYR:HA   | 1:K:366:GLY:O   | 2.00                     | 0.62              |
| 1:L:35:VAL:CG1   | 1:L:68:LYS:HB2  | 2.22                     | 0.62              |
| 1:P:133:TYR:HB2  | 1:P:356:TRP:CE3 | 2.35                     | 0.62              |
| 1:R:35:VAL:CG1   | 1:R:68:LYS:HB2  | 2.22                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:133:TYR:HB2  | 1:U:356:TRP:CE3  | 2.35                     | 0.62              |
| 1:U:362:TYR:HA   | 1:U:366:GLY:O    | 2.00                     | 0.62              |
| 1:W:362:TYR:HA   | 1:W:366:GLY:O    | 2.00                     | 0.62              |
| 1:A:104:LEU:HB2  | 1:A:356:TRP:HH2  | 1.63                     | 0.61              |
| 1:A:362:TYR:HA   | 1:A:366:GLY:O    | 2.00                     | 0.61              |
| 1:D:44:MET:HG3   | 1:D:45:VAL:N     | 2.15                     | 0.61              |
| 1:G:35:VAL:CG1   | 1:G:68:LYS:HB2   | 2.22                     | 0.61              |
| 1:H:34:ILE:HB    | 1:H:54:VAL:HG13  | 1.80                     | 0.61              |
| 1:K:37:ARG:O     | 1:K:66:THR:HG22  | 1.99                     | 0.61              |
| 1:N:133:TYR:HB2  | 1:N:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:O:133:TYR:OH   | 1:O:375:PHE:HB2  | 2.00                     | 0.61              |
| 1:R:37:ARG:O     | 1:R:66:THR:HG22  | 1.99                     | 0.61              |
| 1:R:133:TYR:HB2  | 1:R:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:S:133:TYR:HB2  | 1:S:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:W:44:MET:HG3   | 1:W:45:VAL:N     | 2.15                     | 0.61              |
| 1:J:44:MET:HG3   | 1:J:45:VAL:N     | 2.15                     | 0.61              |
| 1:K:157:ASP:HB2  | 2:K:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:L:133:TYR:HB2  | 1:L:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:N:37:ARG:HB2   | 1:N:51:ASP:O     | 1.99                     | 0.61              |
| 1:Q:44:MET:HG3   | 1:Q:45:VAL:N     | 2.15                     | 0.61              |
| 1:S:362:TYR:HA   | 1:S:366:GLY:O    | 1.99                     | 0.61              |
| 1:T:37:ARG:O     | 1:T:66:THR:HG22  | 1.99                     | 0.61              |
| 1:W:58:ALA:O     | 1:W:61:LYS:N     | 2.30                     | 0.61              |
| 1:W:104:LEU:HB2  | 1:W:356:TRP:HH2  | 1.63                     | 0.61              |
| 1:C:35:VAL:CG1   | 1:C:68:LYS:HB2   | 2.22                     | 0.61              |
| 1:D:147:ARG:HH21 | 1:D:147:ARG:CG   | 2.12                     | 0.61              |
| 1:H:37:ARG:HB2   | 1:H:51:ASP:O     | 1.99                     | 0.61              |
| 1:I:133:TYR:HB2  | 1:I:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:J:133:TYR:HB2  | 1:J:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:N:35:VAL:CG1   | 1:N:68:LYS:HB2   | 2.22                     | 0.61              |
| 1:R:362:TYR:HA   | 1:R:366:GLY:O    | 2.00                     | 0.61              |
| 1:T:133:TYR:OH   | 1:T:375:PHE:HB2  | 2.00                     | 0.61              |
| 1:V:157:ASP:HB2  | 2:V:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:C:65:LEU:C     | 1:C:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:D:157:ASP:HB2  | 2:D:401:ADP:H5'1 | 1.82                     | 0.61              |
| 1:I:65:LEU:C     | 1:I:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:I:157:ASP:HB2  | 2:I:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:K:65:LEU:C     | 1:K:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:O:34:ILE:HB    | 1:O:54:VAL:HG13  | 1.80                     | 0.61              |
| 1:P:35:VAL:CG1   | 1:P:68:LYS:HB2   | 2.22                     | 0.61              |
| 1:P:37:ARG:HB2   | 1:P:51:ASP:O     | 1.99                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:133:TYR:HB2  | 1:Q:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:R:65:LEU:C     | 1:R:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:R:104:LEU:HB2  | 1:R:356:TRP:HH2  | 1.63                     | 0.61              |
| 1:D:133:TYR:OH   | 1:D:375:PHE:HB2  | 2.00                     | 0.61              |
| 1:E:35:VAL:CG1   | 1:E:68:LYS:HB2   | 2.22                     | 0.61              |
| 1:E:157:ASP:HB2  | 2:E:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:J:37:ARG:HB2   | 1:J:51:ASP:O     | 1.99                     | 0.61              |
| 1:L:37:ARG:HB2   | 1:L:51:ASP:O     | 1.99                     | 0.61              |
| 1:O:157:ASP:HB2  | 2:O:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:Q:157:ASP:HB2  | 2:Q:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:R:157:ASP:HB2  | 2:R:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:T:65:LEU:C     | 1:T:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:V:65:LEU:C     | 1:V:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:B:157:ASP:HB2  | 2:B:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:G:37:ARG:HB2   | 1:G:51:ASP:O     | 1.99                     | 0.61              |
| 1:H:147:ARG:HH21 | 1:H:147:ARG:CG   | 2.12                     | 0.61              |
| 1:K:133:TYR:OH   | 1:K:375:PHE:HB2  | 2.00                     | 0.61              |
| 1:L:362:TYR:HA   | 1:L:366:GLY:O    | 2.00                     | 0.61              |
| 1:M:65:LEU:HD12  | 1:M:65:LEU:C     | 2.21                     | 0.61              |
| 1:M:157:ASP:HB2  | 2:M:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:U:298:VAL:HG12 | 1:U:335:ARG:HH11 | 1.64                     | 0.61              |
| 1:C:157:ASP:HB2  | 2:C:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:G:157:ASP:HB2  | 2:G:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:I:36:GLY:N     | 1:I:54:VAL:HG23  | 2.16                     | 0.61              |
| 1:K:44:MET:HG3   | 1:K:45:VAL:N     | 2.15                     | 0.61              |
| 1:K:133:TYR:HB2  | 1:K:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:N:36:GLY:N     | 1:N:54:VAL:HG23  | 2.16                     | 0.61              |
| 1:O:133:TYR:HB2  | 1:O:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:Q:133:TYR:OH   | 1:Q:375:PHE:HB2  | 2.00                     | 0.61              |
| 1:Q:324:THR:HG21 | 1:S:241:GLU:CD   | 2.21                     | 0.61              |
| 1:S:324:THR:HG21 | 1:U:241:GLU:CD   | 2.21                     | 0.61              |
| 1:T:157:ASP:HB2  | 2:T:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:U:34:ILE:HB    | 1:U:54:VAL:HG13  | 1.80                     | 0.61              |
| 1:A:34:ILE:HB    | 1:A:54:VAL:HG13  | 1.80                     | 0.61              |
| 1:B:65:LEU:C     | 1:B:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:D:324:THR:HG21 | 1:F:241:GLU:CD   | 2.21                     | 0.61              |
| 1:J:324:THR:HG21 | 1:L:241:GLU:CD   | 2.21                     | 0.61              |
| 1:L:104:LEU:HB2  | 1:L:356:TRP:HH2  | 1.63                     | 0.61              |
| 1:M:36:GLY:N     | 1:M:54:VAL:HG23  | 2.16                     | 0.61              |
| 1:O:65:LEU:C     | 1:O:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:O:362:TYR:HA   | 1:O:366:GLY:O    | 2.00                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:44:MET:HG3   | 1:P:45:VAL:N     | 2.15                     | 0.61              |
| 1:P:157:ASP:HB2  | 2:P:401:ADP:H5'1 | 1.83                     | 0.61              |
| 1:U:58:ALA:O     | 1:U:61:LYS:N     | 2.30                     | 0.61              |
| 1:B:324:THR:HG21 | 1:D:241:GLU:CD   | 2.21                     | 0.61              |
| 1:F:147:ARG:HH21 | 1:F:147:ARG:CG   | 2.12                     | 0.61              |
| 1:G:44:MET:HG3   | 1:G:45:VAL:N     | 2.15                     | 0.61              |
| 1:H:324:THR:HG21 | 1:J:241:GLU:CD   | 2.21                     | 0.61              |
| 1:J:36:GLY:N     | 1:J:54:VAL:HG23  | 2.16                     | 0.61              |
| 1:L:36:GLY:N     | 1:L:54:VAL:HG23  | 2.16                     | 0.61              |
| 1:P:36:GLY:N     | 1:P:54:VAL:HG23  | 2.16                     | 0.61              |
| 1:P:325:MET:CE   | 1:R:244:ASP:O    | 2.49                     | 0.61              |
| 1:Q:65:LEU:C     | 1:Q:65:LEU:HD12  | 2.21                     | 0.61              |
| 1:A:61:LYS:HG2   | 1:A:64:ILE:HG21  | 1.83                     | 0.61              |
| 1:F:61:LYS:HG2   | 1:F:64:ILE:HG21  | 1.83                     | 0.61              |
| 1:I:34:ILE:CD1   | 1:I:67:LEU:HD22  | 2.31                     | 0.61              |
| 1:L:58:ALA:O     | 1:L:61:LYS:N     | 2.30                     | 0.61              |
| 1:L:61:LYS:HG2   | 1:L:64:ILE:HG21  | 1.83                     | 0.61              |
| 1:M:133:TYR:HB2  | 1:M:356:TRP:CE3  | 2.35                     | 0.61              |
| 1:N:325:MET:CE   | 1:P:244:ASP:O    | 2.49                     | 0.61              |
| 1:O:104:LEU:HB2  | 1:O:356:TRP:HH2  | 1.62                     | 0.61              |
| 1:P:65:LEU:HD12  | 1:P:65:LEU:C     | 2.21                     | 0.61              |
| 1:S:36:GLY:N     | 1:S:54:VAL:HG23  | 2.16                     | 0.61              |
| 1:S:44:MET:HG3   | 1:S:45:VAL:N     | 2.15                     | 0.61              |
| 1:T:44:MET:HG3   | 1:T:45:VAL:N     | 2.15                     | 0.61              |
| 1:U:324:THR:HG21 | 1:W:241:GLU:CD   | 2.21                     | 0.61              |
| 1:V:133:TYR:OH   | 1:V:375:PHE:HB2  | 2.00                     | 0.61              |
| 1:A:65:LEU:C     | 1:A:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:A:325:MET:CE   | 1:C:244:ASP:O    | 2.49                     | 0.60              |
| 1:B:132:MET:O    | 1:B:357:ILE:HB   | 2.01                     | 0.60              |
| 1:E:34:ILE:HB    | 1:E:54:VAL:HG13  | 1.80                     | 0.60              |
| 1:E:65:LEU:HD12  | 1:E:65:LEU:C     | 2.21                     | 0.60              |
| 1:H:61:LYS:HG2   | 1:H:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:J:65:LEU:C     | 1:J:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:K:325:MET:CE   | 1:M:244:ASP:O    | 2.49                     | 0.60              |
| 1:N:362:TYR:HA   | 1:N:366:GLY:O    | 2.00                     | 0.60              |
| 1:Q:36:GLY:N     | 1:Q:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:Q:61:LYS:HG2   | 1:Q:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:S:34:ILE:HB    | 1:S:54:VAL:HG13  | 1.79                     | 0.60              |
| 1:S:157:ASP:HB2  | 2:S:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:T:36:GLY:N     | 1:T:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:V:104:LEU:HB2  | 1:V:356:TRP:HH2  | 1.63                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:61:LYS:HG2   | 1:W:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:B:346:LEU:O    | 1:B:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:C:34:ILE:HB    | 1:C:54:VAL:HG13  | 1.79                     | 0.60              |
| 1:C:133:TYR:OH   | 1:C:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:D:132:MET:O    | 1:D:357:ILE:HB   | 2.01                     | 0.60              |
| 1:E:61:LYS:HG2   | 1:E:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:F:133:TYR:OH   | 1:F:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:F:157:ASP:HB2  | 2:F:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:G:16:LEU:HD23  | 1:G:32:PRO:HA    | 1.83                     | 0.60              |
| 1:G:133:TYR:OH   | 1:G:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:H:36:GLY:N     | 1:H:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:J:61:LYS:HG2   | 1:J:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:J:132:MET:O    | 1:J:357:ILE:HB   | 2.01                     | 0.60              |
| 1:L:65:LEU:C     | 1:L:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:L:325:MET:CE   | 1:N:244:ASP:O    | 2.49                     | 0.60              |
| 1:M:133:TYR:OH   | 1:M:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:N:61:LYS:HG2   | 1:N:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:O:325:MET:CE   | 1:Q:244:ASP:O    | 2.49                     | 0.60              |
| 1:P:362:TYR:HA   | 1:P:366:GLY:O    | 2.00                     | 0.60              |
| 1:R:36:GLY:N     | 1:R:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:R:61:LYS:HG2   | 1:R:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:R:325:MET:CE   | 1:T:244:ASP:O    | 2.49                     | 0.60              |
| 1:S:61:LYS:HG2   | 1:S:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:T:132:MET:O    | 1:T:357:ILE:HB   | 2.01                     | 0.60              |
| 1:U:132:MET:O    | 1:U:357:ILE:HB   | 2.01                     | 0.60              |
| 1:U:133:TYR:OH   | 1:U:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:V:132:MET:O    | 1:V:357:ILE:HB   | 2.01                     | 0.60              |
| 1:A:324:THR:HG21 | 1:C:241:GLU:CD   | 2.21                     | 0.60              |
| 1:C:44:MET:HG3   | 1:C:45:VAL:N     | 2.15                     | 0.60              |
| 1:D:61:LYS:HG2   | 1:D:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:E:133:TYR:OH   | 1:E:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:E:288:ASP:HA   | 1:G:243:PRO:HB2  | 1.83                     | 0.60              |
| 1:G:65:LEU:C     | 1:G:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:I:325:MET:CE   | 1:K:244:ASP:O    | 2.49                     | 0.60              |
| 1:O:36:GLY:N     | 1:O:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:P:132:MET:O    | 1:P:357:ILE:HB   | 2.01                     | 0.60              |
| 1:Q:325:MET:CE   | 1:S:244:ASP:O    | 2.49                     | 0.60              |
| 1:Q:346:LEU:O    | 1:Q:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:R:132:MET:O    | 1:R:357:ILE:HB   | 2.01                     | 0.60              |
| 1:S:143:TYR:CD1  | 1:S:143:TYR:C    | 2.75                     | 0.60              |
| 1:S:325:MET:CE   | 1:U:244:ASP:O    | 2.49                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:36:GLY:N     | 1:U:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:U:104:LEU:HB2  | 1:U:356:TRP:HH2  | 1.62                     | 0.60              |
| 1:W:132:MET:O    | 1:W:357:ILE:HB   | 2.01                     | 0.60              |
| 1:A:157:ASP:HB2  | 2:A:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:B:36:GLY:N     | 1:B:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:C:61:LYS:HG2   | 1:C:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:C:325:MET:CE   | 1:E:244:ASP:O    | 2.49                     | 0.60              |
| 1:E:36:GLY:N     | 1:E:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:E:346:LEU:O    | 1:E:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:F:44:MET:HG3   | 1:F:45:VAL:N     | 2.15                     | 0.60              |
| 1:G:288:ASP:HA   | 1:I:243:PRO:HB2  | 1.84                     | 0.60              |
| 1:J:325:MET:CE   | 1:L:244:ASP:O    | 2.49                     | 0.60              |
| 1:L:132:MET:O    | 1:L:357:ILE:HB   | 2.01                     | 0.60              |
| 1:N:65:LEU:C     | 1:N:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:N:157:ASP:HB2  | 2:N:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:P:61:LYS:HG2   | 1:P:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:R:288:ASP:HA   | 1:T:243:PRO:HB2  | 1.84                     | 0.60              |
| 1:R:346:LEU:O    | 1:R:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:T:288:ASP:HA   | 1:V:243:PRO:HB2  | 1.84                     | 0.60              |
| 1:T:324:THR:HG21 | 1:V:241:GLU:CD   | 2.21                     | 0.60              |
| 1:T:346:LEU:O    | 1:T:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:U:61:LYS:HG2   | 1:U:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:V:34:ILE:CD1   | 1:V:67:LEU:HD22  | 2.31                     | 0.60              |
| 1:C:346:LEU:O    | 1:C:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:E:325:MET:CE   | 1:G:244:ASP:O    | 2.49                     | 0.60              |
| 1:F:34:ILE:CD1   | 1:F:67:LEU:HD22  | 2.31                     | 0.60              |
| 1:F:132:MET:O    | 1:F:357:ILE:HB   | 2.01                     | 0.60              |
| 1:G:61:LYS:HG2   | 1:G:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:H:34:ILE:CD1   | 1:H:67:LEU:HD22  | 2.31                     | 0.60              |
| 1:H:65:LEU:C     | 1:H:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:K:324:THR:HG21 | 1:M:241:GLU:CD   | 2.21                     | 0.60              |
| 1:K:346:LEU:O    | 1:K:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:L:34:ILE:HB    | 1:L:54:VAL:HG13  | 1.79                     | 0.60              |
| 1:N:132:MET:O    | 1:N:357:ILE:HB   | 2.01                     | 0.60              |
| 1:R:16:LEU:HD23  | 1:R:32:PRO:HA    | 1.83                     | 0.60              |
| 1:R:34:ILE:CD1   | 1:R:67:LEU:HD22  | 2.31                     | 0.60              |
| 1:R:324:THR:HG21 | 1:T:241:GLU:CD   | 2.21                     | 0.60              |
| 1:T:34:ILE:CD1   | 1:T:67:LEU:HD22  | 2.31                     | 0.60              |
| 1:T:61:LYS:HG2   | 1:T:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:T:325:MET:CE   | 1:V:244:ASP:O    | 2.49                     | 0.60              |
| 1:U:34:ILE:CD1   | 1:U:67:LEU:HD22  | 2.31                     | 0.60              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:157:ASP:HB2  | 2:U:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:U:325:MET:CE   | 1:W:244:ASP:O    | 2.49                     | 0.60              |
| 1:W:34:ILE:CD1   | 1:W:67:LEU:HD22  | 2.31                     | 0.60              |
| 1:W:36:GLY:N     | 1:W:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:W:157:ASP:HB2  | 2:W:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:A:36:GLY:N     | 1:A:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:B:61:LYS:HG2   | 1:B:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:B:133:TYR:OH   | 1:B:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:D:325:MET:CE   | 1:F:244:ASP:O    | 2.49                     | 0.60              |
| 1:F:36:GLY:N     | 1:F:54:VAL:HG23  | 2.16                     | 0.60              |
| 1:G:325:MET:CE   | 1:I:244:ASP:O    | 2.49                     | 0.60              |
| 1:H:143:TYR:CD1  | 1:H:143:TYR:C    | 2.75                     | 0.60              |
| 1:H:325:MET:CE   | 1:J:244:ASP:O    | 2.49                     | 0.60              |
| 1:J:157:ASP:HB2  | 2:J:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:N:133:TYR:OH   | 1:N:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:P:324:THR:HG21 | 1:R:241:GLU:CD   | 2.21                     | 0.60              |
| 1:V:16:LEU:HD23  | 1:V:32:PRO:HA    | 1.83                     | 0.60              |
| 1:A:132:MET:O    | 1:A:357:ILE:HB   | 2.01                     | 0.60              |
| 1:E:16:LEU:HD23  | 1:E:32:PRO:HA    | 1.83                     | 0.60              |
| 1:F:324:THR:HG21 | 1:H:241:GLU:CD   | 2.21                     | 0.60              |
| 1:F:325:MET:CE   | 1:H:244:ASP:O    | 2.49                     | 0.60              |
| 1:G:324:THR:CG2  | 1:I:241:GLU:OE2  | 2.50                     | 0.60              |
| 1:H:132:MET:O    | 1:H:357:ILE:HB   | 2.01                     | 0.60              |
| 1:J:133:TYR:OH   | 1:J:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:J:346:LEU:O    | 1:J:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:L:157:ASP:HB2  | 2:L:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:M:34:ILE:CD1   | 1:M:67:LEU:HD22  | 2.31                     | 0.60              |
| 1:M:324:THR:HG21 | 1:O:241:GLU:CD   | 2.21                     | 0.60              |
| 1:P:133:TYR:OH   | 1:P:375:PHE:HB2  | 2.00                     | 0.60              |
| 1:P:324:THR:CG2  | 1:R:241:GLU:OE2  | 2.50                     | 0.60              |
| 1:S:65:LEU:C     | 1:S:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:W:65:LEU:C     | 1:W:65:LEU:HD12  | 2.21                     | 0.60              |
| 1:A:288:ASP:HA   | 1:C:243:PRO:HB2  | 1.84                     | 0.60              |
| 1:H:157:ASP:HB2  | 2:H:401:ADP:H5'1 | 1.83                     | 0.60              |
| 1:H:346:LEU:O    | 1:H:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:I:346:LEU:O    | 1:I:349:LEU:HB2  | 2.02                     | 0.60              |
| 1:K:288:ASP:HA   | 1:M:243:PRO:HB2  | 1.83                     | 0.60              |
| 1:M:61:LYS:HG2   | 1:M:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:N:324:THR:HG21 | 1:P:241:GLU:CD   | 2.21                     | 0.60              |
| 1:O:61:LYS:HG2   | 1:O:64:ILE:HG21  | 1.83                     | 0.60              |
| 1:C:288:ASP:HA   | 1:E:243:PRO:HB2  | 1.84                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:D:34:ILE:CD1   | 1:D:67:LEU:HD22 | 2.31                     | 0.60              |
| 1:D:65:LEU:C     | 1:D:65:LEU:HD12 | 2.21                     | 0.60              |
| 1:G:324:THR:HG21 | 1:I:241:GLU:CD  | 2.21                     | 0.60              |
| 1:K:36:GLY:N     | 1:K:54:VAL:HG23 | 2.16                     | 0.60              |
| 1:L:324:THR:HG21 | 1:N:241:GLU:CD  | 2.21                     | 0.60              |
| 1:L:346:LEU:O    | 1:L:349:LEU:HB2 | 2.02                     | 0.60              |
| 1:M:16:LEU:HD23  | 1:M:32:PRO:HA   | 1.83                     | 0.60              |
| 1:N:288:ASP:HA   | 1:P:243:PRO:HB2 | 1.83                     | 0.60              |
| 1:O:44:MET:HG3   | 1:O:45:VAL:N    | 2.15                     | 0.60              |
| 1:O:346:LEU:O    | 1:O:349:LEU:HB2 | 2.02                     | 0.60              |
| 1:P:288:ASP:HA   | 1:R:243:PRO:HB2 | 1.84                     | 0.60              |
| 1:R:133:TYR:OH   | 1:R:375:PHE:HB2 | 2.00                     | 0.60              |
| 1:S:133:TYR:OH   | 1:S:375:PHE:HB2 | 2.00                     | 0.60              |
| 1:S:346:LEU:O    | 1:S:349:LEU:HB2 | 2.02                     | 0.60              |
| 1:W:133:TYR:OH   | 1:W:375:PHE:HB2 | 2.00                     | 0.60              |
| 1:C:36:GLY:N     | 1:C:54:VAL:HG23 | 2.16                     | 0.60              |
| 1:C:132:MET:O    | 1:C:357:ILE:HB  | 2.01                     | 0.60              |
| 1:C:324:THR:HG21 | 1:E:241:GLU:CD  | 2.21                     | 0.60              |
| 1:D:36:GLY:N     | 1:D:54:VAL:HG23 | 2.16                     | 0.60              |
| 1:D:346:LEU:O    | 1:D:349:LEU:HB2 | 2.02                     | 0.60              |
| 1:E:324:THR:CG2  | 1:G:241:GLU:OE2 | 2.50                     | 0.60              |
| 1:G:36:GLY:N     | 1:G:54:VAL:HG23 | 2.16                     | 0.60              |
| 1:H:16:LEU:HD23  | 1:H:32:PRO:HA   | 1.83                     | 0.60              |
| 1:I:288:ASP:HA   | 1:K:243:PRO:HB2 | 1.84                     | 0.60              |
| 1:I:324:THR:HG21 | 1:K:241:GLU:CD  | 2.21                     | 0.60              |
| 1:J:34:ILE:CD1   | 1:J:67:LEU:HD22 | 2.31                     | 0.60              |
| 1:K:34:ILE:CD1   | 1:K:67:LEU:HD22 | 2.31                     | 0.60              |
| 1:K:61:LYS:HG2   | 1:K:64:ILE:HG21 | 1.83                     | 0.60              |
| 1:L:44:MET:HG3   | 1:L:45:VAL:N    | 2.15                     | 0.60              |
| 1:M:325:MET:CE   | 1:O:244:ASP:O   | 2.49                     | 0.60              |
| 1:V:36:GLY:N     | 1:V:54:VAL:HG23 | 2.16                     | 0.60              |
| 1:W:16:LEU:HD23  | 1:W:32:PRO:HA   | 1.83                     | 0.60              |
| 1:A:324:THR:CG2  | 1:C:241:GLU:OE2 | 2.50                     | 0.59              |
| 1:B:143:TYR:CD1  | 1:B:143:TYR:C   | 2.75                     | 0.59              |
| 1:C:34:ILE:CD1   | 1:C:67:LEU:HD22 | 2.31                     | 0.59              |
| 1:C:324:THR:CG2  | 1:E:241:GLU:OE2 | 2.50                     | 0.59              |
| 1:H:104:LEU:HB2  | 1:H:356:TRP:HH2 | 1.63                     | 0.59              |
| 1:H:287:ILE:CD1  | 1:J:208:ILE:CD1 | 2.80                     | 0.59              |
| 1:I:324:THR:CG2  | 1:K:241:GLU:OE2 | 2.50                     | 0.59              |
| 1:K:16:LEU:HD23  | 1:K:32:PRO:HA   | 1.83                     | 0.59              |
| 1:L:133:TYR:OH   | 1:L:375:PHE:HB2 | 2.00                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:143:TYR:CD1  | 1:M:143:TYR:C    | 2.75                     | 0.59              |
| 1:O:324:THR:HG21 | 1:Q:241:GLU:CD   | 2.21                     | 0.59              |
| 1:Q:132:MET:O    | 1:Q:357:ILE:HB   | 2.01                     | 0.59              |
| 1:S:34:ILE:CD1   | 1:S:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:T:104:LEU:HB2  | 1:T:356:TRP:HH2  | 1.63                     | 0.59              |
| 1:U:16:LEU:HD23  | 1:U:32:PRO:HA    | 1.83                     | 0.59              |
| 1:V:61:LYS:HG2   | 1:V:64:ILE:HG21  | 1.83                     | 0.59              |
| 1:C:43:VAL:O     | 1:C:44:MET:CG    | 2.51                     | 0.59              |
| 1:E:132:MET:O    | 1:E:357:ILE:HB   | 2.01                     | 0.59              |
| 1:G:34:ILE:CD1   | 1:G:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:G:143:TYR:CD1  | 1:G:143:TYR:C    | 2.75                     | 0.59              |
| 1:K:8:LEU:HB3    | 1:K:103:THR:HG23 | 1.84                     | 0.59              |
| 1:M:288:ASP:HA   | 1:O:243:PRO:HB2  | 1.83                     | 0.59              |
| 1:M:346:LEU:O    | 1:M:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:N:346:LEU:O    | 1:N:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:O:132:MET:O    | 1:O:357:ILE:HB   | 2.01                     | 0.59              |
| 1:P:16:LEU:HD23  | 1:P:32:PRO:HA    | 1.83                     | 0.59              |
| 1:Q:34:ILE:HB    | 1:Q:54:VAL:HG13  | 1.79                     | 0.59              |
| 1:W:143:TYR:CD1  | 1:W:143:TYR:C    | 2.75                     | 0.59              |
| 1:A:34:ILE:CD1   | 1:A:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:C:143:TYR:CD1  | 1:C:143:TYR:C    | 2.75                     | 0.59              |
| 1:F:43:VAL:O     | 1:F:44:MET:CG    | 2.51                     | 0.59              |
| 1:F:65:LEU:C     | 1:F:65:LEU:HD12  | 2.21                     | 0.59              |
| 1:F:324:THR:CG2  | 1:H:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:H:43:VAL:O     | 1:H:44:MET:CG    | 2.51                     | 0.59              |
| 1:I:8:LEU:HB3    | 1:I:103:THR:HG23 | 1.84                     | 0.59              |
| 1:J:43:VAL:O     | 1:J:44:MET:CG    | 2.51                     | 0.59              |
| 1:L:288:ASP:HA   | 1:N:243:PRO:HB2  | 1.84                     | 0.59              |
| 1:N:43:VAL:O     | 1:N:44:MET:CG    | 2.51                     | 0.59              |
| 1:N:287:ILE:CD1  | 1:P:208:ILE:CD1  | 2.80                     | 0.59              |
| 1:O:34:ILE:CD1   | 1:O:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:Q:143:TYR:CD1  | 1:Q:143:TYR:C    | 2.75                     | 0.59              |
| 1:R:143:TYR:CD1  | 1:R:143:TYR:C    | 2.75                     | 0.59              |
| 1:R:287:ILE:HG13 | 1:R:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:R:324:THR:CG2  | 1:T:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:S:324:THR:CG2  | 1:U:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:T:43:VAL:O     | 1:T:44:MET:CG    | 2.51                     | 0.59              |
| 1:U:324:THR:CG2  | 1:W:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:W:34:ILE:HB    | 1:W:54:VAL:HG13  | 1.79                     | 0.59              |
| 1:W:346:LEU:O    | 1:W:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:A:16:LEU:HD23  | 1:A:32:PRO:HA    | 1.83                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:325:MET:CE   | 1:D:244:ASP:O    | 2.49                     | 0.59              |
| 1:E:104:LEU:HB2  | 1:E:356:TRP:HH2  | 1.63                     | 0.59              |
| 1:F:104:LEU:HB2  | 1:F:356:TRP:HH2  | 1.63                     | 0.59              |
| 1:G:104:LEU:HB2  | 1:G:356:TRP:HH2  | 1.63                     | 0.59              |
| 1:G:346:LEU:O    | 1:G:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:H:133:TYR:OH   | 1:H:375:PHE:HB2  | 2.00                     | 0.59              |
| 1:I:61:LYS:HG2   | 1:I:64:ILE:HG21  | 1.83                     | 0.59              |
| 1:K:290:ARG:HH11 | 1:M:244:ASP:CB   | 2.16                     | 0.59              |
| 1:K:324:THR:CG2  | 1:M:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:M:8:LEU:HB3    | 1:M:103:THR:HG23 | 1.84                     | 0.59              |
| 1:R:43:VAL:O     | 1:R:44:MET:CG    | 2.51                     | 0.59              |
| 1:S:16:LEU:HD23  | 1:S:32:PRO:HA    | 1.83                     | 0.59              |
| 1:S:132:MET:O    | 1:S:357:ILE:HB   | 2.01                     | 0.59              |
| 1:V:43:VAL:O     | 1:V:44:MET:CG    | 2.51                     | 0.59              |
| 1:A:346:LEU:O    | 1:A:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:B:324:THR:CG2  | 1:D:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:D:43:VAL:O     | 1:D:44:MET:CG    | 2.51                     | 0.59              |
| 1:E:324:THR:HG21 | 1:G:241:GLU:CD   | 2.21                     | 0.59              |
| 1:F:16:LEU:HD23  | 1:F:32:PRO:HA    | 1.83                     | 0.59              |
| 1:G:8:LEU:HB3    | 1:G:103:THR:HG23 | 1.84                     | 0.59              |
| 1:G:132:MET:O    | 1:G:357:ILE:HB   | 2.01                     | 0.59              |
| 1:I:16:LEU:HD23  | 1:I:32:PRO:HA    | 1.83                     | 0.59              |
| 1:J:16:LEU:HD23  | 1:J:32:PRO:HA    | 1.83                     | 0.59              |
| 1:N:34:ILE:CD1   | 1:N:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:N:324:THR:CG2  | 1:P:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:O:208:ILE:HD11 | 1:O:243:PRO:HG2  | 1.85                     | 0.59              |
| 1:O:287:ILE:HG13 | 1:O:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:Q:16:LEU:HD23  | 1:Q:32:PRO:HA    | 1.83                     | 0.59              |
| 1:S:208:ILE:HD11 | 1:S:243:PRO:HG2  | 1.85                     | 0.59              |
| 1:S:288:ASP:HA   | 1:U:243:PRO:HB2  | 1.83                     | 0.59              |
| 1:T:290:ARG:HH11 | 1:V:244:ASP:CB   | 2.16                     | 0.59              |
| 1:A:64:ILE:HG23  | 1:A:65:LEU:N     | 2.18                     | 0.59              |
| 1:B:16:LEU:HD23  | 1:B:32:PRO:HA    | 1.83                     | 0.59              |
| 1:B:44:MET:HG3   | 1:B:45:VAL:N     | 2.15                     | 0.59              |
| 1:D:324:THR:CG2  | 1:F:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:E:64:ILE:HG23  | 1:E:65:LEU:N     | 2.18                     | 0.59              |
| 1:F:288:ASP:HA   | 1:H:243:PRO:HB2  | 1.84                     | 0.59              |
| 1:H:324:THR:CG2  | 1:J:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:I:143:TYR:CD1  | 1:I:143:TYR:C    | 2.75                     | 0.59              |
| 1:I:287:ILE:HG13 | 1:I:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:J:362:TYR:O    | 1:J:366:GLY:CA   | 2.51                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:361:GLU:HB3  | 1:K:369:ILE:CD1  | 2.14                     | 0.59              |
| 1:M:132:MET:O    | 1:M:357:ILE:HB   | 2.01                     | 0.59              |
| 1:P:34:ILE:CD1   | 1:P:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:P:43:VAL:O     | 1:P:44:MET:CG    | 2.51                     | 0.59              |
| 1:P:64:ILE:HG23  | 1:P:65:LEU:N     | 2.18                     | 0.59              |
| 1:P:287:ILE:HG13 | 1:P:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:P:346:LEU:O    | 1:P:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:Q:208:ILE:HD11 | 1:Q:243:PRO:HG2  | 1.85                     | 0.59              |
| 1:R:362:TYR:O    | 1:R:366:GLY:CA   | 2.51                     | 0.59              |
| 1:U:43:VAL:O     | 1:U:44:MET:CG    | 2.51                     | 0.59              |
| 1:V:346:LEU:O    | 1:V:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:B:43:VAL:O     | 1:B:44:MET:CG    | 2.51                     | 0.59              |
| 1:D:16:LEU:HD23  | 1:D:32:PRO:HA    | 1.83                     | 0.59              |
| 1:F:143:TYR:CD1  | 1:F:143:TYR:C    | 2.75                     | 0.59              |
| 1:G:43:VAL:O     | 1:G:44:MET:CG    | 2.51                     | 0.59              |
| 1:J:324:THR:CG2  | 1:L:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:L:16:LEU:HD23  | 1:L:32:PRO:HA    | 1.83                     | 0.59              |
| 1:L:287:ILE:HG13 | 1:L:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:L:362:TYR:O    | 1:L:366:GLY:CA   | 2.51                     | 0.59              |
| 1:M:208:ILE:HD11 | 1:M:243:PRO:HG2  | 1.85                     | 0.59              |
| 1:N:287:ILE:HG13 | 1:N:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:O:8:LEU:HB3    | 1:O:103:THR:HG23 | 1.84                     | 0.59              |
| 1:Q:34:ILE:CD1   | 1:Q:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:S:43:VAL:O     | 1:S:44:MET:CG    | 2.51                     | 0.59              |
| 1:T:324:THR:CG2  | 1:V:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:U:65:LEU:C     | 1:U:65:LEU:HD12  | 2.21                     | 0.59              |
| 1:B:290:ARG:HH11 | 1:D:244:ASP:CB   | 2.16                     | 0.59              |
| 1:C:362:TYR:O    | 1:C:366:GLY:CA   | 2.51                     | 0.59              |
| 1:E:8:LEU:HB3    | 1:E:103:THR:HG23 | 1.84                     | 0.59              |
| 1:E:34:ILE:CD1   | 1:E:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:E:223:PHE:CE1  | 1:E:259:GLU:HG2  | 2.38                     | 0.59              |
| 1:J:104:LEU:HB2  | 1:J:356:TRP:HH2  | 1.63                     | 0.59              |
| 1:L:43:VAL:O     | 1:L:44:MET:CG    | 2.51                     | 0.59              |
| 1:L:223:PHE:CE1  | 1:L:259:GLU:HG2  | 2.38                     | 0.59              |
| 1:L:287:ILE:CD1  | 1:N:208:ILE:CD1  | 2.80                     | 0.59              |
| 1:N:362:TYR:O    | 1:N:366:GLY:CA   | 2.51                     | 0.59              |
| 1:P:223:PHE:CE1  | 1:P:259:GLU:HG2  | 2.38                     | 0.59              |
| 1:P:362:TYR:O    | 1:P:366:GLY:CA   | 2.51                     | 0.59              |
| 1:S:287:ILE:CD1  | 1:U:208:ILE:CD1  | 2.80                     | 0.59              |
| 1:T:287:ILE:HG13 | 1:T:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:U:346:LEU:O    | 1:U:349:LEU:HB2  | 2.02                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:43:VAL:O     | 1:W:44:MET:CG    | 2.51                     | 0.59              |
| 1:W:223:PHE:CE1  | 1:W:259:GLU:HG2  | 2.38                     | 0.59              |
| 1:W:287:ILE:HG13 | 1:W:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:D:287:ILE:HG13 | 1:D:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:D:288:ASP:HA   | 1:F:243:PRO:HB2  | 1.84                     | 0.59              |
| 1:F:346:LEU:O    | 1:F:349:LEU:HB2  | 2.02                     | 0.59              |
| 1:I:104:LEU:HB2  | 1:I:356:TRP:HH2  | 1.62                     | 0.59              |
| 1:J:287:ILE:HG13 | 1:J:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:K:132:MET:O    | 1:K:357:ILE:HB   | 2.01                     | 0.59              |
| 1:L:64:ILE:HG23  | 1:L:65:LEU:N     | 2.18                     | 0.59              |
| 1:O:324:THR:CG2  | 1:Q:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:P:287:ILE:CD1  | 1:R:208:ILE:CD1  | 2.80                     | 0.59              |
| 1:R:361:GLU:HB3  | 1:R:369:ILE:CD1  | 2.14                     | 0.59              |
| 1:U:208:ILE:HD11 | 1:U:243:PRO:HG2  | 1.85                     | 0.59              |
| 1:U:287:ILE:HG13 | 1:U:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:U:288:ASP:HA   | 1:W:243:PRO:HB2  | 1.84                     | 0.59              |
| 1:A:133:TYR:OH   | 1:A:375:PHE:HB2  | 2.00                     | 0.59              |
| 1:E:290:ARG:HH11 | 1:G:244:ASP:CB   | 2.16                     | 0.59              |
| 1:E:362:TYR:O    | 1:E:366:GLY:CA   | 2.51                     | 0.59              |
| 1:F:223:PHE:CE1  | 1:F:259:GLU:HG2  | 2.38                     | 0.59              |
| 1:G:324:THR:HG21 | 1:I:241:GLU:OE2  | 2.03                     | 0.59              |
| 1:I:132:MET:O    | 1:I:357:ILE:HB   | 2.01                     | 0.59              |
| 1:I:324:THR:HG21 | 1:K:241:GLU:OE2  | 2.03                     | 0.59              |
| 1:J:8:LEU:HB3    | 1:J:103:THR:HG23 | 1.84                     | 0.59              |
| 1:J:223:PHE:CE1  | 1:J:259:GLU:HG2  | 2.38                     | 0.59              |
| 1:J:288:ASP:HA   | 1:L:243:PRO:HB2  | 1.83                     | 0.59              |
| 1:K:208:ILE:HD11 | 1:K:243:PRO:HG2  | 1.85                     | 0.59              |
| 1:L:34:ILE:CD1   | 1:L:67:LEU:HD22  | 2.31                     | 0.59              |
| 1:L:324:THR:CG2  | 1:N:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:M:324:THR:CG2  | 1:O:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:N:143:TYR:CD1  | 1:N:143:TYR:C    | 2.75                     | 0.59              |
| 1:O:223:PHE:CE1  | 1:O:259:GLU:HG2  | 2.38                     | 0.59              |
| 1:Q:287:ILE:HG13 | 1:Q:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:Q:288:ASP:HA   | 1:S:243:PRO:HB2  | 1.84                     | 0.59              |
| 1:Q:324:THR:CG2  | 1:S:241:GLU:OE2  | 2.50                     | 0.59              |
| 1:R:34:ILE:HB    | 1:R:54:VAL:HG13  | 1.80                     | 0.59              |
| 1:S:287:ILE:HG13 | 1:S:288:ASP:OD1  | 2.03                     | 0.59              |
| 1:T:16:LEU:HD23  | 1:T:32:PRO:HA    | 1.83                     | 0.59              |
| 1:T:64:ILE:HG23  | 1:T:65:LEU:N     | 2.18                     | 0.59              |
| 1:V:8:LEU:HB3    | 1:V:103:THR:HG23 | 1.84                     | 0.59              |
| 1:V:287:ILE:HG13 | 1:V:288:ASP:OD1  | 2.03                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:8:LEU:HB3    | 1:W:103:THR:HG23 | 1.84                     | 0.59              |
| 1:A:362:TYR:O    | 1:A:366:GLY:CA   | 2.51                     | 0.58              |
| 1:B:208:ILE:HD11 | 1:B:243:PRO:HG2  | 1.85                     | 0.58              |
| 1:E:324:THR:HG21 | 1:G:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:H:287:ILE:HG13 | 1:H:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:H:288:ASP:HA   | 1:J:243:PRO:HB2  | 1.84                     | 0.58              |
| 1:I:34:ILE:HB    | 1:I:54:VAL:HG13  | 1.80                     | 0.58              |
| 1:K:223:PHE:CE1  | 1:K:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:L:8:LEU:HB3    | 1:L:103:THR:HG23 | 1.84                     | 0.58              |
| 1:M:290:ARG:HH11 | 1:O:244:ASP:CB   | 2.16                     | 0.58              |
| 1:Q:43:VAL:O     | 1:Q:44:MET:CG    | 2.51                     | 0.58              |
| 1:Q:223:PHE:CE1  | 1:Q:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:Q:290:ARG:HH11 | 1:S:244:ASP:CB   | 2.16                     | 0.58              |
| 1:T:143:TYR:CD1  | 1:T:143:TYR:C    | 2.75                     | 0.58              |
| 1:T:362:TYR:O    | 1:T:366:GLY:CA   | 2.51                     | 0.58              |
| 1:V:223:PHE:CE1  | 1:V:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:A:223:PHE:CE1  | 1:A:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:C:324:THR:HG21 | 1:E:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:D:223:PHE:CE1  | 1:D:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:F:287:ILE:CD1  | 1:H:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:F:287:ILE:HG13 | 1:F:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:I:223:PHE:CE1  | 1:I:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:I:290:ARG:HH11 | 1:K:244:ASP:CB   | 2.16                     | 0.58              |
| 1:J:64:ILE:HG23  | 1:J:65:LEU:N     | 2.18                     | 0.58              |
| 1:K:287:ILE:HG13 | 1:K:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:K:324:THR:HG21 | 1:M:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:N:16:LEU:HD23  | 1:N:32:PRO:HA    | 1.83                     | 0.58              |
| 1:O:288:ASP:HA   | 1:Q:243:PRO:HB2  | 1.83                     | 0.58              |
| 1:R:287:ILE:CD1  | 1:T:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:R:290:ARG:HH11 | 1:T:244:ASP:CB   | 2.16                     | 0.58              |
| 1:U:223:PHE:CE1  | 1:U:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:U:362:TYR:O    | 1:U:366:GLY:CA   | 2.51                     | 0.58              |
| 1:W:362:TYR:O    | 1:W:366:GLY:CA   | 2.51                     | 0.58              |
| 1:B:8:LEU:HB3    | 1:B:103:THR:HG23 | 1.84                     | 0.58              |
| 1:B:34:ILE:CD1   | 1:B:67:LEU:HD22  | 2.31                     | 0.58              |
| 1:B:38:PRO:CD    | 1:B:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:B:288:ASP:HA   | 1:D:243:PRO:HB2  | 1.83                     | 0.58              |
| 1:C:104:LEU:HB2  | 1:C:356:TRP:HH2  | 1.63                     | 0.58              |
| 1:C:287:ILE:CD1  | 1:E:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:C:290:ARG:HH11 | 1:E:244:ASP:CB   | 2.16                     | 0.58              |
| 1:G:290:ARG:HH11 | 1:I:244:ASP:CB   | 2.16                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:362:TYR:O    | 1:G:366:GLY:CA   | 2.51                     | 0.58              |
| 1:H:44:MET:HG3   | 1:H:45:VAL:N     | 2.15                     | 0.58              |
| 1:H:290:ARG:HH11 | 1:J:244:ASP:CB   | 2.16                     | 0.58              |
| 1:K:38:PRO:CD    | 1:K:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:K:287:ILE:CD1  | 1:M:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:L:143:TYR:CD1  | 1:L:143:TYR:C    | 2.75                     | 0.58              |
| 1:M:38:PRO:CD    | 1:M:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:Q:8:LEU:HB3    | 1:Q:103:THR:HG23 | 1.84                     | 0.58              |
| 1:R:324:THR:HG21 | 1:T:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:U:44:MET:HG3   | 1:U:45:VAL:N     | 2.15                     | 0.58              |
| 1:U:64:ILE:HG23  | 1:U:65:LEU:N     | 2.18                     | 0.58              |
| 1:A:324:THR:HG21 | 1:C:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:B:34:ILE:HB    | 1:B:54:VAL:HG13  | 1.79                     | 0.58              |
| 1:B:64:ILE:HG23  | 1:B:65:LEU:N     | 2.18                     | 0.58              |
| 1:C:16:LEU:HD23  | 1:C:32:PRO:HA    | 1.83                     | 0.58              |
| 1:D:104:LEU:HB2  | 1:D:356:TRP:HH2  | 1.63                     | 0.58              |
| 1:F:362:TYR:O    | 1:F:366:GLY:CA   | 2.51                     | 0.58              |
| 1:H:8:LEU:HB3    | 1:H:103:THR:HG23 | 1.84                     | 0.58              |
| 1:L:336:LYS:CE   | 2:L:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:M:43:VAL:O     | 1:M:44:MET:CG    | 2.51                     | 0.58              |
| 1:M:104:LEU:HB2  | 1:M:356:TRP:HH2  | 1.63                     | 0.58              |
| 1:N:64:ILE:HG23  | 1:N:65:LEU:N     | 2.18                     | 0.58              |
| 1:N:336:LYS:CE   | 2:N:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:S:104:LEU:HB2  | 1:S:356:TRP:HH2  | 1.63                     | 0.58              |
| 1:U:8:LEU:HB3    | 1:U:103:THR:HG23 | 1.84                     | 0.58              |
| 1:V:38:PRO:CD    | 1:V:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:W:208:ILE:HD11 | 1:W:243:PRO:HG2  | 1.85                     | 0.58              |
| 1:A:8:LEU:HB3    | 1:A:103:THR:HG23 | 1.84                     | 0.58              |
| 1:A:43:VAL:O     | 1:A:44:MET:CG    | 2.51                     | 0.58              |
| 1:B:361:GLU:HB3  | 1:B:369:ILE:CD1  | 2.14                     | 0.58              |
| 1:D:8:LEU:HB3    | 1:D:103:THR:HG23 | 1.84                     | 0.58              |
| 1:E:43:VAL:O     | 1:E:44:MET:CG    | 2.51                     | 0.58              |
| 1:E:143:TYR:CD1  | 1:E:143:TYR:C    | 2.75                     | 0.58              |
| 1:G:34:ILE:HB    | 1:G:54:VAL:HG13  | 1.79                     | 0.58              |
| 1:J:290:ARG:HH11 | 1:L:244:ASP:CB   | 2.16                     | 0.58              |
| 1:O:16:LEU:HD23  | 1:O:32:PRO:HA    | 1.83                     | 0.58              |
| 1:O:43:VAL:O     | 1:O:44:MET:CG    | 2.51                     | 0.58              |
| 1:T:223:PHE:CE1  | 1:T:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:U:143:TYR:CD1  | 1:U:143:TYR:C    | 2.75                     | 0.58              |
| 1:U:287:ILE:CD1  | 1:W:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:U:336:LYS:CE   | 2:U:401:ADP:H5'2 | 2.34                     | 0.58              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:V:208:ILE:HD11 | 1:V:243:PRO:HG2  | 1.85                     | 0.58              |
| 1:B:287:ILE:HG13 | 1:B:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:C:8:LEU:HB3    | 1:C:103:THR:HG23 | 1.84                     | 0.58              |
| 1:D:64:ILE:HG23  | 1:D:65:LEU:N     | 2.18                     | 0.58              |
| 1:D:208:ILE:HD11 | 1:D:243:PRO:HG2  | 1.85                     | 0.58              |
| 1:D:287:ILE:CD1  | 1:F:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:E:287:ILE:CD1  | 1:G:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:E:336:LYS:CE   | 2:E:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:G:223:PHE:CE1  | 1:G:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:H:362:TYR:O    | 1:H:366:GLY:CA   | 2.51                     | 0.58              |
| 1:I:362:TYR:O    | 1:I:366:GLY:CA   | 2.51                     | 0.58              |
| 1:J:324:THR:HG21 | 1:L:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:M:324:THR:HG21 | 1:O:241:GLU:OE2  | 2.04                     | 0.58              |
| 1:N:8:LEU:HB3    | 1:N:103:THR:HG23 | 1.84                     | 0.58              |
| 1:N:34:ILE:CG2   | 1:N:67:LEU:HB3   | 2.34                     | 0.58              |
| 1:O:38:PRO:CD    | 1:O:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:W:64:ILE:HG23  | 1:W:65:LEU:N     | 2.18                     | 0.58              |
| 1:C:287:ILE:HG13 | 1:C:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:D:290:ARG:HH11 | 1:F:244:ASP:CB   | 2.16                     | 0.58              |
| 1:E:287:ILE:HG13 | 1:E:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:F:8:LEU:HB3    | 1:F:103:THR:HG23 | 1.84                     | 0.58              |
| 1:I:43:VAL:O     | 1:I:44:MET:CG    | 2.51                     | 0.58              |
| 1:I:208:ILE:HD11 | 1:I:243:PRO:HG2  | 1.85                     | 0.58              |
| 1:K:43:VAL:O     | 1:K:44:MET:CG    | 2.51                     | 0.58              |
| 1:L:324:THR:HG21 | 1:N:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:M:287:ILE:HG13 | 1:M:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:Q:287:ILE:CD1  | 1:S:208:ILE:CD1  | 2.80                     | 0.58              |
| 1:S:38:PRO:CD    | 1:S:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:S:290:ARG:HH11 | 1:U:244:ASP:CB   | 2.16                     | 0.58              |
| 1:S:336:LYS:CE   | 2:S:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:T:208:ILE:HD11 | 1:T:243:PRO:HG2  | 1.85                     | 0.58              |
| 1:D:38:PRO:CD    | 1:D:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:E:4:GLU:O      | 1:E:5:THR:HB     | 2.04                     | 0.58              |
| 1:G:287:ILE:HG13 | 1:G:288:ASP:OD1  | 2.03                     | 0.58              |
| 1:G:336:LYS:CE   | 2:G:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:H:324:THR:HG21 | 1:J:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:I:64:ILE:HG23  | 1:I:65:LEU:N     | 2.18                     | 0.58              |
| 1:J:336:LYS:CE   | 2:J:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:L:4:GLU:O      | 1:L:5:THR:HB     | 2.04                     | 0.58              |
| 1:M:362:TYR:O    | 1:M:366:GLY:CA   | 2.51                     | 0.58              |
| 1:N:324:THR:HG21 | 1:P:241:GLU:OE2  | 2.03                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:34:ILE:CG2   | 1:P:67:LEU:HB3   | 2.34                     | 0.58              |
| 1:P:290:ARG:HH11 | 1:R:244:ASP:CB   | 2.16                     | 0.58              |
| 1:P:336:LYS:CE   | 2:P:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:T:8:LEU:HB3    | 1:T:103:THR:HG23 | 1.84                     | 0.58              |
| 1:T:38:PRO:CD    | 1:T:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:W:336:LYS:CE   | 2:W:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:C:336:LYS:CE   | 2:C:401:ADP:H5'2 | 2.34                     | 0.58              |
| 1:D:368:SER:O    | 1:D:371:HIS:N    | 2.37                     | 0.58              |
| 1:F:64:ILE:HG23  | 1:F:65:LEU:N     | 2.18                     | 0.58              |
| 1:F:324:THR:HG21 | 1:H:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:H:64:ILE:HG23  | 1:H:65:LEU:N     | 2.18                     | 0.58              |
| 1:H:223:PHE:CE1  | 1:H:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:J:4:GLU:O      | 1:J:5:THR:HB     | 2.04                     | 0.58              |
| 1:O:34:ILE:HG21  | 1:O:67:LEU:CB    | 2.34                     | 0.58              |
| 1:O:362:TYR:O    | 1:O:366:GLY:CA   | 2.51                     | 0.58              |
| 1:P:4:GLU:O      | 1:P:5:THR:HB     | 2.04                     | 0.58              |
| 1:P:324:THR:HG21 | 1:R:241:GLU:OE2  | 2.03                     | 0.58              |
| 1:Q:362:TYR:O    | 1:Q:366:GLY:CA   | 2.51                     | 0.58              |
| 1:R:34:ILE:CG2   | 1:R:67:LEU:HB3   | 2.34                     | 0.58              |
| 1:R:208:ILE:HD11 | 1:R:243:PRO:HG2  | 1.85                     | 0.58              |
| 1:R:223:PHE:CE1  | 1:R:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:S:368:SER:O    | 1:S:371:HIS:N    | 2.37                     | 0.58              |
| 1:U:38:PRO:CD    | 1:U:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:W:4:GLU:O      | 1:W:5:THR:HB     | 2.04                     | 0.58              |
| 1:A:4:GLU:O      | 1:A:5:THR:HB     | 2.04                     | 0.58              |
| 1:B:34:ILE:CG2   | 1:B:67:LEU:HB3   | 2.34                     | 0.58              |
| 1:B:362:TYR:O    | 1:B:366:GLY:CA   | 2.51                     | 0.58              |
| 1:D:34:ILE:CG2   | 1:D:67:LEU:HB3   | 2.34                     | 0.58              |
| 1:F:290:ARG:HH11 | 1:H:244:ASP:CB   | 2.16                     | 0.58              |
| 1:G:4:GLU:O      | 1:G:5:THR:HB     | 2.04                     | 0.58              |
| 1:I:38:PRO:CD    | 1:I:49:GLN:HE22  | 2.17                     | 0.58              |
| 1:L:34:ILE:CG2   | 1:L:67:LEU:HB3   | 2.34                     | 0.58              |
| 1:M:34:ILE:HG21  | 1:M:67:LEU:CB    | 2.34                     | 0.58              |
| 1:M:223:PHE:CE1  | 1:M:259:GLU:HG2  | 2.38                     | 0.58              |
| 1:N:290:ARG:HH11 | 1:P:244:ASP:CB   | 2.16                     | 0.58              |
| 1:O:64:ILE:HG23  | 1:O:65:LEU:N     | 2.18                     | 0.58              |
| 1:P:8:LEU:HB3    | 1:P:103:THR:HG23 | 1.84                     | 0.58              |
| 1:P:143:TYR:CD1  | 1:P:143:TYR:C    | 2.75                     | 0.58              |
| 1:Q:34:ILE:HG21  | 1:Q:67:LEU:CB    | 2.34                     | 0.58              |
| 1:U:290:ARG:HH11 | 1:W:244:ASP:CB   | 2.16                     | 0.58              |
| 1:V:362:TYR:O    | 1:V:366:GLY:CA   | 2.51                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:290:ARG:HH11 | 1:C:244:ASP:CB   | 2.16                     | 0.57              |
| 1:B:223:PHE:CE1  | 1:B:259:GLU:HG2  | 2.38                     | 0.57              |
| 1:B:324:THR:HG21 | 1:D:241:GLU:OE2  | 2.03                     | 0.57              |
| 1:D:324:THR:HG21 | 1:F:241:GLU:OE2  | 2.03                     | 0.57              |
| 1:D:362:TYR:O    | 1:D:366:GLY:CA   | 2.51                     | 0.57              |
| 1:F:34:ILE:CG2   | 1:F:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:F:208:ILE:HD11 | 1:F:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:I:336:LYS:CE   | 2:I:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:K:104:LEU:HB2  | 1:K:356:TRP:HH2  | 1.63                     | 0.57              |
| 1:N:4:GLU:O      | 1:N:5:THR:HB     | 2.04                     | 0.57              |
| 1:O:324:THR:HG21 | 1:Q:241:GLU:OE2  | 2.03                     | 0.57              |
| 1:Q:38:PRO:CD    | 1:Q:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:Q:64:ILE:HG23  | 1:Q:65:LEU:N     | 2.18                     | 0.57              |
| 1:Q:324:THR:HG21 | 1:S:241:GLU:OE2  | 2.03                     | 0.57              |
| 1:R:34:ILE:HG21  | 1:R:67:LEU:CB    | 2.34                     | 0.57              |
| 1:S:34:ILE:HG21  | 1:S:67:LEU:CB    | 2.34                     | 0.57              |
| 1:S:223:PHE:CE1  | 1:S:259:GLU:HG2  | 2.38                     | 0.57              |
| 1:T:34:ILE:HG21  | 1:T:67:LEU:CB    | 2.34                     | 0.57              |
| 1:T:361:GLU:HB3  | 1:T:369:ILE:CD1  | 2.14                     | 0.57              |
| 1:T:368:SER:O    | 1:T:371:HIS:N    | 2.37                     | 0.57              |
| 1:A:143:TYR:CD1  | 1:A:143:TYR:C    | 2.75                     | 0.57              |
| 1:A:287:ILE:CD1  | 1:C:208:ILE:CD1  | 2.80                     | 0.57              |
| 1:A:287:ILE:HG13 | 1:A:288:ASP:OD1  | 2.03                     | 0.57              |
| 1:B:287:ILE:CD1  | 1:D:208:ILE:CD1  | 2.80                     | 0.57              |
| 1:B:336:LYS:CE   | 2:B:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:C:4:GLU:O      | 1:C:5:THR:HB     | 2.04                     | 0.57              |
| 1:C:38:PRO:CD    | 1:C:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:C:223:PHE:CE1  | 1:C:259:GLU:HG2  | 2.38                     | 0.57              |
| 1:E:38:PRO:CD    | 1:E:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:G:34:ILE:CG2   | 1:G:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:G:64:ILE:HG23  | 1:G:65:LEU:N     | 2.18                     | 0.57              |
| 1:H:4:GLU:O      | 1:H:5:THR:HB     | 2.04                     | 0.57              |
| 1:H:34:ILE:HG21  | 1:H:67:LEU:CB    | 2.34                     | 0.57              |
| 1:K:34:ILE:HG21  | 1:K:67:LEU:CB    | 2.34                     | 0.57              |
| 1:K:64:ILE:HG23  | 1:K:65:LEU:N     | 2.18                     | 0.57              |
| 1:K:362:TYR:O    | 1:K:366:GLY:CA   | 2.51                     | 0.57              |
| 1:N:34:ILE:HG21  | 1:N:67:LEU:CB    | 2.34                     | 0.57              |
| 1:O:368:SER:O    | 1:O:371:HIS:N    | 2.37                     | 0.57              |
| 1:P:208:ILE:HD11 | 1:P:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:S:362:TYR:O    | 1:S:366:GLY:CA   | 2.51                     | 0.57              |
| 1:V:34:ILE:HG21  | 1:V:67:LEU:CB    | 2.34                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:40:HIS:O     | 1:A:41:GLN:C     | 2.43                     | 0.57              |
| 1:C:64:ILE:HG23  | 1:C:65:LEU:N     | 2.18                     | 0.57              |
| 1:D:336:LYS:CE   | 2:D:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:E:40:HIS:O     | 1:E:41:GLN:C     | 2.43                     | 0.57              |
| 1:I:34:ILE:CG2   | 1:I:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:J:34:ILE:HG21  | 1:J:67:LEU:CB    | 2.34                     | 0.57              |
| 1:J:38:PRO:CD    | 1:J:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:L:34:ILE:HG21  | 1:L:67:LEU:CB    | 2.34                     | 0.57              |
| 1:L:40:HIS:O     | 1:L:41:GLN:C     | 2.43                     | 0.57              |
| 1:P:34:ILE:HG21  | 1:P:67:LEU:CB    | 2.34                     | 0.57              |
| 1:Q:336:LYS:CE   | 2:Q:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:S:4:GLU:O      | 1:S:5:THR:HB     | 2.04                     | 0.57              |
| 1:W:34:ILE:CG2   | 1:W:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:E:34:ILE:CG2   | 1:E:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:F:34:ILE:HG21  | 1:F:67:LEU:CB    | 2.34                     | 0.57              |
| 1:F:38:PRO:CD    | 1:F:49:GLN:HE22  | 2.16                     | 0.57              |
| 1:H:38:PRO:CD    | 1:H:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:I:34:ILE:HG21  | 1:I:67:LEU:CB    | 2.34                     | 0.57              |
| 1:L:290:ARG:HH11 | 1:N:244:ASP:CB   | 2.16                     | 0.57              |
| 1:N:208:ILE:HD11 | 1:N:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:N:223:PHE:CE1  | 1:N:259:GLU:HG2  | 2.38                     | 0.57              |
| 1:P:40:HIS:O     | 1:P:41:GLN:C     | 2.43                     | 0.57              |
| 1:R:336:LYS:CE   | 2:R:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:T:40:HIS:O     | 1:T:41:GLN:C     | 2.43                     | 0.57              |
| 1:T:287:ILE:CD1  | 1:V:208:ILE:CD1  | 2.80                     | 0.57              |
| 1:U:34:ILE:HG21  | 1:U:67:LEU:CB    | 2.34                     | 0.57              |
| 1:U:34:ILE:CG2   | 1:U:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:W:40:HIS:O     | 1:W:41:GLN:C     | 2.43                     | 0.57              |
| 1:A:34:ILE:CG2   | 1:A:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:H:34:ILE:CG2   | 1:H:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:H:336:LYS:CE   | 2:H:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:J:287:ILE:CD1  | 1:L:208:ILE:CD1  | 2.80                     | 0.57              |
| 1:L:38:PRO:CD    | 1:L:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:L:208:ILE:HD11 | 1:L:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:R:64:ILE:HG23  | 1:R:65:LEU:N     | 2.18                     | 0.57              |
| 1:S:8:LEU:HB3    | 1:S:103:THR:HG23 | 1.84                     | 0.57              |
| 1:V:34:ILE:CG2   | 1:V:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:V:336:LYS:CE   | 2:V:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:A:38:PRO:CD    | 1:A:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:A:208:ILE:HD11 | 1:A:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:B:34:ILE:HG21  | 1:B:67:LEU:CB    | 2.34                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:104:LEU:HB2  | 1:B:356:TRP:HH2  | 1.63                     | 0.57              |
| 1:C:208:ILE:HD11 | 1:C:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:F:336:LYS:CE   | 2:F:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:G:208:ILE:HD11 | 1:G:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:H:40:HIS:O     | 1:H:41:GLN:C     | 2.43                     | 0.57              |
| 1:I:287:ILE:CD1  | 1:K:208:ILE:CD1  | 2.80                     | 0.57              |
| 1:J:143:TYR:CD1  | 1:J:143:TYR:C    | 2.75                     | 0.57              |
| 1:O:290:ARG:HH11 | 1:Q:244:ASP:CB   | 2.16                     | 0.57              |
| 1:Q:4:GLU:O      | 1:Q:5:THR:HB     | 2.04                     | 0.57              |
| 1:Q:143:TYR:HD2  | 1:Q:346:LEU:HD13 | 1.70                     | 0.57              |
| 1:T:4:GLU:O      | 1:T:5:THR:HB     | 2.04                     | 0.57              |
| 1:T:34:ILE:CG2   | 1:T:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:T:324:THR:HG21 | 1:V:241:GLU:OE2  | 2.03                     | 0.57              |
| 1:U:4:GLU:O      | 1:U:5:THR:HB     | 2.04                     | 0.57              |
| 1:W:38:PRO:CD    | 1:W:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:A:336:LYS:CE   | 2:A:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:D:34:ILE:HG21  | 1:D:67:LEU:CB    | 2.34                     | 0.57              |
| 1:H:208:ILE:HD11 | 1:H:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:J:208:ILE:HD11 | 1:J:243:PRO:HG2  | 1.85                     | 0.57              |
| 1:R:8:LEU:HB3    | 1:R:103:THR:HG23 | 1.84                     | 0.57              |
| 1:V:4:GLU:O      | 1:V:5:THR:HB     | 2.04                     | 0.57              |
| 1:G:34:ILE:HG21  | 1:G:67:LEU:CB    | 2.34                     | 0.57              |
| 1:G:38:PRO:CD    | 1:G:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:H:143:TYR:HD2  | 1:H:346:LEU:HD13 | 1.70                     | 0.57              |
| 1:I:4:GLU:O      | 1:I:5:THR:HB     | 2.04                     | 0.57              |
| 1:I:40:HIS:O     | 1:I:41:GLN:C     | 2.43                     | 0.57              |
| 1:J:143:TYR:HD2  | 1:J:346:LEU:HD13 | 1.70                     | 0.57              |
| 1:K:34:ILE:CG2   | 1:K:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:K:336:LYS:CE   | 2:K:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:K:368:SER:O    | 1:K:371:HIS:N    | 2.37                     | 0.57              |
| 1:N:38:PRO:CD    | 1:N:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:O:34:ILE:CG2   | 1:O:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:R:38:PRO:CD    | 1:R:49:GLN:HE22  | 2.17                     | 0.57              |
| 1:S:143:TYR:HD2  | 1:S:346:LEU:HD13 | 1.70                     | 0.57              |
| 1:S:324:THR:HG21 | 1:U:241:GLU:OE2  | 2.03                     | 0.57              |
| 1:U:324:THR:HG21 | 1:W:241:GLU:OE2  | 2.03                     | 0.57              |
| 1:J:34:ILE:CG2   | 1:J:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:M:34:ILE:CG2   | 1:M:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:O:143:TYR:HD2  | 1:O:346:LEU:HD13 | 1.70                     | 0.57              |
| 1:O:287:ILE:CD1  | 1:Q:208:ILE:CD1  | 2.80                     | 0.57              |
| 1:O:336:LYS:CE   | 2:O:401:ADP:H5'2 | 2.34                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:34:ILE:CG2   | 1:Q:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:S:34:ILE:CG2   | 1:S:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:T:336:LYS:CE   | 2:T:401:ADP:H5'2 | 2.34                     | 0.57              |
| 1:C:34:ILE:CG2   | 1:C:67:LEU:HB3   | 2.34                     | 0.57              |
| 1:M:64:ILE:HG23  | 1:M:65:LEU:N     | 2.18                     | 0.57              |
| 1:P:38:PRO:CD    | 1:P:49:GLN:HE22  | 2.16                     | 0.57              |
| 1:S:40:HIS:O     | 1:S:41:GLN:C     | 2.43                     | 0.57              |
| 1:S:64:ILE:HG23  | 1:S:65:LEU:N     | 2.18                     | 0.57              |
| 1:V:64:ILE:HG23  | 1:V:65:LEU:N     | 2.18                     | 0.57              |
| 1:W:34:ILE:HG21  | 1:W:67:LEU:CB    | 2.34                     | 0.57              |
| 1:B:143:TYR:CZ   | 1:D:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:B:290:ARG:HH11 | 1:D:244:ASP:HB2  | 1.71                     | 0.56              |
| 1:G:290:ARG:HH11 | 1:I:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:I:290:ARG:HH11 | 1:K:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:M:287:ILE:CD1  | 1:O:208:ILE:CD1  | 2.80                     | 0.56              |
| 1:O:4:GLU:O      | 1:O:5:THR:HB     | 2.04                     | 0.56              |
| 1:R:4:GLU:O      | 1:R:5:THR:HB     | 2.04                     | 0.56              |
| 1:U:143:TYR:HD2  | 1:U:346:LEU:HD13 | 1.70                     | 0.56              |
| 1:A:34:ILE:HG21  | 1:A:67:LEU:CB    | 2.34                     | 0.56              |
| 1:B:4:GLU:O      | 1:B:5:THR:HB     | 2.04                     | 0.56              |
| 1:D:4:GLU:O      | 1:D:5:THR:HB     | 2.04                     | 0.56              |
| 1:D:290:ARG:HH11 | 1:F:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:E:208:ILE:HD11 | 1:E:243:PRO:HG2  | 1.85                     | 0.56              |
| 1:E:290:ARG:HH11 | 1:G:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:K:290:ARG:HH11 | 1:M:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:C:40:HIS:O     | 1:C:41:GLN:C     | 2.43                     | 0.56              |
| 1:C:368:SER:O    | 1:C:371:HIS:N    | 2.37                     | 0.56              |
| 1:E:34:ILE:HG21  | 1:E:67:LEU:CB    | 2.34                     | 0.56              |
| 1:F:143:TYR:HD2  | 1:F:346:LEU:HD13 | 1.70                     | 0.56              |
| 1:G:368:SER:O    | 1:G:371:HIS:N    | 2.37                     | 0.56              |
| 1:J:40:HIS:O     | 1:J:41:GLN:C     | 2.43                     | 0.56              |
| 1:L:143:TYR:HD2  | 1:L:346:LEU:HD13 | 1.70                     | 0.56              |
| 1:M:4:GLU:O      | 1:M:5:THR:HB     | 2.04                     | 0.56              |
| 1:N:34:ILE:HB    | 1:N:54:VAL:HG13  | 1.80                     | 0.56              |
| 1:N:368:SER:O    | 1:N:371:HIS:N    | 2.37                     | 0.56              |
| 1:R:290:ARG:HH11 | 1:T:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:T:143:TYR:CZ   | 1:V:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:C:34:ILE:HG21  | 1:C:67:LEU:CB    | 2.34                     | 0.56              |
| 1:F:40:HIS:O     | 1:F:41:GLN:C     | 2.43                     | 0.56              |
| 1:G:287:ILE:CD1  | 1:I:208:ILE:CD1  | 2.80                     | 0.56              |
| 1:M:336:LYS:CE   | 2:M:401:ADP:H5'2 | 2.34                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:40:HIS:O     | 1:N:41:GLN:C     | 2.43                     | 0.56              |
| 1:O:143:TYR:CZ   | 1:Q:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:P:290:ARG:HH11 | 1:R:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:Q:143:TYR:CZ   | 1:S:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:R:368:SER:O    | 1:R:371:HIS:N    | 2.37                     | 0.56              |
| 1:U:40:HIS:O     | 1:U:41:GLN:C     | 2.43                     | 0.56              |
| 1:V:368:SER:O    | 1:V:371:HIS:N    | 2.37                     | 0.56              |
| 1:D:40:HIS:O     | 1:D:41:GLN:C     | 2.43                     | 0.56              |
| 1:M:40:HIS:O     | 1:M:41:GLN:C     | 2.43                     | 0.56              |
| 1:M:143:TYR:CZ   | 1:O:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:Q:290:ARG:HH11 | 1:S:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:S:290:ARG:HH11 | 1:U:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:U:290:ARG:HH11 | 1:W:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:A:116:ARG:HD3  | 1:A:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:B:40:HIS:O     | 1:B:41:GLN:C     | 2.43                     | 0.56              |
| 1:C:290:ARG:HH11 | 1:E:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:E:116:ARG:HD3  | 1:E:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:L:116:ARG:HD3  | 1:L:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:N:143:TYR:CZ   | 1:P:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:P:116:ARG:HD3  | 1:P:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:R:40:HIS:O     | 1:R:41:GLN:C     | 2.43                     | 0.56              |
| 1:R:116:ARG:HD3  | 1:R:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:S:143:TYR:CZ   | 1:U:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:W:361:GLU:HB3  | 1:W:369:ILE:CD1  | 2.14                     | 0.56              |
| 1:C:116:ARG:HD3  | 1:C:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:D:143:TYR:CD1  | 1:D:143:TYR:C    | 2.75                     | 0.56              |
| 1:K:40:HIS:O     | 1:K:41:GLN:C     | 2.43                     | 0.56              |
| 1:K:143:TYR:CZ   | 1:M:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:M:143:TYR:HD2  | 1:M:346:LEU:HD13 | 1.70                     | 0.56              |
| 1:Q:40:HIS:O     | 1:Q:41:GLN:C     | 2.43                     | 0.56              |
| 1:Q:362:TYR:HE1  | 1:Q:367:PRO:CB   | 2.19                     | 0.56              |
| 1:V:40:HIS:O     | 1:V:41:GLN:C     | 2.43                     | 0.56              |
| 1:G:40:HIS:O     | 1:G:41:GLN:C     | 2.43                     | 0.56              |
| 1:J:368:SER:O    | 1:J:371:HIS:N    | 2.37                     | 0.56              |
| 1:L:143:TYR:CZ   | 1:N:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:M:361:GLU:HB3  | 1:M:369:ILE:CD1  | 2.14                     | 0.56              |
| 1:M:362:TYR:HE1  | 1:M:367:PRO:CB   | 2.19                     | 0.56              |
| 1:N:116:ARG:HD3  | 1:N:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:O:40:HIS:O     | 1:O:41:GLN:C     | 2.43                     | 0.56              |
| 1:P:325:MET:HE3  | 1:R:244:ASP:O    | 2.06                     | 0.56              |
| 1:R:143:TYR:CZ   | 1:T:45:VAL:CG2   | 2.88                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:34:ILE:CG2   | 1:U:67:LEU:HD22  | 2.28                     | 0.56              |
| 1:W:143:TYR:HD2  | 1:W:346:LEU:HD13 | 1.70                     | 0.56              |
| 1:D:143:TYR:HD2  | 1:D:346:LEU:HD13 | 1.70                     | 0.56              |
| 1:D:325:MET:HE3  | 1:F:244:ASP:O    | 2.06                     | 0.56              |
| 1:K:4:GLU:O      | 1:K:5:THR:HB     | 2.04                     | 0.56              |
| 1:N:290:ARG:HH11 | 1:P:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:P:143:TYR:CZ   | 1:R:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:V:361:GLU:HB3  | 1:V:369:ILE:CD1  | 2.14                     | 0.56              |
| 1:B:325:MET:HE3  | 1:D:244:ASP:O    | 2.06                     | 0.56              |
| 1:I:143:TYR:CZ   | 1:K:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:L:290:ARG:HH11 | 1:N:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:M:290:ARG:HH11 | 1:O:244:ASP:HB2  | 1.70                     | 0.56              |
| 1:T:116:ARG:HD3  | 1:T:370:VAL:HG13 | 1.88                     | 0.56              |
| 1:U:143:TYR:CZ   | 1:W:45:VAL:CG2   | 2.88                     | 0.56              |
| 1:V:143:TYR:CD1  | 1:V:143:TYR:C    | 2.75                     | 0.56              |
| 1:F:290:ARG:HH11 | 1:H:244:ASP:HB2  | 1.70                     | 0.55              |
| 1:F:362:TYR:HE1  | 1:F:367:PRO:CB   | 2.19                     | 0.55              |
| 1:G:116:ARG:HD3  | 1:G:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:N:143:TYR:HD2  | 1:N:346:LEU:HD13 | 1.70                     | 0.55              |
| 1:P:121:GLN:HA   | 1:P:362:TYR:OH   | 2.07                     | 0.55              |
| 1:T:290:ARG:HH11 | 1:V:244:ASP:HB2  | 1.70                     | 0.55              |
| 1:U:121:GLN:HA   | 1:U:362:TYR:OH   | 2.07                     | 0.55              |
| 1:D:34:ILE:CG2   | 1:D:67:LEU:HD22  | 2.28                     | 0.55              |
| 1:F:4:GLU:O      | 1:F:5:THR:HB     | 2.04                     | 0.55              |
| 1:J:116:ARG:HD3  | 1:J:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:O:143:TYR:CD1  | 1:O:143:TYR:C    | 2.75                     | 0.55              |
| 1:Q:116:ARG:HD3  | 1:Q:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:S:121:GLN:HA   | 1:S:362:TYR:OH   | 2.07                     | 0.55              |
| 1:T:325:MET:HE3  | 1:V:244:ASP:O    | 2.06                     | 0.55              |
| 1:W:54:VAL:O     | 1:W:55:GLY:C     | 2.45                     | 0.55              |
| 1:W:121:GLN:HA   | 1:W:362:TYR:OH   | 2.07                     | 0.55              |
| 1:A:54:VAL:O     | 1:A:55:GLY:C     | 2.45                     | 0.55              |
| 1:A:143:TYR:HD2  | 1:A:346:LEU:HD13 | 1.70                     | 0.55              |
| 1:A:325:MET:HE3  | 1:C:244:ASP:O    | 2.06                     | 0.55              |
| 1:G:121:GLN:HA   | 1:G:362:TYR:OH   | 2.07                     | 0.55              |
| 1:I:37:ARG:CG    | 1:I:38:PRO:CD    | 2.83                     | 0.55              |
| 1:J:143:TYR:CZ   | 1:L:45:VAL:CG2   | 2.88                     | 0.55              |
| 1:L:54:VAL:O     | 1:L:55:GLY:C     | 2.45                     | 0.55              |
| 1:M:325:MET:HE3  | 1:O:244:ASP:O    | 2.07                     | 0.55              |
| 1:P:110:LEU:HD12 | 1:P:177:ARG:HH11 | 1.72                     | 0.55              |
| 1:W:116:ARG:HD3  | 1:W:370:VAL:HG13 | 1.88                     | 0.55              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:121:GLN:HA   | 1:A:362:TYR:OH   | 2.07                     | 0.55              |
| 1:B:362:TYR:HE1  | 1:B:367:PRO:CB   | 2.19                     | 0.55              |
| 1:C:143:TYR:HD2  | 1:C:346:LEU:HD13 | 1.70                     | 0.55              |
| 1:D:116:ARG:HD3  | 1:D:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:F:54:VAL:O     | 1:F:55:GLY:C     | 2.45                     | 0.55              |
| 1:F:325:MET:HE3  | 1:H:244:ASP:O    | 2.06                     | 0.55              |
| 1:H:54:VAL:O     | 1:H:55:GLY:C     | 2.45                     | 0.55              |
| 1:N:110:LEU:HD12 | 1:N:177:ARG:HH11 | 1.72                     | 0.55              |
| 1:W:37:ARG:CG    | 1:W:38:PRO:CD    | 2.83                     | 0.55              |
| 1:A:143:TYR:CZ   | 1:C:45:VAL:CG2   | 2.88                     | 0.55              |
| 1:F:368:SER:O    | 1:F:371:HIS:N    | 2.37                     | 0.55              |
| 1:G:143:TYR:CZ   | 1:I:45:VAL:CG2   | 2.88                     | 0.55              |
| 1:H:143:TYR:CZ   | 1:H:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:I:7:ALA:CB     | 1:I:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:I:110:LEU:HD12 | 1:I:177:ARG:HH11 | 1.72                     | 0.55              |
| 1:I:121:GLN:HA   | 1:I:362:TYR:OH   | 2.07                     | 0.55              |
| 1:J:290:ARG:HH11 | 1:L:244:ASP:HB2  | 1.70                     | 0.55              |
| 1:J:325:MET:HE3  | 1:L:244:ASP:O    | 2.06                     | 0.55              |
| 1:K:110:LEU:HD12 | 1:K:177:ARG:HH11 | 1.72                     | 0.55              |
| 1:M:116:ARG:HD3  | 1:M:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:N:121:GLN:HA   | 1:N:362:TYR:OH   | 2.07                     | 0.55              |
| 1:O:32:PRO:HG3   | 1:O:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:O:116:ARG:HD3  | 1:O:370:VAL:HG13 | 1.87                     | 0.55              |
| 1:O:121:GLN:HA   | 1:O:362:TYR:OH   | 2.07                     | 0.55              |
| 1:O:290:ARG:HH11 | 1:Q:244:ASP:HB2  | 1.70                     | 0.55              |
| 1:Q:121:GLN:HA   | 1:Q:362:TYR:OH   | 2.07                     | 0.55              |
| 1:R:110:LEU:HD12 | 1:R:177:ARG:HH11 | 1.72                     | 0.55              |
| 1:R:121:GLN:HA   | 1:R:362:TYR:OH   | 2.07                     | 0.55              |
| 1:U:368:SER:O    | 1:U:371:HIS:N    | 2.37                     | 0.55              |
| 1:V:116:ARG:HD3  | 1:V:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:B:116:ARG:HD3  | 1:B:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:D:32:PRO:HG3   | 1:D:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:E:143:TYR:CZ   | 1:E:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:F:116:ARG:HD3  | 1:F:370:VAL:HG13 | 1.87                     | 0.55              |
| 1:G:143:TYR:CZ   | 1:G:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:J:7:ALA:CB     | 1:J:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:K:7:ALA:CB     | 1:K:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:L:7:ALA:CB     | 1:L:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:L:121:GLN:HA   | 1:L:362:TYR:OH   | 2.07                     | 0.55              |
| 1:R:143:TYR:CZ   | 1:R:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:S:54:VAL:O     | 1:S:55:GLY:C     | 2.45                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:116:ARG:HD3  | 1:S:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:T:143:TYR:CZ   | 1:T:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:W:143:TYR:CZ   | 1:W:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:C:7:ALA:CB     | 1:C:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:E:32:PRO:HG3   | 1:E:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:G:7:ALA:CB     | 1:G:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:G:32:PRO:HG3   | 1:G:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:I:116:ARG:HD3  | 1:I:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:J:32:PRO:HG3   | 1:J:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:K:32:PRO:HG3   | 1:K:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:L:37:ARG:CG    | 1:L:38:PRO:CD    | 2.83                     | 0.55              |
| 1:M:7:ALA:CB     | 1:M:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:N:7:ALA:CB     | 1:N:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:N:143:TYR:CZ   | 1:N:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:O:325:MET:HE3  | 1:Q:244:ASP:O    | 2.07                     | 0.55              |
| 1:P:143:TYR:CZ   | 1:P:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:Q:54:VAL:O     | 1:Q:55:GLY:C     | 2.45                     | 0.55              |
| 1:S:32:PRO:HG3   | 1:S:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:A:7:ALA:CB     | 1:A:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:A:290:ARG:HH11 | 1:C:244:ASP:HB2  | 1.70                     | 0.55              |
| 1:B:121:GLN:HA   | 1:B:362:TYR:OH   | 2.07                     | 0.55              |
| 1:C:37:ARG:CG    | 1:C:38:PRO:CD    | 2.83                     | 0.55              |
| 1:C:54:VAL:O     | 1:C:55:GLY:C     | 2.45                     | 0.55              |
| 1:D:143:TYR:HD1  | 1:D:143:TYR:C    | 2.09                     | 0.55              |
| 1:F:143:TYR:CZ   | 1:H:45:VAL:CG2   | 2.88                     | 0.55              |
| 1:F:236:LEU:HD12 | 1:F:237:GLU:CG   | 2.37                     | 0.55              |
| 1:G:110:LEU:HD12 | 1:G:177:ARG:HH11 | 1.72                     | 0.55              |
| 1:H:7:ALA:CB     | 1:H:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:H:37:ARG:CG    | 1:H:38:PRO:CD    | 2.83                     | 0.55              |
| 1:H:236:LEU:HD12 | 1:H:237:GLU:CG   | 2.37                     | 0.55              |
| 1:K:325:MET:HE3  | 1:M:244:ASP:O    | 2.06                     | 0.55              |
| 1:M:121:GLN:HA   | 1:M:362:TYR:OH   | 2.07                     | 0.55              |
| 1:N:32:PRO:HG3   | 1:N:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:N:54:VAL:O     | 1:N:55:GLY:C     | 2.45                     | 0.55              |
| 1:P:7:ALA:CB     | 1:P:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:Q:325:MET:HE3  | 1:S:244:ASP:O    | 2.07                     | 0.55              |
| 1:R:54:VAL:O     | 1:R:55:GLY:C     | 2.45                     | 0.55              |
| 1:V:121:GLN:HA   | 1:V:362:TYR:OH   | 2.07                     | 0.55              |
| 1:V:143:TYR:CZ   | 1:V:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:V:143:TYR:HD2  | 1:V:346:LEU:HD13 | 1.70                     | 0.55              |
| 1:W:32:PRO:HG3   | 1:W:59:GLN:NE2   | 2.22                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:110:LEU:HD12 | 1:W:177:ARG:HH11 | 1.72                     | 0.55              |
| 1:A:143:TYR:CZ   | 1:A:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:B:236:LEU:HD12 | 1:B:237:GLU:CG   | 2.37                     | 0.55              |
| 1:C:32:PRO:HG3   | 1:C:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:D:121:GLN:HA   | 1:D:362:TYR:OH   | 2.07                     | 0.55              |
| 1:D:236:LEU:HD12 | 1:D:237:GLU:CG   | 2.37                     | 0.55              |
| 1:D:361:GLU:HB3  | 1:D:369:ILE:CD1  | 2.14                     | 0.55              |
| 1:E:7:ALA:CB     | 1:E:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:E:121:GLN:HA   | 1:E:362:TYR:OH   | 2.07                     | 0.55              |
| 1:H:32:PRO:HG3   | 1:H:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:H:143:TYR:CZ   | 1:J:45:VAL:CG2   | 2.88                     | 0.55              |
| 1:I:32:PRO:HG3   | 1:I:59:GLN:NE2   | 2.22                     | 0.55              |
| 1:J:143:TYR:HD1  | 1:J:143:TYR:C    | 2.09                     | 0.55              |
| 1:K:116:ARG:HD3  | 1:K:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:L:147:ARG:HG3  | 1:L:147:ARG:NH2  | 2.22                     | 0.55              |
| 1:O:7:ALA:CB     | 1:O:347:ALA:HB1  | 2.37                     | 0.55              |
| 1:O:143:TYR:CZ   | 1:O:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:S:325:MET:HE3  | 1:U:244:ASP:O    | 2.06                     | 0.55              |
| 1:T:236:LEU:HD12 | 1:T:237:GLU:CG   | 2.37                     | 0.55              |
| 1:A:147:ARG:HG3  | 1:A:147:ARG:NH2  | 2.22                     | 0.55              |
| 1:B:368:SER:O    | 1:B:371:HIS:N    | 2.37                     | 0.55              |
| 1:C:143:TYR:CZ   | 1:E:45:VAL:CG2   | 2.88                     | 0.55              |
| 1:E:143:TYR:CZ   | 1:G:45:VAL:CG2   | 2.88                     | 0.55              |
| 1:E:362:TYR:HE1  | 1:E:367:PRO:CB   | 2.19                     | 0.55              |
| 1:H:116:ARG:HD3  | 1:H:370:VAL:HG13 | 1.88                     | 0.55              |
| 1:H:236:LEU:HD12 | 1:H:237:GLU:HG2  | 1.89                     | 0.55              |
| 1:H:290:ARG:HH11 | 1:J:244:ASP:HB2  | 1.70                     | 0.55              |
| 1:J:143:TYR:CZ   | 1:J:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:M:143:TYR:CZ   | 1:M:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:O:34:ILE:CG2   | 1:O:67:LEU:HD22  | 2.28                     | 0.55              |
| 1:Q:143:TYR:CZ   | 1:Q:345:ILE:HG22 | 2.42                     | 0.55              |
| 1:R:325:MET:HE3  | 1:T:244:ASP:O    | 2.06                     | 0.55              |
| 1:S:236:LEU:HD12 | 1:S:237:GLU:HG2  | 1.89                     | 0.55              |
| 1:T:236:LEU:HD12 | 1:T:237:GLU:HG2  | 1.90                     | 0.55              |
| 1:F:7:ALA:CB     | 1:F:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:F:143:TYR:CZ   | 1:F:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:F:236:LEU:HD12 | 1:F:237:GLU:HG2  | 1.89                     | 0.54              |
| 1:G:325:MET:HE3  | 1:I:244:ASP:O    | 2.06                     | 0.54              |
| 1:H:147:ARG:NH2  | 1:H:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:J:121:GLN:HA   | 1:J:362:TYR:OH   | 2.07                     | 0.54              |
| 1:N:325:MET:HE3  | 1:P:244:ASP:O    | 2.06                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:54:VAL:O     | 1:P:55:GLY:C     | 2.45                     | 0.54              |
| 1:Q:7:ALA:CB     | 1:Q:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:Q:147:ARG:HG3  | 1:Q:147:ARG:NH2  | 2.22                     | 0.54              |
| 1:Q:236:LEU:HD12 | 1:Q:237:GLU:HG2  | 1.89                     | 0.54              |
| 1:R:7:ALA:CB     | 1:R:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:R:236:LEU:HD12 | 1:R:237:GLU:CG   | 2.37                     | 0.54              |
| 1:S:7:ALA:CB     | 1:S:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:T:110:LEU:HD12 | 1:T:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:V:32:PRO:HG3   | 1:V:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:W:147:ARG:HG3  | 1:W:147:ARG:NH2  | 2.22                     | 0.54              |
| 1:A:32:PRO:HG3   | 1:A:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:A:110:LEU:HD12 | 1:A:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:B:143:TYR:HD2  | 1:B:346:LEU:HD13 | 1.70                     | 0.54              |
| 1:D:34:ILE:HG21  | 1:D:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:D:37:ARG:CG    | 1:D:38:PRO:CD    | 2.83                     | 0.54              |
| 1:D:143:TYR:CZ   | 1:F:45:VAL:CG2   | 2.88                     | 0.54              |
| 1:E:143:TYR:HD2  | 1:E:346:LEU:HD13 | 1.70                     | 0.54              |
| 1:F:34:ILE:HG21  | 1:F:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:F:147:ARG:HG3  | 1:F:147:ARG:NH2  | 2.22                     | 0.54              |
| 1:G:236:LEU:HD12 | 1:G:237:GLU:CG   | 2.37                     | 0.54              |
| 1:I:34:ILE:HG21  | 1:I:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:I:236:LEU:HD12 | 1:I:237:GLU:CG   | 2.37                     | 0.54              |
| 1:I:236:LEU:HD12 | 1:I:237:GLU:HG2  | 1.89                     | 0.54              |
| 1:J:54:VAL:O     | 1:J:55:GLY:C     | 2.45                     | 0.54              |
| 1:J:236:LEU:HD12 | 1:J:237:GLU:CG   | 2.37                     | 0.54              |
| 1:K:143:TYR:HD2  | 1:K:346:LEU:HD13 | 1.70                     | 0.54              |
| 1:K:236:LEU:HD12 | 1:K:237:GLU:HG2  | 1.89                     | 0.54              |
| 1:L:32:PRO:HG3   | 1:L:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:Q:368:SER:O    | 1:Q:371:HIS:N    | 2.37                     | 0.54              |
| 1:R:236:LEU:HD12 | 1:R:237:GLU:HG2  | 1.89                     | 0.54              |
| 1:S:34:ILE:HG21  | 1:S:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:S:143:TYR:HD1  | 1:S:143:TYR:C    | 2.09                     | 0.54              |
| 1:U:7:ALA:CB     | 1:U:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:U:143:TYR:CZ   | 1:U:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:V:34:ILE:HG21  | 1:V:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:V:236:LEU:HD12 | 1:V:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:B:54:VAL:O     | 1:B:55:GLY:C     | 2.45                     | 0.54              |
| 1:B:147:ARG:NH2  | 1:B:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:E:8:LEU:HB2    | 1:E:103:THR:OG1  | 2.08                     | 0.54              |
| 1:E:34:ILE:HG21  | 1:E:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:K:34:ILE:HG21  | 1:K:67:LEU:HB3   | 1.90                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:143:TYR:CZ   | 1:L:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:M:143:TYR:HD1  | 1:M:143:TYR:C    | 2.09                     | 0.54              |
| 1:O:236:LEU:HD12 | 1:O:237:GLU:HG2  | 1.89                     | 0.54              |
| 1:Q:34:ILE:HG21  | 1:Q:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:Q:106:THR:HG22 | 1:Q:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:R:34:ILE:HG21  | 1:R:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:R:37:ARG:CG    | 1:R:38:PRO:CD    | 2.83                     | 0.54              |
| 1:T:8:LEU:HB2    | 1:T:103:THR:OG1  | 2.08                     | 0.54              |
| 1:U:34:ILE:HG21  | 1:U:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:U:110:LEU:HD12 | 1:U:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:U:116:ARG:HD3  | 1:U:370:VAL:HG13 | 1.88                     | 0.54              |
| 1:U:147:ARG:NH2  | 1:U:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:V:8:LEU:HB2    | 1:V:103:THR:OG1  | 2.08                     | 0.54              |
| 1:V:300:SER:HA   | 1:V:335:ARG:HG2  | 1.89                     | 0.54              |
| 1:W:34:ILE:HG21  | 1:W:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:W:362:TYR:HE1  | 1:W:367:PRO:CB   | 2.19                     | 0.54              |
| 1:A:37:ARG:CG    | 1:A:38:PRO:CD    | 2.83                     | 0.54              |
| 1:B:34:ILE:HG21  | 1:B:67:LEU:HB3   | 1.89                     | 0.54              |
| 1:B:300:SER:HA   | 1:B:335:ARG:HG2  | 1.89                     | 0.54              |
| 1:C:8:LEU:HB2    | 1:C:103:THR:OG1  | 2.08                     | 0.54              |
| 1:C:121:GLN:HA   | 1:C:362:TYR:OH   | 2.07                     | 0.54              |
| 1:D:7:ALA:CB     | 1:D:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:E:223:PHE:CZ   | 1:E:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:F:32:PRO:HG3   | 1:F:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:G:236:LEU:HD12 | 1:G:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:I:8:LEU:HB2    | 1:I:103:THR:OG1  | 2.08                     | 0.54              |
| 1:K:7:ALA:CB     | 1:K:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:K:38:PRO:HB2   | 1:K:41:GLN:HB2   | 1.89                     | 0.54              |
| 1:K:54:VAL:O     | 1:K:55:GLY:C     | 2.45                     | 0.54              |
| 1:L:34:ILE:HG21  | 1:L:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:L:110:LEU:HD12 | 1:L:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:M:7:ALA:CB     | 1:M:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:M:110:LEU:HD12 | 1:M:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:M:223:PHE:CZ   | 1:M:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:M:236:LEU:HD12 | 1:M:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:N:223:PHE:CZ   | 1:N:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:P:147:ARG:NH2  | 1:P:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:R:32:PRO:HG3   | 1:R:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:S:106:THR:HG22 | 1:S:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:T:38:PRO:HB2   | 1:T:41:GLN:HB2   | 1.89                     | 0.54              |
| 1:T:54:VAL:O     | 1:T:55:GLY:C     | 2.45                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:32:PRO:HG3   | 1:U:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:U:54:VAL:O     | 1:U:55:GLY:C     | 2.45                     | 0.54              |
| 1:V:236:LEU:HD12 | 1:V:237:GLU:CG   | 2.37                     | 0.54              |
| 1:W:106:THR:HG22 | 1:W:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:A:236:LEU:HD12 | 1:A:237:GLU:CG   | 2.37                     | 0.54              |
| 1:B:110:LEU:HD12 | 1:B:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:B:143:TYR:CZ   | 1:B:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:B:223:PHE:CZ   | 1:B:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:C:34:ILE:HG21  | 1:C:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:D:236:LEU:HD12 | 1:D:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:E:236:LEU:HD12 | 1:E:237:GLU:CG   | 2.37                     | 0.54              |
| 1:G:54:VAL:O     | 1:G:55:GLY:C     | 2.45                     | 0.54              |
| 1:H:34:ILE:HG21  | 1:H:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:H:121:GLN:HA   | 1:H:362:TYR:OH   | 2.07                     | 0.54              |
| 1:I:7:ALA:CB     | 1:I:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:I:38:PRO:HB2   | 1:I:41:GLN:HB2   | 1.89                     | 0.54              |
| 1:J:34:ILE:HG21  | 1:J:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:J:236:LEU:HD12 | 1:J:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:M:8:LEU:HB2    | 1:M:103:THR:OG1  | 2.08                     | 0.54              |
| 1:M:32:PRO:HG3   | 1:M:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:M:38:PRO:HB2   | 1:M:41:GLN:HB2   | 1.89                     | 0.54              |
| 1:M:236:LEU:HD12 | 1:M:237:GLU:CG   | 2.37                     | 0.54              |
| 1:O:7:ALA:CB     | 1:O:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:O:34:ILE:HG21  | 1:O:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:P:8:LEU:HB2    | 1:P:103:THR:OG1  | 2.08                     | 0.54              |
| 1:P:34:ILE:CG2   | 1:P:67:LEU:HD22  | 2.27                     | 0.54              |
| 1:P:223:PHE:CZ   | 1:P:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:Q:236:LEU:HD12 | 1:Q:237:GLU:CG   | 2.37                     | 0.54              |
| 1:S:37:ARG:CG    | 1:S:38:PRO:CD    | 2.83                     | 0.54              |
| 1:S:236:LEU:HD12 | 1:S:237:GLU:CG   | 2.37                     | 0.54              |
| 1:U:106:THR:HG22 | 1:U:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:U:236:LEU:HD12 | 1:U:237:GLU:CG   | 2.37                     | 0.54              |
| 1:U:236:LEU:HD12 | 1:U:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:V:223:PHE:CZ   | 1:V:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:W:7:ALA:CB     | 1:W:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:C:223:PHE:CZ   | 1:C:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:D:110:LEU:HD12 | 1:D:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:D:223:PHE:CZ   | 1:D:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:E:38:PRO:HB2   | 1:E:41:GLN:HB2   | 1.89                     | 0.54              |
| 1:F:121:GLN:HA   | 1:F:362:TYR:OH   | 2.07                     | 0.54              |
| 1:G:34:ILE:HG21  | 1:G:67:LEU:HB3   | 1.90                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:54:VAL:O     | 1:I:55:GLY:C     | 2.45                     | 0.54              |
| 1:I:143:TYR:CZ   | 1:I:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:K:143:TYR:CZ   | 1:K:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:K:236:LEU:HD12 | 1:K:237:GLU:CG   | 2.37                     | 0.54              |
| 1:L:223:PHE:CZ   | 1:L:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:M:34:ILE:HG21  | 1:M:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:M:37:ARG:CG    | 1:M:38:PRO:CD    | 2.83                     | 0.54              |
| 1:O:106:THR:HG22 | 1:O:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:O:223:PHE:CZ   | 1:O:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:O:236:LEU:HD12 | 1:O:237:GLU:CG   | 2.37                     | 0.54              |
| 1:P:34:ILE:HG21  | 1:P:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:P:236:LEU:HD12 | 1:P:237:GLU:CG   | 2.37                     | 0.54              |
| 1:T:7:ALA:CB     | 1:T:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:T:106:THR:HG22 | 1:T:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:T:121:GLN:HA   | 1:T:362:TYR:OH   | 2.07                     | 0.54              |
| 1:W:223:PHE:CZ   | 1:W:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:A:140:LEU:HD22 | 1:A:343:GLY:HA2  | 1.90                     | 0.54              |
| 1:B:7:ALA:CB     | 1:B:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:B:236:LEU:HD12 | 1:B:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:C:143:TYR:CZ   | 1:C:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:D:54:VAL:O     | 1:D:55:GLY:C     | 2.45                     | 0.54              |
| 1:D:147:ARG:HG3  | 1:D:147:ARG:NH2  | 2.22                     | 0.54              |
| 1:E:106:THR:HG22 | 1:E:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:E:110:LEU:HD12 | 1:E:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:G:7:ALA:CB     | 1:G:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:G:38:PRO:HB2   | 1:G:41:GLN:HB2   | 1.89                     | 0.54              |
| 1:I:325:MET:HE3  | 1:K:244:ASP:O    | 2.06                     | 0.54              |
| 1:K:106:THR:HG22 | 1:K:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:K:121:GLN:HA   | 1:K:362:TYR:OH   | 2.07                     | 0.54              |
| 1:L:140:LEU:HD22 | 1:L:343:GLY:HA2  | 1.90                     | 0.54              |
| 1:L:236:LEU:HD12 | 1:L:237:GLU:CG   | 2.37                     | 0.54              |
| 1:M:299:MET:HE1  | 1:M:304:THR:HB   | 1.90                     | 0.54              |
| 1:O:8:LEU:HB2    | 1:O:103:THR:OG1  | 2.08                     | 0.54              |
| 1:O:54:VAL:O     | 1:O:55:GLY:C     | 2.45                     | 0.54              |
| 1:P:32:PRO:HG3   | 1:P:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:P:140:LEU:HD22 | 1:P:343:GLY:HA2  | 1.90                     | 0.54              |
| 1:P:143:TYR:HD2  | 1:P:346:LEU:HD13 | 1.70                     | 0.54              |
| 1:Q:7:ALA:CB     | 1:Q:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:Q:32:PRO:HG3   | 1:Q:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:R:8:LEU:HB2    | 1:R:103:THR:OG1  | 2.08                     | 0.54              |
| 1:R:38:PRO:HB2   | 1:R:41:GLN:HB2   | 1.90                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:R:143:TYR:HD2  | 1:R:346:LEU:HD13 | 1.70                     | 0.54              |
| 1:R:223:PHE:CZ   | 1:R:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:S:147:ARG:NH2  | 1:S:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:T:34:ILE:HG21  | 1:T:67:LEU:HB3   | 1.90                     | 0.54              |
| 1:T:143:TYR:HD1  | 1:T:143:TYR:C    | 2.09                     | 0.54              |
| 1:T:300:SER:HA   | 1:T:335:ARG:HG2  | 1.89                     | 0.54              |
| 1:V:7:ALA:CB     | 1:V:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:A:8:LEU:HB2    | 1:A:103:THR:OG1  | 2.08                     | 0.54              |
| 1:A:106:THR:HG22 | 1:A:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:D:300:SER:HA   | 1:D:335:ARG:HG2  | 1.89                     | 0.54              |
| 1:E:325:MET:HE3  | 1:G:244:ASP:O    | 2.07                     | 0.54              |
| 1:F:223:PHE:CZ   | 1:F:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:G:143:TYR:HD2  | 1:G:346:LEU:HD13 | 1.70                     | 0.54              |
| 1:J:147:ARG:NH2  | 1:J:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:K:223:PHE:CZ   | 1:K:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:M:147:ARG:NH2  | 1:M:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:N:34:ILE:HG21  | 1:N:67:LEU:HB3   | 1.89                     | 0.54              |
| 1:P:236:LEU:HD12 | 1:P:237:GLU:HG2  | 1.89                     | 0.54              |
| 1:R:7:ALA:CB     | 1:R:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:S:143:TYR:CZ   | 1:S:345:ILE:HG22 | 2.42                     | 0.54              |
| 1:T:56:ASP:C     | 1:T:56:ASP:OD1   | 2.47                     | 0.54              |
| 1:U:325:MET:HE3  | 1:W:244:ASP:O    | 2.07                     | 0.54              |
| 1:V:38:PRO:HB2   | 1:V:41:GLN:HB2   | 1.90                     | 0.54              |
| 1:A:34:ILE:HG21  | 1:A:67:LEU:HB3   | 1.89                     | 0.54              |
| 1:B:106:THR:HG22 | 1:B:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:C:38:PRO:HB2   | 1:C:41:GLN:HB2   | 1.89                     | 0.54              |
| 1:C:106:THR:HG22 | 1:C:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:D:208:ILE:HG22 | 1:D:209:VAL:N    | 2.23                     | 0.54              |
| 1:E:54:VAL:O     | 1:E:55:GLY:C     | 2.45                     | 0.54              |
| 1:E:56:ASP:C     | 1:E:56:ASP:OD1   | 2.47                     | 0.54              |
| 1:E:236:LEU:HD12 | 1:E:237:GLU:HG2  | 1.90                     | 0.54              |
| 1:G:223:PHE:CZ   | 1:G:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:I:360:GLN:O    | 1:I:364:GLU:HG3  | 2.08                     | 0.54              |
| 1:J:106:THR:HG22 | 1:J:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:K:8:LEU:HB2    | 1:K:103:THR:OG1  | 2.08                     | 0.54              |
| 1:L:106:THR:HG22 | 1:L:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:S:223:PHE:O    | 1:S:227:MET:HG2  | 2.08                     | 0.54              |
| 1:T:7:ALA:CB     | 1:T:356:TRP:CZ2  | 2.91                     | 0.54              |
| 1:T:32:PRO:CG    | 1:T:55:GLY:O     | 2.55                     | 0.54              |
| 1:T:32:PRO:HG3   | 1:T:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:T:143:TYR:HD2  | 1:T:346:LEU:HD13 | 1.70                     | 0.54              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:V:7:ALA:CB     | 1:V:347:ALA:HB1  | 2.37                     | 0.54              |
| 1:V:362:TYR:HE1  | 1:V:367:PRO:CB   | 2.19                     | 0.54              |
| 1:A:223:PHE:CZ   | 1:A:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:B:32:PRO:HG3   | 1:B:59:GLN:NE2   | 2.22                     | 0.54              |
| 1:B:56:ASP:OD1   | 1:B:56:ASP:C     | 2.47                     | 0.54              |
| 1:B:208:ILE:HG22 | 1:B:209:VAL:N    | 2.23                     | 0.54              |
| 1:C:140:LEU:HD22 | 1:C:343:GLY:HA2  | 1.90                     | 0.54              |
| 1:C:236:LEU:HD12 | 1:C:237:GLU:CG   | 2.37                     | 0.54              |
| 1:C:325:MET:HE3  | 1:E:244:ASP:O    | 2.07                     | 0.54              |
| 1:D:106:THR:HG22 | 1:D:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:E:147:ARG:NH2  | 1:E:147:ARG:HG3  | 2.22                     | 0.54              |
| 1:F:106:THR:HG22 | 1:F:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:F:110:LEU:HD12 | 1:F:177:ARG:HH11 | 1.72                     | 0.54              |
| 1:F:300:SER:HA   | 1:F:335:ARG:HG2  | 1.89                     | 0.54              |
| 1:H:106:THR:HG22 | 1:H:140:LEU:CD1  | 2.38                     | 0.54              |
| 1:I:56:ASP:C     | 1:I:56:ASP:OD1   | 2.47                     | 0.54              |
| 1:J:140:LEU:HD22 | 1:J:343:GLY:HA2  | 1.90                     | 0.54              |
| 1:J:223:PHE:CZ   | 1:J:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:M:368:SER:O    | 1:M:371:HIS:N    | 2.37                     | 0.54              |
| 1:P:37:ARG:CG    | 1:P:38:PRO:CD    | 2.83                     | 0.54              |
| 1:T:223:PHE:CZ   | 1:T:266:PHE:HZ   | 2.26                     | 0.54              |
| 1:W:236:LEU:HD12 | 1:W:237:GLU:CG   | 2.37                     | 0.54              |
| 1:A:300:SER:HA   | 1:A:335:ARG:HG2  | 1.89                     | 0.53              |
| 1:B:8:LEU:HB2    | 1:B:103:THR:OG1  | 2.08                     | 0.53              |
| 1:C:32:PRO:CG    | 1:C:55:GLY:O     | 2.55                     | 0.53              |
| 1:D:223:PHE:O    | 1:D:227:MET:HG2  | 2.08                     | 0.53              |
| 1:G:106:THR:HG22 | 1:G:140:LEU:CD1  | 2.38                     | 0.53              |
| 1:H:135:ALA:HB1  | 1:H:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:H:147:ARG:CG   | 1:H:147:ARG:NH2  | 2.71                     | 0.53              |
| 1:I:223:PHE:O    | 1:I:227:MET:HG2  | 2.09                     | 0.53              |
| 1:L:362:TYR:HE1  | 1:L:367:PRO:CB   | 2.19                     | 0.53              |
| 1:M:34:ILE:CG2   | 1:M:68:LYS:H     | 2.21                     | 0.53              |
| 1:M:56:ASP:C     | 1:M:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:M:223:PHE:O    | 1:M:227:MET:HG2  | 2.09                     | 0.53              |
| 1:N:223:PHE:O    | 1:N:227:MET:HG2  | 2.08                     | 0.53              |
| 1:P:7:ALA:CB     | 1:P:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:P:38:PRO:HB2   | 1:P:41:GLN:HB2   | 1.89                     | 0.53              |
| 1:P:208:ILE:HG22 | 1:P:209:VAL:N    | 2.23                     | 0.53              |
| 1:P:360:GLN:O    | 1:P:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:R:32:PRO:CG    | 1:R:55:GLY:O     | 2.55                     | 0.53              |
| 1:R:140:LEU:HD22 | 1:R:343:GLY:HA2  | 1.90                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:56:ASP:C     | 1:S:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:T:34:ILE:HB    | 1:T:54:VAL:HG13  | 1.80                     | 0.53              |
| 1:T:34:ILE:CG2   | 1:T:68:LYS:H     | 2.21                     | 0.53              |
| 1:U:223:PHE:CZ   | 1:U:266:PHE:HZ   | 2.26                     | 0.53              |
| 1:V:34:ILE:CG2   | 1:V:68:LYS:H     | 2.21                     | 0.53              |
| 1:V:110:LEU:HD12 | 1:V:177:ARG:HH11 | 1.72                     | 0.53              |
| 1:W:147:ARG:CG   | 1:W:147:ARG:NH2  | 2.71                     | 0.53              |
| 1:W:236:LEU:HD12 | 1:W:237:GLU:HG2  | 1.90                     | 0.53              |
| 1:A:135:ALA:HB1  | 1:A:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:D:56:ASP:C     | 1:D:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:E:143:TYR:HD1  | 1:E:143:TYR:C    | 2.09                     | 0.53              |
| 1:E:223:PHE:O    | 1:E:227:MET:HG2  | 2.08                     | 0.53              |
| 1:G:360:GLN:O    | 1:G:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:H:56:ASP:C     | 1:H:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:J:135:ALA:HB1  | 1:J:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:K:34:ILE:CG2   | 1:K:68:LYS:H     | 2.21                     | 0.53              |
| 1:L:223:PHE:O    | 1:L:227:MET:HG2  | 2.09                     | 0.53              |
| 1:L:236:LEU:HD12 | 1:L:237:GLU:HG2  | 1.89                     | 0.53              |
| 1:M:54:VAL:O     | 1:M:55:GLY:C     | 2.45                     | 0.53              |
| 1:M:106:THR:HG22 | 1:M:140:LEU:CD1  | 2.38                     | 0.53              |
| 1:N:106:THR:HG22 | 1:N:140:LEU:CD1  | 2.38                     | 0.53              |
| 1:N:135:ALA:HB1  | 1:N:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:N:173:HIS:CE1  | 1:O:267:ILE:C    | 2.82                     | 0.53              |
| 1:N:236:LEU:HD12 | 1:N:237:GLU:CG   | 2.37                     | 0.53              |
| 1:P:56:ASP:C     | 1:P:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:Q:8:LEU:HB2    | 1:Q:103:THR:OG1  | 2.08                     | 0.53              |
| 1:Q:56:ASP:C     | 1:Q:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:Q:173:HIS:CE1  | 1:R:267:ILE:C    | 2.82                     | 0.53              |
| 1:S:7:ALA:CB     | 1:S:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:S:110:LEU:HD12 | 1:S:177:ARG:HH11 | 1.72                     | 0.53              |
| 1:S:362:TYR:HE1  | 1:S:367:PRO:CB   | 2.19                     | 0.53              |
| 1:U:38:PRO:HB2   | 1:U:41:GLN:HB2   | 1.89                     | 0.53              |
| 1:W:38:PRO:HB2   | 1:W:41:GLN:HB2   | 1.90                     | 0.53              |
| 1:A:360:GLN:O    | 1:A:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:B:7:ALA:CB     | 1:B:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:B:116:ARG:HH12 | 1:B:375:PHE:HA   | 1.74                     | 0.53              |
| 1:B:173:HIS:CE1  | 1:C:267:ILE:C    | 2.82                     | 0.53              |
| 1:D:142:LEU:HD21 | 1:D:165:ILE:CD1  | 2.39                     | 0.53              |
| 1:D:143:TYR:CZ   | 1:D:345:ILE:HG22 | 2.42                     | 0.53              |
| 1:E:7:ALA:CB     | 1:E:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:E:336:LYS:HE2  | 2:E:401:ADP:C5'  | 2.38                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:7:ALA:CB     | 1:F:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:F:56:ASP:C     | 1:F:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:F:208:ILE:HG22 | 1:F:209:VAL:N    | 2.24                     | 0.53              |
| 1:G:223:PHE:O    | 1:G:227:MET:HG2  | 2.09                     | 0.53              |
| 1:H:223:PHE:CZ   | 1:H:266:PHE:HZ   | 2.26                     | 0.53              |
| 1:I:106:THR:HG22 | 1:I:140:LEU:CD1  | 2.38                     | 0.53              |
| 1:K:142:LEU:HD21 | 1:K:165:ILE:CD1  | 2.39                     | 0.53              |
| 1:L:7:ALA:CB     | 1:L:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:L:325:MET:HE3  | 1:N:244:ASP:O    | 2.07                     | 0.53              |
| 1:O:38:PRO:HB2   | 1:O:41:GLN:HB2   | 1.89                     | 0.53              |
| 1:R:106:THR:HG22 | 1:R:140:LEU:CD1  | 2.38                     | 0.53              |
| 1:R:360:GLN:O    | 1:R:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:S:38:PRO:HB2   | 1:S:41:GLN:HB2   | 1.89                     | 0.53              |
| 1:T:147:ARG:HG3  | 1:T:147:ARG:NH2  | 2.22                     | 0.53              |
| 1:T:223:PHE:O    | 1:T:227:MET:HG2  | 2.08                     | 0.53              |
| 1:U:135:ALA:HB1  | 1:U:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:U:140:LEU:HD22 | 1:U:343:GLY:HA2  | 1.90                     | 0.53              |
| 1:U:173:HIS:CE1  | 1:V:267:ILE:C    | 2.82                     | 0.53              |
| 1:V:54:VAL:O     | 1:V:55:GLY:C     | 2.45                     | 0.53              |
| 1:V:116:ARG:HH12 | 1:V:375:PHE:HA   | 1.74                     | 0.53              |
| 1:V:360:GLN:O    | 1:V:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:W:56:ASP:C     | 1:W:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:W:135:ALA:HB1  | 1:W:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:W:140:LEU:HD22 | 1:W:343:GLY:HA2  | 1.90                     | 0.53              |
| 1:A:32:PRO:CG    | 1:A:55:GLY:O     | 2.55                     | 0.53              |
| 1:A:56:ASP:C     | 1:A:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:A:236:LEU:HD12 | 1:A:237:GLU:HG2  | 1.89                     | 0.53              |
| 1:C:135:ALA:HB1  | 1:C:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:D:7:ALA:CB     | 1:D:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:D:135:ALA:HB1  | 1:D:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:D:147:ARG:CG   | 1:D:147:ARG:NH2  | 2.71                     | 0.53              |
| 1:D:360:GLN:O    | 1:D:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:E:140:LEU:HD22 | 1:E:343:GLY:HA2  | 1.90                     | 0.53              |
| 1:F:135:ALA:HB1  | 1:F:140:LEU:HD21 | 1.90                     | 0.53              |
| 1:F:223:PHE:O    | 1:F:227:MET:HG2  | 2.08                     | 0.53              |
| 1:G:8:LEU:HB2    | 1:G:103:THR:OG1  | 2.08                     | 0.53              |
| 1:H:110:LEU:HD12 | 1:H:177:ARG:HH11 | 1.72                     | 0.53              |
| 1:L:8:LEU:HB2    | 1:L:103:THR:OG1  | 2.08                     | 0.53              |
| 1:L:56:ASP:C     | 1:L:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:M:173:HIS:CE1  | 1:N:267:ILE:C    | 2.82                     | 0.53              |
| 1:N:140:LEU:HD22 | 1:N:343:GLY:HA2  | 1.90                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:56:ASP:C     | 1:O:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:P:135:ALA:HB1  | 1:P:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:P:173:HIS:CE1  | 1:Q:267:ILE:C    | 2.82                     | 0.53              |
| 1:Q:223:PHE:CZ   | 1:Q:266:PHE:HZ   | 2.26                     | 0.53              |
| 1:R:173:HIS:CE1  | 1:S:267:ILE:C    | 2.82                     | 0.53              |
| 1:S:116:ARG:HH12 | 1:S:375:PHE:HA   | 1.74                     | 0.53              |
| 1:S:147:ARG:CG   | 1:S:147:ARG:NH2  | 2.71                     | 0.53              |
| 1:U:223:PHE:O    | 1:U:227:MET:HG2  | 2.09                     | 0.53              |
| 1:V:106:THR:HG22 | 1:V:140:LEU:CD1  | 2.38                     | 0.53              |
| 1:V:223:PHE:O    | 1:V:227:MET:HG2  | 2.08                     | 0.53              |
| 1:W:7:ALA:CB     | 1:W:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:A:34:ILE:CG2   | 1:A:67:LEU:HD22  | 2.28                     | 0.53              |
| 1:A:362:TYR:HE1  | 1:A:367:PRO:CB   | 2.19                     | 0.53              |
| 1:B:360:GLN:O    | 1:B:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:C:56:ASP:C     | 1:C:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:C:110:LEU:HD12 | 1:C:177:ARG:HH11 | 1.72                     | 0.53              |
| 1:C:173:HIS:CE1  | 1:D:267:ILE:C    | 2.82                     | 0.53              |
| 1:F:173:HIS:CE1  | 1:G:267:ILE:C    | 2.82                     | 0.53              |
| 1:F:360:GLN:O    | 1:F:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:G:173:HIS:CE1  | 1:H:267:ILE:C    | 2.82                     | 0.53              |
| 1:H:7:ALA:CB     | 1:H:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:I:32:PRO:CG    | 1:I:55:GLY:O     | 2.55                     | 0.53              |
| 1:I:34:ILE:CG2   | 1:I:68:LYS:H     | 2.21                     | 0.53              |
| 1:I:147:ARG:HG3  | 1:I:147:ARG:NH2  | 2.22                     | 0.53              |
| 1:I:173:HIS:CE1  | 1:J:267:ILE:C    | 2.82                     | 0.53              |
| 1:J:7:ALA:CB     | 1:J:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:K:360:GLN:O    | 1:K:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:L:143:TYR:HD1  | 1:L:143:TYR:C    | 2.09                     | 0.53              |
| 1:L:173:HIS:CE1  | 1:M:267:ILE:C    | 2.82                     | 0.53              |
| 1:N:8:LEU:HB2    | 1:N:103:THR:OG1  | 2.08                     | 0.53              |
| 1:O:208:ILE:HG22 | 1:O:209:VAL:N    | 2.23                     | 0.53              |
| 1:Q:223:PHE:O    | 1:Q:227:MET:HG2  | 2.08                     | 0.53              |
| 1:R:34:ILE:CG2   | 1:R:68:LYS:H     | 2.21                     | 0.53              |
| 1:R:300:SER:HA   | 1:R:335:ARG:HG2  | 1.89                     | 0.53              |
| 1:S:135:ALA:HB1  | 1:S:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:T:336:LYS:HE2  | 2:T:401:ADP:C5'  | 2.38                     | 0.53              |
| 1:V:173:HIS:CE1  | 1:W:267:ILE:C    | 2.82                     | 0.53              |
| 1:W:142:LEU:HD21 | 1:W:165:ILE:CD1  | 2.39                     | 0.53              |
| 1:A:38:PRO:HB2   | 1:A:41:GLN:HB2   | 1.89                     | 0.53              |
| 1:B:37:ARG:CG    | 1:B:38:PRO:CD    | 2.83                     | 0.53              |
| 1:C:147:ARG:CG   | 1:C:147:ARG:NH2  | 2.71                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:208:ILE:HG22 | 1:C:209:VAL:N    | 2.23                     | 0.53              |
| 1:C:360:GLN:O    | 1:C:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:D:116:ARG:HH12 | 1:D:375:PHE:HA   | 1.74                     | 0.53              |
| 1:E:173:HIS:CE1  | 1:F:267:ILE:C    | 2.82                     | 0.53              |
| 1:F:336:LYS:HE2  | 2:F:401:ADP:C5'  | 2.38                     | 0.53              |
| 1:H:8:LEU:HB2    | 1:H:103:THR:OG1  | 2.08                     | 0.53              |
| 1:I:116:ARG:HH12 | 1:I:375:PHE:HA   | 1.74                     | 0.53              |
| 1:J:8:LEU:HB2    | 1:J:103:THR:OG1  | 2.08                     | 0.53              |
| 1:J:110:LEU:HD12 | 1:J:177:ARG:HH11 | 1.72                     | 0.53              |
| 1:K:208:ILE:HG22 | 1:K:209:VAL:N    | 2.23                     | 0.53              |
| 1:M:208:ILE:HG22 | 1:M:209:VAL:N    | 2.23                     | 0.53              |
| 1:N:7:ALA:CB     | 1:N:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:O:147:ARG:HG3  | 1:O:147:ARG:NH2  | 2.22                     | 0.53              |
| 1:P:223:PHE:O    | 1:P:227:MET:HG2  | 2.08                     | 0.53              |
| 1:Q:116:ARG:HH12 | 1:Q:375:PHE:HA   | 1.74                     | 0.53              |
| 1:Q:135:ALA:HB1  | 1:Q:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:Q:208:ILE:HG22 | 1:Q:209:VAL:N    | 2.24                     | 0.53              |
| 1:R:223:PHE:O    | 1:R:227:MET:HG2  | 2.08                     | 0.53              |
| 1:S:173:HIS:CE1  | 1:T:267:ILE:C    | 2.82                     | 0.53              |
| 1:U:56:ASP:C     | 1:U:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:U:116:ARG:HH12 | 1:U:375:PHE:HA   | 1.74                     | 0.53              |
| 1:A:7:ALA:CB     | 1:A:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:B:38:PRO:HB2   | 1:B:41:GLN:HB2   | 1.90                     | 0.53              |
| 1:B:135:ALA:HB1  | 1:B:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:B:223:PHE:O    | 1:B:227:MET:HG2  | 2.08                     | 0.53              |
| 1:G:56:ASP:C     | 1:G:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:G:140:LEU:HD22 | 1:G:343:GLY:HA2  | 1.90                     | 0.53              |
| 1:H:173:HIS:CE1  | 1:I:267:ILE:C    | 2.82                     | 0.53              |
| 1:H:325:MET:HE3  | 1:J:244:ASP:O    | 2.07                     | 0.53              |
| 1:H:360:GLN:O    | 1:H:364:GLU:HG3  | 2.08                     | 0.53              |
| 1:J:56:ASP:OD1   | 1:J:56:ASP:C     | 2.47                     | 0.53              |
| 1:L:135:ALA:HB1  | 1:L:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:N:147:ARG:NH2  | 1:N:147:ARG:HG3  | 2.22                     | 0.53              |
| 1:O:135:ALA:HB1  | 1:O:140:LEU:HD21 | 1.91                     | 0.53              |
| 1:O:143:TYR:CE2  | 1:Q:45:VAL:HG21  | 2.44                     | 0.53              |
| 1:O:362:TYR:HE1  | 1:O:367:PRO:CB   | 2.19                     | 0.53              |
| 1:R:56:ASP:OD1   | 1:R:56:ASP:C     | 2.47                     | 0.53              |
| 1:S:208:ILE:HG22 | 1:S:209:VAL:N    | 2.23                     | 0.53              |
| 1:S:223:PHE:CZ   | 1:S:266:PHE:HZ   | 2.26                     | 0.53              |
| 1:T:116:ARG:HH12 | 1:T:375:PHE:HA   | 1.74                     | 0.53              |
| 1:T:173:HIS:CE1  | 1:U:267:ILE:C    | 2.82                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:7:ALA:CB     | 1:U:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:V:336:LYS:HE2  | 2:V:401:ADP:C5'  | 2.38                     | 0.53              |
| 1:A:223:PHE:O    | 1:A:227:MET:HG2  | 2.08                     | 0.53              |
| 1:B:34:ILE:CG2   | 1:B:68:LYS:H     | 2.21                     | 0.53              |
| 1:C:116:ARG:HH12 | 1:C:375:PHE:HA   | 1.74                     | 0.53              |
| 1:C:147:ARG:NH2  | 1:C:147:ARG:HG3  | 2.22                     | 0.53              |
| 1:D:8:LEU:HB2    | 1:D:103:THR:OG1  | 2.08                     | 0.53              |
| 1:D:173:HIS:CE1  | 1:E:267:ILE:C    | 2.82                     | 0.53              |
| 1:D:299:MET:HE1  | 1:D:304:THR:HB   | 1.91                     | 0.53              |
| 1:E:32:PRO:CG    | 1:E:55:GLY:O     | 2.55                     | 0.53              |
| 1:E:116:ARG:HH12 | 1:E:375:PHE:HA   | 1.74                     | 0.53              |
| 1:F:8:LEU:HB2    | 1:F:103:THR:OG1  | 2.08                     | 0.53              |
| 1:F:140:LEU:HD22 | 1:F:343:GLY:HA2  | 1.90                     | 0.53              |
| 1:G:32:PRO:CG    | 1:G:55:GLY:O     | 2.55                     | 0.53              |
| 1:G:37:ARG:CG    | 1:G:38:PRO:CD    | 2.83                     | 0.53              |
| 1:G:116:ARG:HH12 | 1:G:375:PHE:HA   | 1.74                     | 0.53              |
| 1:H:34:ILE:CG2   | 1:H:68:LYS:H     | 2.21                     | 0.53              |
| 1:H:140:LEU:HD22 | 1:H:343:GLY:HA2  | 1.90                     | 0.53              |
| 1:H:208:ILE:HG22 | 1:H:209:VAL:N    | 2.24                     | 0.53              |
| 1:I:143:TYR:HD2  | 1:I:346:LEU:HD13 | 1.70                     | 0.53              |
| 1:J:223:PHE:O    | 1:J:227:MET:HG2  | 2.09                     | 0.53              |
| 1:K:223:PHE:O    | 1:K:227:MET:HG2  | 2.08                     | 0.53              |
| 1:N:56:ASP:C     | 1:N:56:ASP:OD1   | 2.47                     | 0.53              |
| 1:N:208:ILE:HG22 | 1:N:209:VAL:N    | 2.23                     | 0.53              |
| 1:O:34:ILE:CG2   | 1:O:68:LYS:H     | 2.21                     | 0.53              |
| 1:O:110:LEU:HD12 | 1:O:177:ARG:HH11 | 1.72                     | 0.53              |
| 1:Q:143:TYR:CE2  | 1:S:45:VAL:HG21  | 2.44                     | 0.53              |
| 1:Q:336:LYS:HE2  | 2:Q:401:ADP:C5'  | 2.38                     | 0.53              |
| 1:S:336:LYS:HE2  | 2:S:401:ADP:C5'  | 2.38                     | 0.53              |
| 1:T:140:LEU:HD22 | 1:T:343:GLY:HA2  | 1.90                     | 0.53              |
| 1:U:142:LEU:HD21 | 1:U:165:ILE:CD1  | 2.38                     | 0.53              |
| 1:V:32:PRO:CG    | 1:V:55:GLY:O     | 2.55                     | 0.53              |
| 1:V:147:ARG:NH2  | 1:V:147:ARG:HG3  | 2.22                     | 0.53              |
| 1:B:142:LEU:HD21 | 1:B:165:ILE:CD1  | 2.38                     | 0.53              |
| 1:C:7:ALA:CB     | 1:C:356:TRP:CZ2  | 2.91                     | 0.53              |
| 1:D:38:PRO:HB2   | 1:D:41:GLN:HB2   | 1.89                     | 0.53              |
| 1:E:34:ILE:CG2   | 1:E:67:LEU:HD22  | 2.28                     | 0.53              |
| 1:G:147:ARG:HG3  | 1:G:147:ARG:NH2  | 2.22                     | 0.53              |
| 1:H:143:TYR:CE2  | 1:J:45:VAL:HG21  | 2.44                     | 0.53              |
| 1:I:142:LEU:HD21 | 1:I:165:ILE:CD1  | 2.38                     | 0.53              |
| 1:I:223:PHE:CZ   | 1:I:266:PHE:HZ   | 2.26                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:I:368:SER:O    | 1:I:371:HIS:N   | 2.37                     | 0.53              |
| 1:J:173:HIS:CE1  | 1:K:267:ILE:C   | 2.82                     | 0.53              |
| 1:K:173:HIS:CE1  | 1:L:267:ILE:C   | 2.82                     | 0.53              |
| 1:M:143:TYR:CE2  | 1:O:45:VAL:HG21 | 2.44                     | 0.53              |
| 1:O:116:ARG:HH12 | 1:O:375:PHE:HA  | 1.74                     | 0.53              |
| 1:O:223:PHE:O    | 1:O:227:MET:HG2 | 2.08                     | 0.53              |
| 1:O:360:GLN:O    | 1:O:364:GLU:HG3 | 2.08                     | 0.53              |
| 1:Q:38:PRO:HB2   | 1:Q:41:GLN:HB2  | 1.89                     | 0.53              |
| 1:R:142:LEU:HD21 | 1:R:165:ILE:CD1 | 2.39                     | 0.53              |
| 1:W:116:ARG:HH12 | 1:W:375:PHE:HA  | 1.74                     | 0.53              |
| 1:A:173:HIS:CE1  | 1:B:267:ILE:C   | 2.82                     | 0.53              |
| 1:B:143:TYR:CE2  | 1:D:45:VAL:HG21 | 2.44                     | 0.53              |
| 1:C:223:PHE:O    | 1:C:227:MET:HG2 | 2.08                     | 0.53              |
| 1:F:34:ILE:CG2   | 1:F:68:LYS:H    | 2.21                     | 0.53              |
| 1:I:208:ILE:HG22 | 1:I:209:VAL:N   | 2.24                     | 0.53              |
| 1:J:143:TYR:CE2  | 1:L:45:VAL:HG21 | 2.44                     | 0.53              |
| 1:J:360:GLN:O    | 1:J:364:GLU:HG3 | 2.08                     | 0.53              |
| 1:K:362:TYR:HE1  | 1:K:367:PRO:CB  | 2.19                     | 0.53              |
| 1:N:32:PRO:CG    | 1:N:55:GLY:O    | 2.55                     | 0.53              |
| 1:N:360:GLN:O    | 1:N:364:GLU:HG3 | 2.08                     | 0.53              |
| 1:P:106:THR:HG22 | 1:P:140:LEU:CD1 | 2.38                     | 0.53              |
| 1:U:8:LEU:HB2    | 1:U:103:THR:OG1 | 2.08                     | 0.53              |
| 1:U:54:VAL:CG1   | 1:U:55:GLY:N    | 2.71                     | 0.53              |
| 1:A:116:ARG:HH12 | 1:A:375:PHE:HA  | 1.74                     | 0.52              |
| 1:D:34:ILE:CG2   | 1:D:68:LYS:H    | 2.21                     | 0.52              |
| 1:D:169:TYR:CZ   | 1:D:172:PRO:HD3 | 2.45                     | 0.52              |
| 1:F:38:PRO:HB2   | 1:F:41:GLN:HB2  | 1.89                     | 0.52              |
| 1:G:34:ILE:CG2   | 1:G:68:LYS:H    | 2.21                     | 0.52              |
| 1:G:143:TYR:CE2  | 1:I:45:VAL:HG21 | 2.44                     | 0.52              |
| 1:G:336:LYS:HE2  | 2:G:401:ADP:C5' | 2.38                     | 0.52              |
| 1:M:169:TYR:CZ   | 1:M:172:PRO:HD3 | 2.45                     | 0.52              |
| 1:N:37:ARG:CG    | 1:N:38:PRO:CD   | 2.83                     | 0.52              |
| 1:N:147:ARG:CG   | 1:N:147:ARG:NH2 | 2.71                     | 0.52              |
| 1:O:140:LEU:HD22 | 1:O:343:GLY:HA2 | 1.90                     | 0.52              |
| 1:O:336:LYS:HE2  | 2:O:401:ADP:C5' | 2.38                     | 0.52              |
| 1:P:32:PRO:CG    | 1:P:55:GLY:O    | 2.55                     | 0.52              |
| 1:U:336:LYS:HE2  | 2:U:401:ADP:C5' | 2.38                     | 0.52              |
| 1:V:169:TYR:CZ   | 1:V:172:PRO:HD3 | 2.45                     | 0.52              |
| 1:V:362:TYR:HD1  | 1:V:367:PRO:HA  | 1.74                     | 0.52              |
| 1:W:8:LEU:HB2    | 1:W:103:THR:OG1 | 2.08                     | 0.52              |
| 1:W:34:ILE:CG2   | 1:W:68:LYS:H    | 2.21                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:34:ILE:CG2   | 1:E:68:LYS:H     | 2.21                     | 0.52              |
| 1:E:135:ALA:HB1  | 1:E:140:LEU:HD21 | 1.91                     | 0.52              |
| 1:F:299:MET:HE1  | 1:F:304:THR:HB   | 1.91                     | 0.52              |
| 1:G:169:TYR:CZ   | 1:G:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:H:362:TYR:HD1  | 1:H:367:PRO:HA   | 1.75                     | 0.52              |
| 1:H:368:SER:O    | 1:H:371:HIS:N    | 2.37                     | 0.52              |
| 1:J:34:ILE:CG2   | 1:J:68:LYS:H     | 2.21                     | 0.52              |
| 1:J:37:ARG:CG    | 1:J:38:PRO:CD    | 2.83                     | 0.52              |
| 1:K:32:PRO:CG    | 1:K:55:GLY:O     | 2.55                     | 0.52              |
| 1:K:37:ARG:CG    | 1:K:38:PRO:CD    | 2.83                     | 0.52              |
| 1:K:56:ASP:C     | 1:K:56:ASP:OD1   | 2.47                     | 0.52              |
| 1:K:116:ARG:HH12 | 1:K:375:PHE:HA   | 1.74                     | 0.52              |
| 1:K:169:TYR:CZ   | 1:K:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:L:32:PRO:CG    | 1:L:55:GLY:O     | 2.55                     | 0.52              |
| 1:N:38:PRO:HB2   | 1:N:41:GLN:HB2   | 1.90                     | 0.52              |
| 1:P:142:LEU:HD21 | 1:P:165:ILE:CD1  | 2.39                     | 0.52              |
| 1:R:116:ARG:HH12 | 1:R:375:PHE:HA   | 1.74                     | 0.52              |
| 1:R:208:ILE:HG22 | 1:R:209:VAL:N    | 2.23                     | 0.52              |
| 1:S:169:TYR:CZ   | 1:S:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:T:135:ALA:HB1  | 1:T:140:LEU:HD21 | 1.91                     | 0.52              |
| 1:C:362:TYR:HE1  | 1:C:367:PRO:CB   | 2.19                     | 0.52              |
| 1:E:360:GLN:O    | 1:E:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:E:368:SER:O    | 1:E:371:HIS:N    | 2.37                     | 0.52              |
| 1:F:143:TYR:CE2  | 1:H:45:VAL:HG21  | 2.44                     | 0.52              |
| 1:G:135:ALA:HB1  | 1:G:140:LEU:HD21 | 1.90                     | 0.52              |
| 1:H:362:TYR:HE1  | 1:H:367:PRO:CB   | 2.19                     | 0.52              |
| 1:J:361:GLU:HB3  | 1:J:369:ILE:CD1  | 2.14                     | 0.52              |
| 1:M:135:ALA:HB1  | 1:M:140:LEU:HD21 | 1.91                     | 0.52              |
| 1:O:173:HIS:CE1  | 1:P:267:ILE:C    | 2.82                     | 0.52              |
| 1:P:34:ILE:CG2   | 1:P:68:LYS:H     | 2.21                     | 0.52              |
| 1:P:362:TYR:HD1  | 1:P:367:PRO:HA   | 1.75                     | 0.52              |
| 1:Q:110:LEU:HD12 | 1:Q:177:ARG:HH11 | 1.72                     | 0.52              |
| 1:R:135:ALA:HB1  | 1:R:140:LEU:HD21 | 1.91                     | 0.52              |
| 1:S:8:LEU:HB2    | 1:S:103:THR:OG1  | 2.08                     | 0.52              |
| 1:V:37:ARG:CG    | 1:V:38:PRO:CD    | 2.83                     | 0.52              |
| 1:V:56:ASP:C     | 1:V:56:ASP:OD1   | 2.47                     | 0.52              |
| 1:V:140:LEU:HD22 | 1:V:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:V:143:TYR:HD1  | 1:V:143:TYR:C    | 2.09                     | 0.52              |
| 1:W:368:SER:O    | 1:W:371:HIS:N    | 2.37                     | 0.52              |
| 1:A:34:ILE:CG2   | 1:A:68:LYS:H     | 2.21                     | 0.52              |
| 1:A:208:ILE:HG22 | 1:A:209:VAL:N    | 2.24                     | 0.52              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:368:SER:O    | 1:A:371:HIS:N    | 2.37                     | 0.52              |
| 1:B:140:LEU:HD22 | 1:B:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:B:169:TYR:CZ   | 1:B:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:E:37:ARG:CG    | 1:E:38:PRO:CD    | 2.83                     | 0.52              |
| 1:E:54:VAL:CG1   | 1:E:55:GLY:N     | 2.71                     | 0.52              |
| 1:E:169:TYR:CZ   | 1:E:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:F:116:ARG:HH12 | 1:F:375:PHE:HA   | 1.74                     | 0.52              |
| 1:F:169:TYR:CZ   | 1:F:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:F:362:TYR:HD1  | 1:F:367:PRO:HA   | 1.75                     | 0.52              |
| 1:G:208:ILE:HG22 | 1:G:209:VAL:N    | 2.23                     | 0.52              |
| 1:H:38:PRO:HB2   | 1:H:41:GLN:HB2   | 1.90                     | 0.52              |
| 1:I:135:ALA:HB1  | 1:I:140:LEU:HD21 | 1.91                     | 0.52              |
| 1:K:140:LEU:HD22 | 1:K:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:K:147:ARG:NH2  | 1:K:147:ARG:HG3  | 2.22                     | 0.52              |
| 1:L:169:TYR:CZ   | 1:L:172:PRO:HD3  | 2.44                     | 0.52              |
| 1:M:140:LEU:HD22 | 1:M:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:M:336:LYS:HE2  | 2:M:401:ADP:C5'  | 2.38                     | 0.52              |
| 1:M:360:GLN:O    | 1:M:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:O:169:TYR:CZ   | 1:O:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:O:299:MET:HE1  | 1:O:304:THR:HB   | 1.91                     | 0.52              |
| 1:P:143:TYR:CE2  | 1:R:45:VAL:HG21  | 2.44                     | 0.52              |
| 1:Q:140:LEU:HD22 | 1:Q:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:Q:360:GLN:O    | 1:Q:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:R:147:ARG:NH2  | 1:R:147:ARG:HG3  | 2.22                     | 0.52              |
| 1:S:140:LEU:HD22 | 1:S:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:S:143:TYR:CE2  | 1:U:45:VAL:HG21  | 2.44                     | 0.52              |
| 1:T:169:TYR:CZ   | 1:T:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:U:34:ILE:CG2   | 1:U:68:LYS:H     | 2.21                     | 0.52              |
| 1:W:164:PRO:HG3  | 1:W:174:ALA:HB1  | 1.92                     | 0.52              |
| 1:W:208:ILE:HG22 | 1:W:209:VAL:N    | 2.23                     | 0.52              |
| 1:W:223:PHE:O    | 1:W:227:MET:HG2  | 2.09                     | 0.52              |
| 1:A:362:TYR:HD1  | 1:A:367:PRO:HA   | 1.75                     | 0.52              |
| 1:C:34:ILE:CG2   | 1:C:68:LYS:H     | 2.21                     | 0.52              |
| 1:C:236:LEU:HD12 | 1:C:237:GLU:HG2  | 1.89                     | 0.52              |
| 1:C:362:TYR:HD1  | 1:C:367:PRO:HA   | 1.75                     | 0.52              |
| 1:E:362:TYR:HD1  | 1:E:367:PRO:HA   | 1.75                     | 0.52              |
| 1:H:116:ARG:HH12 | 1:H:375:PHE:HA   | 1.74                     | 0.52              |
| 1:I:140:LEU:HD22 | 1:I:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:I:143:TYR:CE2  | 1:K:45:VAL:HG21  | 2.44                     | 0.52              |
| 1:J:362:TYR:HD1  | 1:J:367:PRO:HA   | 1.75                     | 0.52              |
| 1:L:38:PRO:HB2   | 1:L:41:GLN:HB2   | 1.90                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:362:TYR:HD1  | 1:O:367:PRO:HA   | 1.75                     | 0.52              |
| 1:Q:34:ILE:CG2   | 1:Q:68:LYS:H     | 2.21                     | 0.52              |
| 1:R:362:TYR:HE1  | 1:R:367:PRO:CB   | 2.19                     | 0.52              |
| 1:T:360:GLN:O    | 1:T:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:U:37:ARG:CG    | 1:U:38:PRO:CD    | 2.83                     | 0.52              |
| 1:U:164:PRO:HG3  | 1:U:174:ALA:HB1  | 1.92                     | 0.52              |
| 1:U:169:TYR:CZ   | 1:U:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:U:208:ILE:HG22 | 1:U:209:VAL:N    | 2.24                     | 0.52              |
| 1:V:135:ALA:HB1  | 1:V:140:LEU:HD21 | 1.91                     | 0.52              |
| 1:W:300:SER:HA   | 1:W:335:ARG:HG2  | 1.89                     | 0.52              |
| 1:A:143:TYR:CE2  | 1:C:45:VAL:HG21  | 2.44                     | 0.52              |
| 1:D:336:LYS:HE2  | 2:D:401:ADP:C5'  | 2.38                     | 0.52              |
| 1:E:208:ILE:HG22 | 1:E:209:VAL:N    | 2.23                     | 0.52              |
| 1:J:38:PRO:HB2   | 1:J:41:GLN:HB2   | 1.89                     | 0.52              |
| 1:J:169:TYR:CZ   | 1:J:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:M:34:ILE:CG2   | 1:M:67:LEU:HD22  | 2.28                     | 0.52              |
| 1:P:300:SER:HA   | 1:P:335:ARG:HG2  | 1.89                     | 0.52              |
| 1:Q:362:TYR:HD1  | 1:Q:367:PRO:HA   | 1.75                     | 0.52              |
| 1:S:142:LEU:HD21 | 1:S:165:ILE:CD1  | 2.38                     | 0.52              |
| 1:T:143:TYR:CE2  | 1:V:45:VAL:HG21  | 2.44                     | 0.52              |
| 1:U:360:GLN:O    | 1:U:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:W:360:GLN:O    | 1:W:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:A:164:PRO:HG3  | 1:A:174:ALA:HB1  | 1.92                     | 0.52              |
| 1:D:140:LEU:HD22 | 1:D:343:GLY:HA2  | 1.90                     | 0.52              |
| 1:G:143:TYR:HD1  | 1:G:143:TYR:C    | 2.09                     | 0.52              |
| 1:H:223:PHE:O    | 1:H:227:MET:HG2  | 2.08                     | 0.52              |
| 1:I:169:TYR:CZ   | 1:I:172:PRO:HD3  | 2.45                     | 0.52              |
| 1:J:208:ILE:HG22 | 1:J:209:VAL:N    | 2.23                     | 0.52              |
| 1:K:135:ALA:HB1  | 1:K:140:LEU:HD21 | 1.91                     | 0.52              |
| 1:K:164:PRO:HG2  | 1:K:174:ALA:HB3  | 1.92                     | 0.52              |
| 1:L:360:GLN:O    | 1:L:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:N:142:LEU:HD21 | 1:N:165:ILE:CD1  | 2.39                     | 0.52              |
| 1:N:236:LEU:HD12 | 1:N:237:GLU:HG2  | 1.90                     | 0.52              |
| 1:O:361:GLU:HB3  | 1:O:369:ILE:CD1  | 2.14                     | 0.52              |
| 1:S:360:GLN:O    | 1:S:364:GLU:HG3  | 2.08                     | 0.52              |
| 1:T:362:TYR:HD1  | 1:T:367:PRO:HA   | 1.75                     | 0.52              |
| 1:U:143:TYR:CE2  | 1:W:45:VAL:HG21  | 2.44                     | 0.52              |
| 1:V:34:ILE:CG2   | 1:V:67:LEU:HD22  | 2.27                     | 0.52              |
| 1:V:164:PRO:HG2  | 1:V:174:ALA:HB3  | 1.92                     | 0.52              |
| 1:V:208:ILE:HG22 | 1:V:209:VAL:N    | 2.23                     | 0.52              |
| 1:A:361:GLU:HB3  | 1:A:369:ILE:CD1  | 2.14                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:D:143:TYR:CE2  | 1:F:45:VAL:HG21 | 2.44                     | 0.52              |
| 1:K:336:LYS:HE2  | 2:K:401:ADP:C5' | 2.38                     | 0.52              |
| 1:L:147:ARG:CG   | 1:L:147:ARG:NH2 | 2.71                     | 0.52              |
| 1:L:208:ILE:HG22 | 1:L:209:VAL:N   | 2.23                     | 0.52              |
| 1:M:116:ARG:HH12 | 1:M:375:PHE:HA  | 1.74                     | 0.52              |
| 1:M:362:TYR:HD1  | 1:M:367:PRO:HA  | 1.75                     | 0.52              |
| 1:N:143:TYR:CE2  | 1:P:45:VAL:HG21 | 2.44                     | 0.52              |
| 1:N:169:TYR:CZ   | 1:N:172:PRO:HD3 | 2.45                     | 0.52              |
| 1:P:368:SER:O    | 1:P:371:HIS:N   | 2.37                     | 0.52              |
| 1:Q:169:TYR:CZ   | 1:Q:172:PRO:HD3 | 2.45                     | 0.52              |
| 1:U:300:SER:HA   | 1:U:335:ARG:HG2 | 1.89                     | 0.52              |
| 1:E:143:TYR:CE2  | 1:G:45:VAL:HG21 | 2.44                     | 0.52              |
| 1:G:142:LEU:HD21 | 1:G:165:ILE:CD1 | 2.39                     | 0.52              |
| 1:I:164:PRO:HG2  | 1:I:174:ALA:HB3 | 1.92                     | 0.52              |
| 1:I:362:TYR:HD1  | 1:I:367:PRO:HA  | 1.74                     | 0.52              |
| 1:K:143:TYR:CE2  | 1:M:45:VAL:HG21 | 2.44                     | 0.52              |
| 1:L:34:ILE:CG2   | 1:L:68:LYS:H    | 2.21                     | 0.52              |
| 1:L:143:TYR:CE2  | 1:N:45:VAL:HG21 | 2.44                     | 0.52              |
| 1:M:167:GLU:OE1  | 1:O:61:LYS:CE   | 2.58                     | 0.52              |
| 1:O:164:PRO:HG2  | 1:O:174:ALA:HB3 | 1.92                     | 0.52              |
| 1:O:167:GLU:OE1  | 1:Q:61:LYS:CE   | 2.58                     | 0.52              |
| 1:P:116:ARG:HH12 | 1:P:375:PHE:HA  | 1.74                     | 0.52              |
| 1:T:167:GLU:OE1  | 1:V:61:LYS:CE   | 2.58                     | 0.52              |
| 1:T:208:ILE:HG22 | 1:T:209:VAL:N   | 2.24                     | 0.52              |
| 1:B:336:LYS:HE2  | 2:B:401:ADP:C5' | 2.38                     | 0.52              |
| 1:D:362:TYR:HE1  | 1:D:367:PRO:CB  | 2.19                     | 0.52              |
| 1:E:36:GLY:HA3   | 1:E:66:THR:O    | 2.10                     | 0.52              |
| 1:I:167:GLU:OE1  | 1:K:61:LYS:CE   | 2.58                     | 0.52              |
| 1:J:116:ARG:HH12 | 1:J:375:PHE:HA  | 1.74                     | 0.52              |
| 1:J:230:ALA:HA   | 1:J:233:SER:HB2 | 1.92                     | 0.52              |
| 1:K:143:TYR:CD1  | 1:K:143:TYR:C   | 2.75                     | 0.52              |
| 1:P:36:GLY:HA3   | 1:P:66:THR:O    | 2.10                     | 0.52              |
| 1:Q:167:GLU:OE1  | 1:S:61:LYS:CE   | 2.58                     | 0.52              |
| 1:R:167:GLU:OE1  | 1:T:61:LYS:CE   | 2.58                     | 0.52              |
| 1:S:36:GLY:HA3   | 1:S:66:THR:O    | 2.10                     | 0.52              |
| 1:A:36:GLY:HA3   | 1:A:66:THR:O    | 2.10                     | 0.51              |
| 1:A:169:TYR:CZ   | 1:A:172:PRO:HD3 | 2.45                     | 0.51              |
| 1:B:36:GLY:HA3   | 1:B:66:THR:O    | 2.10                     | 0.51              |
| 1:C:143:TYR:CE2  | 1:E:45:VAL:HG21 | 2.44                     | 0.51              |
| 1:D:362:TYR:HD1  | 1:D:367:PRO:HA  | 1.75                     | 0.51              |
| 1:E:2:GLU:OE2    | 1:E:2:GLU:HA    | 2.10                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:F:164:PRO:HG3  | 1:F:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:G:362:TYR:HD1  | 1:G:367:PRO:HA  | 1.75                     | 0.51              |
| 1:J:147:ARG:CG   | 1:J:147:ARG:NH2 | 2.71                     | 0.51              |
| 1:K:167:GLU:OE1  | 1:M:61:LYS:CE   | 2.58                     | 0.51              |
| 1:L:167:GLU:OE1  | 1:N:61:LYS:CE   | 2.58                     | 0.51              |
| 1:L:230:ALA:HA   | 1:L:233:SER:HB2 | 1.92                     | 0.51              |
| 1:L:362:TYR:HD1  | 1:L:367:PRO:HA  | 1.75                     | 0.51              |
| 1:L:368:SER:O    | 1:L:371:HIS:N   | 2.37                     | 0.51              |
| 1:M:164:PRO:HG2  | 1:M:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:P:164:PRO:HG3  | 1:P:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:S:34:ILE:CG2   | 1:S:68:LYS:H    | 2.21                     | 0.51              |
| 1:S:164:PRO:HG3  | 1:S:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:B:22:ALA:HB1   | 1:B:348:SER:CB  | 2.41                     | 0.51              |
| 1:B:164:PRO:HG2  | 1:B:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:B:167:GLU:OE1  | 1:D:61:LYS:CE   | 2.58                     | 0.51              |
| 1:C:164:PRO:HG3  | 1:C:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:D:164:PRO:HG3  | 1:D:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:F:361:GLU:HB3  | 1:F:369:ILE:CD1 | 2.14                     | 0.51              |
| 1:I:58:ALA:CA    | 1:I:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:I:336:LYS:HE2  | 2:I:401:ADP:C5' | 2.38                     | 0.51              |
| 1:L:22:ALA:HB1   | 1:L:348:SER:CB  | 2.41                     | 0.51              |
| 1:L:116:ARG:HH12 | 1:L:375:PHE:HA  | 1.74                     | 0.51              |
| 1:N:34:ILE:CG2   | 1:N:68:LYS:H    | 2.21                     | 0.51              |
| 1:N:362:TYR:HE1  | 1:N:367:PRO:CB  | 2.19                     | 0.51              |
| 1:N:362:TYR:HD1  | 1:N:367:PRO:HA  | 1.75                     | 0.51              |
| 1:O:58:ALA:CA    | 1:O:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:Q:22:ALA:HB1   | 1:Q:348:SER:CB  | 2.41                     | 0.51              |
| 1:Q:36:GLY:HA3   | 1:Q:66:THR:O    | 2.10                     | 0.51              |
| 1:Q:58:ALA:CA    | 1:Q:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:S:300:SER:HA   | 1:S:335:ARG:HG2 | 1.89                     | 0.51              |
| 1:T:2:GLU:OE2    | 1:T:2:GLU:HA    | 2.10                     | 0.51              |
| 1:T:164:PRO:HG2  | 1:T:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:T:362:TYR:HE1  | 1:T:367:PRO:CB  | 2.19                     | 0.51              |
| 1:U:2:GLU:OE2    | 1:U:2:GLU:HA    | 2.10                     | 0.51              |
| 1:W:32:PRO:CG    | 1:W:55:GLY:O    | 2.55                     | 0.51              |
| 1:W:230:ALA:HA   | 1:W:233:SER:HB2 | 1.92                     | 0.51              |
| 1:A:2:GLU:OE2    | 1:A:2:GLU:HA    | 2.10                     | 0.51              |
| 1:A:332:PRO:HG2  | 1:A:335:ARG:NE  | 2.26                     | 0.51              |
| 1:B:58:ALA:CA    | 1:B:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:C:169:TYR:CZ   | 1:C:172:PRO:HD3 | 2.45                     | 0.51              |
| 1:C:332:PRO:HG2  | 1:C:335:ARG:NE  | 2.26                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:D:39:ARG:NE    | 1:D:66:THR:CA   | 2.69                     | 0.51              |
| 1:E:22:ALA:HB1   | 1:E:348:SER:CB  | 2.41                     | 0.51              |
| 1:E:164:PRO:HG2  | 1:E:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:F:2:GLU:OE2    | 1:F:2:GLU:HA    | 2.10                     | 0.51              |
| 1:G:39:ARG:HG2   | 1:G:66:THR:HB   | 1.93                     | 0.51              |
| 1:G:164:PRO:HG2  | 1:G:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:G:362:TYR:HE1  | 1:G:367:PRO:CB  | 2.19                     | 0.51              |
| 1:H:164:PRO:HG3  | 1:H:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:H:230:ALA:HA   | 1:H:233:SER:HB2 | 1.92                     | 0.51              |
| 1:I:2:GLU:OE2    | 1:I:2:GLU:HA    | 2.10                     | 0.51              |
| 1:I:34:ILE:CG2   | 1:I:35:VAL:N    | 2.74                     | 0.51              |
| 1:J:32:PRO:CG    | 1:J:55:GLY:O    | 2.55                     | 0.51              |
| 1:K:39:ARG:HG2   | 1:K:66:THR:HB   | 1.93                     | 0.51              |
| 1:K:58:ALA:CA    | 1:K:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:M:36:GLY:HA3   | 1:M:66:THR:O    | 2.10                     | 0.51              |
| 1:M:58:ALA:CA    | 1:M:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:N:36:GLY:HA3   | 1:N:66:THR:O    | 2.10                     | 0.51              |
| 1:N:164:PRO:HG3  | 1:N:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:P:167:GLU:OE1  | 1:R:61:LYS:CE   | 2.58                     | 0.51              |
| 1:P:169:TYR:CZ   | 1:P:172:PRO:HD3 | 2.44                     | 0.51              |
| 1:R:143:TYR:CE2  | 1:T:45:VAL:HG21 | 2.44                     | 0.51              |
| 1:R:164:PRO:HG2  | 1:R:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:S:332:PRO:HG2  | 1:S:335:ARG:NE  | 2.26                     | 0.51              |
| 1:S:362:TYR:HD1  | 1:S:367:PRO:HA  | 1.75                     | 0.51              |
| 1:W:362:TYR:HD1  | 1:W:367:PRO:HA  | 1.75                     | 0.51              |
| 1:A:34:ILE:CG2   | 1:A:35:VAL:N    | 2.74                     | 0.51              |
| 1:A:167:GLU:OE1  | 1:C:61:LYS:CE   | 2.58                     | 0.51              |
| 1:D:22:ALA:HB1   | 1:D:348:SER:CB  | 2.41                     | 0.51              |
| 1:D:36:GLY:HA3   | 1:D:66:THR:O    | 2.10                     | 0.51              |
| 1:G:36:GLY:HA3   | 1:G:66:THR:O    | 2.10                     | 0.51              |
| 1:G:58:ALA:CA    | 1:G:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:H:169:TYR:CZ   | 1:H:172:PRO:HD3 | 2.45                     | 0.51              |
| 1:J:332:PRO:HG2  | 1:J:335:ARG:NE  | 2.26                     | 0.51              |
| 1:L:34:ILE:CG2   | 1:L:67:LEU:HD22 | 2.28                     | 0.51              |
| 1:L:54:VAL:CG1   | 1:L:55:GLY:N    | 2.72                     | 0.51              |
| 1:L:142:LEU:HD21 | 1:L:165:ILE:CD1 | 2.39                     | 0.51              |
| 1:N:230:ALA:HA   | 1:N:233:SER:HB2 | 1.92                     | 0.51              |
| 1:O:37:ARG:CG    | 1:O:38:PRO:CD   | 2.83                     | 0.51              |
| 1:P:2:GLU:OE2    | 1:P:2:GLU:HA    | 2.10                     | 0.51              |
| 1:P:362:TYR:HE1  | 1:P:367:PRO:CB  | 2.19                     | 0.51              |
| 1:Q:164:PRO:HG2  | 1:Q:174:ALA:HB3 | 1.92                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-----------------|--------------------------|-------------------|
| 1:Q:332:PRO:HG2 | 1:Q:335:ARG:NE  | 2.26                     | 0.51              |
| 1:R:34:ILE:CG2  | 1:R:35:VAL:N    | 2.74                     | 0.51              |
| 1:R:169:TYR:CZ  | 1:R:172:PRO:HD3 | 2.45                     | 0.51              |
| 1:S:22:ALA:HB1  | 1:S:348:SER:CB  | 2.41                     | 0.51              |
| 1:S:58:ALA:CA   | 1:S:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:S:167:GLU:OE1 | 1:U:61:LYS:CE   | 2.58                     | 0.51              |
| 1:T:36:GLY:HA3  | 1:T:66:THR:O    | 2.10                     | 0.51              |
| 1:T:37:ARG:CG   | 1:T:38:PRO:CD   | 2.83                     | 0.51              |
| 1:U:36:GLY:HA3  | 1:U:66:THR:O    | 2.10                     | 0.51              |
| 1:U:167:GLU:OE1 | 1:W:61:LYS:CE   | 2.58                     | 0.51              |
| 1:U:230:ALA:HA  | 1:U:233:SER:HB2 | 1.92                     | 0.51              |
| 1:U:361:GLU:HB3 | 1:U:369:ILE:CD1 | 2.14                     | 0.51              |
| 1:W:34:ILE:CG2  | 1:W:67:LEU:HD22 | 2.27                     | 0.51              |
| 1:C:36:GLY:HA3  | 1:C:66:THR:O    | 2.10                     | 0.51              |
| 1:C:361:GLU:HB3 | 1:C:369:ILE:CD1 | 2.14                     | 0.51              |
| 1:D:58:ALA:CA   | 1:D:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:D:164:PRO:HG2 | 1:D:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:G:34:ILE:CG2  | 1:G:35:VAL:N    | 2.74                     | 0.51              |
| 1:J:167:GLU:OE1 | 1:L:61:LYS:CE   | 2.58                     | 0.51              |
| 1:K:22:ALA:HB1  | 1:K:348:SER:CB  | 2.41                     | 0.51              |
| 1:N:22:ALA:HB1  | 1:N:348:SER:CB  | 2.41                     | 0.51              |
| 1:N:169:TYR:OH  | 1:P:40:HIS:HB3  | 2.10                     | 0.51              |
| 1:P:34:ILE:CG2  | 1:P:35:VAL:N    | 2.74                     | 0.51              |
| 1:Q:37:ARG:CG   | 1:Q:38:PRO:CD   | 2.83                     | 0.51              |
| 1:R:164:PRO:HG3 | 1:R:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:T:22:ALA:HB1  | 1:T:348:SER:CB  | 2.41                     | 0.51              |
| 1:T:39:ARG:HG2  | 1:T:66:THR:HB   | 1.93                     | 0.51              |
| 1:V:58:ALA:CA   | 1:V:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:W:169:TYR:CZ  | 1:W:172:PRO:HD3 | 2.45                     | 0.51              |
| 1:B:164:PRO:HG3 | 1:B:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:C:34:ILE:CG2  | 1:C:67:LEU:HD22 | 2.28                     | 0.51              |
| 1:D:167:GLU:OE1 | 1:F:61:LYS:CE   | 2.58                     | 0.51              |
| 1:F:36:GLY:HA3  | 1:F:66:THR:O    | 2.10                     | 0.51              |
| 1:F:37:ARG:CG   | 1:F:38:PRO:CD   | 2.83                     | 0.51              |
| 1:F:58:ALA:CA   | 1:F:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:G:34:ILE:HG23 | 1:G:68:LYS:N    | 2.26                     | 0.51              |
| 1:G:167:GLU:OE1 | 1:I:61:LYS:CE   | 2.58                     | 0.51              |
| 1:H:332:PRO:HG2 | 1:H:335:ARG:NE  | 2.26                     | 0.51              |
| 1:J:22:ALA:HB1  | 1:J:348:SER:CB  | 2.41                     | 0.51              |
| 1:L:2:GLU:HA    | 1:L:2:GLU:OE2   | 2.11                     | 0.51              |
| 1:L:36:GLY:HA3  | 1:L:66:THR:O    | 2.10                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:N:116:ARG:HH12 | 1:N:375:PHE:HA  | 1.74                     | 0.51              |
| 1:N:167:GLU:OE1  | 1:P:61:LYS:CE   | 2.58                     | 0.51              |
| 1:O:332:PRO:HG2  | 1:O:335:ARG:NE  | 2.26                     | 0.51              |
| 1:P:164:PRO:HG2  | 1:P:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:P:169:TYR:OH   | 1:R:40:HIS:HB3  | 2.10                     | 0.51              |
| 1:S:230:ALA:HA   | 1:S:233:SER:HB2 | 1.92                     | 0.51              |
| 1:T:332:PRO:HG2  | 1:T:335:ARG:NE  | 2.26                     | 0.51              |
| 1:U:34:ILE:HG23  | 1:U:68:LYS:N    | 2.26                     | 0.51              |
| 1:U:332:PRO:HG2  | 1:U:335:ARG:NE  | 2.26                     | 0.51              |
| 1:A:169:TYR:OH   | 1:C:40:HIS:HB3  | 2.10                     | 0.51              |
| 1:B:34:ILE:HG23  | 1:B:68:LYS:N    | 2.26                     | 0.51              |
| 1:B:169:TYR:OH   | 1:D:40:HIS:HB3  | 2.10                     | 0.51              |
| 1:C:34:ILE:CG2   | 1:C:35:VAL:N    | 2.74                     | 0.51              |
| 1:C:34:ILE:HG12  | 1:C:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:C:164:PRO:HG2  | 1:C:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:D:230:ALA:HA   | 1:D:233:SER:HB2 | 1.92                     | 0.51              |
| 1:E:34:ILE:HG23  | 1:E:68:LYS:N    | 2.26                     | 0.51              |
| 1:E:58:ALA:CA    | 1:E:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:E:332:PRO:HG2  | 1:E:335:ARG:NE  | 2.26                     | 0.51              |
| 1:F:34:ILE:CG2   | 1:F:67:LEU:HD22 | 2.28                     | 0.51              |
| 1:F:167:GLU:OE1  | 1:H:61:LYS:CE   | 2.58                     | 0.51              |
| 1:I:34:ILE:HG23  | 1:I:68:LYS:N    | 2.26                     | 0.51              |
| 1:K:362:TYR:HD1  | 1:K:367:PRO:HA  | 1.75                     | 0.51              |
| 1:L:332:PRO:HG2  | 1:L:335:ARG:NE  | 2.26                     | 0.51              |
| 1:O:36:GLY:HA3   | 1:O:66:THR:O    | 2.10                     | 0.51              |
| 1:Q:2:GLU:HA     | 1:Q:2:GLU:OE2   | 2.11                     | 0.51              |
| 1:Q:230:ALA:HA   | 1:Q:233:SER:HB2 | 1.92                     | 0.51              |
| 1:Q:300:SER:HA   | 1:Q:335:ARG:HG2 | 1.89                     | 0.51              |
| 1:R:362:TYR:HD1  | 1:R:367:PRO:HA  | 1.75                     | 0.51              |
| 1:T:34:ILE:HG12  | 1:T:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:T:58:ALA:CA    | 1:T:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:T:164:PRO:HG3  | 1:T:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:U:58:ALA:CA    | 1:U:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:V:332:PRO:HG2  | 1:V:335:ARG:NE  | 2.26                     | 0.51              |
| 1:A:34:ILE:HG23  | 1:A:68:LYS:N    | 2.26                     | 0.51              |
| 1:A:230:ALA:HA   | 1:A:233:SER:HB2 | 1.92                     | 0.51              |
| 1:B:2:GLU:OE2    | 1:B:2:GLU:HA    | 2.10                     | 0.51              |
| 1:C:230:ALA:HA   | 1:C:233:SER:HB2 | 1.92                     | 0.51              |
| 1:D:34:ILE:HG23  | 1:D:68:LYS:N    | 2.26                     | 0.51              |
| 1:D:34:ILE:HG12  | 1:D:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:F:230:ALA:HA   | 1:F:233:SER:HB2 | 1.92                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:H:2:GLU:OE2    | 1:H:2:GLU:HA    | 2.10                     | 0.51              |
| 1:H:34:ILE:CG2   | 1:H:67:LEU:HD22 | 2.28                     | 0.51              |
| 1:H:36:GLY:HA3   | 1:H:66:THR:O    | 2.10                     | 0.51              |
| 1:H:58:ALA:CA    | 1:H:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:H:299:MET:HE1  | 1:H:304:THR:HB  | 1.93                     | 0.51              |
| 1:J:164:PRO:HG3  | 1:J:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:K:34:ILE:HG12  | 1:K:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:L:164:PRO:HG3  | 1:L:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:L:169:TYR:OH   | 1:N:40:HIS:HB3  | 2.10                     | 0.51              |
| 1:M:2:GLU:OE2    | 1:M:2:GLU:HA    | 2.10                     | 0.51              |
| 1:O:34:ILE:HG12  | 1:O:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:O:39:ARG:HG2   | 1:O:66:THR:HB   | 1.93                     | 0.51              |
| 1:P:347:ALA:HA   | 1:P:356:TRP:CZ2 | 2.46                     | 0.51              |
| 1:Q:164:PRO:HG3  | 1:Q:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:W:2:GLU:OE2    | 1:W:2:GLU:HA    | 2.10                     | 0.51              |
| 1:B:39:ARG:HG2   | 1:B:66:THR:HB   | 1.93                     | 0.51              |
| 1:B:332:PRO:HG2  | 1:B:335:ARG:NE  | 2.26                     | 0.51              |
| 1:C:34:ILE:HG23  | 1:C:68:LYS:N    | 2.26                     | 0.51              |
| 1:C:39:ARG:HG2   | 1:C:66:THR:HB   | 1.92                     | 0.51              |
| 1:E:164:PRO:HG3  | 1:E:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:E:167:GLU:OE1  | 1:G:61:LYS:CE   | 2.58                     | 0.51              |
| 1:F:34:ILE:HG23  | 1:F:68:LYS:N    | 2.26                     | 0.51              |
| 1:H:167:GLU:OE1  | 1:J:61:LYS:CE   | 2.58                     | 0.51              |
| 1:I:164:PRO:HG3  | 1:I:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:J:34:ILE:HG23  | 1:J:68:LYS:N    | 2.26                     | 0.51              |
| 1:J:164:PRO:HG2  | 1:J:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:L:34:ILE:HG23  | 1:L:68:LYS:N    | 2.26                     | 0.51              |
| 1:L:34:ILE:HG12  | 1:L:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:M:39:ARG:NE    | 1:M:66:THR:CA   | 2.69                     | 0.51              |
| 1:O:300:SER:HA   | 1:O:335:ARG:HG2 | 1.89                     | 0.51              |
| 1:Q:142:LEU:HD21 | 1:Q:165:ILE:CD1 | 2.39                     | 0.51              |
| 1:R:58:ALA:CA    | 1:R:65:LEU:CD2  | 2.89                     | 0.51              |
| 1:R:347:ALA:HA   | 1:R:356:TRP:CZ2 | 2.46                     | 0.51              |
| 1:T:347:ALA:HA   | 1:T:356:TRP:CZ2 | 2.46                     | 0.51              |
| 1:U:34:ILE:HG12  | 1:U:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:W:164:PRO:HG2  | 1:W:174:ALA:HB3 | 1.92                     | 0.51              |
| 1:B:39:ARG:NE    | 1:B:66:THR:CA   | 2.69                     | 0.51              |
| 1:C:54:VAL:CG1   | 1:C:55:GLY:N    | 2.72                     | 0.51              |
| 1:D:169:TYR:OH   | 1:F:40:HIS:HB3  | 2.10                     | 0.51              |
| 1:E:34:ILE:HG12  | 1:E:69:TYR:CE1  | 2.46                     | 0.51              |
| 1:F:332:PRO:HG2  | 1:F:335:ARG:NE  | 2.26                     | 0.51              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:I:36:GLY:HA3   | 1:I:66:THR:O    | 2.10                     | 0.51              |
| 1:J:347:ALA:HA   | 1:J:356:TRP:CZ2 | 2.46                     | 0.51              |
| 1:K:34:ILE:CG2   | 1:K:35:VAL:N    | 2.74                     | 0.51              |
| 1:K:34:ILE:HG23  | 1:K:68:LYS:N    | 2.26                     | 0.51              |
| 1:K:164:PRO:HG3  | 1:K:174:ALA:HB1 | 1.92                     | 0.51              |
| 1:L:347:ALA:HA   | 1:L:356:TRP:CZ2 | 2.46                     | 0.51              |
| 1:L:369:ILE:C    | 1:L:371:HIS:H   | 2.15                     | 0.51              |
| 1:M:347:ALA:HA   | 1:M:356:TRP:CZ2 | 2.46                     | 0.51              |
| 1:N:300:SER:HA   | 1:N:335:ARG:HG2 | 1.89                     | 0.51              |
| 1:R:332:PRO:HG2  | 1:R:335:ARG:NE  | 2.26                     | 0.51              |
| 1:R:336:LYS:HE2  | 2:R:401:ADP:C5' | 2.38                     | 0.51              |
| 1:T:34:ILE:CG2   | 1:T:35:VAL:N    | 2.74                     | 0.51              |
| 1:U:22:ALA:HB1   | 1:U:348:SER:CB  | 2.41                     | 0.51              |
| 1:V:36:GLY:HA3   | 1:V:66:THR:O    | 2.10                     | 0.51              |
| 1:V:347:ALA:HA   | 1:V:356:TRP:CZ2 | 2.47                     | 0.51              |
| 1:A:58:ALA:CA    | 1:A:65:LEU:CD2  | 2.89                     | 0.50              |
| 1:B:230:ALA:HA   | 1:B:233:SER:HB2 | 1.92                     | 0.50              |
| 1:E:142:LEU:HD21 | 1:E:165:ILE:CD1 | 2.39                     | 0.50              |
| 1:F:22:ALA:HB1   | 1:F:348:SER:CB  | 2.41                     | 0.50              |
| 1:F:147:ARG:CG   | 1:F:147:ARG:NH2 | 2.71                     | 0.50              |
| 1:G:22:ALA:HB1   | 1:G:348:SER:CB  | 2.41                     | 0.50              |
| 1:G:332:PRO:HG2  | 1:G:335:ARG:NE  | 2.26                     | 0.50              |
| 1:H:34:ILE:HG23  | 1:H:68:LYS:N    | 2.26                     | 0.50              |
| 1:H:34:ILE:HG12  | 1:H:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:H:347:ALA:HA   | 1:H:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:J:34:ILE:HG12  | 1:J:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:K:169:TYR:OH   | 1:M:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:M:22:ALA:HB1   | 1:M:348:SER:CB  | 2.41                     | 0.50              |
| 1:M:32:PRO:CG    | 1:M:55:GLY:O    | 2.55                     | 0.50              |
| 1:M:164:PRO:HG3  | 1:M:174:ALA:HB1 | 1.92                     | 0.50              |
| 1:M:169:TYR:OH   | 1:O:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:N:34:ILE:HG12  | 1:N:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:N:347:ALA:HA   | 1:N:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:N:369:ILE:C    | 1:N:371:HIS:H   | 2.15                     | 0.50              |
| 1:O:32:PRO:CG    | 1:O:55:GLY:O    | 2.55                     | 0.50              |
| 1:P:34:ILE:HG23  | 1:P:68:LYS:N    | 2.26                     | 0.50              |
| 1:P:230:ALA:HA   | 1:P:233:SER:HB2 | 1.92                     | 0.50              |
| 1:Q:34:ILE:HG12  | 1:Q:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:U:32:PRO:CG    | 1:U:55:GLY:O    | 2.55                     | 0.50              |
| 1:U:147:ARG:CG   | 1:U:147:ARG:NH2 | 2.71                     | 0.50              |
| 1:U:362:TYR:HD1  | 1:U:367:PRO:HA  | 1.75                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-----------------|--------------------------|-------------------|
| 1:V:34:ILE:CG2  | 1:V:35:VAL:N    | 2.74                     | 0.50              |
| 1:V:34:ILE:HG12 | 1:V:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:V:164:PRO:HG3 | 1:V:174:ALA:HB1 | 1.92                     | 0.50              |
| 1:C:167:GLU:OE1 | 1:E:61:LYS:CE   | 2.58                     | 0.50              |
| 1:E:230:ALA:HA  | 1:E:233:SER:HB2 | 1.92                     | 0.50              |
| 1:F:32:PRO:CG   | 1:F:55:GLY:O    | 2.55                     | 0.50              |
| 1:F:347:ALA:HA  | 1:F:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:G:164:PRO:HG3 | 1:G:174:ALA:HB1 | 1.92                     | 0.50              |
| 1:I:169:TYR:OH  | 1:K:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:I:347:ALA:HA  | 1:I:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:J:34:ILE:CG2  | 1:J:35:VAL:N    | 2.74                     | 0.50              |
| 1:J:58:ALA:CA   | 1:J:65:LEU:CD2  | 2.89                     | 0.50              |
| 1:J:369:ILE:C   | 1:J:371:HIS:H   | 2.15                     | 0.50              |
| 1:K:347:ALA:HA  | 1:K:356:TRP:CZ2 | 2.47                     | 0.50              |
| 1:L:164:PRO:HG2 | 1:L:174:ALA:HB3 | 1.92                     | 0.50              |
| 1:M:34:ILE:HG23 | 1:M:68:LYS:N    | 2.26                     | 0.50              |
| 1:M:332:PRO:HG2 | 1:M:335:ARG:NE  | 2.26                     | 0.50              |
| 1:N:332:PRO:HG2 | 1:N:335:ARG:NE  | 2.26                     | 0.50              |
| 1:O:169:TYR:OH  | 1:Q:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:O:347:ALA:HA  | 1:O:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:Q:32:PRO:CG   | 1:Q:55:GLY:O    | 2.55                     | 0.50              |
| 1:R:34:ILE:HG12 | 1:R:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:R:230:ALA:HA  | 1:R:233:SER:HB2 | 1.92                     | 0.50              |
| 1:V:230:ALA:HA  | 1:V:233:SER:HB2 | 1.92                     | 0.50              |
| 1:A:34:ILE:HG12 | 1:A:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:F:164:PRO:HG2 | 1:F:174:ALA:HB3 | 1.92                     | 0.50              |
| 1:G:369:ILE:C   | 1:G:371:HIS:H   | 2.15                     | 0.50              |
| 1:I:362:TYR:HE1 | 1:I:367:PRO:CB  | 2.19                     | 0.50              |
| 1:I:369:ILE:C   | 1:I:371:HIS:H   | 2.15                     | 0.50              |
| 1:J:36:GLY:HA3  | 1:J:66:THR:O    | 2.10                     | 0.50              |
| 1:L:34:ILE:CG2  | 1:L:35:VAL:N    | 2.74                     | 0.50              |
| 1:M:300:SER:HA  | 1:M:335:ARG:HG2 | 1.89                     | 0.50              |
| 1:P:22:ALA:HB1  | 1:P:348:SER:CB  | 2.41                     | 0.50              |
| 1:P:39:ARG:HG2  | 1:P:66:THR:HB   | 1.93                     | 0.50              |
| 1:P:58:ALA:CA   | 1:P:65:LEU:CD2  | 2.89                     | 0.50              |
| 1:Q:34:ILE:HD13 | 1:Q:67:LEU:CD1  | 2.41                     | 0.50              |
| 1:Q:37:ARG:CG   | 1:Q:38:PRO:N    | 2.75                     | 0.50              |
| 1:S:34:ILE:HG23 | 1:S:68:LYS:N    | 2.26                     | 0.50              |
| 1:S:34:ILE:HG12 | 1:S:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:S:164:PRO:HG2 | 1:S:174:ALA:HB3 | 1.92                     | 0.50              |
| 1:U:164:PRO:HG2 | 1:U:174:ALA:HB3 | 1.92                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:U:169:TYR:OH   | 1:W:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:V:22:ALA:HB1   | 1:V:348:SER:CB  | 2.41                     | 0.50              |
| 1:W:36:GLY:HA3   | 1:W:66:THR:O    | 2.10                     | 0.50              |
| 1:W:58:ALA:CA    | 1:W:65:LEU:CD2  | 2.89                     | 0.50              |
| 1:A:164:PRO:HG2  | 1:A:174:ALA:HB3 | 1.92                     | 0.50              |
| 1:B:362:TYR:HD1  | 1:B:367:PRO:HA  | 1.75                     | 0.50              |
| 1:C:58:ALA:CA    | 1:C:65:LEU:CD2  | 2.89                     | 0.50              |
| 1:D:40:HIS:O     | 1:D:41:GLN:O    | 2.30                     | 0.50              |
| 1:D:347:ALA:HA   | 1:D:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:E:34:ILE:CG2   | 1:E:35:VAL:N    | 2.74                     | 0.50              |
| 1:F:34:ILE:HG12  | 1:F:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:H:37:ARG:CG    | 1:H:38:PRO:N    | 2.75                     | 0.50              |
| 1:H:164:PRO:HG2  | 1:H:174:ALA:HB3 | 1.92                     | 0.50              |
| 1:J:142:LEU:HD21 | 1:J:165:ILE:CD1 | 2.39                     | 0.50              |
| 1:K:36:GLY:HA3   | 1:K:66:THR:O    | 2.10                     | 0.50              |
| 1:N:34:ILE:CG2   | 1:N:35:VAL:N    | 2.74                     | 0.50              |
| 1:N:34:ILE:HG23  | 1:N:68:LYS:N    | 2.26                     | 0.50              |
| 1:O:40:HIS:O     | 1:O:41:GLN:O    | 2.30                     | 0.50              |
| 1:O:230:ALA:HA   | 1:O:233:SER:HB2 | 1.92                     | 0.50              |
| 1:R:36:GLY:HA3   | 1:R:66:THR:O    | 2.10                     | 0.50              |
| 1:R:169:TYR:OH   | 1:T:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:S:2:GLU:HA     | 1:S:2:GLU:OE2   | 2.10                     | 0.50              |
| 1:V:34:ILE:HG23  | 1:V:68:LYS:N    | 2.26                     | 0.50              |
| 1:V:39:ARG:HG2   | 1:V:66:THR:HB   | 1.93                     | 0.50              |
| 1:W:37:ARG:CG    | 1:W:38:PRO:N    | 2.75                     | 0.50              |
| 1:A:22:ALA:HB1   | 1:A:348:SER:CB  | 2.41                     | 0.50              |
| 1:B:34:ILE:CG2   | 1:B:35:VAL:N    | 2.74                     | 0.50              |
| 1:B:40:HIS:O     | 1:B:41:GLN:O    | 2.30                     | 0.50              |
| 1:B:347:ALA:HA   | 1:B:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:C:169:TYR:OH   | 1:E:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:F:37:ARG:CG    | 1:F:38:PRO:N    | 2.75                     | 0.50              |
| 1:F:40:HIS:O     | 1:F:41:GLN:O    | 2.30                     | 0.50              |
| 1:G:169:TYR:OH   | 1:I:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:G:347:ALA:HA   | 1:G:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:L:37:ARG:CG    | 1:L:38:PRO:N    | 2.75                     | 0.50              |
| 1:M:40:HIS:O     | 1:M:41:GLN:O    | 2.30                     | 0.50              |
| 1:O:34:ILE:CG2   | 1:O:35:VAL:N    | 2.74                     | 0.50              |
| 1:O:34:ILE:HG23  | 1:O:68:LYS:N    | 2.26                     | 0.50              |
| 1:O:164:PRO:HG3  | 1:O:174:ALA:HB1 | 1.92                     | 0.50              |
| 1:P:369:ILE:C    | 1:P:371:HIS:H   | 2.15                     | 0.50              |
| 1:Q:40:HIS:O     | 1:Q:41:GLN:O    | 2.30                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:R:34:ILE:HG23  | 1:R:68:LYS:N    | 2.26                     | 0.50              |
| 1:S:40:HIS:O     | 1:S:41:GLN:O    | 2.30                     | 0.50              |
| 1:U:37:ARG:CG    | 1:U:38:PRO:N    | 2.75                     | 0.50              |
| 1:W:39:ARG:HG2   | 1:W:66:THR:HB   | 1.92                     | 0.50              |
| 1:W:332:PRO:HG2  | 1:W:335:ARG:NE  | 2.26                     | 0.50              |
| 1:A:290:ARG:NH1  | 1:C:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:B:37:ARG:CG    | 1:B:38:PRO:N    | 2.75                     | 0.50              |
| 1:D:32:PRO:CG    | 1:D:55:GLY:O    | 2.55                     | 0.50              |
| 1:E:290:ARG:NH1  | 1:G:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:E:361:GLU:HB3  | 1:E:369:ILE:CD1 | 2.14                     | 0.50              |
| 1:F:34:ILE:HD13  | 1:F:67:LEU:CD1  | 2.41                     | 0.50              |
| 1:H:34:ILE:CG2   | 1:H:35:VAL:N    | 2.74                     | 0.50              |
| 1:H:40:HIS:O     | 1:H:41:GLN:O    | 2.30                     | 0.50              |
| 1:J:362:TYR:HE1  | 1:J:367:PRO:CB  | 2.19                     | 0.50              |
| 1:K:40:HIS:O     | 1:K:41:GLN:O    | 2.30                     | 0.50              |
| 1:M:34:ILE:HG12  | 1:M:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:N:164:PRO:HG2  | 1:N:174:ALA:HB3 | 1.92                     | 0.50              |
| 1:N:290:ARG:NH1  | 1:P:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:O:34:ILE:HD13  | 1:O:67:LEU:CD1  | 2.41                     | 0.50              |
| 1:P:290:ARG:NH1  | 1:R:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:P:332:PRO:HG2  | 1:P:335:ARG:NE  | 2.26                     | 0.50              |
| 1:Q:34:ILE:CG2   | 1:Q:35:VAL:N    | 2.74                     | 0.50              |
| 1:Q:227:MET:HE3  | 1:Q:227:MET:HA  | 1.93                     | 0.50              |
| 1:Q:347:ALA:HA   | 1:Q:356:TRP:CZ2 | 2.47                     | 0.50              |
| 1:T:290:ARG:NH1  | 1:V:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:C:287:ILE:HG13 | 1:C:288:ASP:N   | 2.27                     | 0.50              |
| 1:D:2:GLU:OE2    | 1:D:2:GLU:HA    | 2.10                     | 0.50              |
| 1:D:332:PRO:HG2  | 1:D:335:ARG:NE  | 2.26                     | 0.50              |
| 1:E:347:ALA:HA   | 1:E:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:E:369:ILE:C    | 1:E:371:HIS:H   | 2.15                     | 0.50              |
| 1:F:169:TYR:OH   | 1:H:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:G:290:ARG:NH1  | 1:I:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:I:34:ILE:HG12  | 1:I:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:I:290:ARG:NH1  | 1:K:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:I:332:PRO:HG2  | 1:I:335:ARG:NE  | 2.26                     | 0.50              |
| 1:J:34:ILE:CG2   | 1:J:67:LEU:HD22 | 2.27                     | 0.50              |
| 1:K:332:PRO:HG2  | 1:K:335:ARG:NE  | 2.26                     | 0.50              |
| 1:L:39:ARG:HG2   | 1:L:66:THR:HB   | 1.93                     | 0.50              |
| 1:L:58:ALA:CA    | 1:L:65:LEU:CD2  | 2.89                     | 0.50              |
| 1:M:35:VAL:CA    | 1:M:54:VAL:CG2  | 2.90                     | 0.50              |
| 1:N:58:ALA:CA    | 1:N:65:LEU:CD2  | 2.89                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:P:34:ILE:HG12  | 1:P:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:Q:169:TYR:OH   | 1:S:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:R:39:ARG:HG2   | 1:R:66:THR:HB   | 1.92                     | 0.50              |
| 1:S:37:ARG:CG    | 1:S:38:PRO:N    | 2.75                     | 0.50              |
| 1:S:347:ALA:HA   | 1:S:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:T:230:ALA:HA   | 1:T:233:SER:HB2 | 1.92                     | 0.50              |
| 1:U:40:HIS:O     | 1:U:41:GLN:O    | 2.30                     | 0.50              |
| 1:W:34:ILE:CG2   | 1:W:35:VAL:N    | 2.74                     | 0.50              |
| 1:W:34:ILE:HG23  | 1:W:68:LYS:N    | 2.26                     | 0.50              |
| 1:W:40:HIS:O     | 1:W:41:GLN:O    | 2.30                     | 0.50              |
| 1:A:143:TYR:HD1  | 1:A:143:TYR:C   | 2.09                     | 0.50              |
| 1:A:287:ILE:HG13 | 1:A:288:ASP:N   | 2.27                     | 0.50              |
| 1:C:143:TYR:HD1  | 1:C:143:TYR:C   | 2.09                     | 0.50              |
| 1:E:169:TYR:OH   | 1:G:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:E:287:ILE:HG13 | 1:E:288:ASP:N   | 2.27                     | 0.50              |
| 1:G:37:ARG:CG    | 1:G:38:PRO:N    | 2.75                     | 0.50              |
| 1:H:32:PRO:CG    | 1:H:55:GLY:O    | 2.55                     | 0.50              |
| 1:H:369:ILE:C    | 1:H:371:HIS:H   | 2.15                     | 0.50              |
| 1:I:230:ALA:HA   | 1:I:233:SER:HB2 | 1.92                     | 0.50              |
| 1:J:169:TYR:OH   | 1:L:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:K:34:ILE:HD13  | 1:K:67:LEU:CD1  | 2.41                     | 0.50              |
| 1:K:300:SER:HA   | 1:K:335:ARG:HG2 | 1.89                     | 0.50              |
| 1:O:35:VAL:CA    | 1:O:54:VAL:CG2  | 2.90                     | 0.50              |
| 1:Q:34:ILE:CG2   | 1:Q:67:LEU:HD22 | 2.28                     | 0.50              |
| 1:R:35:VAL:CA    | 1:R:54:VAL:CG2  | 2.90                     | 0.50              |
| 1:R:287:ILE:HG13 | 1:R:288:ASP:N   | 2.27                     | 0.50              |
| 1:T:35:VAL:CA    | 1:T:54:VAL:CG2  | 2.90                     | 0.50              |
| 1:T:369:ILE:C    | 1:T:371:HIS:H   | 2.15                     | 0.50              |
| 1:B:32:PRO:CG    | 1:B:55:GLY:O    | 2.55                     | 0.50              |
| 1:B:147:ARG:CG   | 1:B:147:ARG:NH2 | 2.71                     | 0.50              |
| 1:D:34:ILE:HD13  | 1:D:67:LEU:CD1  | 2.41                     | 0.50              |
| 1:D:37:ARG:CG    | 1:D:38:PRO:N    | 2.75                     | 0.50              |
| 1:G:34:ILE:HG12  | 1:G:69:TYR:CE1  | 2.46                     | 0.50              |
| 1:G:230:ALA:HA   | 1:G:233:SER:HB2 | 1.92                     | 0.50              |
| 1:H:169:TYR:OH   | 1:J:40:HIS:HB3  | 2.10                     | 0.50              |
| 1:I:40:HIS:O     | 1:I:41:GLN:O    | 2.30                     | 0.50              |
| 1:K:35:VAL:CA    | 1:K:54:VAL:CG2  | 2.90                     | 0.50              |
| 1:K:369:ILE:C    | 1:K:371:HIS:H   | 2.15                     | 0.50              |
| 1:L:290:ARG:NH1  | 1:N:244:ASP:OD1 | 2.45                     | 0.50              |
| 1:M:37:ARG:CG    | 1:M:38:PRO:N    | 2.75                     | 0.50              |
| 1:O:290:ARG:NH1  | 1:Q:244:ASP:OD1 | 2.45                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:P:35:VAL:CA    | 1:P:54:VAL:CG2  | 2.90                     | 0.50              |
| 1:Q:147:ARG:CG   | 1:Q:147:ARG:NH2 | 2.71                     | 0.50              |
| 1:R:299:MET:HE1  | 1:R:304:THR:HB  | 1.94                     | 0.50              |
| 1:R:369:ILE:C    | 1:R:371:HIS:H   | 2.15                     | 0.50              |
| 1:U:347:ALA:HA   | 1:U:356:TRP:CZ2 | 2.46                     | 0.50              |
| 1:V:37:ARG:CG    | 1:V:38:PRO:N    | 2.75                     | 0.50              |
| 1:A:37:ARG:CG    | 1:A:38:PRO:N    | 2.75                     | 0.49              |
| 1:B:34:ILE:HD13  | 1:B:67:LEU:CD1  | 2.41                     | 0.49              |
| 1:B:34:ILE:HG12  | 1:B:69:TYR:CE1  | 2.46                     | 0.49              |
| 1:C:347:ALA:HA   | 1:C:356:TRP:CZ2 | 2.46                     | 0.49              |
| 1:F:39:ARG:HG2   | 1:F:66:THR:HB   | 1.93                     | 0.49              |
| 1:G:287:ILE:HG13 | 1:G:288:ASP:N   | 2.27                     | 0.49              |
| 1:J:37:ARG:CG    | 1:J:38:PRO:N    | 2.75                     | 0.49              |
| 1:J:39:ARG:HG2   | 1:J:66:THR:HB   | 1.93                     | 0.49              |
| 1:J:40:HIS:O     | 1:J:41:GLN:O    | 2.30                     | 0.49              |
| 1:K:34:ILE:CG2   | 1:K:67:LEU:HD22 | 2.28                     | 0.49              |
| 1:K:290:ARG:NH1  | 1:M:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:M:34:ILE:CG2   | 1:M:35:VAL:N    | 2.74                     | 0.49              |
| 1:M:290:ARG:NH1  | 1:O:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:Q:34:ILE:HG23  | 1:Q:68:LYS:N    | 2.26                     | 0.49              |
| 1:T:34:ILE:HG23  | 1:T:68:LYS:N    | 2.26                     | 0.49              |
| 1:V:40:HIS:O     | 1:V:41:GLN:O    | 2.30                     | 0.49              |
| 1:V:142:LEU:HD21 | 1:V:165:ILE:CD1 | 2.39                     | 0.49              |
| 1:W:22:ALA:HB1   | 1:W:348:SER:CB  | 2.41                     | 0.49              |
| 1:D:39:ARG:HG2   | 1:D:66:THR:HB   | 1.92                     | 0.49              |
| 1:E:147:ARG:CG   | 1:E:147:ARG:NH2 | 2.71                     | 0.49              |
| 1:F:44:MET:CG    | 1:F:45:VAL:N    | 2.75                     | 0.49              |
| 1:I:287:ILE:HG22 | 1:I:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:K:230:ALA:HA   | 1:K:233:SER:HB2 | 1.92                     | 0.49              |
| 1:L:40:HIS:O     | 1:L:41:GLN:O    | 2.30                     | 0.49              |
| 1:L:287:ILE:HG22 | 1:L:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:N:39:ARG:HG2   | 1:N:66:THR:HB   | 1.93                     | 0.49              |
| 1:Q:39:ARG:NE    | 1:Q:66:THR:CA   | 2.69                     | 0.49              |
| 1:S:34:ILE:CG2   | 1:S:35:VAL:N    | 2.74                     | 0.49              |
| 1:S:169:TYR:OH   | 1:U:40:HIS:HB3  | 2.10                     | 0.49              |
| 1:W:34:ILE:HG12  | 1:W:69:TYR:CE1  | 2.46                     | 0.49              |
| 1:W:299:MET:HE1  | 1:W:304:THR:HB  | 1.95                     | 0.49              |
| 1:A:347:ALA:HA   | 1:A:356:TRP:CZ2 | 2.46                     | 0.49              |
| 1:C:35:VAL:CA    | 1:C:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:F:287:ILE:HG22 | 1:F:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:I:39:ARG:HG2   | 1:I:66:THR:HB   | 1.93                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:M:227:MET:HA   | 1:M:227:MET:HE3 | 1.94                     | 0.49              |
| 1:M:230:ALA:HA   | 1:M:233:SER:HB2 | 1.92                     | 0.49              |
| 1:O:287:ILE:HG22 | 1:O:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:Q:35:VAL:CA    | 1:Q:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:R:37:ARG:CG    | 1:R:38:PRO:N    | 2.75                     | 0.49              |
| 1:T:40:HIS:O     | 1:T:41:GLN:O    | 2.30                     | 0.49              |
| 1:V:35:VAL:CA    | 1:V:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:V:287:ILE:HG22 | 1:V:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:W:287:ILE:HG13 | 1:W:288:ASP:N   | 2.27                     | 0.49              |
| 1:W:347:ALA:HA   | 1:W:356:TRP:CZ2 | 2.47                     | 0.49              |
| 1:A:39:ARG:HG2   | 1:A:66:THR:HB   | 1.93                     | 0.49              |
| 1:H:22:ALA:HB1   | 1:H:348:SER:CB  | 2.41                     | 0.49              |
| 1:I:35:VAL:CA    | 1:I:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:M:369:ILE:C    | 1:M:371:HIS:H   | 2.15                     | 0.49              |
| 1:N:35:VAL:CA    | 1:N:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:O:142:LEU:HD21 | 1:O:165:ILE:CD1 | 2.39                     | 0.49              |
| 1:S:39:ARG:HG2   | 1:S:66:THR:HB   | 1.93                     | 0.49              |
| 1:S:287:ILE:HG22 | 1:S:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:T:169:TYR:OH   | 1:V:40:HIS:HB3  | 2.10                     | 0.49              |
| 1:A:147:ARG:CG   | 1:A:147:ARG:NH2 | 2.71                     | 0.49              |
| 1:B:287:ILE:HG22 | 1:B:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:C:369:ILE:C    | 1:C:371:HIS:H   | 2.15                     | 0.49              |
| 1:D:290:ARG:NH1  | 1:F:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:E:35:VAL:CA    | 1:E:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:G:40:HIS:O     | 1:G:41:GLN:O    | 2.30                     | 0.49              |
| 1:H:290:ARG:NH1  | 1:J:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:I:43:VAL:O     | 1:I:44:MET:HG2  | 2.13                     | 0.49              |
| 1:L:287:ILE:HG13 | 1:L:288:ASP:N   | 2.27                     | 0.49              |
| 1:M:34:ILE:HD13  | 1:M:67:LEU:CD1  | 2.41                     | 0.49              |
| 1:M:287:ILE:HG22 | 1:M:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:N:40:HIS:O     | 1:N:41:GLN:O    | 2.30                     | 0.49              |
| 1:S:32:PRO:CG    | 1:S:55:GLY:O    | 2.55                     | 0.49              |
| 1:S:34:ILE:HD13  | 1:S:67:LEU:CD1  | 2.41                     | 0.49              |
| 1:T:43:VAL:O     | 1:T:44:MET:HG2  | 2.13                     | 0.49              |
| 1:U:39:ARG:HG2   | 1:U:66:THR:HB   | 1.93                     | 0.49              |
| 1:U:287:ILE:HG22 | 1:U:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:U:362:TYR:HE1  | 1:U:367:PRO:CB  | 2.19                     | 0.49              |
| 1:A:40:HIS:O     | 1:A:41:GLN:O    | 2.30                     | 0.49              |
| 1:C:142:LEU:HD21 | 1:C:165:ILE:CD1 | 2.39                     | 0.49              |
| 1:D:34:ILE:CG2   | 1:D:35:VAL:N    | 2.74                     | 0.49              |
| 1:E:37:ARG:CG    | 1:E:38:PRO:N    | 2.75                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:E:39:ARG:HG2   | 1:E:66:THR:HB   | 1.93                     | 0.49              |
| 1:E:40:HIS:O     | 1:E:41:GLN:O    | 2.30                     | 0.49              |
| 1:F:34:ILE:CG2   | 1:F:35:VAL:N    | 2.74                     | 0.49              |
| 1:F:290:ARG:NH1  | 1:H:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:H:39:ARG:HG2   | 1:H:66:THR:HB   | 1.93                     | 0.49              |
| 1:H:287:ILE:HG22 | 1:H:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:I:34:ILE:HG22  | 1:I:35:VAL:H    | 1.78                     | 0.49              |
| 1:I:37:ARG:CG    | 1:I:38:PRO:N    | 2.75                     | 0.49              |
| 1:I:147:ARG:CG   | 1:I:147:ARG:NH2 | 2.71                     | 0.49              |
| 1:I:300:SER:HA   | 1:I:335:ARG:HG2 | 1.89                     | 0.49              |
| 1:J:43:VAL:O     | 1:J:44:MET:HG2  | 2.13                     | 0.49              |
| 1:K:34:ILE:HG22  | 1:K:35:VAL:H    | 1.78                     | 0.49              |
| 1:O:2:GLU:HA     | 1:O:2:GLU:OE2   | 2.10                     | 0.49              |
| 1:P:37:ARG:CG    | 1:P:38:PRO:N    | 2.75                     | 0.49              |
| 1:P:40:HIS:O     | 1:P:41:GLN:O    | 2.30                     | 0.49              |
| 1:P:147:ARG:CG   | 1:P:147:ARG:NH2 | 2.71                     | 0.49              |
| 1:Q:290:ARG:NH1  | 1:S:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:R:34:ILE:HG22  | 1:R:35:VAL:H    | 1.78                     | 0.49              |
| 1:R:40:HIS:O     | 1:R:41:GLN:O    | 2.30                     | 0.49              |
| 1:R:290:ARG:NH1  | 1:T:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:U:43:VAL:O     | 1:U:44:MET:HG2  | 2.13                     | 0.49              |
| 1:V:34:ILE:HD13  | 1:V:67:LEU:CD1  | 2.41                     | 0.49              |
| 1:B:34:ILE:HG22  | 1:B:35:VAL:H    | 1.78                     | 0.49              |
| 1:C:290:ARG:NH1  | 1:E:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:E:8:LEU:HB2    | 1:E:103:THR:HA  | 1.95                     | 0.49              |
| 1:F:43:VAL:O     | 1:F:44:MET:HG2  | 2.13                     | 0.49              |
| 1:H:336:LYS:HE2  | 2:H:401:ADP:C5' | 2.38                     | 0.49              |
| 1:I:287:ILE:HG13 | 1:I:288:ASP:N   | 2.27                     | 0.49              |
| 1:J:287:ILE:HG13 | 1:J:288:ASP:N   | 2.27                     | 0.49              |
| 1:K:37:ARG:CG    | 1:K:38:PRO:N    | 2.75                     | 0.49              |
| 1:K:43:VAL:O     | 1:K:44:MET:HG2  | 2.13                     | 0.49              |
| 1:L:300:SER:HA   | 1:L:335:ARG:HG2 | 1.89                     | 0.49              |
| 1:M:39:ARG:HG2   | 1:M:66:THR:HB   | 1.93                     | 0.49              |
| 1:M:147:ARG:CG   | 1:M:147:ARG:NH2 | 2.71                     | 0.49              |
| 1:O:22:ALA:HB1   | 1:O:348:SER:CB  | 2.41                     | 0.49              |
| 1:O:37:ARG:CG    | 1:O:38:PRO:N    | 2.75                     | 0.49              |
| 1:P:43:VAL:O     | 1:P:44:MET:HG2  | 2.13                     | 0.49              |
| 1:Q:298:VAL:HG12 | 1:Q:335:ARG:NH1 | 2.28                     | 0.49              |
| 1:S:290:ARG:NH1  | 1:U:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:T:147:ARG:CG   | 1:T:147:ARG:NH2 | 2.71                     | 0.49              |
| 1:U:34:ILE:HD13  | 1:U:67:LEU:CD1  | 2.41                     | 0.49              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:W:43:VAL:O     | 1:W:44:MET:HG2  | 2.13                     | 0.49              |
| 1:A:270:GLU:O    | 1:A:270:GLU:CD  | 2.51                     | 0.49              |
| 1:B:290:ARG:NH1  | 1:D:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:B:299:MET:HE1  | 1:B:304:THR:HB  | 1.94                     | 0.49              |
| 1:C:37:ARG:CG    | 1:C:38:PRO:N    | 2.75                     | 0.49              |
| 1:C:40:HIS:O     | 1:C:41:GLN:O    | 2.30                     | 0.49              |
| 1:D:34:ILE:HG22  | 1:D:35:VAL:H    | 1.78                     | 0.49              |
| 1:E:43:VAL:O     | 1:E:44:MET:HG2  | 2.13                     | 0.49              |
| 1:E:287:ILE:HG22 | 1:E:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:F:270:GLU:O    | 1:F:270:GLU:CD  | 2.51                     | 0.49              |
| 1:F:369:ILE:C    | 1:F:371:HIS:H   | 2.15                     | 0.49              |
| 1:H:142:LEU:HD21 | 1:H:165:ILE:CD1 | 2.39                     | 0.49              |
| 1:H:298:VAL:HG12 | 1:H:335:ARG:NH1 | 2.28                     | 0.49              |
| 1:H:361:GLU:HB3  | 1:H:369:ILE:CD1 | 2.14                     | 0.49              |
| 1:M:43:VAL:O     | 1:M:44:MET:HG2  | 2.13                     | 0.49              |
| 1:N:287:ILE:HG13 | 1:N:288:ASP:N   | 2.27                     | 0.49              |
| 1:O:287:ILE:HG13 | 1:O:288:ASP:N   | 2.27                     | 0.49              |
| 1:O:369:ILE:C    | 1:O:371:HIS:H   | 2.15                     | 0.49              |
| 1:Q:8:LEU:HB2    | 1:Q:103:THR:HA  | 1.95                     | 0.49              |
| 1:Q:39:ARG:HG2   | 1:Q:66:THR:HB   | 1.93                     | 0.49              |
| 1:T:34:ILE:HG22  | 1:T:35:VAL:H    | 1.78                     | 0.49              |
| 1:T:37:ARG:CG    | 1:T:38:PRO:N    | 2.75                     | 0.49              |
| 1:U:34:ILE:CG2   | 1:U:35:VAL:N    | 2.74                     | 0.49              |
| 1:W:34:ILE:HD13  | 1:W:67:LEU:CD1  | 2.41                     | 0.49              |
| 1:W:44:MET:CG    | 1:W:45:VAL:N    | 2.75                     | 0.49              |
| 1:A:54:VAL:CG1   | 1:A:55:GLY:N    | 2.72                     | 0.49              |
| 1:A:369:ILE:C    | 1:A:371:HIS:H   | 2.15                     | 0.49              |
| 1:B:43:VAL:O     | 1:B:44:MET:HG2  | 2.13                     | 0.49              |
| 1:D:8:LEU:HB2    | 1:D:103:THR:HA  | 1.95                     | 0.49              |
| 1:F:8:LEU:HB2    | 1:F:103:THR:HA  | 1.95                     | 0.49              |
| 1:F:298:VAL:HG12 | 1:F:335:ARG:NH1 | 2.28                     | 0.49              |
| 1:G:8:LEU:HB2    | 1:G:103:THR:HA  | 1.95                     | 0.49              |
| 1:H:44:MET:CG    | 1:H:45:VAL:N    | 2.75                     | 0.49              |
| 1:I:34:ILE:HD13  | 1:I:67:LEU:CD1  | 2.41                     | 0.49              |
| 1:J:287:ILE:HG22 | 1:J:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:L:270:GLU:O    | 1:L:270:GLU:CD  | 2.51                     | 0.49              |
| 1:O:270:GLU:O    | 1:O:270:GLU:CD  | 2.51                     | 0.49              |
| 1:O:298:VAL:HG12 | 1:O:335:ARG:NH1 | 2.28                     | 0.49              |
| 1:P:287:ILE:HG22 | 1:P:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:Q:43:VAL:O     | 1:Q:44:MET:HG2  | 2.13                     | 0.49              |
| 1:U:270:GLU:O    | 1:U:270:GLU:CD  | 2.51                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:U:287:ILE:HG13 | 1:U:288:ASP:N   | 2.27                     | 0.49              |
| 1:U:290:ARG:NH1  | 1:W:244:ASP:OD1 | 2.45                     | 0.49              |
| 1:V:369:ILE:C    | 1:V:371:HIS:H   | 2.15                     | 0.49              |
| 1:A:43:VAL:O     | 1:A:44:MET:HG2  | 2.13                     | 0.49              |
| 1:A:287:ILE:HG22 | 1:A:290:ARG:CZ  | 2.43                     | 0.49              |
| 1:B:58:ALA:HA    | 1:B:65:LEU:CD2  | 2.43                     | 0.49              |
| 1:B:173:HIS:NE2  | 1:C:267:ILE:C   | 2.67                     | 0.49              |
| 1:D:43:VAL:O     | 1:D:44:MET:HG2  | 2.13                     | 0.49              |
| 1:G:2:GLU:OE2    | 1:G:2:GLU:HA    | 2.10                     | 0.49              |
| 1:G:35:VAL:CA    | 1:G:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:H:34:ILE:HD13  | 1:H:67:LEU:CD1  | 2.41                     | 0.49              |
| 1:H:35:VAL:CA    | 1:H:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:H:287:ILE:HG13 | 1:H:288:ASP:N   | 2.27                     | 0.49              |
| 1:I:22:ALA:HB1   | 1:I:348:SER:CB  | 2.41                     | 0.49              |
| 1:I:58:ALA:HA    | 1:I:65:LEU:CD2  | 2.43                     | 0.49              |
| 1:J:180:LEU:HD12 | 1:J:181:ALA:O   | 2.13                     | 0.49              |
| 1:K:2:GLU:OE2    | 1:K:2:GLU:HA    | 2.11                     | 0.49              |
| 1:K:335:ARG:O    | 1:K:338:SER:HB3 | 2.13                     | 0.49              |
| 1:L:35:VAL:CA    | 1:L:54:VAL:CG2  | 2.90                     | 0.49              |
| 1:O:8:LEU:HB2    | 1:O:103:THR:HA  | 1.95                     | 0.49              |
| 1:Q:270:GLU:O    | 1:Q:270:GLU:CD  | 2.52                     | 0.49              |
| 1:R:270:GLU:O    | 1:R:270:GLU:CD  | 2.52                     | 0.49              |
| 1:S:298:VAL:HG12 | 1:S:335:ARG:NH1 | 2.28                     | 0.49              |
| 1:U:180:LEU:HD12 | 1:U:181:ALA:O   | 2.13                     | 0.49              |
| 1:U:369:ILE:C    | 1:U:371:HIS:H   | 2.15                     | 0.49              |
| 1:B:369:ILE:C    | 1:B:371:HIS:H   | 2.15                     | 0.48              |
| 1:C:8:LEU:HB2    | 1:C:103:THR:HA  | 1.95                     | 0.48              |
| 1:C:270:GLU:O    | 1:C:270:GLU:CD  | 2.51                     | 0.48              |
| 1:D:58:ALA:HA    | 1:D:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:F:335:ARG:O    | 1:F:338:SER:HB3 | 2.13                     | 0.48              |
| 1:G:173:HIS:NE2  | 1:H:267:ILE:C   | 2.67                     | 0.48              |
| 1:H:335:ARG:O    | 1:H:338:SER:HB3 | 2.13                     | 0.48              |
| 1:I:335:ARG:O    | 1:I:338:SER:HB3 | 2.13                     | 0.48              |
| 1:J:35:VAL:CA    | 1:J:54:VAL:CG2  | 2.90                     | 0.48              |
| 1:J:290:ARG:NH1  | 1:L:244:ASP:OD1 | 2.45                     | 0.48              |
| 1:J:298:VAL:HG12 | 1:J:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:M:335:ARG:O    | 1:M:338:SER:HB3 | 2.13                     | 0.48              |
| 1:O:44:MET:CG    | 1:O:45:VAL:N    | 2.75                     | 0.48              |
| 1:O:335:ARG:O    | 1:O:338:SER:HB3 | 2.13                     | 0.48              |
| 1:P:34:ILE:HG22  | 1:P:35:VAL:H    | 1.78                     | 0.48              |
| 1:P:270:GLU:O    | 1:P:270:GLU:CD  | 2.52                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:P:287:ILE:HG13 | 1:P:288:ASP:N   | 2.27                     | 0.48              |
| 1:Q:287:ILE:HG13 | 1:Q:288:ASP:N   | 2.27                     | 0.48              |
| 1:Q:335:ARG:O    | 1:Q:338:SER:HB3 | 2.13                     | 0.48              |
| 1:Q:369:ILE:C    | 1:Q:371:HIS:H   | 2.15                     | 0.48              |
| 1:R:287:ILE:HG22 | 1:R:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:S:8:LEU:HB2    | 1:S:103:THR:HA  | 1.95                     | 0.48              |
| 1:S:369:ILE:C    | 1:S:371:HIS:H   | 2.15                     | 0.48              |
| 1:V:180:LEU:HD12 | 1:V:181:ALA:O   | 2.13                     | 0.48              |
| 1:B:180:LEU:HD12 | 1:B:181:ALA:O   | 2.13                     | 0.48              |
| 1:C:22:ALA:HB1   | 1:C:348:SER:CB  | 2.41                     | 0.48              |
| 1:D:35:VAL:CA    | 1:D:54:VAL:CG2  | 2.90                     | 0.48              |
| 1:D:270:GLU:O    | 1:D:270:GLU:CD  | 2.52                     | 0.48              |
| 1:D:287:ILE:HG22 | 1:D:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:D:335:ARG:O    | 1:D:338:SER:HB3 | 2.13                     | 0.48              |
| 1:E:180:LEU:HD12 | 1:E:181:ALA:O   | 2.13                     | 0.48              |
| 1:G:34:ILE:HG22  | 1:G:35:VAL:H    | 1.78                     | 0.48              |
| 1:G:43:VAL:O     | 1:G:44:MET:HG2  | 2.13                     | 0.48              |
| 1:H:8:LEU:HB2    | 1:H:103:THR:HA  | 1.95                     | 0.48              |
| 1:J:227:MET:HA   | 1:J:227:MET:HE3 | 1.94                     | 0.48              |
| 1:J:270:GLU:O    | 1:J:270:GLU:CD  | 2.51                     | 0.48              |
| 1:K:58:ALA:HA    | 1:K:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:K:287:ILE:HG22 | 1:K:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:M:173:HIS:NE2  | 1:N:267:ILE:C   | 2.67                     | 0.48              |
| 1:O:173:HIS:NE2  | 1:P:267:ILE:C   | 2.67                     | 0.48              |
| 1:R:8:LEU:HB2    | 1:R:103:THR:HA  | 1.95                     | 0.48              |
| 1:R:22:ALA:HB1   | 1:R:348:SER:CB  | 2.41                     | 0.48              |
| 1:S:173:HIS:NE2  | 1:T:267:ILE:C   | 2.67                     | 0.48              |
| 1:S:335:ARG:O    | 1:S:338:SER:HB3 | 2.13                     | 0.48              |
| 1:T:287:ILE:HG13 | 1:T:288:ASP:N   | 2.27                     | 0.48              |
| 1:U:35:VAL:CA    | 1:U:54:VAL:CG2  | 2.90                     | 0.48              |
| 1:U:58:ALA:HA    | 1:U:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:W:270:GLU:O    | 1:W:270:GLU:CD  | 2.52                     | 0.48              |
| 1:W:369:ILE:C    | 1:W:371:HIS:H   | 2.15                     | 0.48              |
| 1:B:58:ALA:CB    | 1:B:65:LEU:CD2  | 2.90                     | 0.48              |
| 1:B:270:GLU:O    | 1:B:270:GLU:CD  | 2.52                     | 0.48              |
| 1:C:287:ILE:HG22 | 1:C:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:G:58:ALA:HA    | 1:G:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:G:270:GLU:O    | 1:G:270:GLU:CD  | 2.52                     | 0.48              |
| 1:H:43:VAL:O     | 1:H:44:MET:HG2  | 2.13                     | 0.48              |
| 1:K:173:HIS:NE2  | 1:L:267:ILE:C   | 2.67                     | 0.48              |
| 1:K:180:LEU:HD12 | 1:K:181:ALA:O   | 2.13                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:M:58:ALA:CB    | 1:M:65:LEU:CD2  | 2.90                     | 0.48              |
| 1:N:43:VAL:O     | 1:N:44:MET:HG2  | 2.13                     | 0.48              |
| 1:P:8:LEU:HB2    | 1:P:103:THR:HA  | 1.95                     | 0.48              |
| 1:P:180:LEU:HD12 | 1:P:181:ALA:O   | 2.14                     | 0.48              |
| 1:P:299:MET:HE1  | 1:P:304:THR:HB  | 1.96                     | 0.48              |
| 1:Q:173:HIS:NE2  | 1:R:267:ILE:C   | 2.67                     | 0.48              |
| 1:R:34:ILE:HG22  | 1:R:54:VAL:HG21 | 1.96                     | 0.48              |
| 1:R:173:HIS:NE2  | 1:S:267:ILE:C   | 2.67                     | 0.48              |
| 1:S:58:ALA:HA    | 1:S:65:LEU:CD2  | 2.44                     | 0.48              |
| 1:T:287:ILE:HG22 | 1:T:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:V:2:GLU:OE2    | 1:V:2:GLU:HA    | 2.10                     | 0.48              |
| 1:V:173:HIS:NE2  | 1:W:267:ILE:C   | 2.67                     | 0.48              |
| 1:V:335:ARG:O    | 1:V:338:SER:HB3 | 2.13                     | 0.48              |
| 1:W:35:VAL:CA    | 1:W:54:VAL:CG2  | 2.90                     | 0.48              |
| 1:W:287:ILE:HG22 | 1:W:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:A:8:LEU:HB2    | 1:A:103:THR:HA  | 1.95                     | 0.48              |
| 1:B:8:LEU:HB2    | 1:B:103:THR:HA  | 1.95                     | 0.48              |
| 1:B:35:VAL:CA    | 1:B:54:VAL:CG2  | 2.90                     | 0.48              |
| 1:B:335:ARG:O    | 1:B:338:SER:HB3 | 2.14                     | 0.48              |
| 1:C:2:GLU:OE2    | 1:C:2:GLU:HA    | 2.10                     | 0.48              |
| 1:D:173:HIS:NE2  | 1:E:267:ILE:C   | 2.67                     | 0.48              |
| 1:D:180:LEU:HD12 | 1:D:181:ALA:O   | 2.13                     | 0.48              |
| 1:F:35:VAL:CA    | 1:F:54:VAL:CG2  | 2.90                     | 0.48              |
| 1:G:180:LEU:HD12 | 1:G:181:ALA:O   | 2.13                     | 0.48              |
| 1:I:8:LEU:HB2    | 1:I:103:THR:HA  | 1.95                     | 0.48              |
| 1:I:173:HIS:NE2  | 1:J:267:ILE:C   | 2.67                     | 0.48              |
| 1:I:270:GLU:O    | 1:I:270:GLU:CD  | 2.51                     | 0.48              |
| 1:J:8:LEU:HB2    | 1:J:103:THR:HA  | 1.95                     | 0.48              |
| 1:J:34:ILE:HD13  | 1:J:67:LEU:CD1  | 2.41                     | 0.48              |
| 1:K:287:ILE:HG13 | 1:K:288:ASP:N   | 2.27                     | 0.48              |
| 1:L:8:LEU:HB2    | 1:L:103:THR:HA  | 1.95                     | 0.48              |
| 1:L:43:VAL:O     | 1:L:44:MET:HG2  | 2.13                     | 0.48              |
| 1:N:8:LEU:HB2    | 1:N:103:THR:HA  | 1.95                     | 0.48              |
| 1:N:37:ARG:CG    | 1:N:38:PRO:N    | 2.75                     | 0.48              |
| 1:N:287:ILE:HG22 | 1:N:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:N:299:MET:HE1  | 1:N:304:THR:HB  | 1.96                     | 0.48              |
| 1:P:34:ILE:HG22  | 1:P:54:VAL:HG21 | 1.96                     | 0.48              |
| 1:Q:287:ILE:HG22 | 1:Q:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:T:335:ARG:O    | 1:T:338:SER:HB3 | 2.13                     | 0.48              |
| 1:U:8:LEU:HB2    | 1:U:103:THR:HA  | 1.95                     | 0.48              |
| 1:U:335:ARG:O    | 1:U:338:SER:HB3 | 2.13                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:A:223:PHE:CD1  | 1:A:259:GLU:CG  | 2.96                     | 0.48              |
| 1:A:298:VAL:HG12 | 1:A:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:C:43:VAL:O     | 1:C:44:MET:HG2  | 2.13                     | 0.48              |
| 1:G:300:SER:HA   | 1:G:335:ARG:HG2 | 1.89                     | 0.48              |
| 1:H:173:HIS:NE2  | 1:I:267:ILE:C   | 2.67                     | 0.48              |
| 1:H:270:GLU:O    | 1:H:270:GLU:CD  | 2.52                     | 0.48              |
| 1:J:335:ARG:O    | 1:J:338:SER:HB3 | 2.14                     | 0.48              |
| 1:M:8:LEU:HB2    | 1:M:103:THR:HA  | 1.95                     | 0.48              |
| 1:N:270:GLU:O    | 1:N:270:GLU:CD  | 2.52                     | 0.48              |
| 1:Q:58:ALA:CB    | 1:Q:65:LEU:CD2  | 2.90                     | 0.48              |
| 1:Q:58:ALA:HA    | 1:Q:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:R:2:GLU:HA     | 1:R:2:GLU:OE2   | 2.10                     | 0.48              |
| 1:R:43:VAL:O     | 1:R:44:MET:HG2  | 2.13                     | 0.48              |
| 1:R:180:LEU:HD12 | 1:R:181:ALA:O   | 2.13                     | 0.48              |
| 1:S:287:ILE:HG13 | 1:S:288:ASP:N   | 2.27                     | 0.48              |
| 1:T:8:LEU:HB2    | 1:T:103:THR:HA  | 1.95                     | 0.48              |
| 1:T:173:HIS:NE2  | 1:U:267:ILE:C   | 2.67                     | 0.48              |
| 1:V:43:VAL:O     | 1:V:44:MET:HG2  | 2.13                     | 0.48              |
| 1:V:298:VAL:HG12 | 1:V:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:W:34:ILE:HG22  | 1:W:35:VAL:H    | 1.78                     | 0.48              |
| 1:A:180:LEU:HD12 | 1:A:181:ALA:O   | 2.13                     | 0.48              |
| 1:D:369:ILE:C    | 1:D:371:HIS:H   | 2.15                     | 0.48              |
| 1:E:34:ILE:HG23  | 1:E:68:LYS:H    | 1.79                     | 0.48              |
| 1:E:298:VAL:HG12 | 1:E:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:F:58:ALA:HA    | 1:F:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:F:173:HIS:NE2  | 1:G:267:ILE:C   | 2.67                     | 0.48              |
| 1:F:287:ILE:HG13 | 1:F:288:ASP:N   | 2.27                     | 0.48              |
| 1:K:147:ARG:CG   | 1:K:147:ARG:NH2 | 2.71                     | 0.48              |
| 1:L:34:ILE:HD13  | 1:L:67:LEU:CD1  | 2.41                     | 0.48              |
| 1:L:34:ILE:HG23  | 1:L:68:LYS:H    | 1.79                     | 0.48              |
| 1:L:298:VAL:HG12 | 1:L:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:M:142:LEU:HD21 | 1:M:165:ILE:CD1 | 2.38                     | 0.48              |
| 1:M:236:LEU:HD22 | 1:M:251:GLY:C   | 2.34                     | 0.48              |
| 1:M:287:ILE:HG13 | 1:M:288:ASP:N   | 2.27                     | 0.48              |
| 1:M:298:VAL:HG12 | 1:M:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:N:34:ILE:HG22  | 1:N:54:VAL:HG21 | 1.96                     | 0.48              |
| 1:N:34:ILE:HG23  | 1:N:68:LYS:H    | 1.79                     | 0.48              |
| 1:Q:34:ILE:HG23  | 1:Q:68:LYS:H    | 1.79                     | 0.48              |
| 1:Q:361:GLU:HB3  | 1:Q:369:ILE:CD1 | 2.14                     | 0.48              |
| 1:T:34:ILE:HG22  | 1:T:54:VAL:HG21 | 1.96                     | 0.48              |
| 1:U:223:PHE:CD1  | 1:U:259:GLU:CG  | 2.96                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:V:58:ALA:HA    | 1:V:65:LEU:CD2  | 2.44                     | 0.48              |
| 1:V:223:PHE:CD1  | 1:V:259:GLU:CG  | 2.96                     | 0.48              |
| 1:V:287:ILE:HG13 | 1:V:288:ASP:N   | 2.27                     | 0.48              |
| 1:W:8:LEU:HB2    | 1:W:103:THR:HA  | 1.95                     | 0.48              |
| 1:W:58:ALA:HA    | 1:W:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:W:223:PHE:CD1  | 1:W:259:GLU:CG  | 2.96                     | 0.48              |
| 1:C:298:VAL:HG12 | 1:C:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:D:236:LEU:HD22 | 1:D:251:GLY:C   | 2.34                     | 0.48              |
| 1:E:34:ILE:HD13  | 1:E:67:LEU:CD1  | 2.41                     | 0.48              |
| 1:E:58:ALA:HA    | 1:E:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:F:180:LEU:HD12 | 1:F:181:ALA:O   | 2.13                     | 0.48              |
| 1:F:236:LEU:HD22 | 1:F:251:GLY:C   | 2.34                     | 0.48              |
| 1:G:287:ILE:HG22 | 1:G:290:ARG:CZ  | 2.43                     | 0.48              |
| 1:H:180:LEU:HD12 | 1:H:181:ALA:O   | 2.13                     | 0.48              |
| 1:I:298:VAL:HG12 | 1:I:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:J:236:LEU:HD22 | 1:J:251:GLY:C   | 2.34                     | 0.48              |
| 1:K:270:GLU:O    | 1:K:270:GLU:CD  | 2.51                     | 0.48              |
| 1:M:270:GLU:O    | 1:M:270:GLU:CD  | 2.52                     | 0.48              |
| 1:N:58:ALA:HA    | 1:N:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:N:227:MET:HE3  | 1:N:227:MET:HA  | 1.95                     | 0.48              |
| 1:O:34:ILE:HG23  | 1:O:68:LYS:H    | 1.79                     | 0.48              |
| 1:O:58:ALA:CB    | 1:O:65:LEU:CD2  | 2.90                     | 0.48              |
| 1:O:180:LEU:HD12 | 1:O:181:ALA:O   | 2.13                     | 0.48              |
| 1:P:34:ILE:HG23  | 1:P:68:LYS:H    | 1.79                     | 0.48              |
| 1:Q:223:PHE:CD1  | 1:Q:259:GLU:CG  | 2.96                     | 0.48              |
| 1:S:223:PHE:CD1  | 1:S:259:GLU:CG  | 2.96                     | 0.48              |
| 1:T:34:ILE:HD13  | 1:T:67:LEU:CD1  | 2.41                     | 0.48              |
| 1:U:298:VAL:HG12 | 1:U:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:A:34:ILE:HG22  | 1:A:54:VAL:HG21 | 1.96                     | 0.48              |
| 1:A:335:ARG:O    | 1:A:338:SER:HB3 | 2.13                     | 0.48              |
| 1:B:287:ILE:HG13 | 1:B:288:ASP:N   | 2.27                     | 0.48              |
| 1:D:58:ALA:CB    | 1:D:65:LEU:CD2  | 2.90                     | 0.48              |
| 1:E:270:GLU:CD   | 1:E:270:GLU:O   | 2.51                     | 0.48              |
| 1:F:34:ILE:HG23  | 1:F:68:LYS:H    | 1.79                     | 0.48              |
| 1:F:39:ARG:NE    | 1:F:66:THR:CA   | 2.69                     | 0.48              |
| 1:G:298:VAL:HG12 | 1:G:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:G:335:ARG:O    | 1:G:338:SER:HB3 | 2.14                     | 0.48              |
| 1:G:361:GLU:HB3  | 1:G:369:ILE:CD1 | 2.14                     | 0.48              |
| 1:H:236:LEU:HD22 | 1:H:251:GLY:C   | 2.34                     | 0.48              |
| 1:I:8:LEU:O      | 1:I:104:LEU:N   | 2.47                     | 0.48              |
| 1:K:58:ALA:CB    | 1:K:65:LEU:CD2  | 2.90                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:M:58:ALA:HA    | 1:M:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:O:223:PHE:CD1  | 1:O:259:GLU:CG  | 2.96                     | 0.48              |
| 1:P:58:ALA:HA    | 1:P:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:Q:180:LEU:HD12 | 1:Q:181:ALA:O   | 2.14                     | 0.48              |
| 1:R:58:ALA:HA    | 1:R:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:T:58:ALA:HA    | 1:T:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:T:223:PHE:CD1  | 1:T:259:GLU:CG  | 2.96                     | 0.48              |
| 1:T:270:GLU:O    | 1:T:270:GLU:CD  | 2.51                     | 0.48              |
| 1:V:270:GLU:O    | 1:V:270:GLU:CD  | 2.52                     | 0.48              |
| 1:W:34:ILE:HG22  | 1:W:54:VAL:HG21 | 1.96                     | 0.48              |
| 1:C:223:PHE:CD1  | 1:C:259:GLU:CG  | 2.96                     | 0.48              |
| 1:D:287:ILE:HG13 | 1:D:288:ASP:N   | 2.27                     | 0.48              |
| 1:E:173:HIS:NE2  | 1:F:267:ILE:C   | 2.67                     | 0.48              |
| 1:E:369:ILE:HG22 | 1:E:370:VAL:N   | 2.29                     | 0.48              |
| 1:F:288:ASP:OD2  | 1:H:204:ALA:HB1 | 2.14                     | 0.48              |
| 1:G:34:ILE:HD13  | 1:G:67:LEU:CD1  | 2.41                     | 0.48              |
| 1:G:34:ILE:HG23  | 1:G:68:LYS:H    | 1.79                     | 0.48              |
| 1:K:369:ILE:HG22 | 1:K:370:VAL:N   | 2.29                     | 0.48              |
| 1:L:180:LEU:HD12 | 1:L:181:ALA:O   | 2.13                     | 0.48              |
| 1:L:236:LEU:HD22 | 1:L:251:GLY:C   | 2.34                     | 0.48              |
| 1:N:34:ILE:HG22  | 1:N:35:VAL:H    | 1.78                     | 0.48              |
| 1:N:58:ALA:O     | 1:N:59:GLN:C    | 2.53                     | 0.48              |
| 1:N:369:ILE:HG22 | 1:N:370:VAL:N   | 2.29                     | 0.48              |
| 1:P:173:HIS:NE2  | 1:Q:267:ILE:C   | 2.67                     | 0.48              |
| 1:P:335:ARG:O    | 1:P:338:SER:HB3 | 2.13                     | 0.48              |
| 1:S:43:VAL:O     | 1:S:44:MET:HG2  | 2.13                     | 0.48              |
| 1:S:270:GLU:O    | 1:S:270:GLU:CD  | 2.52                     | 0.48              |
| 1:T:8:LEU:O      | 1:T:104:LEU:N   | 2.47                     | 0.48              |
| 1:T:142:LEU:HD21 | 1:T:165:ILE:CD1 | 2.39                     | 0.48              |
| 1:V:369:ILE:HG22 | 1:V:370:VAL:N   | 2.29                     | 0.48              |
| 1:W:180:LEU:HD12 | 1:W:181:ALA:O   | 2.13                     | 0.48              |
| 1:A:142:LEU:HD21 | 1:A:165:ILE:CD1 | 2.38                     | 0.48              |
| 1:A:173:HIS:NE2  | 1:B:267:ILE:C   | 2.67                     | 0.48              |
| 1:B:288:ASP:OD2  | 1:D:204:ALA:HB1 | 2.14                     | 0.48              |
| 1:B:298:VAL:HG12 | 1:B:335:ARG:NH1 | 2.28                     | 0.48              |
| 1:C:34:ILE:HG23  | 1:C:68:LYS:H    | 1.79                     | 0.48              |
| 1:C:44:MET:CG    | 1:C:45:VAL:N    | 2.75                     | 0.48              |
| 1:C:58:ALA:HA    | 1:C:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:G:369:ILE:HG22 | 1:G:370:VAL:N   | 2.29                     | 0.48              |
| 1:J:58:ALA:O     | 1:J:59:GLN:C    | 2.53                     | 0.48              |
| 1:J:173:HIS:NE2  | 1:K:267:ILE:C   | 2.67                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:J:288:ASP:OD2  | 1:L:204:ALA:HB1 | 2.14                     | 0.48              |
| 1:L:34:ILE:HG22  | 1:L:54:VAL:HG21 | 1.96                     | 0.48              |
| 1:L:58:ALA:HA    | 1:L:65:LEU:CD2  | 2.43                     | 0.48              |
| 1:M:223:PHE:CD1  | 1:M:259:GLU:CG  | 2.96                     | 0.48              |
| 1:N:180:LEU:HD12 | 1:N:181:ALA:O   | 2.13                     | 0.48              |
| 1:P:34:ILE:HD13  | 1:P:67:LEU:CD1  | 2.41                     | 0.48              |
| 1:Q:288:ASP:OD2  | 1:S:204:ALA:HB1 | 2.14                     | 0.48              |
| 1:S:34:ILE:HG23  | 1:S:68:LYS:H    | 1.79                     | 0.48              |
| 1:S:180:LEU:HD12 | 1:S:181:ALA:O   | 2.13                     | 0.48              |
| 1:T:369:ILE:HG22 | 1:T:370:VAL:N   | 2.29                     | 0.48              |
| 1:U:173:HIS:NE2  | 1:V:267:ILE:C   | 2.67                     | 0.48              |
| 1:U:288:ASP:OD2  | 1:W:204:ALA:HB1 | 2.14                     | 0.48              |
| 1:V:8:LEU:O      | 1:V:104:LEU:N   | 2.47                     | 0.48              |
| 1:V:227:MET:HA   | 1:V:227:MET:HE3 | 1.96                     | 0.48              |
| 1:V:335:ARG:HA   | 1:V:335:ARG:HD3 | 1.39                     | 0.48              |
| 1:W:34:ILE:HG23  | 1:W:68:LYS:H    | 1.79                     | 0.48              |
| 1:W:335:ARG:O    | 1:W:338:SER:HB3 | 2.14                     | 0.48              |
| 1:W:369:ILE:HG22 | 1:W:370:VAL:N   | 2.29                     | 0.48              |
| 1:A:31:PHE:HA    | 1:A:32:PRO:HD3  | 1.66                     | 0.47              |
| 1:A:58:ALA:HA    | 1:A:65:LEU:CD2  | 2.43                     | 0.47              |
| 1:C:58:ALA:O     | 1:C:59:GLN:C    | 2.53                     | 0.47              |
| 1:C:227:MET:HA   | 1:C:227:MET:HE3 | 1.96                     | 0.47              |
| 1:D:288:ASP:OD2  | 1:F:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:E:8:LEU:O      | 1:E:104:LEU:N   | 2.47                     | 0.47              |
| 1:E:44:MET:CG    | 1:E:45:VAL:N    | 2.76                     | 0.47              |
| 1:H:34:ILE:HG23  | 1:H:68:LYS:H    | 1.79                     | 0.47              |
| 1:H:58:ALA:HA    | 1:H:65:LEU:CD2  | 2.43                     | 0.47              |
| 1:I:44:MET:CG    | 1:I:45:VAL:N    | 2.75                     | 0.47              |
| 1:I:180:LEU:HD12 | 1:I:181:ALA:O   | 2.13                     | 0.47              |
| 1:K:31:PHE:HA    | 1:K:32:PRO:HD3  | 1.66                     | 0.47              |
| 1:K:180:LEU:O    | 1:K:180:LEU:HG  | 2.11                     | 0.47              |
| 1:K:223:PHE:CD1  | 1:K:259:GLU:CG  | 2.96                     | 0.47              |
| 1:M:34:ILE:HG23  | 1:M:68:LYS:H    | 1.79                     | 0.47              |
| 1:N:2:GLU:OE2    | 1:N:2:GLU:HA    | 2.10                     | 0.47              |
| 1:N:288:ASP:OD2  | 1:P:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:N:335:ARG:O    | 1:N:338:SER:HB3 | 2.14                     | 0.47              |
| 1:O:58:ALA:HA    | 1:O:65:LEU:CD2  | 2.43                     | 0.47              |
| 1:O:236:LEU:HD22 | 1:O:251:GLY:C   | 2.34                     | 0.47              |
| 1:P:288:ASP:OD2  | 1:R:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:Q:58:ALA:O     | 1:Q:59:GLN:C    | 2.53                     | 0.47              |
| 1:R:335:ARG:O    | 1:R:338:SER:HB3 | 2.14                     | 0.47              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:U:34:ILE:HG22  | 1:U:35:VAL:H    | 1.78                     | 0.47              |
| 1:U:58:ALA:O     | 1:U:59:GLN:C    | 2.53                     | 0.47              |
| 1:U:227:MET:HA   | 1:U:227:MET:HE3 | 1.95                     | 0.47              |
| 1:V:147:ARG:CG   | 1:V:147:ARG:NH2 | 2.71                     | 0.47              |
| 1:W:298:VAL:HG12 | 1:W:335:ARG:NH1 | 2.28                     | 0.47              |
| 1:A:34:ILE:HD13  | 1:A:67:LEU:CD1  | 2.41                     | 0.47              |
| 1:C:34:ILE:HG22  | 1:C:54:VAL:HG21 | 1.96                     | 0.47              |
| 1:C:173:HIS:NE2  | 1:D:267:ILE:C   | 2.67                     | 0.47              |
| 1:C:236:LEU:HD22 | 1:C:251:GLY:C   | 2.34                     | 0.47              |
| 1:D:34:ILE:HG23  | 1:D:68:LYS:H    | 1.79                     | 0.47              |
| 1:F:58:ALA:O     | 1:F:59:GLN:C    | 2.53                     | 0.47              |
| 1:H:369:ILE:HG22 | 1:H:370:VAL:N   | 2.29                     | 0.47              |
| 1:I:223:PHE:CD1  | 1:I:259:GLU:CG  | 2.96                     | 0.47              |
| 1:J:58:ALA:HA    | 1:J:65:LEU:CD2  | 2.43                     | 0.47              |
| 1:K:8:LEU:O      | 1:K:104:LEU:N   | 2.47                     | 0.47              |
| 1:K:288:ASP:OD2  | 1:M:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:L:335:ARG:O    | 1:L:338:SER:HB3 | 2.13                     | 0.47              |
| 1:M:180:LEU:HD12 | 1:M:181:ALA:O   | 2.13                     | 0.47              |
| 1:N:173:HIS:NE2  | 1:O:267:ILE:C   | 2.67                     | 0.47              |
| 1:O:58:ALA:O     | 1:O:59:GLN:C    | 2.53                     | 0.47              |
| 1:O:335:ARG:HA   | 1:O:335:ARG:HD3 | 1.39                     | 0.47              |
| 1:P:227:MET:HA   | 1:P:227:MET:HE3 | 1.96                     | 0.47              |
| 1:R:288:ASP:OD2  | 1:T:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:S:35:VAL:CA    | 1:S:54:VAL:CG2  | 2.90                     | 0.47              |
| 1:T:180:LEU:HD12 | 1:T:181:ALA:O   | 2.14                     | 0.47              |
| 1:T:298:VAL:HG12 | 1:T:335:ARG:NH1 | 2.28                     | 0.47              |
| 1:U:34:ILE:HG22  | 1:U:54:VAL:HG21 | 1.96                     | 0.47              |
| 1:V:34:ILE:HG23  | 1:V:68:LYS:H    | 1.79                     | 0.47              |
| 1:V:58:ALA:CB    | 1:V:65:LEU:CD2  | 2.90                     | 0.47              |
| 1:W:39:ARG:NE    | 1:W:66:THR:CA   | 2.69                     | 0.47              |
| 1:A:44:MET:CG    | 1:A:45:VAL:N    | 2.75                     | 0.47              |
| 1:A:236:LEU:HD11 | 1:A:237:GLU:HG2 | 1.96                     | 0.47              |
| 1:A:288:ASP:OD2  | 1:C:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:B:58:ALA:O     | 1:B:59:GLN:C    | 2.53                     | 0.47              |
| 1:B:236:LEU:HD22 | 1:B:251:GLY:C   | 2.34                     | 0.47              |
| 1:C:180:LEU:HD12 | 1:C:181:ALA:O   | 2.13                     | 0.47              |
| 1:C:236:LEU:HD11 | 1:C:237:GLU:HG2 | 1.96                     | 0.47              |
| 1:E:34:ILE:HG22  | 1:E:35:VAL:H    | 1.78                     | 0.47              |
| 1:E:223:PHE:CD1  | 1:E:259:GLU:CG  | 2.96                     | 0.47              |
| 1:E:236:LEU:HD22 | 1:E:251:GLY:C   | 2.34                     | 0.47              |
| 1:F:142:LEU:HD21 | 1:F:165:ILE:CD1 | 2.38                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:H:143:TYR:CZ   | 1:H:345:ILE:CG2 | 2.98                     | 0.47              |
| 1:J:44:MET:CG    | 1:J:45:VAL:N    | 2.75                     | 0.47              |
| 1:J:336:LYS:HE2  | 2:J:401:ADP:C5' | 2.38                     | 0.47              |
| 1:N:236:LEU:HD22 | 1:N:251:GLY:C   | 2.34                     | 0.47              |
| 1:N:298:VAL:HG12 | 1:N:335:ARG:NH1 | 2.28                     | 0.47              |
| 1:P:143:TYR:CZ   | 1:P:345:ILE:CG2 | 2.98                     | 0.47              |
| 1:P:369:ILE:HG22 | 1:P:370:VAL:N   | 2.29                     | 0.47              |
| 1:R:34:ILE:HD13  | 1:R:67:LEU:CD1  | 2.41                     | 0.47              |
| 1:R:34:ILE:HG23  | 1:R:68:LYS:H    | 1.79                     | 0.47              |
| 1:R:58:ALA:O     | 1:R:59:GLN:C    | 2.53                     | 0.47              |
| 1:T:236:LEU:HD22 | 1:T:251:GLY:C   | 2.34                     | 0.47              |
| 1:U:34:ILE:HG23  | 1:U:68:LYS:H    | 1.79                     | 0.47              |
| 1:V:8:LEU:HB2    | 1:V:103:THR:HA  | 1.95                     | 0.47              |
| 1:V:34:ILE:HG22  | 1:V:54:VAL:HG21 | 1.96                     | 0.47              |
| 1:W:143:TYR:CZ   | 1:W:345:ILE:CG2 | 2.98                     | 0.47              |
| 1:W:236:LEU:HD22 | 1:W:251:GLY:C   | 2.34                     | 0.47              |
| 1:A:35:VAL:CA    | 1:A:54:VAL:CG2  | 2.90                     | 0.47              |
| 1:A:143:TYR:CZ   | 1:A:345:ILE:CG2 | 2.98                     | 0.47              |
| 1:A:236:LEU:HD22 | 1:A:251:GLY:C   | 2.34                     | 0.47              |
| 1:D:58:ALA:O     | 1:D:59:GLN:C    | 2.53                     | 0.47              |
| 1:G:223:PHE:CD1  | 1:G:259:GLU:CG  | 2.96                     | 0.47              |
| 1:I:34:ILE:HG23  | 1:I:68:LYS:H    | 1.79                     | 0.47              |
| 1:I:288:ASP:OD2  | 1:K:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:J:300:SER:HA   | 1:J:335:ARG:HG2 | 1.89                     | 0.47              |
| 1:J:369:ILE:HG22 | 1:J:370:VAL:N   | 2.29                     | 0.47              |
| 1:K:8:LEU:HB2    | 1:K:103:THR:HA  | 1.95                     | 0.47              |
| 1:K:58:ALA:O     | 1:K:59:GLN:C    | 2.53                     | 0.47              |
| 1:K:236:LEU:HD22 | 1:K:251:GLY:C   | 2.34                     | 0.47              |
| 1:K:298:VAL:HG12 | 1:K:335:ARG:NH1 | 2.28                     | 0.47              |
| 1:M:58:ALA:O     | 1:M:59:GLN:C    | 2.53                     | 0.47              |
| 1:M:288:ASP:OD2  | 1:O:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:R:34:ILE:CG2   | 1:R:67:LEU:HD22 | 2.28                     | 0.47              |
| 1:R:236:LEU:HD22 | 1:R:251:GLY:C   | 2.34                     | 0.47              |
| 1:S:34:ILE:HG22  | 1:S:35:VAL:H    | 1.78                     | 0.47              |
| 1:T:227:MET:HA   | 1:T:227:MET:HE3 | 1.96                     | 0.47              |
| 1:A:369:ILE:HG22 | 1:A:370:VAL:N   | 2.29                     | 0.47              |
| 1:B:61:LYS:HG2   | 1:B:64:ILE:CG2  | 2.44                     | 0.47              |
| 1:B:369:ILE:HG22 | 1:B:370:VAL:N   | 2.29                     | 0.47              |
| 1:C:288:ASP:OD2  | 1:E:204:ALA:HB1 | 2.14                     | 0.47              |
| 1:C:299:MET:HE1  | 1:C:304:THR:HB  | 1.97                     | 0.47              |
| 1:C:335:ARG:O    | 1:C:338:SER:HB3 | 2.14                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:300:SER:HA   | 1:E:335:ARG:HG2  | 1.89                     | 0.47              |
| 1:F:288:ASP:OD1  | 1:H:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:G:58:ALA:O     | 1:G:59:GLN:C     | 2.53                     | 0.47              |
| 1:H:236:LEU:HD11 | 1:H:237:GLU:HG2  | 1.96                     | 0.47              |
| 1:H:288:ASP:OD1  | 1:J:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:J:2:GLU:HA     | 1:J:2:GLU:OE2    | 2.10                     | 0.47              |
| 1:J:143:TYR:CZ   | 1:J:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:L:369:ILE:HG22 | 1:L:370:VAL:N    | 2.29                     | 0.47              |
| 1:M:369:ILE:HG22 | 1:M:370:VAL:N    | 2.29                     | 0.47              |
| 1:O:43:VAL:O     | 1:O:44:MET:HG2   | 2.13                     | 0.47              |
| 1:R:143:TYR:CZ   | 1:R:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:R:287:ILE:HD12 | 1:T:208:ILE:HD13 | 1.96                     | 0.47              |
| 1:T:169:TYR:CD1  | 1:V:42:GLY:HA3   | 2.50                     | 0.47              |
| 1:U:143:TYR:CZ   | 1:U:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:U:236:LEU:HD22 | 1:U:251:GLY:C    | 2.34                     | 0.47              |
| 1:V:236:LEU:HD22 | 1:V:251:GLY:C    | 2.34                     | 0.47              |
| 1:A:37:ARG:O     | 1:A:66:THR:CG2   | 2.63                     | 0.47              |
| 1:A:299:MET:HE1  | 1:A:304:THR:HB   | 1.97                     | 0.47              |
| 1:B:34:ILE:HG22  | 1:B:54:VAL:HG21  | 1.95                     | 0.47              |
| 1:C:8:LEU:O      | 1:C:104:LEU:N    | 2.47                     | 0.47              |
| 1:C:369:ILE:HG22 | 1:C:370:VAL:N    | 2.29                     | 0.47              |
| 1:E:288:ASP:OD1  | 1:G:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:J:14:SER:HB2   | 1:J:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:K:288:ASP:OD1  | 1:M:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:N:143:TYR:CZ   | 1:N:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:O:8:LEU:O      | 1:O:104:LEU:N    | 2.47                     | 0.47              |
| 1:P:58:ALA:O     | 1:P:59:GLN:C     | 2.53                     | 0.47              |
| 1:Q:236:LEU:HD22 | 1:Q:251:GLY:C    | 2.34                     | 0.47              |
| 1:Q:288:ASP:OD1  | 1:S:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:R:169:TYR:CD1  | 1:T:42:GLY:HA3   | 2.50                     | 0.47              |
| 1:S:14:SER:HB2   | 1:S:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:S:143:TYR:CZ   | 1:S:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:U:14:SER:HB2   | 1:U:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:V:58:ALA:O     | 1:V:59:GLN:C     | 2.53                     | 0.47              |
| 1:A:336:LYS:HE2  | 2:A:401:ADP:C5'  | 2.38                     | 0.47              |
| 1:B:14:SER:HB2   | 1:B:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:B:134:VAL:O    | 1:B:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:B:288:ASP:OD1  | 1:D:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:C:180:LEU:O    | 1:C:180:LEU:HG   | 2.11                     | 0.47              |
| 1:C:288:ASP:OD1  | 1:E:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:C:369:ILE:HG23 | 1:C:370:VAL:N    | 2.30                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:134:VAL:O    | 1:D:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:E:14:SER:HB2   | 1:E:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:E:34:ILE:HG22  | 1:E:54:VAL:HG21  | 1.96                     | 0.47              |
| 1:E:335:ARG:O    | 1:E:338:SER:HB3  | 2.13                     | 0.47              |
| 1:F:134:VAL:O    | 1:F:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:F:143:TYR:CZ   | 1:F:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:F:369:ILE:HG22 | 1:F:370:VAL:N    | 2.29                     | 0.47              |
| 1:G:44:MET:CG    | 1:G:45:VAL:N     | 2.75                     | 0.47              |
| 1:G:61:LYS:HG2   | 1:G:64:ILE:CG2   | 2.45                     | 0.47              |
| 1:G:236:LEU:HD22 | 1:G:251:GLY:C    | 2.34                     | 0.47              |
| 1:G:288:ASP:OD1  | 1:I:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:H:14:SER:HB2   | 1:H:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:H:134:VAL:O    | 1:H:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:H:288:ASP:OD2  | 1:J:204:ALA:HB1  | 2.14                     | 0.47              |
| 1:I:34:ILE:HG22  | 1:I:54:VAL:HG21  | 1.95                     | 0.47              |
| 1:I:61:LYS:HG2   | 1:I:64:ILE:CG2   | 2.45                     | 0.47              |
| 1:I:227:MET:HA   | 1:I:227:MET:HE3  | 1.97                     | 0.47              |
| 1:J:31:PHE:HA    | 1:J:32:PRO:HD3   | 1.66                     | 0.47              |
| 1:J:34:ILE:HG22  | 1:J:54:VAL:HG21  | 1.96                     | 0.47              |
| 1:J:37:ARG:O     | 1:J:66:THR:CG2   | 2.63                     | 0.47              |
| 1:J:134:VAL:O    | 1:J:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:J:147:ARG:HH21 | 1:J:147:ARG:HG3  | 1.80                     | 0.47              |
| 1:K:34:ILE:HG23  | 1:K:68:LYS:H     | 1.79                     | 0.47              |
| 1:K:299:MET:HE1  | 1:K:304:THR:HB   | 1.97                     | 0.47              |
| 1:L:14:SER:HB2   | 1:L:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:L:134:VAL:O    | 1:L:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:L:143:TYR:CZ   | 1:L:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:L:173:HIS:NE2  | 1:M:267:ILE:C    | 2.67                     | 0.47              |
| 1:L:299:MET:HE1  | 1:L:304:THR:HB   | 1.97                     | 0.47              |
| 1:M:34:ILE:HG22  | 1:M:54:VAL:HG21  | 1.95                     | 0.47              |
| 1:M:288:ASP:OD1  | 1:O:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:N:34:ILE:CG2   | 1:N:67:LEU:HD22  | 2.27                     | 0.47              |
| 1:O:34:ILE:HG22  | 1:O:54:VAL:HG21  | 1.96                     | 0.47              |
| 1:P:8:LEU:O      | 1:P:104:LEU:N    | 2.47                     | 0.47              |
| 1:P:44:MET:CG    | 1:P:45:VAL:N     | 2.76                     | 0.47              |
| 1:P:169:TYR:CD1  | 1:R:42:GLY:HA3   | 2.50                     | 0.47              |
| 1:Q:14:SER:HB2   | 1:Q:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:Q:134:VAL:O    | 1:Q:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:Q:369:ILE:HG22 | 1:Q:370:VAL:N    | 2.29                     | 0.47              |
| 1:R:37:ARG:O     | 1:R:66:THR:CG2   | 2.63                     | 0.47              |
| 1:R:44:MET:CG    | 1:R:45:VAL:N     | 2.75                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:R:369:ILE:HG23 | 1:R:370:VAL:N    | 2.30                     | 0.47              |
| 1:S:34:ILE:HG22  | 1:S:54:VAL:HG21  | 1.96                     | 0.47              |
| 1:S:58:ALA:O     | 1:S:59:GLN:C     | 2.53                     | 0.47              |
| 1:S:134:VAL:O    | 1:S:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:S:288:ASP:OD2  | 1:U:204:ALA:HB1  | 2.14                     | 0.47              |
| 1:T:31:PHE:HA    | 1:T:32:PRO:HD3   | 1.66                     | 0.47              |
| 1:T:37:ARG:O     | 1:T:66:THR:CG2   | 2.63                     | 0.47              |
| 1:T:58:ALA:O     | 1:T:59:GLN:C     | 2.53                     | 0.47              |
| 1:T:288:ASP:OD2  | 1:V:204:ALA:HB1  | 2.14                     | 0.47              |
| 1:U:134:VAL:O    | 1:U:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:V:236:LEU:HD11 | 1:V:237:GLU:HG2  | 1.96                     | 0.47              |
| 1:W:134:VAL:O    | 1:W:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:A:58:ALA:O     | 1:A:59:GLN:C     | 2.53                     | 0.47              |
| 1:A:134:VAL:O    | 1:A:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:A:169:TYR:CD1  | 1:C:42:GLY:HA3   | 2.50                     | 0.47              |
| 1:C:14:SER:HB2   | 1:C:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:D:143:TYR:CZ   | 1:D:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:D:335:ARG:HA   | 1:D:335:ARG:HD3  | 1.39                     | 0.47              |
| 1:D:369:ILE:HG22 | 1:D:370:VAL:N    | 2.29                     | 0.47              |
| 1:E:58:ALA:O     | 1:E:59:GLN:C     | 2.53                     | 0.47              |
| 1:G:14:SER:HB2   | 1:G:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:G:73:HIC:HA    | 1:G:183:ARG:NH1  | 2.18                     | 0.47              |
| 1:G:288:ASP:OD2  | 1:I:204:ALA:HB1  | 2.14                     | 0.47              |
| 1:G:290:ARG:HB2  | 1:I:244:ASP:HA   | 1.97                     | 0.47              |
| 1:H:147:ARG:HH21 | 1:H:147:ARG:HG3  | 1.80                     | 0.47              |
| 1:I:14:SER:HB2   | 1:I:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:I:37:ARG:O     | 1:I:66:THR:CG2   | 2.63                     | 0.47              |
| 1:I:58:ALA:O     | 1:I:59:GLN:C     | 2.53                     | 0.47              |
| 1:J:236:LEU:HD11 | 1:J:237:GLU:HG2  | 1.96                     | 0.47              |
| 1:L:37:ARG:O     | 1:L:66:THR:CG2   | 2.63                     | 0.47              |
| 1:L:61:LYS:HG2   | 1:L:64:ILE:CG2   | 2.45                     | 0.47              |
| 1:L:369:ILE:HG23 | 1:L:370:VAL:N    | 2.30                     | 0.47              |
| 1:M:8:LEU:O      | 1:M:104:LEU:N    | 2.47                     | 0.47              |
| 1:M:134:VAL:O    | 1:M:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:N:134:VAL:O    | 1:N:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:N:288:ASP:OD1  | 1:P:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:O:134:VAL:O    | 1:O:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:O:288:ASP:OD2  | 1:Q:204:ALA:HB1  | 2.14                     | 0.47              |
| 1:P:287:ILE:HD12 | 1:R:208:ILE:HD13 | 1.96                     | 0.47              |
| 1:P:298:VAL:HG12 | 1:P:335:ARG:NH1  | 2.28                     | 0.47              |
| 1:Q:34:ILE:HG22  | 1:Q:35:VAL:H     | 1.78                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:143:TYR:CZ   | 1:Q:345:ILE:CG2  | 2.97                     | 0.47              |
| 1:R:288:ASP:OD1  | 1:T:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:R:290:ARG:HB2  | 1:T:244:ASP:HA   | 1.97                     | 0.47              |
| 1:R:298:VAL:HG12 | 1:R:335:ARG:NH1  | 2.28                     | 0.47              |
| 1:S:58:ALA:CB    | 1:S:65:LEU:CD2   | 2.90                     | 0.47              |
| 1:S:288:ASP:OD1  | 1:U:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:S:369:ILE:HG22 | 1:S:370:VAL:N    | 2.29                     | 0.47              |
| 1:T:58:ALA:CB    | 1:T:65:LEU:CD2   | 2.90                     | 0.47              |
| 1:U:37:ARG:O     | 1:U:66:THR:CG2   | 2.63                     | 0.47              |
| 1:V:44:MET:CG    | 1:V:45:VAL:N     | 2.75                     | 0.47              |
| 1:V:299:MET:HE1  | 1:V:304:THR:HB   | 1.97                     | 0.47              |
| 1:W:58:ALA:O     | 1:W:59:GLN:C     | 2.53                     | 0.47              |
| 1:A:34:ILE:HG23  | 1:A:68:LYS:H     | 1.79                     | 0.47              |
| 1:A:290:ARG:HB2  | 1:C:244:ASP:HA   | 1.97                     | 0.47              |
| 1:D:34:ILE:HG22  | 1:D:54:VAL:HG21  | 1.96                     | 0.47              |
| 1:E:143:TYR:CZ   | 1:E:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:F:73:HIC:HA    | 1:F:183:ARG:NH1  | 2.18                     | 0.47              |
| 1:F:287:ILE:HD12 | 1:H:208:ILE:HD13 | 1.96                     | 0.47              |
| 1:G:8:LEU:O      | 1:G:104:LEU:N    | 2.47                     | 0.47              |
| 1:G:34:ILE:HG22  | 1:G:54:VAL:HG21  | 1.96                     | 0.47              |
| 1:G:37:ARG:O     | 1:G:66:THR:CG2   | 2.63                     | 0.47              |
| 1:G:143:TYR:CZ   | 1:G:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:H:58:ALA:O     | 1:H:59:GLN:C     | 2.53                     | 0.47              |
| 1:I:169:TYR:CD1  | 1:K:42:GLY:HA3   | 2.50                     | 0.47              |
| 1:I:236:LEU:HD22 | 1:I:251:GLY:C    | 2.34                     | 0.47              |
| 1:K:34:ILE:HG22  | 1:K:54:VAL:HG21  | 1.95                     | 0.47              |
| 1:K:287:ILE:HD12 | 1:M:208:ILE:HD13 | 1.96                     | 0.47              |
| 1:L:58:ALA:O     | 1:L:59:GLN:C     | 2.53                     | 0.47              |
| 1:L:288:ASP:OD1  | 1:N:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:M:143:TYR:CZ   | 1:M:345:ILE:CG2  | 2.97                     | 0.47              |
| 1:N:236:LEU:HD11 | 1:N:237:GLU:HG2  | 1.96                     | 0.47              |
| 1:O:14:SER:HB2   | 1:O:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:O:287:ILE:HD12 | 1:Q:208:ILE:HD13 | 1.96                     | 0.47              |
| 1:O:369:ILE:HG22 | 1:O:370:VAL:N    | 2.29                     | 0.47              |
| 1:P:236:LEU:HD22 | 1:P:251:GLY:C    | 2.34                     | 0.47              |
| 1:Q:61:LYS:HG2   | 1:Q:64:ILE:CG2   | 2.45                     | 0.47              |
| 1:Q:106:THR:HB   | 1:Q:137:GLN:HG2  | 1.97                     | 0.47              |
| 1:R:227:MET:HA   | 1:R:227:MET:HE3  | 1.97                     | 0.47              |
| 1:S:236:LEU:HD22 | 1:S:251:GLY:C    | 2.34                     | 0.47              |
| 1:T:34:ILE:HG23  | 1:T:68:LYS:H     | 1.79                     | 0.47              |
| 1:W:180:LEU:O    | 1:W:180:LEU:HG   | 2.11                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:34:ILE:HG23  | 1:B:68:LYS:H     | 1.79                     | 0.47              |
| 1:B:335:ARG:HA   | 1:B:335:ARG:HD3  | 1.39                     | 0.47              |
| 1:C:34:ILE:HD13  | 1:C:67:LEU:CD1   | 2.41                     | 0.47              |
| 1:C:37:ARG:O     | 1:C:66:THR:CG2   | 2.63                     | 0.47              |
| 1:D:288:ASP:OD1  | 1:F:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:D:298:VAL:HG12 | 1:D:335:ARG:NH1  | 2.28                     | 0.47              |
| 1:E:288:ASP:OD2  | 1:G:204:ALA:HB1  | 2.14                     | 0.47              |
| 1:H:37:ARG:O     | 1:H:66:THR:CG2   | 2.63                     | 0.47              |
| 1:J:173:HIS:HE1  | 1:K:268:GLY:CA   | 2.28                     | 0.47              |
| 1:K:61:LYS:HG2   | 1:K:64:ILE:CG2   | 2.45                     | 0.47              |
| 1:K:143:TYR:CZ   | 1:K:345:ILE:CG2  | 2.98                     | 0.47              |
| 1:L:34:ILE:HG22  | 1:L:35:VAL:H     | 1.78                     | 0.47              |
| 1:L:236:LEU:HD11 | 1:L:237:GLU:HG2  | 1.96                     | 0.47              |
| 1:N:39:ARG:NE    | 1:N:66:THR:CA    | 2.69                     | 0.47              |
| 1:N:44:MET:CG    | 1:N:45:VAL:N     | 2.76                     | 0.47              |
| 1:N:61:LYS:HG2   | 1:N:64:ILE:CG2   | 2.45                     | 0.47              |
| 1:P:134:VAL:O    | 1:P:375:PHE:OXT  | 2.33                     | 0.47              |
| 1:P:288:ASP:OD1  | 1:R:208:ILE:HD12 | 2.15                     | 0.47              |
| 1:Q:34:ILE:HG22  | 1:Q:54:VAL:HG21  | 1.95                     | 0.47              |
| 1:S:106:THR:HB   | 1:S:137:GLN:HG2  | 1.97                     | 0.47              |
| 1:T:335:ARG:HA   | 1:T:335:ARG:HD3  | 1.39                     | 0.47              |
| 1:V:14:SER:HB2   | 1:V:183:ARG:HH22 | 1.80                     | 0.47              |
| 1:W:349:LEU:HD23 | 1:W:349:LEU:HA   | 1.80                     | 0.47              |
| 1:A:14:SER:HB2   | 1:A:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:A:44:MET:CG    | 1:A:45:VAL:H     | 2.18                     | 0.46              |
| 1:A:143:TYR:CE2  | 1:A:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:A:152:VAL:HG22 | 1:A:298:VAL:HB   | 1.98                     | 0.46              |
| 1:B:152:VAL:HG22 | 1:B:298:VAL:HB   | 1.98                     | 0.46              |
| 1:C:134:VAL:O    | 1:C:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:C:169:TYR:CD1  | 1:E:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:D:14:SER:HB2   | 1:D:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:D:73:HIC:HA    | 1:D:183:ARG:NH1  | 2.18                     | 0.46              |
| 1:E:287:ILE:HD12 | 1:G:208:ILE:HD13 | 1.96                     | 0.46              |
| 1:F:58:ALA:CB    | 1:F:65:LEU:CD2   | 2.90                     | 0.46              |
| 1:G:287:ILE:HD12 | 1:I:208:ILE:HD13 | 1.96                     | 0.46              |
| 1:I:143:TYR:CZ   | 1:I:345:ILE:CG2  | 2.98                     | 0.46              |
| 1:I:369:ILE:HG22 | 1:I:370:VAL:N    | 2.29                     | 0.46              |
| 1:J:58:ALA:CB    | 1:J:65:LEU:CD2   | 2.90                     | 0.46              |
| 1:K:134:VAL:O    | 1:K:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:K:169:TYR:CD1  | 1:M:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:L:288:ASP:OD2  | 1:N:204:ALA:HB1  | 2.14                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:361:GLU:HB3  | 1:L:369:ILE:CD1  | 2.14                     | 0.46              |
| 1:N:8:LEU:O      | 1:N:104:LEU:N    | 2.47                     | 0.46              |
| 1:N:14:SER:HB2   | 1:N:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:O:152:VAL:HG22 | 1:O:298:VAL:HB   | 1.98                     | 0.46              |
| 1:Q:147:ARG:HH21 | 1:Q:147:ARG:HG3  | 1.80                     | 0.46              |
| 1:R:8:LEU:O      | 1:R:104:LEU:N    | 2.47                     | 0.46              |
| 1:U:106:THR:HB   | 1:U:137:GLN:HG2  | 1.97                     | 0.46              |
| 1:W:14:SER:HB2   | 1:W:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:W:336:LYS:HE2  | 2:W:401:ADP:C5'  | 2.38                     | 0.46              |
| 1:A:147:ARG:HH21 | 1:A:147:ARG:HG3  | 1.80                     | 0.46              |
| 1:B:106:THR:HB   | 1:B:137:GLN:HG2  | 1.97                     | 0.46              |
| 1:C:143:TYR:CE2  | 1:C:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:C:336:LYS:HE2  | 2:C:401:ADP:C5'  | 2.38                     | 0.46              |
| 1:E:61:LYS:HG2   | 1:E:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:F:143:TYR:CE2  | 1:F:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:H:143:TYR:CE2  | 1:H:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:I:58:ALA:CB    | 1:I:65:LEU:CD2   | 2.90                     | 0.46              |
| 1:J:61:LYS:HG2   | 1:J:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:J:152:VAL:HG22 | 1:J:298:VAL:HB   | 1.98                     | 0.46              |
| 1:J:223:PHE:CD1  | 1:J:259:GLU:CG   | 2.96                     | 0.46              |
| 1:K:44:MET:CG    | 1:K:45:VAL:N     | 2.75                     | 0.46              |
| 1:L:290:ARG:HB2  | 1:N:244:ASP:HA   | 1.97                     | 0.46              |
| 1:N:152:VAL:HG22 | 1:N:298:VAL:HB   | 1.98                     | 0.46              |
| 1:N:369:ILE:HG23 | 1:N:370:VAL:N    | 2.30                     | 0.46              |
| 1:O:147:ARG:HH21 | 1:O:147:ARG:HG3  | 1.80                     | 0.46              |
| 1:P:37:ARG:O     | 1:P:66:THR:CG2   | 2.63                     | 0.46              |
| 1:Q:152:VAL:HG22 | 1:Q:298:VAL:HB   | 1.98                     | 0.46              |
| 1:R:58:ALA:CB    | 1:R:65:LEU:CD2   | 2.90                     | 0.46              |
| 1:S:61:LYS:HG2   | 1:S:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:U:44:MET:CG    | 1:U:45:VAL:N     | 2.75                     | 0.46              |
| 1:U:152:VAL:HG22 | 1:U:298:VAL:HB   | 1.98                     | 0.46              |
| 1:V:143:TYR:CZ   | 1:V:345:ILE:CG2  | 2.98                     | 0.46              |
| 1:B:143:TYR:CZ   | 1:B:345:ILE:CG2  | 2.98                     | 0.46              |
| 1:B:287:ILE:HD12 | 1:D:208:ILE:HD13 | 1.96                     | 0.46              |
| 1:C:143:TYR:CZ   | 1:C:345:ILE:CG2  | 2.98                     | 0.46              |
| 1:C:152:VAL:HG22 | 1:C:298:VAL:HB   | 1.98                     | 0.46              |
| 1:D:37:ARG:O     | 1:D:66:THR:CG2   | 2.63                     | 0.46              |
| 1:D:61:LYS:HG2   | 1:D:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:E:134:VAL:O    | 1:E:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:F:34:ILE:HG22  | 1:F:54:VAL:HG21  | 1.96                     | 0.46              |
| 1:F:169:TYR:CD1  | 1:H:42:GLY:HA3   | 2.50                     | 0.46              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:169:TYR:CD1  | 1:I:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:H:223:PHE:CD1  | 1:H:259:GLU:CG   | 2.96                     | 0.46              |
| 1:I:134:VAL:O    | 1:I:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:L:39:ARG:NE    | 1:L:66:THR:CA    | 2.69                     | 0.46              |
| 1:L:147:ARG:HH21 | 1:L:147:ARG:HG3  | 1.80                     | 0.46              |
| 1:L:152:VAL:HG22 | 1:L:298:VAL:HB   | 1.98                     | 0.46              |
| 1:M:143:TYR:CE2  | 1:M:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:N:169:TYR:CD1  | 1:P:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:O:143:TYR:CZ   | 1:O:345:ILE:CG2  | 2.98                     | 0.46              |
| 1:O:143:TYR:CE2  | 1:O:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:O:288:ASP:OD1  | 1:Q:208:ILE:HD12 | 2.15                     | 0.46              |
| 1:P:290:ARG:HB2  | 1:R:244:ASP:HA   | 1.97                     | 0.46              |
| 1:Q:8:LEU:O      | 1:Q:104:LEU:N    | 2.47                     | 0.46              |
| 1:R:134:VAL:O    | 1:R:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:R:173:HIS:HE1  | 1:S:268:GLY:CA   | 2.28                     | 0.46              |
| 1:R:369:ILE:HG22 | 1:R:370:VAL:N    | 2.29                     | 0.46              |
| 1:S:37:ARG:O     | 1:S:66:THR:CG2   | 2.63                     | 0.46              |
| 1:S:299:MET:HE1  | 1:S:304:THR:HB   | 1.97                     | 0.46              |
| 1:T:44:MET:CG    | 1:T:45:VAL:N     | 2.76                     | 0.46              |
| 1:T:61:LYS:HG2   | 1:T:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:T:143:TYR:CZ   | 1:T:345:ILE:CG2  | 2.98                     | 0.46              |
| 1:U:61:LYS:HG2   | 1:U:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:W:37:ARG:O     | 1:W:66:THR:CG2   | 2.63                     | 0.46              |
| 1:B:369:ILE:HG23 | 1:B:370:VAL:N    | 2.30                     | 0.46              |
| 1:C:39:ARG:NE    | 1:C:66:THR:CA    | 2.69                     | 0.46              |
| 1:D:152:VAL:HG22 | 1:D:298:VAL:HB   | 1.98                     | 0.46              |
| 1:D:169:TYR:CD1  | 1:F:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:F:14:SER:HB2   | 1:F:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:G:134:VAL:O    | 1:G:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:H:152:VAL:HG22 | 1:H:298:VAL:HB   | 1.98                     | 0.46              |
| 1:H:227:MET:HA   | 1:H:227:MET:HE3  | 1.96                     | 0.46              |
| 1:H:300:SER:HA   | 1:H:335:ARG:HG2  | 1.89                     | 0.46              |
| 1:I:9:VAL:HG21   | 1:I:344:SER:HA   | 1.98                     | 0.46              |
| 1:I:34:ILE:HD13  | 1:I:67:LEU:CD2   | 2.46                     | 0.46              |
| 1:J:143:TYR:CE2  | 1:J:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:M:152:VAL:HG22 | 1:M:298:VAL:HB   | 1.98                     | 0.46              |
| 1:N:34:ILE:HD13  | 1:N:67:LEU:CD1   | 2.41                     | 0.46              |
| 1:N:236:LEU:CD1  | 1:N:237:GLU:CG   | 2.93                     | 0.46              |
| 1:O:37:ARG:O     | 1:O:66:THR:CG2   | 2.63                     | 0.46              |
| 1:O:106:THR:HB   | 1:O:137:GLN:HG2  | 1.98                     | 0.46              |
| 1:T:9:VAL:HG21   | 1:T:344:SER:HA   | 1.98                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:134:VAL:O    | 1:T:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:T:236:LEU:HD11 | 1:T:237:GLU:HG2  | 1.96                     | 0.46              |
| 1:T:288:ASP:OD1  | 1:V:208:ILE:HD12 | 2.15                     | 0.46              |
| 1:U:58:ALA:CB    | 1:U:65:LEU:CD2   | 2.90                     | 0.46              |
| 1:U:369:ILE:HG22 | 1:U:370:VAL:N    | 2.29                     | 0.46              |
| 1:V:106:THR:HB   | 1:V:137:GLN:HG2  | 1.97                     | 0.46              |
| 1:V:134:VAL:O    | 1:V:375:PHE:OXT  | 2.33                     | 0.46              |
| 1:W:106:THR:HB   | 1:W:137:GLN:HG2  | 1.97                     | 0.46              |
| 1:W:236:LEU:HD11 | 1:W:237:GLU:HG2  | 1.96                     | 0.46              |
| 1:W:369:ILE:HG23 | 1:W:370:VAL:N    | 2.30                     | 0.46              |
| 1:B:8:LEU:O      | 1:B:104:LEU:N    | 2.47                     | 0.46              |
| 1:C:9:VAL:HG21   | 1:C:344:SER:HA   | 1.98                     | 0.46              |
| 1:C:173:HIS:HE1  | 1:D:268:GLY:CA   | 2.28                     | 0.46              |
| 1:D:8:LEU:O      | 1:D:104:LEU:N    | 2.47                     | 0.46              |
| 1:E:290:ARG:HB2  | 1:G:244:ASP:HA   | 1.97                     | 0.46              |
| 1:F:152:VAL:HG22 | 1:F:298:VAL:HB   | 1.98                     | 0.46              |
| 1:F:223:PHE:CD1  | 1:F:259:GLU:CG   | 2.96                     | 0.46              |
| 1:H:58:ALA:CB    | 1:H:65:LEU:CD2   | 2.90                     | 0.46              |
| 1:I:287:ILE:HD12 | 1:K:208:ILE:HD13 | 1.96                     | 0.46              |
| 1:J:8:LEU:O      | 1:J:104:LEU:N    | 2.47                     | 0.46              |
| 1:L:44:MET:CG    | 1:L:45:VAL:N     | 2.75                     | 0.46              |
| 1:L:223:PHE:CD1  | 1:L:259:GLU:CG   | 2.96                     | 0.46              |
| 1:M:369:ILE:HG23 | 1:M:370:VAL:N    | 2.30                     | 0.46              |
| 1:N:173:HIS:HE1  | 1:O:268:GLY:CA   | 2.28                     | 0.46              |
| 1:N:180:LEU:O    | 1:N:180:LEU:HG   | 2.11                     | 0.46              |
| 1:O:180:LEU:O    | 1:O:180:LEU:HG   | 2.11                     | 0.46              |
| 1:P:61:LYS:HG2   | 1:P:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:P:152:VAL:HG22 | 1:P:298:VAL:HB   | 1.98                     | 0.46              |
| 1:S:152:VAL:HG22 | 1:S:298:VAL:HB   | 1.98                     | 0.46              |
| 1:T:143:TYR:CE2  | 1:T:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:U:288:ASP:OD1  | 1:W:208:ILE:HD12 | 2.15                     | 0.46              |
| 1:V:152:VAL:HG22 | 1:V:298:VAL:HB   | 1.98                     | 0.46              |
| 1:W:61:LYS:HG2   | 1:W:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:W:152:VAL:HG22 | 1:W:298:VAL:HB   | 1.98                     | 0.46              |
| 1:A:288:ASP:OD1  | 1:C:208:ILE:HD12 | 2.15                     | 0.46              |
| 1:C:44:MET:CG    | 1:C:45:VAL:H     | 2.18                     | 0.46              |
| 1:C:147:ARG:HH21 | 1:C:147:ARG:HG3  | 1.80                     | 0.46              |
| 1:C:290:ARG:HB2  | 1:E:244:ASP:HA   | 1.97                     | 0.46              |
| 1:D:143:TYR:CE2  | 1:D:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:D:227:MET:HA   | 1:D:227:MET:HE3  | 1.97                     | 0.46              |
| 1:E:173:HIS:HE1  | 1:F:268:GLY:CA   | 2.28                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:152:VAL:HG22 | 1:G:298:VAL:HB   | 1.98                     | 0.46              |
| 1:H:34:ILE:HG22  | 1:H:54:VAL:HG21  | 1.95                     | 0.46              |
| 1:H:73:HIC:HA    | 1:H:183:ARG:NH1  | 2.18                     | 0.46              |
| 1:I:152:VAL:HG22 | 1:I:298:VAL:HB   | 1.98                     | 0.46              |
| 1:I:290:ARG:HB2  | 1:K:244:ASP:HA   | 1.97                     | 0.46              |
| 1:K:14:SER:HB2   | 1:K:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:L:336:LYS:HE2  | 2:L:401:ADP:C5'  | 2.38                     | 0.46              |
| 1:M:106:THR:HB   | 1:M:137:GLN:HG2  | 1.97                     | 0.46              |
| 1:M:135:ALA:HB3  | 1:M:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:M:169:TYR:CD1  | 1:O:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:N:37:ARG:O     | 1:N:66:THR:CG2   | 2.63                     | 0.46              |
| 1:N:336:LYS:HE2  | 2:N:401:ADP:C5'  | 2.38                     | 0.46              |
| 1:O:61:LYS:HG2   | 1:O:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:O:227:MET:HA   | 1:O:227:MET:HE3  | 1.97                     | 0.46              |
| 1:P:14:SER:HB2   | 1:P:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:Q:369:ILE:HG23 | 1:Q:370:VAL:N    | 2.30                     | 0.46              |
| 1:R:143:TYR:CE2  | 1:R:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:T:152:VAL:HG22 | 1:T:298:VAL:HB   | 1.98                     | 0.46              |
| 1:T:290:ARG:HB2  | 1:V:244:ASP:HA   | 1.97                     | 0.46              |
| 1:V:37:ARG:O     | 1:V:66:THR:CG2   | 2.63                     | 0.46              |
| 1:W:135:ALA:HB3  | 1:W:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:A:33:SER:O     | 1:A:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:A:135:ALA:HB3  | 1:A:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:C:61:LYS:HG2   | 1:C:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:D:106:THR:HB   | 1:D:137:GLN:HG2  | 1.97                     | 0.46              |
| 1:D:223:PHE:CD1  | 1:D:259:GLU:CG   | 2.96                     | 0.46              |
| 1:E:143:TYR:CE2  | 1:E:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:E:169:TYR:CD1  | 1:G:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:E:299:MET:HE1  | 1:E:304:THR:HB   | 1.98                     | 0.46              |
| 1:F:135:ALA:HB3  | 1:F:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:G:34:ILE:CG2   | 1:G:67:LEU:HD22  | 2.27                     | 0.46              |
| 1:G:39:ARG:NE    | 1:G:66:THR:CA    | 2.69                     | 0.46              |
| 1:H:169:TYR:CD1  | 1:J:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:I:287:ILE:HB   | 1:K:244:ASP:HB3  | 1.97                     | 0.46              |
| 1:I:369:ILE:HG23 | 1:I:370:VAL:N    | 2.30                     | 0.46              |
| 1:J:135:ALA:HB3  | 1:J:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:J:288:ASP:OD1  | 1:L:208:ILE:HD12 | 2.15                     | 0.46              |
| 1:L:143:TYR:CE2  | 1:L:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:M:14:SER:HB2   | 1:M:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:O:169:TYR:CD1  | 1:Q:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:Q:143:TYR:CE2  | 1:Q:346:LEU:HD13 | 2.51                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:169:TYR:CD1  | 1:S:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:T:106:THR:HB   | 1:T:137:GLN:HG2  | 1.97                     | 0.46              |
| 1:T:173:HIS:HE1  | 1:U:268:GLY:CA   | 2.28                     | 0.46              |
| 1:T:349:LEU:HD23 | 1:T:349:LEU:HA   | 1.80                     | 0.46              |
| 1:U:39:ARG:NE    | 1:U:66:THR:CA    | 2.69                     | 0.46              |
| 1:U:236:LEU:HD11 | 1:U:237:GLU:HG2  | 1.96                     | 0.46              |
| 1:V:33:SER:O     | 1:V:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:V:143:TYR:CE2  | 1:V:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:V:144:ALA:HB2  | 1:V:342:GLY:N    | 2.31                     | 0.46              |
| 1:W:33:SER:O     | 1:W:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:W:143:TYR:CE2  | 1:W:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:B:169:TYR:CD1  | 1:D:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:B:223:PHE:CD1  | 1:B:259:GLU:CG   | 2.96                     | 0.46              |
| 1:C:135:ALA:HB3  | 1:C:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:D:135:ALA:HB3  | 1:D:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:D:287:ILE:HD12 | 1:F:208:ILE:HD13 | 1.96                     | 0.46              |
| 1:E:33:SER:O     | 1:E:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:F:8:LEU:O      | 1:F:104:LEU:N    | 2.47                     | 0.46              |
| 1:F:37:ARG:O     | 1:F:66:THR:CG2   | 2.63                     | 0.46              |
| 1:H:135:ALA:HB3  | 1:H:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:I:236:LEU:HD11 | 1:I:237:GLU:HG2  | 1.96                     | 0.46              |
| 1:I:288:ASP:OD1  | 1:K:208:ILE:HD12 | 2.15                     | 0.46              |
| 1:J:7:ALA:HB1    | 1:J:347:ALA:HB1  | 1.98                     | 0.46              |
| 1:K:37:ARG:O     | 1:K:66:THR:CG2   | 2.63                     | 0.46              |
| 1:K:152:VAL:HG22 | 1:K:298:VAL:HB   | 1.98                     | 0.46              |
| 1:L:33:SER:O     | 1:L:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:M:37:ARG:O     | 1:M:66:THR:CG2   | 2.63                     | 0.46              |
| 1:M:61:LYS:HG2   | 1:M:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:M:144:ALA:HB2  | 1:M:342:GLY:N    | 2.31                     | 0.46              |
| 1:M:290:ARG:HB2  | 1:O:244:ASP:HA   | 1.97                     | 0.46              |
| 1:N:135:ALA:HB3  | 1:N:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:O:135:ALA:HB3  | 1:O:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:P:33:SER:O     | 1:P:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:P:135:ALA:HB3  | 1:P:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:P:336:LYS:HE2  | 2:P:401:ADP:C5'  | 2.38                     | 0.46              |
| 1:Q:44:MET:CG    | 1:Q:45:VAL:H     | 2.18                     | 0.46              |
| 1:Q:73:HIC:HA    | 1:Q:183:ARG:NH1  | 2.18                     | 0.46              |
| 1:R:9:VAL:HG21   | 1:R:344:SER:HA   | 1.98                     | 0.46              |
| 1:R:152:VAL:HG22 | 1:R:298:VAL:HB   | 1.98                     | 0.46              |
| 1:T:14:SER:HB2   | 1:T:183:ARG:HH22 | 1.80                     | 0.46              |
| 1:T:33:SER:O     | 1:T:69:TYR:CD1   | 2.69                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:144:ALA:HB2  | 1:T:342:GLY:N    | 2.31                     | 0.46              |
| 1:T:287:ILE:HB   | 1:V:244:ASP:HB3  | 1.97                     | 0.46              |
| 1:T:369:ILE:HG23 | 1:T:370:VAL:N    | 2.30                     | 0.46              |
| 1:U:33:SER:O     | 1:U:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:U:135:ALA:HB3  | 1:U:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:U:287:ILE:HB   | 1:W:244:ASP:HB3  | 1.97                     | 0.46              |
| 1:W:374:CYS:HB2  | 1:W:375:PHE:H    | 1.61                     | 0.46              |
| 1:B:37:ARG:O     | 1:B:66:THR:CG2   | 2.63                     | 0.46              |
| 1:B:44:MET:CG    | 1:B:45:VAL:H     | 2.18                     | 0.46              |
| 1:B:135:ALA:HB3  | 1:B:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:B:369:ILE:HG22 | 1:B:370:VAL:H    | 1.81                     | 0.46              |
| 1:C:300:SER:HA   | 1:C:335:ARG:HG2  | 1.89                     | 0.46              |
| 1:E:37:ARG:O     | 1:E:66:THR:CG2   | 2.63                     | 0.46              |
| 1:E:73:HIC:HA    | 1:E:183:ARG:NH1  | 2.18                     | 0.46              |
| 1:E:152:VAL:HG22 | 1:E:298:VAL:HB   | 1.98                     | 0.46              |
| 1:H:61:LYS:HG2   | 1:H:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:I:7:ALA:HB1    | 1:I:347:ALA:HB1  | 1.98                     | 0.46              |
| 1:I:38:PRO:HD3   | 1:I:49:GLN:HE22  | 1.81                     | 0.46              |
| 1:K:7:ALA:HB1    | 1:K:347:ALA:HB1  | 1.98                     | 0.46              |
| 1:K:143:TYR:CE2  | 1:K:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:M:31:PHE:HA    | 1:M:32:PRO:HD3   | 1.66                     | 0.46              |
| 1:N:147:ARG:HH21 | 1:N:147:ARG:HG3  | 1.80                     | 0.46              |
| 1:O:34:ILE:HG22  | 1:O:35:VAL:H     | 1.78                     | 0.46              |
| 1:O:144:ALA:HB2  | 1:O:342:GLY:N    | 2.31                     | 0.46              |
| 1:P:143:TYR:CE2  | 1:P:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:R:144:ALA:HB2  | 1:R:342:GLY:N    | 2.31                     | 0.46              |
| 1:R:223:PHE:CD1  | 1:R:259:GLU:CG   | 2.96                     | 0.46              |
| 1:R:236:LEU:HD11 | 1:R:237:GLU:HG2  | 1.96                     | 0.46              |
| 1:S:135:ALA:HB3  | 1:S:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:T:374:CYS:HB2  | 1:T:375:PHE:H    | 1.61                     | 0.46              |
| 1:V:135:ALA:HB3  | 1:V:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:A:61:LYS:HG2   | 1:A:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:A:144:ALA:HB2  | 1:A:342:GLY:N    | 2.31                     | 0.46              |
| 1:C:34:ILE:HG22  | 1:C:35:VAL:H     | 1.78                     | 0.46              |
| 1:E:287:ILE:HB   | 1:G:244:ASP:HB3  | 1.98                     | 0.46              |
| 1:E:369:ILE:HG23 | 1:E:370:VAL:N    | 2.30                     | 0.46              |
| 1:G:9:VAL:HG21   | 1:G:344:SER:HA   | 1.98                     | 0.46              |
| 1:G:135:ALA:HB3  | 1:G:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:H:180:LEU:O    | 1:H:180:LEU:HG   | 2.11                     | 0.46              |
| 1:J:34:ILE:HG23  | 1:J:68:LYS:H     | 1.79                     | 0.46              |
| 1:J:290:ARG:HB2  | 1:L:244:ASP:HA   | 1.97                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:369:ILE:HG22 | 1:J:370:VAL:H    | 1.81                     | 0.46              |
| 1:K:369:ILE:HG22 | 1:K:370:VAL:H    | 1.81                     | 0.46              |
| 1:L:7:ALA:HB1    | 1:L:347:ALA:HB1  | 1.98                     | 0.46              |
| 1:L:34:ILE:N     | 1:L:54:VAL:HG11  | 2.31                     | 0.46              |
| 1:M:7:ALA:HB1    | 1:M:347:ALA:HB1  | 1.98                     | 0.46              |
| 1:M:34:ILE:HD13  | 1:M:67:LEU:CD2   | 2.46                     | 0.46              |
| 1:N:9:VAL:HG21   | 1:N:344:SER:HA   | 1.98                     | 0.46              |
| 1:N:287:ILE:HD12 | 1:P:208:ILE:HD13 | 1.96                     | 0.46              |
| 1:N:290:ARG:HB2  | 1:P:244:ASP:HA   | 1.97                     | 0.46              |
| 1:P:43:VAL:C     | 1:P:44:MET:HG2   | 2.37                     | 0.46              |
| 1:P:58:ALA:CB    | 1:P:65:LEU:CD2   | 2.90                     | 0.46              |
| 1:R:33:SER:O     | 1:R:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:R:39:ARG:NE    | 1:R:66:THR:CA    | 2.69                     | 0.46              |
| 1:R:43:VAL:C     | 1:R:44:MET:HG2   | 2.37                     | 0.46              |
| 1:R:61:LYS:HG2   | 1:R:64:ILE:CG2   | 2.45                     | 0.46              |
| 1:R:135:ALA:HB3  | 1:R:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:R:335:ARG:HA   | 1:R:335:ARG:HD3  | 1.39                     | 0.46              |
| 1:S:33:SER:O     | 1:S:69:TYR:CD1   | 2.69                     | 0.46              |
| 1:S:34:ILE:CG2   | 1:S:67:LEU:HD22  | 2.28                     | 0.46              |
| 1:S:143:TYR:CE2  | 1:S:346:LEU:HD13 | 2.51                     | 0.46              |
| 1:T:135:ALA:HB3  | 1:T:140:LEU:HD11 | 1.98                     | 0.46              |
| 1:U:133:TYR:CE2  | 1:U:375:PHE:HB2  | 2.51                     | 0.46              |
| 1:U:169:TYR:CD1  | 1:W:42:GLY:HA3   | 2.50                     | 0.46              |
| 1:A:8:LEU:O      | 1:A:104:LEU:N    | 2.47                     | 0.45              |
| 1:A:34:ILE:HD13  | 1:A:67:LEU:CD2   | 2.46                     | 0.45              |
| 1:C:144:ALA:HB2  | 1:C:342:GLY:N    | 2.31                     | 0.45              |
| 1:C:287:ILE:HD12 | 1:E:208:ILE:HD13 | 1.96                     | 0.45              |
| 1:F:349:LEU:HD23 | 1:F:349:LEU:HA   | 1.80                     | 0.45              |
| 1:H:7:ALA:HB1    | 1:H:347:ALA:HB1  | 1.98                     | 0.45              |
| 1:H:369:ILE:HG22 | 1:H:370:VAL:H    | 1.81                     | 0.45              |
| 1:H:369:ILE:HG23 | 1:H:370:VAL:N    | 2.30                     | 0.45              |
| 1:I:135:ALA:HB3  | 1:I:140:LEU:HD11 | 1.98                     | 0.45              |
| 1:J:169:TYR:CD1  | 1:L:42:GLY:HA3   | 2.50                     | 0.45              |
| 1:K:135:ALA:HB3  | 1:K:140:LEU:HD11 | 1.98                     | 0.45              |
| 1:L:135:ALA:HB3  | 1:L:140:LEU:HD11 | 1.98                     | 0.45              |
| 1:L:169:TYR:CD1  | 1:N:42:GLY:HA3   | 2.50                     | 0.45              |
| 1:L:287:ILE:HG22 | 1:L:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:N:7:ALA:HB1    | 1:N:347:ALA:HB1  | 1.98                     | 0.45              |
| 1:N:106:THR:HB   | 1:N:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:N:223:PHE:CD1  | 1:N:259:GLU:CG   | 2.96                     | 0.45              |
| 1:O:9:VAL:HG21   | 1:O:344:SER:HA   | 1.98                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:287:ILE:HG22 | 1:O:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:P:144:ALA:HB2  | 1:P:342:GLY:N    | 2.31                     | 0.45              |
| 1:Q:135:ALA:HB3  | 1:Q:140:LEU:HD11 | 1.98                     | 0.45              |
| 1:Q:335:ARG:HA   | 1:Q:335:ARG:HD3  | 1.39                     | 0.45              |
| 1:Q:369:ILE:HG22 | 1:Q:370:VAL:H    | 1.81                     | 0.45              |
| 1:R:106:THR:HB   | 1:R:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:R:287:ILE:HB   | 1:T:244:ASP:HB3  | 1.97                     | 0.45              |
| 1:S:73:HIC:HA    | 1:S:183:ARG:NH1  | 2.18                     | 0.45              |
| 1:S:169:TYR:CD1  | 1:U:42:GLY:HA3   | 2.50                     | 0.45              |
| 1:S:236:LEU:CD1  | 1:S:237:GLU:CG   | 2.93                     | 0.45              |
| 1:S:287:ILE:HD12 | 1:U:208:ILE:HD13 | 1.96                     | 0.45              |
| 1:S:287:ILE:HB   | 1:U:244:ASP:HB3  | 1.97                     | 0.45              |
| 1:U:43:VAL:C     | 1:U:44:MET:HG2   | 2.37                     | 0.45              |
| 1:W:287:ILE:HG22 | 1:W:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:A:43:VAL:C     | 1:A:44:MET:HG2   | 2.37                     | 0.45              |
| 1:A:106:THR:HB   | 1:A:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:B:38:PRO:HD3   | 1:B:49:GLN:HE22  | 1.82                     | 0.45              |
| 1:B:73:HIC:HA    | 1:B:183:ARG:NH1  | 2.18                     | 0.45              |
| 1:B:143:TYR:CE2  | 1:B:346:LEU:HD13 | 2.51                     | 0.45              |
| 1:D:236:LEU:CD1  | 1:D:237:GLU:CG   | 2.93                     | 0.45              |
| 1:D:369:ILE:HG23 | 1:D:370:VAL:N    | 2.30                     | 0.45              |
| 1:E:147:ARG:HH21 | 1:E:147:ARG:HG3  | 1.80                     | 0.45              |
| 1:F:144:ALA:HB2  | 1:F:342:GLY:N    | 2.31                     | 0.45              |
| 1:G:7:ALA:HB1    | 1:G:347:ALA:HB1  | 1.98                     | 0.45              |
| 1:G:144:ALA:HB2  | 1:G:342:GLY:N    | 2.31                     | 0.45              |
| 1:H:34:ILE:N     | 1:H:54:VAL:HG11  | 2.31                     | 0.45              |
| 1:H:144:ALA:HB2  | 1:H:342:GLY:N    | 2.31                     | 0.45              |
| 1:I:33:SER:O     | 1:I:69:TYR:CD1   | 2.69                     | 0.45              |
| 1:I:38:PRO:CG    | 1:I:49:GLN:NE2   | 2.79                     | 0.45              |
| 1:J:38:PRO:HD3   | 1:J:49:GLN:HE22  | 1.82                     | 0.45              |
| 1:J:106:THR:HB   | 1:J:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:K:144:ALA:HB2  | 1:K:342:GLY:N    | 2.31                     | 0.45              |
| 1:K:290:ARG:HB2  | 1:M:244:ASP:HA   | 1.97                     | 0.45              |
| 1:L:8:LEU:O      | 1:L:104:LEU:N    | 2.47                     | 0.45              |
| 1:L:106:THR:HB   | 1:L:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:N:34:ILE:HD13  | 1:N:67:LEU:CD2   | 2.46                     | 0.45              |
| 1:N:287:ILE:HG22 | 1:N:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:O:369:ILE:HG22 | 1:O:370:VAL:H    | 1.82                     | 0.45              |
| 1:P:38:PRO:HD3   | 1:P:49:GLN:HE22  | 1.81                     | 0.45              |
| 1:P:133:TYR:CE2  | 1:P:375:PHE:HB2  | 2.51                     | 0.45              |
| 1:Q:37:ARG:O     | 1:Q:66:THR:CG2   | 2.63                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:Q:38:PRO:HD3   | 1:Q:49:GLN:HE22 | 1.82                     | 0.45              |
| 1:Q:144:ALA:HB2  | 1:Q:342:GLY:N   | 2.31                     | 0.45              |
| 1:Q:287:ILE:HG22 | 1:Q:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:S:38:PRO:HD3   | 1:S:49:GLN:HE22 | 1.82                     | 0.45              |
| 1:S:133:TYR:CE2  | 1:S:375:PHE:HB2 | 2.51                     | 0.45              |
| 1:S:287:ILE:HG22 | 1:S:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:T:43:VAL:C     | 1:T:44:MET:HG2  | 2.37                     | 0.45              |
| 1:V:164:PRO:CG   | 1:V:174:ALA:CB  | 2.95                     | 0.45              |
| 1:A:9:VAL:HG21   | 1:A:344:SER:HA  | 1.98                     | 0.45              |
| 1:A:34:ILE:N     | 1:A:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:C:287:ILE:HB   | 1:E:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:D:369:ILE:HG22 | 1:D:370:VAL:H   | 1.82                     | 0.45              |
| 1:E:335:ARG:HA   | 1:E:335:ARG:HD3 | 1.39                     | 0.45              |
| 1:F:7:ALA:HB1    | 1:F:347:ALA:HB1 | 1.98                     | 0.45              |
| 1:F:34:ILE:N     | 1:F:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:F:61:LYS:HG2   | 1:F:64:ILE:CG2  | 2.45                     | 0.45              |
| 1:F:106:THR:HB   | 1:F:137:GLN:HG2 | 1.97                     | 0.45              |
| 1:F:324:THR:HG23 | 1:H:241:GLU:OE2 | 2.16                     | 0.45              |
| 1:F:335:ARG:HA   | 1:F:335:ARG:HD3 | 1.39                     | 0.45              |
| 1:G:287:ILE:HB   | 1:I:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:H:33:SER:O     | 1:H:69:TYR:CD1  | 2.69                     | 0.45              |
| 1:I:144:ALA:HB2  | 1:I:342:GLY:N   | 2.31                     | 0.45              |
| 1:I:369:ILE:HG22 | 1:I:370:VAL:H   | 1.82                     | 0.45              |
| 1:J:34:ILE:HG22  | 1:J:35:VAL:H    | 1.78                     | 0.45              |
| 1:J:287:ILE:HG22 | 1:J:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:K:9:VAL:HG21   | 1:K:344:SER:HA  | 1.98                     | 0.45              |
| 1:K:33:SER:O     | 1:K:69:TYR:CD1  | 2.69                     | 0.45              |
| 1:M:287:ILE:HG22 | 1:M:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:O:73:HIC:HA    | 1:O:183:ARG:NH1 | 2.18                     | 0.45              |
| 1:P:106:THR:HB   | 1:P:137:GLN:HG2 | 1.97                     | 0.45              |
| 1:P:223:PHE:CD1  | 1:P:259:GLU:CG  | 2.96                     | 0.45              |
| 1:P:287:ILE:HB   | 1:R:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:Q:33:SER:O     | 1:Q:69:TYR:CD1  | 2.69                     | 0.45              |
| 1:R:180:LEU:CD1  | 1:R:181:ALA:N   | 2.78                     | 0.45              |
| 1:S:43:VAL:C     | 1:S:44:MET:HG2  | 2.37                     | 0.45              |
| 1:T:164:PRO:CG   | 1:T:174:ALA:CB  | 2.95                     | 0.45              |
| 1:U:287:ILE:HG22 | 1:U:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:V:38:PRO:HD3   | 1:V:49:GLN:HE22 | 1.81                     | 0.45              |
| 1:W:43:VAL:C     | 1:W:44:MET:HG2  | 2.37                     | 0.45              |
| 1:W:133:TYR:CE2  | 1:W:375:PHE:HB2 | 2.51                     | 0.45              |
| 1:W:236:LEU:CD1  | 1:W:237:GLU:CG  | 2.93                     | 0.45              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:369:ILE:HG22 | 1:W:370:VAL:H    | 1.82                     | 0.45              |
| 1:A:38:PRO:HD3   | 1:A:49:GLN:HE22  | 1.81                     | 0.45              |
| 1:A:287:ILE:HG22 | 1:A:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:B:290:ARG:HB2  | 1:D:244:ASP:HA   | 1.97                     | 0.45              |
| 1:C:38:PRO:HD3   | 1:C:49:GLN:HE22  | 1.81                     | 0.45              |
| 1:C:43:VAL:C     | 1:C:44:MET:HG2   | 2.37                     | 0.45              |
| 1:C:287:ILE:HG22 | 1:C:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:D:38:PRO:HD3   | 1:D:49:GLN:HE22  | 1.82                     | 0.45              |
| 1:D:144:ALA:HB2  | 1:D:342:GLY:N    | 2.31                     | 0.45              |
| 1:E:116:ARG:NH1  | 1:E:375:PHE:HA   | 2.32                     | 0.45              |
| 1:E:135:ALA:HB3  | 1:E:140:LEU:HD11 | 1.98                     | 0.45              |
| 1:E:287:ILE:HG22 | 1:E:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:F:38:PRO:CG    | 1:F:49:GLN:NE2   | 2.79                     | 0.45              |
| 1:F:290:ARG:HB2  | 1:H:244:ASP:HA   | 1.97                     | 0.45              |
| 1:F:369:ILE:HG22 | 1:F:370:VAL:H    | 1.81                     | 0.45              |
| 1:F:369:ILE:HG23 | 1:F:370:VAL:N    | 2.30                     | 0.45              |
| 1:G:38:PRO:HD3   | 1:G:49:GLN:HE22  | 1.82                     | 0.45              |
| 1:G:335:ARG:HA   | 1:G:335:ARG:HD3  | 1.39                     | 0.45              |
| 1:H:287:ILE:HG22 | 1:H:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:K:106:THR:HB   | 1:K:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:K:287:ILE:HB   | 1:M:244:ASP:HB3  | 1.98                     | 0.45              |
| 1:M:33:SER:O     | 1:M:69:TYR:CD1   | 2.69                     | 0.45              |
| 1:M:34:ILE:N     | 1:M:54:VAL:HG11  | 2.31                     | 0.45              |
| 1:N:34:ILE:N     | 1:N:54:VAL:HG11  | 2.31                     | 0.45              |
| 1:N:43:VAL:C     | 1:N:44:MET:HG2   | 2.37                     | 0.45              |
| 1:N:116:ARG:NH1  | 1:N:375:PHE:HA   | 2.32                     | 0.45              |
| 1:N:143:TYR:CE2  | 1:N:346:LEU:HD13 | 2.51                     | 0.45              |
| 1:O:7:ALA:HB1    | 1:O:347:ALA:HB1  | 1.98                     | 0.45              |
| 1:O:33:SER:O     | 1:O:69:TYR:CD1   | 2.69                     | 0.45              |
| 1:P:236:LEU:HD11 | 1:P:237:GLU:HG2  | 1.96                     | 0.45              |
| 1:R:14:SER:HB2   | 1:R:183:ARG:HH22 | 1.80                     | 0.45              |
| 1:R:38:PRO:HD3   | 1:R:49:GLN:HE22  | 1.81                     | 0.45              |
| 1:R:287:ILE:HG22 | 1:R:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:S:180:LEU:O    | 1:S:180:LEU:HG   | 2.11                     | 0.45              |
| 1:S:324:THR:HG23 | 1:U:241:GLU:OE2  | 2.16                     | 0.45              |
| 1:T:287:ILE:HG22 | 1:T:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:U:34:ILE:N     | 1:U:54:VAL:HG11  | 2.31                     | 0.45              |
| 1:U:143:TYR:CE2  | 1:U:346:LEU:HD13 | 2.51                     | 0.45              |
| 1:U:369:ILE:HG22 | 1:U:370:VAL:H    | 1.82                     | 0.45              |
| 1:V:9:VAL:HG21   | 1:V:344:SER:HA   | 1.98                     | 0.45              |
| 1:V:369:ILE:HG22 | 1:V:370:VAL:H    | 1.82                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:8:LEU:O      | 1:W:104:LEU:N    | 2.47                     | 0.45              |
| 1:A:173:HIS:HE1  | 1:B:268:GLY:CA   | 2.28                     | 0.45              |
| 1:B:116:ARG:NH1  | 1:B:375:PHE:HA   | 2.32                     | 0.45              |
| 1:B:164:PRO:CG   | 1:B:174:ALA:CB   | 2.95                     | 0.45              |
| 1:C:33:SER:O     | 1:C:69:TYR:CD1   | 2.69                     | 0.45              |
| 1:C:73:HIC:HA    | 1:C:183:ARG:NH1  | 2.18                     | 0.45              |
| 1:C:116:ARG:NH1  | 1:C:375:PHE:HA   | 2.32                     | 0.45              |
| 1:C:233:SER:HB3  | 1:C:236:LEU:HG   | 1.99                     | 0.45              |
| 1:D:7:ALA:HB1    | 1:D:347:ALA:HB1  | 1.98                     | 0.45              |
| 1:E:58:ALA:CB    | 1:E:65:LEU:CD2   | 2.90                     | 0.45              |
| 1:E:324:THR:HG23 | 1:G:241:GLU:OE2  | 2.16                     | 0.45              |
| 1:F:287:ILE:HG22 | 1:F:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:G:33:SER:O     | 1:G:69:TYR:CD1   | 2.69                     | 0.45              |
| 1:G:116:ARG:NH1  | 1:G:375:PHE:HA   | 2.32                     | 0.45              |
| 1:G:143:TYR:CE2  | 1:G:346:LEU:HD13 | 2.51                     | 0.45              |
| 1:G:369:ILE:HG22 | 1:G:370:VAL:H    | 1.81                     | 0.45              |
| 1:H:8:LEU:O      | 1:H:104:LEU:N    | 2.47                     | 0.45              |
| 1:H:106:THR:HB   | 1:H:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:H:324:THR:HG23 | 1:J:241:GLU:OE2  | 2.16                     | 0.45              |
| 1:J:144:ALA:HB2  | 1:J:342:GLY:N    | 2.31                     | 0.45              |
| 1:L:236:LEU:CD1  | 1:L:237:GLU:CG   | 2.93                     | 0.45              |
| 1:M:9:VAL:HG21   | 1:M:344:SER:HA   | 1.98                     | 0.45              |
| 1:N:33:SER:O     | 1:N:69:TYR:CD1   | 2.69                     | 0.45              |
| 1:P:7:ALA:HB1    | 1:P:347:ALA:HB1  | 1.98                     | 0.45              |
| 1:Q:287:ILE:HB   | 1:S:244:ASP:HB3  | 1.97                     | 0.45              |
| 1:T:34:ILE:HD13  | 1:T:67:LEU:CD2   | 2.46                     | 0.45              |
| 1:T:324:THR:HG23 | 1:V:241:GLU:OE2  | 2.16                     | 0.45              |
| 1:U:73:HIC:HA    | 1:U:183:ARG:NH1  | 2.18                     | 0.45              |
| 1:U:144:ALA:HB2  | 1:U:342:GLY:N    | 2.31                     | 0.45              |
| 1:U:324:THR:HG23 | 1:W:241:GLU:OE2  | 2.16                     | 0.45              |
| 1:U:349:LEU:HD23 | 1:U:349:LEU:HA   | 1.80                     | 0.45              |
| 1:W:116:ARG:NH1  | 1:W:375:PHE:HA   | 2.32                     | 0.45              |
| 1:W:144:ALA:HB2  | 1:W:342:GLY:N    | 2.31                     | 0.45              |
| 1:B:287:ILE:HG22 | 1:B:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:C:106:THR:HB   | 1:C:137:GLN:HG2  | 1.97                     | 0.45              |
| 1:C:180:LEU:CD1  | 1:C:181:ALA:N    | 2.78                     | 0.45              |
| 1:D:9:VAL:HG21   | 1:D:344:SER:HA   | 1.98                     | 0.45              |
| 1:D:116:ARG:NH1  | 1:D:375:PHE:HA   | 2.32                     | 0.45              |
| 1:D:180:LEU:O    | 1:D:180:LEU:HG   | 2.11                     | 0.45              |
| 1:D:287:ILE:HG22 | 1:D:290:ARG:NH1  | 2.32                     | 0.45              |
| 1:D:324:THR:HG23 | 1:F:241:GLU:OE2  | 2.16                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:G:164:PRO:CG   | 1:G:174:ALA:CB  | 2.95                     | 0.45              |
| 1:H:290:ARG:HB2  | 1:J:244:ASP:HA  | 1.97                     | 0.45              |
| 1:K:38:PRO:HD3   | 1:K:49:GLN:HE22 | 1.81                     | 0.45              |
| 1:K:287:ILE:HG22 | 1:K:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:L:38:PRO:HD3   | 1:L:49:GLN:HE22 | 1.81                     | 0.45              |
| 1:L:116:ARG:NH1  | 1:L:375:PHE:HA  | 2.32                     | 0.45              |
| 1:M:335:ARG:HA   | 1:M:335:ARG:HD3 | 1.39                     | 0.45              |
| 1:M:369:ILE:HG22 | 1:M:370:VAL:H   | 1.82                     | 0.45              |
| 1:N:144:ALA:HB2  | 1:N:342:GLY:N   | 2.31                     | 0.45              |
| 1:O:31:PHE:HA    | 1:O:32:PRO:HD3  | 1.65                     | 0.45              |
| 1:P:34:ILE:N     | 1:P:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:P:180:LEU:CD1  | 1:P:181:ALA:N   | 2.78                     | 0.45              |
| 1:Q:290:ARG:HB2  | 1:S:244:ASP:HA  | 1.97                     | 0.45              |
| 1:Q:324:THR:HG23 | 1:S:241:GLU:OE2 | 2.17                     | 0.45              |
| 1:S:8:LEU:O      | 1:S:104:LEU:N   | 2.47                     | 0.45              |
| 1:S:369:ILE:HG22 | 1:S:370:VAL:H   | 1.82                     | 0.45              |
| 1:U:116:ARG:NH1  | 1:U:375:PHE:HA  | 2.32                     | 0.45              |
| 1:W:110:LEU:CD1  | 1:W:177:ARG:NH1 | 2.80                     | 0.45              |
| 1:A:180:LEU:CD1  | 1:A:181:ALA:N   | 2.78                     | 0.45              |
| 1:A:233:SER:HB3  | 1:A:236:LEU:HG  | 1.99                     | 0.45              |
| 1:B:7:ALA:HB1    | 1:B:347:ALA:HB1 | 1.98                     | 0.45              |
| 1:C:34:ILE:N     | 1:C:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:C:369:ILE:HG22 | 1:C:370:VAL:H   | 1.81                     | 0.45              |
| 1:E:7:ALA:HB1    | 1:E:347:ALA:HB1 | 1.98                     | 0.45              |
| 1:E:9:VAL:HG21   | 1:E:344:SER:HA  | 1.98                     | 0.45              |
| 1:E:106:THR:HB   | 1:E:137:GLN:HG2 | 1.98                     | 0.45              |
| 1:E:167:GLU:OE1  | 1:G:61:LYS:CD   | 2.65                     | 0.45              |
| 1:E:233:SER:HB3  | 1:E:236:LEU:HG  | 1.99                     | 0.45              |
| 1:G:106:THR:HB   | 1:G:137:GLN:HG2 | 1.97                     | 0.45              |
| 1:G:167:GLU:OE1  | 1:I:61:LYS:CD   | 2.65                     | 0.45              |
| 1:G:180:LEU:CD1  | 1:G:181:ALA:N   | 2.78                     | 0.45              |
| 1:G:236:LEU:HD11 | 1:G:237:GLU:HG2 | 1.96                     | 0.45              |
| 1:G:324:THR:HG23 | 1:I:241:GLU:OE2 | 2.16                     | 0.45              |
| 1:I:164:PRO:CG   | 1:I:174:ALA:CB  | 2.95                     | 0.45              |
| 1:I:361:GLU:HB3  | 1:I:369:ILE:CD1 | 2.14                     | 0.45              |
| 1:J:33:SER:O     | 1:J:69:TYR:CD1  | 2.69                     | 0.45              |
| 1:J:164:PRO:CG   | 1:J:174:ALA:CB  | 2.95                     | 0.45              |
| 1:J:167:GLU:OE1  | 1:L:61:LYS:CD   | 2.65                     | 0.45              |
| 1:J:324:THR:HG23 | 1:L:241:GLU:OE2 | 2.16                     | 0.45              |
| 1:K:7:ALA:HB3    | 1:K:347:ALA:HB1 | 1.99                     | 0.45              |
| 1:K:34:ILE:N     | 1:K:54:VAL:HG11 | 2.31                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:K:164:PRO:CG   | 1:K:174:ALA:CB  | 2.95                     | 0.45              |
| 1:K:167:GLU:OE1  | 1:M:61:LYS:CD   | 2.65                     | 0.45              |
| 1:L:43:VAL:C     | 1:L:44:MET:HG2  | 2.37                     | 0.45              |
| 1:L:164:PRO:CG   | 1:L:174:ALA:CB  | 2.95                     | 0.45              |
| 1:L:369:ILE:HG22 | 1:L:370:VAL:H   | 1.81                     | 0.45              |
| 1:M:7:ALA:HB3    | 1:M:347:ALA:HB1 | 1.99                     | 0.45              |
| 1:M:287:ILE:HB   | 1:O:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:N:361:GLU:HB3  | 1:N:369:ILE:CD1 | 2.14                     | 0.45              |
| 1:O:7:ALA:HB3    | 1:O:347:ALA:HB1 | 1.99                     | 0.45              |
| 1:P:116:ARG:NH1  | 1:P:375:PHE:HA  | 2.32                     | 0.45              |
| 1:P:287:ILE:HG22 | 1:P:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:Q:7:ALA:HB1    | 1:Q:347:ALA:HB1 | 1.98                     | 0.45              |
| 1:Q:299:MET:HE1  | 1:Q:304:THR:HB  | 1.98                     | 0.45              |
| 1:S:290:ARG:HB2  | 1:U:244:ASP:HA  | 1.97                     | 0.45              |
| 1:S:369:ILE:HG23 | 1:S:370:VAL:N   | 2.30                     | 0.45              |
| 1:T:369:ILE:HG22 | 1:T:370:VAL:H   | 1.81                     | 0.45              |
| 1:U:8:LEU:O      | 1:U:104:LEU:N   | 2.47                     | 0.45              |
| 1:V:43:VAL:C     | 1:V:44:MET:HG2  | 2.37                     | 0.45              |
| 1:A:357:ILE:HD12 | 1:A:357:ILE:HA  | 1.79                     | 0.45              |
| 1:A:369:ILE:HG22 | 1:A:370:VAL:H   | 1.81                     | 0.45              |
| 1:B:33:SER:O     | 1:B:69:TYR:CD1  | 2.69                     | 0.45              |
| 1:B:34:ILE:N     | 1:B:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:B:144:ALA:HB2  | 1:B:342:GLY:N   | 2.31                     | 0.45              |
| 1:B:167:GLU:OE1  | 1:D:61:LYS:CD   | 2.65                     | 0.45              |
| 1:B:300:SER:HA   | 1:B:335:ARG:NE  | 2.32                     | 0.45              |
| 1:D:38:PRO:CG    | 1:D:49:GLN:NE2  | 2.79                     | 0.45              |
| 1:D:164:PRO:CG   | 1:D:174:ALA:CB  | 2.95                     | 0.45              |
| 1:D:290:ARG:HB2  | 1:F:244:ASP:HA  | 1.97                     | 0.45              |
| 1:E:144:ALA:HB2  | 1:E:342:GLY:N   | 2.31                     | 0.45              |
| 1:E:164:PRO:CG   | 1:E:174:ALA:CB  | 2.95                     | 0.45              |
| 1:G:300:SER:HA   | 1:G:335:ARG:NE  | 2.32                     | 0.45              |
| 1:H:38:PRO:HD3   | 1:H:49:GLN:HE22 | 1.81                     | 0.45              |
| 1:H:164:PRO:CG   | 1:H:174:ALA:CB  | 2.95                     | 0.45              |
| 1:H:236:LEU:CD1  | 1:H:237:GLU:CG  | 2.93                     | 0.45              |
| 1:I:7:ALA:HB3    | 1:I:347:ALA:HB1 | 1.99                     | 0.45              |
| 1:I:106:THR:HB   | 1:I:137:GLN:HG2 | 1.97                     | 0.45              |
| 1:I:116:ARG:NH1  | 1:I:375:PHE:HA  | 2.32                     | 0.45              |
| 1:I:167:GLU:OE1  | 1:K:61:LYS:CD   | 2.65                     | 0.45              |
| 1:K:38:PRO:CG    | 1:K:49:GLN:NE2  | 2.79                     | 0.45              |
| 1:L:287:ILE:HB   | 1:N:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:L:362:TYR:CE1  | 1:L:367:PRO:CB  | 2.99                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:M:167:GLU:OE1  | 1:O:61:LYS:CD   | 2.65                     | 0.45              |
| 1:O:35:VAL:H     | 1:O:68:LYS:H    | 1.65                     | 0.45              |
| 1:O:290:ARG:HB2  | 1:Q:244:ASP:HA  | 1.97                     | 0.45              |
| 1:O:369:ILE:HG23 | 1:O:370:VAL:N   | 2.30                     | 0.45              |
| 1:Q:7:ALA:HB3    | 1:Q:347:ALA:HB1 | 1.99                     | 0.45              |
| 1:R:164:PRO:CG   | 1:R:174:ALA:CB  | 2.95                     | 0.45              |
| 1:S:116:ARG:NH1  | 1:S:375:PHE:HA  | 2.32                     | 0.45              |
| 1:S:236:LEU:HD11 | 1:S:237:GLU:HG2 | 1.96                     | 0.45              |
| 1:T:38:PRO:CG    | 1:T:49:GLN:NE2  | 2.79                     | 0.45              |
| 1:U:6:THR:O      | 1:U:102:PRO:HD2 | 2.17                     | 0.45              |
| 1:U:300:SER:HA   | 1:U:335:ARG:NE  | 2.32                     | 0.45              |
| 1:V:287:ILE:HG22 | 1:V:290:ARG:NH1 | 2.32                     | 0.45              |
| 1:A:287:ILE:HB   | 1:C:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:B:9:VAL:HG21   | 1:B:344:SER:HA  | 1.98                     | 0.45              |
| 1:B:38:PRO:CG    | 1:B:49:GLN:NE2  | 2.79                     | 0.45              |
| 1:B:110:LEU:CD1  | 1:B:177:ARG:NH1 | 2.80                     | 0.45              |
| 1:B:287:ILE:HB   | 1:D:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:C:7:ALA:HB1    | 1:C:347:ALA:HB1 | 1.98                     | 0.45              |
| 1:D:34:ILE:HD13  | 1:D:67:LEU:CD2  | 2.46                     | 0.45              |
| 1:D:34:ILE:N     | 1:D:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:E:300:SER:HA   | 1:E:335:ARG:NE  | 2.32                     | 0.45              |
| 1:E:369:ILE:HG22 | 1:E:370:VAL:H   | 1.82                     | 0.45              |
| 1:F:227:MET:HE3  | 1:F:227:MET:HA  | 1.98                     | 0.45              |
| 1:F:287:ILE:HB   | 1:H:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:G:133:TYR:CE2  | 1:G:375:PHE:HB2 | 2.51                     | 0.45              |
| 1:H:34:ILE:HD13  | 1:H:67:LEU:CD2  | 2.46                     | 0.45              |
| 1:H:167:GLU:OE1  | 1:J:61:LYS:CD   | 2.65                     | 0.45              |
| 1:H:287:ILE:HB   | 1:J:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:J:34:ILE:N     | 1:J:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:L:9:VAL:HG21   | 1:L:344:SER:HA  | 1.98                     | 0.45              |
| 1:L:167:GLU:OE1  | 1:N:61:LYS:CD   | 2.65                     | 0.45              |
| 1:M:44:MET:CG    | 1:M:45:VAL:N    | 2.75                     | 0.45              |
| 1:O:34:ILE:N     | 1:O:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:O:38:PRO:HD3   | 1:O:49:GLN:HE22 | 1.82                     | 0.45              |
| 1:O:324:THR:HG23 | 1:Q:241:GLU:OE2 | 2.16                     | 0.45              |
| 1:P:34:ILE:HD13  | 1:P:67:LEU:CD2  | 2.46                     | 0.45              |
| 1:Q:43:VAL:C     | 1:Q:44:MET:HG2  | 2.37                     | 0.45              |
| 1:Q:167:GLU:OE1  | 1:S:61:LYS:CD   | 2.65                     | 0.45              |
| 1:R:324:THR:HG23 | 1:T:241:GLU:OE2 | 2.16                     | 0.45              |
| 1:S:7:ALA:HB1    | 1:S:347:ALA:HB1 | 1.98                     | 0.45              |
| 1:S:7:ALA:HB3    | 1:S:347:ALA:HB1 | 1.99                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:S:335:ARG:HA   | 1:S:335:ARG:HD3 | 1.39                     | 0.45              |
| 1:T:180:LEU:CD1  | 1:T:181:ALA:N   | 2.78                     | 0.45              |
| 1:U:290:ARG:HB2  | 1:W:244:ASP:HA  | 1.97                     | 0.45              |
| 1:V:34:ILE:HG22  | 1:V:35:VAL:H    | 1.78                     | 0.45              |
| 1:V:34:ILE:N     | 1:V:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:V:233:SER:HB3  | 1:V:236:LEU:HG  | 1.99                     | 0.45              |
| 1:W:34:ILE:N     | 1:W:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:W:38:PRO:HD3   | 1:W:49:GLN:HE22 | 1.81                     | 0.45              |
| 1:W:73:HIC:HA    | 1:W:183:ARG:NH1 | 2.18                     | 0.45              |
| 1:W:164:PRO:CG   | 1:W:174:ALA:CB  | 2.95                     | 0.45              |
| 1:A:164:PRO:CG   | 1:A:174:ALA:CB  | 2.95                     | 0.45              |
| 1:A:300:SER:HA   | 1:A:335:ARG:NE  | 2.32                     | 0.45              |
| 1:B:324:THR:HG23 | 1:D:241:GLU:OE2 | 2.16                     | 0.45              |
| 1:C:167:GLU:OE1  | 1:E:61:LYS:CD   | 2.65                     | 0.45              |
| 1:D:300:SER:HA   | 1:D:335:ARG:NE  | 2.32                     | 0.45              |
| 1:E:34:ILE:N     | 1:E:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:F:33:SER:O     | 1:F:69:TYR:CD1  | 2.69                     | 0.45              |
| 1:G:34:ILE:N     | 1:G:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:G:147:ARG:HH21 | 1:G:147:ARG:HG3 | 1.80                     | 0.45              |
| 1:G:233:SER:HB3  | 1:G:236:LEU:HG  | 1.99                     | 0.45              |
| 1:H:9:VAL:HG21   | 1:H:344:SER:HA  | 1.98                     | 0.45              |
| 1:I:180:LEU:CD1  | 1:I:181:ALA:N   | 2.78                     | 0.45              |
| 1:I:300:SER:HA   | 1:I:335:ARG:NE  | 2.32                     | 0.45              |
| 1:J:34:ILE:HD13  | 1:J:67:LEU:CD2  | 2.46                     | 0.45              |
| 1:J:287:ILE:HB   | 1:L:244:ASP:HB3 | 1.97                     | 0.45              |
| 1:L:300:SER:HA   | 1:L:335:ARG:NE  | 2.32                     | 0.45              |
| 1:L:357:ILE:HD12 | 1:L:357:ILE:HA  | 1.79                     | 0.45              |
| 1:L:374:CYS:HB2  | 1:L:375:PHE:H   | 1.61                     | 0.45              |
| 1:M:43:VAL:C     | 1:M:44:MET:HG2  | 2.37                     | 0.45              |
| 1:P:9:VAL:HG21   | 1:P:344:SER:HA  | 1.98                     | 0.45              |
| 1:P:369:ILE:HG22 | 1:P:370:VAL:H   | 1.82                     | 0.45              |
| 1:Q:34:ILE:N     | 1:Q:54:VAL:HG11 | 2.31                     | 0.45              |
| 1:Q:236:LEU:CD1  | 1:Q:237:GLU:CG  | 2.93                     | 0.45              |
| 1:R:7:ALA:HB1    | 1:R:347:ALA:HB1 | 1.98                     | 0.45              |
| 1:R:369:ILE:HG22 | 1:R:370:VAL:H   | 1.82                     | 0.45              |
| 1:S:9:VAL:HG21   | 1:S:344:SER:HA  | 1.98                     | 0.45              |
| 1:S:144:ALA:HB2  | 1:S:342:GLY:N   | 2.31                     | 0.45              |
| 1:S:300:SER:HA   | 1:S:335:ARG:NE  | 2.32                     | 0.45              |
| 1:T:233:SER:HB3  | 1:T:236:LEU:HG  | 1.99                     | 0.45              |
| 1:U:164:PRO:CG   | 1:U:174:ALA:CB  | 2.95                     | 0.45              |
| 1:U:369:ILE:HG23 | 1:U:370:VAL:N   | 2.30                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:W:6:THR:O      | 1:W:102:PRO:HD2 | 2.17                     | 0.45              |
| 1:W:34:ILE:HD13  | 1:W:67:LEU:CD2  | 2.46                     | 0.45              |
| 1:W:58:ALA:CB    | 1:W:65:LEU:CD2  | 2.90                     | 0.45              |
| 1:A:73:HIC:HA    | 1:A:183:ARG:NH1 | 2.18                     | 0.44              |
| 1:A:167:GLU:OE1  | 1:C:61:LYS:CD   | 2.65                     | 0.44              |
| 1:C:324:THR:HG23 | 1:E:241:GLU:OE2 | 2.16                     | 0.44              |
| 1:D:6:THR:O      | 1:D:102:PRO:HD2 | 2.17                     | 0.44              |
| 1:D:43:VAL:C     | 1:D:44:MET:HG2  | 2.37                     | 0.44              |
| 1:E:43:VAL:C     | 1:E:44:MET:HG2  | 2.37                     | 0.44              |
| 1:F:38:PRO:HD3   | 1:F:49:GLN:HE22 | 1.81                     | 0.44              |
| 1:F:43:VAL:C     | 1:F:44:MET:HG2  | 2.37                     | 0.44              |
| 1:F:116:ARG:NH1  | 1:F:375:PHE:HA  | 2.32                     | 0.44              |
| 1:G:7:ALA:HB3    | 1:G:347:ALA:HB1 | 1.99                     | 0.44              |
| 1:G:43:VAL:C     | 1:G:44:MET:HG2  | 2.37                     | 0.44              |
| 1:G:287:ILE:HG22 | 1:G:290:ARG:NH1 | 2.32                     | 0.44              |
| 1:J:43:VAL:C     | 1:J:44:MET:HG2  | 2.37                     | 0.44              |
| 1:K:43:VAL:C     | 1:K:44:MET:HG2  | 2.37                     | 0.44              |
| 1:K:300:SER:HA   | 1:K:335:ARG:NE  | 2.32                     | 0.44              |
| 1:K:369:ILE:HG23 | 1:K:370:VAL:N   | 2.30                     | 0.44              |
| 1:M:164:PRO:CG   | 1:M:174:ALA:CB  | 2.95                     | 0.44              |
| 1:N:164:PRO:CG   | 1:N:174:ALA:CB  | 2.95                     | 0.44              |
| 1:N:287:ILE:HB   | 1:P:244:ASP:HB3 | 1.98                     | 0.44              |
| 1:N:369:ILE:HG22 | 1:N:370:VAL:H   | 1.82                     | 0.44              |
| 1:O:116:ARG:NH1  | 1:O:375:PHE:HA  | 2.32                     | 0.44              |
| 1:O:167:GLU:OE1  | 1:Q:61:LYS:CD   | 2.65                     | 0.44              |
| 1:P:164:PRO:CG   | 1:P:174:ALA:CB  | 2.95                     | 0.44              |
| 1:P:167:GLU:OE1  | 1:R:61:LYS:CD   | 2.65                     | 0.44              |
| 1:Q:34:ILE:HD13  | 1:Q:67:LEU:CD2  | 2.46                     | 0.44              |
| 1:R:116:ARG:NH1  | 1:R:375:PHE:HA  | 2.32                     | 0.44              |
| 1:R:133:TYR:CE2  | 1:R:375:PHE:HB2 | 2.51                     | 0.44              |
| 1:R:167:GLU:OE1  | 1:T:61:LYS:CD   | 2.65                     | 0.44              |
| 1:S:6:THR:O      | 1:S:102:PRO:HD2 | 2.17                     | 0.44              |
| 1:S:361:GLU:HB3  | 1:S:369:ILE:CD1 | 2.14                     | 0.44              |
| 1:U:7:ALA:HB3    | 1:U:347:ALA:HB1 | 1.99                     | 0.44              |
| 1:U:38:PRO:HD3   | 1:U:49:GLN:HE22 | 1.82                     | 0.44              |
| 1:V:300:SER:HA   | 1:V:335:ARG:NE  | 2.32                     | 0.44              |
| 1:W:300:SER:HA   | 1:W:335:ARG:NE  | 2.32                     | 0.44              |
| 1:W:362:TYR:CE1  | 1:W:367:PRO:CB  | 2.99                     | 0.44              |
| 1:A:7:ALA:HB1    | 1:A:347:ALA:HB1 | 1.98                     | 0.44              |
| 1:A:110:LEU:CD1  | 1:A:177:ARG:NH1 | 2.80                     | 0.44              |
| 1:A:116:ARG:NH1  | 1:A:375:PHE:HA  | 2.32                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:B:6:THR:O      | 1:B:102:PRO:HD2 | 2.17                     | 0.44              |
| 1:B:31:PHE:HA    | 1:B:32:PRO:HD3  | 1.66                     | 0.44              |
| 1:B:43:VAL:C     | 1:B:44:MET:HG2  | 2.37                     | 0.44              |
| 1:C:164:PRO:CG   | 1:C:174:ALA:CB  | 2.95                     | 0.44              |
| 1:C:300:SER:HA   | 1:C:335:ARG:NE  | 2.32                     | 0.44              |
| 1:D:33:SER:O     | 1:D:69:TYR:CD1  | 2.69                     | 0.44              |
| 1:D:287:ILE:HB   | 1:F:244:ASP:HB3 | 1.98                     | 0.44              |
| 1:G:34:ILE:HD13  | 1:G:67:LEU:CD2  | 2.46                     | 0.44              |
| 1:G:58:ALA:CB    | 1:G:65:LEU:CD2  | 2.90                     | 0.44              |
| 1:H:6:THR:O      | 1:H:102:PRO:HD2 | 2.17                     | 0.44              |
| 1:H:43:VAL:C     | 1:H:44:MET:HG2  | 2.37                     | 0.44              |
| 1:I:287:ILE:HG22 | 1:I:290:ARG:NH1 | 2.32                     | 0.44              |
| 1:I:362:TYR:CE1  | 1:I:367:PRO:CB  | 2.99                     | 0.44              |
| 1:J:73:HIC:HA    | 1:J:183:ARG:NH1 | 2.18                     | 0.44              |
| 1:J:116:ARG:NH1  | 1:J:375:PHE:HA  | 2.32                     | 0.44              |
| 1:L:144:ALA:HB2  | 1:L:342:GLY:N   | 2.31                     | 0.44              |
| 1:M:35:VAL:H     | 1:M:68:LYS:H    | 1.65                     | 0.44              |
| 1:N:167:GLU:OE1  | 1:P:61:LYS:CD   | 2.65                     | 0.44              |
| 1:N:300:SER:HA   | 1:N:335:ARG:NE  | 2.32                     | 0.44              |
| 1:O:43:VAL:C     | 1:O:44:MET:HG2  | 2.37                     | 0.44              |
| 1:O:300:SER:HA   | 1:O:335:ARG:NE  | 2.32                     | 0.44              |
| 1:P:300:SER:HA   | 1:P:335:ARG:NE  | 2.32                     | 0.44              |
| 1:Q:35:VAL:H     | 1:Q:68:LYS:H    | 1.65                     | 0.44              |
| 1:S:34:ILE:HD13  | 1:S:67:LEU:CD2  | 2.46                     | 0.44              |
| 1:S:167:GLU:OE1  | 1:U:61:LYS:CD   | 2.65                     | 0.44              |
| 1:T:167:GLU:OE1  | 1:V:61:LYS:CD   | 2.65                     | 0.44              |
| 1:U:7:ALA:HB1    | 1:U:347:ALA:HB1 | 1.98                     | 0.44              |
| 1:V:61:LYS:HG2   | 1:V:64:ILE:CG2  | 2.45                     | 0.44              |
| 1:B:34:ILE:O     | 1:B:54:VAL:HB   | 2.18                     | 0.44              |
| 1:C:170:ALA:O    | 1:C:172:PRO:HD3 | 2.18                     | 0.44              |
| 1:D:35:VAL:H     | 1:D:68:LYS:H    | 1.65                     | 0.44              |
| 1:D:110:LEU:CD1  | 1:D:177:ARG:NH1 | 2.80                     | 0.44              |
| 1:D:167:GLU:OE1  | 1:F:61:LYS:CD   | 2.65                     | 0.44              |
| 1:E:6:THR:O      | 1:E:102:PRO:HD2 | 2.17                     | 0.44              |
| 1:F:6:THR:O      | 1:F:102:PRO:HD2 | 2.17                     | 0.44              |
| 1:F:35:VAL:H     | 1:F:68:LYS:H    | 1.65                     | 0.44              |
| 1:F:164:PRO:CG   | 1:F:174:ALA:CB  | 2.95                     | 0.44              |
| 1:G:34:ILE:O     | 1:G:54:VAL:HB   | 2.18                     | 0.44              |
| 1:G:110:LEU:CD1  | 1:G:177:ARG:NH1 | 2.80                     | 0.44              |
| 1:I:43:VAL:C     | 1:I:44:MET:HG2  | 2.37                     | 0.44              |
| 1:J:34:ILE:O     | 1:J:54:VAL:HB   | 2.18                     | 0.44              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:299:MET:HE1  | 1:J:304:THR:HB   | 2.00                     | 0.44              |
| 1:K:116:ARG:NH1  | 1:K:375:PHE:HA   | 2.32                     | 0.44              |
| 1:L:170:ALA:O    | 1:L:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:L:324:THR:HG23 | 1:N:241:GLU:OE2  | 2.16                     | 0.44              |
| 1:M:34:ILE:HG22  | 1:M:35:VAL:H     | 1.78                     | 0.44              |
| 1:M:34:ILE:O     | 1:M:54:VAL:HB    | 2.18                     | 0.44              |
| 1:M:38:PRO:CG    | 1:M:49:GLN:NE2   | 2.79                     | 0.44              |
| 1:O:164:PRO:CG   | 1:O:174:ALA:CB   | 2.95                     | 0.44              |
| 1:P:173:HIS:HE1  | 1:Q:268:GLY:CA   | 2.28                     | 0.44              |
| 1:Q:34:ILE:O     | 1:Q:54:VAL:HB    | 2.18                     | 0.44              |
| 1:Q:300:SER:HA   | 1:Q:335:ARG:NE   | 2.32                     | 0.44              |
| 1:R:233:SER:HB3  | 1:R:236:LEU:HG   | 1.99                     | 0.44              |
| 1:S:164:PRO:CG   | 1:S:174:ALA:CB   | 2.95                     | 0.44              |
| 1:T:6:THR:O      | 1:T:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:V:34:ILE:O     | 1:V:54:VAL:HB    | 2.18                     | 0.44              |
| 1:V:38:PRO:CG    | 1:V:49:GLN:NE2   | 2.79                     | 0.44              |
| 1:V:362:TYR:CE1  | 1:V:367:PRO:CB   | 2.99                     | 0.44              |
| 1:A:34:ILE:O     | 1:A:54:VAL:HB    | 2.18                     | 0.44              |
| 1:C:110:LEU:CD1  | 1:C:177:ARG:NH1  | 2.80                     | 0.44              |
| 1:H:34:ILE:HG22  | 1:H:35:VAL:H     | 1.78                     | 0.44              |
| 1:I:6:THR:O      | 1:I:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:I:143:TYR:CE2  | 1:I:346:LEU:HD13 | 2.51                     | 0.44              |
| 1:I:233:SER:HB3  | 1:I:236:LEU:HG   | 1.99                     | 0.44              |
| 1:I:299:MET:HE1  | 1:I:304:THR:HB   | 1.99                     | 0.44              |
| 1:J:7:ALA:HB3    | 1:J:347:ALA:HB1  | 1.99                     | 0.44              |
| 1:J:9:VAL:HG21   | 1:J:344:SER:HA   | 1.98                     | 0.44              |
| 1:J:151:ILE:O    | 1:J:297:ASN:HA   | 2.17                     | 0.44              |
| 1:J:369:ILE:HG23 | 1:J:370:VAL:N    | 2.30                     | 0.44              |
| 1:K:34:ILE:O     | 1:K:54:VAL:HB    | 2.18                     | 0.44              |
| 1:K:227:MET:HA   | 1:K:227:MET:HE3  | 2.00                     | 0.44              |
| 1:P:369:ILE:HG23 | 1:P:370:VAL:N    | 2.30                     | 0.44              |
| 1:Q:148:THR:CG2  | 1:Q:149:THR:N    | 2.81                     | 0.44              |
| 1:R:357:ILE:HD12 | 1:R:357:ILE:HA   | 1.79                     | 0.44              |
| 1:U:9:VAL:HG21   | 1:U:344:SER:HA   | 1.98                     | 0.44              |
| 1:V:7:ALA:HB1    | 1:V:347:ALA:HB1  | 1.98                     | 0.44              |
| 1:A:287:ILE:HD12 | 1:C:208:ILE:HD13 | 1.96                     | 0.44              |
| 1:B:34:ILE:CG2   | 1:B:67:LEU:HD22  | 2.28                     | 0.44              |
| 1:C:34:ILE:HD13  | 1:C:67:LEU:CD2   | 2.46                     | 0.44              |
| 1:E:34:ILE:O     | 1:E:54:VAL:HB    | 2.18                     | 0.44              |
| 1:E:110:LEU:CD1  | 1:E:177:ARG:NH1  | 2.80                     | 0.44              |
| 1:E:180:LEU:CD1  | 1:E:181:ALA:N    | 2.78                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:F:233:SER:HB3  | 1:F:236:LEU:HG  | 1.99                     | 0.44              |
| 1:H:7:ALA:HB3    | 1:H:347:ALA:HB1 | 1.99                     | 0.44              |
| 1:H:151:ILE:O    | 1:H:297:ASN:HA  | 2.17                     | 0.44              |
| 1:I:180:LEU:O    | 1:I:180:LEU:HG  | 2.11                     | 0.44              |
| 1:M:73:HIC:HA    | 1:M:183:ARG:NH1 | 2.18                     | 0.44              |
| 1:M:170:ALA:O    | 1:M:172:PRO:HD3 | 2.18                     | 0.44              |
| 1:O:148:THR:CG2  | 1:O:149:THR:N   | 2.81                     | 0.44              |
| 1:O:287:ILE:HB   | 1:Q:244:ASP:HB3 | 1.97                     | 0.44              |
| 1:Q:116:ARG:NH1  | 1:Q:375:PHE:HA  | 2.32                     | 0.44              |
| 1:Q:233:SER:HB3  | 1:Q:236:LEU:HG  | 1.99                     | 0.44              |
| 1:R:34:ILE:N     | 1:R:54:VAL:HG11 | 2.31                     | 0.44              |
| 1:R:34:ILE:O     | 1:R:54:VAL:HB   | 2.18                     | 0.44              |
| 1:R:298:VAL:CG1  | 1:R:335:ARG:NH1 | 2.81                     | 0.44              |
| 1:S:34:ILE:N     | 1:S:54:VAL:HG11 | 2.31                     | 0.44              |
| 1:S:233:SER:HB3  | 1:S:236:LEU:HG  | 1.99                     | 0.44              |
| 1:U:38:PRO:CG    | 1:U:49:GLN:NE2  | 2.79                     | 0.44              |
| 1:U:170:ALA:O    | 1:U:172:PRO:HD3 | 2.18                     | 0.44              |
| 1:V:116:ARG:NH1  | 1:V:375:PHE:HA  | 2.32                     | 0.44              |
| 1:W:38:PRO:CG    | 1:W:49:GLN:NE2  | 2.79                     | 0.44              |
| 1:A:298:VAL:CG1  | 1:A:335:ARG:NH1 | 2.81                     | 0.44              |
| 1:D:233:SER:HB3  | 1:D:236:LEU:HG  | 1.99                     | 0.44              |
| 1:F:7:ALA:HB3    | 1:F:347:ALA:HB1 | 1.99                     | 0.44              |
| 1:F:9:VAL:HG21   | 1:F:344:SER:HA  | 1.98                     | 0.44              |
| 1:F:298:VAL:CG1  | 1:F:335:ARG:NH1 | 2.81                     | 0.44              |
| 1:F:300:SER:HA   | 1:F:335:ARG:NE  | 2.32                     | 0.44              |
| 1:G:6:THR:O      | 1:G:102:PRO:HD2 | 2.17                     | 0.44              |
| 1:G:357:ILE:HD12 | 1:G:357:ILE:HA  | 1.78                     | 0.44              |
| 1:H:298:VAL:CG1  | 1:H:335:ARG:NH1 | 2.81                     | 0.44              |
| 1:I:34:ILE:N     | 1:I:54:VAL:HG11 | 2.31                     | 0.44              |
| 1:J:298:VAL:CG1  | 1:J:335:ARG:NH1 | 2.81                     | 0.44              |
| 1:K:335:ARG:HA   | 1:K:335:ARG:HD3 | 1.39                     | 0.44              |
| 1:L:7:ALA:HB3    | 1:L:347:ALA:HB1 | 1.99                     | 0.44              |
| 1:L:173:HIS:HE1  | 1:M:268:GLY:CA  | 2.28                     | 0.44              |
| 1:M:116:ARG:NH1  | 1:M:375:PHE:HA  | 2.32                     | 0.44              |
| 1:M:324:THR:HG23 | 1:O:241:GLU:OE2 | 2.17                     | 0.44              |
| 1:M:374:CYS:HB2  | 1:M:375:PHE:H   | 1.61                     | 0.44              |
| 1:N:7:ALA:HB3    | 1:N:347:ALA:HB1 | 1.99                     | 0.44              |
| 1:N:58:ALA:CB    | 1:N:65:LEU:CD2  | 2.90                     | 0.44              |
| 1:N:148:THR:CG2  | 1:N:149:THR:N   | 2.81                     | 0.44              |
| 1:N:170:ALA:O    | 1:N:172:PRO:HD3 | 2.18                     | 0.44              |
| 1:O:38:PRO:CG    | 1:O:49:GLN:NE2  | 2.79                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:298:VAL:CG1  | 1:O:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:P:7:ALA:HB3    | 1:P:347:ALA:HB1  | 1.99                     | 0.44              |
| 1:P:34:ILE:O     | 1:P:54:VAL:HB    | 2.18                     | 0.44              |
| 1:P:298:VAL:CG1  | 1:P:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:P:361:GLU:HB3  | 1:P:369:ILE:CD1  | 2.14                     | 0.44              |
| 1:Q:6:THR:O      | 1:Q:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:Q:151:ILE:O    | 1:Q:297:ASN:HA   | 2.18                     | 0.44              |
| 1:Q:298:VAL:CG1  | 1:Q:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:R:7:ALA:HB3    | 1:R:347:ALA:HB1  | 1.99                     | 0.44              |
| 1:S:227:MET:HA   | 1:S:227:MET:HE3  | 1.99                     | 0.44              |
| 1:T:38:PRO:HD3   | 1:T:49:GLN:HE22  | 1.81                     | 0.44              |
| 1:T:151:ILE:O    | 1:T:297:ASN:HA   | 2.17                     | 0.44              |
| 1:V:6:THR:O      | 1:V:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:V:180:LEU:CD1  | 1:V:181:ALA:N    | 2.78                     | 0.44              |
| 1:W:7:ALA:HB1    | 1:W:347:ALA:HB1  | 1.98                     | 0.44              |
| 1:W:9:VAL:HG21   | 1:W:344:SER:HA   | 1.98                     | 0.44              |
| 1:W:170:ALA:O    | 1:W:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:A:170:ALA:O    | 1:A:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:B:170:ALA:O    | 1:B:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:D:298:VAL:CG1  | 1:D:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:F:110:LEU:CD1  | 1:F:177:ARG:NH1  | 2.80                     | 0.44              |
| 1:F:167:GLU:OE1  | 1:H:61:LYS:CD    | 2.65                     | 0.44              |
| 1:G:151:ILE:O    | 1:G:297:ASN:HA   | 2.18                     | 0.44              |
| 1:I:133:TYR:CE2  | 1:I:375:PHE:HB2  | 2.51                     | 0.44              |
| 1:I:170:ALA:O    | 1:I:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:I:298:VAL:CG1  | 1:I:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:J:170:ALA:O    | 1:J:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:J:287:ILE:HD12 | 1:L:208:ILE:HD13 | 1.96                     | 0.44              |
| 1:J:300:SER:HA   | 1:J:335:ARG:NE   | 2.32                     | 0.44              |
| 1:K:34:ILE:HD13  | 1:K:67:LEU:CD2   | 2.46                     | 0.44              |
| 1:K:298:VAL:CG1  | 1:K:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:L:6:THR:O      | 1:L:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:L:148:THR:CG2  | 1:L:149:THR:N    | 2.81                     | 0.44              |
| 1:L:287:ILE:HD12 | 1:N:208:ILE:HD13 | 1.96                     | 0.44              |
| 1:M:298:VAL:CG1  | 1:M:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:N:6:THR:O      | 1:N:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:P:6:THR:O      | 1:P:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:Q:38:PRO:CG    | 1:Q:49:GLN:NE2   | 2.79                     | 0.44              |
| 1:Q:164:PRO:CG   | 1:Q:174:ALA:CB   | 2.95                     | 0.44              |
| 1:R:151:ILE:O    | 1:R:297:ASN:HA   | 2.17                     | 0.44              |
| 1:S:34:ILE:O     | 1:S:54:VAL:HB    | 2.18                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:S:38:PRO:CG    | 1:S:49:GLN:NE2   | 2.79                     | 0.44              |
| 1:T:7:ALA:HB1    | 1:T:347:ALA:HB1  | 1.98                     | 0.44              |
| 1:T:34:ILE:N     | 1:T:54:VAL:HG11  | 2.31                     | 0.44              |
| 1:T:170:ALA:O    | 1:T:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:T:180:LEU:O    | 1:T:180:LEU:HG   | 2.11                     | 0.44              |
| 1:T:298:VAL:CG1  | 1:T:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:V:110:LEU:CD1  | 1:V:177:ARG:NH1  | 2.80                     | 0.44              |
| 1:W:34:ILE:O     | 1:W:54:VAL:HB    | 2.18                     | 0.44              |
| 1:A:34:ILE:HG22  | 1:A:35:VAL:H     | 1.78                     | 0.44              |
| 1:D:170:ALA:O    | 1:D:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:E:7:ALA:HB3    | 1:E:347:ALA:HB1  | 1.99                     | 0.44              |
| 1:E:38:PRO:HD3   | 1:E:49:GLN:HE22  | 1.82                     | 0.44              |
| 1:E:151:ILE:O    | 1:E:297:ASN:HA   | 2.17                     | 0.44              |
| 1:E:183:ARG:HE   | 1:E:183:ARG:HB3  | 1.58                     | 0.44              |
| 1:E:236:LEU:HD11 | 1:E:237:GLU:HG2  | 1.97                     | 0.44              |
| 1:F:34:ILE:O     | 1:F:54:VAL:HB    | 2.18                     | 0.44              |
| 1:F:148:THR:CG2  | 1:F:149:THR:N    | 2.81                     | 0.44              |
| 1:H:35:VAL:H     | 1:H:68:LYS:H     | 1.65                     | 0.44              |
| 1:H:300:SER:HA   | 1:H:335:ARG:NE   | 2.32                     | 0.44              |
| 1:J:148:THR:CG2  | 1:J:149:THR:N    | 2.81                     | 0.44              |
| 1:N:34:ILE:CG2   | 1:N:67:LEU:CB    | 2.96                     | 0.44              |
| 1:N:180:LEU:CD1  | 1:N:181:ALA:N    | 2.78                     | 0.44              |
| 1:P:148:THR:CG2  | 1:P:149:THR:N    | 2.81                     | 0.44              |
| 1:R:300:SER:HA   | 1:R:335:ARG:NE   | 2.32                     | 0.44              |
| 1:S:151:ILE:O    | 1:S:297:ASN:HA   | 2.18                     | 0.44              |
| 1:S:298:VAL:CG1  | 1:S:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:T:7:ALA:HB3    | 1:T:347:ALA:HB1  | 1.99                     | 0.44              |
| 1:V:7:ALA:HB3    | 1:V:347:ALA:HB1  | 1.99                     | 0.44              |
| 1:V:151:ILE:O    | 1:V:297:ASN:HA   | 2.17                     | 0.44              |
| 1:V:369:ILE:HG23 | 1:V:370:VAL:N    | 2.30                     | 0.44              |
| 1:W:233:SER:HB3  | 1:W:236:LEU:HG   | 1.99                     | 0.44              |
| 1:B:133:TYR:CE2  | 1:B:375:PHE:HB2  | 2.51                     | 0.44              |
| 1:B:233:SER:HB3  | 1:B:236:LEU:HG   | 1.99                     | 0.44              |
| 1:C:151:ILE:O    | 1:C:297:ASN:HA   | 2.18                     | 0.44              |
| 1:C:298:VAL:CG1  | 1:C:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:E:39:ARG:NE    | 1:E:66:THR:CA    | 2.69                     | 0.44              |
| 1:F:8:LEU:CB     | 1:F:103:THR:HG23 | 2.48                     | 0.44              |
| 1:H:34:ILE:O     | 1:H:54:VAL:HB    | 2.18                     | 0.44              |
| 1:H:116:ARG:NH1  | 1:H:375:PHE:HA   | 2.32                     | 0.44              |
| 1:H:233:SER:HB3  | 1:H:236:LEU:HG   | 1.99                     | 0.44              |
| 1:H:362:TYR:CE1  | 1:H:367:PRO:CB   | 2.99                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:147:ARG:HH21 | 1:I:147:ARG:HG3  | 1.80                     | 0.44              |
| 1:I:151:ILE:O    | 1:I:297:ASN:HA   | 2.18                     | 0.44              |
| 1:J:233:SER:HB3  | 1:J:236:LEU:HG   | 1.99                     | 0.44              |
| 1:K:299:MET:O    | 1:K:332:PRO:HD2  | 2.18                     | 0.44              |
| 1:L:151:ILE:O    | 1:L:297:ASN:HA   | 2.18                     | 0.44              |
| 1:L:298:VAL:CG1  | 1:L:335:ARG:NH1  | 2.81                     | 0.44              |
| 1:M:8:LEU:CB     | 1:M:103:THR:HG23 | 2.48                     | 0.44              |
| 1:N:357:ILE:HD12 | 1:N:357:ILE:HA   | 1.79                     | 0.44              |
| 1:O:151:ILE:O    | 1:O:297:ASN:HA   | 2.18                     | 0.44              |
| 1:O:233:SER:HB3  | 1:O:236:LEU:HG   | 1.99                     | 0.44              |
| 1:P:34:ILE:CG2   | 1:P:67:LEU:CB    | 2.96                     | 0.44              |
| 1:P:233:SER:HB3  | 1:P:236:LEU:HG   | 1.99                     | 0.44              |
| 1:Q:9:VAL:HG21   | 1:Q:344:SER:HA   | 1.98                     | 0.44              |
| 1:Q:170:ALA:O    | 1:Q:172:PRO:HD3  | 2.18                     | 0.44              |
| 1:R:6:THR:O      | 1:R:102:PRO:HD2  | 2.17                     | 0.44              |
| 1:T:8:LEU:CB     | 1:T:103:THR:HG23 | 2.48                     | 0.44              |
| 1:T:116:ARG:NH1  | 1:T:375:PHE:HA   | 2.32                     | 0.44              |
| 1:T:300:SER:HA   | 1:T:335:ARG:NE   | 2.32                     | 0.44              |
| 1:U:167:GLU:OE1  | 1:W:61:LYS:CD    | 2.65                     | 0.44              |
| 1:U:233:SER:HB3  | 1:U:236:LEU:HG   | 1.99                     | 0.44              |
| 1:W:7:ALA:HB3    | 1:W:347:ALA:HB1  | 1.99                     | 0.44              |
| 1:A:349:LEU:HD23 | 1:A:349:LEU:HA   | 1.79                     | 0.43              |
| 1:A:369:ILE:HG23 | 1:A:370:VAL:N    | 2.30                     | 0.43              |
| 1:B:298:VAL:CG1  | 1:B:335:ARG:NH1  | 2.81                     | 0.43              |
| 1:D:7:ALA:HB3    | 1:D:347:ALA:HB1  | 1.99                     | 0.43              |
| 1:F:34:ILE:HD13  | 1:F:67:LEU:CD2   | 2.46                     | 0.43              |
| 1:F:151:ILE:O    | 1:F:297:ASN:HA   | 2.18                     | 0.43              |
| 1:G:170:ALA:O    | 1:G:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:G:173:HIS:HE1  | 1:H:268:GLY:CA   | 2.28                     | 0.43              |
| 1:H:110:LEU:CD1  | 1:H:177:ARG:NH1  | 2.80                     | 0.43              |
| 1:I:324:THR:HG23 | 1:K:241:GLU:OE2  | 2.16                     | 0.43              |
| 1:L:34:ILE:O     | 1:L:54:VAL:HB    | 2.17                     | 0.43              |
| 1:L:69:TYR:CD2   | 1:L:69:TYR:N     | 2.86                     | 0.43              |
| 1:L:180:LEU:CD1  | 1:L:181:ALA:N    | 2.78                     | 0.43              |
| 1:L:233:SER:HB3  | 1:L:236:LEU:HG   | 1.99                     | 0.43              |
| 1:M:233:SER:HB3  | 1:M:236:LEU:HG   | 1.99                     | 0.43              |
| 1:M:300:SER:HA   | 1:M:335:ARG:NE   | 2.32                     | 0.43              |
| 1:N:34:ILE:O     | 1:N:54:VAL:HB    | 2.18                     | 0.43              |
| 1:N:64:ILE:CG2   | 1:N:65:LEU:N     | 2.81                     | 0.43              |
| 1:N:233:SER:HB3  | 1:N:236:LEU:HG   | 1.99                     | 0.43              |
| 1:N:298:VAL:CG1  | 1:N:335:ARG:NH1  | 2.81                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:8:LEU:CB     | 1:O:103:THR:HG23 | 2.48                     | 0.43              |
| 1:O:34:ILE:HD13  | 1:O:67:LEU:CD2   | 2.46                     | 0.43              |
| 1:R:8:LEU:CB     | 1:R:103:THR:HG23 | 2.48                     | 0.43              |
| 1:R:349:LEU:HD23 | 1:R:349:LEU:HA   | 1.79                     | 0.43              |
| 1:S:148:THR:CG2  | 1:S:149:THR:N    | 2.81                     | 0.43              |
| 1:S:349:LEU:HD23 | 1:S:349:LEU:HA   | 1.80                     | 0.43              |
| 1:U:151:ILE:O    | 1:U:297:ASN:HA   | 2.17                     | 0.43              |
| 1:U:236:LEU:CD1  | 1:U:237:GLU:CG   | 2.93                     | 0.43              |
| 1:U:298:VAL:CG1  | 1:U:335:ARG:NH1  | 2.81                     | 0.43              |
| 1:V:35:VAL:H     | 1:V:68:LYS:H     | 1.65                     | 0.43              |
| 1:V:298:VAL:CG1  | 1:V:335:ARG:NH1  | 2.81                     | 0.43              |
| 1:W:298:VAL:CG1  | 1:W:335:ARG:NH1  | 2.81                     | 0.43              |
| 1:A:6:THR:O      | 1:A:102:PRO:HD2  | 2.17                     | 0.43              |
| 1:A:324:THR:HG23 | 1:C:241:GLU:OE2  | 2.16                     | 0.43              |
| 1:B:35:VAL:H     | 1:B:68:LYS:H     | 1.65                     | 0.43              |
| 1:B:149:THR:HG23 | 1:B:150:GLY:N    | 2.34                     | 0.43              |
| 1:C:58:ALA:CB    | 1:C:65:LEU:CD2   | 2.90                     | 0.43              |
| 1:C:64:ILE:CG2   | 1:C:65:LEU:N     | 2.81                     | 0.43              |
| 1:D:8:LEU:CB     | 1:D:103:THR:HG23 | 2.48                     | 0.43              |
| 1:D:34:ILE:O     | 1:D:54:VAL:HB    | 2.17                     | 0.43              |
| 1:E:64:ILE:CG2   | 1:E:65:LEU:N     | 2.81                     | 0.43              |
| 1:G:298:VAL:CG1  | 1:G:335:ARG:NH1  | 2.81                     | 0.43              |
| 1:H:64:ILE:CG2   | 1:H:65:LEU:N     | 2.81                     | 0.43              |
| 1:K:6:THR:O      | 1:K:102:PRO:HD2  | 2.17                     | 0.43              |
| 1:K:151:ILE:O    | 1:K:297:ASN:HA   | 2.18                     | 0.43              |
| 1:L:58:ALA:CB    | 1:L:65:LEU:CD2   | 2.90                     | 0.43              |
| 1:M:180:LEU:O    | 1:M:180:LEU:HG   | 2.11                     | 0.43              |
| 1:P:39:ARG:NE    | 1:P:66:THR:CA    | 2.69                     | 0.43              |
| 1:P:324:THR:HG23 | 1:R:241:GLU:OE2  | 2.16                     | 0.43              |
| 1:P:357:ILE:HD12 | 1:P:357:ILE:HA   | 1.79                     | 0.43              |
| 1:R:34:ILE:CG2   | 1:R:67:LEU:CB    | 2.96                     | 0.43              |
| 1:R:148:THR:CG2  | 1:R:149:THR:N    | 2.81                     | 0.43              |
| 1:S:31:PHE:HA    | 1:S:32:PRO:HD3   | 1.66                     | 0.43              |
| 1:T:172:PRO:HA   | 1:T:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:U:69:TYR:CD2   | 1:U:69:TYR:N     | 2.87                     | 0.43              |
| 1:U:171:LEU:HA   | 1:U:172:PRO:HD3  | 1.79                     | 0.43              |
| 1:U:362:TYR:CE1  | 1:U:367:PRO:CB   | 2.99                     | 0.43              |
| 1:V:8:LEU:CB     | 1:V:103:THR:HG23 | 2.48                     | 0.43              |
| 1:V:299:MET:O    | 1:V:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:W:69:TYR:N     | 1:W:69:TYR:CD2   | 2.87                     | 0.43              |
| 1:W:149:THR:HG23 | 1:W:150:GLY:N    | 2.34                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:34:ILE:O     | 1:C:54:VAL:HB    | 2.18                     | 0.43              |
| 1:D:149:THR:HG23 | 1:D:150:GLY:N    | 2.34                     | 0.43              |
| 1:E:172:PRO:HA   | 1:E:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:G:35:VAL:H     | 1:G:68:LYS:H     | 1.65                     | 0.43              |
| 1:G:149:THR:HG23 | 1:G:150:GLY:N    | 2.34                     | 0.43              |
| 1:G:299:MET:O    | 1:G:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:H:8:LEU:CB     | 1:H:103:THR:HG23 | 2.48                     | 0.43              |
| 1:J:6:THR:O      | 1:J:102:PRO:HD2  | 2.17                     | 0.43              |
| 1:J:64:ILE:CG2   | 1:J:65:LEU:N     | 2.81                     | 0.43              |
| 1:J:69:TYR:CD2   | 1:J:69:TYR:N     | 2.86                     | 0.43              |
| 1:J:180:LEU:O    | 1:J:180:LEU:HG   | 2.11                     | 0.43              |
| 1:K:35:VAL:H     | 1:K:68:LYS:H     | 1.65                     | 0.43              |
| 1:K:180:LEU:CD1  | 1:K:181:ALA:N    | 2.78                     | 0.43              |
| 1:L:31:PHE:HA    | 1:L:32:PRO:HD3   | 1.66                     | 0.43              |
| 1:L:34:ILE:CG2   | 1:L:67:LEU:CB    | 2.96                     | 0.43              |
| 1:L:149:THR:HG23 | 1:L:150:GLY:N    | 2.34                     | 0.43              |
| 1:M:38:PRO:HD3   | 1:M:49:GLN:HE22  | 1.82                     | 0.43              |
| 1:M:287:ILE:HD12 | 1:O:208:ILE:HD13 | 1.96                     | 0.43              |
| 1:N:69:TYR:CD2   | 1:N:69:TYR:N     | 2.86                     | 0.43              |
| 1:N:149:THR:HG23 | 1:N:150:GLY:N    | 2.34                     | 0.43              |
| 1:N:324:THR:HG23 | 1:P:241:GLU:OE2  | 2.16                     | 0.43              |
| 1:O:6:THR:O      | 1:O:102:PRO:HD2  | 2.17                     | 0.43              |
| 1:P:172:PRO:HA   | 1:P:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:Q:31:PHE:HA    | 1:Q:32:PRO:HD3   | 1.66                     | 0.43              |
| 1:R:170:ALA:O    | 1:R:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:S:64:ILE:CG2   | 1:S:65:LEU:N     | 2.81                     | 0.43              |
| 1:S:69:TYR:CD2   | 1:S:69:TYR:N     | 2.87                     | 0.43              |
| 1:S:170:ALA:O    | 1:S:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:T:64:ILE:CG2   | 1:T:65:LEU:N     | 2.81                     | 0.43              |
| 1:T:110:LEU:CD1  | 1:T:177:ARG:NH1  | 2.80                     | 0.43              |
| 1:W:35:VAL:H     | 1:W:68:LYS:H     | 1.65                     | 0.43              |
| 1:B:7:ALA:HB3    | 1:B:347:ALA:HB1  | 1.99                     | 0.43              |
| 1:B:236:LEU:HD11 | 1:B:237:GLU:HG2  | 1.96                     | 0.43              |
| 1:C:6:THR:O      | 1:C:102:PRO:HD2  | 2.17                     | 0.43              |
| 1:C:31:PHE:HA    | 1:C:32:PRO:HD3   | 1.66                     | 0.43              |
| 1:E:149:THR:HG23 | 1:E:150:GLY:N    | 2.34                     | 0.43              |
| 1:F:170:ALA:O    | 1:F:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:I:148:THR:CG2  | 1:I:149:THR:N    | 2.81                     | 0.43              |
| 1:K:324:THR:HG23 | 1:M:241:GLU:OE2  | 2.16                     | 0.43              |
| 1:M:151:ILE:O    | 1:M:297:ASN:HA   | 2.18                     | 0.43              |
| 1:N:172:PRO:HA   | 1:N:175:ILE:CD1  | 2.49                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:170:ALA:O    | 1:O:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:P:136:ILE:O    | 1:P:139:VAL:HB   | 2.19                     | 0.43              |
| 1:P:151:ILE:O    | 1:P:297:ASN:HA   | 2.18                     | 0.43              |
| 1:Q:8:LEU:CB     | 1:Q:103:THR:HG23 | 2.48                     | 0.43              |
| 1:Q:69:TYR:N     | 1:Q:69:TYR:CD2   | 2.87                     | 0.43              |
| 1:R:31:PHE:HA    | 1:R:32:PRO:HD3   | 1.66                     | 0.43              |
| 1:U:34:ILE:HD13  | 1:U:67:LEU:CD2   | 2.46                     | 0.43              |
| 1:W:107:GLU:O    | 1:W:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:W:151:ILE:O    | 1:W:297:ASN:HA   | 2.17                     | 0.43              |
| 1:A:8:LEU:CB     | 1:A:103:THR:HG23 | 2.48                     | 0.43              |
| 1:A:58:ALA:CB    | 1:A:65:LEU:CD2   | 2.90                     | 0.43              |
| 1:A:149:THR:HG23 | 1:A:150:GLY:N    | 2.34                     | 0.43              |
| 1:B:148:THR:CG2  | 1:B:149:THR:N    | 2.81                     | 0.43              |
| 1:C:8:LEU:CB     | 1:C:103:THR:HG23 | 2.48                     | 0.43              |
| 1:C:136:ILE:O    | 1:C:139:VAL:HB   | 2.19                     | 0.43              |
| 1:C:172:PRO:HA   | 1:C:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:D:133:TYR:CE2  | 1:D:375:PHE:HB2  | 2.51                     | 0.43              |
| 1:E:104:LEU:HD13 | 1:E:347:ALA:HB2  | 2.01                     | 0.43              |
| 1:E:170:ALA:O    | 1:E:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:F:34:ILE:HG22  | 1:F:35:VAL:H     | 1.78                     | 0.43              |
| 1:G:172:PRO:HA   | 1:G:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:H:148:THR:CG2  | 1:H:149:THR:N    | 2.81                     | 0.43              |
| 1:I:34:ILE:O     | 1:I:54:VAL:HB    | 2.18                     | 0.43              |
| 1:I:149:THR:HG23 | 1:I:150:GLY:N    | 2.34                     | 0.43              |
| 1:J:110:LEU:CD1  | 1:J:177:ARG:NH1  | 2.80                     | 0.43              |
| 1:J:362:TYR:CE1  | 1:J:367:PRO:CB   | 2.99                     | 0.43              |
| 1:K:149:THR:HG23 | 1:K:150:GLY:N    | 2.34                     | 0.43              |
| 1:K:170:ALA:O    | 1:K:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:K:236:LEU:HD11 | 1:K:237:GLU:HG2  | 1.96                     | 0.43              |
| 1:M:6:THR:O      | 1:M:102:PRO:HD2  | 2.17                     | 0.43              |
| 1:M:149:THR:HG23 | 1:M:150:GLY:N    | 2.34                     | 0.43              |
| 1:M:299:MET:O    | 1:M:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:N:38:PRO:HD3   | 1:N:49:GLN:HE22  | 1.81                     | 0.43              |
| 1:N:151:ILE:O    | 1:N:297:ASN:HA   | 2.18                     | 0.43              |
| 1:O:172:PRO:HA   | 1:O:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:O:299:MET:O    | 1:O:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:P:8:LEU:CB     | 1:P:103:THR:HG23 | 2.48                     | 0.43              |
| 1:R:172:PRO:HA   | 1:R:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:S:35:VAL:H     | 1:S:68:LYS:H     | 1.65                     | 0.43              |
| 1:T:299:MET:O    | 1:T:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:V:31:PHE:HA    | 1:V:32:PRO:HD3   | 1.66                     | 0.43              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:V:173:HIS:HE1  | 1:W:268:GLY:CA  | 2.28                     | 0.43              |
| 1:A:39:ARG:NE    | 1:A:66:THR:CA   | 2.69                     | 0.43              |
| 1:A:136:ILE:O    | 1:A:139:VAL:HB  | 2.19                     | 0.43              |
| 1:B:34:ILE:HD13  | 1:B:67:LEU:CD2  | 2.46                     | 0.43              |
| 1:C:7:ALA:HB3    | 1:C:347:ALA:HB1 | 1.99                     | 0.43              |
| 1:C:104:LEU:HD13 | 1:C:347:ALA:HB2 | 2.01                     | 0.43              |
| 1:D:151:ILE:O    | 1:D:297:ASN:HA  | 2.18                     | 0.43              |
| 1:E:35:VAL:H     | 1:E:68:LYS:H    | 1.65                     | 0.43              |
| 1:E:136:ILE:O    | 1:E:139:VAL:HB  | 2.19                     | 0.43              |
| 1:E:227:MET:HA   | 1:E:227:MET:HE3 | 2.01                     | 0.43              |
| 1:E:298:VAL:CG1  | 1:E:335:ARG:NH1 | 2.81                     | 0.43              |
| 1:E:374:CYS:HB2  | 1:E:375:PHE:H   | 1.61                     | 0.43              |
| 1:F:362:TYR:CE1  | 1:F:367:PRO:CB  | 2.99                     | 0.43              |
| 1:G:299:MET:HE1  | 1:G:304:THR:HB  | 2.01                     | 0.43              |
| 1:H:69:TYR:CD2   | 1:H:69:TYR:N    | 2.87                     | 0.43              |
| 1:H:104:LEU:HD13 | 1:H:347:ALA:HB2 | 2.01                     | 0.43              |
| 1:I:2:GLU:HB3    | 1:I:3:ASP:H     | 1.66                     | 0.43              |
| 1:J:104:LEU:HD13 | 1:J:347:ALA:HB2 | 2.01                     | 0.43              |
| 1:K:148:THR:CG2  | 1:K:149:THR:N   | 2.81                     | 0.43              |
| 1:K:233:SER:HB3  | 1:K:236:LEU:HG  | 1.99                     | 0.43              |
| 1:K:362:TYR:CE1  | 1:K:367:PRO:CB  | 2.99                     | 0.43              |
| 1:M:172:PRO:HA   | 1:M:175:ILE:CD1 | 2.49                     | 0.43              |
| 1:N:136:ILE:O    | 1:N:139:VAL:HB  | 2.19                     | 0.43              |
| 1:O:34:ILE:O     | 1:O:54:VAL:HB   | 2.18                     | 0.43              |
| 1:O:69:TYR:N     | 1:O:69:TYR:CD2  | 2.86                     | 0.43              |
| 1:P:104:LEU:HD13 | 1:P:347:ALA:HB2 | 2.01                     | 0.43              |
| 1:P:149:THR:HG23 | 1:P:150:GLY:N   | 2.34                     | 0.43              |
| 1:Q:172:PRO:HA   | 1:Q:175:ILE:CD1 | 2.49                     | 0.43              |
| 1:R:64:ILE:CG2   | 1:R:65:LEU:N    | 2.81                     | 0.43              |
| 1:R:136:ILE:O    | 1:R:139:VAL:HB  | 2.19                     | 0.43              |
| 1:T:34:ILE:O     | 1:T:54:VAL:HB   | 2.18                     | 0.43              |
| 1:T:133:TYR:CE2  | 1:T:375:PHE:HB2 | 2.51                     | 0.43              |
| 1:T:149:THR:HG23 | 1:T:150:GLY:N   | 2.34                     | 0.43              |
| 1:V:149:THR:HG23 | 1:V:150:GLY:N   | 2.34                     | 0.43              |
| 1:V:172:PRO:HA   | 1:V:175:ILE:CD1 | 2.49                     | 0.43              |
| 1:W:64:ILE:CG2   | 1:W:65:LEU:N    | 2.82                     | 0.43              |
| 1:W:104:LEU:HD13 | 1:W:347:ALA:HB2 | 2.01                     | 0.43              |
| 1:A:167:GLU:CD   | 1:C:61:LYS:CE   | 2.85                     | 0.43              |
| 1:B:69:TYR:CD2   | 1:B:69:TYR:N    | 2.86                     | 0.43              |
| 1:C:149:THR:HG23 | 1:C:150:GLY:N   | 2.34                     | 0.43              |
| 1:G:369:ILE:HG23 | 1:G:370:VAL:N   | 2.30                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:31:PHE:HA    | 1:H:32:PRO:HD3   | 1.66                     | 0.43              |
| 1:H:107:GLU:O    | 1:H:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:J:8:LEU:CB     | 1:J:103:THR:HG23 | 2.48                     | 0.43              |
| 1:J:149:THR:HG23 | 1:J:150:GLY:N    | 2.34                     | 0.43              |
| 1:J:180:LEU:CD1  | 1:J:181:ALA:N    | 2.78                     | 0.43              |
| 1:L:104:LEU:HD13 | 1:L:347:ALA:HB2  | 2.01                     | 0.43              |
| 1:L:107:GLU:O    | 1:L:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:L:172:PRO:HA   | 1:L:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:N:335:ARG:HD3  | 1:N:335:ARG:HA   | 1.39                     | 0.43              |
| 1:Q:65:LEU:HD13  | 1:Q:67:LEU:HD23  | 2.01                     | 0.43              |
| 1:R:104:LEU:HD13 | 1:R:347:ALA:HB2  | 2.01                     | 0.43              |
| 1:R:110:LEU:CD1  | 1:R:177:ARG:NH1  | 2.80                     | 0.43              |
| 1:R:149:THR:HG23 | 1:R:150:GLY:N    | 2.34                     | 0.43              |
| 1:S:172:PRO:HA   | 1:S:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:T:148:THR:CG2  | 1:T:149:THR:N    | 2.81                     | 0.43              |
| 1:U:34:ILE:O     | 1:U:54:VAL:HB    | 2.18                     | 0.43              |
| 1:U:35:VAL:H     | 1:U:68:LYS:H     | 1.65                     | 0.43              |
| 1:U:64:ILE:CG2   | 1:U:65:LEU:N     | 2.81                     | 0.43              |
| 1:U:149:THR:HG23 | 1:U:150:GLY:N    | 2.34                     | 0.43              |
| 1:U:172:PRO:HA   | 1:U:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:W:8:LEU:CB     | 1:W:103:THR:HG23 | 2.48                     | 0.43              |
| 1:W:172:PRO:HA   | 1:W:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:A:104:LEU:HD13 | 1:A:347:ALA:HB2  | 2.01                     | 0.43              |
| 1:A:133:TYR:CE2  | 1:A:375:PHE:HB2  | 2.51                     | 0.43              |
| 1:B:64:ILE:CG2   | 1:B:65:LEU:N     | 2.81                     | 0.43              |
| 1:B:65:LEU:HD13  | 1:B:67:LEU:HD23  | 2.01                     | 0.43              |
| 1:C:35:VAL:H     | 1:C:68:LYS:H     | 1.65                     | 0.43              |
| 1:F:107:GLU:O    | 1:F:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:F:236:LEU:HD11 | 1:F:237:GLU:HG2  | 1.96                     | 0.43              |
| 1:H:39:ARG:NE    | 1:H:66:THR:CA    | 2.69                     | 0.43              |
| 1:H:170:ALA:O    | 1:H:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:H:299:MET:O    | 1:H:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:I:31:PHE:HA    | 1:I:32:PRO:HD3   | 1.66                     | 0.43              |
| 1:I:64:ILE:CG2   | 1:I:65:LEU:N     | 2.81                     | 0.43              |
| 1:J:39:ARG:NE    | 1:J:66:THR:CA    | 2.69                     | 0.43              |
| 1:J:299:MET:O    | 1:J:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:K:64:ILE:CG2   | 1:K:65:LEU:N     | 2.81                     | 0.43              |
| 1:K:133:TYR:CE2  | 1:K:375:PHE:HB2  | 2.51                     | 0.43              |
| 1:O:65:LEU:HD13  | 1:O:67:LEU:HD23  | 2.01                     | 0.43              |
| 1:P:69:TYR:CD2   | 1:P:69:TYR:N     | 2.86                     | 0.43              |
| 1:Q:34:ILE:CG2   | 1:Q:67:LEU:CB    | 2.96                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:Q:64:ILE:CG2   | 1:Q:65:LEU:N     | 2.81                     | 0.43              |
| 1:T:39:ARG:NE    | 1:T:66:THR:CA    | 2.69                     | 0.43              |
| 1:T:104:LEU:HD13 | 1:T:347:ALA:HB2  | 2.01                     | 0.43              |
| 1:T:136:ILE:O    | 1:T:139:VAL:HB   | 2.19                     | 0.43              |
| 1:U:104:LEU:HD13 | 1:U:347:ALA:HB2  | 2.01                     | 0.43              |
| 1:V:64:ILE:CG2   | 1:V:65:LEU:N     | 2.81                     | 0.43              |
| 1:V:72:GLU:O     | 1:V:183:ARG:NH2  | 2.52                     | 0.43              |
| 1:V:149:THR:CG2  | 1:V:150:GLY:N    | 2.82                     | 0.43              |
| 1:W:227:MET:HA   | 1:W:227:MET:HE3  | 2.00                     | 0.43              |
| 1:A:151:ILE:O    | 1:A:297:ASN:HA   | 2.18                     | 0.43              |
| 1:A:172:PRO:HA   | 1:A:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:B:151:ILE:O    | 1:B:297:ASN:HA   | 2.17                     | 0.43              |
| 1:B:178:LEU:HG   | 1:B:180:LEU:H    | 1.84                     | 0.43              |
| 1:C:107:GLU:O    | 1:C:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:D:64:ILE:CG2   | 1:D:65:LEU:N     | 2.81                     | 0.43              |
| 1:D:349:LEU:HD23 | 1:D:349:LEU:HA   | 1.80                     | 0.43              |
| 1:E:8:LEU:CB     | 1:E:103:THR:HG23 | 2.48                     | 0.43              |
| 1:E:34:ILE:CG2   | 1:E:67:LEU:CB    | 2.96                     | 0.43              |
| 1:E:178:LEU:HG   | 1:E:180:LEU:H    | 1.84                     | 0.43              |
| 1:G:2:GLU:HB3    | 1:G:3:ASP:H      | 1.66                     | 0.43              |
| 1:G:34:ILE:CG2   | 1:G:67:LEU:CB    | 2.96                     | 0.43              |
| 1:G:72:GLU:O     | 1:G:183:ARG:NH2  | 2.52                     | 0.43              |
| 1:G:136:ILE:O    | 1:G:139:VAL:HB   | 2.19                     | 0.43              |
| 1:G:227:MET:HA   | 1:G:227:MET:HE3  | 2.01                     | 0.43              |
| 1:I:172:PRO:HA   | 1:I:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:L:110:LEU:CD1  | 1:L:177:ARG:NH1  | 2.80                     | 0.43              |
| 1:L:136:ILE:O    | 1:L:139:VAL:HB   | 2.19                     | 0.43              |
| 1:M:236:LEU:HD11 | 1:M:237:GLU:HG2  | 1.96                     | 0.43              |
| 1:M:357:ILE:HD12 | 1:M:357:ILE:HA   | 1.79                     | 0.43              |
| 1:N:107:GLU:O    | 1:N:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:O:236:LEU:HD11 | 1:O:237:GLU:HG2  | 1.96                     | 0.43              |
| 1:P:35:VAL:H     | 1:P:68:LYS:H     | 1.65                     | 0.43              |
| 1:P:110:LEU:CD1  | 1:P:177:ARG:NH1  | 2.80                     | 0.43              |
| 1:R:149:THR:CG2  | 1:R:150:GLY:N    | 2.82                     | 0.43              |
| 1:S:65:LEU:HD13  | 1:S:67:LEU:HD23  | 2.01                     | 0.43              |
| 1:W:299:MET:O    | 1:W:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:A:35:VAL:H     | 1:A:68:LYS:H     | 1.65                     | 0.43              |
| 1:B:374:CYS:HB2  | 1:B:375:PHE:H    | 1.62                     | 0.43              |
| 1:C:72:GLU:O     | 1:C:183:ARG:NH2  | 2.52                     | 0.43              |
| 1:D:65:LEU:HD13  | 1:D:67:LEU:HD23  | 2.01                     | 0.43              |
| 1:D:172:PRO:HA   | 1:D:175:ILE:CD1  | 2.49                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:236:LEU:HD11 | 1:D:237:GLU:HG2  | 1.96                     | 0.43              |
| 1:E:105:LEU:HD11 | 1:E:123:MET:HG3  | 2.01                     | 0.43              |
| 1:F:65:LEU:HD13  | 1:F:67:LEU:HD23  | 2.01                     | 0.43              |
| 1:F:236:LEU:CD1  | 1:F:237:GLU:CG   | 2.93                     | 0.43              |
| 1:J:172:PRO:HA   | 1:J:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:K:72:GLU:O     | 1:K:183:ARG:NH2  | 2.52                     | 0.43              |
| 1:K:107:GLU:O    | 1:K:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:K:172:PRO:HA   | 1:K:175:ILE:CD1  | 2.49                     | 0.43              |
| 1:K:178:LEU:HG   | 1:K:180:LEU:H    | 1.84                     | 0.43              |
| 1:L:34:ILE:HD13  | 1:L:67:LEU:CD2   | 2.46                     | 0.43              |
| 1:L:35:VAL:H     | 1:L:68:LYS:H     | 1.65                     | 0.43              |
| 1:L:64:ILE:CG2   | 1:L:65:LEU:N     | 2.81                     | 0.43              |
| 1:L:106:THR:HG22 | 1:L:140:LEU:HD11 | 2.01                     | 0.43              |
| 1:L:167:GLU:CD   | 1:N:61:LYS:CE    | 2.85                     | 0.43              |
| 1:M:107:GLU:O    | 1:M:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:N:35:VAL:H     | 1:N:68:LYS:H     | 1.65                     | 0.43              |
| 1:N:104:LEU:HD13 | 1:N:347:ALA:HB2  | 2.01                     | 0.43              |
| 1:N:110:LEU:CD1  | 1:N:177:ARG:NH1  | 2.80                     | 0.43              |
| 1:P:105:LEU:HD11 | 1:P:123:MET:HG3  | 2.01                     | 0.43              |
| 1:P:170:ALA:O    | 1:P:172:PRO:HD3  | 2.18                     | 0.43              |
| 1:Q:107:GLU:O    | 1:Q:137:GLN:HG3  | 2.19                     | 0.43              |
| 1:Q:178:LEU:HG   | 1:Q:180:LEU:H    | 1.84                     | 0.43              |
| 1:Q:236:LEU:HD11 | 1:Q:237:GLU:HG2  | 1.96                     | 0.43              |
| 1:Q:299:MET:O    | 1:Q:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:R:35:VAL:H     | 1:R:68:LYS:H     | 1.65                     | 0.43              |
| 1:R:72:GLU:O     | 1:R:183:ARG:NH2  | 2.52                     | 0.43              |
| 1:R:299:MET:O    | 1:R:332:PRO:HD2  | 2.18                     | 0.43              |
| 1:U:8:LEU:CB     | 1:U:103:THR:HG23 | 2.48                     | 0.43              |
| 1:U:34:ILE:HG23  | 1:U:67:LEU:HB3   | 2.01                     | 0.43              |
| 1:V:39:ARG:NE    | 1:V:66:THR:CA    | 2.69                     | 0.43              |
| 1:W:106:THR:HG22 | 1:W:140:LEU:HD11 | 2.01                     | 0.43              |
| 1:W:148:THR:CG2  | 1:W:149:THR:N    | 2.81                     | 0.43              |
| 1:A:7:ALA:HB3    | 1:A:347:ALA:HB1  | 1.99                     | 0.42              |
| 1:A:106:THR:HG22 | 1:A:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:A:107:GLU:O    | 1:A:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:A:227:MET:HA   | 1:A:227:MET:HE3  | 2.01                     | 0.42              |
| 1:A:299:MET:O    | 1:A:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:B:172:PRO:HA   | 1:B:175:ILE:CD1  | 2.49                     | 0.42              |
| 1:B:227:MET:HA   | 1:B:227:MET:HE3  | 2.01                     | 0.42              |
| 1:D:110:LEU:CD1  | 1:D:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:D:299:MET:O    | 1:D:332:PRO:HD2  | 2.18                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:180:LEU:O    | 1:E:180:LEU:HG   | 2.11                     | 0.42              |
| 1:E:299:MET:O    | 1:E:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:F:69:TYR:CD2   | 1:F:69:TYR:N     | 2.86                     | 0.42              |
| 1:F:133:TYR:CE2  | 1:F:375:PHE:HB2  | 2.51                     | 0.42              |
| 1:F:149:THR:HG23 | 1:F:150:GLY:N    | 2.34                     | 0.42              |
| 1:F:172:PRO:HA   | 1:F:175:ILE:CD1  | 2.49                     | 0.42              |
| 1:G:104:LEU:HD13 | 1:G:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:G:148:THR:CG2  | 1:G:149:THR:N    | 2.81                     | 0.42              |
| 1:I:35:VAL:H     | 1:I:68:LYS:H     | 1.65                     | 0.42              |
| 1:I:105:LEU:HD11 | 1:I:123:MET:HG3  | 2.01                     | 0.42              |
| 1:K:105:LEU:HD11 | 1:K:123:MET:HG3  | 2.01                     | 0.42              |
| 1:L:105:LEU:HD11 | 1:L:123:MET:HG3  | 2.01                     | 0.42              |
| 1:L:299:MET:O    | 1:L:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:N:105:LEU:HD11 | 1:N:123:MET:HG3  | 2.01                     | 0.42              |
| 1:N:106:THR:HG22 | 1:N:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:O:167:GLU:CD   | 1:Q:61:LYS:CE    | 2.85                     | 0.42              |
| 1:Q:167:GLU:OE1  | 1:S:61:LYS:HE2   | 2.19                     | 0.42              |
| 1:S:136:ILE:O    | 1:S:139:VAL:HB   | 2.19                     | 0.42              |
| 1:S:167:GLU:CD   | 1:U:61:LYS:CE    | 2.85                     | 0.42              |
| 1:T:178:LEU:HG   | 1:T:180:LEU:H    | 1.84                     | 0.42              |
| 1:V:2:GLU:HB3    | 1:V:3:ASP:H      | 1.66                     | 0.42              |
| 1:V:105:LEU:HD11 | 1:V:123:MET:HG3  | 2.01                     | 0.42              |
| 1:V:170:ALA:O    | 1:V:172:PRO:HD3  | 2.18                     | 0.42              |
| 1:W:34:ILE:HG23  | 1:W:67:LEU:HB3   | 2.02                     | 0.42              |
| 1:W:105:LEU:HD11 | 1:W:123:MET:HG3  | 2.01                     | 0.42              |
| 1:B:173:HIS:HE1  | 1:C:268:GLY:CA   | 2.28                     | 0.42              |
| 1:C:105:LEU:HD11 | 1:C:123:MET:HG3  | 2.01                     | 0.42              |
| 1:C:299:MET:O    | 1:C:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:C:335:ARG:HD3  | 1:C:335:ARG:HA   | 1.39                     | 0.42              |
| 1:D:69:TYR:CD2   | 1:D:69:TYR:N     | 2.86                     | 0.42              |
| 1:F:64:ILE:CG2   | 1:F:65:LEU:N     | 2.81                     | 0.42              |
| 1:F:104:LEU:HD13 | 1:F:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:G:69:TYR:N     | 1:G:69:TYR:CD2   | 2.87                     | 0.42              |
| 1:G:149:THR:CG2  | 1:G:150:GLY:N    | 2.82                     | 0.42              |
| 1:H:167:GLU:OE1  | 1:J:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:H:172:PRO:HA   | 1:H:175:ILE:CD1  | 2.49                     | 0.42              |
| 1:I:107:GLU:O    | 1:I:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:I:136:ILE:O    | 1:I:139:VAL:HB   | 2.19                     | 0.42              |
| 1:J:34:ILE:CG2   | 1:J:67:LEU:CB    | 2.96                     | 0.42              |
| 1:J:49:GLN:HG3   | 1:J:50:LYS:N     | 2.20                     | 0.42              |
| 1:J:105:LEU:HD11 | 1:J:123:MET:HG3  | 2.02                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:180:LEU:HD12 | 1:J:181:ALA:CA   | 2.50                     | 0.42              |
| 1:K:167:GLU:OE1  | 1:M:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:K:349:LEU:HD23 | 1:K:349:LEU:HA   | 1.79                     | 0.42              |
| 1:L:8:LEU:N      | 1:L:102:PRO:O    | 2.48                     | 0.42              |
| 1:L:178:LEU:HG   | 1:L:180:LEU:H    | 1.84                     | 0.42              |
| 1:M:65:LEU:HD13  | 1:M:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:M:136:ILE:O    | 1:M:139:VAL:HB   | 2.19                     | 0.42              |
| 1:N:8:LEU:CB     | 1:N:103:THR:HG23 | 2.48                     | 0.42              |
| 1:N:299:MET:O    | 1:N:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:O:107:GLU:O    | 1:O:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:O:362:TYR:CE1  | 1:O:367:PRO:CB   | 2.99                     | 0.42              |
| 1:Q:287:ILE:HD12 | 1:S:208:ILE:HD13 | 1.96                     | 0.42              |
| 1:Q:349:LEU:HD23 | 1:Q:349:LEU:HA   | 1.80                     | 0.42              |
| 1:S:8:LEU:CB     | 1:S:103:THR:HG23 | 2.48                     | 0.42              |
| 1:S:104:LEU:HD13 | 1:S:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:U:106:THR:HG22 | 1:U:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:U:107:GLU:O    | 1:U:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:U:110:LEU:CD1  | 1:U:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:U:180:LEU:O    | 1:U:180:LEU:HG   | 2.11                     | 0.42              |
| 1:U:299:MET:HE1  | 1:U:304:THR:HB   | 2.01                     | 0.42              |
| 1:V:136:ILE:O    | 1:V:139:VAL:HB   | 2.19                     | 0.42              |
| 1:A:167:GLU:OE1  | 1:C:61:LYS:HE2   | 2.19                     | 0.42              |
| 1:C:34:ILE:CG2   | 1:C:67:LEU:CB    | 2.96                     | 0.42              |
| 1:C:149:THR:CG2  | 1:C:150:GLY:N    | 2.82                     | 0.42              |
| 1:D:44:MET:CG    | 1:D:45:VAL:N     | 2.75                     | 0.42              |
| 1:D:104:LEU:HD13 | 1:D:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:D:178:LEU:HG   | 1:D:180:LEU:H    | 1.84                     | 0.42              |
| 1:F:135:ALA:CB   | 1:F:140:LEU:HD21 | 2.49                     | 0.42              |
| 1:F:136:ILE:O    | 1:F:139:VAL:HB   | 2.19                     | 0.42              |
| 1:G:44:MET:CG    | 1:G:45:VAL:H     | 2.18                     | 0.42              |
| 1:G:167:GLU:OE1  | 1:I:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:H:72:GLU:O     | 1:H:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:H:135:ALA:CB   | 1:H:140:LEU:HD21 | 2.49                     | 0.42              |
| 1:H:149:THR:HG23 | 1:H:150:GLY:N    | 2.34                     | 0.42              |
| 1:H:178:LEU:HG   | 1:H:180:LEU:H    | 1.84                     | 0.42              |
| 1:I:34:ILE:CG2   | 1:I:67:LEU:CB    | 2.96                     | 0.42              |
| 1:I:69:TYR:CD2   | 1:I:69:TYR:N     | 2.87                     | 0.42              |
| 1:I:72:GLU:O     | 1:I:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:I:374:CYS:HB2  | 1:I:375:PHE:H    | 1.62                     | 0.42              |
| 1:J:106:THR:HG22 | 1:J:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:J:136:ILE:O    | 1:J:139:VAL:HB   | 2.19                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:69:TYR:CD2   | 1:K:69:TYR:N     | 2.86                     | 0.42              |
| 1:L:180:LEU:HD12 | 1:L:181:ALA:CA   | 2.50                     | 0.42              |
| 1:L:227:MET:HA   | 1:L:227:MET:HE3  | 2.01                     | 0.42              |
| 1:M:64:ILE:CG2   | 1:M:65:LEU:N     | 2.81                     | 0.42              |
| 1:N:34:ILE:HG23  | 1:N:67:LEU:HB3   | 2.01                     | 0.42              |
| 1:N:180:LEU:HD12 | 1:N:181:ALA:CA   | 2.50                     | 0.42              |
| 1:Q:104:LEU:HD13 | 1:Q:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:R:105:LEU:HD11 | 1:R:123:MET:HG3  | 2.01                     | 0.42              |
| 1:R:180:LEU:HD12 | 1:R:181:ALA:CA   | 2.50                     | 0.42              |
| 1:T:69:TYR:N     | 1:T:69:TYR:CD2   | 2.86                     | 0.42              |
| 1:T:167:GLU:OE1  | 1:V:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:U:105:LEU:HD11 | 1:U:123:MET:HG3  | 2.01                     | 0.42              |
| 1:U:178:LEU:HG   | 1:U:180:LEU:H    | 1.84                     | 0.42              |
| 1:V:148:THR:CG2  | 1:V:149:THR:N    | 2.81                     | 0.42              |
| 1:W:31:PHE:HA    | 1:W:32:PRO:HD3   | 1.66                     | 0.42              |
| 1:A:105:LEU:HD11 | 1:A:123:MET:HG3  | 2.01                     | 0.42              |
| 1:B:180:LEU:O    | 1:B:180:LEU:HG   | 2.11                     | 0.42              |
| 1:C:106:THR:HG22 | 1:C:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:D:149:THR:CG2  | 1:D:150:GLY:N    | 2.82                     | 0.42              |
| 1:F:178:LEU:HG   | 1:F:180:LEU:H    | 1.84                     | 0.42              |
| 1:G:34:ILE:HG23  | 1:G:67:LEU:HB3   | 2.02                     | 0.42              |
| 1:G:105:LEU:HD11 | 1:G:123:MET:HG3  | 2.01                     | 0.42              |
| 1:G:107:GLU:O    | 1:G:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:H:180:LEU:HD12 | 1:H:181:ALA:CA   | 2.50                     | 0.42              |
| 1:I:104:LEU:HD13 | 1:I:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:I:299:MET:O    | 1:I:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:J:110:LEU:CD1  | 1:J:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:K:73:HIC:HA    | 1:K:183:ARG:NH1  | 2.18                     | 0.42              |
| 1:L:8:LEU:CB     | 1:L:103:THR:HG23 | 2.48                     | 0.42              |
| 1:M:148:THR:CG2  | 1:M:149:THR:N    | 2.81                     | 0.42              |
| 1:M:167:GLU:OE1  | 1:O:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:M:173:HIS:HE1  | 1:N:268:GLY:CA   | 2.28                     | 0.42              |
| 1:M:362:TYR:CE1  | 1:M:367:PRO:CB   | 2.99                     | 0.42              |
| 1:N:178:LEU:HG   | 1:N:180:LEU:H    | 1.84                     | 0.42              |
| 1:O:110:LEU:CD1  | 1:O:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:P:180:LEU:HD12 | 1:P:181:ALA:CA   | 2.50                     | 0.42              |
| 1:Q:362:TYR:CE1  | 1:Q:367:PRO:CB   | 2.99                     | 0.42              |
| 1:R:107:GLU:O    | 1:R:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:S:34:ILE:HG23  | 1:S:67:LEU:HB3   | 2.01                     | 0.42              |
| 1:S:72:GLU:O     | 1:S:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:S:178:LEU:HG   | 1:S:180:LEU:H    | 1.84                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:105:LEU:HD11 | 1:T:123:MET:HG3  | 2.01                     | 0.42              |
| 1:U:65:LEU:HD13  | 1:U:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:V:44:MET:CG    | 1:V:45:VAL:H     | 2.18                     | 0.42              |
| 1:W:72:GLU:O     | 1:W:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:W:136:ILE:O    | 1:W:139:VAL:HB   | 2.19                     | 0.42              |
| 1:W:178:LEU:HG   | 1:W:180:LEU:H    | 1.85                     | 0.42              |
| 1:A:374:CYS:HB2  | 1:A:375:PHE:H    | 1.61                     | 0.42              |
| 1:B:34:ILE:CG2   | 1:B:67:LEU:CB    | 2.96                     | 0.42              |
| 1:B:34:ILE:HG23  | 1:B:67:LEU:HB3   | 2.02                     | 0.42              |
| 1:B:104:LEU:HD13 | 1:B:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:C:167:GLU:OE1  | 1:E:61:LYS:HE2   | 2.20                     | 0.42              |
| 1:C:300:SER:HA   | 1:C:335:ARG:CD   | 2.50                     | 0.42              |
| 1:D:136:ILE:O    | 1:D:139:VAL:HB   | 2.19                     | 0.42              |
| 1:E:34:ILE:HG23  | 1:E:67:LEU:HB3   | 2.01                     | 0.42              |
| 1:E:65:LEU:HD13  | 1:E:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:E:300:SER:HA   | 1:E:335:ARG:CD   | 2.50                     | 0.42              |
| 1:F:167:GLU:OE1  | 1:H:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:H:105:LEU:HD11 | 1:H:123:MET:HG3  | 2.01                     | 0.42              |
| 1:I:335:ARG:HA   | 1:I:335:ARG:HD3  | 1.39                     | 0.42              |
| 1:K:104:LEU:HD13 | 1:K:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:L:34:ILE:HG23  | 1:L:67:LEU:HB3   | 2.01                     | 0.42              |
| 1:L:73:HIC:HA    | 1:L:183:ARG:NH1  | 2.18                     | 0.42              |
| 1:M:2:GLU:HB3    | 1:M:3:ASP:H      | 1.65                     | 0.42              |
| 1:M:72:GLU:O     | 1:M:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:N:72:GLU:O     | 1:N:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:O:72:GLU:O     | 1:O:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:O:105:LEU:HD11 | 1:O:123:MET:HG3  | 2.01                     | 0.42              |
| 1:P:72:GLU:O     | 1:P:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:P:374:CYS:HB2  | 1:P:375:PHE:H    | 1.61                     | 0.42              |
| 1:Q:110:LEU:CD1  | 1:Q:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:Q:136:ILE:O    | 1:Q:139:VAL:HB   | 2.19                     | 0.42              |
| 1:Q:180:LEU:O    | 1:Q:180:LEU:HG   | 2.11                     | 0.42              |
| 1:R:69:TYR:CD2   | 1:R:69:TYR:N     | 2.86                     | 0.42              |
| 1:R:167:GLU:OE1  | 1:T:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:R:178:LEU:HG   | 1:R:180:LEU:H    | 1.84                     | 0.42              |
| 1:S:107:GLU:O    | 1:S:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:S:149:THR:HG23 | 1:S:150:GLY:N    | 2.34                     | 0.42              |
| 1:S:167:GLU:OE1  | 1:U:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:S:167:GLU:OE1  | 1:U:61:LYS:HE2   | 2.20                     | 0.42              |
| 1:T:72:GLU:O     | 1:T:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:T:107:GLU:O    | 1:T:137:GLN:HG3  | 2.19                     | 0.42              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:180:LEU:HD12 | 1:T:181:ALA:CA   | 2.50                     | 0.42              |
| 1:U:167:GLU:OE1  | 1:W:61:LYS:HE2   | 2.20                     | 0.42              |
| 1:U:183:ARG:HE   | 1:U:183:ARG:HB3  | 1.58                     | 0.42              |
| 1:V:107:GLU:O    | 1:V:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:W:135:ALA:CB   | 1:W:140:LEU:HD21 | 2.50                     | 0.42              |
| 1:W:180:LEU:CD1  | 1:W:181:ALA:N    | 2.78                     | 0.42              |
| 1:A:64:ILE:CG2   | 1:A:65:LEU:N     | 2.82                     | 0.42              |
| 1:A:121:GLN:HG3  | 1:A:362:TYR:OH   | 2.20                     | 0.42              |
| 1:A:178:LEU:HG   | 1:A:180:LEU:H    | 1.84                     | 0.42              |
| 1:B:167:GLU:OE1  | 1:D:61:LYS:HE2   | 2.19                     | 0.42              |
| 1:B:299:MET:O    | 1:B:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:C:178:LEU:HG   | 1:C:180:LEU:H    | 1.84                     | 0.42              |
| 1:D:105:LEU:HD11 | 1:D:123:MET:HG3  | 2.01                     | 0.42              |
| 1:D:106:THR:HG22 | 1:D:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:D:148:THR:CG2  | 1:D:149:THR:N    | 2.81                     | 0.42              |
| 1:E:357:ILE:HD12 | 1:E:357:ILE:HA   | 1.78                     | 0.42              |
| 1:F:299:MET:O    | 1:F:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:G:8:LEU:CB     | 1:G:103:THR:HG23 | 2.48                     | 0.42              |
| 1:G:64:ILE:CG2   | 1:G:65:LEU:N     | 2.81                     | 0.42              |
| 1:H:65:LEU:HD13  | 1:H:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:H:110:LEU:CD1  | 1:H:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:I:34:ILE:HG23  | 1:I:67:LEU:HB3   | 2.02                     | 0.42              |
| 1:I:180:LEU:HD12 | 1:I:181:ALA:CA   | 2.50                     | 0.42              |
| 1:K:65:LEU:HD13  | 1:K:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:K:180:LEU:HD12 | 1:K:181:ALA:CA   | 2.50                     | 0.42              |
| 1:L:300:SER:HA   | 1:L:335:ARG:CD   | 2.50                     | 0.42              |
| 1:M:105:LEU:HD11 | 1:M:123:MET:HG3  | 2.01                     | 0.42              |
| 1:M:180:LEU:HD12 | 1:M:181:ALA:CA   | 2.50                     | 0.42              |
| 1:O:104:LEU:HD13 | 1:O:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:O:136:ILE:O    | 1:O:139:VAL:HB   | 2.19                     | 0.42              |
| 1:P:34:ILE:HG23  | 1:P:67:LEU:HB3   | 2.01                     | 0.42              |
| 1:Q:105:LEU:HD11 | 1:Q:123:MET:HG3  | 2.01                     | 0.42              |
| 1:T:2:GLU:HB3    | 1:T:3:ASP:H      | 1.66                     | 0.42              |
| 1:U:148:THR:CG2  | 1:U:149:THR:N    | 2.81                     | 0.42              |
| 1:V:374:CYS:HB2  | 1:V:375:PHE:H    | 1.61                     | 0.42              |
| 1:A:72:GLU:O     | 1:A:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:A:135:ALA:CB   | 1:A:140:LEU:HD21 | 2.49                     | 0.42              |
| 1:B:72:GLU:O     | 1:B:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:B:106:THR:HG22 | 1:B:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:B:107:GLU:O    | 1:B:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:B:357:ILE:CG2  | 1:B:358:THR:N    | 2.83                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:135:ALA:CB   | 1:D:140:LEU:HD21 | 2.49                     | 0.42              |
| 1:D:362:TYR:CE1  | 1:D:367:PRO:CB   | 2.99                     | 0.42              |
| 1:F:110:LEU:CD1  | 1:F:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:F:180:LEU:HD12 | 1:F:181:ALA:CA   | 2.50                     | 0.42              |
| 1:G:236:LEU:CD1  | 1:G:237:GLU:CG   | 2.93                     | 0.42              |
| 1:H:180:LEU:CD1  | 1:H:181:ALA:N    | 2.78                     | 0.42              |
| 1:J:35:VAL:H     | 1:J:68:LYS:H     | 1.65                     | 0.42              |
| 1:J:135:ALA:CB   | 1:J:140:LEU:HD21 | 2.50                     | 0.42              |
| 1:J:167:GLU:OE1  | 1:L:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:K:2:GLU:HB3    | 1:K:3:ASP:H      | 1.66                     | 0.42              |
| 1:K:136:ILE:O    | 1:K:139:VAL:HB   | 2.19                     | 0.42              |
| 1:K:149:THR:CG2  | 1:K:150:GLY:N    | 2.82                     | 0.42              |
| 1:K:357:ILE:CG2  | 1:K:358:THR:N    | 2.83                     | 0.42              |
| 1:M:69:TYR:CD2   | 1:M:69:TYR:N     | 2.86                     | 0.42              |
| 1:N:65:LEU:HD13  | 1:N:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:N:167:GLU:OE1  | 1:P:61:LYS:HE2   | 2.19                     | 0.42              |
| 1:O:180:LEU:HD12 | 1:O:181:ALA:CA   | 2.50                     | 0.42              |
| 1:Q:180:LEU:HD12 | 1:Q:181:ALA:CA   | 2.50                     | 0.42              |
| 1:S:105:LEU:HD11 | 1:S:123:MET:HG3  | 2.01                     | 0.42              |
| 1:S:110:LEU:CD1  | 1:S:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:S:299:MET:O    | 1:S:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:T:35:VAL:H     | 1:T:68:LYS:H     | 1.65                     | 0.42              |
| 1:T:65:LEU:HD13  | 1:T:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:U:121:GLN:HG3  | 1:U:362:TYR:OH   | 2.20                     | 0.42              |
| 1:U:136:ILE:O    | 1:U:139:VAL:HB   | 2.19                     | 0.42              |
| 1:U:299:MET:O    | 1:U:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:V:104:LEU:HD13 | 1:V:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:V:180:LEU:HD12 | 1:V:181:ALA:CA   | 2.50                     | 0.42              |
| 1:W:121:GLN:HG3  | 1:W:362:TYR:OH   | 2.20                     | 0.42              |
| 1:A:65:LEU:HD13  | 1:A:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:B:105:LEU:HD11 | 1:B:123:MET:HG3  | 2.02                     | 0.42              |
| 1:B:136:ILE:O    | 1:B:139:VAL:HB   | 2.19                     | 0.42              |
| 1:B:149:THR:CG2  | 1:B:150:GLY:N    | 2.82                     | 0.42              |
| 1:B:362:TYR:CE1  | 1:B:367:PRO:CB   | 2.99                     | 0.42              |
| 1:D:72:GLU:O     | 1:D:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:E:72:GLU:O     | 1:E:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:F:105:LEU:HD11 | 1:F:123:MET:HG3  | 2.02                     | 0.42              |
| 1:G:180:LEU:HD12 | 1:G:181:ALA:CA   | 2.50                     | 0.42              |
| 1:G:300:SER:HA   | 1:G:335:ARG:CD   | 2.50                     | 0.42              |
| 1:H:133:TYR:CE2  | 1:H:375:PHE:HB2  | 2.51                     | 0.42              |
| 1:H:136:ILE:O    | 1:H:139:VAL:HB   | 2.19                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:39:ARG:NE    | 1:I:66:THR:CA    | 2.69                     | 0.42              |
| 1:I:167:GLU:OE1  | 1:K:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:K:110:LEU:CD1  | 1:K:177:ARG:HH11 | 2.32                     | 0.42              |
| 1:L:72:GLU:O     | 1:L:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:L:121:GLN:HG3  | 1:L:362:TYR:OH   | 2.20                     | 0.42              |
| 1:L:167:GLU:OE1  | 1:N:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:O:8:LEU:N      | 1:O:102:PRO:O    | 2.48                     | 0.42              |
| 1:P:106:THR:HG22 | 1:P:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:Q:171:LEU:HA   | 1:Q:172:PRO:HD3  | 1.79                     | 0.42              |
| 1:Q:173:HIS:HE1  | 1:R:268:GLY:CA   | 2.28                     | 0.42              |
| 1:R:65:LEU:HD13  | 1:R:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:S:121:GLN:HG3  | 1:S:362:TYR:OH   | 2.20                     | 0.42              |
| 1:S:362:TYR:CE1  | 1:S:367:PRO:CB   | 2.99                     | 0.42              |
| 1:U:287:ILE:HD12 | 1:W:208:ILE:HD13 | 1.96                     | 0.42              |
| 1:V:135:ALA:CB   | 1:V:140:LEU:HD21 | 2.49                     | 0.42              |
| 1:A:38:PRO:CG    | 1:A:49:GLN:NE2   | 2.79                     | 0.42              |
| 1:B:180:LEU:CD1  | 1:B:181:ALA:N    | 2.78                     | 0.42              |
| 1:C:121:GLN:HG3  | 1:C:362:TYR:OH   | 2.20                     | 0.42              |
| 1:D:167:GLU:OE1  | 1:F:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:E:167:GLU:OE1  | 1:G:61:LYS:HE2   | 2.20                     | 0.42              |
| 1:E:180:LEU:HD12 | 1:E:181:ALA:CA   | 2.49                     | 0.42              |
| 1:F:167:GLU:CD   | 1:H:61:LYS:CE    | 2.85                     | 0.42              |
| 1:F:180:LEU:O    | 1:F:180:LEU:HG   | 2.11                     | 0.42              |
| 1:J:35:VAL:C     | 1:J:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:J:107:GLU:O    | 1:J:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:J:121:GLN:HG3  | 1:J:362:TYR:OH   | 2.20                     | 0.42              |
| 1:K:34:ILE:CG2   | 1:K:67:LEU:CB    | 2.96                     | 0.42              |
| 1:K:110:LEU:CD1  | 1:K:177:ARG:NH1  | 2.80                     | 0.42              |
| 1:K:167:GLU:CD   | 1:M:61:LYS:CE    | 2.85                     | 0.42              |
| 1:L:65:LEU:HD13  | 1:L:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:M:104:LEU:HD13 | 1:M:347:ALA:HB2  | 2.01                     | 0.42              |
| 1:M:133:TYR:CE2  | 1:M:375:PHE:HB2  | 2.51                     | 0.42              |
| 1:N:103:THR:O    | 1:N:132:MET:HA   | 2.20                     | 0.42              |
| 1:O:64:ILE:CG2   | 1:O:65:LEU:N     | 2.81                     | 0.42              |
| 1:O:149:THR:HG23 | 1:O:150:GLY:N    | 2.34                     | 0.42              |
| 1:O:167:GLU:OE1  | 1:Q:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:P:180:LEU:O    | 1:P:180:LEU:HG   | 2.11                     | 0.42              |
| 1:Q:34:ILE:HG23  | 1:Q:67:LEU:HB3   | 2.02                     | 0.42              |
| 1:Q:35:VAL:C     | 1:Q:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:S:149:THR:CG2  | 1:S:150:GLY:N    | 2.82                     | 0.42              |
| 1:S:180:LEU:HD12 | 1:S:181:ALA:CA   | 2.50                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:35:VAL:C     | 1:T:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:T:299:MET:HE1  | 1:T:304:THR:HB   | 2.02                     | 0.42              |
| 1:U:180:LEU:HD12 | 1:U:181:ALA:CA   | 2.49                     | 0.42              |
| 1:V:121:GLN:HG3  | 1:V:362:TYR:OH   | 2.20                     | 0.42              |
| 1:W:65:LEU:HD13  | 1:W:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:A:167:GLU:OE1  | 1:C:64:ILE:HD13  | 2.19                     | 0.42              |
| 1:C:34:ILE:HG23  | 1:C:67:LEU:HB3   | 2.01                     | 0.42              |
| 1:C:148:THR:CG2  | 1:C:149:THR:N    | 2.81                     | 0.42              |
| 1:E:103:THR:O    | 1:E:132:MET:HA   | 2.20                     | 0.42              |
| 1:E:106:THR:HG22 | 1:E:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:F:106:THR:HG22 | 1:F:140:LEU:HD11 | 2.01                     | 0.42              |
| 1:G:65:LEU:HD13  | 1:G:67:LEU:HD23  | 2.01                     | 0.42              |
| 1:H:35:VAL:C     | 1:H:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:I:178:LEU:HG   | 1:I:180:LEU:H    | 1.84                     | 0.42              |
| 1:J:178:LEU:HG   | 1:J:180:LEU:H    | 1.84                     | 0.42              |
| 1:L:35:VAL:C     | 1:L:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:L:47:MET:HB3   | 1:L:48:GLY:H     | 1.61                     | 0.42              |
| 1:L:103:THR:O    | 1:L:132:MET:HA   | 2.20                     | 0.42              |
| 1:M:110:LEU:CD1  | 1:M:177:ARG:NH1  | 2.80                     | 0.42              |
| 1:M:180:LEU:CD1  | 1:M:181:ALA:N    | 2.78                     | 0.42              |
| 1:N:121:GLN:HG3  | 1:N:362:TYR:OH   | 2.20                     | 0.42              |
| 1:O:35:VAL:C     | 1:O:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:O:178:LEU:HG   | 1:O:180:LEU:H    | 1.84                     | 0.42              |
| 1:O:180:LEU:CD1  | 1:O:181:ALA:N    | 2.78                     | 0.42              |
| 1:P:107:GLU:O    | 1:P:137:GLN:HG3  | 2.19                     | 0.42              |
| 1:P:299:MET:O    | 1:P:332:PRO:HD2  | 2.18                     | 0.42              |
| 1:Q:72:GLU:O     | 1:Q:183:ARG:NH2  | 2.52                     | 0.42              |
| 1:R:35:VAL:C     | 1:R:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:S:35:VAL:C     | 1:S:54:VAL:CG2   | 2.88                     | 0.42              |
| 1:T:135:ALA:CB   | 1:T:140:LEU:HD21 | 2.49                     | 0.42              |
| 1:T:299:MET:HE1  | 1:T:309:ILE:HD13 | 2.01                     | 0.42              |
| 1:U:135:ALA:CB   | 1:U:140:LEU:HD21 | 2.50                     | 0.42              |
| 1:U:300:SER:HA   | 1:U:335:ARG:CD   | 2.50                     | 0.42              |
| 1:V:35:VAL:C     | 1:V:54:VAL:CG2   | 2.89                     | 0.42              |
| 1:A:34:ILE:CG2   | 1:A:67:LEU:CB    | 2.96                     | 0.41              |
| 1:B:8:LEU:CB     | 1:B:103:THR:HG23 | 2.48                     | 0.41              |
| 1:C:133:TYR:CE2  | 1:C:375:PHE:HB2  | 2.51                     | 0.41              |
| 1:C:167:GLU:OE1  | 1:E:64:ILE:HD13  | 2.19                     | 0.41              |
| 1:E:69:TYR:CD2   | 1:E:69:TYR:N     | 2.87                     | 0.41              |
| 1:G:103:THR:O    | 1:G:132:MET:HA   | 2.20                     | 0.41              |
| 1:G:178:LEU:HG   | 1:G:180:LEU:H    | 1.84                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:106:THR:HG22 | 1:H:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:K:140:LEU:HB3  | 1:K:343:GLY:N    | 2.35                     | 0.41              |
| 1:K:173:HIS:HE1  | 1:L:268:GLY:CA   | 2.28                     | 0.41              |
| 1:M:153:LEU:HD23 | 1:M:299:MET:HE2  | 2.02                     | 0.41              |
| 1:M:178:LEU:HG   | 1:M:180:LEU:H    | 1.84                     | 0.41              |
| 1:P:35:VAL:C     | 1:P:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:P:103:THR:O    | 1:P:132:MET:HA   | 2.20                     | 0.41              |
| 1:P:178:LEU:HG   | 1:P:180:LEU:H    | 1.84                     | 0.41              |
| 1:Q:121:GLN:HG3  | 1:Q:362:TYR:OH   | 2.20                     | 0.41              |
| 1:Q:149:THR:CG2  | 1:Q:150:GLY:N    | 2.82                     | 0.41              |
| 1:R:140:LEU:HB3  | 1:R:343:GLY:N    | 2.35                     | 0.41              |
| 1:S:106:THR:HG22 | 1:S:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:T:357:ILE:CG2  | 1:T:358:THR:N    | 2.82                     | 0.41              |
| 1:V:103:THR:O    | 1:V:132:MET:HA   | 2.20                     | 0.41              |
| 1:V:133:TYR:CE2  | 1:V:375:PHE:HB2  | 2.51                     | 0.41              |
| 1:W:35:VAL:C     | 1:W:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:W:103:THR:O    | 1:W:132:MET:HA   | 2.20                     | 0.41              |
| 1:W:140:LEU:HB3  | 1:W:343:GLY:N    | 2.35                     | 0.41              |
| 1:A:171:LEU:HA   | 1:A:172:PRO:HD3  | 1.79                     | 0.41              |
| 1:A:189:LEU:HA   | 1:A:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:C:38:PRO:CG    | 1:C:49:GLN:NE2   | 2.79                     | 0.41              |
| 1:D:107:GLU:O    | 1:D:137:GLN:HG3  | 2.19                     | 0.41              |
| 1:D:121:GLN:HA   | 1:D:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:D:167:GLU:OE1  | 1:F:61:LYS:HE2   | 2.20                     | 0.41              |
| 1:E:107:GLU:O    | 1:E:137:GLN:HG3  | 2.19                     | 0.41              |
| 1:E:121:GLN:HG3  | 1:E:362:TYR:OH   | 2.20                     | 0.41              |
| 1:F:35:VAL:C     | 1:F:54:VAL:CG2   | 2.89                     | 0.41              |
| 1:F:72:GLU:O     | 1:F:183:ARG:NH2  | 2.52                     | 0.41              |
| 1:G:167:GLU:OE1  | 1:I:61:LYS:HE2   | 2.19                     | 0.41              |
| 1:H:34:ILE:CG2   | 1:H:67:LEU:CB    | 2.96                     | 0.41              |
| 1:H:121:GLN:HG3  | 1:H:362:TYR:OH   | 2.20                     | 0.41              |
| 1:I:65:LEU:HD13  | 1:I:67:LEU:HD23  | 2.01                     | 0.41              |
| 1:J:34:ILE:HG23  | 1:J:67:LEU:HB3   | 2.01                     | 0.41              |
| 1:J:47:MET:HB3   | 1:J:48:GLY:H     | 1.62                     | 0.41              |
| 1:J:65:LEU:HD13  | 1:J:67:LEU:HD23  | 2.01                     | 0.41              |
| 1:J:72:GLU:O     | 1:J:183:ARG:NH2  | 2.52                     | 0.41              |
| 1:L:167:GLU:OE1  | 1:N:61:LYS:HE2   | 2.19                     | 0.41              |
| 1:N:35:VAL:C     | 1:N:54:VAL:CG2   | 2.89                     | 0.41              |
| 1:N:110:LEU:CD1  | 1:N:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:N:189:LEU:HA   | 1:N:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:N:300:SER:HA   | 1:N:335:ARG:CD   | 2.50                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:106:THR:HG22 | 1:O:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:O:173:HIS:HE1  | 1:P:268:GLY:CA   | 2.28                     | 0.41              |
| 1:P:208:ILE:CG2  | 1:P:209:VAL:N    | 2.83                     | 0.41              |
| 1:Q:106:THR:HG22 | 1:Q:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:Q:121:GLN:HA   | 1:Q:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:Q:140:LEU:HB3  | 1:Q:343:GLY:N    | 2.35                     | 0.41              |
| 1:Q:180:LEU:CD1  | 1:Q:181:ALA:N    | 2.78                     | 0.41              |
| 1:R:34:ILE:HG23  | 1:R:67:LEU:HB3   | 2.01                     | 0.41              |
| 1:S:121:GLN:HA   | 1:S:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:T:34:ILE:CG2   | 1:T:67:LEU:CB    | 2.96                     | 0.41              |
| 1:T:121:GLN:HG3  | 1:T:362:TYR:OH   | 2.20                     | 0.41              |
| 1:T:140:LEU:HB3  | 1:T:343:GLY:N    | 2.36                     | 0.41              |
| 1:U:35:VAL:C     | 1:U:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:U:103:THR:O    | 1:U:132:MET:HA   | 2.20                     | 0.41              |
| 1:U:140:LEU:HB3  | 1:U:343:GLY:N    | 2.36                     | 0.41              |
| 1:U:167:GLU:OE1  | 1:W:64:ILE:HD13  | 2.19                     | 0.41              |
| 1:V:34:ILE:HG23  | 1:V:67:LEU:HB3   | 2.02                     | 0.41              |
| 1:V:65:LEU:HD13  | 1:V:67:LEU:HD23  | 2.01                     | 0.41              |
| 1:V:69:TYR:CD2   | 1:V:69:TYR:N     | 2.86                     | 0.41              |
| 1:V:73:HIC:HA    | 1:V:183:ARG:NH1  | 2.18                     | 0.41              |
| 1:A:148:THR:CG2  | 1:A:149:THR:N    | 2.81                     | 0.41              |
| 1:B:121:GLN:HA   | 1:B:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:B:121:GLN:HG3  | 1:B:362:TYR:OH   | 2.20                     | 0.41              |
| 1:C:65:LEU:HD13  | 1:C:67:LEU:HD23  | 2.01                     | 0.41              |
| 1:C:103:THR:O    | 1:C:132:MET:HA   | 2.20                     | 0.41              |
| 1:C:189:LEU:HA   | 1:C:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:C:357:ILE:CG2  | 1:C:358:THR:N    | 2.83                     | 0.41              |
| 1:D:180:LEU:HD12 | 1:D:181:ALA:CA   | 2.50                     | 0.41              |
| 1:E:121:GLN:HA   | 1:E:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:E:167:GLU:OE1  | 1:G:64:ILE:HD13  | 2.19                     | 0.41              |
| 1:F:140:LEU:HB3  | 1:F:343:GLY:N    | 2.35                     | 0.41              |
| 1:H:121:GLN:HA   | 1:H:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:H:149:THR:CG2  | 1:H:150:GLY:N    | 2.82                     | 0.41              |
| 1:I:121:GLN:HA   | 1:I:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:J:103:THR:O    | 1:J:132:MET:HA   | 2.20                     | 0.41              |
| 1:J:121:GLN:HA   | 1:J:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:J:167:GLU:CD   | 1:L:61:LYS:CE    | 2.85                     | 0.41              |
| 1:J:335:ARG:O    | 1:J:338:SER:CB   | 2.69                     | 0.41              |
| 1:L:149:THR:CG2  | 1:L:150:GLY:N    | 2.82                     | 0.41              |
| 1:M:35:VAL:C     | 1:M:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:N:167:GLU:OE1  | 1:P:64:ILE:HD13  | 2.19                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:34:ILE:HG23  | 1:O:67:LEU:HB3   | 2.01                     | 0.41              |
| 1:O:140:LEU:HB3  | 1:O:343:GLY:N    | 2.35                     | 0.41              |
| 1:O:349:LEU:HD23 | 1:O:349:LEU:HA   | 1.80                     | 0.41              |
| 1:P:140:LEU:HB3  | 1:P:343:GLY:N    | 2.35                     | 0.41              |
| 1:P:149:THR:CG2  | 1:P:150:GLY:N    | 2.82                     | 0.41              |
| 1:Q:335:ARG:O    | 1:Q:338:SER:CB   | 2.69                     | 0.41              |
| 1:S:103:THR:O    | 1:S:132:MET:HA   | 2.20                     | 0.41              |
| 1:S:140:LEU:HB3  | 1:S:343:GLY:N    | 2.35                     | 0.41              |
| 1:S:374:CYS:HB2  | 1:S:375:PHE:H    | 1.61                     | 0.41              |
| 1:T:103:THR:O    | 1:T:132:MET:HA   | 2.20                     | 0.41              |
| 1:V:34:ILE:CG2   | 1:V:67:LEU:CB    | 2.96                     | 0.41              |
| 1:V:140:LEU:HB3  | 1:V:343:GLY:N    | 2.35                     | 0.41              |
| 1:W:8:LEU:N      | 1:W:102:PRO:O    | 2.48                     | 0.41              |
| 1:A:140:LEU:HB3  | 1:A:343:GLY:N    | 2.36                     | 0.41              |
| 1:B:135:ALA:CB   | 1:B:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:C:180:LEU:HD12 | 1:C:181:ALA:CA   | 2.50                     | 0.41              |
| 1:D:35:VAL:C     | 1:D:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:D:183:ARG:HE   | 1:D:183:ARG:HB3  | 1.59                     | 0.41              |
| 1:E:31:PHE:HA    | 1:E:32:PRO:HD3   | 1.66                     | 0.41              |
| 1:E:171:LEU:HA   | 1:E:172:PRO:HD3  | 1.79                     | 0.41              |
| 1:F:236:LEU:HD12 | 1:F:237:GLU:CA   | 2.51                     | 0.41              |
| 1:G:121:GLN:HA   | 1:G:362:TYR:CZ   | 2.56                     | 0.41              |
| 1:H:335:ARG:O    | 1:H:338:SER:CB   | 2.69                     | 0.41              |
| 1:H:374:CYS:HB2  | 1:H:375:PHE:H    | 1.61                     | 0.41              |
| 1:I:110:LEU:CD1  | 1:I:177:ARG:NH1  | 2.80                     | 0.41              |
| 1:I:140:LEU:HB3  | 1:I:343:GLY:N    | 2.35                     | 0.41              |
| 1:I:300:SER:HA   | 1:I:335:ARG:CD   | 2.50                     | 0.41              |
| 1:L:357:ILE:CG2  | 1:L:358:THR:N    | 2.83                     | 0.41              |
| 1:M:106:THR:HG22 | 1:M:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:M:135:ALA:CB   | 1:M:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:N:31:PHE:HA    | 1:N:32:PRO:HD3   | 1.66                     | 0.41              |
| 1:O:110:LEU:CD1  | 1:O:177:ARG:NH1  | 2.80                     | 0.41              |
| 1:O:121:GLN:HG3  | 1:O:362:TYR:OH   | 2.20                     | 0.41              |
| 1:P:167:GLU:OE1  | 1:R:64:ILE:HD13  | 2.19                     | 0.41              |
| 1:P:189:LEU:HA   | 1:P:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:R:2:GLU:HB3    | 1:R:3:ASP:H      | 1.66                     | 0.41              |
| 1:R:189:LEU:HA   | 1:R:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:R:357:ILE:CG2  | 1:R:358:THR:N    | 2.83                     | 0.41              |
| 1:S:171:LEU:HA   | 1:S:172:PRO:HD3  | 1.79                     | 0.41              |
| 1:T:189:LEU:HA   | 1:T:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:V:110:LEU:CD1  | 1:V:177:ARG:HH11 | 2.32                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:W:121:GLN:HA   | 1:W:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:W:180:LEU:HD12 | 1:W:181:ALA:CA   | 2.50                     | 0.41              |
| 1:B:110:LEU:CD1  | 1:B:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:B:140:LEU:HB3  | 1:B:343:GLY:N    | 2.35                     | 0.41              |
| 1:B:335:ARG:O    | 1:B:338:SER:CB   | 2.69                     | 0.41              |
| 1:C:69:TYR:CD2   | 1:C:69:TYR:N     | 2.86                     | 0.41              |
| 1:C:140:LEU:HB3  | 1:C:343:GLY:N    | 2.35                     | 0.41              |
| 1:E:2:GLU:HB3    | 1:E:3:ASP:H      | 1.66                     | 0.41              |
| 1:E:135:ALA:CB   | 1:E:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:E:208:ILE:CG2  | 1:E:209:VAL:N    | 2.83                     | 0.41              |
| 1:I:103:THR:O    | 1:I:132:MET:HA   | 2.20                     | 0.41              |
| 1:I:335:ARG:O    | 1:I:338:SER:CB   | 2.69                     | 0.41              |
| 1:K:35:VAL:C     | 1:K:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:L:189:LEU:HA   | 1:L:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:L:335:ARG:HD3  | 1:L:335:ARG:HA   | 1.39                     | 0.41              |
| 1:M:121:GLN:HG3  | 1:M:362:TYR:OH   | 2.20                     | 0.41              |
| 1:M:236:LEU:HD12 | 1:M:237:GLU:CA   | 2.51                     | 0.41              |
| 1:O:103:THR:O    | 1:O:132:MET:HA   | 2.20                     | 0.41              |
| 1:P:64:ILE:CG2   | 1:P:65:LEU:N     | 2.82                     | 0.41              |
| 1:P:65:LEU:HD13  | 1:P:67:LEU:HD23  | 2.01                     | 0.41              |
| 1:P:135:ALA:CB   | 1:P:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:P:349:LEU:HD23 | 1:P:349:LEU:HA   | 1.80                     | 0.41              |
| 1:Q:103:THR:O    | 1:Q:132:MET:HA   | 2.20                     | 0.41              |
| 1:Q:167:GLU:OE1  | 1:S:64:ILE:HD13  | 2.19                     | 0.41              |
| 1:R:34:ILE:HD13  | 1:R:67:LEU:CD2   | 2.46                     | 0.41              |
| 1:R:135:ALA:CB   | 1:R:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:S:34:ILE:CG2   | 1:S:67:LEU:CB    | 2.96                     | 0.41              |
| 1:S:180:LEU:CD1  | 1:S:181:ALA:N    | 2.78                     | 0.41              |
| 1:S:357:ILE:CG2  | 1:S:358:THR:N    | 2.82                     | 0.41              |
| 1:U:49:GLN:HG3   | 1:U:50:LYS:N     | 2.20                     | 0.41              |
| 1:U:72:GLU:O     | 1:U:183:ARG:NH2  | 2.52                     | 0.41              |
| 1:U:180:LEU:CD1  | 1:U:181:ALA:N    | 2.78                     | 0.41              |
| 1:U:335:ARG:O    | 1:U:338:SER:CB   | 2.69                     | 0.41              |
| 1:V:171:LEU:HA   | 1:V:172:PRO:HD3  | 1.79                     | 0.41              |
| 1:A:180:LEU:HD12 | 1:A:181:ALA:CA   | 2.50                     | 0.41              |
| 1:B:236:LEU:HD12 | 1:B:237:GLU:CA   | 2.51                     | 0.41              |
| 1:C:49:GLN:HG3   | 1:C:50:LYS:N     | 2.21                     | 0.41              |
| 1:C:121:GLN:HA   | 1:C:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:D:121:GLN:HG3  | 1:D:362:TYR:OH   | 2.20                     | 0.41              |
| 1:E:189:LEU:HA   | 1:E:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:F:223:PHE:CZ   | 1:F:266:PHE:CZ   | 3.09                     | 0.41              |

*Continued on next page...*



*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:106:THR:HG22 | 1:G:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:G:135:ALA:CB   | 1:G:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:G:189:LEU:HA   | 1:G:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:I:34:ILE:CG2   | 1:I:67:LEU:HD22  | 2.28                     | 0.41              |
| 1:J:133:TYR:CE2  | 1:J:375:PHE:HB2  | 2.51                     | 0.41              |
| 1:J:167:GLU:OE1  | 1:L:61:LYS:HE2   | 2.20                     | 0.41              |
| 1:K:121:GLN:HA   | 1:K:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:K:335:ARG:O    | 1:K:338:SER:CB   | 2.69                     | 0.41              |
| 1:M:34:ILE:CG2   | 1:M:67:LEU:CB    | 2.96                     | 0.41              |
| 1:M:121:GLN:HA   | 1:M:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:M:335:ARG:O    | 1:M:338:SER:CB   | 2.69                     | 0.41              |
| 1:N:135:ALA:CB   | 1:N:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:N:140:LEU:HB3  | 1:N:343:GLY:N    | 2.35                     | 0.41              |
| 1:P:121:GLN:HG3  | 1:P:362:TYR:OH   | 2.20                     | 0.41              |
| 1:S:135:ALA:CB   | 1:S:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:S:335:ARG:O    | 1:S:338:SER:CB   | 2.69                     | 0.41              |
| 1:U:31:PHE:HA    | 1:U:32:PRO:HD3   | 1.66                     | 0.41              |
| 1:V:178:LEU:HG   | 1:V:180:LEU:H    | 1.84                     | 0.41              |
| 1:W:47:MET:HB3   | 1:W:48:GLY:H     | 1.61                     | 0.41              |
| 1:W:236:LEU:HD12 | 1:W:237:GLU:CA   | 2.51                     | 0.41              |
| 1:A:103:THR:O    | 1:A:132:MET:HA   | 2.20                     | 0.41              |
| 1:A:149:THR:CG2  | 1:A:150:GLY:N    | 2.82                     | 0.41              |
| 1:B:35:VAL:C     | 1:B:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:B:167:GLU:OE1  | 1:D:64:ILE:HD13  | 2.19                     | 0.41              |
| 1:C:35:VAL:C     | 1:C:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:C:357:ILE:HD12 | 1:C:357:ILE:HA   | 1.79                     | 0.41              |
| 1:D:8:LEU:N      | 1:D:102:PRO:O    | 2.48                     | 0.41              |
| 1:D:140:LEU:HB3  | 1:D:343:GLY:N    | 2.35                     | 0.41              |
| 1:D:335:ARG:O    | 1:D:338:SER:CB   | 2.69                     | 0.41              |
| 1:E:357:ILE:CG2  | 1:E:358:THR:N    | 2.82                     | 0.41              |
| 1:F:121:GLN:HA   | 1:F:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:F:121:GLN:HG3  | 1:F:362:TYR:OH   | 2.20                     | 0.41              |
| 1:F:167:GLU:OE1  | 1:H:61:LYS:HE2   | 2.20                     | 0.41              |
| 1:F:335:ARG:O    | 1:F:338:SER:CB   | 2.69                     | 0.41              |
| 1:G:110:LEU:CD1  | 1:G:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:G:121:GLN:HG3  | 1:G:362:TYR:OH   | 2.20                     | 0.41              |
| 1:G:236:LEU:HD12 | 1:G:237:GLU:CA   | 2.51                     | 0.41              |
| 1:H:8:LEU:N      | 1:H:102:PRO:O    | 2.48                     | 0.41              |
| 1:I:8:LEU:CD1    | 1:I:90:PHE:CD1   | 3.04                     | 0.41              |
| 1:I:35:VAL:C     | 1:I:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:I:106:THR:HG22 | 1:I:140:LEU:HD11 | 2.01                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:236:LEU:HD12 | 1:I:237:GLU:CA   | 2.51                     | 0.41              |
| 1:K:121:GLN:HG3  | 1:K:362:TYR:OH   | 2.20                     | 0.41              |
| 1:L:236:LEU:HD12 | 1:L:237:GLU:CA   | 2.51                     | 0.41              |
| 1:M:110:LEU:CD1  | 1:M:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:M:183:ARG:HE   | 1:M:183:ARG:HB3  | 1.58                     | 0.41              |
| 1:N:38:PRO:CG    | 1:N:49:GLN:NE2   | 2.79                     | 0.41              |
| 1:N:121:GLN:HA   | 1:N:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:P:121:GLN:HA   | 1:P:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:Q:110:LEU:CD1  | 1:Q:177:ARG:NH1  | 2.80                     | 0.41              |
| 1:Q:149:THR:HG23 | 1:Q:150:GLY:N    | 2.34                     | 0.41              |
| 1:Q:236:LEU:HD12 | 1:Q:237:GLU:CA   | 2.51                     | 0.41              |
| 1:R:106:THR:HG22 | 1:R:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:R:110:LEU:CD1  | 1:R:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:R:362:TYR:CE1  | 1:R:367:PRO:CB   | 2.99                     | 0.41              |
| 1:T:335:ARG:O    | 1:T:338:SER:CB   | 2.69                     | 0.41              |
| 1:W:110:LEU:CD1  | 1:W:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:W:335:ARG:O    | 1:W:338:SER:CB   | 2.69                     | 0.41              |
| 1:A:34:ILE:HG23  | 1:A:67:LEU:HB3   | 2.01                     | 0.41              |
| 1:A:35:VAL:C     | 1:A:54:VAL:CG2   | 2.89                     | 0.41              |
| 1:B:180:LEU:HD12 | 1:B:181:ALA:CA   | 2.50                     | 0.41              |
| 1:B:357:ILE:HD12 | 1:B:357:ILE:HA   | 1.79                     | 0.41              |
| 1:C:110:LEU:CD1  | 1:C:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:C:135:ALA:CB   | 1:C:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:D:300:SER:HA   | 1:D:335:ARG:CD   | 2.50                     | 0.41              |
| 1:F:43:VAL:O     | 1:F:44:MET:CE    | 2.69                     | 0.41              |
| 1:G:299:MET:HE1  | 1:G:309:ILE:HD13 | 2.03                     | 0.41              |
| 1:H:34:ILE:HG23  | 1:H:67:LEU:HB3   | 2.01                     | 0.41              |
| 1:I:8:LEU:CB     | 1:I:103:THR:HG23 | 2.49                     | 0.41              |
| 1:I:121:GLN:HG3  | 1:I:362:TYR:OH   | 2.20                     | 0.41              |
| 1:J:149:THR:CG2  | 1:J:150:GLY:N    | 2.82                     | 0.41              |
| 1:K:106:THR:HG22 | 1:K:140:LEU:HD11 | 2.01                     | 0.41              |
| 1:O:39:ARG:NE    | 1:O:66:THR:CA    | 2.69                     | 0.41              |
| 1:P:142:LEU:CD1  | 1:P:165:ILE:HD11 | 2.47                     | 0.41              |
| 1:P:167:GLU:CD   | 1:R:61:LYS:CE    | 2.85                     | 0.41              |
| 1:P:300:SER:HA   | 1:P:335:ARG:CD   | 2.50                     | 0.41              |
| 1:P:335:ARG:O    | 1:P:338:SER:CB   | 2.69                     | 0.41              |
| 1:R:236:LEU:HD12 | 1:R:237:GLU:CA   | 2.51                     | 0.41              |
| 1:S:39:ARG:NE    | 1:S:66:THR:CA    | 2.69                     | 0.41              |
| 1:S:236:LEU:HD12 | 1:S:237:GLU:CA   | 2.51                     | 0.41              |
| 1:T:236:LEU:HD12 | 1:T:237:GLU:CA   | 2.51                     | 0.41              |
| 1:U:8:LEU:N      | 1:U:102:PRO:O    | 2.48                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:U:299:MET:HE1  | 1:U:309:ILE:HD13 | 2.03                     | 0.41              |
| 1:W:300:SER:HA   | 1:W:335:ARG:CD   | 2.50                     | 0.41              |
| 1:A:43:VAL:O     | 1:A:44:MET:CE    | 2.69                     | 0.41              |
| 1:A:110:LEU:CD1  | 1:A:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:A:121:GLN:HA   | 1:A:362:TYR:CZ   | 2.56                     | 0.41              |
| 1:A:236:LEU:HD12 | 1:A:237:GLU:CA   | 2.51                     | 0.41              |
| 1:B:103:THR:O    | 1:B:132:MET:HA   | 2.20                     | 0.41              |
| 1:B:175:ILE:H    | 1:B:175:ILE:HG13 | 1.71                     | 0.41              |
| 1:B:349:LEU:HD23 | 1:B:349:LEU:HA   | 1.80                     | 0.41              |
| 1:C:164:PRO:HG2  | 1:C:174:ALA:CB   | 2.51                     | 0.41              |
| 1:D:164:PRO:CG   | 1:D:174:ALA:HB3  | 2.51                     | 0.41              |
| 1:D:180:LEU:CD1  | 1:D:181:ALA:N    | 2.78                     | 0.41              |
| 1:D:357:ILE:CG2  | 1:D:358:THR:N    | 2.83                     | 0.41              |
| 1:E:35:VAL:C     | 1:E:54:VAL:CG2   | 2.89                     | 0.41              |
| 1:E:38:PRO:CG    | 1:E:49:GLN:NE2   | 2.79                     | 0.41              |
| 1:E:140:LEU:HB3  | 1:E:343:GLY:N    | 2.35                     | 0.41              |
| 1:E:148:THR:CG2  | 1:E:149:THR:N    | 2.81                     | 0.41              |
| 1:E:335:ARG:O    | 1:E:338:SER:CB   | 2.69                     | 0.41              |
| 1:F:8:LEU:N      | 1:F:102:PRO:O    | 2.48                     | 0.41              |
| 1:F:173:HIS:HE1  | 1:G:268:GLY:CA   | 2.28                     | 0.41              |
| 1:F:180:LEU:CD1  | 1:F:181:ALA:N    | 2.78                     | 0.41              |
| 1:G:8:LEU:CD1    | 1:G:90:PHE:CD1   | 3.04                     | 0.41              |
| 1:G:35:VAL:C     | 1:G:54:VAL:CG2   | 2.88                     | 0.41              |
| 1:G:43:VAL:O     | 1:G:44:MET:CE    | 2.69                     | 0.41              |
| 1:H:43:VAL:O     | 1:H:44:MET:CE    | 2.69                     | 0.41              |
| 1:H:103:THR:O    | 1:H:132:MET:HA   | 2.20                     | 0.41              |
| 1:H:140:LEU:HB3  | 1:H:343:GLY:N    | 2.35                     | 0.41              |
| 1:H:167:GLU:OE1  | 1:J:61:LYS:HE2   | 2.20                     | 0.41              |
| 1:H:236:LEU:HD12 | 1:H:237:GLU:CA   | 2.51                     | 0.41              |
| 1:H:287:ILE:HD12 | 1:J:208:ILE:HD13 | 1.96                     | 0.41              |
| 1:I:34:ILE:CG2   | 1:I:68:LYS:N     | 2.84                     | 0.41              |
| 1:I:135:ALA:CB   | 1:I:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:I:189:LEU:HA   | 1:I:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:J:43:VAL:O     | 1:J:44:MET:CE    | 2.69                     | 0.41              |
| 1:J:164:PRO:HG2  | 1:J:174:ALA:CB   | 2.51                     | 0.41              |
| 1:J:164:PRO:CG   | 1:J:174:ALA:HB3  | 2.51                     | 0.41              |
| 1:K:8:LEU:CD1    | 1:K:90:PHE:CD1   | 3.04                     | 0.41              |
| 1:K:34:ILE:CG2   | 1:K:68:LYS:N     | 2.84                     | 0.41              |
| 1:K:103:THR:O    | 1:K:132:MET:HA   | 2.20                     | 0.41              |
| 1:K:135:ALA:CB   | 1:K:140:LEU:HD21 | 2.50                     | 0.41              |
| 1:L:43:VAL:O     | 1:L:44:MET:CE    | 2.69                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:110:LEU:CD1  | 1:L:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:L:121:GLN:HA   | 1:L:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:L:164:PRO:HG2  | 1:L:174:ALA:CB   | 2.51                     | 0.41              |
| 1:L:164:PRO:CG   | 1:L:174:ALA:HB3  | 2.51                     | 0.41              |
| 1:L:335:ARG:O    | 1:L:338:SER:CB   | 2.69                     | 0.41              |
| 1:M:34:ILE:CG2   | 1:M:68:LYS:N     | 2.84                     | 0.41              |
| 1:M:34:ILE:HG23  | 1:M:67:LEU:HB3   | 2.02                     | 0.41              |
| 1:M:103:THR:O    | 1:M:132:MET:HA   | 2.20                     | 0.41              |
| 1:M:357:ILE:CG2  | 1:M:358:THR:N    | 2.83                     | 0.41              |
| 1:N:43:VAL:O     | 1:N:44:MET:CE    | 2.69                     | 0.41              |
| 1:N:164:PRO:CG   | 1:N:174:ALA:HB3  | 2.51                     | 0.41              |
| 1:N:335:ARG:O    | 1:N:338:SER:CB   | 2.69                     | 0.41              |
| 1:O:2:GLU:HB3    | 1:O:3:ASP:H      | 1.66                     | 0.41              |
| 1:O:133:TYR:CE2  | 1:O:375:PHE:HB2  | 2.51                     | 0.41              |
| 1:O:142:LEU:CD1  | 1:O:165:ILE:HD11 | 2.47                     | 0.41              |
| 1:O:153:LEU:HD23 | 1:O:299:MET:HE2  | 2.03                     | 0.41              |
| 1:P:38:PRO:CG    | 1:P:49:GLN:NE2   | 2.79                     | 0.41              |
| 1:P:43:VAL:O     | 1:P:44:MET:CE    | 2.69                     | 0.41              |
| 1:P:110:LEU:CD1  | 1:P:177:ARG:HH11 | 2.32                     | 0.41              |
| 1:P:362:TYR:CE1  | 1:P:367:PRO:CB   | 2.99                     | 0.41              |
| 1:R:8:LEU:CD1    | 1:R:90:PHE:CD1   | 3.04                     | 0.41              |
| 1:R:43:VAL:O     | 1:R:44:MET:CE    | 2.69                     | 0.41              |
| 1:R:103:THR:O    | 1:R:132:MET:HA   | 2.20                     | 0.41              |
| 1:R:121:GLN:HA   | 1:R:362:TYR:CZ   | 2.56                     | 0.41              |
| 1:R:121:GLN:HG3  | 1:R:362:TYR:OH   | 2.20                     | 0.41              |
| 1:S:173:HIS:HE1  | 1:T:268:GLY:CA   | 2.28                     | 0.41              |
| 1:T:8:LEU:CD1    | 1:T:90:PHE:CD1   | 3.04                     | 0.41              |
| 1:T:34:ILE:HG23  | 1:T:67:LEU:HB3   | 2.01                     | 0.41              |
| 1:T:149:THR:CG2  | 1:T:150:GLY:N    | 2.82                     | 0.41              |
| 1:T:236:LEU:CD1  | 1:T:237:GLU:CG   | 2.93                     | 0.41              |
| 1:U:44:MET:CG    | 1:U:45:VAL:H     | 2.18                     | 0.41              |
| 1:V:189:LEU:HA   | 1:V:192:ILE:HG12 | 2.03                     | 0.41              |
| 1:V:335:ARG:O    | 1:V:338:SER:CB   | 2.69                     | 0.41              |
| 1:W:34:ILE:CG2   | 1:W:67:LEU:CB    | 2.96                     | 0.41              |
| 1:W:43:VAL:O     | 1:W:44:MET:CE    | 2.69                     | 0.41              |
| 1:W:223:PHE:CZ   | 1:W:266:PHE:CZ   | 3.09                     | 0.41              |
| 1:A:69:TYR:CD2   | 1:A:69:TYR:N     | 2.86                     | 0.41              |
| 1:B:8:LEU:CD1    | 1:B:90:PHE:CD1   | 3.04                     | 0.41              |
| 1:C:335:ARG:O    | 1:C:338:SER:CB   | 2.69                     | 0.41              |
| 1:D:173:HIS:HE1  | 1:E:268:GLY:CA   | 2.28                     | 0.41              |
| 1:E:43:VAL:O     | 1:E:44:MET:CE    | 2.69                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:164:PRO:HG2  | 1:E:174:ALA:CB   | 2.51                     | 0.41              |
| 1:E:167:GLU:CD   | 1:G:61:LYS:CE    | 2.85                     | 0.41              |
| 1:E:224:GLU:OE1  | 1:E:224:GLU:N    | 2.51                     | 0.41              |
| 1:F:164:PRO:CG   | 1:F:174:ALA:HB3  | 2.51                     | 0.41              |
| 1:F:169:TYR:CE2  | 1:H:40:HIS:HB2   | 2.56                     | 0.41              |
| 1:G:34:ILE:CG2   | 1:G:68:LYS:N     | 2.84                     | 0.41              |
| 1:H:164:PRO:CG   | 1:H:174:ALA:HB3  | 2.51                     | 0.41              |
| 1:H:169:TYR:CE2  | 1:J:40:HIS:HB2   | 2.56                     | 0.41              |
| 1:I:73:HIC:HA    | 1:I:183:ARG:NH1  | 2.18                     | 0.41              |
| 1:I:167:GLU:OE1  | 1:K:61:LYS:HE2   | 2.20                     | 0.41              |
| 1:J:171:LEU:HA   | 1:J:172:PRO:HD3  | 1.79                     | 0.41              |
| 1:J:189:LEU:HA   | 1:J:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:L:38:PRO:CG    | 1:L:49:GLN:NE2   | 2.79                     | 0.41              |
| 1:L:140:LEU:HB3  | 1:L:343:GLY:N    | 2.35                     | 0.41              |
| 1:L:183:ARG:HE   | 1:L:183:ARG:HB3  | 1.58                     | 0.41              |
| 1:L:332:PRO:HA   | 1:L:333:PRO:HD3  | 1.95                     | 0.41              |
| 1:N:73:HIC:HA    | 1:N:183:ARG:NH1  | 2.18                     | 0.41              |
| 1:O:135:ALA:CB   | 1:O:140:LEU:HD21 | 2.49                     | 0.41              |
| 1:Q:8:LEU:CD1    | 1:Q:90:PHE:CD1   | 3.04                     | 0.41              |
| 1:Q:164:PRO:HG2  | 1:Q:174:ALA:CB   | 2.51                     | 0.41              |
| 1:R:224:GLU:OE1  | 1:R:224:GLU:N    | 2.51                     | 0.41              |
| 1:S:164:PRO:HG2  | 1:S:174:ALA:CB   | 2.51                     | 0.41              |
| 1:T:34:ILE:CG2   | 1:T:67:LEU:HD22  | 2.28                     | 0.41              |
| 1:T:121:GLN:HA   | 1:T:362:TYR:CZ   | 2.55                     | 0.41              |
| 1:U:43:VAL:O     | 1:U:44:MET:CE    | 2.69                     | 0.41              |
| 1:U:236:LEU:HD12 | 1:U:237:GLU:CA   | 2.51                     | 0.41              |
| 1:V:34:ILE:HD13  | 1:V:67:LEU:CD2   | 2.46                     | 0.41              |
| 1:V:357:ILE:HD12 | 1:V:357:ILE:HA   | 1.78                     | 0.41              |
| 1:V:357:ILE:CG2  | 1:V:358:THR:N    | 2.83                     | 0.41              |
| 1:W:189:LEU:HA   | 1:W:192:ILE:HG12 | 2.02                     | 0.41              |
| 1:W:332:PRO:HA   | 1:W:333:PRO:HD3  | 1.95                     | 0.41              |
| 1:B:143:TYR:CE2  | 1:D:45:VAL:CG2   | 3.04                     | 0.40              |
| 1:C:143:TYR:CE2  | 1:E:45:VAL:CG2   | 3.04                     | 0.40              |
| 1:D:43:VAL:O     | 1:D:44:MET:CE    | 2.69                     | 0.40              |
| 1:E:142:LEU:CD1  | 1:E:165:ILE:HD11 | 2.47                     | 0.40              |
| 1:F:34:ILE:CG2   | 1:F:67:LEU:CB    | 2.96                     | 0.40              |
| 1:H:164:PRO:HG2  | 1:H:174:ALA:CB   | 2.51                     | 0.40              |
| 1:J:169:TYR:CE2  | 1:L:40:HIS:HB2   | 2.56                     | 0.40              |
| 1:J:236:LEU:HD12 | 1:J:237:GLU:CA   | 2.51                     | 0.40              |
| 1:J:332:PRO:HA   | 1:J:333:PRO:HD3  | 1.95                     | 0.40              |
| 1:M:8:LEU:N      | 1:M:102:PRO:O    | 2.48                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:8:LEU:N      | 1:N:102:PRO:O    | 2.48                     | 0.40              |
| 1:N:183:ARG:HE   | 1:N:183:ARG:HB3  | 1.58                     | 0.40              |
| 1:N:362:TYR:CE1  | 1:N:367:PRO:CB   | 2.99                     | 0.40              |
| 1:O:34:ILE:CG2   | 1:O:68:LYS:N     | 2.84                     | 0.40              |
| 1:O:43:VAL:O     | 1:O:44:MET:CE    | 2.69                     | 0.40              |
| 1:O:335:ARG:O    | 1:O:338:SER:CB   | 2.69                     | 0.40              |
| 1:Q:43:VAL:O     | 1:Q:44:MET:CE    | 2.69                     | 0.40              |
| 1:Q:143:TYR:CE2  | 1:S:45:VAL:CG2   | 3.04                     | 0.40              |
| 1:S:8:LEU:N      | 1:S:102:PRO:O    | 2.48                     | 0.40              |
| 1:S:110:LEU:CD1  | 1:S:177:ARG:NH1  | 2.80                     | 0.40              |
| 1:S:164:PRO:CG   | 1:S:174:ALA:HB3  | 2.51                     | 0.40              |
| 1:T:110:LEU:CD1  | 1:T:177:ARG:HH11 | 2.32                     | 0.40              |
| 1:U:47:MET:HB3   | 1:U:48:GLY:H     | 1.62                     | 0.40              |
| 1:V:164:PRO:HG2  | 1:V:174:ALA:CB   | 2.51                     | 0.40              |
| 1:V:164:PRO:CG   | 1:V:174:ALA:HB3  | 2.51                     | 0.40              |
| 1:A:47:MET:HB3   | 1:A:48:GLY:H     | 1.61                     | 0.40              |
| 1:A:143:TYR:CE2  | 1:C:45:VAL:CG2   | 3.04                     | 0.40              |
| 1:A:164:PRO:HG2  | 1:A:174:ALA:CB   | 2.51                     | 0.40              |
| 1:B:50:LYS:CG    | 1:B:53:TYR:CE2   | 3.03                     | 0.40              |
| 1:B:113:LYS:HB3  | 1:B:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:F:153:LEU:HD23 | 1:F:299:MET:HE2  | 2.03                     | 0.40              |
| 1:H:47:MET:HB3   | 1:H:48:GLY:H     | 1.62                     | 0.40              |
| 1:H:189:LEU:HA   | 1:H:192:ILE:HG12 | 2.02                     | 0.40              |
| 1:K:236:LEU:HD12 | 1:K:237:GLU:CA   | 2.51                     | 0.40              |
| 1:K:300:SER:HA   | 1:K:335:ARG:CD   | 2.50                     | 0.40              |
| 1:L:135:ALA:CB   | 1:L:140:LEU:HD21 | 2.50                     | 0.40              |
| 1:M:140:LEU:HB3  | 1:M:343:GLY:N    | 2.35                     | 0.40              |
| 1:N:47:MET:HB3   | 1:N:48:GLY:H     | 1.62                     | 0.40              |
| 1:O:164:PRO:HG2  | 1:O:174:ALA:CB   | 2.51                     | 0.40              |
| 1:Q:44:MET:CG    | 1:Q:45:VAL:N     | 2.76                     | 0.40              |
| 1:T:34:ILE:CG2   | 1:T:68:LYS:N     | 2.84                     | 0.40              |
| 1:T:106:THR:HG22 | 1:T:140:LEU:HD11 | 2.01                     | 0.40              |
| 1:T:164:PRO:CG   | 1:T:174:ALA:HB3  | 2.51                     | 0.40              |
| 1:U:164:PRO:CG   | 1:U:174:ALA:HB3  | 2.51                     | 0.40              |
| 1:U:189:LEU:HA   | 1:U:192:ILE:HG12 | 2.02                     | 0.40              |
| 1:A:8:LEU:CD1    | 1:A:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:B:189:LEU:HA   | 1:B:192:ILE:HG12 | 2.02                     | 0.40              |
| 1:C:50:LYS:CG    | 1:C:53:TYR:CE2   | 3.03                     | 0.40              |
| 1:D:34:ILE:CG2   | 1:D:67:LEU:CB    | 2.96                     | 0.40              |
| 1:D:103:THR:O    | 1:D:132:MET:HA   | 2.20                     | 0.40              |
| 1:D:143:TYR:CE2  | 1:F:45:VAL:CG2   | 3.04                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:189:LEU:HA   | 1:D:192:ILE:HG12 | 2.02                     | 0.40              |
| 1:F:173:HIS:CE1  | 1:G:268:GLY:N    | 2.90                     | 0.40              |
| 1:G:140:LEU:HB3  | 1:G:343:GLY:N    | 2.35                     | 0.40              |
| 1:G:164:PRO:HG2  | 1:G:174:ALA:CB   | 2.51                     | 0.40              |
| 1:J:140:LEU:HB3  | 1:J:343:GLY:N    | 2.36                     | 0.40              |
| 1:N:164:PRO:HG2  | 1:N:174:ALA:CB   | 2.51                     | 0.40              |
| 1:N:173:HIS:CE1  | 1:O:268:GLY:N    | 2.90                     | 0.40              |
| 1:N:357:ILE:CG2  | 1:N:358:THR:N    | 2.83                     | 0.40              |
| 1:O:8:LEU:CD1    | 1:O:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:O:121:GLN:HA   | 1:O:362:TYR:CZ   | 2.55                     | 0.40              |
| 1:O:143:TYR:CE2  | 1:Q:45:VAL:CG2   | 3.04                     | 0.40              |
| 1:O:149:THR:CG2  | 1:O:150:GLY:N    | 2.82                     | 0.40              |
| 1:O:236:LEU:HD12 | 1:O:237:GLU:CA   | 2.51                     | 0.40              |
| 1:Q:113:LYS:HB3  | 1:Q:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:Q:164:PRO:CG   | 1:Q:174:ALA:HB3  | 2.51                     | 0.40              |
| 1:Q:208:ILE:CG2  | 1:Q:209:VAL:N    | 2.83                     | 0.40              |
| 1:R:34:ILE:CG2   | 1:R:68:LYS:N     | 2.84                     | 0.40              |
| 1:R:50:LYS:CG    | 1:R:53:TYR:CE2   | 3.03                     | 0.40              |
| 1:S:43:VAL:O     | 1:S:44:MET:CE    | 2.69                     | 0.40              |
| 1:S:183:ARG:HE   | 1:S:183:ARG:HB3  | 1.58                     | 0.40              |
| 1:T:164:PRO:HG2  | 1:T:174:ALA:CB   | 2.51                     | 0.40              |
| 1:U:121:GLN:HA   | 1:U:362:TYR:CZ   | 2.55                     | 0.40              |
| 1:U:223:PHE:CZ   | 1:U:266:PHE:CZ   | 3.09                     | 0.40              |
| 1:W:357:ILE:HD12 | 1:W:357:ILE:HA   | 1.78                     | 0.40              |
| 1:A:335:ARG:O    | 1:A:338:SER:CB   | 2.69                     | 0.40              |
| 1:B:43:VAL:O     | 1:B:44:MET:CE    | 2.69                     | 0.40              |
| 1:E:34:ILE:CG2   | 1:E:68:LYS:N     | 2.84                     | 0.40              |
| 1:E:143:TYR:CE2  | 1:G:45:VAL:CG2   | 3.04                     | 0.40              |
| 1:E:173:HIS:CE1  | 1:F:268:GLY:N    | 2.90                     | 0.40              |
| 1:I:173:HIS:CE1  | 1:J:268:GLY:N    | 2.90                     | 0.40              |
| 1:I:236:LEU:CD1  | 1:I:237:GLU:CG   | 2.93                     | 0.40              |
| 1:K:173:HIS:CE1  | 1:L:268:GLY:N    | 2.90                     | 0.40              |
| 1:M:8:LEU:CD1    | 1:M:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:M:157:ASP:H    | 2:M:401:ADP:PB   | 2.45                     | 0.40              |
| 1:N:149:THR:CG2  | 1:N:150:GLY:N    | 2.82                     | 0.40              |
| 1:O:224:GLU:OE1  | 1:O:224:GLU:N    | 2.51                     | 0.40              |
| 1:P:8:LEU:CD1    | 1:P:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:P:173:HIS:CE1  | 1:Q:268:GLY:N    | 2.90                     | 0.40              |
| 1:Q:34:ILE:CG2   | 1:Q:68:LYS:N     | 2.84                     | 0.40              |
| 1:Q:135:ALA:CB   | 1:Q:140:LEU:HD21 | 2.49                     | 0.40              |
| 1:S:143:TYR:CE2  | 1:U:45:VAL:CG2   | 3.04                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:T:287:ILE:HD12 | 1:V:208:ILE:HD13 | 1.96                     | 0.40              |
| 1:U:164:PRO:HG2  | 1:U:174:ALA:CB   | 2.51                     | 0.40              |
| 1:U:374:CYS:HB2  | 1:U:375:PHE:H    | 1.61                     | 0.40              |
| 1:V:43:VAL:O     | 1:V:44:MET:CE    | 2.69                     | 0.40              |
| 1:V:113:LYS:HB3  | 1:V:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:V:236:LEU:HD12 | 1:V:237:GLU:CA   | 2.51                     | 0.40              |
| 1:W:183:ARG:HE   | 1:W:183:ARG:HB3  | 1.58                     | 0.40              |
| 1:A:120:THR:HG23 | 1:A:132:MET:SD   | 2.62                     | 0.40              |
| 1:B:44:MET:CG    | 1:B:45:VAL:N     | 2.75                     | 0.40              |
| 1:C:8:LEU:CD1    | 1:C:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:C:43:VAL:O     | 1:C:44:MET:CE    | 2.69                     | 0.40              |
| 1:C:236:LEU:CD1  | 1:C:237:GLU:CG   | 2.93                     | 0.40              |
| 1:D:169:TYR:CE2  | 1:F:40:HIS:HB2   | 2.56                     | 0.40              |
| 1:D:173:HIS:CE1  | 1:E:268:GLY:N    | 2.90                     | 0.40              |
| 1:E:8:LEU:CD1    | 1:E:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:E:113:LYS:HB3  | 1:E:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:F:8:LEU:CD1    | 1:F:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:F:157:ASP:H    | 2:F:401:ADP:PB   | 2.45                     | 0.40              |
| 1:G:335:ARG:O    | 1:G:338:SER:CB   | 2.69                     | 0.40              |
| 1:I:43:VAL:O     | 1:I:44:MET:CE    | 2.69                     | 0.40              |
| 1:I:110:LEU:CD1  | 1:I:177:ARG:HH11 | 2.32                     | 0.40              |
| 1:I:113:LYS:HB3  | 1:I:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:K:39:ARG:NE    | 1:K:66:THR:CA    | 2.69                     | 0.40              |
| 1:L:169:TYR:CE2  | 1:N:40:HIS:HB2   | 2.56                     | 0.40              |
| 1:M:113:LYS:HB3  | 1:M:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:M:349:LEU:HD23 | 1:M:349:LEU:HA   | 1.80                     | 0.40              |
| 1:O:113:LYS:HB3  | 1:O:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:O:157:ASP:H    | 2:O:401:ADP:PB   | 2.45                     | 0.40              |
| 1:P:35:VAL:CG1   | 1:P:35:VAL:O     | 2.70                     | 0.40              |
| 1:P:164:PRO:CG   | 1:P:174:ALA:HB3  | 2.51                     | 0.40              |
| 1:Q:173:HIS:CE1  | 1:R:268:GLY:N    | 2.90                     | 0.40              |
| 1:R:335:ARG:O    | 1:R:338:SER:CB   | 2.69                     | 0.40              |
| 1:S:8:LEU:CD1    | 1:S:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:S:223:PHE:CZ   | 1:S:266:PHE:CZ   | 3.09                     | 0.40              |
| 1:T:43:VAL:O     | 1:T:44:MET:CE    | 2.69                     | 0.40              |
| 1:T:113:LYS:HB3  | 1:T:371:HIS:CD2  | 2.57                     | 0.40              |
| 1:V:8:LEU:CD1    | 1:V:90:PHE:CD1   | 3.04                     | 0.40              |
| 1:V:106:THR:HG22 | 1:V:140:LEU:HD11 | 2.01                     | 0.40              |
| 1:V:121:GLN:HA   | 1:V:362:TYR:CZ   | 2.55                     | 0.40              |

There are no symmetry-related clashes.



## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

| Mol | Chain | Analysed        | Favoured   | Allowed  | Outliers | Percentiles |    |
|-----|-------|-----------------|------------|----------|----------|-------------|----|
| 1   | A     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | B     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | C     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | D     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | E     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | F     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | G     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | H     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | I     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | J     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | K     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | L     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | M     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | N     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | O     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | P     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | Q     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | R     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | S     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | T     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | U     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | V     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| 1   | W     | 372/375 (99%)   | 329 (88%)  | 31 (8%)  | 12 (3%)  | 4           | 26 |
| All | All   | 8556/8625 (99%) | 7567 (88%) | 713 (8%) | 276 (3%) | 7           | 26 |

All (276) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 3   | ASP  |
| 1   | A     | 41  | GLN  |
| 1   | A     | 44  | MET  |
| 1   | B     | 3   | ASP  |
| 1   | B     | 41  | GLN  |
| 1   | B     | 44  | MET  |
| 1   | C     | 3   | ASP  |
| 1   | C     | 41  | GLN  |
| 1   | C     | 44  | MET  |
| 1   | D     | 3   | ASP  |
| 1   | D     | 41  | GLN  |
| 1   | D     | 44  | MET  |
| 1   | E     | 3   | ASP  |
| 1   | E     | 41  | GLN  |
| 1   | E     | 44  | MET  |
| 1   | F     | 3   | ASP  |
| 1   | F     | 41  | GLN  |
| 1   | F     | 44  | MET  |
| 1   | G     | 3   | ASP  |
| 1   | G     | 41  | GLN  |
| 1   | G     | 44  | MET  |
| 1   | H     | 3   | ASP  |
| 1   | H     | 41  | GLN  |
| 1   | H     | 44  | MET  |
| 1   | I     | 3   | ASP  |
| 1   | I     | 41  | GLN  |
| 1   | I     | 44  | MET  |
| 1   | J     | 3   | ASP  |
| 1   | J     | 41  | GLN  |
| 1   | J     | 44  | MET  |
| 1   | K     | 3   | ASP  |
| 1   | K     | 41  | GLN  |
| 1   | K     | 44  | MET  |
| 1   | L     | 3   | ASP  |
| 1   | L     | 41  | GLN  |
| 1   | L     | 44  | MET  |
| 1   | M     | 3   | ASP  |
| 1   | M     | 41  | GLN  |
| 1   | M     | 44  | MET  |
| 1   | N     | 3   | ASP  |
| 1   | N     | 41  | GLN  |
| 1   | N     | 44  | MET  |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | O            | 3          | ASP         |
| 1          | O            | 41         | GLN         |
| 1          | O            | 44         | MET         |
| 1          | P            | 3          | ASP         |
| 1          | P            | 41         | GLN         |
| 1          | P            | 44         | MET         |
| 1          | Q            | 3          | ASP         |
| 1          | Q            | 41         | GLN         |
| 1          | Q            | 44         | MET         |
| 1          | R            | 3          | ASP         |
| 1          | R            | 41         | GLN         |
| 1          | R            | 44         | MET         |
| 1          | S            | 3          | ASP         |
| 1          | S            | 41         | GLN         |
| 1          | S            | 44         | MET         |
| 1          | T            | 3          | ASP         |
| 1          | T            | 41         | GLN         |
| 1          | T            | 44         | MET         |
| 1          | U            | 3          | ASP         |
| 1          | U            | 41         | GLN         |
| 1          | U            | 44         | MET         |
| 1          | V            | 3          | ASP         |
| 1          | V            | 41         | GLN         |
| 1          | V            | 44         | MET         |
| 1          | W            | 3          | ASP         |
| 1          | W            | 41         | GLN         |
| 1          | W            | 44         | MET         |
| 1          | A            | 4          | GLU         |
| 1          | A            | 55         | GLY         |
| 1          | A            | 374        | CYS         |
| 1          | B            | 4          | GLU         |
| 1          | B            | 55         | GLY         |
| 1          | B            | 374        | CYS         |
| 1          | C            | 4          | GLU         |
| 1          | C            | 55         | GLY         |
| 1          | C            | 374        | CYS         |
| 1          | D            | 4          | GLU         |
| 1          | D            | 55         | GLY         |
| 1          | D            | 374        | CYS         |
| 1          | E            | 4          | GLU         |
| 1          | E            | 55         | GLY         |
| 1          | E            | 374        | CYS         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | F            | 4          | GLU         |
| 1          | F            | 55         | GLY         |
| 1          | F            | 374        | CYS         |
| 1          | G            | 4          | GLU         |
| 1          | G            | 55         | GLY         |
| 1          | G            | 374        | CYS         |
| 1          | H            | 4          | GLU         |
| 1          | H            | 55         | GLY         |
| 1          | H            | 374        | CYS         |
| 1          | I            | 4          | GLU         |
| 1          | I            | 55         | GLY         |
| 1          | I            | 374        | CYS         |
| 1          | J            | 4          | GLU         |
| 1          | J            | 55         | GLY         |
| 1          | J            | 374        | CYS         |
| 1          | K            | 4          | GLU         |
| 1          | K            | 55         | GLY         |
| 1          | K            | 374        | CYS         |
| 1          | L            | 4          | GLU         |
| 1          | L            | 55         | GLY         |
| 1          | L            | 374        | CYS         |
| 1          | M            | 4          | GLU         |
| 1          | M            | 55         | GLY         |
| 1          | M            | 374        | CYS         |
| 1          | N            | 4          | GLU         |
| 1          | N            | 55         | GLY         |
| 1          | N            | 374        | CYS         |
| 1          | O            | 4          | GLU         |
| 1          | O            | 55         | GLY         |
| 1          | O            | 374        | CYS         |
| 1          | P            | 4          | GLU         |
| 1          | P            | 55         | GLY         |
| 1          | P            | 374        | CYS         |
| 1          | Q            | 4          | GLU         |
| 1          | Q            | 55         | GLY         |
| 1          | Q            | 374        | CYS         |
| 1          | R            | 4          | GLU         |
| 1          | R            | 55         | GLY         |
| 1          | R            | 374        | CYS         |
| 1          | S            | 4          | GLU         |
| 1          | S            | 55         | GLY         |
| 1          | S            | 374        | CYS         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | T            | 4          | GLU         |
| 1          | T            | 55         | GLY         |
| 1          | T            | 374        | CYS         |
| 1          | U            | 4          | GLU         |
| 1          | U            | 55         | GLY         |
| 1          | U            | 374        | CYS         |
| 1          | V            | 4          | GLU         |
| 1          | V            | 55         | GLY         |
| 1          | V            | 374        | CYS         |
| 1          | W            | 4          | GLU         |
| 1          | W            | 55         | GLY         |
| 1          | W            | 374        | CYS         |
| 1          | A            | 2          | GLU         |
| 1          | B            | 2          | GLU         |
| 1          | C            | 2          | GLU         |
| 1          | D            | 2          | GLU         |
| 1          | E            | 2          | GLU         |
| 1          | F            | 2          | GLU         |
| 1          | G            | 2          | GLU         |
| 1          | H            | 2          | GLU         |
| 1          | I            | 2          | GLU         |
| 1          | J            | 2          | GLU         |
| 1          | K            | 2          | GLU         |
| 1          | L            | 2          | GLU         |
| 1          | M            | 2          | GLU         |
| 1          | N            | 2          | GLU         |
| 1          | O            | 2          | GLU         |
| 1          | P            | 2          | GLU         |
| 1          | Q            | 2          | GLU         |
| 1          | R            | 2          | GLU         |
| 1          | S            | 2          | GLU         |
| 1          | T            | 2          | GLU         |
| 1          | U            | 2          | GLU         |
| 1          | V            | 2          | GLU         |
| 1          | W            | 2          | GLU         |
| 1          | A            | 43         | VAL         |
| 1          | A            | 54         | VAL         |
| 1          | B            | 43         | VAL         |
| 1          | B            | 54         | VAL         |
| 1          | C            | 43         | VAL         |
| 1          | C            | 54         | VAL         |
| 1          | D            | 43         | VAL         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | D            | 54         | VAL         |
| 1          | E            | 43         | VAL         |
| 1          | E            | 54         | VAL         |
| 1          | F            | 43         | VAL         |
| 1          | F            | 54         | VAL         |
| 1          | G            | 43         | VAL         |
| 1          | G            | 54         | VAL         |
| 1          | H            | 43         | VAL         |
| 1          | H            | 54         | VAL         |
| 1          | I            | 43         | VAL         |
| 1          | I            | 54         | VAL         |
| 1          | J            | 43         | VAL         |
| 1          | J            | 54         | VAL         |
| 1          | K            | 43         | VAL         |
| 1          | K            | 54         | VAL         |
| 1          | L            | 43         | VAL         |
| 1          | L            | 54         | VAL         |
| 1          | M            | 43         | VAL         |
| 1          | M            | 54         | VAL         |
| 1          | N            | 43         | VAL         |
| 1          | N            | 54         | VAL         |
| 1          | O            | 43         | VAL         |
| 1          | O            | 54         | VAL         |
| 1          | P            | 43         | VAL         |
| 1          | P            | 54         | VAL         |
| 1          | Q            | 43         | VAL         |
| 1          | Q            | 54         | VAL         |
| 1          | R            | 43         | VAL         |
| 1          | R            | 54         | VAL         |
| 1          | S            | 43         | VAL         |
| 1          | S            | 54         | VAL         |
| 1          | T            | 43         | VAL         |
| 1          | T            | 54         | VAL         |
| 1          | U            | 43         | VAL         |
| 1          | U            | 54         | VAL         |
| 1          | V            | 43         | VAL         |
| 1          | V            | 54         | VAL         |
| 1          | W            | 43         | VAL         |
| 1          | W            | 54         | VAL         |
| 1          | A            | 58         | ALA         |
| 1          | C            | 58         | ALA         |
| 1          | D            | 58         | ALA         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | F            | 58         | ALA         |
| 1          | H            | 58         | ALA         |
| 1          | I            | 58         | ALA         |
| 1          | J            | 58         | ALA         |
| 1          | L            | 58         | ALA         |
| 1          | N            | 58         | ALA         |
| 1          | O            | 58         | ALA         |
| 1          | P            | 58         | ALA         |
| 1          | Q            | 58         | ALA         |
| 1          | R            | 58         | ALA         |
| 1          | T            | 58         | ALA         |
| 1          | U            | 58         | ALA         |
| 1          | W            | 58         | ALA         |
| 1          | B            | 58         | ALA         |
| 1          | E            | 58         | ALA         |
| 1          | G            | 58         | ALA         |
| 1          | K            | 58         | ALA         |
| 1          | M            | 58         | ALA         |
| 1          | S            | 58         | ALA         |
| 1          | V            | 58         | ALA         |
| 1          | A            | 45         | VAL         |
| 1          | B            | 45         | VAL         |
| 1          | C            | 45         | VAL         |
| 1          | F            | 45         | VAL         |
| 1          | M            | 45         | VAL         |
| 1          | P            | 45         | VAL         |
| 1          | V            | 45         | VAL         |
| 1          | W            | 45         | VAL         |
| 1          | D            | 45         | VAL         |
| 1          | E            | 45         | VAL         |
| 1          | G            | 45         | VAL         |
| 1          | H            | 45         | VAL         |
| 1          | I            | 45         | VAL         |
| 1          | J            | 45         | VAL         |
| 1          | K            | 45         | VAL         |
| 1          | L            | 45         | VAL         |
| 1          | N            | 45         | VAL         |
| 1          | O            | 45         | VAL         |
| 1          | Q            | 45         | VAL         |
| 1          | R            | 45         | VAL         |
| 1          | S            | 45         | VAL         |
| 1          | T            | 45         | VAL         |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | U     | 45  | VAL  |
| 1   | A     | 370 | VAL  |
| 1   | B     | 370 | VAL  |
| 1   | C     | 370 | VAL  |
| 1   | D     | 370 | VAL  |
| 1   | E     | 370 | VAL  |
| 1   | F     | 370 | VAL  |
| 1   | G     | 370 | VAL  |
| 1   | H     | 370 | VAL  |
| 1   | I     | 370 | VAL  |
| 1   | J     | 370 | VAL  |
| 1   | K     | 370 | VAL  |
| 1   | L     | 370 | VAL  |
| 1   | M     | 370 | VAL  |
| 1   | N     | 370 | VAL  |
| 1   | O     | 370 | VAL  |
| 1   | P     | 370 | VAL  |
| 1   | Q     | 370 | VAL  |
| 1   | R     | 370 | VAL  |
| 1   | S     | 370 | VAL  |
| 1   | T     | 370 | VAL  |
| 1   | U     | 370 | VAL  |
| 1   | V     | 370 | VAL  |
| 1   | W     | 370 | VAL  |

### 5.3.2 Protein sidechains [i](#)

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

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

| Mol | Chain | Analysed       | Rotameric | Outliers | Percentiles |
|-----|-------|----------------|-----------|----------|-------------|
| 1   | A     | 317/317 (100%) | 280 (88%) | 37 (12%) | 5 21        |
| 1   | B     | 317/317 (100%) | 280 (88%) | 37 (12%) | 5 21        |
| 1   | C     | 317/317 (100%) | 280 (88%) | 37 (12%) | 5 21        |
| 1   | D     | 317/317 (100%) | 280 (88%) | 37 (12%) | 5 21        |
| 1   | E     | 317/317 (100%) | 280 (88%) | 37 (12%) | 5 21        |

*Continued on next page...*



*Continued from previous page...*

| Mol | Chain | Analysed         | Rotameric  | Outliers  | Percentiles |    |
|-----|-------|------------------|------------|-----------|-------------|----|
| 1   | F     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | G     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | H     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | I     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | J     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | K     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | L     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | M     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | N     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | O     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | P     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | Q     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | R     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | S     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | T     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | U     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | V     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| 1   | W     | 317/317 (100%)   | 280 (88%)  | 37 (12%)  | 5           | 21 |
| All | All   | 7291/7291 (100%) | 6440 (88%) | 851 (12%) | 9           | 21 |

All (851) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 8   | LEU  |
| 1   | A     | 33  | SER  |
| 1   | A     | 35  | VAL  |
| 1   | A     | 37  | ARG  |
| 1   | A     | 45  | VAL  |
| 1   | A     | 49  | GLN  |
| 1   | A     | 51  | ASP  |
| 1   | A     | 56  | ASP  |
| 1   | A     | 57  | GLU  |
| 1   | A     | 66  | THR  |
| 1   | A     | 68  | LYS  |
| 1   | A     | 113 | LYS  |
| 1   | A     | 132 | MET  |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | A            | 141        | SER         |
| 1          | A            | 143        | TYR         |
| 1          | A            | 145        | SER         |
| 1          | A            | 147        | ARG         |
| 1          | A            | 148        | THR         |
| 1          | A            | 149        | THR         |
| 1          | A            | 167        | GLU         |
| 1          | A            | 171        | LEU         |
| 1          | A            | 176        | MET         |
| 1          | A            | 179        | ASP         |
| 1          | A            | 180        | LEU         |
| 1          | A            | 183        | ARG         |
| 1          | A            | 208        | ILE         |
| 1          | A            | 232        | SER         |
| 1          | A            | 236        | LEU         |
| 1          | A            | 244        | ASP         |
| 1          | A            | 269        | MET         |
| 1          | A            | 286        | ASP         |
| 1          | A            | 335        | ARG         |
| 1          | A            | 350        | SER         |
| 1          | A            | 357        | ILE         |
| 1          | A            | 370        | VAL         |
| 1          | A            | 372        | ARG         |
| 1          | A            | 373        | LYS         |
| 1          | B            | 8          | LEU         |
| 1          | B            | 33         | SER         |
| 1          | B            | 35         | VAL         |
| 1          | B            | 37         | ARG         |
| 1          | B            | 45         | VAL         |
| 1          | B            | 49         | GLN         |
| 1          | B            | 51         | ASP         |
| 1          | B            | 56         | ASP         |
| 1          | B            | 57         | GLU         |
| 1          | B            | 66         | THR         |
| 1          | B            | 68         | LYS         |
| 1          | B            | 113        | LYS         |
| 1          | B            | 132        | MET         |
| 1          | B            | 141        | SER         |
| 1          | B            | 143        | TYR         |
| 1          | B            | 145        | SER         |
| 1          | B            | 147        | ARG         |
| 1          | B            | 148        | THR         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | B            | 149        | THR         |
| 1          | B            | 167        | GLU         |
| 1          | B            | 171        | LEU         |
| 1          | B            | 176        | MET         |
| 1          | B            | 179        | ASP         |
| 1          | B            | 180        | LEU         |
| 1          | B            | 183        | ARG         |
| 1          | B            | 208        | ILE         |
| 1          | B            | 232        | SER         |
| 1          | B            | 236        | LEU         |
| 1          | B            | 244        | ASP         |
| 1          | B            | 269        | MET         |
| 1          | B            | 286        | ASP         |
| 1          | B            | 335        | ARG         |
| 1          | B            | 350        | SER         |
| 1          | B            | 357        | ILE         |
| 1          | B            | 370        | VAL         |
| 1          | B            | 372        | ARG         |
| 1          | B            | 373        | LYS         |
| 1          | C            | 8          | LEU         |
| 1          | C            | 33         | SER         |
| 1          | C            | 35         | VAL         |
| 1          | C            | 37         | ARG         |
| 1          | C            | 45         | VAL         |
| 1          | C            | 49         | GLN         |
| 1          | C            | 51         | ASP         |
| 1          | C            | 56         | ASP         |
| 1          | C            | 57         | GLU         |
| 1          | C            | 66         | THR         |
| 1          | C            | 68         | LYS         |
| 1          | C            | 113        | LYS         |
| 1          | C            | 132        | MET         |
| 1          | C            | 141        | SER         |
| 1          | C            | 143        | TYR         |
| 1          | C            | 145        | SER         |
| 1          | C            | 147        | ARG         |
| 1          | C            | 148        | THR         |
| 1          | C            | 149        | THR         |
| 1          | C            | 167        | GLU         |
| 1          | C            | 171        | LEU         |
| 1          | C            | 176        | MET         |
| 1          | C            | 179        | ASP         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | C            | 180        | LEU         |
| 1          | C            | 183        | ARG         |
| 1          | C            | 208        | ILE         |
| 1          | C            | 232        | SER         |
| 1          | C            | 236        | LEU         |
| 1          | C            | 244        | ASP         |
| 1          | C            | 269        | MET         |
| 1          | C            | 286        | ASP         |
| 1          | C            | 335        | ARG         |
| 1          | C            | 350        | SER         |
| 1          | C            | 357        | ILE         |
| 1          | C            | 370        | VAL         |
| 1          | C            | 372        | ARG         |
| 1          | C            | 373        | LYS         |
| 1          | D            | 8          | LEU         |
| 1          | D            | 33         | SER         |
| 1          | D            | 35         | VAL         |
| 1          | D            | 37         | ARG         |
| 1          | D            | 45         | VAL         |
| 1          | D            | 49         | GLN         |
| 1          | D            | 51         | ASP         |
| 1          | D            | 56         | ASP         |
| 1          | D            | 57         | GLU         |
| 1          | D            | 66         | THR         |
| 1          | D            | 68         | LYS         |
| 1          | D            | 113        | LYS         |
| 1          | D            | 132        | MET         |
| 1          | D            | 141        | SER         |
| 1          | D            | 143        | TYR         |
| 1          | D            | 145        | SER         |
| 1          | D            | 147        | ARG         |
| 1          | D            | 148        | THR         |
| 1          | D            | 149        | THR         |
| 1          | D            | 167        | GLU         |
| 1          | D            | 171        | LEU         |
| 1          | D            | 176        | MET         |
| 1          | D            | 179        | ASP         |
| 1          | D            | 180        | LEU         |
| 1          | D            | 183        | ARG         |
| 1          | D            | 208        | ILE         |
| 1          | D            | 232        | SER         |
| 1          | D            | 236        | LEU         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | D            | 244        | ASP         |
| 1          | D            | 269        | MET         |
| 1          | D            | 286        | ASP         |
| 1          | D            | 335        | ARG         |
| 1          | D            | 350        | SER         |
| 1          | D            | 357        | ILE         |
| 1          | D            | 370        | VAL         |
| 1          | D            | 372        | ARG         |
| 1          | D            | 373        | LYS         |
| 1          | E            | 8          | LEU         |
| 1          | E            | 33         | SER         |
| 1          | E            | 35         | VAL         |
| 1          | E            | 37         | ARG         |
| 1          | E            | 45         | VAL         |
| 1          | E            | 49         | GLN         |
| 1          | E            | 51         | ASP         |
| 1          | E            | 56         | ASP         |
| 1          | E            | 57         | GLU         |
| 1          | E            | 66         | THR         |
| 1          | E            | 68         | LYS         |
| 1          | E            | 113        | LYS         |
| 1          | E            | 132        | MET         |
| 1          | E            | 141        | SER         |
| 1          | E            | 143        | TYR         |
| 1          | E            | 145        | SER         |
| 1          | E            | 147        | ARG         |
| 1          | E            | 148        | THR         |
| 1          | E            | 149        | THR         |
| 1          | E            | 167        | GLU         |
| 1          | E            | 171        | LEU         |
| 1          | E            | 176        | MET         |
| 1          | E            | 179        | ASP         |
| 1          | E            | 180        | LEU         |
| 1          | E            | 183        | ARG         |
| 1          | E            | 208        | ILE         |
| 1          | E            | 232        | SER         |
| 1          | E            | 236        | LEU         |
| 1          | E            | 244        | ASP         |
| 1          | E            | 269        | MET         |
| 1          | E            | 286        | ASP         |
| 1          | E            | 335        | ARG         |
| 1          | E            | 350        | SER         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | E            | 357        | ILE         |
| 1          | E            | 370        | VAL         |
| 1          | E            | 372        | ARG         |
| 1          | E            | 373        | LYS         |
| 1          | F            | 8          | LEU         |
| 1          | F            | 33         | SER         |
| 1          | F            | 35         | VAL         |
| 1          | F            | 37         | ARG         |
| 1          | F            | 45         | VAL         |
| 1          | F            | 49         | GLN         |
| 1          | F            | 51         | ASP         |
| 1          | F            | 56         | ASP         |
| 1          | F            | 57         | GLU         |
| 1          | F            | 66         | THR         |
| 1          | F            | 68         | LYS         |
| 1          | F            | 113        | LYS         |
| 1          | F            | 132        | MET         |
| 1          | F            | 141        | SER         |
| 1          | F            | 143        | TYR         |
| 1          | F            | 145        | SER         |
| 1          | F            | 147        | ARG         |
| 1          | F            | 148        | THR         |
| 1          | F            | 149        | THR         |
| 1          | F            | 167        | GLU         |
| 1          | F            | 171        | LEU         |
| 1          | F            | 176        | MET         |
| 1          | F            | 179        | ASP         |
| 1          | F            | 180        | LEU         |
| 1          | F            | 183        | ARG         |
| 1          | F            | 208        | ILE         |
| 1          | F            | 232        | SER         |
| 1          | F            | 236        | LEU         |
| 1          | F            | 244        | ASP         |
| 1          | F            | 269        | MET         |
| 1          | F            | 286        | ASP         |
| 1          | F            | 335        | ARG         |
| 1          | F            | 350        | SER         |
| 1          | F            | 357        | ILE         |
| 1          | F            | 370        | VAL         |
| 1          | F            | 372        | ARG         |
| 1          | F            | 373        | LYS         |
| 1          | G            | 8          | LEU         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | G            | 33         | SER         |
| 1          | G            | 35         | VAL         |
| 1          | G            | 37         | ARG         |
| 1          | G            | 45         | VAL         |
| 1          | G            | 49         | GLN         |
| 1          | G            | 51         | ASP         |
| 1          | G            | 56         | ASP         |
| 1          | G            | 57         | GLU         |
| 1          | G            | 66         | THR         |
| 1          | G            | 68         | LYS         |
| 1          | G            | 113        | LYS         |
| 1          | G            | 132        | MET         |
| 1          | G            | 141        | SER         |
| 1          | G            | 143        | TYR         |
| 1          | G            | 145        | SER         |
| 1          | G            | 147        | ARG         |
| 1          | G            | 148        | THR         |
| 1          | G            | 149        | THR         |
| 1          | G            | 167        | GLU         |
| 1          | G            | 171        | LEU         |
| 1          | G            | 176        | MET         |
| 1          | G            | 179        | ASP         |
| 1          | G            | 180        | LEU         |
| 1          | G            | 183        | ARG         |
| 1          | G            | 208        | ILE         |
| 1          | G            | 232        | SER         |
| 1          | G            | 236        | LEU         |
| 1          | G            | 244        | ASP         |
| 1          | G            | 269        | MET         |
| 1          | G            | 286        | ASP         |
| 1          | G            | 335        | ARG         |
| 1          | G            | 350        | SER         |
| 1          | G            | 357        | ILE         |
| 1          | G            | 370        | VAL         |
| 1          | G            | 372        | ARG         |
| 1          | G            | 373        | LYS         |
| 1          | H            | 8          | LEU         |
| 1          | H            | 33         | SER         |
| 1          | H            | 35         | VAL         |
| 1          | H            | 37         | ARG         |
| 1          | H            | 45         | VAL         |
| 1          | H            | 49         | GLN         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | H            | 51         | ASP         |
| 1          | H            | 56         | ASP         |
| 1          | H            | 57         | GLU         |
| 1          | H            | 66         | THR         |
| 1          | H            | 68         | LYS         |
| 1          | H            | 113        | LYS         |
| 1          | H            | 132        | MET         |
| 1          | H            | 141        | SER         |
| 1          | H            | 143        | TYR         |
| 1          | H            | 145        | SER         |
| 1          | H            | 147        | ARG         |
| 1          | H            | 148        | THR         |
| 1          | H            | 149        | THR         |
| 1          | H            | 167        | GLU         |
| 1          | H            | 171        | LEU         |
| 1          | H            | 176        | MET         |
| 1          | H            | 179        | ASP         |
| 1          | H            | 180        | LEU         |
| 1          | H            | 183        | ARG         |
| 1          | H            | 208        | ILE         |
| 1          | H            | 232        | SER         |
| 1          | H            | 236        | LEU         |
| 1          | H            | 244        | ASP         |
| 1          | H            | 269        | MET         |
| 1          | H            | 286        | ASP         |
| 1          | H            | 335        | ARG         |
| 1          | H            | 350        | SER         |
| 1          | H            | 357        | ILE         |
| 1          | H            | 370        | VAL         |
| 1          | H            | 372        | ARG         |
| 1          | H            | 373        | LYS         |
| 1          | I            | 8          | LEU         |
| 1          | I            | 33         | SER         |
| 1          | I            | 35         | VAL         |
| 1          | I            | 37         | ARG         |
| 1          | I            | 45         | VAL         |
| 1          | I            | 49         | GLN         |
| 1          | I            | 51         | ASP         |
| 1          | I            | 56         | ASP         |
| 1          | I            | 57         | GLU         |
| 1          | I            | 66         | THR         |
| 1          | I            | 68         | LYS         |

*Continued on next page...*



*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | I            | 113        | LYS         |
| 1          | I            | 132        | MET         |
| 1          | I            | 141        | SER         |
| 1          | I            | 143        | TYR         |
| 1          | I            | 145        | SER         |
| 1          | I            | 147        | ARG         |
| 1          | I            | 148        | THR         |
| 1          | I            | 149        | THR         |
| 1          | I            | 167        | GLU         |
| 1          | I            | 171        | LEU         |
| 1          | I            | 176        | MET         |
| 1          | I            | 179        | ASP         |
| 1          | I            | 180        | LEU         |
| 1          | I            | 183        | ARG         |
| 1          | I            | 208        | ILE         |
| 1          | I            | 232        | SER         |
| 1          | I            | 236        | LEU         |
| 1          | I            | 244        | ASP         |
| 1          | I            | 269        | MET         |
| 1          | I            | 286        | ASP         |
| 1          | I            | 335        | ARG         |
| 1          | I            | 350        | SER         |
| 1          | I            | 357        | ILE         |
| 1          | I            | 370        | VAL         |
| 1          | I            | 372        | ARG         |
| 1          | I            | 373        | LYS         |
| 1          | J            | 8          | LEU         |
| 1          | J            | 33         | SER         |
| 1          | J            | 35         | VAL         |
| 1          | J            | 37         | ARG         |
| 1          | J            | 45         | VAL         |
| 1          | J            | 49         | GLN         |
| 1          | J            | 51         | ASP         |
| 1          | J            | 56         | ASP         |
| 1          | J            | 57         | GLU         |
| 1          | J            | 66         | THR         |
| 1          | J            | 68         | LYS         |
| 1          | J            | 113        | LYS         |
| 1          | J            | 132        | MET         |
| 1          | J            | 141        | SER         |
| 1          | J            | 143        | TYR         |
| 1          | J            | 145        | SER         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | J            | 147        | ARG         |
| 1          | J            | 148        | THR         |
| 1          | J            | 149        | THR         |
| 1          | J            | 167        | GLU         |
| 1          | J            | 171        | LEU         |
| 1          | J            | 176        | MET         |
| 1          | J            | 179        | ASP         |
| 1          | J            | 180        | LEU         |
| 1          | J            | 183        | ARG         |
| 1          | J            | 208        | ILE         |
| 1          | J            | 232        | SER         |
| 1          | J            | 236        | LEU         |
| 1          | J            | 244        | ASP         |
| 1          | J            | 269        | MET         |
| 1          | J            | 286        | ASP         |
| 1          | J            | 335        | ARG         |
| 1          | J            | 350        | SER         |
| 1          | J            | 357        | ILE         |
| 1          | J            | 370        | VAL         |
| 1          | J            | 372        | ARG         |
| 1          | J            | 373        | LYS         |
| 1          | K            | 8          | LEU         |
| 1          | K            | 33         | SER         |
| 1          | K            | 35         | VAL         |
| 1          | K            | 37         | ARG         |
| 1          | K            | 45         | VAL         |
| 1          | K            | 49         | GLN         |
| 1          | K            | 51         | ASP         |
| 1          | K            | 56         | ASP         |
| 1          | K            | 57         | GLU         |
| 1          | K            | 66         | THR         |
| 1          | K            | 68         | LYS         |
| 1          | K            | 113        | LYS         |
| 1          | K            | 132        | MET         |
| 1          | K            | 141        | SER         |
| 1          | K            | 143        | TYR         |
| 1          | K            | 145        | SER         |
| 1          | K            | 147        | ARG         |
| 1          | K            | 148        | THR         |
| 1          | K            | 149        | THR         |
| 1          | K            | 167        | GLU         |
| 1          | K            | 171        | LEU         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | K            | 176        | MET         |
| 1          | K            | 179        | ASP         |
| 1          | K            | 180        | LEU         |
| 1          | K            | 183        | ARG         |
| 1          | K            | 208        | ILE         |
| 1          | K            | 232        | SER         |
| 1          | K            | 236        | LEU         |
| 1          | K            | 244        | ASP         |
| 1          | K            | 269        | MET         |
| 1          | K            | 286        | ASP         |
| 1          | K            | 335        | ARG         |
| 1          | K            | 350        | SER         |
| 1          | K            | 357        | ILE         |
| 1          | K            | 370        | VAL         |
| 1          | K            | 372        | ARG         |
| 1          | K            | 373        | LYS         |
| 1          | L            | 8          | LEU         |
| 1          | L            | 33         | SER         |
| 1          | L            | 35         | VAL         |
| 1          | L            | 37         | ARG         |
| 1          | L            | 45         | VAL         |
| 1          | L            | 49         | GLN         |
| 1          | L            | 51         | ASP         |
| 1          | L            | 56         | ASP         |
| 1          | L            | 57         | GLU         |
| 1          | L            | 66         | THR         |
| 1          | L            | 68         | LYS         |
| 1          | L            | 113        | LYS         |
| 1          | L            | 132        | MET         |
| 1          | L            | 141        | SER         |
| 1          | L            | 143        | TYR         |
| 1          | L            | 145        | SER         |
| 1          | L            | 147        | ARG         |
| 1          | L            | 148        | THR         |
| 1          | L            | 149        | THR         |
| 1          | L            | 167        | GLU         |
| 1          | L            | 171        | LEU         |
| 1          | L            | 176        | MET         |
| 1          | L            | 179        | ASP         |
| 1          | L            | 180        | LEU         |
| 1          | L            | 183        | ARG         |
| 1          | L            | 208        | ILE         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | L            | 232        | SER         |
| 1          | L            | 236        | LEU         |
| 1          | L            | 244        | ASP         |
| 1          | L            | 269        | MET         |
| 1          | L            | 286        | ASP         |
| 1          | L            | 335        | ARG         |
| 1          | L            | 350        | SER         |
| 1          | L            | 357        | ILE         |
| 1          | L            | 370        | VAL         |
| 1          | L            | 372        | ARG         |
| 1          | L            | 373        | LYS         |
| 1          | M            | 8          | LEU         |
| 1          | M            | 33         | SER         |
| 1          | M            | 35         | VAL         |
| 1          | M            | 37         | ARG         |
| 1          | M            | 45         | VAL         |
| 1          | M            | 49         | GLN         |
| 1          | M            | 51         | ASP         |
| 1          | M            | 56         | ASP         |
| 1          | M            | 57         | GLU         |
| 1          | M            | 66         | THR         |
| 1          | M            | 68         | LYS         |
| 1          | M            | 113        | LYS         |
| 1          | M            | 132        | MET         |
| 1          | M            | 141        | SER         |
| 1          | M            | 143        | TYR         |
| 1          | M            | 145        | SER         |
| 1          | M            | 147        | ARG         |
| 1          | M            | 148        | THR         |
| 1          | M            | 149        | THR         |
| 1          | M            | 167        | GLU         |
| 1          | M            | 171        | LEU         |
| 1          | M            | 176        | MET         |
| 1          | M            | 179        | ASP         |
| 1          | M            | 180        | LEU         |
| 1          | M            | 183        | ARG         |
| 1          | M            | 208        | ILE         |
| 1          | M            | 232        | SER         |
| 1          | M            | 236        | LEU         |
| 1          | M            | 244        | ASP         |
| 1          | M            | 269        | MET         |
| 1          | M            | 286        | ASP         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | M            | 335        | ARG         |
| 1          | M            | 350        | SER         |
| 1          | M            | 357        | ILE         |
| 1          | M            | 370        | VAL         |
| 1          | M            | 372        | ARG         |
| 1          | M            | 373        | LYS         |
| 1          | N            | 8          | LEU         |
| 1          | N            | 33         | SER         |
| 1          | N            | 35         | VAL         |
| 1          | N            | 37         | ARG         |
| 1          | N            | 45         | VAL         |
| 1          | N            | 49         | GLN         |
| 1          | N            | 51         | ASP         |
| 1          | N            | 56         | ASP         |
| 1          | N            | 57         | GLU         |
| 1          | N            | 66         | THR         |
| 1          | N            | 68         | LYS         |
| 1          | N            | 113        | LYS         |
| 1          | N            | 132        | MET         |
| 1          | N            | 141        | SER         |
| 1          | N            | 143        | TYR         |
| 1          | N            | 145        | SER         |
| 1          | N            | 147        | ARG         |
| 1          | N            | 148        | THR         |
| 1          | N            | 149        | THR         |
| 1          | N            | 167        | GLU         |
| 1          | N            | 171        | LEU         |
| 1          | N            | 176        | MET         |
| 1          | N            | 179        | ASP         |
| 1          | N            | 180        | LEU         |
| 1          | N            | 183        | ARG         |
| 1          | N            | 208        | ILE         |
| 1          | N            | 232        | SER         |
| 1          | N            | 236        | LEU         |
| 1          | N            | 244        | ASP         |
| 1          | N            | 269        | MET         |
| 1          | N            | 286        | ASP         |
| 1          | N            | 335        | ARG         |
| 1          | N            | 350        | SER         |
| 1          | N            | 357        | ILE         |
| 1          | N            | 370        | VAL         |
| 1          | N            | 372        | ARG         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | N            | 373        | LYS         |
| 1          | O            | 8          | LEU         |
| 1          | O            | 33         | SER         |
| 1          | O            | 35         | VAL         |
| 1          | O            | 37         | ARG         |
| 1          | O            | 45         | VAL         |
| 1          | O            | 49         | GLN         |
| 1          | O            | 51         | ASP         |
| 1          | O            | 56         | ASP         |
| 1          | O            | 57         | GLU         |
| 1          | O            | 66         | THR         |
| 1          | O            | 68         | LYS         |
| 1          | O            | 113        | LYS         |
| 1          | O            | 132        | MET         |
| 1          | O            | 141        | SER         |
| 1          | O            | 143        | TYR         |
| 1          | O            | 145        | SER         |
| 1          | O            | 147        | ARG         |
| 1          | O            | 148        | THR         |
| 1          | O            | 149        | THR         |
| 1          | O            | 167        | GLU         |
| 1          | O            | 171        | LEU         |
| 1          | O            | 176        | MET         |
| 1          | O            | 179        | ASP         |
| 1          | O            | 180        | LEU         |
| 1          | O            | 183        | ARG         |
| 1          | O            | 208        | ILE         |
| 1          | O            | 232        | SER         |
| 1          | O            | 236        | LEU         |
| 1          | O            | 244        | ASP         |
| 1          | O            | 269        | MET         |
| 1          | O            | 286        | ASP         |
| 1          | O            | 335        | ARG         |
| 1          | O            | 350        | SER         |
| 1          | O            | 357        | ILE         |
| 1          | O            | 370        | VAL         |
| 1          | O            | 372        | ARG         |
| 1          | O            | 373        | LYS         |
| 1          | P            | 8          | LEU         |
| 1          | P            | 33         | SER         |
| 1          | P            | 35         | VAL         |
| 1          | P            | 37         | ARG         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | P            | 45         | VAL         |
| 1          | P            | 49         | GLN         |
| 1          | P            | 51         | ASP         |
| 1          | P            | 56         | ASP         |
| 1          | P            | 57         | GLU         |
| 1          | P            | 66         | THR         |
| 1          | P            | 68         | LYS         |
| 1          | P            | 113        | LYS         |
| 1          | P            | 132        | MET         |
| 1          | P            | 141        | SER         |
| 1          | P            | 143        | TYR         |
| 1          | P            | 145        | SER         |
| 1          | P            | 147        | ARG         |
| 1          | P            | 148        | THR         |
| 1          | P            | 149        | THR         |
| 1          | P            | 167        | GLU         |
| 1          | P            | 171        | LEU         |
| 1          | P            | 176        | MET         |
| 1          | P            | 179        | ASP         |
| 1          | P            | 180        | LEU         |
| 1          | P            | 183        | ARG         |
| 1          | P            | 208        | ILE         |
| 1          | P            | 232        | SER         |
| 1          | P            | 236        | LEU         |
| 1          | P            | 244        | ASP         |
| 1          | P            | 269        | MET         |
| 1          | P            | 286        | ASP         |
| 1          | P            | 335        | ARG         |
| 1          | P            | 350        | SER         |
| 1          | P            | 357        | ILE         |
| 1          | P            | 370        | VAL         |
| 1          | P            | 372        | ARG         |
| 1          | P            | 373        | LYS         |
| 1          | Q            | 8          | LEU         |
| 1          | Q            | 33         | SER         |
| 1          | Q            | 35         | VAL         |
| 1          | Q            | 37         | ARG         |
| 1          | Q            | 45         | VAL         |
| 1          | Q            | 49         | GLN         |
| 1          | Q            | 51         | ASP         |
| 1          | Q            | 56         | ASP         |
| 1          | Q            | 57         | GLU         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | Q            | 66         | THR         |
| 1          | Q            | 68         | LYS         |
| 1          | Q            | 113        | LYS         |
| 1          | Q            | 132        | MET         |
| 1          | Q            | 141        | SER         |
| 1          | Q            | 143        | TYR         |
| 1          | Q            | 145        | SER         |
| 1          | Q            | 147        | ARG         |
| 1          | Q            | 148        | THR         |
| 1          | Q            | 149        | THR         |
| 1          | Q            | 167        | GLU         |
| 1          | Q            | 171        | LEU         |
| 1          | Q            | 176        | MET         |
| 1          | Q            | 179        | ASP         |
| 1          | Q            | 180        | LEU         |
| 1          | Q            | 183        | ARG         |
| 1          | Q            | 208        | ILE         |
| 1          | Q            | 232        | SER         |
| 1          | Q            | 236        | LEU         |
| 1          | Q            | 244        | ASP         |
| 1          | Q            | 269        | MET         |
| 1          | Q            | 286        | ASP         |
| 1          | Q            | 335        | ARG         |
| 1          | Q            | 350        | SER         |
| 1          | Q            | 357        | ILE         |
| 1          | Q            | 370        | VAL         |
| 1          | Q            | 372        | ARG         |
| 1          | Q            | 373        | LYS         |
| 1          | R            | 8          | LEU         |
| 1          | R            | 33         | SER         |
| 1          | R            | 35         | VAL         |
| 1          | R            | 37         | ARG         |
| 1          | R            | 45         | VAL         |
| 1          | R            | 49         | GLN         |
| 1          | R            | 51         | ASP         |
| 1          | R            | 56         | ASP         |
| 1          | R            | 57         | GLU         |
| 1          | R            | 66         | THR         |
| 1          | R            | 68         | LYS         |
| 1          | R            | 113        | LYS         |
| 1          | R            | 132        | MET         |
| 1          | R            | 141        | SER         |

*Continued on next page...*



*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | R            | 143        | TYR         |
| 1          | R            | 145        | SER         |
| 1          | R            | 147        | ARG         |
| 1          | R            | 148        | THR         |
| 1          | R            | 149        | THR         |
| 1          | R            | 167        | GLU         |
| 1          | R            | 171        | LEU         |
| 1          | R            | 176        | MET         |
| 1          | R            | 179        | ASP         |
| 1          | R            | 180        | LEU         |
| 1          | R            | 183        | ARG         |
| 1          | R            | 208        | ILE         |
| 1          | R            | 232        | SER         |
| 1          | R            | 236        | LEU         |
| 1          | R            | 244        | ASP         |
| 1          | R            | 269        | MET         |
| 1          | R            | 286        | ASP         |
| 1          | R            | 335        | ARG         |
| 1          | R            | 350        | SER         |
| 1          | R            | 357        | ILE         |
| 1          | R            | 370        | VAL         |
| 1          | R            | 372        | ARG         |
| 1          | R            | 373        | LYS         |
| 1          | S            | 8          | LEU         |
| 1          | S            | 33         | SER         |
| 1          | S            | 35         | VAL         |
| 1          | S            | 37         | ARG         |
| 1          | S            | 45         | VAL         |
| 1          | S            | 49         | GLN         |
| 1          | S            | 51         | ASP         |
| 1          | S            | 56         | ASP         |
| 1          | S            | 57         | GLU         |
| 1          | S            | 66         | THR         |
| 1          | S            | 68         | LYS         |
| 1          | S            | 113        | LYS         |
| 1          | S            | 132        | MET         |
| 1          | S            | 141        | SER         |
| 1          | S            | 143        | TYR         |
| 1          | S            | 145        | SER         |
| 1          | S            | 147        | ARG         |
| 1          | S            | 148        | THR         |
| 1          | S            | 149        | THR         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | S            | 167        | GLU         |
| 1          | S            | 171        | LEU         |
| 1          | S            | 176        | MET         |
| 1          | S            | 179        | ASP         |
| 1          | S            | 180        | LEU         |
| 1          | S            | 183        | ARG         |
| 1          | S            | 208        | ILE         |
| 1          | S            | 232        | SER         |
| 1          | S            | 236        | LEU         |
| 1          | S            | 244        | ASP         |
| 1          | S            | 269        | MET         |
| 1          | S            | 286        | ASP         |
| 1          | S            | 335        | ARG         |
| 1          | S            | 350        | SER         |
| 1          | S            | 357        | ILE         |
| 1          | S            | 370        | VAL         |
| 1          | S            | 372        | ARG         |
| 1          | S            | 373        | LYS         |
| 1          | T            | 8          | LEU         |
| 1          | T            | 33         | SER         |
| 1          | T            | 35         | VAL         |
| 1          | T            | 37         | ARG         |
| 1          | T            | 45         | VAL         |
| 1          | T            | 49         | GLN         |
| 1          | T            | 51         | ASP         |
| 1          | T            | 56         | ASP         |
| 1          | T            | 57         | GLU         |
| 1          | T            | 66         | THR         |
| 1          | T            | 68         | LYS         |
| 1          | T            | 113        | LYS         |
| 1          | T            | 132        | MET         |
| 1          | T            | 141        | SER         |
| 1          | T            | 143        | TYR         |
| 1          | T            | 145        | SER         |
| 1          | T            | 147        | ARG         |
| 1          | T            | 148        | THR         |
| 1          | T            | 149        | THR         |
| 1          | T            | 167        | GLU         |
| 1          | T            | 171        | LEU         |
| 1          | T            | 176        | MET         |
| 1          | T            | 179        | ASP         |
| 1          | T            | 180        | LEU         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | T            | 183        | ARG         |
| 1          | T            | 208        | ILE         |
| 1          | T            | 232        | SER         |
| 1          | T            | 236        | LEU         |
| 1          | T            | 244        | ASP         |
| 1          | T            | 269        | MET         |
| 1          | T            | 286        | ASP         |
| 1          | T            | 335        | ARG         |
| 1          | T            | 350        | SER         |
| 1          | T            | 357        | ILE         |
| 1          | T            | 370        | VAL         |
| 1          | T            | 372        | ARG         |
| 1          | T            | 373        | LYS         |
| 1          | U            | 8          | LEU         |
| 1          | U            | 33         | SER         |
| 1          | U            | 35         | VAL         |
| 1          | U            | 37         | ARG         |
| 1          | U            | 45         | VAL         |
| 1          | U            | 49         | GLN         |
| 1          | U            | 51         | ASP         |
| 1          | U            | 56         | ASP         |
| 1          | U            | 57         | GLU         |
| 1          | U            | 66         | THR         |
| 1          | U            | 68         | LYS         |
| 1          | U            | 113        | LYS         |
| 1          | U            | 132        | MET         |
| 1          | U            | 141        | SER         |
| 1          | U            | 143        | TYR         |
| 1          | U            | 145        | SER         |
| 1          | U            | 147        | ARG         |
| 1          | U            | 148        | THR         |
| 1          | U            | 149        | THR         |
| 1          | U            | 167        | GLU         |
| 1          | U            | 171        | LEU         |
| 1          | U            | 176        | MET         |
| 1          | U            | 179        | ASP         |
| 1          | U            | 180        | LEU         |
| 1          | U            | 183        | ARG         |
| 1          | U            | 208        | ILE         |
| 1          | U            | 232        | SER         |
| 1          | U            | 236        | LEU         |
| 1          | U            | 244        | ASP         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | U            | 269        | MET         |
| 1          | U            | 286        | ASP         |
| 1          | U            | 335        | ARG         |
| 1          | U            | 350        | SER         |
| 1          | U            | 357        | ILE         |
| 1          | U            | 370        | VAL         |
| 1          | U            | 372        | ARG         |
| 1          | U            | 373        | LYS         |
| 1          | V            | 8          | LEU         |
| 1          | V            | 33         | SER         |
| 1          | V            | 35         | VAL         |
| 1          | V            | 37         | ARG         |
| 1          | V            | 45         | VAL         |
| 1          | V            | 49         | GLN         |
| 1          | V            | 51         | ASP         |
| 1          | V            | 56         | ASP         |
| 1          | V            | 57         | GLU         |
| 1          | V            | 66         | THR         |
| 1          | V            | 68         | LYS         |
| 1          | V            | 113        | LYS         |
| 1          | V            | 132        | MET         |
| 1          | V            | 141        | SER         |
| 1          | V            | 143        | TYR         |
| 1          | V            | 145        | SER         |
| 1          | V            | 147        | ARG         |
| 1          | V            | 148        | THR         |
| 1          | V            | 149        | THR         |
| 1          | V            | 167        | GLU         |
| 1          | V            | 171        | LEU         |
| 1          | V            | 176        | MET         |
| 1          | V            | 179        | ASP         |
| 1          | V            | 180        | LEU         |
| 1          | V            | 183        | ARG         |
| 1          | V            | 208        | ILE         |
| 1          | V            | 232        | SER         |
| 1          | V            | 236        | LEU         |
| 1          | V            | 244        | ASP         |
| 1          | V            | 269        | MET         |
| 1          | V            | 286        | ASP         |
| 1          | V            | 335        | ARG         |
| 1          | V            | 350        | SER         |
| 1          | V            | 357        | ILE         |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | V     | 370 | VAL  |
| 1   | V     | 372 | ARG  |
| 1   | V     | 373 | LYS  |
| 1   | W     | 8   | LEU  |
| 1   | W     | 33  | SER  |
| 1   | W     | 35  | VAL  |
| 1   | W     | 37  | ARG  |
| 1   | W     | 45  | VAL  |
| 1   | W     | 49  | GLN  |
| 1   | W     | 51  | ASP  |
| 1   | W     | 56  | ASP  |
| 1   | W     | 57  | GLU  |
| 1   | W     | 66  | THR  |
| 1   | W     | 68  | LYS  |
| 1   | W     | 113 | LYS  |
| 1   | W     | 132 | MET  |
| 1   | W     | 141 | SER  |
| 1   | W     | 143 | TYR  |
| 1   | W     | 145 | SER  |
| 1   | W     | 147 | ARG  |
| 1   | W     | 148 | THR  |
| 1   | W     | 149 | THR  |
| 1   | W     | 167 | GLU  |
| 1   | W     | 171 | LEU  |
| 1   | W     | 176 | MET  |
| 1   | W     | 179 | ASP  |
| 1   | W     | 180 | LEU  |
| 1   | W     | 183 | ARG  |
| 1   | W     | 208 | ILE  |
| 1   | W     | 232 | SER  |
| 1   | W     | 236 | LEU  |
| 1   | W     | 244 | ASP  |
| 1   | W     | 269 | MET  |
| 1   | W     | 286 | ASP  |
| 1   | W     | 335 | ARG  |
| 1   | W     | 350 | SER  |
| 1   | W     | 357 | ILE  |
| 1   | W     | 370 | VAL  |
| 1   | W     | 372 | ARG  |
| 1   | W     | 373 | LYS  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (136) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 49  | GLN  |
| 1   | A     | 59  | GLN  |
| 1   | A     | 92  | ASN  |
| 1   | A     | 121 | GLN  |
| 1   | A     | 173 | HIS  |
| 1   | A     | 353 | GLN  |
| 1   | B     | 49  | GLN  |
| 1   | B     | 59  | GLN  |
| 1   | B     | 92  | ASN  |
| 1   | B     | 121 | GLN  |
| 1   | B     | 173 | HIS  |
| 1   | B     | 353 | GLN  |
| 1   | C     | 49  | GLN  |
| 1   | C     | 59  | GLN  |
| 1   | C     | 92  | ASN  |
| 1   | C     | 121 | GLN  |
| 1   | C     | 173 | HIS  |
| 1   | C     | 353 | GLN  |
| 1   | D     | 49  | GLN  |
| 1   | D     | 59  | GLN  |
| 1   | D     | 92  | ASN  |
| 1   | D     | 121 | GLN  |
| 1   | D     | 173 | HIS  |
| 1   | D     | 353 | GLN  |
| 1   | E     | 49  | GLN  |
| 1   | E     | 59  | GLN  |
| 1   | E     | 92  | ASN  |
| 1   | E     | 121 | GLN  |
| 1   | E     | 173 | HIS  |
| 1   | E     | 353 | GLN  |
| 1   | F     | 49  | GLN  |
| 1   | F     | 59  | GLN  |
| 1   | F     | 92  | ASN  |
| 1   | F     | 121 | GLN  |
| 1   | F     | 353 | GLN  |
| 1   | G     | 49  | GLN  |
| 1   | G     | 59  | GLN  |
| 1   | G     | 92  | ASN  |
| 1   | G     | 121 | GLN  |
| 1   | G     | 173 | HIS  |
| 1   | G     | 353 | GLN  |
| 1   | H     | 49  | GLN  |
| 1   | H     | 59  | GLN  |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | H            | 92         | ASN         |
| 1          | H            | 121        | GLN         |
| 1          | H            | 173        | HIS         |
| 1          | H            | 353        | GLN         |
| 1          | I            | 49         | GLN         |
| 1          | I            | 59         | GLN         |
| 1          | I            | 92         | ASN         |
| 1          | I            | 121        | GLN         |
| 1          | I            | 173        | HIS         |
| 1          | I            | 353        | GLN         |
| 1          | J            | 49         | GLN         |
| 1          | J            | 59         | GLN         |
| 1          | J            | 92         | ASN         |
| 1          | J            | 121        | GLN         |
| 1          | J            | 173        | HIS         |
| 1          | J            | 353        | GLN         |
| 1          | K            | 49         | GLN         |
| 1          | K            | 59         | GLN         |
| 1          | K            | 92         | ASN         |
| 1          | K            | 121        | GLN         |
| 1          | K            | 173        | HIS         |
| 1          | K            | 353        | GLN         |
| 1          | L            | 49         | GLN         |
| 1          | L            | 59         | GLN         |
| 1          | L            | 92         | ASN         |
| 1          | L            | 121        | GLN         |
| 1          | L            | 173        | HIS         |
| 1          | L            | 353        | GLN         |
| 1          | M            | 49         | GLN         |
| 1          | M            | 59         | GLN         |
| 1          | M            | 92         | ASN         |
| 1          | M            | 121        | GLN         |
| 1          | M            | 173        | HIS         |
| 1          | M            | 353        | GLN         |
| 1          | N            | 49         | GLN         |
| 1          | N            | 59         | GLN         |
| 1          | N            | 92         | ASN         |
| 1          | N            | 121        | GLN         |
| 1          | N            | 173        | HIS         |
| 1          | N            | 353        | GLN         |
| 1          | O            | 49         | GLN         |
| 1          | O            | 59         | GLN         |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | O            | 92         | ASN         |
| 1          | O            | 121        | GLN         |
| 1          | O            | 173        | HIS         |
| 1          | O            | 353        | GLN         |
| 1          | P            | 49         | GLN         |
| 1          | P            | 59         | GLN         |
| 1          | P            | 92         | ASN         |
| 1          | P            | 121        | GLN         |
| 1          | P            | 173        | HIS         |
| 1          | P            | 353        | GLN         |
| 1          | Q            | 49         | GLN         |
| 1          | Q            | 59         | GLN         |
| 1          | Q            | 92         | ASN         |
| 1          | Q            | 121        | GLN         |
| 1          | Q            | 173        | HIS         |
| 1          | Q            | 353        | GLN         |
| 1          | R            | 49         | GLN         |
| 1          | R            | 59         | GLN         |
| 1          | R            | 92         | ASN         |
| 1          | R            | 121        | GLN         |
| 1          | R            | 173        | HIS         |
| 1          | R            | 353        | GLN         |
| 1          | S            | 49         | GLN         |
| 1          | S            | 59         | GLN         |
| 1          | S            | 92         | ASN         |
| 1          | S            | 121        | GLN         |
| 1          | S            | 173        | HIS         |
| 1          | S            | 353        | GLN         |
| 1          | T            | 49         | GLN         |
| 1          | T            | 59         | GLN         |
| 1          | T            | 92         | ASN         |
| 1          | T            | 121        | GLN         |
| 1          | T            | 173        | HIS         |
| 1          | T            | 353        | GLN         |
| 1          | U            | 49         | GLN         |
| 1          | U            | 59         | GLN         |
| 1          | U            | 92         | ASN         |
| 1          | U            | 121        | GLN         |
| 1          | U            | 173        | HIS         |
| 1          | U            | 353        | GLN         |
| 1          | V            | 49         | GLN         |
| 1          | V            | 59         | GLN         |

*Continued on next page...*



Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | V     | 92  | ASN  |
| 1   | V     | 121 | GLN  |
| 1   | V     | 173 | HIS  |
| 1   | V     | 353 | GLN  |
| 1   | W     | 49  | GLN  |
| 1   | W     | 59  | GLN  |
| 1   | W     | 92  | ASN  |
| 1   | W     | 121 | GLN  |
| 1   | W     | 353 | GLN  |

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

23 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths |      |             | Bond angles |      |             |
|-----|------|-------|-----|------|--------------|------|-------------|-------------|------|-------------|
|     |      |       |     |      | Counts       | RMSZ | $\# Z  > 2$ | Counts      | RMSZ | $\# Z  > 2$ |
| 1   | HIC  | I     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.21 | 1 (16%)     |
| 1   | HIC  | R     | 73  | 1    | 8,11,12      | 1.04 | 0           | 6,14,16     | 1.17 | 1 (16%)     |
| 1   | HIC  | P     | 73  | 1    | 8,11,12      | 1.04 | 0           | 6,14,16     | 1.18 | 1 (16%)     |
| 1   | HIC  | N     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.18 | 1 (16%)     |
| 1   | HIC  | B     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.19 | 1 (16%)     |
| 1   | HIC  | C     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.18 | 1 (16%)     |
| 1   | HIC  | A     | 73  | 1    | 8,11,12      | 1.04 | 0           | 6,14,16     | 1.20 | 1 (16%)     |
| 1   | HIC  | W     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.18 | 1 (16%)     |
| 1   | HIC  | G     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.19 | 1 (16%)     |
| 1   | HIC  | E     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.18 | 1 (16%)     |
| 1   | HIC  | J     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.19 | 1 (16%)     |
| 1   | HIC  | M     | 73  | 1    | 8,11,12      | 1.05 | 0           | 6,14,16     | 1.18 | 1 (16%)     |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 1   | HIC  | S     | 73  | 1    | 8,11,12      | 1.05 | 0        | 6,14,16     | 1.18 | 1 (16%)  |
| 1   | HIC  | Q     | 73  | 1    | 8,11,12      | 1.06 | 0        | 6,14,16     | 1.18 | 1 (16%)  |
| 1   | HIC  | D     | 73  | 1    | 8,11,12      | 1.05 | 0        | 6,14,16     | 1.19 | 1 (16%)  |
| 1   | HIC  | T     | 73  | 1    | 8,11,12      | 1.05 | 0        | 6,14,16     | 1.18 | 1 (16%)  |
| 1   | HIC  | O     | 73  | 1    | 8,11,12      | 1.03 | 0        | 6,14,16     | 1.18 | 1 (16%)  |
| 1   | HIC  | K     | 73  | 1    | 8,11,12      | 1.04 | 0        | 6,14,16     | 1.20 | 1 (16%)  |
| 1   | HIC  | V     | 73  | 1    | 8,11,12      | 1.04 | 0        | 6,14,16     | 1.18 | 1 (16%)  |
| 1   | HIC  | U     | 73  | 1    | 8,11,12      | 1.05 | 0        | 6,14,16     | 1.19 | 1 (16%)  |
| 1   | HIC  | H     | 73  | 1    | 8,11,12      | 1.05 | 0        | 6,14,16     | 1.19 | 1 (16%)  |
| 1   | HIC  | F     | 73  | 1    | 8,11,12      | 1.04 | 0        | 6,14,16     | 1.19 | 1 (16%)  |
| 1   | HIC  | L     | 73  | 1    | 8,11,12      | 1.05 | 0        | 6,14,16     | 1.17 | 1 (16%)  |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings   |
|-----|------|-------|-----|------|---------|----------|---------|
| 1   | HIC  | I     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | R     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | P     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | N     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | B     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | C     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | A     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | W     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | G     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | E     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | J     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | M     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | S     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | Q     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | D     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | T     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | O     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | K     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |

*Continued on next page...*

*Continued from previous page...*

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings   |
|-----|------|-------|-----|------|---------|----------|---------|
| 1   | HIC  | V     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | U     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | H     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | F     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |
| 1   | HIC  | L     | 73  | 1    | -       | 2/5/6/8  | 0/1/1/1 |

There are no bond length outliers.

All (23) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms      | Z    | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|------|-------------|----------|
| 1   | I     | 73  | HIC  | CG-CD2-NE2 | 2.27 | 110.23      | 107.78   |
| 1   | K     | 73  | HIC  | CG-CD2-NE2 | 2.25 | 110.21      | 107.78   |
| 1   | F     | 73  | HIC  | CG-CD2-NE2 | 2.24 | 110.21      | 107.78   |
| 1   | A     | 73  | HIC  | CG-CD2-NE2 | 2.24 | 110.20      | 107.78   |
| 1   | B     | 73  | HIC  | CG-CD2-NE2 | 2.23 | 110.20      | 107.78   |
| 1   | H     | 73  | HIC  | CG-CD2-NE2 | 2.23 | 110.19      | 107.78   |
| 1   | U     | 73  | HIC  | CG-CD2-NE2 | 2.23 | 110.19      | 107.78   |
| 1   | D     | 73  | HIC  | CG-CD2-NE2 | 2.22 | 110.18      | 107.78   |
| 1   | Q     | 73  | HIC  | CG-CD2-NE2 | 2.22 | 110.18      | 107.78   |
| 1   | S     | 73  | HIC  | CG-CD2-NE2 | 2.22 | 110.18      | 107.78   |
| 1   | O     | 73  | HIC  | CG-CD2-NE2 | 2.22 | 110.18      | 107.78   |
| 1   | W     | 73  | HIC  | CG-CD2-NE2 | 2.22 | 110.18      | 107.78   |
| 1   | V     | 73  | HIC  | CG-CD2-NE2 | 2.21 | 110.17      | 107.78   |
| 1   | G     | 73  | HIC  | CG-CD2-NE2 | 2.21 | 110.17      | 107.78   |
| 1   | N     | 73  | HIC  | CG-CD2-NE2 | 2.21 | 110.17      | 107.78   |
| 1   | T     | 73  | HIC  | CG-CD2-NE2 | 2.21 | 110.17      | 107.78   |
| 1   | E     | 73  | HIC  | CG-CD2-NE2 | 2.21 | 110.17      | 107.78   |
| 1   | J     | 73  | HIC  | CG-CD2-NE2 | 2.21 | 110.17      | 107.78   |
| 1   | M     | 73  | HIC  | CG-CD2-NE2 | 2.20 | 110.17      | 107.78   |
| 1   | C     | 73  | HIC  | CG-CD2-NE2 | 2.20 | 110.16      | 107.78   |
| 1   | P     | 73  | HIC  | CG-CD2-NE2 | 2.19 | 110.15      | 107.78   |
| 1   | L     | 73  | HIC  | CG-CD2-NE2 | 2.18 | 110.14      | 107.78   |
| 1   | R     | 73  | HIC  | CG-CD2-NE2 | 2.17 | 110.13      | 107.78   |

There are no chirality outliers.

All (46) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms        |
|-----|-------|-----|------|--------------|
| 1   | A     | 73  | HIC  | O-C-CA-CB    |
| 1   | A     | 73  | HIC  | CA-CB-CG-ND1 |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms        |
|-----|-------|-----|------|--------------|
| 1   | B     | 73  | HIC  | O-C-CA-CB    |
| 1   | B     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | C     | 73  | HIC  | O-C-CA-CB    |
| 1   | C     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | D     | 73  | HIC  | O-C-CA-CB    |
| 1   | D     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | E     | 73  | HIC  | O-C-CA-CB    |
| 1   | E     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | F     | 73  | HIC  | O-C-CA-CB    |
| 1   | F     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | G     | 73  | HIC  | O-C-CA-CB    |
| 1   | G     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | H     | 73  | HIC  | O-C-CA-CB    |
| 1   | H     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | I     | 73  | HIC  | O-C-CA-CB    |
| 1   | I     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | J     | 73  | HIC  | O-C-CA-CB    |
| 1   | J     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | K     | 73  | HIC  | O-C-CA-CB    |
| 1   | K     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | L     | 73  | HIC  | O-C-CA-CB    |
| 1   | L     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | M     | 73  | HIC  | O-C-CA-CB    |
| 1   | M     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | N     | 73  | HIC  | O-C-CA-CB    |
| 1   | N     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | O     | 73  | HIC  | O-C-CA-CB    |
| 1   | O     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | P     | 73  | HIC  | O-C-CA-CB    |
| 1   | P     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | Q     | 73  | HIC  | O-C-CA-CB    |
| 1   | Q     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | R     | 73  | HIC  | O-C-CA-CB    |
| 1   | R     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | S     | 73  | HIC  | O-C-CA-CB    |
| 1   | S     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | T     | 73  | HIC  | O-C-CA-CB    |
| 1   | T     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | U     | 73  | HIC  | O-C-CA-CB    |
| 1   | U     | 73  | HIC  | CA-CB-CG-ND1 |
| 1   | V     | 73  | HIC  | O-C-CA-CB    |
| 1   | V     | 73  | HIC  | CA-CB-CG-ND1 |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms        |
|-----|-------|-----|------|--------------|
| 1   | W     | 73  | HIC  | O-C-CA-CB    |
| 1   | W     | 73  | HIC  | CA-CB-CG-ND1 |

There are no ring outliers.

23 monomers are involved in 43 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 1   | I     | 73  | HIC  | 2       | 0            |
| 1   | R     | 73  | HIC  | 1       | 0            |
| 1   | P     | 73  | HIC  | 1       | 0            |
| 1   | N     | 73  | HIC  | 2       | 0            |
| 1   | B     | 73  | HIC  | 2       | 0            |
| 1   | C     | 73  | HIC  | 2       | 0            |
| 1   | A     | 73  | HIC  | 2       | 0            |
| 1   | W     | 73  | HIC  | 2       | 0            |
| 1   | G     | 73  | HIC  | 2       | 0            |
| 1   | E     | 73  | HIC  | 2       | 0            |
| 1   | J     | 73  | HIC  | 2       | 0            |
| 1   | M     | 73  | HIC  | 2       | 0            |
| 1   | S     | 73  | HIC  | 2       | 0            |
| 1   | Q     | 73  | HIC  | 2       | 0            |
| 1   | D     | 73  | HIC  | 2       | 0            |
| 1   | T     | 73  | HIC  | 1       | 0            |
| 1   | O     | 73  | HIC  | 2       | 0            |
| 1   | K     | 73  | HIC  | 2       | 0            |
| 1   | V     | 73  | HIC  | 2       | 0            |
| 1   | U     | 73  | HIC  | 2       | 0            |
| 1   | H     | 73  | HIC  | 2       | 0            |
| 1   | F     | 73  | HIC  | 2       | 0            |
| 1   | L     | 73  | HIC  | 2       | 0            |

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

23 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 2   | ADP  | P     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.40 | 4 (13%)  |
| 2   | ADP  | J     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | M     | 401 | -    | 24,29,29     | 1.19 | 1 (4%)   | 29,45,45    | 1.40 | 4 (13%)  |
| 2   | ADP  | K     | 401 | -    | 24,29,29     | 1.20 | 3 (12%)  | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | V     | 401 | -    | 24,29,29     | 1.19 | 1 (4%)   | 29,45,45    | 1.40 | 4 (13%)  |
| 2   | ADP  | T     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | D     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.40 | 4 (13%)  |
| 2   | ADP  | O     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | Q     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | N     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | S     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.40 | 4 (13%)  |
| 2   | ADP  | H     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.40 | 4 (13%)  |
| 2   | ADP  | A     | 401 | -    | 24,29,29     | 1.19 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | R     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | I     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | B     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | C     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | E     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | W     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.40 | 4 (13%)  |
| 2   | ADP  | G     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | F     | 401 | -    | 24,29,29     | 1.19 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | U     | 401 | -    | 24,29,29     | 1.20 | 1 (4%)   | 29,45,45    | 1.41 | 4 (13%)  |
| 2   | ADP  | L     | 401 | -    | 24,29,29     | 1.20 | 2 (8%)   | 29,45,45    | 1.41 | 4 (13%)  |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions   | Rings   |
|-----|------|-------|-----|------|---------|------------|---------|
| 2   | ADP  | P     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | J     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |

Continued on next page...

*Continued from previous page...*

| Mol | Type | Chain | Res | Link | Chirals | Torsions   | Rings   |
|-----|------|-------|-----|------|---------|------------|---------|
| 2   | ADP  | M     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | K     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | V     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | T     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | D     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | O     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | Q     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | N     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | S     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | H     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | A     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | R     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | I     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | B     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | C     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | E     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | W     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | G     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | F     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | U     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |
| 2   | ADP  | L     | 401 | -    | -       | 0/12/32/32 | 0/3/3/3 |

All (33) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|------|-------------|----------|
| 2   | S     | 401 | ADP  | C2-N1 | 3.03 | 1.39        | 1.33     |
| 2   | E     | 401 | ADP  | C2-N1 | 3.01 | 1.39        | 1.33     |
| 2   | P     | 401 | ADP  | C2-N1 | 3.00 | 1.39        | 1.33     |
| 2   | Q     | 401 | ADP  | C2-N1 | 3.00 | 1.39        | 1.33     |
| 2   | K     | 401 | ADP  | C2-N1 | 2.99 | 1.39        | 1.33     |
| 2   | G     | 401 | ADP  | C2-N1 | 2.99 | 1.39        | 1.33     |
| 2   | J     | 401 | ADP  | C2-N1 | 2.99 | 1.39        | 1.33     |
| 2   | C     | 401 | ADP  | C2-N1 | 2.99 | 1.39        | 1.33     |
| 2   | L     | 401 | ADP  | C2-N1 | 2.99 | 1.39        | 1.33     |
| 2   | O     | 401 | ADP  | C2-N1 | 2.98 | 1.39        | 1.33     |
| 2   | U     | 401 | ADP  | C2-N1 | 2.98 | 1.39        | 1.33     |
| 2   | M     | 401 | ADP  | C2-N1 | 2.98 | 1.39        | 1.33     |
| 2   | W     | 401 | ADP  | C2-N1 | 2.98 | 1.39        | 1.33     |
| 2   | R     | 401 | ADP  | C2-N1 | 2.98 | 1.39        | 1.33     |
| 2   | I     | 401 | ADP  | C2-N1 | 2.98 | 1.39        | 1.33     |
| 2   | T     | 401 | ADP  | C2-N1 | 2.97 | 1.39        | 1.33     |
| 2   | H     | 401 | ADP  | C2-N1 | 2.96 | 1.39        | 1.33     |

*Continued on next page...*

Continued from previous page...

| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 2   | B     | 401 | ADP  | C2-N1   | 2.96  | 1.39        | 1.33     |
| 2   | N     | 401 | ADP  | C2-N1   | 2.96  | 1.39        | 1.33     |
| 2   | D     | 401 | ADP  | C2-N1   | 2.95  | 1.39        | 1.33     |
| 2   | V     | 401 | ADP  | C2-N1   | 2.94  | 1.39        | 1.33     |
| 2   | A     | 401 | ADP  | C2-N1   | 2.93  | 1.39        | 1.33     |
| 2   | F     | 401 | ADP  | C2-N1   | 2.93  | 1.39        | 1.33     |
| 2   | G     | 401 | ADP  | C2'-C1' | -2.02 | 1.50        | 1.53     |
| 2   | N     | 401 | ADP  | C2'-C1' | -2.01 | 1.50        | 1.53     |
| 2   | K     | 401 | ADP  | C8-N7   | -2.01 | 1.31        | 1.34     |
| 2   | E     | 401 | ADP  | C2'-C1' | -2.01 | 1.50        | 1.53     |
| 2   | J     | 401 | ADP  | C2'-C1' | -2.01 | 1.50        | 1.53     |
| 2   | C     | 401 | ADP  | C2'-C1' | -2.01 | 1.50        | 1.53     |
| 2   | K     | 401 | ADP  | C2'-C1' | -2.01 | 1.50        | 1.53     |
| 2   | L     | 401 | ADP  | C2'-C1' | -2.01 | 1.50        | 1.53     |
| 2   | I     | 401 | ADP  | C2'-C1' | -2.01 | 1.50        | 1.53     |
| 2   | H     | 401 | ADP  | C2'-C1' | -2.00 | 1.50        | 1.53     |

All (92) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms    | Z    | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|------|-------------|----------|
| 2   | O     | 401 | ADP  | C4-C5-N7 | 3.95 | 113.52      | 109.40   |
| 2   | L     | 401 | ADP  | C4-C5-N7 | 3.93 | 113.50      | 109.40   |
| 2   | Q     | 401 | ADP  | C4-C5-N7 | 3.93 | 113.49      | 109.40   |
| 2   | J     | 401 | ADP  | C4-C5-N7 | 3.92 | 113.49      | 109.40   |
| 2   | C     | 401 | ADP  | C4-C5-N7 | 3.92 | 113.49      | 109.40   |
| 2   | N     | 401 | ADP  | C4-C5-N7 | 3.92 | 113.49      | 109.40   |
| 2   | R     | 401 | ADP  | C4-C5-N7 | 3.92 | 113.48      | 109.40   |
| 2   | D     | 401 | ADP  | C4-C5-N7 | 3.92 | 113.48      | 109.40   |
| 2   | G     | 401 | ADP  | C4-C5-N7 | 3.92 | 113.48      | 109.40   |
| 2   | A     | 401 | ADP  | C4-C5-N7 | 3.91 | 113.48      | 109.40   |
| 2   | T     | 401 | ADP  | C4-C5-N7 | 3.91 | 113.48      | 109.40   |
| 2   | U     | 401 | ADP  | C4-C5-N7 | 3.91 | 113.47      | 109.40   |
| 2   | B     | 401 | ADP  | C4-C5-N7 | 3.90 | 113.47      | 109.40   |
| 2   | H     | 401 | ADP  | C4-C5-N7 | 3.90 | 113.46      | 109.40   |
| 2   | E     | 401 | ADP  | C4-C5-N7 | 3.89 | 113.45      | 109.40   |
| 2   | M     | 401 | ADP  | C4-C5-N7 | 3.89 | 113.45      | 109.40   |
| 2   | V     | 401 | ADP  | C4-C5-N7 | 3.89 | 113.45      | 109.40   |
| 2   | S     | 401 | ADP  | C4-C5-N7 | 3.89 | 113.45      | 109.40   |
| 2   | F     | 401 | ADP  | C4-C5-N7 | 3.88 | 113.45      | 109.40   |
| 2   | I     | 401 | ADP  | C4-C5-N7 | 3.88 | 113.44      | 109.40   |
| 2   | K     | 401 | ADP  | C4-C5-N7 | 3.87 | 113.44      | 109.40   |
| 2   | P     | 401 | ADP  | C4-C5-N7 | 3.87 | 113.43      | 109.40   |

Continued on next page...



*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 2   | W     | 401 | ADP  | C4-C5-N7 | 3.85  | 113.41      | 109.40   |
| 2   | G     | 401 | ADP  | N3-C2-N1 | -2.22 | 125.20      | 128.68   |
| 2   | K     | 401 | ADP  | N3-C2-N1 | -2.22 | 125.21      | 128.68   |
| 2   | F     | 401 | ADP  | C2-N1-C6 | 2.21  | 122.53      | 118.75   |
| 2   | G     | 401 | ADP  | C2-N1-C6 | 2.20  | 122.52      | 118.75   |
| 2   | E     | 401 | ADP  | N3-C2-N1 | -2.20 | 125.23      | 128.68   |
| 2   | T     | 401 | ADP  | N3-C2-N1 | -2.20 | 125.24      | 128.68   |
| 2   | K     | 401 | ADP  | C2-N1-C6 | 2.20  | 122.52      | 118.75   |
| 2   | C     | 401 | ADP  | N3-C2-N1 | -2.20 | 125.24      | 128.68   |
| 2   | J     | 401 | ADP  | N3-C2-N1 | -2.20 | 125.24      | 128.68   |
| 2   | T     | 401 | ADP  | C2-N1-C6 | 2.20  | 122.51      | 118.75   |
| 2   | L     | 401 | ADP  | N3-C2-N1 | -2.20 | 125.24      | 128.68   |
| 2   | R     | 401 | ADP  | C2-N1-C6 | 2.19  | 122.51      | 118.75   |
| 2   | W     | 401 | ADP  | N3-C2-N1 | -2.19 | 125.25      | 128.68   |
| 2   | I     | 401 | ADP  | C2-N1-C6 | 2.19  | 122.50      | 118.75   |
| 2   | N     | 401 | ADP  | C2-N1-C6 | 2.19  | 122.50      | 118.75   |
| 2   | R     | 401 | ADP  | N3-C2-N1 | -2.19 | 125.25      | 128.68   |
| 2   | F     | 401 | ADP  | N3-C2-N1 | -2.19 | 125.26      | 128.68   |
| 2   | N     | 401 | ADP  | N3-C2-N1 | -2.19 | 125.26      | 128.68   |
| 2   | V     | 401 | ADP  | N3-C2-N1 | -2.19 | 125.26      | 128.68   |
| 2   | W     | 401 | ADP  | C2-N1-C6 | 2.19  | 122.50      | 118.75   |
| 2   | A     | 401 | ADP  | C2-N1-C6 | 2.19  | 122.49      | 118.75   |
| 2   | O     | 401 | ADP  | C2-N1-C6 | 2.19  | 122.49      | 118.75   |
| 2   | D     | 401 | ADP  | C2-N1-C6 | 2.18  | 122.49      | 118.75   |
| 2   | A     | 401 | ADP  | N3-C2-N1 | -2.18 | 125.27      | 128.68   |
| 2   | C     | 401 | ADP  | C2-N1-C6 | 2.18  | 122.48      | 118.75   |
| 2   | I     | 401 | ADP  | N3-C2-N1 | -2.18 | 125.28      | 128.68   |
| 2   | V     | 401 | ADP  | C2-N1-C6 | 2.18  | 122.48      | 118.75   |
| 2   | E     | 401 | ADP  | C2-N1-C6 | 2.18  | 122.48      | 118.75   |
| 2   | H     | 401 | ADP  | C2-N1-C6 | 2.18  | 122.47      | 118.75   |
| 2   | M     | 401 | ADP  | N3-C2-N1 | -2.17 | 125.28      | 128.68   |
| 2   | U     | 401 | ADP  | N3-C2-N1 | -2.17 | 125.28      | 128.68   |
| 2   | O     | 401 | ADP  | N3-C2-N1 | -2.17 | 125.28      | 128.68   |
| 2   | S     | 401 | ADP  | N3-C2-N1 | -2.17 | 125.28      | 128.68   |
| 2   | J     | 401 | ADP  | C2-N1-C6 | 2.17  | 122.47      | 118.75   |
| 2   | B     | 401 | ADP  | N3-C2-N1 | -2.17 | 125.29      | 128.68   |
| 2   | B     | 401 | ADP  | C2-N1-C6 | 2.17  | 122.46      | 118.75   |
| 2   | S     | 401 | ADP  | C2-N1-C6 | 2.17  | 122.46      | 118.75   |
| 2   | U     | 401 | ADP  | C2-N1-C6 | 2.17  | 122.46      | 118.75   |
| 2   | H     | 401 | ADP  | N3-C2-N1 | -2.17 | 125.29      | 128.68   |
| 2   | M     | 401 | ADP  | C2-N1-C6 | 2.17  | 122.46      | 118.75   |
| 2   | P     | 401 | ADP  | N3-C2-N1 | -2.17 | 125.29      | 128.68   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 2   | L     | 401 | ADP  | C2-N1-C6   | 2.16  | 122.46      | 118.75   |
| 2   | Q     | 401 | ADP  | C2-N1-C6   | 2.16  | 122.46      | 118.75   |
| 2   | Q     | 401 | ADP  | N3-C2-N1   | -2.16 | 125.30      | 128.68   |
| 2   | D     | 401 | ADP  | N3-C2-N1   | -2.16 | 125.30      | 128.68   |
| 2   | P     | 401 | ADP  | C2-N1-C6   | 2.16  | 122.44      | 118.75   |
| 2   | M     | 401 | ADP  | O3B-PB-O2B | 2.11  | 115.69      | 107.64   |
| 2   | L     | 401 | ADP  | O3B-PB-O2B | 2.11  | 115.69      | 107.64   |
| 2   | T     | 401 | ADP  | O3B-PB-O2B | 2.11  | 115.69      | 107.64   |
| 2   | W     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.68      | 107.64   |
| 2   | G     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.67      | 107.64   |
| 2   | B     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.66      | 107.64   |
| 2   | R     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.65      | 107.64   |
| 2   | P     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.65      | 107.64   |
| 2   | E     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.65      | 107.64   |
| 2   | J     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.65      | 107.64   |
| 2   | K     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.65      | 107.64   |
| 2   | H     | 401 | ADP  | O3B-PB-O2B | 2.10  | 115.64      | 107.64   |
| 2   | C     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.63      | 107.64   |
| 2   | Q     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.63      | 107.64   |
| 2   | V     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.63      | 107.64   |
| 2   | N     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.63      | 107.64   |
| 2   | S     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.63      | 107.64   |
| 2   | I     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.63      | 107.64   |
| 2   | D     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.62      | 107.64   |
| 2   | O     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.62      | 107.64   |
| 2   | U     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.62      | 107.64   |
| 2   | A     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.61      | 107.64   |
| 2   | F     | 401 | ADP  | O3B-PB-O2B | 2.09  | 115.61      | 107.64   |

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

23 monomers are involved in 95 short contacts:

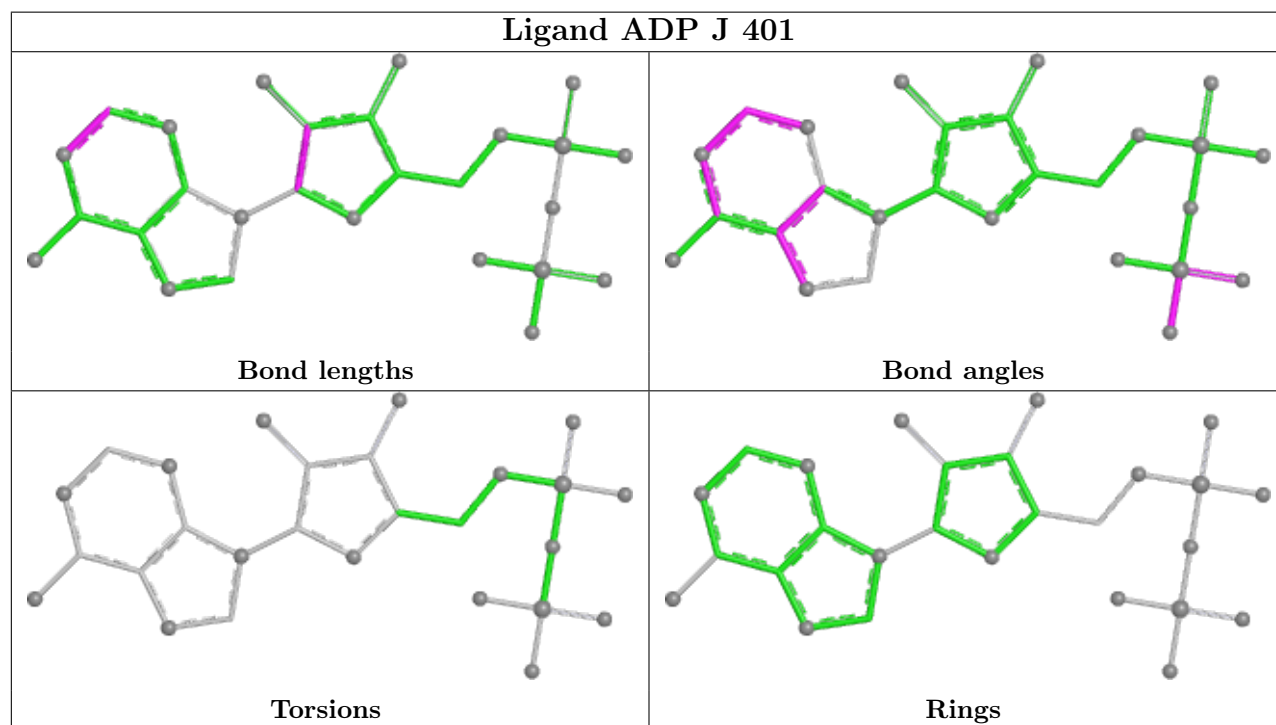
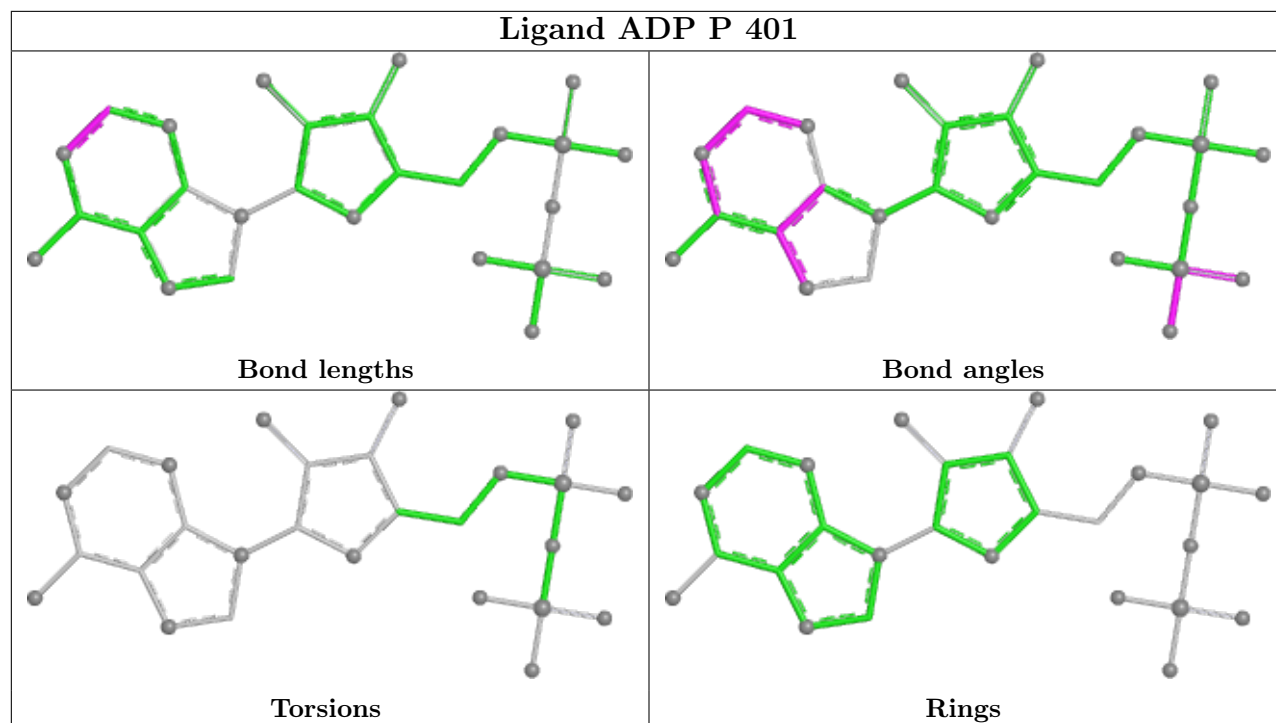
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2   | P     | 401 | ADP  | 4       | 0            |
| 2   | J     | 401 | ADP  | 4       | 0            |
| 2   | M     | 401 | ADP  | 5       | 0            |
| 2   | K     | 401 | ADP  | 4       | 0            |
| 2   | V     | 401 | ADP  | 4       | 0            |
| 2   | T     | 401 | ADP  | 4       | 0            |

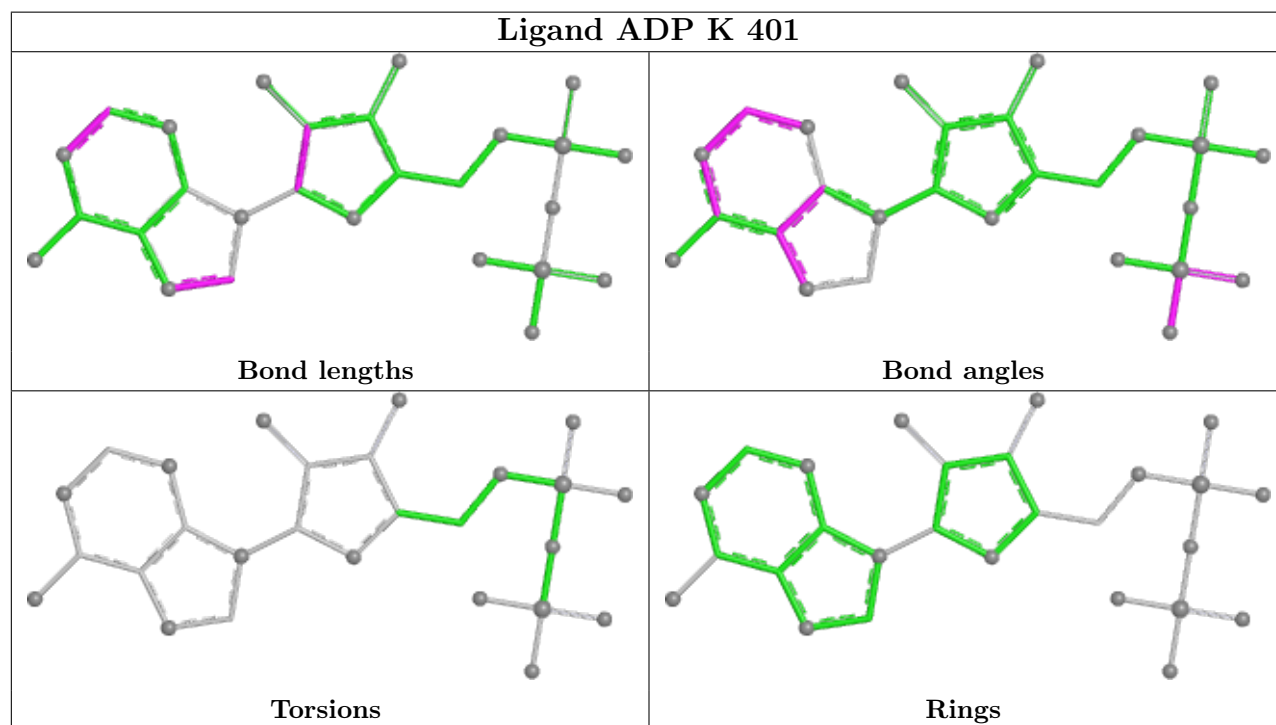
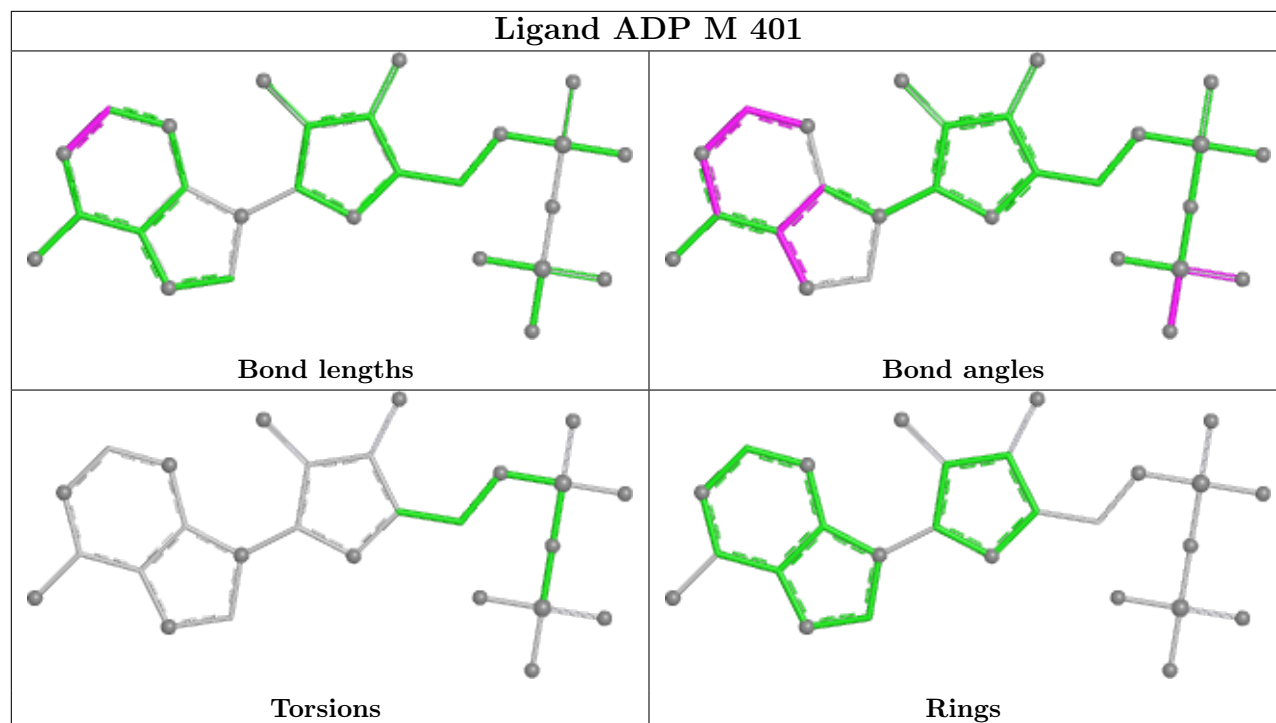
*Continued on next page...*

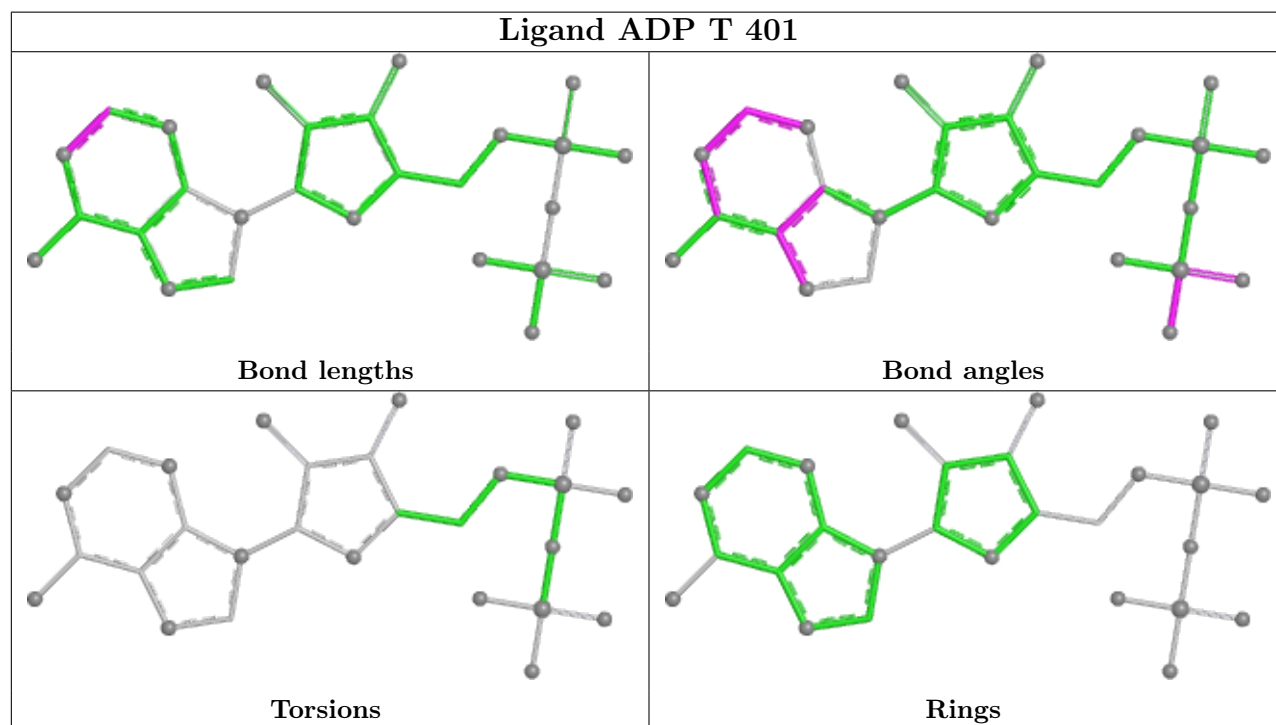
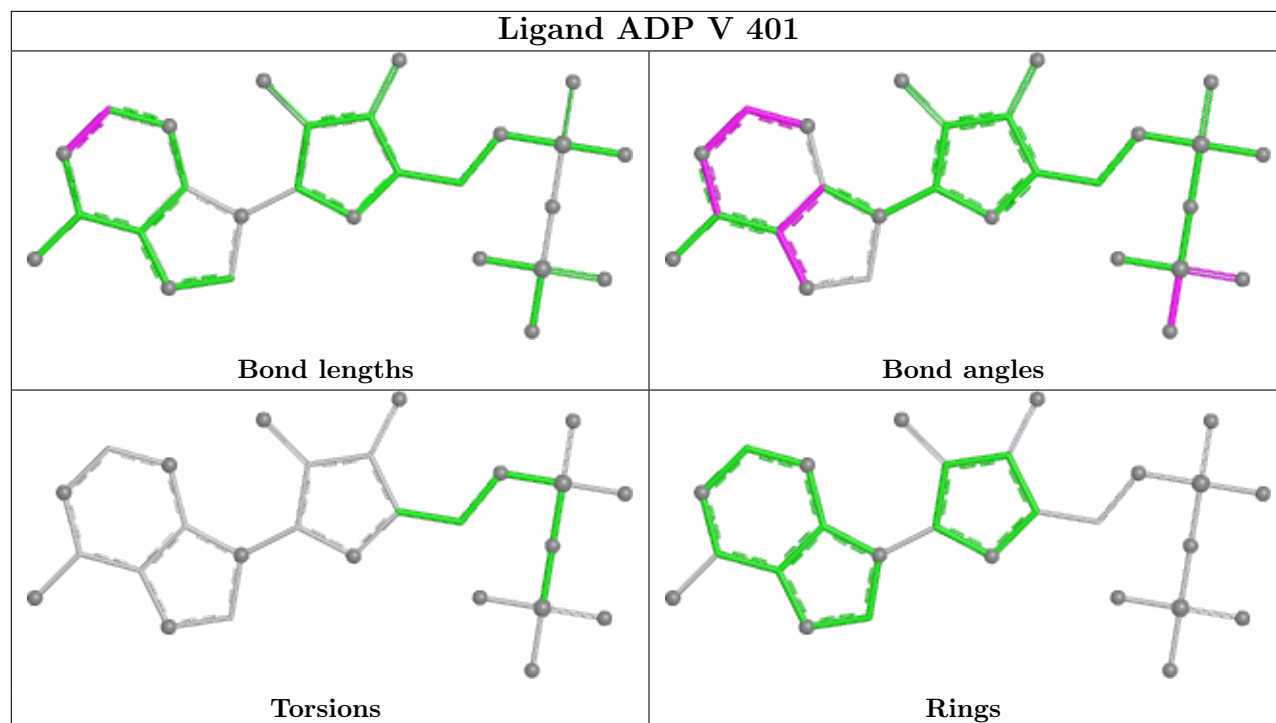
*Continued from previous page...*

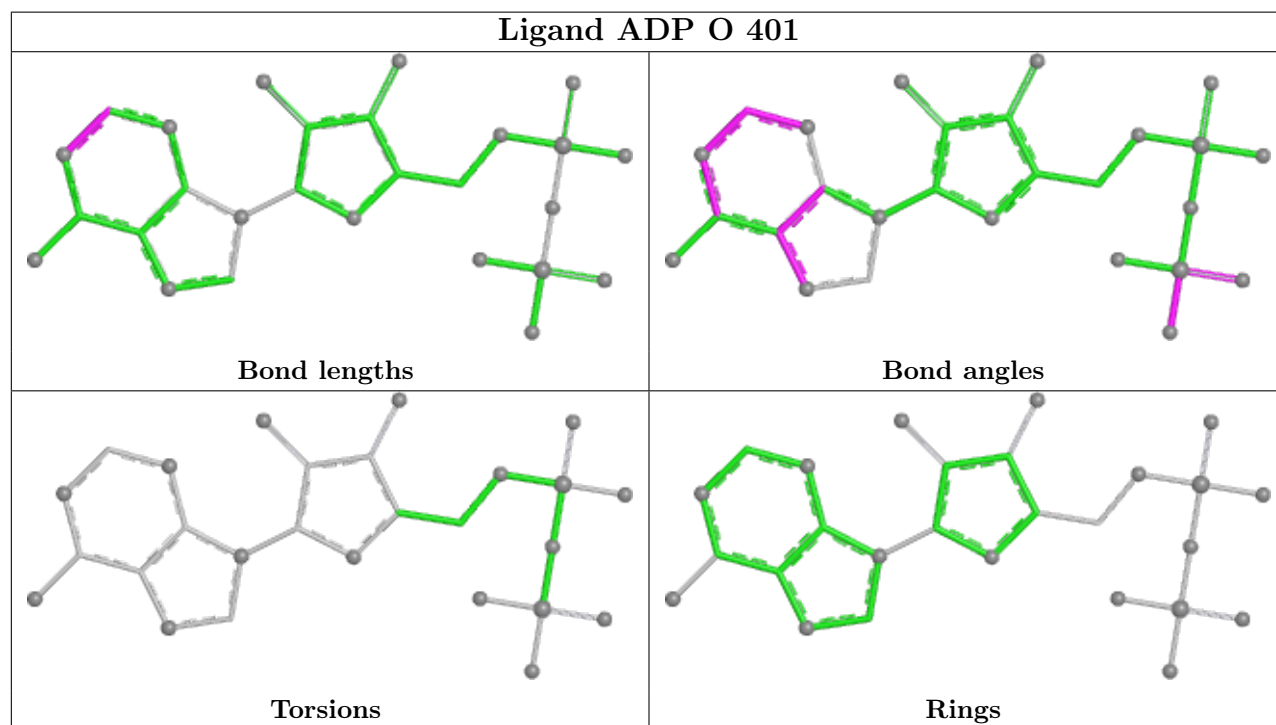
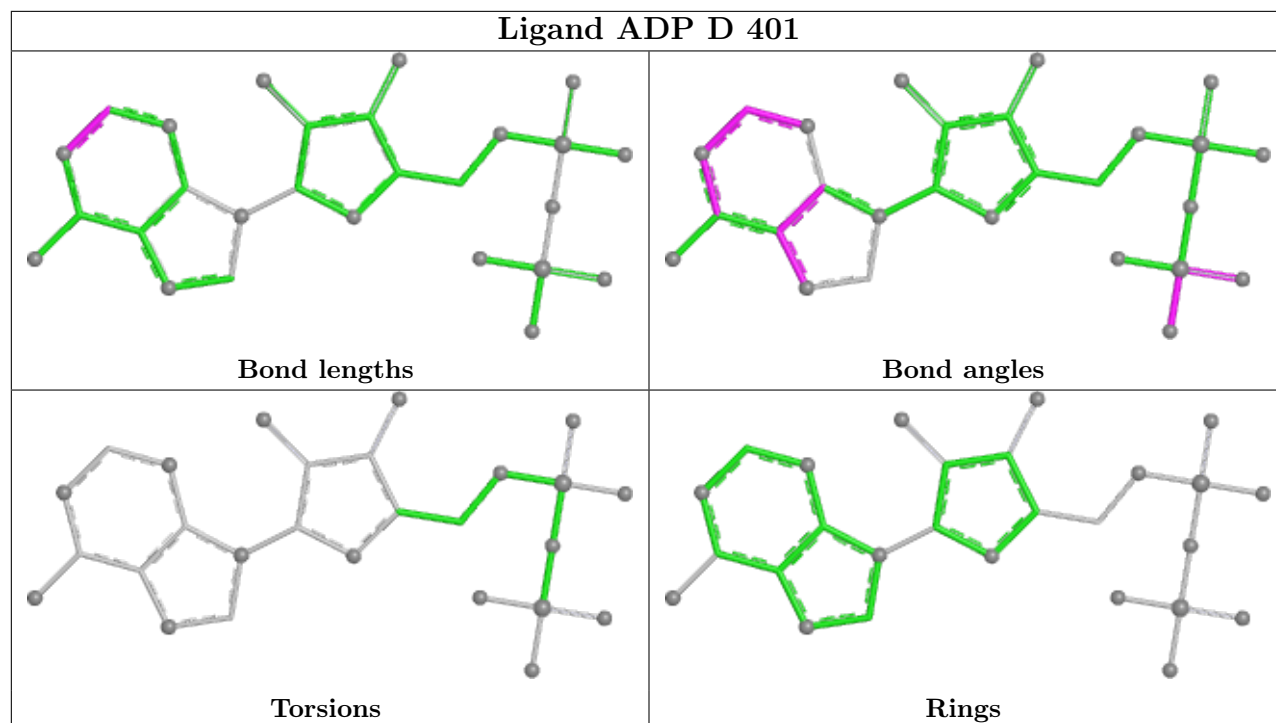
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2   | D     | 401 | ADP  | 4       | 0            |
| 2   | O     | 401 | ADP  | 5       | 0            |
| 2   | Q     | 401 | ADP  | 4       | 0            |
| 2   | N     | 401 | ADP  | 4       | 0            |
| 2   | S     | 401 | ADP  | 4       | 0            |
| 2   | H     | 401 | ADP  | 4       | 0            |
| 2   | A     | 401 | ADP  | 4       | 0            |
| 2   | R     | 401 | ADP  | 4       | 0            |
| 2   | I     | 401 | ADP  | 4       | 0            |
| 2   | B     | 401 | ADP  | 4       | 0            |
| 2   | C     | 401 | ADP  | 4       | 0            |
| 2   | E     | 401 | ADP  | 4       | 0            |
| 2   | W     | 401 | ADP  | 4       | 0            |
| 2   | G     | 401 | ADP  | 4       | 0            |
| 2   | F     | 401 | ADP  | 5       | 0            |
| 2   | U     | 401 | ADP  | 4       | 0            |
| 2   | L     | 401 | ADP  | 4       | 0            |

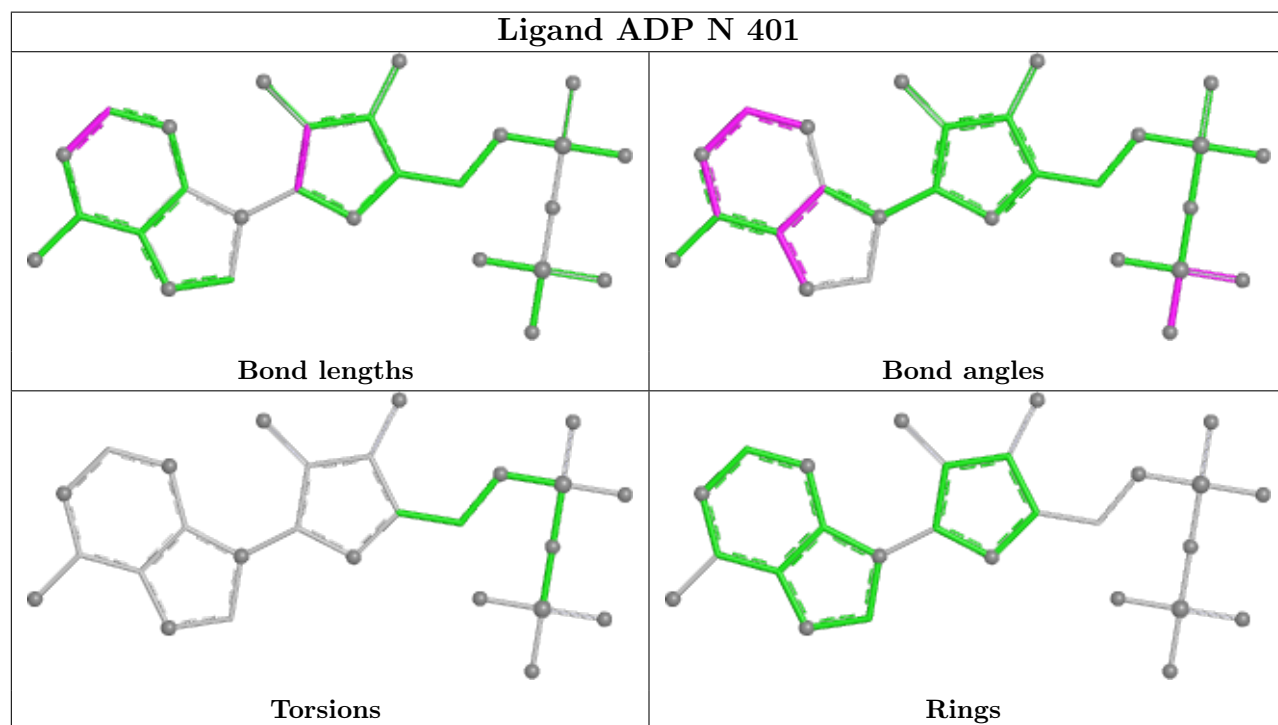
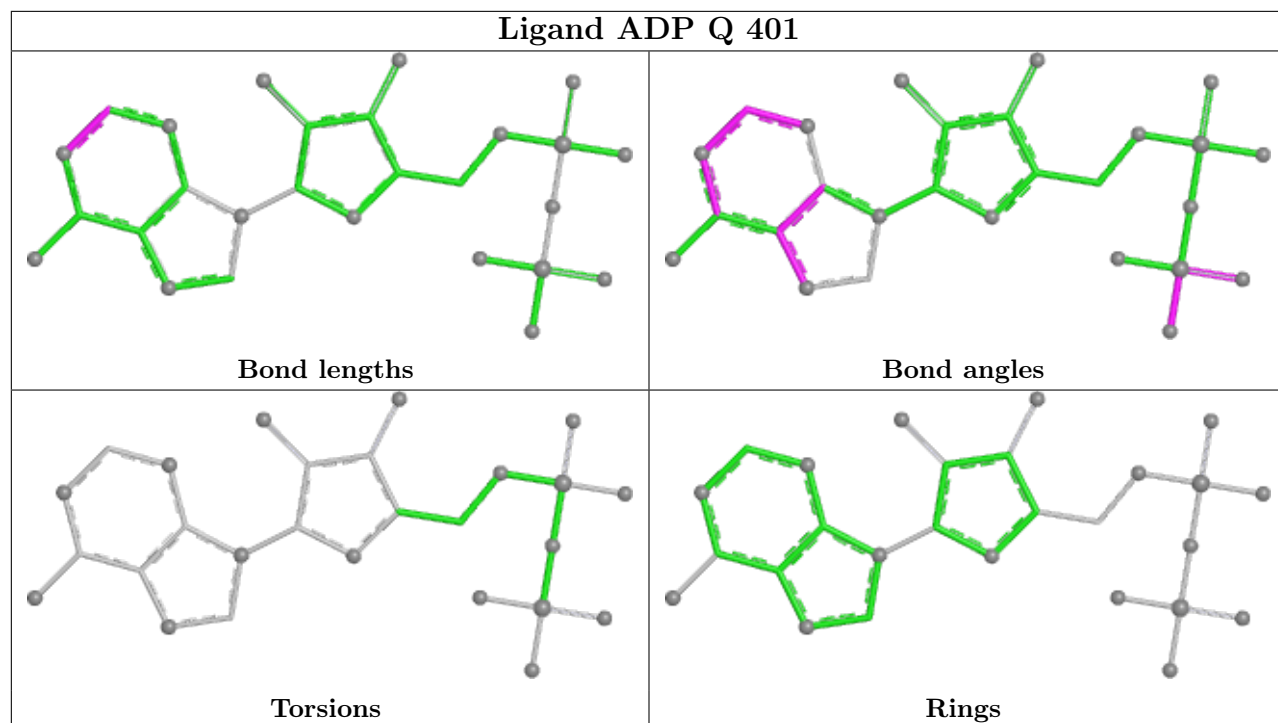
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



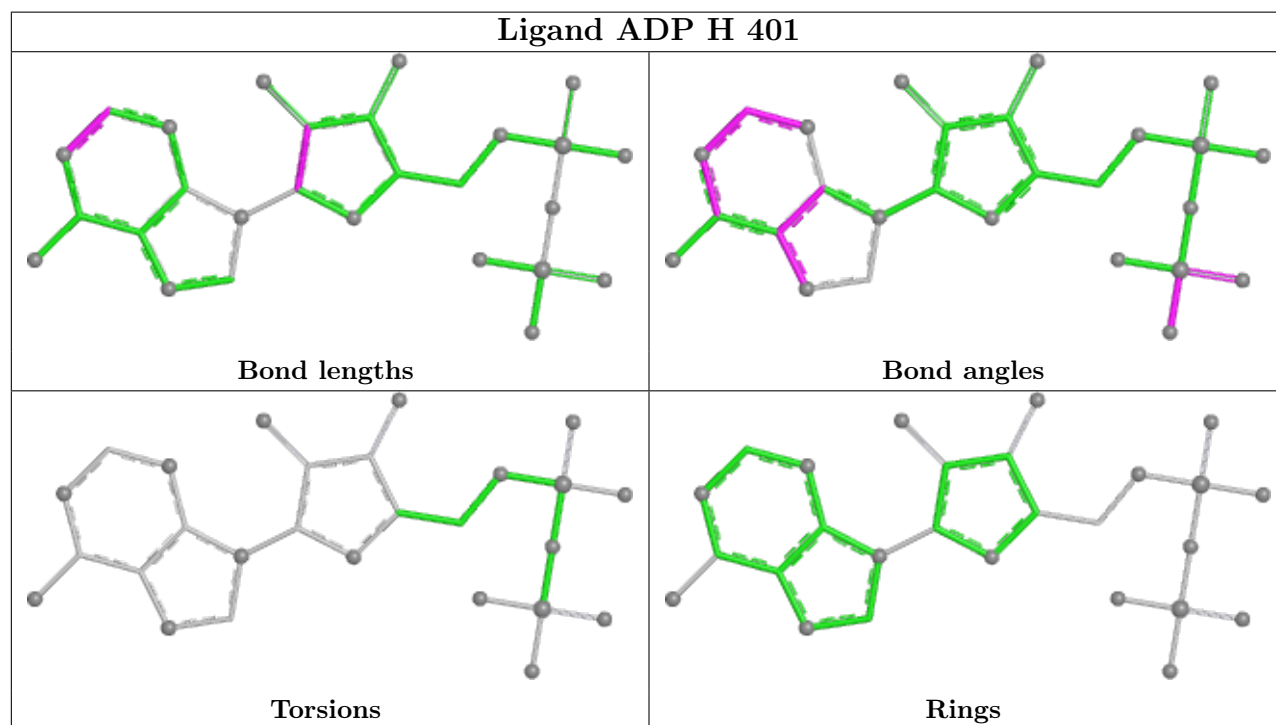
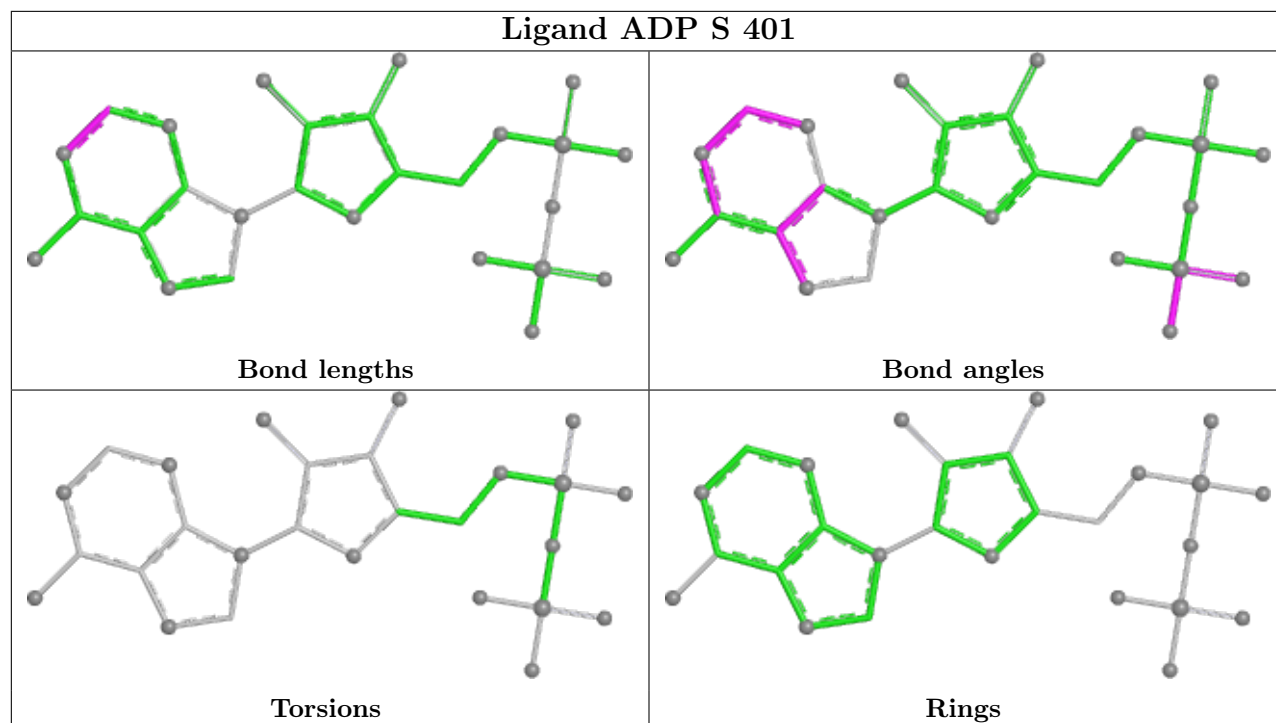


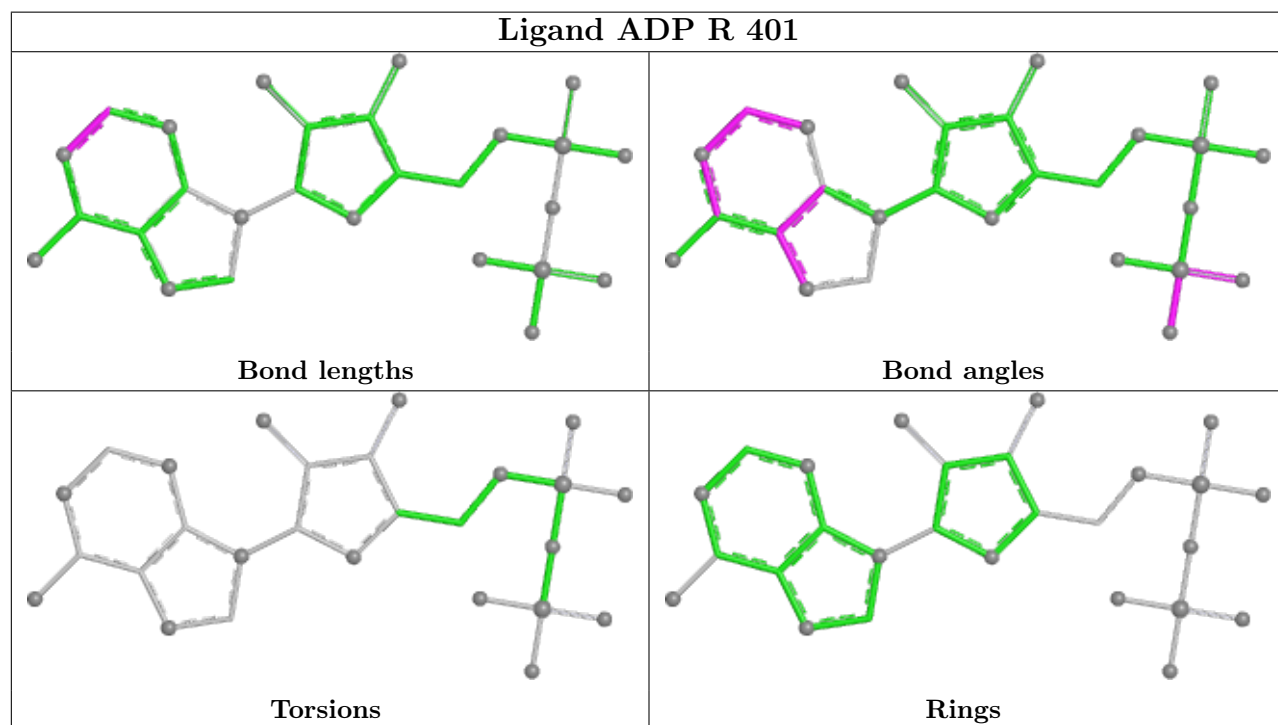
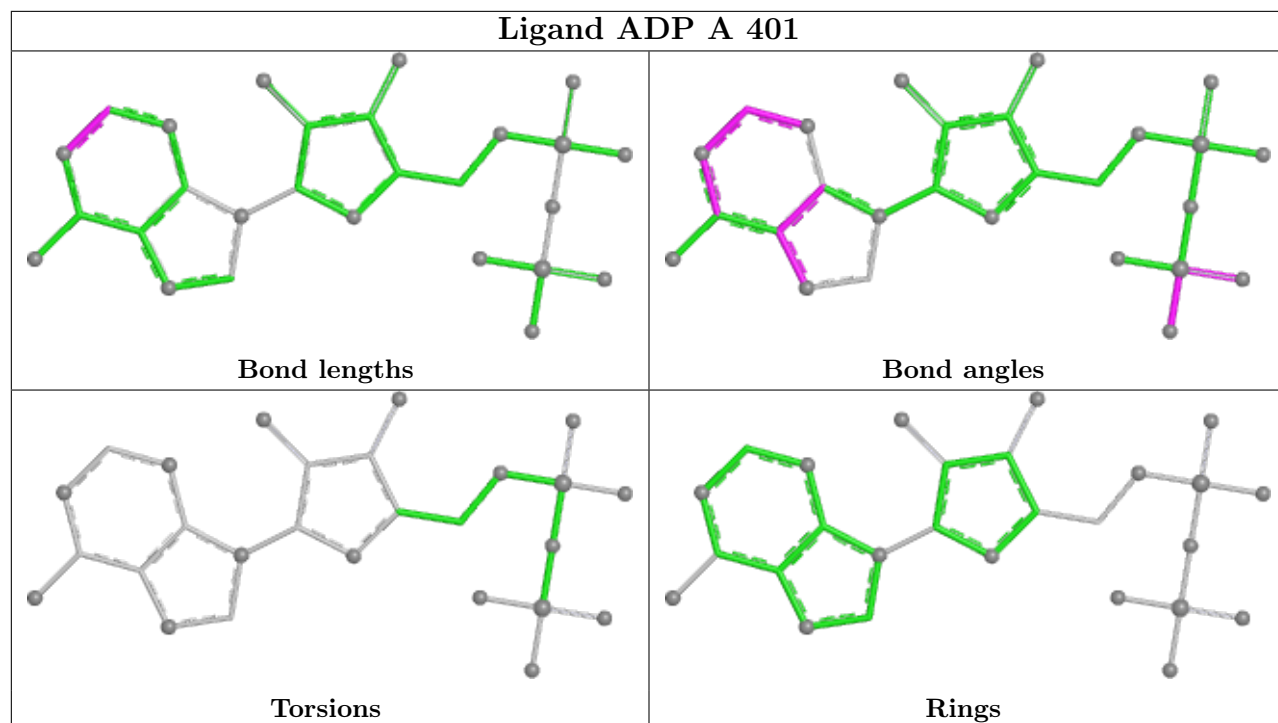


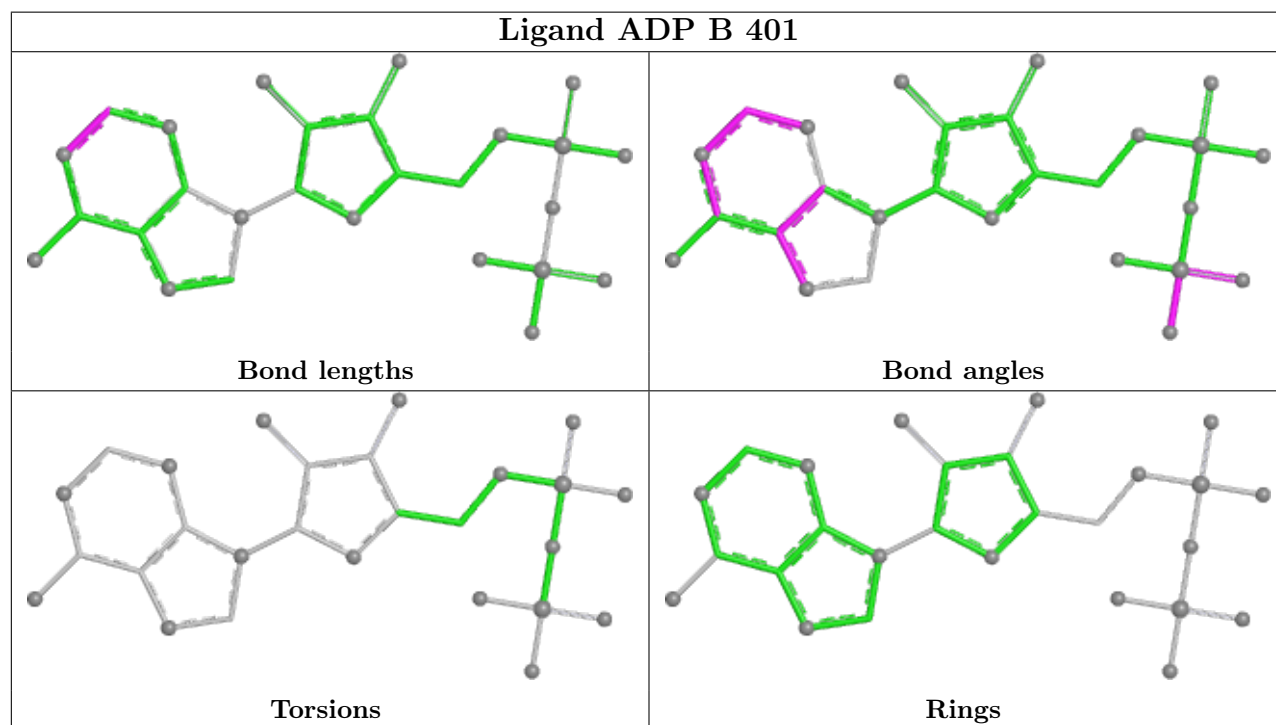
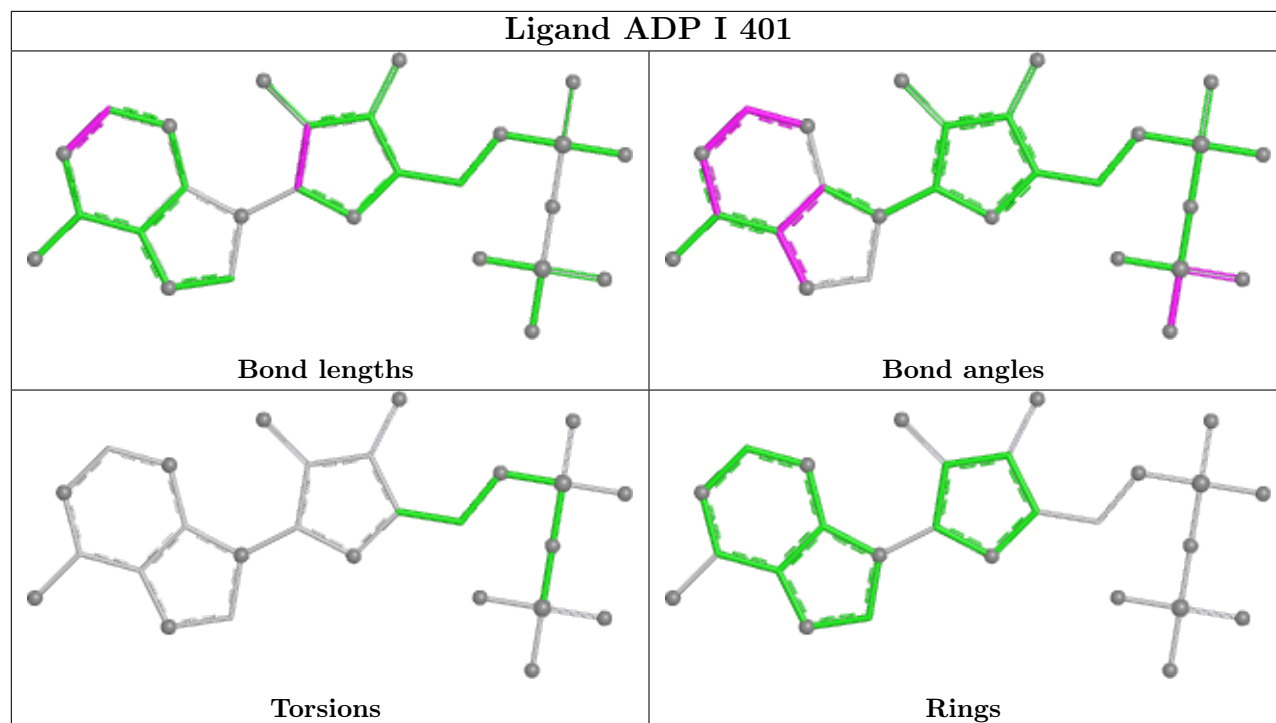


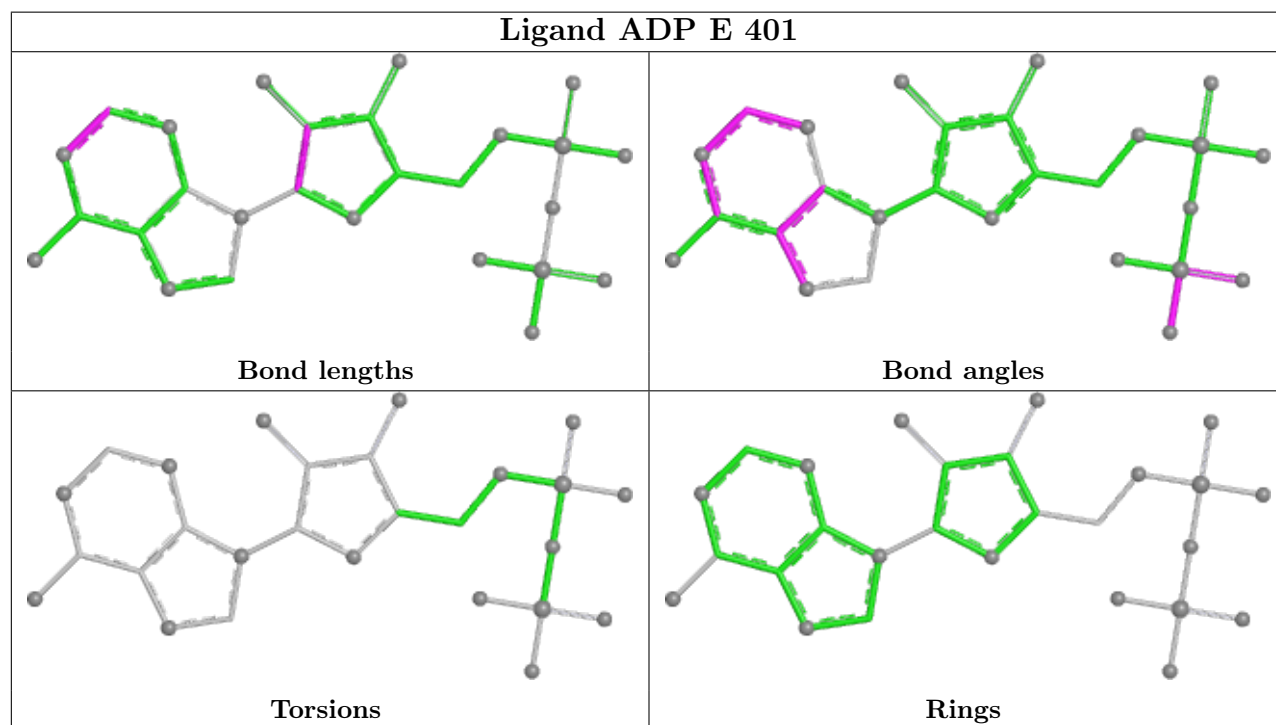
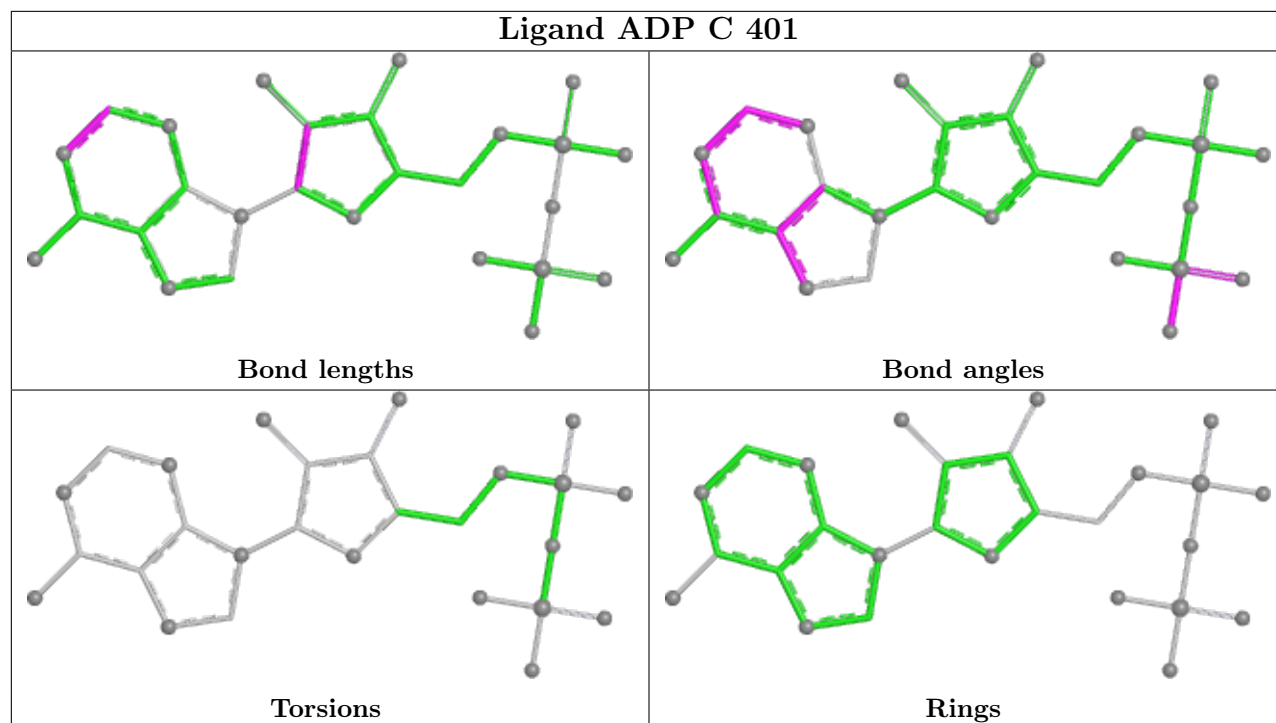


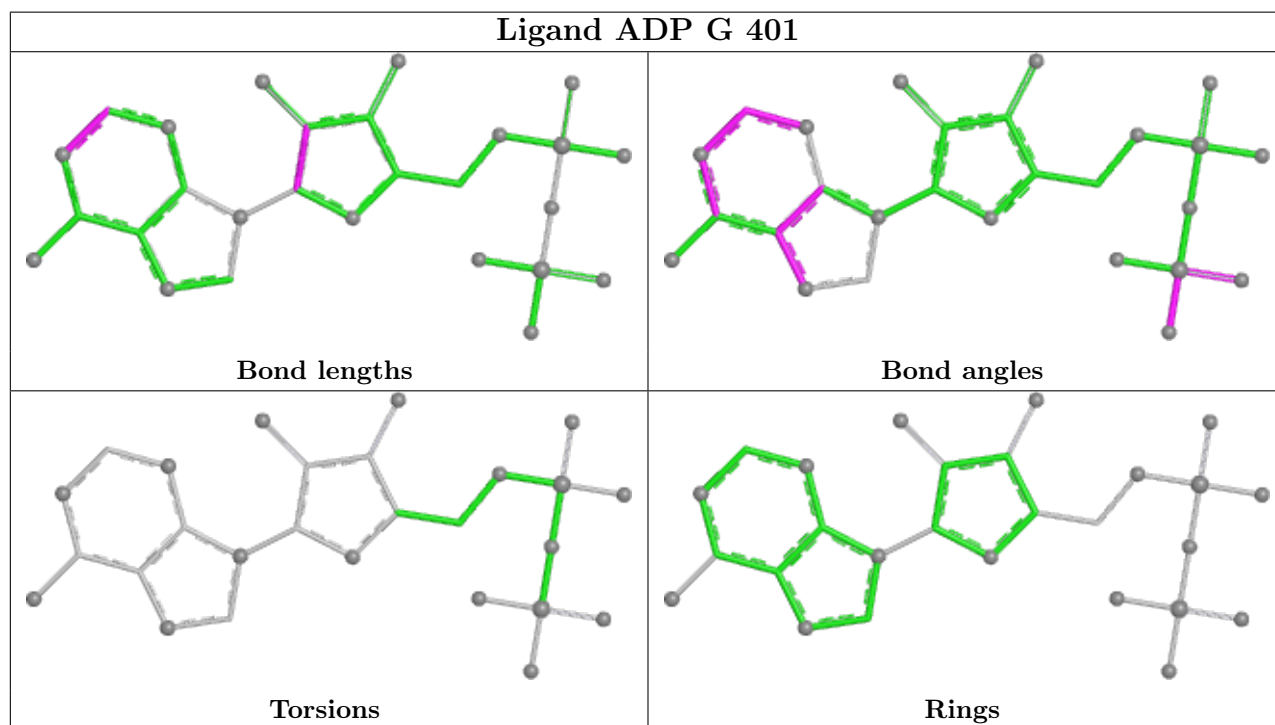
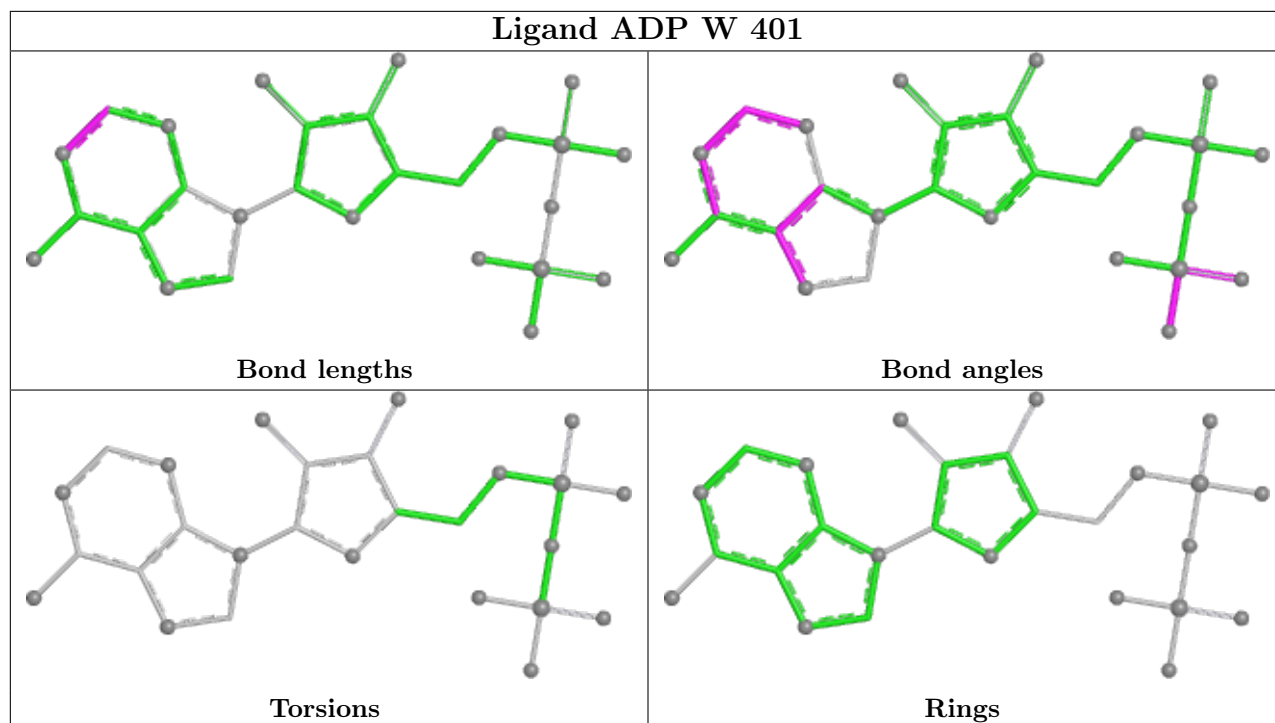


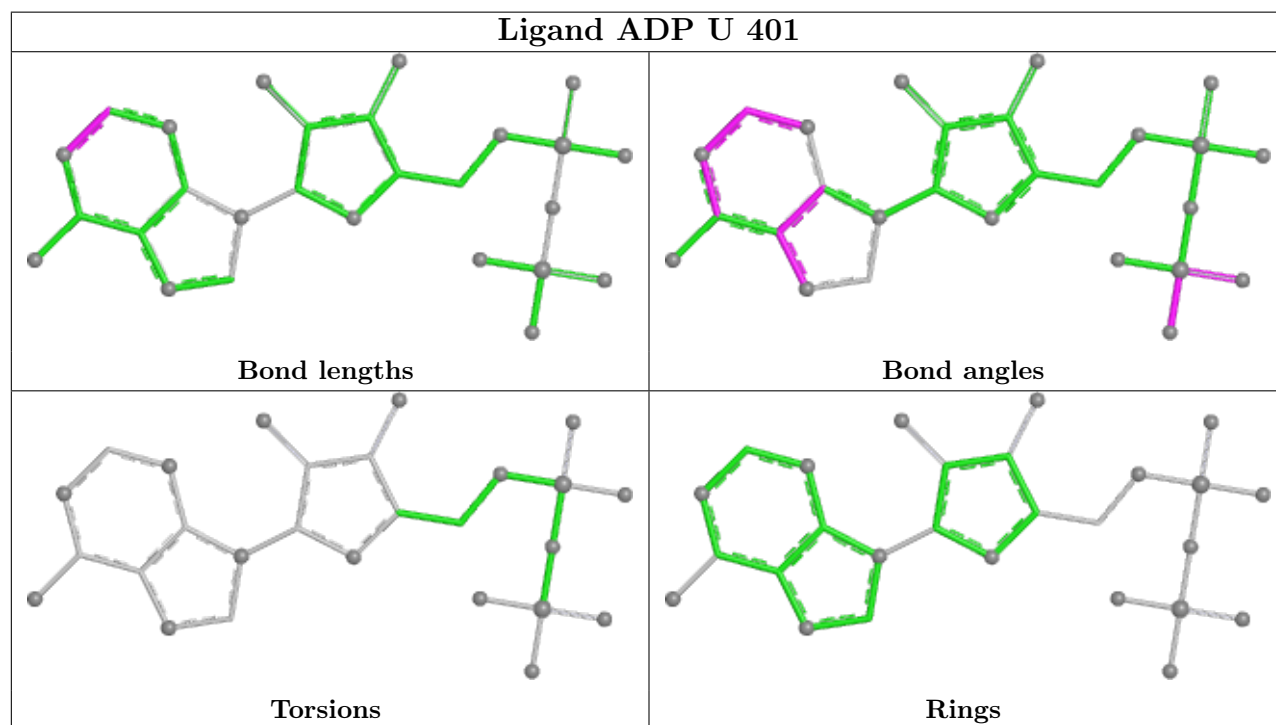
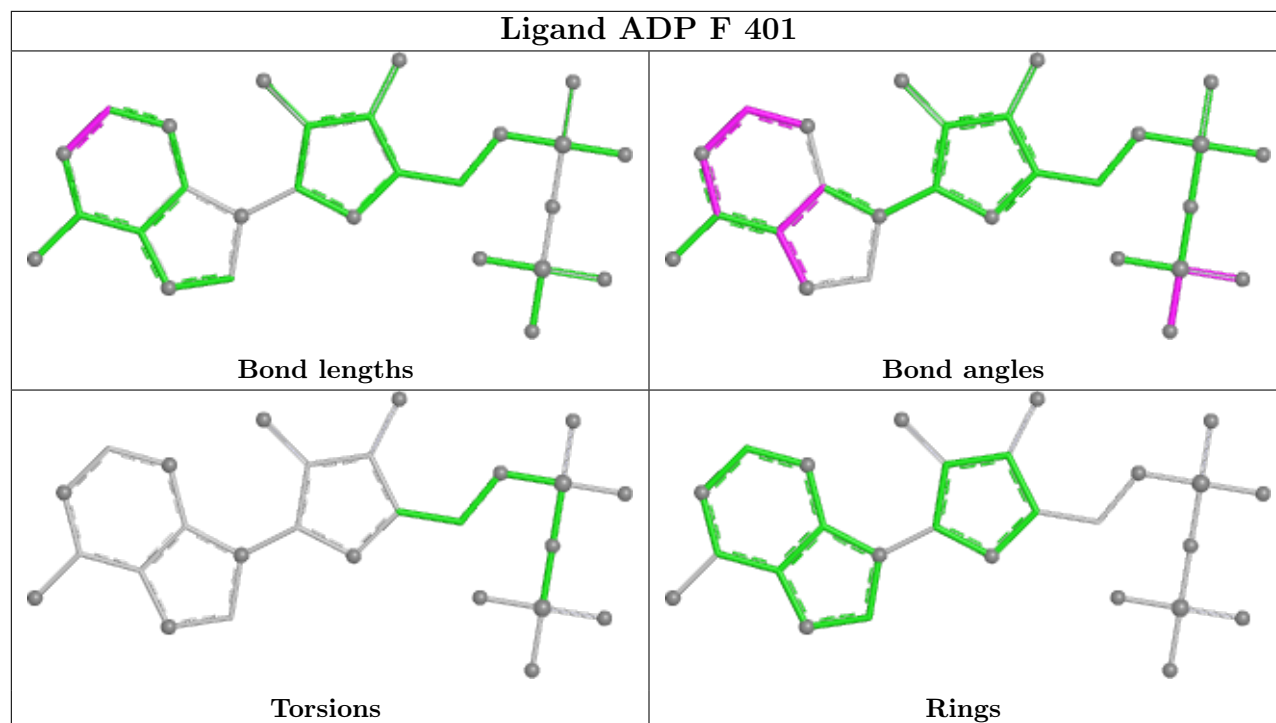


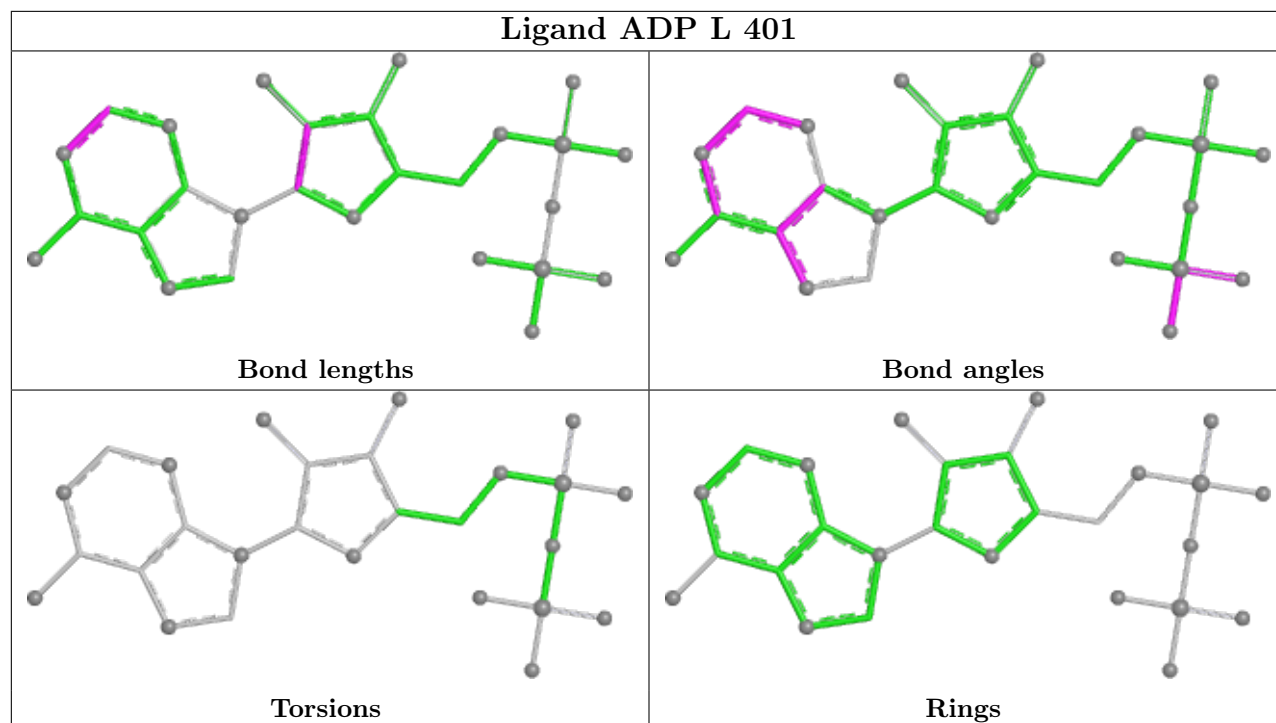












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

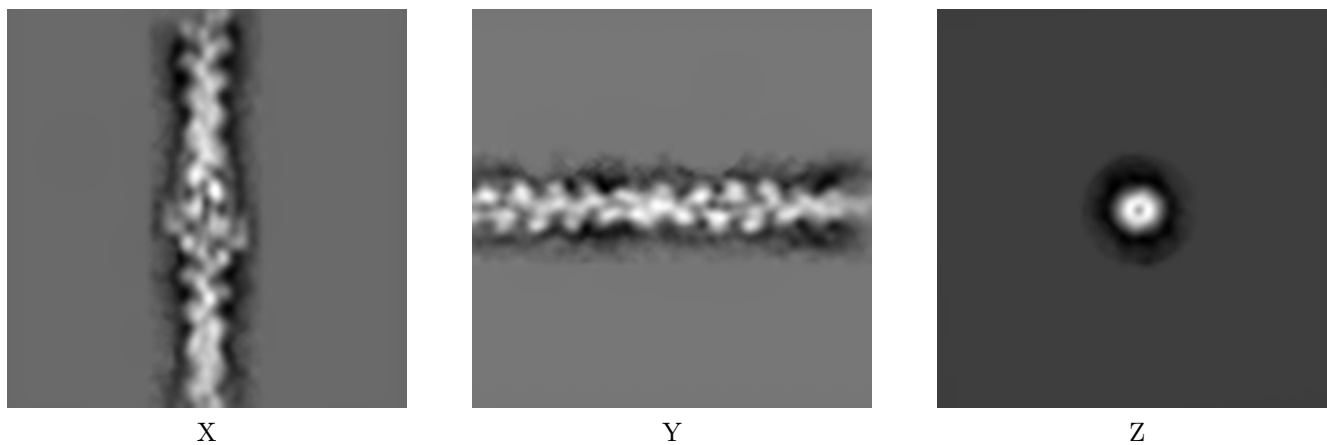
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3578. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

### 6.1 Orthogonal projections [i](#)

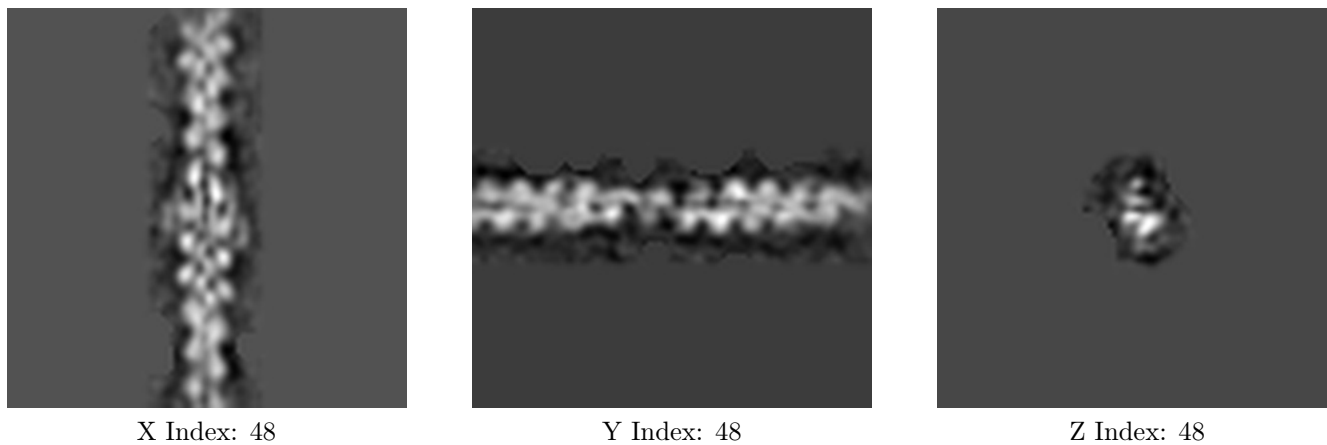
#### 6.1.1 Primary map



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

### 6.2 Central slices [i](#)

#### 6.2.1 Primary map





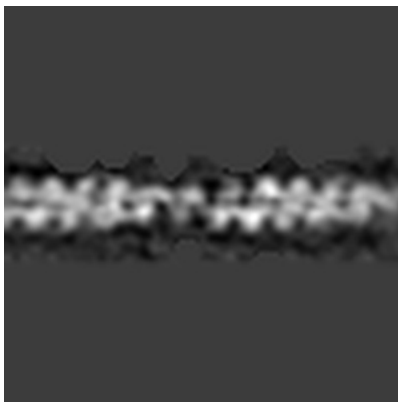
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

### 6.3.1 Primary map



X Index: 50



Y Index: 48



Z Index: 27

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

## 6.4 Orthogonal surface views [i](#)

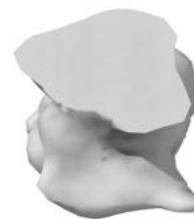
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 1.8. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

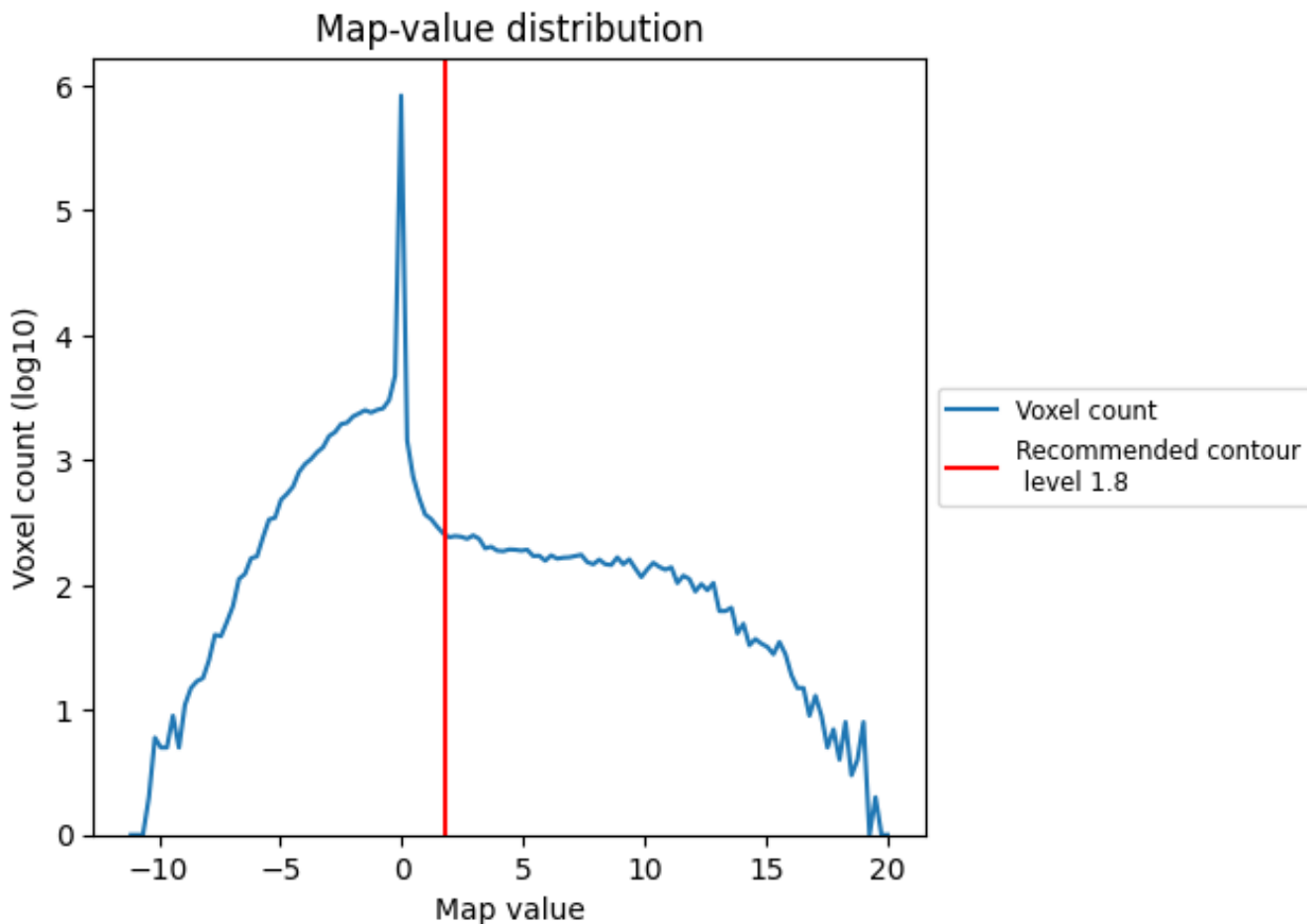
## 6.5 Mask visualisation

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

## 7 Map analysis [i](#)

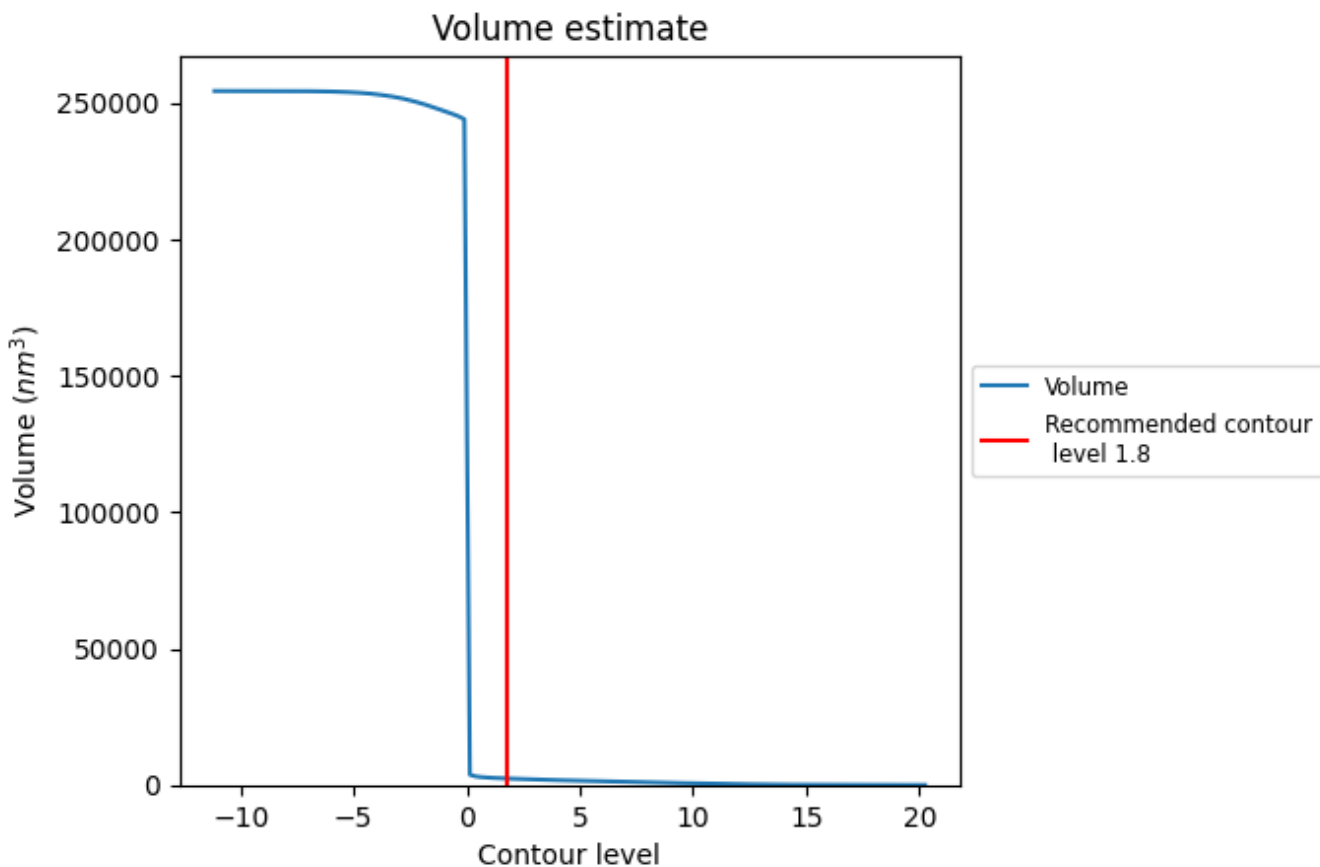
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

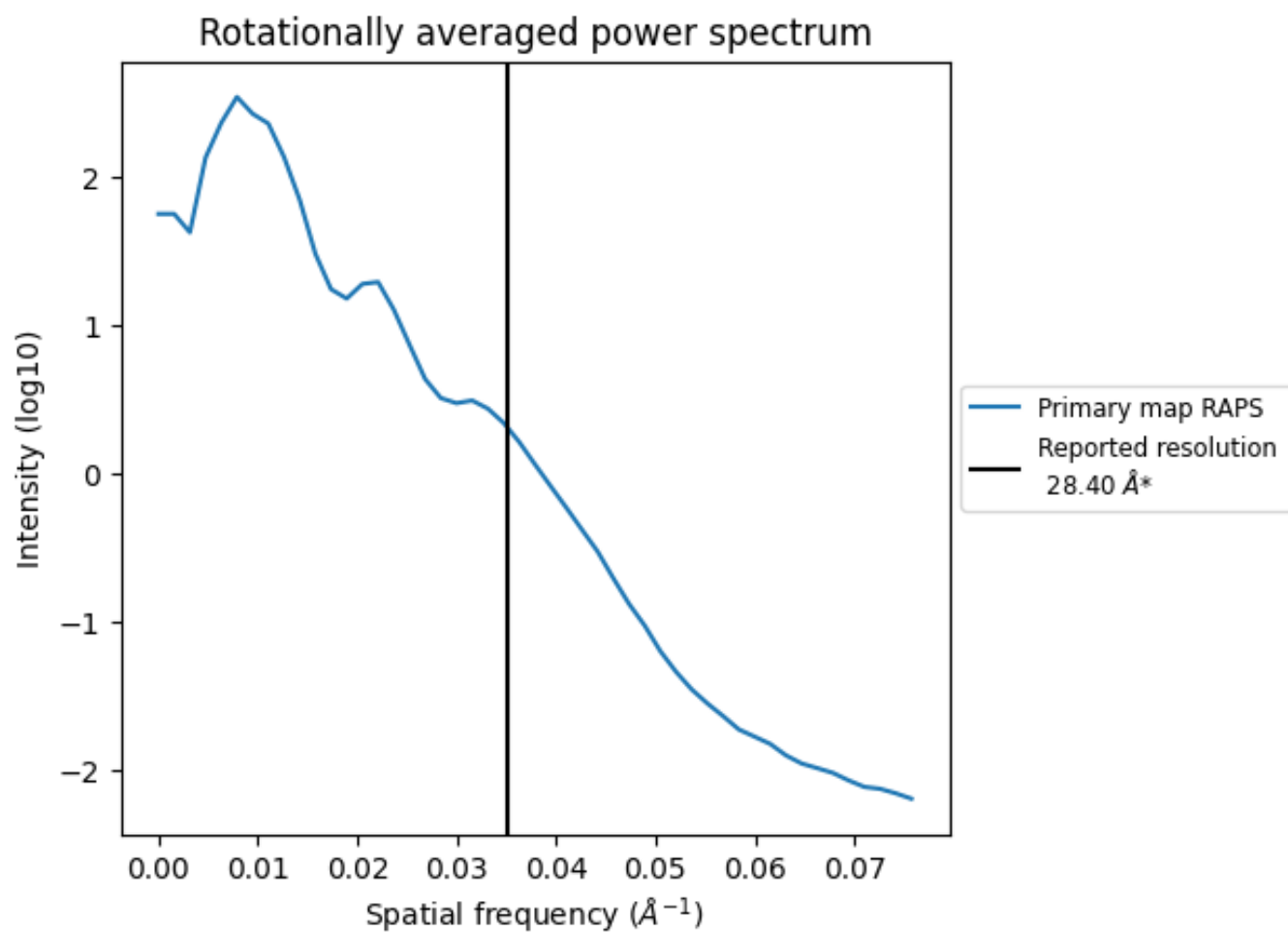
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2359 nm<sup>3</sup>; this corresponds to an approximate mass of 2131 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum [i](#)



\*Reported resolution corresponds to spatial frequency of  $0.035 \text{\AA}^{-1}$

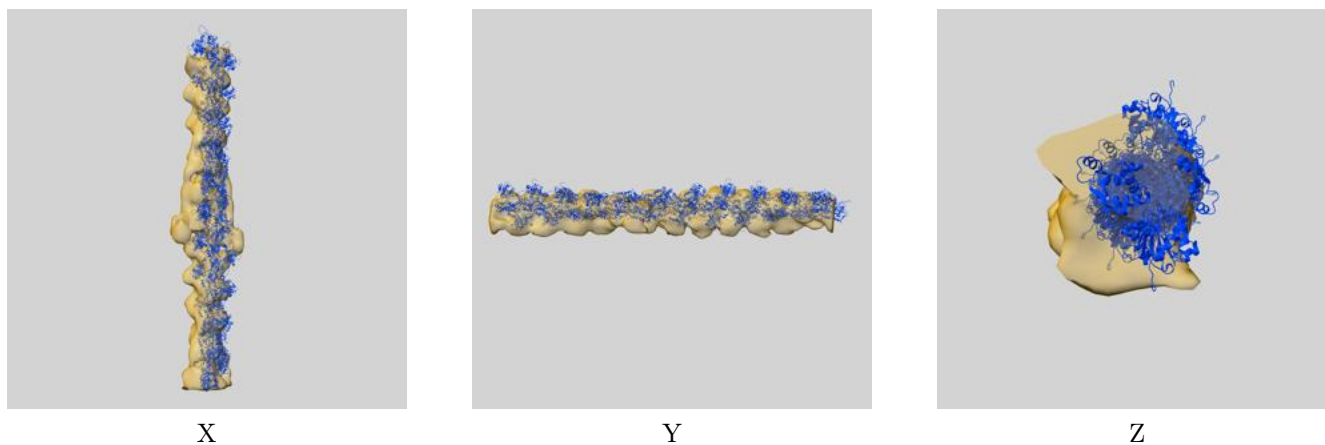
## 8 Fourier-Shell correlation

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

## 9 Map-model fit [i](#)

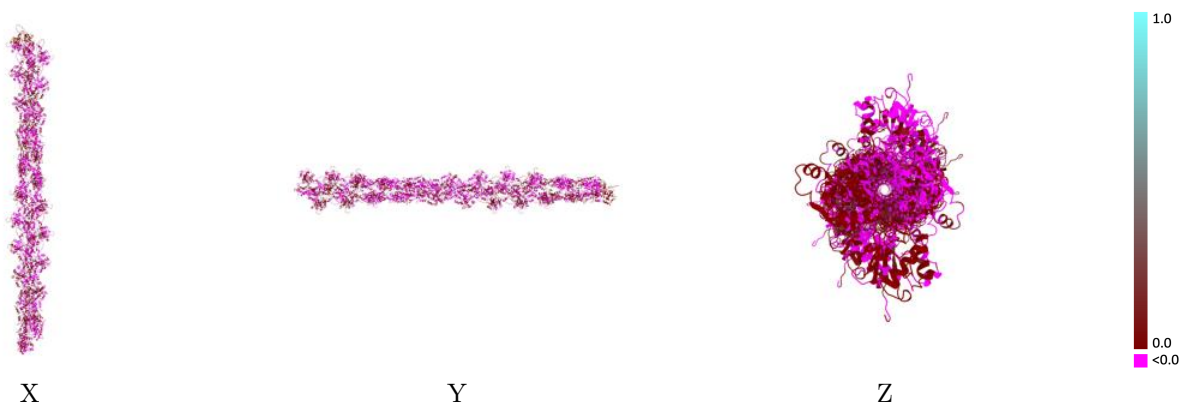
This section contains information regarding the fit between EMDB map EMD-3578 and PDB model 5MVY. Per-residue inclusion information can be found in section [3](#) on page [7](#).

### 9.1 Map-model overlay [i](#)



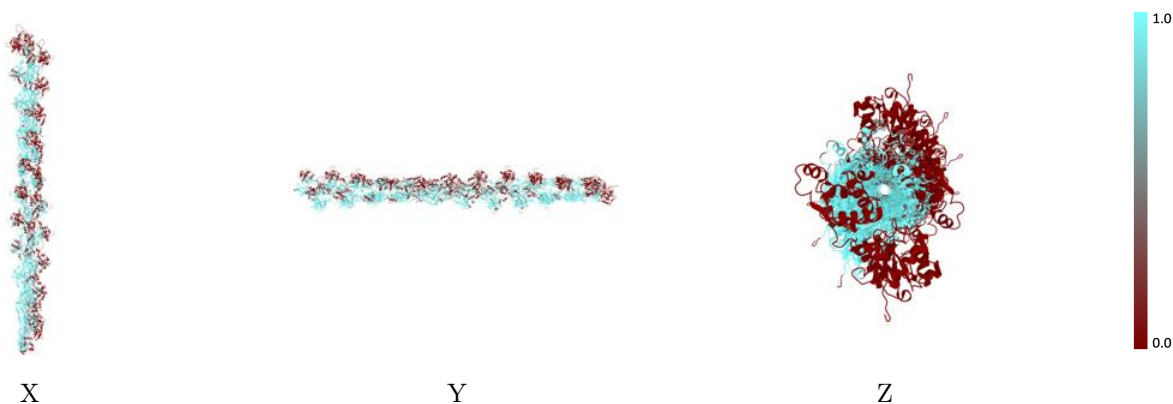
The images above show the 3D surface view of the map at the recommended contour level 1.8 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [\(i\)](#)



The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

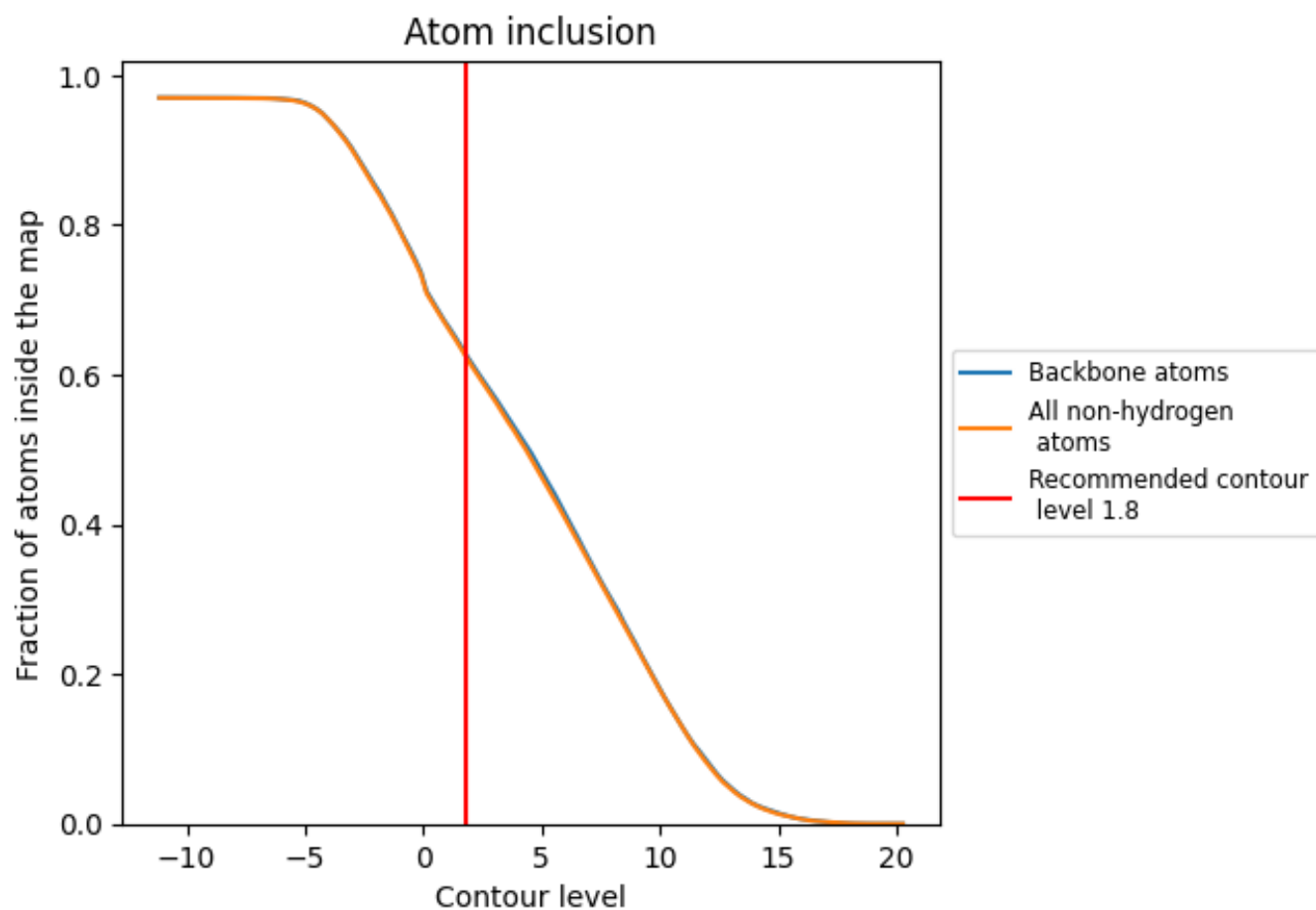
## 9.3 Atom inclusion mapped to coordinate model [\(i\)](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (1.8).



















































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 63% of all backbone atoms, 62% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (1.8) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion   | Q-score   |
|-------|--|---|
| All   |  0.6239   |  0.0030    |
| A     |  0.2000   |  -0.0060   |
| B     |  0.2892   |  -0.0190   |
| C     |  0.8974   |  0.0240    |
| D     |  0.4417   |  -0.0100   |
| E     |  0.9363   |  0.0230    |
| F     |  0.5208   |  -0.0010   |
| G     |  0.7921   |  0.0050    |
| H     |  0.6141   |  0.0040    |
| I     |  0.6358   |  0.0150    |
| J     |  0.6213   |  -0.0000   |
| K     |  0.4954   |  -0.0010   |
| L     |  0.6010   |  -0.0240   |
| M     |  0.5043   |  -0.0030   |
| N     |  0.6585  |  -0.0170  |
| O     |  0.4468 |  0.0040  |
| P     |  0.8114 |  -0.0100 |
| Q     |  0.5494 |  -0.0000 |
| R     |  0.9060 |  0.0090  |
| S     |  0.5969 |  0.0050  |
| T     |  0.8145 |  0.0150  |
| U     |  0.6530 |  0.0220  |
| V     |  0.6702 |  0.0120  |
| W     |  0.6933 |  0.0230  |

