



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 26, 2014 – 03:08 PM GMT

PDB ID : 1R4N  
Title : APPBP1-UBA3-NEDD8, an E1-ubiquitin-like protein complex with ATP  
Authors : Walden, H.; Podgorski, M.S.; Holton, J.M; Schulman, B.A.  
Deposited on : 2003-10-07  
Resolution : 3.60 Å(reported)

This is a full wwPDB 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 <http://wwpdb.org/ValidationPDFNotes.html>

---

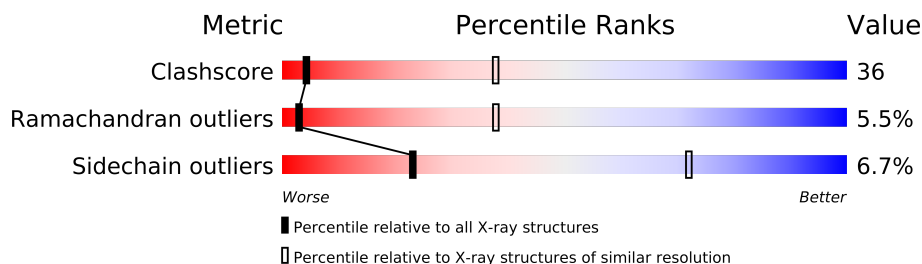
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.15 2013
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Percentile statistics	:	21963
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 3.60 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)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1155 (3.80-3.40)
Ramachandran outliers	78287	1109 (3.80-3.40)
Sidechain outliers	78261	1108 (3.80-3.40)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	529	
1	C	529	
1	E	529	
1	G	529	
2	B	431	
2	D	431	
2	F	431	
2	H	431	
3	I	76	
3	J	76	
3	K	76	
3	L	76	

## 2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 31744 atoms, of which 0 are hydrogen and 0 are deuterium.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 amyloid beta precursor protein-binding protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	516	Total	C	N	O	S	0	0	0
			4105	2602	699	789	15			
1	C	516	Total	C	N	O	S	0	0	0
			4105	2602	699	789	15			
1	E	516	Total	C	N	O	S	0	0	0
			4105	2602	699	789	15			
1	G	516	Total	C	N	O	S	0	0	0
			4105	2602	699	789	15			

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	ASN	DELETION	UNP Q13564
A	?	-	GLU	DELETION	UNP Q13564
A	?	-	ASN	DELETION	UNP Q13564
A	?	-	GLY	DELETION	UNP Q13564
A	?	-	ALA	DELETION	UNP Q13564
C	?	-	ASN	DELETION	UNP Q13564
C	?	-	GLU	DELETION	UNP Q13564
C	?	-	ASN	DELETION	UNP Q13564
C	?	-	GLY	DELETION	UNP Q13564
C	?	-	ALA	DELETION	UNP Q13564
E	?	-	ASN	DELETION	UNP Q13564
E	?	-	GLU	DELETION	UNP Q13564
E	?	-	ASN	DELETION	UNP Q13564
E	?	-	GLY	DELETION	UNP Q13564
E	?	-	ALA	DELETION	UNP Q13564
G	?	-	ASN	DELETION	UNP Q13564
G	?	-	GLU	DELETION	UNP Q13564
G	?	-	ASN	DELETION	UNP Q13564
G	?	-	GLY	DELETION	UNP Q13564
G	?	-	ALA	DELETION	UNP Q13564

- Molecule 2 is a protein called ubiquitin-activating enzyme E1C.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	418	Total	C	N	O	S	0	0	0
			3199	2038	549	595	17			
2	D	418	Total	C	N	O	S	0	0	0
			3199	2038	549	595	17			
2	F	418	Total	C	N	O	S	0	0	0
			3199	2038	549	595	17			
2	H	418	Total	C	N	O	S	0	0	0
			3199	2038	549	595	17			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	150	ALA	CYS	ENGINEERED	UNP Q8TBC4
D	150	ALA	CYS	ENGINEERED	UNP Q8TBC4
F	150	ALA	CYS	ENGINEERED	UNP Q8TBC4
H	150	ALA	CYS	ENGINEERED	UNP Q8TBC4

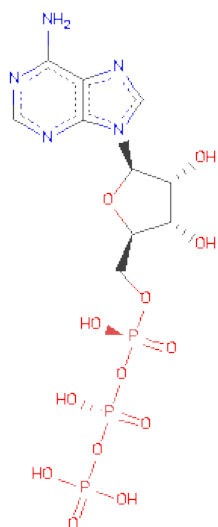
- Molecule 3 is a protein called Ubiquitin-like protein NEDD8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	I	76	Total	C	N	O	S	0	0	0
			600	378	104	116	2			
3	J	76	Total	C	N	O	S	0	0	0
			600	378	104	116	2			
3	K	76	Total	C	N	O	S	0	0	0
			600	378	104	116	2			
3	L	76	Total	C	N	O	S	0	0	0
			600	378	104	116	2			

- Molecule 4 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	H	2	Total	Zn	0	0
			2	2		
4	J	1	Total	Zn	0	0
			1	1		
4	F	1	Total	Zn	0	0
			1	1		

- Molecule 5 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: C<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>13</sub>P<sub>3</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
5	B	1	Total	C	N	O	P	0	0
			31	10	5	13	3		
5	D	1	Total	C	N	O	P	0	0
			31	10	5	13	3		
5	F	1	Total	C	N	O	P	0	0
			31	10	5	13	3		
5	H	1	Total	C	N	O	P	0	0
			31	10	5	13	3		

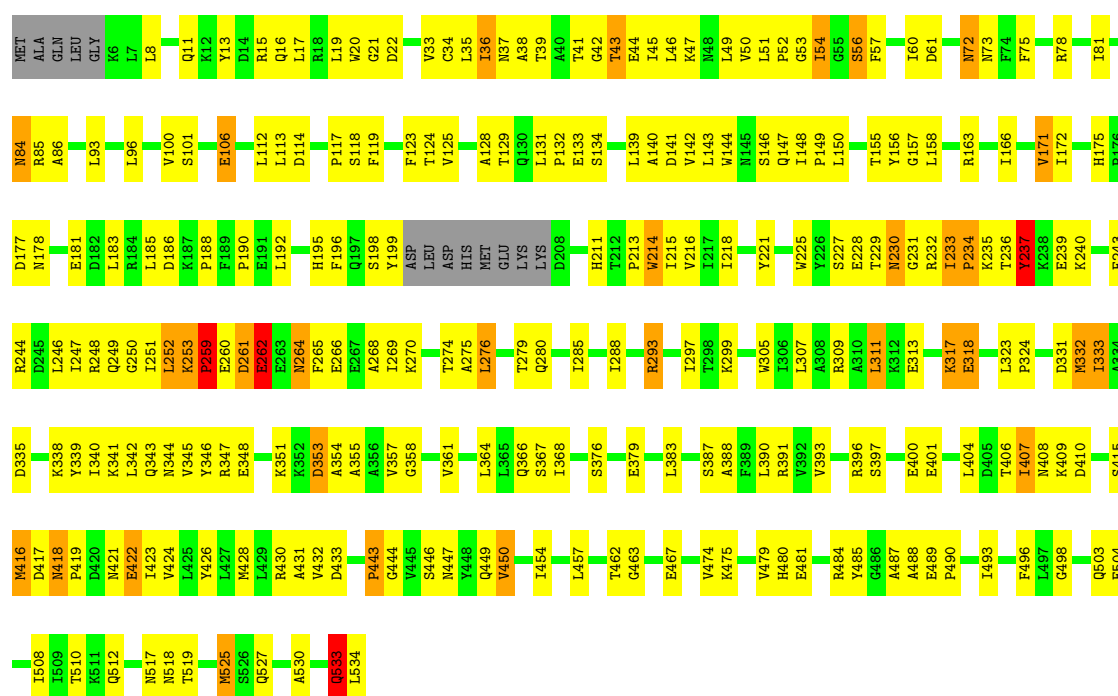
### 3 Residue-property plots

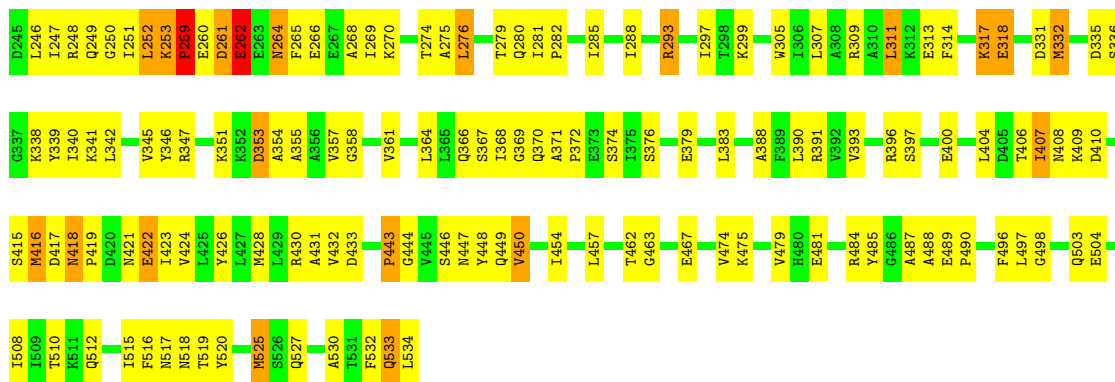
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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 dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). 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.

Note EDS was not executed.

- Molecule 1: amyloid beta precursor protein-binding protein 1

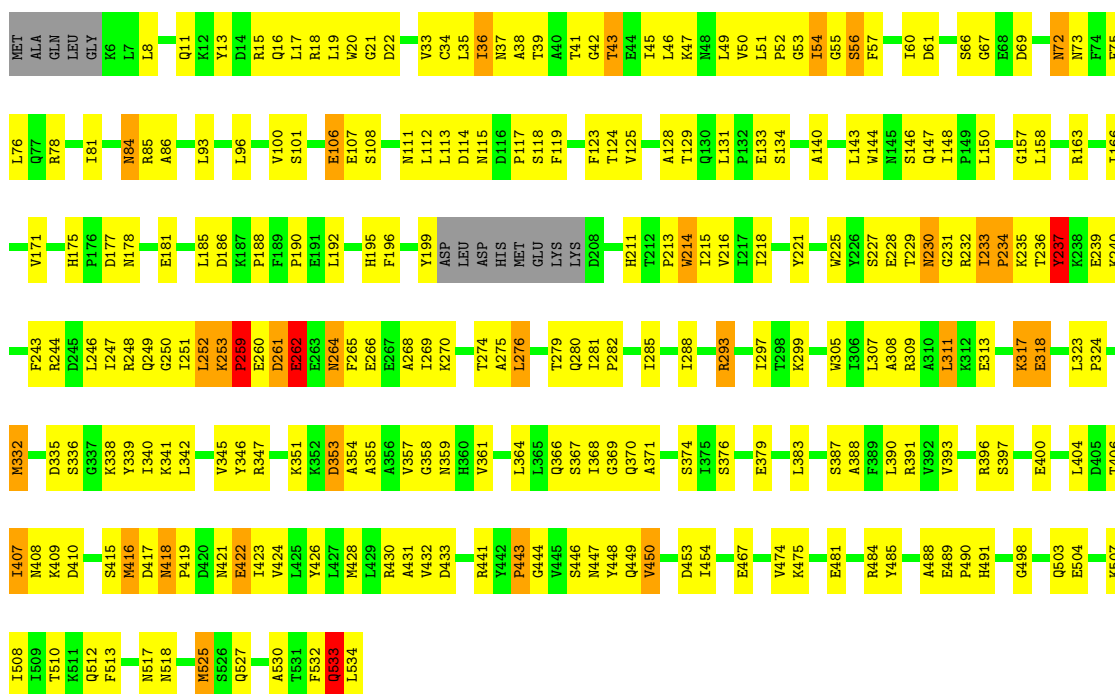
Chain A:





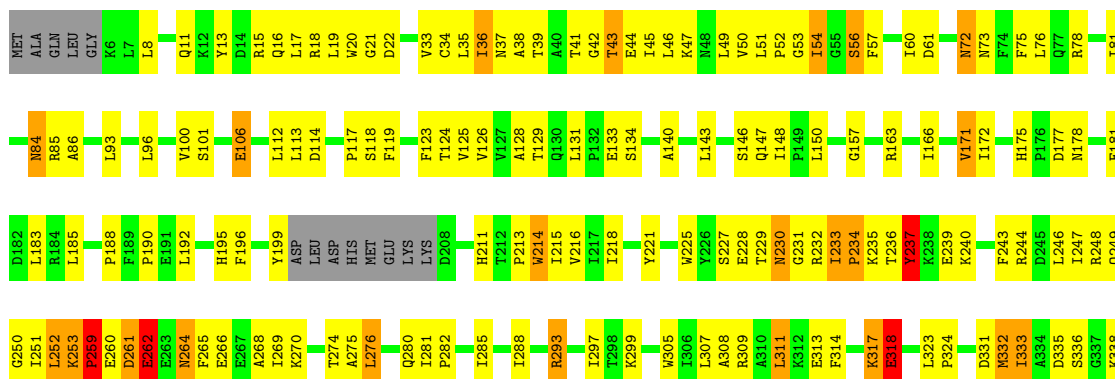
- Molecule 1: amyloid beta precursor protein-binding protein 1

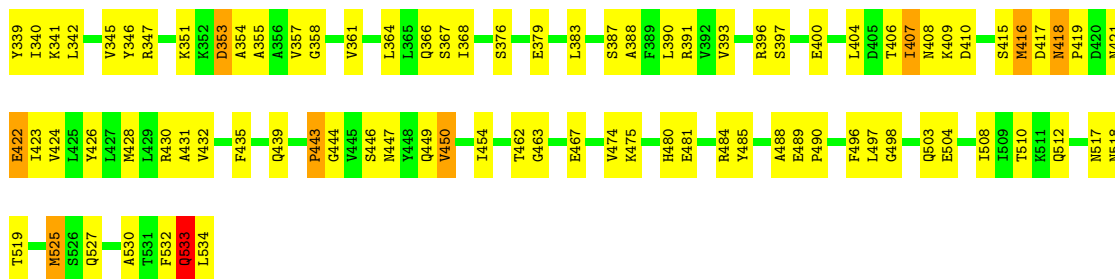
Chain E:



- Molecule 1: amyloid beta precursor protein-binding protein 1

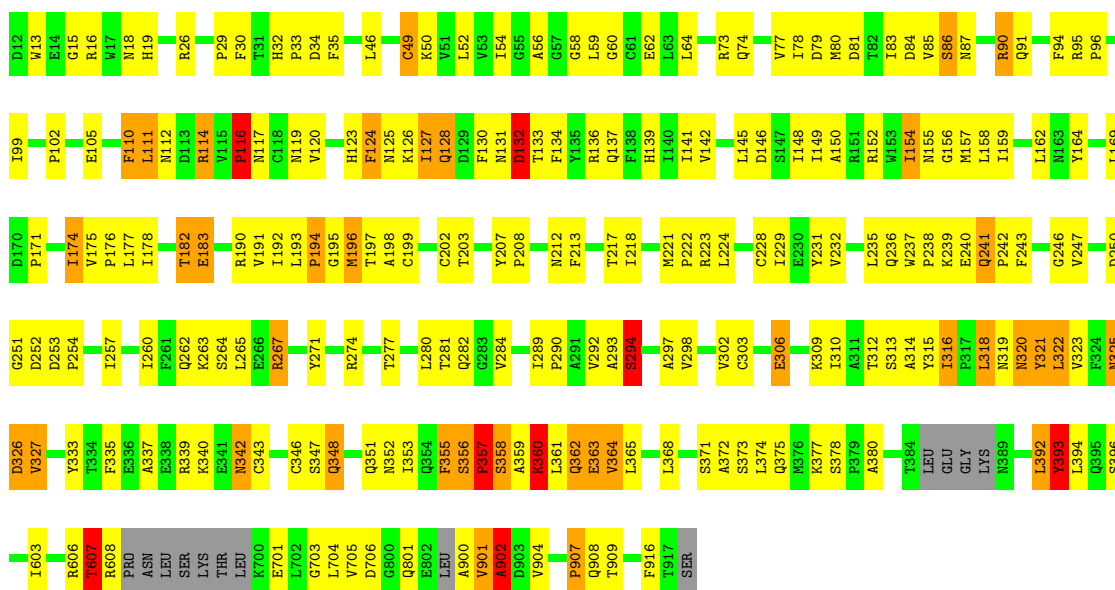
Chain G:





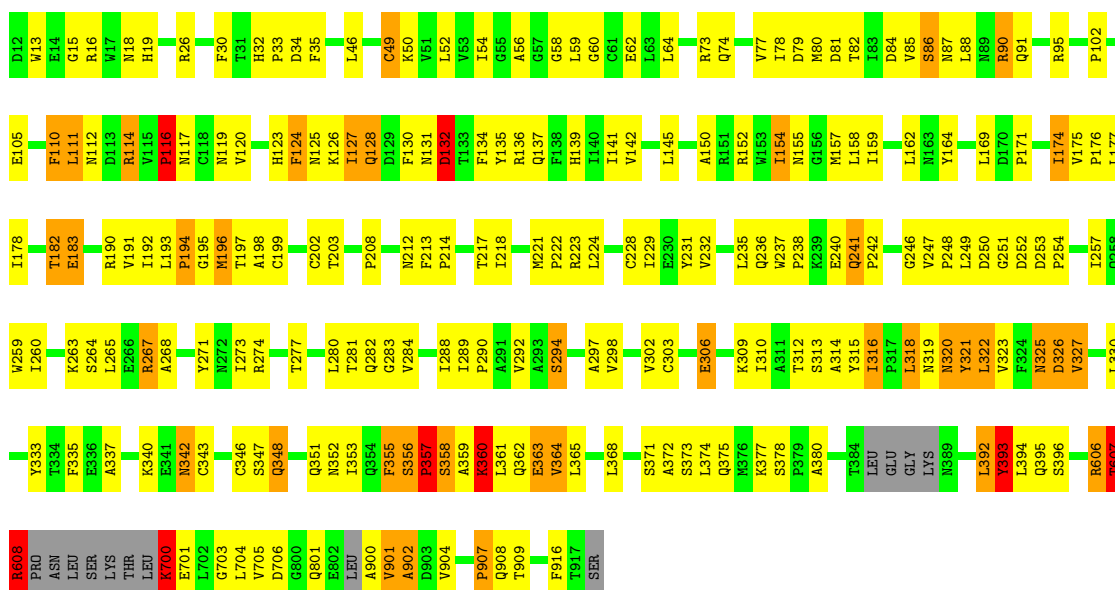
• Molecule 2: ubiquitin-activating enzyme E1C

Chain B:



• Molecule 2: ubiquitin-activating enzyme E1C

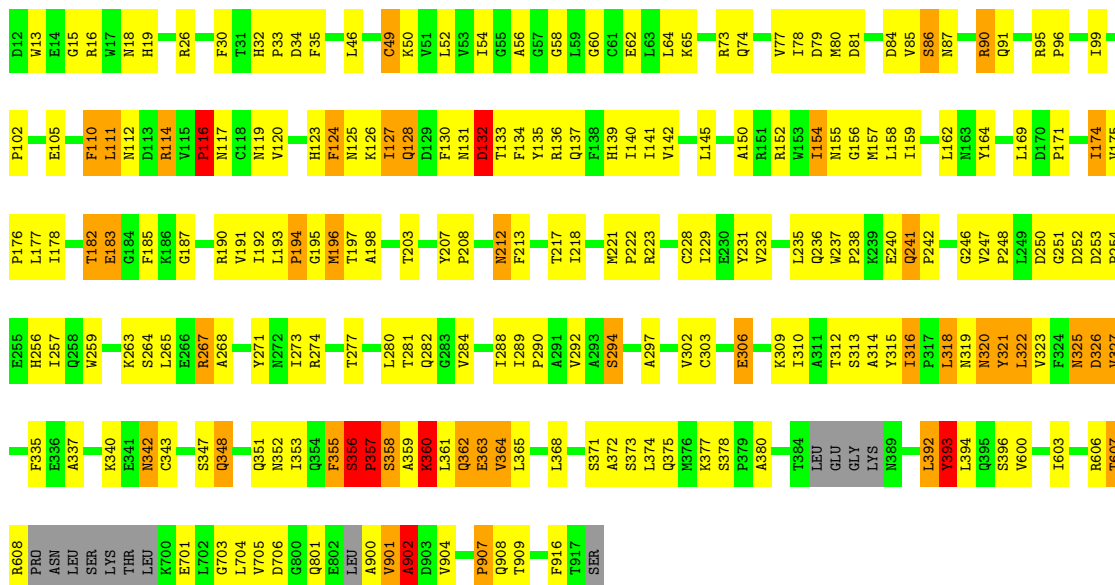
Chain D:





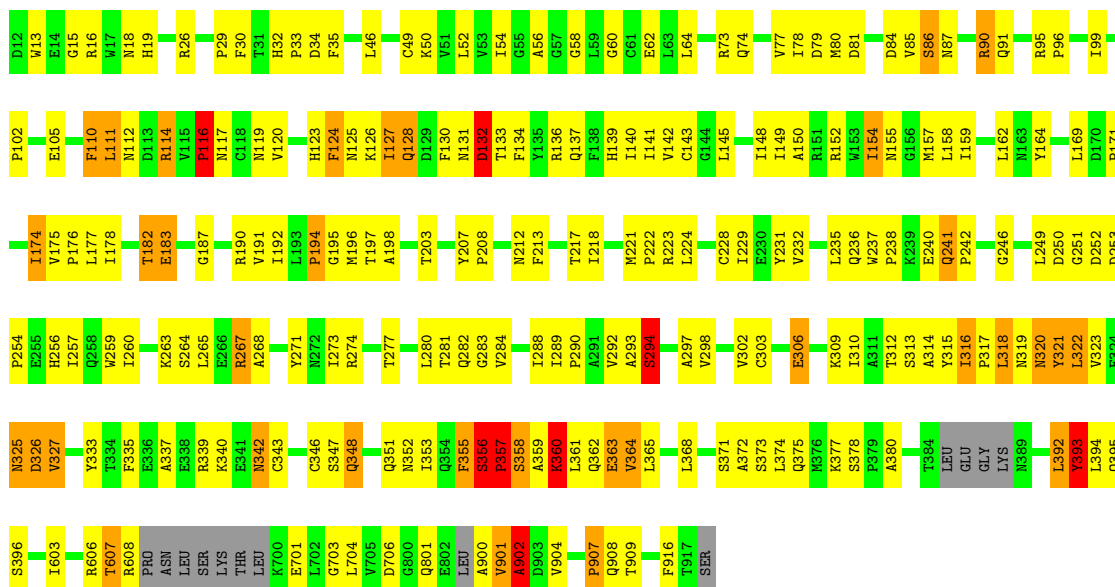
- Molecule 2: ubiquitin-activating enzyme E1C

Chain F:



- Molecule 2: ubiquitin-activating enzyme E1C

Chain H:



- Molecule 3: Ubiquitin-like protein NEDD8

Chain I:



- Molecule 3: Ubiquitin-like protein NEDD8

Chain J:



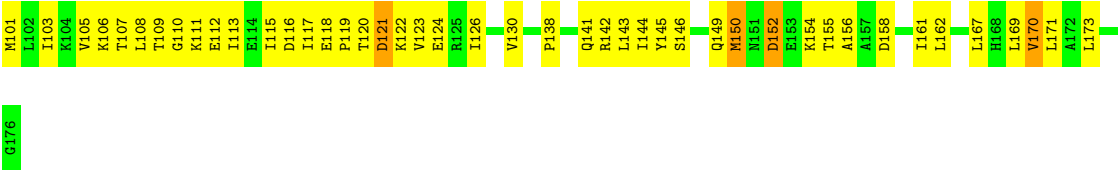
• Molecule 3: Ubiquitin-like protein NEDD8

Chain K:



• Molecule 3: Ubiquitin-like protein NEDD8

Chain L:



## 4 Data and refinement statistics

Xtriage (Phenix) and EDS were not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	135.00Å 197.90Å 211.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.60	Depositor
% Data completeness (in resolution range)	(Not available) (50.00-3.60)	Depositor
$R_{merge}$	0.09	Depositor
$R_{sym}$	(Not available)	Depositor
Refinement program	CNS	Depositor
R, $R_{free}$	0.251 , 0.290	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	31744	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	85.0	wwPDB-VP

## 5 Model quality

### 5.1 Standard geometry

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

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	0.54	5/4185 (0.1%)	0.72	9/5661 (0.2%)
1	C	0.52	6/4185 (0.1%)	0.75	9/5661 (0.2%)
1	E	0.56	3/4185 (0.1%)	0.74	9/5661 (0.2%)
1	G	0.54	6/4185 (0.1%)	0.74	11/5661 (0.2%)
2	B	0.53	1/3268 (0.0%)	0.93	8/4447 (0.2%)
2	D	0.75	9/3269 (0.3%)	0.82	12/4450 (0.3%)
2	F	0.50	1/3268 (0.0%)	0.77	8/4447 (0.2%)
2	H	0.49	2/3268 (0.1%)	0.76	7/4447 (0.2%)
3	I	0.36	0/605	0.67	0/808
3	J	0.32	0/605	0.66	0/808
3	K	0.35	0/605	0.66	0/808
3	L	0.34	0/605	0.66	0/808
All	All	0.54	33/32233 (0.1%)	0.77	73/43667 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	C	0	1
1	G	0	1
2	B	0	1
2	D	0	2
2	F	0	1
2	H	0	1
All	All	0	8

All (33) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	700	LYS	N-CA	16.70	1.79	1.46
1	C	259	PRO	N-CA	14.05	1.71	1.47
1	A	259	PRO	N-CA	13.99	1.71	1.47
2	D	608	ARG	N-CA	13.42	1.73	1.46
2	B	392	LEU	CG-CD2	-13.03	1.03	1.51
1	E	259	PRO	N-CA	12.57	1.68	1.47
1	G	259	PRO	N-CA	12.22	1.68	1.47
2	D	700	LYS	C-N	11.95	1.61	1.34
2	D	608	ARG	C-N	11.85	1.61	1.34
2	D	608	ARG	CA-C	11.47	1.82	1.52
2	D	700	LYS	CA-C	10.56	1.80	1.52
1	A	253	LYS	C-N	9.71	1.52	1.34
1	E	253	LYS	CA-C	9.58	1.77	1.52
2	D	607	THR	C-N	9.56	1.56	1.34
1	E	253	LYS	C-N	9.23	1.51	1.34
1	C	253	LYS	CA-C	9.12	1.76	1.52
1	A	253	LYS	CA-C	8.87	1.76	1.52
1	G	253	LYS	CA-C	7.78	1.73	1.52
1	G	253	LYS	C-N	7.17	1.47	1.34
1	G	252	LEU	C-N	-6.97	1.18	1.34
1	A	252	LEU	C-N	-6.86	1.18	1.34
2	D	607	THR	CA-C	6.74	1.70	1.52
1	C	253	LYS	C-N	6.70	1.47	1.34
1	C	252	LEU	C-N	-6.55	1.19	1.34
2	F	392	LEU	CG-CD2	-5.56	1.31	1.51
2	D	392	LEU	CG-CD2	-5.56	1.31	1.51
1	A	253	LYS	CA-CB	5.53	1.66	1.53
1	G	253	LYS	CA-CB	5.51	1.66	1.53
1	C	259	PRO	C-N	-5.40	1.21	1.34
1	C	253	LYS	CA-CB	5.38	1.65	1.53
2	H	143	CYS	CB-SG	-5.35	1.73	1.81
2	H	392	LEU	CG-CD2	-5.22	1.32	1.51
1	G	259	PRO	C-N	-5.12	1.22	1.34

All (73) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	392	LEU	CB-CG-CD2	-32.12	56.40	111.00
2	B	392	LEU	CB-CG-CD1	14.82	136.20	111.00
1	C	259	PRO	CA-N-CD	-14.32	91.45	111.50
1	E	259	PRO	CA-N-CD	-12.19	94.43	111.50
2	D	700	LYS	N-CA-C	11.93	143.21	111.00
1	A	253	LYS	CB-CA-C	11.19	132.77	110.40

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	259	PRO	CA-N-CD	-10.24	97.17	111.50
2	D	608	ARG	N-CA-C	10.08	138.21	111.00
2	B	392	LEU	CA-CB-CG	9.88	138.01	115.30
1	E	253	LYS	CB-CA-C	9.79	129.97	110.40
1	A	259	PRO	CA-N-CD	-9.77	97.82	111.50
1	C	259	PRO	CA-CB-CG	-9.60	85.76	104.00
2	B	392	LEU	CD1-CG-CD2	-9.24	82.78	110.50
1	E	259	PRO	CA-CB-CG	-9.23	86.45	104.00
1	G	259	PRO	CA-CB-CG	-9.16	86.59	104.00
1	C	253	LYS	C-N-CD	-9.14	100.49	120.60
1	G	252	LEU	C-N-CA	-8.28	101.00	121.70
1	A	259	PRO	CA-CB-CG	-8.16	88.49	104.00
1	C	253	LYS	CB-CA-C	8.07	126.54	110.40
1	G	253	LYS	CB-CA-C	7.91	126.22	110.40
1	C	252	LEU	C-N-CA	-7.87	102.02	121.70
2	F	392	LEU	CB-CG-CD2	-7.81	97.73	111.00
2	D	392	LEU	CB-CG-CD2	-7.76	97.80	111.00
1	G	259	PRO	N-CA-C	7.52	131.65	112.10
1	G	253	LYS	C-N-CD	-7.43	104.26	120.60
2	D	392	LEU	CB-CG-CD1	7.40	123.58	111.00
2	F	392	LEU	CB-CG-CD1	7.39	123.56	111.00
2	F	607	THR	C-N-CA	7.36	140.10	121.70
1	C	259	PRO	N-CA-C	7.28	131.03	112.10
2	D	902	ALA	N-CA-C	-7.08	91.89	111.00
1	C	253	LYS	C-N-CA	6.85	150.77	122.00
1	G	253	LYS	C-N-CA	6.84	150.72	122.00
2	D	606	ARG	C-N-CA	-6.83	104.63	121.70
2	H	392	LEU	CB-CG-CD1	6.78	122.53	111.00
2	H	392	LEU	CB-CG-CD2	-6.59	99.79	111.00
2	F	902	ALA	N-CA-C	-6.54	93.35	111.00
1	A	259	PRO	N-CA-C	6.34	128.57	112.10
2	F	607	THR	CA-C-N	-6.31	103.32	117.20
1	A	252	LEU	C-N-CA	-6.28	106.00	121.70
2	D	607	THR	CA-C-N	6.26	130.98	117.20
1	A	253	LYS	C-N-CA	6.14	147.80	122.00
1	A	253	LYS	N-CA-CB	-6.07	99.67	110.60
1	E	252	LEU	C-N-CA	-6.01	106.68	121.70
1	C	253	LYS	CA-C-N	6.00	133.89	117.10
1	C	253	LYS	N-CA-CB	-6.00	99.81	110.60
2	H	356	SER	C-N-CD	-5.97	107.47	120.60
1	E	253	LYS	N-CA-CB	-5.95	99.89	110.60
2	H	907	PRO	N-CA-CB	5.92	110.41	103.30

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	907	PRO	N-CA-CB	5.79	110.25	103.30
2	D	907	PRO	N-CA-CB	5.78	110.23	103.30
2	H	607	THR	CA-C-N	-5.64	104.79	117.20
2	B	907	PRO	N-CA-CB	5.61	110.03	103.30
2	B	607	THR	CA-C-N	-5.56	104.97	117.20
2	H	360	LYS	N-CA-C	5.49	125.82	111.00
1	E	253	LYS	C-N-CA	5.48	145.03	122.00
2	H	902	ALA	N-CA-C	-5.42	96.36	111.00
1	G	253	LYS	N-CA-CB	-5.41	100.87	110.60
1	E	259	PRO	N-CA-C	5.38	126.09	112.10
2	B	902	ALA	N-CA-C	-5.32	96.65	111.00
2	D	360	LYS	N-CA-C	5.28	125.27	111.00
2	F	360	LYS	N-CA-C	5.25	125.19	111.00
2	B	360	LYS	N-CA-C	5.25	125.19	111.00
2	D	700	LYS	N-CA-CB	-5.24	101.16	110.60
2	D	608	ARG	C-N-CA	5.20	134.70	121.70
1	A	533	GLN	N-CA-C	5.20	125.03	111.00
2	F	356	SER	C-N-CD	-5.17	109.23	120.60
1	A	259	PRO	N-CA-CB	-5.16	96.92	102.60
1	E	533	GLN	N-CA-C	5.15	124.91	111.00
1	E	259	PRO	C-N-CA	-5.15	108.83	121.70
1	G	253	LYS	CA-C-N	5.13	131.45	117.10
1	G	237	TYR	CB-CG-CD2	-5.08	117.95	121.00
1	G	533	GLN	N-CA-C	5.03	124.57	111.00
2	D	607	THR	O-C-N	-5.00	114.69	122.70

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	259	PRO	Peptide
2	B	355	PHE	Sidechain
1	C	259	PRO	Peptide
2	D	355	PHE	Sidechain
2	D	393	TYR	Sidechain
2	F	355	PHE	Sidechain
1	G	259	PRO	Peptide
2	H	355	PHE	Sidechain

## 5.2 Close contacts ⓘ

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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4105	0	4063	272	0
1	C	4105	0	4063	266	0
1	E	4105	0	4063	278	0
1	G	4105	0	4063	264	0
2	B	3199	0	3066	265	0
2	D	3199	0	3067	263	0
2	F	3199	0	3062	255	0
2	H	3199	0	3062	261	0
3	I	600	0	635	59	0
3	J	600	0	635	60	0
3	K	600	0	635	64	0
3	L	600	0	635	61	0
4	F	1	0	0	0	0
4	H	2	0	0	0	0
4	J	1	0	0	0	0
5	B	31	0	12	3	0
5	D	31	0	12	4	0
5	F	31	0	11	6	0
5	H	31	0	12	10	0
All	All	31744	0	31096	2256	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 36.

All (2256) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:253:LYS:C	1:A:253:LYS:CA	1.76	1.54
1:C:253:LYS:C	1:C:253:LYS:CA	1.76	1.52
1:E:253:LYS:CA	1:E:253:LYS:C	1.77	1.50
2:D:700:LYS:C	2:D:700:LYS:CA	1.80	1.49
2:D:608:ARG:N	2:D:608:ARG:CA	1.73	1.47
2:D:608:ARG:CA	2:D:608:ARG:C	1.82	1.45
2:D:700:LYS:N	2:D:700:LYS:CA	1.79	1.43
1:C:259:PRO:N	1:C:259:PRO:CA	1.71	1.40

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:259:PRO:CA	1:E:259:PRO:N	1.68	1.30
1:G:259:PRO:CA	1:G:259:PRO:N	1.68	1.30
1:A:259:PRO:N	1:A:259:PRO:CA	1.71	1.28
2:B:361:LEU:HD11	2:B:704:LEU:HA	1.32	1.12
2:B:274:ARG:HH22	1:E:107:GLU:HA	0.99	1.11
2:F:361:LEU:HD11	2:F:704:LEU:HA	1.34	1.09
2:H:380:ALA:HB2	2:H:394:LEU:HD13	1.31	1.09
2:H:361:LEU:HD11	2:H:704:LEU:HA	1.29	1.09
2:D:361:LEU:HD11	2:D:704:LEU:HA	1.31	1.09
2:D:380:ALA:HB2	2:D:394:LEU:HD13	1.35	1.08
2:B:262:GLN:NE2	1:E:67:GLY:H	1.49	1.07
1:A:396:ARG:HG3	1:A:534:LEU:HD11	1.36	1.07
2:B:380:ALA:HB2	2:B:394:LEU:HD13	1.35	1.05
2:F:380:ALA:HB2	2:F:394:LEU:HD13	1.37	1.05
2:B:274:ARG:NH2	1:E:107:GLU:HA	1.73	1.04
1:A:344:ASN:ND2	1:E:111:ASN:HD22	1.57	1.02
1:G:396:ARG:HG3	1:G:534:LEU:HD11	1.39	1.02
2:B:262:GLN:HE22	1:E:67:GLY:N	1.59	1.01
1:E:396:ARG:HG3	1:E:534:LEU:HD11	1.39	1.01
1:E:518:ASN:ND2	1:E:533:GLN:HG3	1.77	1.00
1:G:336:SER:HG	2:H:271:TYR:HD2	1.07	0.99
1:A:252:LEU:O	1:A:253:LYS:C	2.00	0.99
1:G:518:ASN:ND2	1:G:533:GLN:HG3	1.78	0.98
2:B:128:GLN:H	2:B:128:GLN:NE2	1.59	0.98
2:H:128:GLN:NE2	2:H:128:GLN:H	1.61	0.97
2:B:128:GLN:HE21	2:B:128:GLN:N	1.59	0.97
2:F:229:ILE:HD13	2:F:281:THR:HA	1.45	0.97
2:F:58:GLY:H	2:F:91:GLN:HG2	1.29	0.97
1:C:396:ARG:HG3	1:C:534:LEU:HD11	1.41	0.97
2:F:128:GLN:NE2	2:F:128:GLN:H	1.63	0.97
2:H:128:GLN:HE21	2:H:128:GLN:N	1.61	0.96
2:B:606:ARG:C	2:B:608:ARG:H	1.68	0.96
2:D:58:GLY:H	2:D:91:GLN:HG2	1.31	0.96
2:D:128:GLN:NE2	2:D:128:GLN:H	1.63	0.95
2:F:128:GLN:N	2:F:128:GLN:HE21	1.64	0.95
2:D:229:ILE:HD13	2:D:281:THR:HA	1.48	0.95
2:D:128:GLN:HE21	2:D:128:GLN:N	1.65	0.94
1:A:344:ASN:ND2	1:E:111:ASN:ND2	2.15	0.94
1:E:253:LYS:O	1:E:260:GLU:CG	2.16	0.94
1:C:518:ASN:ND2	1:C:533:GLN:HG3	1.82	0.93
1:G:252:LEU:O	1:G:253:LYS:C	2.04	0.92
2:B:606:ARG:O	2:B:608:ARG:N	2.02	0.92

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:F:323:VAL:HG21	3:K:170:VAL:HG22	1.48	0.92
1:A:253:LYS:O	1:A:260:GLU:CG	2.18	0.92
2:H:229:ILE:HD13	2:H:281:THR:HA	1.50	0.91
2:D:208:PRO:HG3	3:J:171:LEU:HD11	1.53	0.90
1:A:285:ILE:HD11	1:A:388:ALA:HA	1.53	0.90
1:G:285:ILE:HD11	1:G:388:ALA:HA	1.54	0.90
2:B:229:ILE:HD13	2:B:281:THR:HA	1.50	0.90
2:B:267:ARG:HH11	2:B:267:ARG:HG2	1.37	0.90
1:A:518:ASN:ND2	1:A:533:GLN:HG3	1.87	0.89
2:H:58:GLY:H	2:H:91:GLN:HG2	1.37	0.89
3:I:138:PRO:HA	3:I:141:GLN:HE21	1.38	0.89
3:L:138:PRO:HA	3:L:141:GLN:HE21	1.38	0.89
2:B:274:ARG:HH22	1:E:107:GLU:CA	1.84	0.88
1:C:252:LEU:O	1:C:253:LYS:C	2.12	0.88
1:E:252:LEU:O	1:E:253:LYS:C	2.12	0.88
1:C:309:ARG:HG3	1:C:364:LEU:HD21	1.56	0.88
1:E:307:LEU:HB3	1:E:383:LEU:HD22	1.56	0.88
2:B:58:GLY:H	2:B:91:GLN:HG2	1.39	0.87
2:H:323:VAL:HG21	3:L:170:VAL:HG22	1.57	0.87
1:E:285:ILE:HD11	1:E:388:ALA:HA	1.57	0.86
2:D:267:ARG:HG2	2:D:267:ARG:HH11	1.39	0.86
2:H:380:ALA:HB2	2:H:394:LEU:CD1	2.06	0.86
2:D:361:LEU:CD1	2:D:704:LEU:HA	2.06	0.86
2:H:208:PRO:HG3	3:L:171:LEU:HD11	1.55	0.86
1:A:309:ARG:HG3	1:A:364:LEU:HD21	1.56	0.86
2:H:322:LEU:HD12	2:H:323:VAL:N	1.91	0.86
2:H:267:ARG:HH11	2:H:267:ARG:HG2	1.38	0.86
2:F:208:PRO:HG3	3:K:171:LEU:HD11	1.58	0.85
1:E:232:ARG:HB3	1:E:234:PRO:HD3	1.57	0.85
2:B:208:PRO:HG3	3:I:171:LEU:HD11	1.58	0.85
3:K:138:PRO:HA	3:K:141:GLN:HE21	1.41	0.85
1:G:232:ARG:HB3	1:G:234:PRO:HD3	1.56	0.85
1:E:61:ASP:HB3	1:E:86:ALA:HB2	1.56	0.85
1:E:307:LEU:HB3	1:E:383:LEU:CD2	2.07	0.85
1:A:232:ARG:HB3	1:A:234:PRO:HD3	1.56	0.85
2:F:316:ILE:HD12	2:F:316:ILE:H	1.41	0.85
1:A:344:ASN:HD21	1:E:111:ASN:HD22	1.22	0.84
1:C:285:ILE:HD11	1:C:388:ALA:HA	1.57	0.84
2:D:316:ILE:H	2:D:316:ILE:HD12	1.40	0.84
1:G:309:ARG:HG3	1:G:364:LEU:HD21	1.57	0.84
1:C:232:ARG:HB3	1:C:234:PRO:HD3	1.58	0.84
2:H:361:LEU:CD1	2:H:704:LEU:HA	2.07	0.84

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:61:ASP:HB3	1:G:86:ALA:HB2	1.59	0.84
1:C:236:THR:O	1:C:237:TYR:HB2	1.76	0.84
1:E:309:ARG:HG3	1:E:364:LEU:HD21	1.57	0.84
3:I:155:THR:HG22	3:I:158:ASP:OD2	1.78	0.84
2:F:267:ARG:HG2	2:F:267:ARG:HH11	1.41	0.83
3:J:138:PRO:HA	3:J:141:GLN:HE21	1.41	0.83
1:A:61:ASP:HB3	1:A:86:ALA:HB2	1.58	0.83
1:C:307:LEU:HB3	1:C:383:LEU:HD22	1.57	0.83
2:B:361:LEU:CD1	2:B:704:LEU:HA	2.07	0.83
2:H:606:ARG:O	2:H:608:ARG:N	2.09	0.83
1:C:61:ASP:HB3	1:C:86:ALA:HB2	1.60	0.82
2:B:316:ILE:H	2:B:316:ILE:HD12	1.43	0.82
1:A:307:LEU:HB3	1:A:383:LEU:HD22	1.60	0.82
2:F:361:LEU:CD1	2:F:704:LEU:HA	2.09	0.82
2:F:901:VAL:C	2:F:902:ALA:O	2.08	0.82
2:B:74:GLN:HE22	2:B:119:ASN:HD22	1.28	0.81
1:C:253:LYS:O	1:C:260:GLU:OE2	1.98	0.81
2:B:323:VAL:HG21	3:I:170:VAL:HG22	1.61	0.81
2:H:316:ILE:HD12	2:H:316:ILE:H	1.44	0.81
2:D:323:VAL:HG21	3:J:170:VAL:HG22	1.63	0.81
2:H:361:LEU:HD11	2:H:704:LEU:CA	2.11	0.81
1:C:307:LEU:HB3	1:C:383:LEU:CD2	2.10	0.81
2:B:368:LEU:HA	2:B:374:LEU:HD12	1.63	0.81
1:G:307:LEU:HB3	1:G:383:LEU:CD2	2.11	0.81
1:E:236:THR:O	1:E:237:TYR:HB2	1.79	0.80
1:C:56:SER:HB3	1:C:101:SER:OG	1.80	0.80
1:G:421:ASN:O	1:G:424:VAL:HG23	1.81	0.80
2:D:380:ALA:HB2	2:D:394:LEU:CD1	2.10	0.80
1:A:307:LEU:HB3	1:A:383:LEU:CD2	2.12	0.80
1:C:253:LYS:HA	1:C:253:LYS:C	2.00	0.80
2:D:325:ASN:ND2	2:D:327:VAL:HG22	1.97	0.80
2:D:322:LEU:HD12	2:D:323:VAL:N	1.97	0.80
1:A:236:THR:O	1:A:237:TYR:HB2	1.81	0.80
2:D:361:LEU:HD11	2:D:704:LEU:CA	2.12	0.79
1:A:533:GLN:O	1:A:534:LEU:HG	1.81	0.79
2:F:380:ALA:HB2	2:F:394:LEU:CD1	2.13	0.79
1:A:253:LYS:C	1:A:253:LYS:HA	2.01	0.79
2:H:325:ASN:ND2	2:H:327:VAL:HG22	1.97	0.79
2:B:380:ALA:HB2	2:B:394:LEU:CD1	2.12	0.79
1:G:533:GLN:O	1:G:534:LEU:HG	1.82	0.79
2:F:368:LEU:HA	2:F:374:LEU:HD12	1.64	0.79
2:F:701:GLU:HA	2:F:704:LEU:CB	2.13	0.79

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:344:ASN:HD22	1:E:111:ASN:ND2	1.79	0.79
1:E:533:GLN:O	1:E:534:LEU:HG	1.82	0.79
3:K:123:VAL:HB	3:K:152:ASP:HA	1.65	0.79
1:G:307:LEU:HB3	1:G:383:LEU:HD22	1.64	0.79
2:H:368:LEU:HA	2:H:374:LEU:HD12	1.64	0.78
1:A:56:SER:HB3	1:A:101:SER:OG	1.83	0.78
2:D:368:LEU:HA	2:D:374:LEU:HD12	1.64	0.78
2:F:322:LEU:HD12	2:F:323:VAL:N	1.98	0.78
3:J:123:VAL:HB	3:J:152:ASP:HA	1.66	0.78
3:J:155:THR:HG22	3:J:158:ASP:OD2	1.81	0.78
3:K:155:THR:HG22	3:K:158:ASP:OD2	1.83	0.78
2:H:325:ASN:HD21	2:H:327:VAL:HG22	1.49	0.77
3:L:155:THR:HG22	3:L:158:ASP:OD2	1.84	0.77
2:F:81:ASP:HB2	5:F:7:ATP:O2'	1.85	0.77
2:D:74:GLN:HE22	2:D:119:ASN:HD22	1.29	0.77
3:I:123:VAL:HB	3:I:152:ASP:HA	1.66	0.77
3:K:155:THR:HG23	3:K:158:ASP:H	1.50	0.77
3:I:124:GLU:HB2	3:I:152:ASP:O	1.84	0.77
3:J:124:GLU:HB2	3:J:152:ASP:O	1.85	0.76
1:G:56:SER:HB3	1:G:101:SER:OG	1.84	0.76
1:E:421:ASN:O	1:E:424:VAL:HG23	1.85	0.76
2:B:361:LEU:HD11	2:B:704:LEU:CA	2.13	0.76
3:I:155:THR:HG23	3:I:158:ASP:H	1.49	0.76
1:C:421:ASN:O	1:C:424:VAL:HG23	1.85	0.76
2:B:81:ASP:HB2	5:B:5:ATP:O2'	1.84	0.76
2:H:701:GLU:HA	2:H:704:LEU:CB	2.16	0.76
3:L:155:THR:HG23	3:L:158:ASP:H	1.50	0.76
1:G:393:VAL:HG13	1:G:517:ASN:HD22	1.50	0.76
1:G:307:LEU:HD13	1:G:383:LEU:HD22	1.68	0.76
2:B:262:GLN:HE22	1:E:67:GLY:H	0.79	0.76
3:L:123:VAL:HB	3:L:152:ASP:HA	1.68	0.76
1:A:233:ILE:N	1:A:234:PRO:CD	2.49	0.75
2:D:325:ASN:HD21	2:D:327:VAL:HG22	1.48	0.75
2:H:64:LEU:HB3	2:H:111:LEU:CD1	2.16	0.75
1:G:51:LEU:HB2	1:G:52:PRO:HD3	1.68	0.75
2:F:325:ASN:ND2	2:F:327:VAL:HG22	2.00	0.75
1:E:233:ILE:N	1:E:234:PRO:CD	2.49	0.75
1:E:56:SER:HB3	1:E:101:SER:OG	1.85	0.75
1:C:51:LEU:HB2	1:C:52:PRO:HD3	1.68	0.75
1:G:233:ILE:N	1:G:234:PRO:CD	2.50	0.75
2:F:74:GLN:HE22	2:F:119:ASN:HD22	1.32	0.75
2:H:380:ALA:CB	2:H:394:LEU:HD13	2.13	0.75

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:64:LEU:HB3	2:D:111:LEU:CD1	2.17	0.75
2:H:901:VAL:C	2:H:902:ALA:O	2.17	0.75
1:C:163:ARG:HH11	1:C:163:ARG:HG2	1.52	0.75
3:J:155:THR:HG23	3:J:158:ASP:H	1.51	0.74
2:F:64:LEU:HB3	2:F:111:LEU:CD1	2.17	0.74
1:E:253:LYS:O	1:E:260:GLU:HG2	1.87	0.74
1:A:396:ARG:CG	1:A:534:LEU:HD11	2.17	0.74
1:A:253:LYS:O	1:A:260:GLU:HG3	1.85	0.74
1:A:51:LEU:HB2	1:A:52:PRO:HD3	1.70	0.74
2:D:701:GLU:HA	2:D:704:LEU:CB	2.17	0.74
1:E:163:ARG:HH11	1:E:163:ARG:HG2	1.50	0.74
1:A:348:GLU:HG3	1:E:115:ASN:ND2	2.03	0.74
1:A:533:GLN:HG3	1:A:533:GLN:O	1.87	0.74
1:C:393:VAL:HG13	1:C:517:ASN:HD22	1.53	0.74
2:B:325:ASN:ND2	2:B:327:VAL:HG22	2.02	0.74
1:A:351:LYS:O	1:A:354:ALA:HB3	1.88	0.74
1:G:163:ARG:HH11	1:G:163:ARG:HG2	1.51	0.74
1:G:34:CYS:HB2	1:G:123:PHE:CD2	2.23	0.74
2:B:322:LEU:HD12	2:B:323:VAL:N	2.03	0.73
1:A:421:ASN:O	1:A:424:VAL:HG23	1.86	0.73
1:E:351:LYS:O	1:E:354:ALA:HB3	1.87	0.73
2:B:901:VAL:C	2:B:902:ALA:O	2.22	0.73
2:B:701:GLU:HA	2:B:704:LEU:CB	2.17	0.73
1:C:233:ILE:N	1:C:234:PRO:CD	2.50	0.73
2:F:325:ASN:HD21	2:F:327:VAL:HG22	1.54	0.73
2:H:74:GLN:HE22	2:H:119:ASN:HD22	1.34	0.73
2:H:318:LEU:HD21	2:H:321:TYR:H	1.54	0.73
2:D:84:ASP:H	2:D:87:ASN:ND2	1.86	0.73
3:K:124:GLU:HB2	3:K:152:ASP:O	1.86	0.73
2:B:237:TRP:HB3	2:B:238:PRO:HD3	1.71	0.73
1:G:45:ILE:HG12	1:G:498:GLY:HA2	1.70	0.73
3:L:124:GLU:HB2	3:L:152:ASP:O	1.87	0.73
1:E:396:ARG:CG	1:E:534:LEU:HD11	2.19	0.72
1:E:143:LEU:CD1	1:E:150:LEU:HD13	2.19	0.72
2:B:361:LEU:HA	2:B:364:VAL:HG22	1.71	0.72
2:F:361:LEU:HD11	2:F:704:LEU:CA	2.16	0.72
1:A:163:ARG:HG2	1:A:163:ARG:HH11	1.54	0.72
1:C:533:GLN:HG3	1:C:533:GLN:O	1.88	0.72
2:H:158:LEU:HD22	2:H:175:VAL:HB	1.70	0.72
1:E:34:CYS:HB2	1:E:123:PHE:CD2	2.24	0.72
1:G:396:ARG:CG	1:G:534:LEU:HD11	2.19	0.72
2:F:84:ASP:H	2:F:87:ASN:ND2	1.87	0.72

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:L:123:VAL:HG11	3:L:150:MET:HB3	1.72	0.72
2:H:32:HIS:ND1	2:H:33:PRO:HD2	2.05	0.72
1:C:351:LYS:O	1:C:354:ALA:HB3	1.90	0.72
1:C:533:GLN:O	1:C:534:LEU:HG	1.90	0.71
3:J:101:MET:HB3	3:J:117:ILE:O	1.90	0.71
1:G:351:LYS:O	1:G:354:ALA:HB3	1.89	0.71
2:B:606:ARG:C	2:B:608:ARG:N	2.39	0.71
2:H:84:ASP:H	2:H:87:ASN:ND2	1.88	0.71
1:E:481:GLU:HG2	1:E:525:MET:HE3	1.70	0.71
2:H:357:PRO:O	2:H:358:SER:HB3	1.89	0.71
1:A:143:LEU:CD1	1:A:150:LEU:HD13	2.20	0.71
2:F:171:PRO:O	2:F:174:ILE:HG13	1.91	0.71
2:D:608:ARG:CB	2:D:608:ARG:N	2.54	0.71
2:H:606:ARG:C	2:H:608:ARG:N	2.43	0.71
3:J:106:LYS:HA	3:J:112:GLU:HA	1.73	0.71
2:D:237:TRP:HB3	2:D:238:PRO:HD3	1.72	0.71
2:D:700:LYS:C	2:D:700:LYS:CB	2.58	0.71
2:B:361:LEU:O	2:B:364:VAL:HG23	1.91	0.71
2:D:318:LEU:HD21	2:D:321:TYR:H	1.56	0.71
2:F:901:VAL:O	2:F:902:ALA:O	2.07	0.71
2:D:700:LYS:C	2:D:700:LYS:HA	2.05	0.71
2:H:361:LEU:O	2:H:364:VAL:HG23	1.90	0.71
1:G:533:GLN:O	1:G:533:GLN:HG3	1.89	0.71
2:B:325:ASN:HD21	2:B:327:VAL:HG22	1.56	0.71
2:D:158:LEU:HD22	2:D:175:VAL:HB	1.73	0.71
1:C:264:ASN:HD22	1:C:264:ASN:N	1.89	0.70
1:G:236:THR:O	1:G:237:TYR:HB2	1.90	0.70
1:G:422:GLU:HG3	1:G:530:ALA:HB3	1.73	0.70
1:C:34:CYS:HB2	1:C:123:PHE:CD2	2.26	0.70
2:D:342:ASN:H	2:D:342:ASN:HD22	1.38	0.70
1:G:143:LEU:CD1	1:G:150:LEU:HD13	2.21	0.70
2:B:84:ASP:H	2:B:87:ASN:ND2	1.89	0.70
2:H:606:ARG:C	2:H:608:ARG:H	1.95	0.70
1:E:45:ILE:HG12	1:E:498:GLY:HA2	1.74	0.70
3:I:123:VAL:HG11	3:I:150:MET:HB3	1.72	0.70
2:F:158:LEU:HD22	2:F:175:VAL:HB	1.72	0.70
2:F:606:ARG:O	2:F:608:ARG:N	2.22	0.70
1:E:51:LEU:HB2	1:E:52:PRO:HD3	1.74	0.70
2:H:237:TRP:HB3	2:H:238:PRO:HD3	1.74	0.70
1:A:348:GLU:HG3	1:E:115:ASN:CG	2.12	0.70
1:C:236:THR:O	1:C:237:TYR:CB	2.39	0.70
2:D:361:LEU:HA	2:D:364:VAL:HG22	1.73	0.70

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:285:ILE:CD1	1:A:388:ALA:HA	2.22	0.70
2:H:237:TRP:CE3	2:H:242:PRO:HG2	2.27	0.70
2:B:318:LEU:HD21	2:B:321:TYR:H	1.56	0.70
2:F:342:ASN:HD22	2:F:342:ASN:H	1.39	0.69
1:C:422:GLU:HG3	1:C:530:ALA:HB3	1.73	0.69
1:E:533:GLN:O	1:E:533:GLN:HG3	1.90	0.69
3:K:106:LYS:HA	3:K:112:GLU:HA	1.74	0.69
2:F:237:TRP:HB3	2:F:238:PRO:HD3	1.72	0.69
2:B:32:HIS:ND1	2:B:33:PRO:HD2	2.07	0.69
1:C:45:ILE:HG12	1:C:498:GLY:HA2	1.72	0.69
2:F:32:HIS:ND1	2:F:33:PRO:HD2	2.08	0.69
3:K:105:VAL:HG11	3:K:130:VAL:HG22	1.74	0.69
1:A:393:VAL:HG13	1:A:517:ASN:HD22	1.56	0.69
2:B:64:LEU:HB3	2:B:111:LEU:CD1	2.21	0.69
3:L:106:LYS:HA	3:L:112:GLU:HA	1.74	0.69
2:F:361:LEU:HA	2:F:364:VAL:HG22	1.73	0.69
2:D:361:LEU:O	2:D:364:VAL:HG23	1.92	0.69
2:B:262:GLN:NE2	1:E:67:GLY:N	2.29	0.69
1:E:422:GLU:HG3	1:E:530:ALA:HB3	1.74	0.69
2:F:318:LEU:HD21	2:F:321:TYR:H	1.56	0.69
1:G:264:ASN:N	1:G:264:ASN:HD22	1.88	0.69
2:B:158:LEU:HD22	2:B:175:VAL:HB	1.74	0.69
1:A:45:ILE:HG12	1:A:498:GLY:HA2	1.75	0.69
2:D:237:TRP:CE3	2:D:242:PRO:HG2	2.28	0.69
1:E:393:VAL:HG13	1:E:517:ASN:HD22	1.58	0.68
3:I:101:MET:HB3	3:I:117:ILE:O	1.93	0.68
3:L:101:MET:HB3	3:L:117:ILE:O	1.92	0.68
1:A:264:ASN:N	1:A:264:ASN:HD22	1.88	0.68
2:D:128:GLN:HE21	2:D:128:GLN:H	0.80	0.68
2:F:380:ALA:CB	2:F:394:LEU:HD13	2.21	0.68
2:B:202:CYS:HG	2:B:343:CYS:HG	1.39	0.68
3:K:123:VAL:HG11	3:K:150:MET:HB3	1.76	0.68
2:B:342:ASN:H	2:B:342:ASN:HD22	1.41	0.68
2:H:380:ALA:HB1	2:H:394:LEU:HB2	1.75	0.68
1:G:253:LYS:O	1:G:260:GLU:OE2	2.11	0.68
1:A:236:THR:O	1:A:237:TYR:CB	2.42	0.68
2:F:237:TRP:CE3	2:F:242:PRO:HG2	2.28	0.68
3:L:105:VAL:HG11	3:L:130:VAL:HG22	1.76	0.68
1:G:211:HIS:HB3	1:G:335:ASP:HB2	1.75	0.68
1:E:264:ASN:N	1:E:264:ASN:HD22	1.89	0.68
2:D:700:LYS:N	2:D:700:LYS:CB	2.57	0.68
2:H:357:PRO:O	2:H:358:SER:CB	2.42	0.68

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:380:ALA:CB	2:D:394:LEU:HD13	2.19	0.68
1:E:253:LYS:HA	1:E:253:LYS:C	2.04	0.67
1:G:262:GLU:HB3	1:G:265:PHE:HB2	1.76	0.67
1:A:396:ARG:HG3	1:A:534:LEU:CD1	2.19	0.67
1:C:285:ILE:CD1	1:C:388:ALA:HA	2.24	0.67
1:A:422:GLU:HG3	1:A:530:ALA:HB3	1.74	0.67
1:A:34:CYS:HB2	1:A:123:PHE:CD2	2.28	0.67
1:E:211:HIS:HB3	1:E:335:ASP:HB2	1.77	0.67
2:F:361:LEU:O	2:F:364:VAL:HG23	1.94	0.67
3:K:101:MET:HB3	3:K:117:ILE:O	1.93	0.67
3:I:106:LYS:HA	3:I:112:GLU:HA	1.74	0.67
1:A:264:ASN:H	1:A:264:ASN:HD22	1.43	0.67
1:C:211:HIS:HB3	1:C:335:ASP:HB2	1.75	0.67
2:F:154:ILE:HD13	2:F:154:ILE:O	1.95	0.67
2:F:192:ILE:HG22	2:F:194:PRO:HD3	1.75	0.67
1:G:75:PHE:CE2	1:G:96:LEU:HD11	2.30	0.67
1:C:213:PRO:HB3	1:C:332:MET:CE	2.24	0.67
2:D:164:TYR:HE2	2:D:169:LEU:HB2	1.59	0.67
2:H:361:LEU:HA	2:H:364:VAL:HG22	1.77	0.67
2:H:251:GLY:O	2:H:257:ILE:HD11	1.95	0.67
1:E:49:LEU:C	1:E:52:PRO:HD2	2.15	0.67
3:J:105:VAL:HG11	3:J:130:VAL:HG22	1.76	0.67
2:D:213:PHE:HB2	2:D:218:ILE:HD11	1.77	0.67
2:D:32:HIS:ND1	2:D:33:PRO:HD2	2.09	0.67
1:E:285:ILE:CD1	1:E:388:ALA:HA	2.23	0.66
2:H:64:LEU:HB3	2:H:111:LEU:HD13	1.76	0.66
2:D:192:ILE:HG22	2:D:194:PRO:HD3	1.78	0.66
1:E:376:SER:OG	1:E:379:GLU:HG3	1.95	0.66
2:H:342:ASN:H	2:H:342:ASN:HD22	1.42	0.66
2:H:164:TYR:HE2	2:H:169:LEU:HB2	1.58	0.66
1:A:376:SER:OG	1:A:379:GLU:HG3	1.95	0.66
2:F:64:LEU:HB3	2:F:111:LEU:HD13	1.76	0.66
1:C:390:LEU:O	1:C:391:ARG:HG2	1.96	0.66
1:A:36:ILE:HG22	1:A:37:ASN:N	2.11	0.66
1:E:262:GLU:HB3	1:E:265:PHE:HB2	1.76	0.66
1:A:213:PRO:HB3	1:A:332:MET:CE	2.24	0.66
1:E:307:LEU:HD13	1:E:383:LEU:HD22	1.78	0.66
1:A:49:LEU:C	1:A:52:PRO:HD2	2.16	0.66
1:A:397:SER:OG	1:A:400:GLU:HG3	1.95	0.66
2:H:359:ALA:HB1	2:H:363:GLU:OE1	1.97	0.65
1:C:396:ARG:CG	1:C:534:LEU:HD11	2.22	0.65
1:E:397:SER:OG	1:E:400:GLU:HG3	1.96	0.65

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:213:PRO:HB3	1:A:332:MET:HE3	1.77	0.65
1:G:390:LEU:O	1:G:391:ARG:HG2	1.95	0.65
1:E:390:LEU:O	1:E:391:ARG:HG2	1.96	0.65
1:G:397:SER:OG	1:G:400:GLU:HG3	1.97	0.65
1:G:213:PRO:HB3	1:G:332:MET:CE	2.25	0.65
1:A:252:LEU:C	1:A:253:LYS:C	2.53	0.65
2:D:608:ARG:C	2:D:608:ARG:HA	2.08	0.65
2:H:213:PHE:HB2	2:H:218:ILE:HD11	1.77	0.65
2:H:217:THR:HA	2:H:221:MET:HG2	1.77	0.65
2:B:164:TYR:HE2	2:B:169:LEU:HB2	1.61	0.65
1:E:262:GLU:HA	1:E:262:GLU:OE1	1.97	0.65
1:E:264:ASN:HD22	1:E:264:ASN:H	1.44	0.65
2:D:608:ARG:CB	2:D:608:ARG:C	2.64	0.65
2:B:154:ILE:HD13	2:B:154:ILE:O	1.97	0.65
1:A:211:HIS:HB3	1:A:335:ASP:HB2	1.77	0.65
1:C:143:LEU:CD1	1:C:150:LEU:HD13	2.26	0.65
1:A:262:GLU:HB3	1:A:265:PHE:HB2	1.79	0.65
3:J:123:VAL:HG11	3:J:150:MET:HB3	1.77	0.65
2:H:171:PRO:O	2:H:174:ILE:HG13	1.97	0.65
1:G:264:ASN:H	1:G:264:ASN:HD22	1.43	0.65
2:B:217:THR:HG21	2:B:223:ARG:HH22	1.60	0.65
1:C:36:ILE:HG22	1:C:37:ASN:N	2.10	0.65
1:G:447:ASN:ND2	2:H:26:ARG:HE	1.95	0.65
2:D:154:ILE:HD13	2:D:154:ILE:O	1.96	0.65
2:D:171:PRO:O	2:D:174:ILE:HG13	1.97	0.65
2:B:213:PHE:HB2	2:B:218:ILE:HD11	1.78	0.65
1:E:36:ILE:HG22	1:E:37:ASN:N	2.10	0.65
2:B:251:GLY:O	2:B:257:ILE:HD11	1.97	0.65
1:A:266:GLU:HA	1:A:269:ILE:HD12	1.79	0.65
2:B:356:SER:HB2	2:B:359:ALA:HB3	1.79	0.65
2:F:703:GLY:HA2	2:F:706:ASP:CB	2.26	0.65
2:B:237:TRP:CE3	2:B:242:PRO:HG2	2.32	0.65
2:F:606:ARG:C	2:F:608:ARG:H	1.99	0.65
1:G:49:LEU:C	1:G:52:PRO:HD2	2.17	0.64
2:F:213:PHE:HB2	2:F:218:ILE:HD11	1.79	0.64
1:A:488:ALA:O	1:A:490:PRO:HD3	1.97	0.64
2:D:356:SER:HB2	2:D:359:ALA:HB3	1.80	0.64
1:E:36:ILE:HB	1:E:128:ALA:HA	1.79	0.64
1:C:262:GLU:HB3	1:C:265:PHE:HB2	1.78	0.64
1:C:307:LEU:HD13	1:C:383:LEU:HD22	1.80	0.64
1:C:49:LEU:C	1:C:52:PRO:HD2	2.18	0.64
2:F:159:ILE:HG23	2:F:162:LEU:HD12	1.78	0.64

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:213:PRO:HB3	1:C:332:MET:HE3	1.79	0.64
1:E:213:PRO:HB3	1:E:332:MET:CE	2.27	0.64
1:A:261:ASP:O	1:A:262:GLU:CB	2.45	0.64
2:D:608:ARG:N	2:D:608:ARG:HA	2.02	0.64
2:B:361:LEU:HA	2:B:364:VAL:CG2	2.27	0.64
2:B:380:ALA:HB1	2:B:394:LEU:HB2	1.79	0.64
2:F:380:ALA:HB1	2:F:394:LEU:HB2	1.79	0.64
2:F:356:SER:HB2	2:F:359:ALA:HB3	1.79	0.64
1:A:307:LEU:HD13	1:A:383:LEU:HD22	1.78	0.64
1:C:75:PHE:CE2	1:C:96:LEU:HD11	2.32	0.64
2:B:703:GLY:HA2	2:B:706:ASP:CB	2.28	0.64
2:D:217:THR:HA	2:D:221:MET:HG2	1.78	0.64
1:G:396:ARG:HG3	1:G:534:LEU:CD1	2.22	0.64
1:A:366:GLN:C	1:A:368:ILE:H	2.01	0.64
2:H:154:ILE:HD13	2:H:154:ILE:O	1.98	0.64
2:D:54:ILE:HD13	2:D:127:ILE:HG21	1.80	0.64
2:B:171:PRO:O	2:B:174:ILE:HG13	1.97	0.64
3:I:105:VAL:HG11	3:I:130:VAL:HG22	1.78	0.64
2:H:703:GLY:HA2	2:H:706:ASP:CB	2.28	0.64
1:C:33:VAL:HG23	1:C:54:ILE:HD11	1.80	0.64
1:G:533:GLN:O	1:G:534:LEU:CG	2.45	0.64
1:G:285:ILE:CD1	1:G:388:ALA:HA	2.24	0.64
1:A:527:GLN:OE1	2:B:302:VAL:HG13	1.97	0.64
1:A:46:LEU:HD23	1:A:93:LEU:HD13	1.79	0.64
1:C:251:ILE:HG23	1:C:262:GLU:HG2	1.80	0.64
1:C:264:ASN:HD22	1:C:264:ASN:H	1.44	0.64
2:B:192:ILE:HG22	2:B:194:PRO:HD3	1.79	0.64
1:E:251:ILE:HG23	1:E:262:GLU:HG2	1.79	0.63
3:K:107:THR:CG2	3:K:111:LYS:H	2.11	0.63
2:B:217:THR:HA	2:B:221:MET:HG2	1.80	0.63
2:F:164:TYR:HE2	2:F:169:LEU:HB2	1.62	0.63
1:E:229:THR:O	1:E:230:ASN:HB2	1.98	0.63
2:D:361:LEU:HA	2:D:364:VAL:CG2	2.28	0.63
1:E:396:ARG:HG3	1:E:534:LEU:CD1	2.22	0.63
2:D:267:ARG:HG2	2:D:267:ARG:NH1	2.13	0.63
1:C:488:ALA:O	1:C:490:PRO:HD3	1.97	0.63
2:B:145:LEU:HD13	2:B:150:ALA:HB1	1.80	0.63
1:E:72:ASN:HD22	1:E:72:ASN:C	2.00	0.63
1:A:262:GLU:HA	1:A:262:GLU:OE1	1.98	0.63
2:D:64:LEU:HB3	2:D:111:LEU:HD13	1.79	0.63
3:L:107:THR:CG2	3:L:111:LYS:H	2.12	0.63
1:C:446:SER:HB2	1:C:449:GLN:HG3	1.79	0.63

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:450:VAL:O	1:C:454:ILE:HG13	1.98	0.63
1:G:262:GLU:HA	1:G:262:GLU:OE1	1.98	0.63
3:K:150:MET:CE	3:K:167:LEU:HD22	2.28	0.63
1:E:253:LYS:O	1:E:260:GLU:OE2	2.16	0.63
2:B:351:GLN:HA	2:B:351:GLN:HE21	1.64	0.63
2:F:360:LYS:C	2:F:361:LEU:HD23	2.18	0.63
1:A:533:GLN:O	1:A:534:LEU:CG	2.46	0.63
3:I:107:THR:CG2	3:I:111:LYS:H	2.12	0.63
1:C:447:ASN:HD22	2:D:26:ARG:HH21	1.45	0.63
1:G:450:VAL:O	1:G:454:ILE:HG13	1.97	0.63
1:G:376:SER:OG	1:G:379:GLU:HG3	1.98	0.63
1:C:261:ASP:O	1:C:262:GLU:HB2	1.98	0.63
1:G:260:GLU:C	1:G:261:ASP:OD1	2.37	0.63
2:D:360:LYS:C	2:D:361:LEU:HD23	2.18	0.63
3:L:138:PRO:HA	3:L:141:GLN:NE2	2.10	0.63
2:H:318:LEU:HD21	2:H:321:TYR:N	2.12	0.63
2:D:74:GLN:NE2	2:D:119:ASN:HD22	1.96	0.63
1:E:366:GLN:C	1:E:368:ILE:H	2.01	0.63
1:C:72:ASN:C	1:C:72:ASN:HD22	2.02	0.63
1:A:261:ASP:O	1:A:262:GLU:HB2	1.98	0.63
1:E:253:LYS:O	1:E:260:GLU:HG3	1.97	0.63
3:I:138:PRO:HA	3:I:141:GLN:NE2	2.10	0.63
1:E:488:ALA:O	1:E:490:PRO:HD3	1.99	0.63
2:F:217:THR:HA	2:F:221:MET:HG2	1.79	0.63
1:G:72:ASN:C	1:G:72:ASN:HD22	1.99	0.63
3:I:107:THR:HA	3:I:169:LEU:HD12	1.81	0.63
2:D:217:THR:HG21	2:D:223:ARG:HH22	1.64	0.63
1:E:75:PHE:CE2	1:E:96:LEU:HD11	2.34	0.63
1:C:261:ASP:O	1:C:262:GLU:CB	2.47	0.63
3:K:138:PRO:HA	3:K:141:GLN:NE2	2.12	0.63
1:E:49:LEU:O	1:E:52:PRO:HD2	1.98	0.63
3:I:107:THR:HG22	3:I:111:LYS:H	1.64	0.63
1:G:488:ALA:O	1:G:490:PRO:HD3	1.99	0.63
1:A:229:THR:O	1:A:230:ASN:HB2	1.98	0.63
1:E:61:ASP:CB	1:E:86:ALA:HB2	2.26	0.62
2:F:359:ALA:HB1	2:F:363:GLU:OE1	1.99	0.62
2:F:251:GLY:O	2:F:257:ILE:HD11	1.99	0.62
1:C:229:THR:O	1:C:230:ASN:HB2	1.98	0.62
2:D:348:GLN:HE21	2:D:348:GLN:C	2.02	0.62
2:F:361:LEU:HA	2:F:364:VAL:CG2	2.29	0.62
2:B:74:GLN:NE2	2:B:119:ASN:HD22	1.96	0.62
1:C:448:TYR:HE2	2:H:240:GLU:OE2	1.82	0.62

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:703:GLY:HA2	2:D:706:ASP:CB	2.30	0.62
2:H:348:GLN:C	2:H:348:GLN:HE21	2.02	0.62
1:G:229:THR:O	1:G:230:ASN:HB2	1.98	0.62
2:H:351:GLN:HA	2:H:351:GLN:HE21	1.65	0.62
3:J:107:THR:CG2	3:J:111:LYS:H	2.12	0.62
1:A:61:ASP:CB	1:A:86:ALA:HB2	2.29	0.62
1:A:36:ILE:HB	1:A:128:ALA:HA	1.82	0.62
1:E:447:ASN:ND2	2:F:26:ARG:HE	1.95	0.62
1:E:518:ASN:HD22	1:E:533:GLN:HG3	1.63	0.62
3:J:156:ALA:HA	3:J:161:ILE:HD12	1.80	0.62
2:F:606:ARG:C	2:F:608:ARG:N	2.51	0.62
1:G:72:ASN:C	1:G:72:ASN:ND2	2.53	0.62
1:A:260:GLU:C	1:A:261:ASP:OD1	2.38	0.62
3:I:156:ALA:HA	3:I:161:ILE:HD12	1.80	0.62
1:C:36:ILE:HB	1:C:128:ALA:HA	1.81	0.62
1:G:36:ILE:HB	1:G:128:ALA:HA	1.82	0.62
2:D:145:LEU:HD13	2:D:150:ALA:HB1	1.81	0.62
1:E:233:ILE:N	1:E:234:PRO:HD3	2.14	0.62
1:A:232:ARG:C	1:A:234:PRO:HD3	2.20	0.62
1:E:236:THR:O	1:E:237:TYR:CB	2.42	0.62
1:E:446:SER:HB2	1:E:449:GLN:HG3	1.80	0.62
1:G:260:GLU:CB	1:G:261:ASP:OD1	2.48	0.62
1:G:36:ILE:HG22	1:G:37:ASN:N	2.15	0.62
2:D:80:MET:HG2	5:D:6:ATP:C2	2.34	0.62
1:C:266:GLU:HA	1:C:269:ILE:HD12	1.81	0.62
1:G:253:LYS:O	1:G:260:GLU:CG	2.48	0.62
2:B:365:LEU:HD22	2:B:393:TYR:OH	1.99	0.62
1:A:233:ILE:N	1:A:234:PRO:HD3	2.15	0.62
2:H:102:PRO:HB2	2:H:105:GLU:HB2	1.82	0.62
1:A:253:LYS:O	1:A:260:GLU:HG2	1.97	0.61
1:A:260:GLU:CB	1:A:261:ASP:OD1	2.48	0.61
2:H:360:LYS:C	2:H:361:LEU:HD23	2.20	0.61
1:E:533:GLN:O	1:E:534:LEU:CG	2.47	0.61
2:B:318:LEU:HD21	2:B:321:TYR:N	2.15	0.61
1:A:510:THR:HB	1:A:512:GLN:HG3	1.81	0.61
1:A:390:LEU:O	1:A:391:ARG:HG2	2.00	0.61
2:B:348:GLN:HE21	2:B:348:GLN:C	2.02	0.61
2:D:380:ALA:HB1	2:D:394:LEU:HB2	1.81	0.61
2:D:318:LEU:HD21	2:D:321:TYR:N	2.15	0.61
3:K:156:ALA:HA	3:K:161:ILE:HD12	1.80	0.61
1:C:376:SER:OG	1:C:379:GLU:HG3	1.99	0.61
2:H:178:ILE:HD11	2:H:310:ILE:HD12	1.82	0.61

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:46:LEU:HD23	1:G:93:LEU:HD13	1.81	0.61
1:C:262:GLU:OE1	1:C:262:GLU:HA	1.98	0.61
3:L:107:THR:HG22	3:L:111:LYS:H	1.65	0.61
1:E:213:PRO:HB3	1:E:332:MET:HE3	1.82	0.61
2:D:252:ASP:O	2:D:254:PRO:HD3	2.01	0.61
1:C:347:ARG:HH22	2:D:274:ARG:HH11	1.46	0.61
1:G:232:ARG:C	1:G:234:PRO:HD3	2.20	0.61
3:K:107:THR:HG22	3:K:111:LYS:H	1.65	0.61
1:C:260:GLU:C	1:C:261:ASP:OD1	2.39	0.61
1:G:266:GLU:HA	1:G:269:ILE:HD12	1.81	0.61
1:G:61:ASP:CB	1:G:86:ALA:HB2	2.29	0.61
3:L:150:MET:CE	3:L:167:LEU:HD22	2.29	0.61
2:H:217:THR:HG21	2:H:223:ARG:HH22	1.64	0.61
2:B:380:ALA:CB	2:B:394:LEU:HD13	2.20	0.61
2:B:360:LYS:C	2:B:361:LEU:HD23	2.20	0.61
2:H:54:ILE:HD13	2:H:127:ILE:HG21	1.83	0.61
2:H:901:VAL:O	2:H:902:ALA:O	2.18	0.61
2:B:359:ALA:HB1	2:B:363:GLU:OE1	2.01	0.61
2:F:351:GLN:HA	2:F:351:GLN:HE21	1.66	0.61
3:I:138:PRO:CA	3:I:141:GLN:HE21	2.13	0.61
3:J:150:MET:CE	3:J:167:LEU:HD22	2.30	0.61
3:K:107:THR:HA	3:K:169:LEU:HD12	1.82	0.61
3:L:107:THR:HA	3:L:169:LEU:HD12	1.81	0.61
1:C:366:GLN:C	1:C:368:ILE:H	2.02	0.61
2:F:394:LEU:CG	2:F:396:SER:HB3	2.31	0.61
1:G:38:ALA:O	1:G:85:ARG:HD3	2.00	0.61
1:G:49:LEU:O	1:G:52:PRO:HD2	2.00	0.61
2:F:318:LEU:HD21	2:F:321:TYR:N	2.15	0.61
1:C:214:TRP:CD1	1:C:214:TRP:C	2.74	0.61
2:F:102:PRO:HB2	2:F:105:GLU:HB2	1.83	0.61
1:C:428:MET:O	1:C:431:ALA:HB3	2.01	0.61
1:A:75:PHE:CE2	1:A:96:LEU:HD11	2.36	0.61
1:C:309:ARG:CG	1:C:364:LEU:HD21	2.31	0.60
2:B:54:ILE:HD13	2:B:127:ILE:HG21	1.82	0.60
3:L:156:ALA:HA	3:L:161:ILE:HD12	1.82	0.60
2:H:145:LEU:HD13	2:H:150:ALA:HB1	1.81	0.60
3:K:118:GLU:O	3:K:120:THR:N	2.29	0.60
1:A:72:ASN:HD22	1:A:72:ASN:C	2.02	0.60
2:D:335:PHE:HE1	2:D:337:ALA:HB2	1.65	0.60
3:K:141:GLN:O	3:K:142:ARG:HD3	2.02	0.60
3:J:138:PRO:HA	3:J:141:GLN:NE2	2.13	0.60
2:D:64:LEU:HD21	2:D:77:VAL:HG22	1.83	0.60

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:72:ASN:ND2	1:E:72:ASN:C	2.54	0.60
1:G:446:SER:HB2	1:G:449:GLN:HG3	1.83	0.60
2:B:252:ASP:O	2:B:254:PRO:HD3	2.02	0.60
2:D:257:ILE:HD13	2:D:282:GLN:HG2	1.82	0.60
1:C:260:GLU:CB	1:C:261:ASP:OD1	2.50	0.60
1:E:232:ARG:C	1:E:234:PRO:HD3	2.21	0.60
1:C:397:SER:OG	1:C:400:GLU:HG3	2.01	0.60
2:H:394:LEU:CG	2:H:396:SER:HB3	2.31	0.60
1:C:49:LEU:O	1:C:52:PRO:HD2	2.01	0.60
1:G:213:PRO:HB3	1:G:332:MET:HE3	1.83	0.60
1:G:428:MET:O	1:G:431:ALA:HB3	2.01	0.60
1:E:347:ARG:HH22	2:F:274:ARG:HH11	1.48	0.60
2:B:110:PHE:C	2:B:110:PHE:HD2	2.04	0.60
2:D:359:ALA:HB1	2:D:363:GLU:OE1	2.02	0.60
1:G:518:ASN:HD22	1:G:533:GLN:HG3	1.66	0.60
1:C:232:ARG:C	1:C:234:PRO:HD3	2.21	0.60
2:F:217:THR:HG21	2:F:223:ARG:HH22	1.66	0.60
2:D:102:PRO:HB2	2:D:105:GLU:HB2	1.83	0.60
3:J:107:THR:HA	3:J:169:LEU:HD12	1.83	0.60
1:G:214:TRP:C	1:G:214:TRP:CD1	2.75	0.60
1:C:481:GLU:HA	1:C:481:GLU:OE1	2.02	0.60
1:G:366:GLN:C	1:G:368:ILE:H	2.03	0.60
2:B:267:ARG:HG2	2:B:267:ARG:NH1	2.12	0.60
2:F:74:GLN:NE2	2:F:119:ASN:HD22	1.99	0.60
2:H:192:ILE:HG22	2:H:194:PRO:HD3	1.82	0.60
2:H:54:ILE:CD1	2:H:154:ILE:HG13	2.32	0.60
2:B:64:LEU:HB3	2:B:111:LEU:HD13	1.82	0.60
1:G:8:LEU:HD12	1:G:11:GLN:OE1	2.01	0.60
2:F:394:LEU:HD21	2:F:396:SER:HB3	1.82	0.60
1:G:261:ASP:N	1:G:261:ASP:OD1	2.35	0.59
2:H:81:ASP:HB2	5:H:8:ATP:O2'	2.02	0.59
2:B:229:ILE:HA	2:B:264:SER:OG	2.02	0.59
3:L:138:PRO:CA	3:L:141:GLN:HE21	2.13	0.59
1:A:49:LEU:O	1:A:52:PRO:HD2	2.01	0.59
3:I:118:GLU:O	3:I:120:THR:N	2.30	0.59
3:I:150:MET:CE	3:I:167:LEU:HD22	2.32	0.59
1:G:422:GLU:HG3	1:G:530:ALA:CB	2.31	0.59
1:A:16:GLN:NE2	1:A:20:TRP:HZ2	2.01	0.59
1:E:13:TYR:O	1:E:17:LEU:HG	2.01	0.59
1:E:260:GLU:C	1:E:261:ASP:OD1	2.39	0.59
2:B:394:LEU:CG	2:B:396:SER:HB3	2.32	0.59
1:A:309:ARG:CG	1:A:364:LEU:HD21	2.30	0.59

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:233:ILE:N	1:C:234:PRO:HD3	2.16	0.59
1:E:450:VAL:O	1:E:454:ILE:HG13	2.01	0.59
2:F:348:GLN:HE21	2:F:348:GLN:C	2.05	0.59
2:H:356:SER:HB2	2:H:359:ALA:HB3	1.84	0.59
1:G:233:ILE:N	1:G:234:PRO:HD3	2.16	0.59
3:J:107:THR:HG22	3:J:111:LYS:H	1.67	0.59
1:C:46:LEU:HD23	1:C:93:LEU:HD13	1.84	0.59
2:D:251:GLY:O	2:D:257:ILE:HD11	2.02	0.59
1:E:407:ILE:HG23	1:E:407:ILE:O	2.02	0.59
2:D:351:GLN:HE21	2:D:351:GLN:HA	1.67	0.59
2:D:394:LEU:CG	2:D:396:SER:HB3	2.33	0.59
1:G:518:ASN:ND2	1:G:533:GLN:CG	2.62	0.59
2:H:229:ILE:HA	2:H:264:SER:OG	2.01	0.59
1:C:61:ASP:CB	1:C:86:ALA:HB2	2.30	0.59
1:C:34:CYS:HB2	1:C:123:PHE:CE2	2.38	0.59
1:C:510:THR:HB	1:C:512:GLN:HG3	1.83	0.59
1:G:261:ASP:O	1:G:262:GLU:CB	2.51	0.59
3:I:170:VAL:HG13	3:I:171:LEU:N	2.16	0.59
2:B:178:ILE:HD11	2:B:310:ILE:HD12	1.84	0.59
2:H:322:LEU:HD12	2:H:322:LEU:C	2.23	0.59
2:F:277:THR:HG23	2:F:280:LEU:H	1.68	0.59
2:D:56:ALA:HA	2:D:60:GLY:HA3	1.83	0.59
1:A:261:ASP:N	1:A:261:ASP:OD1	2.35	0.59
1:C:243:PHE:O	1:C:246:LEU:HB3	2.03	0.59
1:C:259:PRO:C	1:C:260:GLU:HG2	2.22	0.59
2:F:335:PHE:HE1	2:F:337:ALA:HB2	1.67	0.59
1:C:422:GLU:HG3	1:C:530:ALA:CB	2.32	0.59
2:B:64:LEU:HD21	2:B:77:VAL:HG22	1.84	0.59
2:H:159:ILE:HG23	2:H:162:LEU:HD12	1.83	0.59
1:E:214:TRP:C	1:E:214:TRP:CD1	2.76	0.59
1:A:243:PHE:O	1:A:246:LEU:HB3	2.02	0.59
1:A:450:VAL:O	1:A:454:ILE:HG13	2.01	0.59
2:B:357:PRO:O	2:B:358:SER:CB	2.51	0.59
1:C:396:ARG:HG3	1:C:534:LEU:CD1	2.24	0.59
2:F:54:ILE:HD13	2:F:127:ILE:HG21	1.85	0.59
3:L:117:ILE:CD1	3:L:126:ILE:HG23	2.32	0.59
1:E:447:ASN:HD22	2:F:26:ARG:HH21	1.50	0.59
2:H:110:PHE:C	2:H:110:PHE:HD2	2.06	0.59
1:G:236:THR:O	1:G:237:TYR:CB	2.49	0.59
1:E:366:GLN:O	1:E:368:ILE:N	2.36	0.59
1:G:347:ARG:HH22	2:H:274:ARG:HH11	1.50	0.59
1:A:72:ASN:ND2	1:A:72:ASN:C	2.56	0.58

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:F:357:PRO:O	2:F:358:SER:CB	2.51	0.58
3:L:141:GLN:O	3:L:142:ARG:HD3	2.03	0.58
2:H:64:LEU:HD21	2:H:77:VAL:HG22	1.86	0.58
2:B:152:ARG:O	2:B:155:ASN:HB3	2.04	0.58
1:C:8:LEU:HD12	1:C:11:GLN:OE1	2.03	0.58
2:F:357:PRO:O	2:F:358:SER:HB3	2.03	0.58
2:H:74:GLN:NE2	2:H:119:ASN:HD22	2.00	0.58
2:D:700:LYS:N	2:D:700:LYS:HA	2.04	0.58
2:H:128:GLN:HE22	5:H:8:ATP:HN62	1.51	0.58
1:C:214:TRP:CE3	1:C:332:MET:HB3	2.39	0.58
1:G:307:LEU:HB3	1:G:383:LEU:HD21	1.85	0.58
1:A:446:SER:HB2	1:A:449:GLN:HG3	1.84	0.58
1:A:33:VAL:HG23	1:A:54:ILE:HD11	1.84	0.58
1:A:214:TRP:C	1:A:214:TRP:CD1	2.76	0.58
1:G:332:MET:HG2	1:G:339:TYR:HE1	1.68	0.58
2:B:102:PRO:HB2	2:B:105:GLU:HB2	1.85	0.58
1:G:527:GLN:OE1	2:H:302:VAL:HG13	2.04	0.58
3:I:141:GLN:O	3:I:142:ARG:HD3	2.04	0.58
1:A:422:GLU:HG3	1:A:530:ALA:CB	2.34	0.58
2:D:178:ILE:HD11	2:D:310:ILE:HD12	1.85	0.58
1:E:199:TYR:CD2	1:E:216:VAL:HG11	2.39	0.58
1:E:266:GLU:HA	1:E:269:ILE:HD12	1.84	0.58
2:H:361:LEU:HA	2:H:364:VAL:CG2	2.32	0.58
2:H:80:MET:HG2	5:H:8:ATP:C4	2.39	0.58
2:F:54:ILE:CD1	2:F:154:ILE:HG13	2.33	0.58
3:K:138:PRO:CA	3:K:141:GLN:HE21	2.15	0.58
2:B:56:ALA:HA	2:B:60:GLY:HA3	1.86	0.58
1:E:341:LYS:O	1:E:345:VAL:HG23	2.04	0.58
2:D:229:ILE:HA	2:D:264:SER:OG	2.03	0.58
3:K:117:ILE:CD1	3:K:126:ILE:HG23	2.34	0.58
1:E:422:GLU:HG3	1:E:530:ALA:CB	2.33	0.58
1:C:199:TYR:CD2	1:C:216:VAL:HG11	2.39	0.58
2:B:277:THR:HG23	2:B:280:LEU:H	1.69	0.58
1:G:481:GLU:HA	1:G:481:GLU:OE1	2.04	0.57
1:E:259:PRO:C	1:E:260:GLU:HG2	2.23	0.57
1:E:261:ASP:N	1:E:261:ASP:OD1	2.36	0.57
3:K:170:VAL:HG13	3:K:171:LEU:N	2.18	0.57
2:D:110:PHE:HD2	2:D:110:PHE:C	2.07	0.57
3:J:118:GLU:O	3:J:120:THR:N	2.31	0.57
1:C:533:GLN:O	1:C:534:LEU:CG	2.52	0.57
1:A:8:LEU:HD12	1:A:11:GLN:OE1	2.04	0.57
1:C:341:LYS:O	1:C:345:VAL:HG23	2.04	0.57

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:F:56:ALA:N	2:F:79:ASP:OD1	2.38	0.57
1:E:260:GLU:CB	1:E:261:ASP:OD1	2.52	0.57
2:F:64:LEU:HD21	2:F:77:VAL:HG22	1.86	0.57
1:E:16:GLN:NE2	1:E:20:TRP:HZ2	2.02	0.57
1:A:199:TYR:CD2	1:A:216:VAL:HG11	2.40	0.57
2:B:87:ASN:HB3	2:B:91:GLN:CD	2.25	0.57
1:A:297:ILE:HD11	1:A:309:ARG:HG2	1.87	0.57
2:H:365:LEU:HD22	2:H:393:TYR:OH	2.05	0.57
2:H:110:PHE:C	2:H:110:PHE:CD2	2.78	0.57
1:G:16:GLN:NE2	1:G:20:TRP:HZ2	2.03	0.57
1:E:46:LEU:HD23	1:E:93:LEU:HD13	1.85	0.57
3:L:118:GLU:O	3:L:120:THR:N	2.30	0.57
2:B:13:TRP:HZ3	2:B:116:PRO:HG2	1.69	0.57
2:F:229:ILE:HA	2:F:264:SER:OG	2.03	0.57
1:E:307:LEU:CB	1:E:383:LEU:HD22	2.33	0.57
2:F:365:LEU:HD22	2:F:393:TYR:OH	2.04	0.57
2:B:110:PHE:C	2:B:110:PHE:CD2	2.76	0.57
2:H:152:ARG:O	2:H:155:ASN:HB3	2.04	0.57
2:H:335:PHE:HE1	2:H:337:ALA:HB2	1.70	0.57
1:C:72:ASN:C	1:C:72:ASN:ND2	2.56	0.57
2:F:145:LEU:HD13	2:F:150:ALA:HB1	1.85	0.57
2:H:277:THR:HG23	2:H:280:LEU:H	1.69	0.57
1:E:8:LEU:HD12	1:E:11:GLN:OE1	2.03	0.57
1:C:261:ASP:OD1	1:C:261:ASP:N	2.37	0.57
1:G:251:ILE:HG23	1:G:262:GLU:HG2	1.85	0.57
1:A:366:GLN:O	1:A:368:ILE:N	2.38	0.57
1:G:33:VAL:HG23	1:G:54:ILE:HD11	1.87	0.57
1:E:307:LEU:HB3	1:E:383:LEU:HD21	1.86	0.57
2:B:335:PHE:HE1	2:B:337:ALA:HB2	1.69	0.57
3:I:150:MET:HE1	3:I:167:LEU:HD22	1.87	0.57
2:B:257:ILE:HD13	2:B:282:GLN:HG2	1.87	0.57
1:A:251:ILE:HG23	1:A:262:GLU:HG2	1.85	0.57
2:D:58:GLY:N	2:D:91:GLN:HG2	2.12	0.57
2:D:54:ILE:CD1	2:D:154:ILE:HG13	2.35	0.57
1:C:84:ASN:OD1	1:C:106:GLU:HG2	2.05	0.57
1:E:481:GLU:OE1	1:E:481:GLU:HA	2.05	0.57
1:G:199:TYR:CD2	1:G:216:VAL:HG11	2.40	0.57
1:G:13:TYR:O	1:G:17:LEU:HG	2.04	0.57
2:D:46:LEU:O	2:D:73:ARG:HB2	2.05	0.57
2:F:152:ARG:O	2:F:155:ASN:HB3	2.05	0.57
1:A:347:ARG:HH22	2:B:274:ARG:HH11	1.52	0.56
1:G:84:ASN:OD1	1:G:106:GLU:HG2	2.04	0.56

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:407:ILE:HD12	1:E:409:LYS:HB3	1.86	0.56
1:E:510:THR:HB	1:E:512:GLN:HG3	1.87	0.56
1:A:332:MET:HG2	1:A:339:TYR:HE1	1.70	0.56
1:G:214:TRP:CE3	1:G:332:MET:HB3	2.40	0.56
2:D:110:PHE:CD2	2:D:110:PHE:C	2.79	0.56
1:A:341:LYS:O	1:A:345:VAL:HG23	2.06	0.56
1:C:342:LEU:HD11	1:C:346:TYR:HE1	1.69	0.56
2:H:56:ALA:HA	2:H:60:GLY:HA3	1.86	0.56
1:E:243:PHE:O	1:E:246:LEU:HB3	2.04	0.56
2:B:267:ARG:CG	2:B:267:ARG:HH11	2.16	0.56
2:H:335:PHE:CZ	3:L:144:ILE:HD13	2.40	0.56
3:J:141:GLN:O	3:J:142:ARG:HD3	2.05	0.56
1:E:407:ILE:O	1:E:409:LYS:N	2.38	0.56
2:F:110:PHE:C	2:F:110:PHE:HD2	2.08	0.56
1:E:38:ALA:O	1:E:85:ARG:HD3	2.05	0.56
2:D:394:LEU:HG	2:D:396:SER:H	1.71	0.56
1:A:84:ASN:OD1	1:A:106:GLU:HG2	2.05	0.56
2:F:257:ILE:HD13	2:F:282:GLN:HG2	1.88	0.56
1:A:13:TYR:O	1:A:17:LEU:HG	2.04	0.56
1:G:407:ILE:O	1:G:409:LYS:N	2.38	0.56
1:E:261:ASP:O	1:E:262:GLU:HB2	2.05	0.56
2:D:357:PRO:O	2:D:358:SER:HB3	2.05	0.56
1:E:34:CYS:HB2	1:E:123:PHE:CE2	2.40	0.56
2:H:252:ASP:O	2:H:254:PRO:HD3	2.05	0.56
1:G:185:LEU:O	1:G:188:PRO:HD3	2.05	0.56
2:D:394:LEU:HD21	2:D:396:SER:HB3	1.88	0.56
3:J:117:ILE:CD1	3:J:126:ILE:HG23	2.35	0.56
1:G:407:ILE:HD12	1:G:409:LYS:HB3	1.87	0.56
1:E:261:ASP:O	1:E:262:GLU:CB	2.54	0.56
2:B:357:PRO:O	2:B:358:SER:HB3	2.05	0.56
2:F:394:LEU:HG	2:F:396:SER:H	1.71	0.56
2:H:267:ARG:HG2	2:H:267:ARG:NH1	2.13	0.56
3:J:150:MET:HE1	3:J:167:LEU:HD22	1.87	0.56
1:E:214:TRP:CE3	1:E:332:MET:HB3	2.40	0.56
2:D:277:THR:HG23	2:D:280:LEU:H	1.69	0.56
1:G:510:THR:HB	1:G:512:GLN:HG3	1.88	0.56
2:D:365:LEU:HD22	2:D:393:TYR:OH	2.06	0.56
1:G:407:ILE:HG23	1:G:407:ILE:O	2.06	0.56
1:E:50:VAL:HG13	1:E:100:VAL:HG21	1.88	0.56
1:C:39:THR:O	1:C:43:THR:HB	2.06	0.56
1:G:243:PHE:O	1:G:246:LEU:HB3	2.04	0.56
2:B:54:ILE:CD1	2:B:154:ILE:HG13	2.36	0.56

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:64:LEU:HD11	2:B:77:VAL:HG21	1.88	0.56
1:A:235:LYS:HB2	1:A:239:GLU:OE1	2.06	0.56
1:E:342:LEU:HD11	1:E:346:TYR:HE1	1.71	0.56
2:F:335:PHE:CZ	3:K:144:ILE:HD13	2.41	0.56
2:D:343:CYS:SG	2:D:346:CYS:SG	3.04	0.56
2:D:322:LEU:HD12	2:D:322:LEU:C	2.27	0.55
2:H:394:LEU:HG	2:H:396:SER:H	1.71	0.55
2:D:357:PRO:O	2:D:358:SER:CB	2.54	0.55
1:G:309:ARG:CG	1:G:364:LEU:HD21	2.33	0.55
1:E:309:ARG:CG	1:E:364:LEU:HD21	2.31	0.55
2:F:64:LEU:HD11	2:F:77:VAL:HG21	1.88	0.55
1:E:33:VAL:HG23	1:E:54:ILE:HD11	1.88	0.55
2:D:335:PHE:HE2	3:J:170:VAL:HG21	1.71	0.55
3:J:170:VAL:HG13	3:J:171:LEU:N	2.20	0.55
2:B:16:ARG:NH2	2:B:116:PRO:HB2	2.21	0.55
1:G:261:ASP:O	1:G:262:GLU:HB2	2.06	0.55
1:G:533:GLN:O	1:G:534:LEU:CB	2.55	0.55
1:E:332:MET:HG2	1:E:339:TYR:HE1	1.71	0.55
1:A:481:GLU:OE1	1:A:481:GLU:HA	2.06	0.55
2:F:178:ILE:HD12	2:F:178:ILE:N	2.21	0.55
1:A:407:ILE:HG23	1:A:407:ILE:O	2.07	0.55
2:H:351:GLN:HA	2:H:351:GLN:NE2	2.22	0.55
1:E:518:ASN:ND2	1:E:533:GLN:CG	2.61	0.55
1:C:297:ILE:HD11	1:C:309:ARG:HG2	1.89	0.55
2:D:64:LEU:HD11	2:D:77:VAL:HG21	1.88	0.55
2:B:159:ILE:HG23	2:B:162:LEU:HD12	1.87	0.55
1:C:229:THR:HG22	1:C:231:GLY:H	1.72	0.55
1:G:341:LYS:O	1:G:345:VAL:HG23	2.06	0.55
1:E:84:ASN:OD1	1:E:106:GLU:HG2	2.06	0.55
3:K:117:ILE:HD13	3:K:126:ILE:HG12	1.89	0.55
1:E:46:LEU:HD21	1:E:57:PHE:CD1	2.41	0.55
2:D:901:VAL:C	2:D:902:ALA:O	2.40	0.55
1:E:428:MET:O	1:E:431:ALA:HB3	2.07	0.55
1:A:259:PRO:C	1:A:260:GLU:HG2	2.27	0.55
3:J:138:PRO:CA	3:J:141:GLN:HE21	2.16	0.55
3:I:117:ILE:CD1	3:I:126:ILE:HG23	2.37	0.55
2:B:164:TYR:CE2	2:B:169:LEU:HD13	2.41	0.55
1:A:229:THR:HG22	1:A:231:GLY:N	2.22	0.55
2:F:252:ASP:O	2:F:254:PRO:HD3	2.06	0.55
1:C:16:GLN:NE2	1:C:20:TRP:HZ2	2.05	0.55
2:D:240:GLU:O	2:D:241:GLN:C	2.45	0.55
2:B:394:LEU:HG	2:B:396:SER:H	1.72	0.55

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:325:ASN:HD22	2:D:326:ASP:N	2.04	0.55
1:C:407:ILE:O	1:C:407:ILE:HG23	2.07	0.55
2:D:152:ARG:O	2:D:155:ASN:HB3	2.06	0.55
2:H:380:ALA:CB	2:H:394:LEU:HB2	2.37	0.55
1:C:235:LYS:HB2	1:C:239:GLU:OE1	2.07	0.55
1:G:342:LEU:HD11	1:G:346:TYR:HE1	1.72	0.55
1:A:229:THR:O	1:A:230:ASN:CB	2.55	0.55
2:H:240:GLU:O	2:H:241:GLN:C	2.45	0.55
2:B:351:GLN:HA	2:B:351:GLN:NE2	2.21	0.54
2:D:237:TRP:CD2	2:D:242:PRO:HG2	2.41	0.54
2:F:237:TRP:CD2	2:F:242:PRO:HG2	2.42	0.54
1:C:41:THR:O	1:C:45:ILE:HG13	2.07	0.54
1:G:229:THR:HG22	1:G:231:GLY:H	1.73	0.54
1:C:353:ASP:O	1:C:357:VAL:HG23	2.07	0.54
2:B:356:SER:CB	2:B:359:ALA:HB3	2.38	0.54
2:F:325:ASN:HD22	2:F:326:ASP:N	2.05	0.54
2:F:56:ALA:HA	2:F:60:GLY:HA3	1.88	0.54
2:F:110:PHE:C	2:F:110:PHE:CD2	2.80	0.54
2:F:178:ILE:HD11	2:F:310:ILE:HD12	1.89	0.54
2:B:394:LEU:HD21	2:B:396:SER:HB3	1.89	0.54
2:H:87:ASN:HB3	2:H:91:GLN:CD	2.27	0.54
3:K:103:ILE:CD1	3:K:115:ILE:HB	2.37	0.54
2:H:237:TRP:CD2	2:H:242:PRO:HG2	2.41	0.54
2:H:162:LEU:HD21	2:H:174:ILE:HG23	1.89	0.54
2:B:85:VAL:HG13	2:B:86:SER:N	2.22	0.54
1:G:297:ILE:HD11	1:G:309:ARG:HG2	1.90	0.54
1:C:232:ARG:CB	1:C:234:PRO:HD3	2.35	0.54
1:A:214:TRP:CE3	1:A:332:MET:HB3	2.42	0.54
1:A:229:THR:HG22	1:A:231:GLY:H	1.71	0.54
1:C:366:GLN:O	1:C:368:ILE:N	2.40	0.54
2:D:13:TRP:HZ3	2:D:116:PRO:HG2	1.72	0.54
1:A:60:ILE:HD11	1:A:119:PHE:HE2	1.73	0.54
1:C:518:ASN:HD22	1:C:533:GLN:HG3	1.71	0.54
2:H:325:ASN:HD22	2:H:326:ASP:N	2.05	0.54
3:K:150:MET:HE3	3:K:167:LEU:HD22	1.89	0.54
2:D:64:LEU:HD21	2:D:77:VAL:CG2	2.37	0.54
2:D:159:ILE:HG23	2:D:162:LEU:HD12	1.89	0.54
1:E:229:THR:HG22	1:E:231:GLY:H	1.72	0.54
1:E:185:LEU:O	1:E:188:PRO:HD3	2.07	0.54
1:C:185:LEU:O	1:C:188:PRO:HD3	2.06	0.54
1:A:317:LYS:HB3	1:A:318:GLU:OE1	2.08	0.54
1:A:221:TYR:OH	1:A:250:GLY:HA3	2.07	0.54

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:221:TYR:OH	1:C:250:GLY:HA3	2.07	0.54
2:F:232:VAL:HG11	2:F:263:LYS:HB2	1.88	0.54
2:D:81:ASP:HB2	5:D:6:ATP:O2'	2.08	0.54
2:F:195:GLY:O	2:F:196:MET:HG3	2.08	0.54
1:A:248:ARG:C	1:A:250:GLY:H	2.11	0.54
1:C:253:LYS:O	1:C:260:GLU:CG	2.55	0.54
2:F:164:TYR:CE2	2:F:169:LEU:HD13	2.43	0.54
2:B:56:ALA:N	2:B:79:ASP:OD1	2.40	0.54
1:G:426:TYR:CZ	1:G:430:ARG:HD3	2.43	0.54
1:A:447:ASN:ND2	2:B:26:ARG:HE	2.04	0.54
2:F:351:GLN:HA	2:F:351:GLN:NE2	2.22	0.54
2:D:351:GLN:NE2	2:D:351:GLN:HA	2.23	0.54
2:F:58:GLY:N	2:F:91:GLN:HG2	2.11	0.54
1:C:332:MET:HG2	1:C:339:TYR:HE1	1.73	0.54
1:E:235:LYS:HB2	1:E:239:GLU:OE1	2.08	0.54
2:B:87:ASN:HB3	2:B:91:GLN:NE2	2.23	0.54
2:F:316:ILE:H	2:F:316:ILE:CD1	2.08	0.54
1:G:34:CYS:HB2	1:G:123:PHE:CE2	2.42	0.54
2:B:217:THR:CG2	2:B:223:ARG:HH22	2.21	0.54
1:G:366:GLN:O	1:G:368:ILE:N	2.41	0.54
2:D:178:ILE:HD12	2:D:178:ILE:N	2.23	0.54
1:E:16:GLN:CB	2:F:292:VAL:HG12	2.38	0.54
2:B:240:GLU:O	2:B:241:GLN:C	2.46	0.54
1:A:232:ARG:CB	1:A:234:PRO:HD3	2.33	0.53
2:F:162:LEU:HD21	2:F:174:ILE:HG23	1.90	0.53
2:D:164:TYR:CE2	2:D:169:LEU:HD13	2.44	0.53
1:C:293:ARG:HG2	1:C:305:TRP:CD1	2.43	0.53
2:H:13:TRP:HZ3	2:H:116:PRO:HG2	1.73	0.53
1:A:533:GLN:O	1:A:534:LEU:CB	2.56	0.53
2:F:87:ASN:HB3	2:F:91:GLN:CD	2.29	0.53
3:I:155:THR:O	3:I:158:ASP:HB2	2.09	0.53
3:I:101:MET:SD	3:I:162:LEU:HA	2.48	0.53
3:L:103:ILE:CD1	3:L:115:ILE:HB	2.38	0.53
1:C:229:THR:HG22	1:C:231:GLY:N	2.23	0.53
3:I:103:ILE:HD11	3:I:115:ILE:HB	1.90	0.53
1:C:13:TYR:O	1:C:17:LEU:HG	2.08	0.53
2:H:371:SER:O	2:H:373:SER:N	2.41	0.53
1:C:248:ARG:C	1:C:250:GLY:H	2.12	0.53
2:B:380:ALA:CB	2:B:394:LEU:HB2	2.38	0.53
2:F:87:ASN:HB3	2:F:91:GLN:NE2	2.23	0.53
2:H:58:GLY:N	2:H:91:GLN:HG2	2.17	0.53
2:B:178:ILE:N	2:B:178:ILE:HD12	2.23	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:407:ILE:O	1:A:409:LYS:N	2.40	0.53
1:C:407:ILE:HD12	1:C:409:LYS:HB3	1.89	0.53
3:L:150:MET:HE1	3:L:167:LEU:HD22	1.90	0.53
1:A:407:ILE:HD12	1:A:409:LYS:HB3	1.91	0.53
2:D:195:GLY:O	2:D:196:MET:HG3	2.09	0.53
2:F:13:TRP:HZ3	2:F:116:PRO:HG2	1.74	0.53
2:D:356:SER:CB	2:D:359:ALA:HB3	2.39	0.53
2:F:128:GLN:HE21	2:F:128:GLN:H	0.79	0.53
2:H:320:ASN:O	2:H:321:TYR:HB2	2.09	0.53
1:C:307:LEU:HB3	1:C:383:LEU:HD21	1.90	0.53
2:H:158:LEU:CD1	2:H:177:LEU:HB2	2.38	0.53
2:F:240:GLU:O	2:F:241:GLN:C	2.46	0.53
3:L:170:VAL:HG13	3:L:171:LEU:N	2.22	0.53
1:A:34:CYS:HB2	1:A:123:PHE:CE2	2.43	0.53
1:G:50:VAL:HG13	1:G:100:VAL:HG21	1.91	0.53
1:E:181:GLU:OE1	1:E:181:GLU:HA	2.08	0.53
1:A:260:GLU:HB3	1:A:261:ASP:OD1	2.09	0.53
2:H:111:LEU:O	2:H:111:LEU:HD23	2.08	0.53
1:E:229:THR:HG22	1:E:231:GLY:N	2.24	0.53
2:B:46:LEU:O	2:B:73:ARG:HB2	2.08	0.53
2:F:356:SER:CB	2:F:359:ALA:HB3	2.38	0.53
1:E:297:ILE:HD11	1:E:309:ARG:HG2	1.91	0.53
3:K:101:MET:SD	3:K:162:LEU:HA	2.49	0.53
2:B:901:VAL:O	2:B:902:ALA:O	2.26	0.53
2:B:197:THR:HG22	2:B:198:ALA:N	2.23	0.53
3:I:103:ILE:HD12	3:I:103:ILE:O	2.09	0.53
1:E:357:VAL:O	1:E:361:VAL:HG23	2.08	0.53
2:H:394:LEU:HD21	2:H:396:SER:HB3	1.89	0.53
3:K:103:ILE:HD11	3:K:115:ILE:HB	1.90	0.53
2:B:90:ARG:NH2	5:B:5:ATP:O2G	2.42	0.53
2:F:197:THR:HG22	2:F:198:ALA:N	2.24	0.53
2:B:213:PHE:CB	2:B:218:ILE:HD11	2.39	0.53
2:H:62:GLU:HG2	2:H:297:ALA:HA	1.90	0.53
1:A:496:PHE:CE1	2:B:298:VAL:HG13	2.43	0.53
2:H:360:LYS:N	2:H:363:GLU:OE1	2.42	0.53
2:D:199:CYS:HG	2:D:202:CYS:HG	1.53	0.53
2:H:257:ILE:HD13	2:H:282:GLN:HG2	1.91	0.53
2:H:164:TYR:CE2	2:H:169:LEU:HD13	2.44	0.53
2:H:164:TYR:CE2	2:H:169:LEU:HB2	2.42	0.53
1:C:229:THR:O	1:C:230:ASN:CB	2.57	0.53
1:A:428:MET:O	1:A:431:ALA:HB3	2.08	0.53
1:A:342:LEU:HD11	1:A:346:TYR:HE1	1.74	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:251:ILE:HG23	1:C:262:GLU:CG	2.39	0.52
1:C:252:LEU:C	1:C:253:LYS:C	2.67	0.52
1:G:221:TYR:OH	1:G:250:GLY:HA3	2.08	0.52
1:C:307:LEU:CB	1:C:383:LEU:HD22	2.34	0.52
3:I:117:ILE:HD13	3:I:126:ILE:HG12	1.91	0.52
3:L:103:ILE:HD11	3:L:115:ILE:HB	1.90	0.52
3:J:108:LEU:O	3:J:108:LEU:HG	2.10	0.52
1:E:229:THR:O	1:E:230:ASN:CB	2.56	0.52
1:C:177:ASP:O	1:C:178:ASN:HB2	2.09	0.52
2:B:162:LEU:HD21	2:B:174:ILE:HG23	1.91	0.52
1:G:229:THR:O	1:G:230:ASN:CB	2.57	0.52
1:A:518:ASN:HD22	1:A:533:GLN:HG3	1.73	0.52
2:D:197:THR:HG22	2:D:198:ALA:N	2.24	0.52
3:L:155:THR:O	3:L:158:ASP:HB2	2.08	0.52
2:B:111:LEU:O	2:B:111:LEU:HD23	2.09	0.52
1:C:18:ARG:NH2	2:D:288:ILE:HD12	2.23	0.52
1:C:527:GLN:OE1	2:D:302:VAL:HG13	2.10	0.52
1:E:248:ARG:C	1:E:250:GLY:H	2.11	0.52
1:G:259:PRO:C	1:G:260:GLU:HG2	2.28	0.52
2:H:127:ILE:HG13	2:H:128:GLN:NE2	2.24	0.52
3:J:117:ILE:HD13	3:J:126:ILE:HG12	1.91	0.52
1:G:34:CYS:HB2	1:G:123:PHE:CG	2.43	0.52
1:E:39:THR:O	1:E:43:THR:HB	2.09	0.52
1:G:19:LEU:HD21	2:H:290:PRO:HB2	1.92	0.52
1:A:15:ARG:HH11	1:A:15:ARG:HG3	1.74	0.52
2:B:361:LEU:CG	2:B:704:LEU:HA	2.40	0.52
1:C:309:ARG:HD2	1:C:313:GLU:HG2	1.92	0.52
2:B:335:PHE:HE2	3:I:170:VAL:HG21	1.75	0.52
1:G:47:LYS:HD3	1:G:51:LEU:HD11	1.91	0.52
2:F:111:LEU:O	2:F:111:LEU:HD23	2.09	0.52
1:A:47:LYS:HD3	1:A:51:LEU:HD11	1.91	0.52
2:F:158:LEU:CD1	2:F:177:LEU:HB2	2.40	0.52
2:F:393:TYR:HB3	2:F:606:ARG:CB	2.39	0.52
3:L:108:LEU:HG	3:L:108:LEU:O	2.09	0.52
3:I:107:THR:HG23	3:I:109:THR:H	1.74	0.52
2:H:127:ILE:HG12	5:H:8:ATP:HN62	1.73	0.52
5:H:8:ATP:O1A	5:H:8:ATP:O2B	2.28	0.52
1:G:232:ARG:CB	1:G:234:PRO:HD3	2.33	0.52
3:I:108:LEU:HG	3:I:108:LEU:O	2.08	0.52
1:G:229:THR:HG22	1:G:231:GLY:N	2.25	0.52
1:C:60:ILE:HD11	1:C:119:PHE:HE2	1.75	0.52
2:D:606:ARG:O	2:D:607:THR:C	2.46	0.52

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:244:ARG:HD3	1:G:269:ILE:CG2	2.39	0.52
3:K:108:LEU:HG	3:K:108:LEU:O	2.09	0.52
1:C:407:ILE:O	1:C:409:LYS:N	2.41	0.52
2:H:371:SER:C	2:H:373:SER:H	2.13	0.52
1:E:489:GLU:O	1:E:489:GLU:HG2	2.10	0.52
1:A:185:LEU:O	1:A:188:PRO:HD3	2.09	0.52
2:B:195:GLY:O	2:B:196:MET:HG3	2.09	0.52
2:F:136:ARG:HH11	2:F:136:ARG:HG2	1.75	0.52
1:E:533:GLN:O	1:E:534:LEU:CB	2.58	0.52
2:H:54:ILE:HD12	2:H:154:ILE:HG13	1.92	0.52
2:F:901:VAL:O	2:F:902:ALA:C	2.44	0.52
2:H:64:LEU:HD11	2:H:77:VAL:HG21	1.91	0.52
1:A:192:LEU:HG	1:A:196:PHE:CE1	2.45	0.52
2:D:606:ARG:O	2:D:608:ARG:N	2.43	0.52
2:H:394:LEU:HG	2:H:396:SER:HB3	1.92	0.52
2:D:87:ASN:HB3	2:D:91:GLN:CD	2.30	0.52
2:H:197:THR:HG22	2:H:198:ALA:N	2.25	0.52
2:B:342:ASN:HD22	2:B:342:ASN:N	2.02	0.52
2:H:213:PHE:CB	2:H:218:ILE:HD11	2.40	0.52
1:C:489:GLU:HG2	1:C:489:GLU:O	2.10	0.52
1:E:309:ARG:HD2	1:E:313:GLU:HG2	1.93	0.52
1:C:47:LYS:HD3	1:C:51:LEU:HD11	1.91	0.52
1:C:50:VAL:HG13	1:C:100:VAL:HG21	1.92	0.52
2:B:239:LYS:HG2	1:E:448:TYR:CZ	2.45	0.52
2:H:603:ILE:O	2:H:607:THR:N	2.43	0.52
1:A:261:ASP:O	1:A:262:GLU:HG2	2.10	0.51
2:F:394:LEU:CD2	2:F:396:SER:HB3	2.40	0.51
2:H:80:MET:HG2	5:H:8:ATP:N3	2.25	0.51
5:F:7:ATP:H3'	5:F:7:ATP:O1B	2.10	0.51
1:A:307:LEU:HB3	1:A:383:LEU:HD21	1.91	0.51
1:A:293:ARG:HG2	1:A:305:TRP:CD1	2.45	0.51
2:D:361:LEU:CG	2:D:704:LEU:HA	2.39	0.51
2:H:393:TYR:HB3	2:H:606:ARG:CB	2.40	0.51
2:F:900:ALA:O	2:F:901:VAL:CB	2.58	0.51
3:K:155:THR:O	3:K:158:ASP:HB2	2.10	0.51
2:B:158:LEU:CD1	2:B:177:LEU:HB2	2.40	0.51
2:D:371:SER:O	2:D:373:SER:N	2.43	0.51
2:H:46:LEU:O	2:H:73:ARG:HB2	2.10	0.51
1:G:41:THR:O	1:G:45:ILE:HG13	2.11	0.51
2:D:342:ASN:HD22	2:D:342:ASN:N	2.01	0.51
2:F:15:GLY:HA2	2:F:18:ASN:OD1	2.10	0.51
1:E:252:LEU:C	1:E:253:LYS:C	2.69	0.51

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:244:ARG:HD3	1:E:269:ILE:CG2	2.40	0.51
1:A:236:THR:O	1:A:237:TYR:CD1	2.64	0.51
3:J:103:ILE:CD1	3:J:115:ILE:HB	2.41	0.51
2:H:901:VAL:O	2:H:902:ALA:C	2.47	0.51
2:D:342:ASN:ND2	2:D:342:ASN:H	2.07	0.51
3:I:103:ILE:CD1	3:I:115:ILE:HB	2.40	0.51
2:F:16:ARG:NH2	2:F:116:PRO:HB2	2.24	0.51
1:E:15:ARG:NH1	5:F:7:ATP:O1G	2.44	0.51
2:B:237:TRP:CD2	2:B:242:PRO:HG2	2.45	0.51
2:F:342:ASN:HD22	2:F:342:ASN:N	2.01	0.51
1:G:317:LYS:HB3	1:G:318:GLU:OE1	2.10	0.51
2:F:603:ILE:O	2:F:607:THR:N	2.43	0.51
2:B:393:TYR:HB3	2:B:606:ARG:CB	2.41	0.51
2:H:87:ASN:HB3	2:H:91:GLN:NE2	2.26	0.51
2:H:197:THR:HG21	2:H:320:ASN:HB3	1.93	0.51
1:A:309:ARG:HD2	1:A:313:GLU:HG2	1.93	0.51
1:G:16:GLN:CB	2:H:292:VAL:HG12	2.41	0.51
2:H:56:ALA:N	2:H:79:ASP:OD1	2.43	0.51
1:C:259:PRO:CA	1:C:260:GLU:HG2	2.40	0.51
1:G:248:ARG:C	1:G:250:GLY:H	2.13	0.51
1:A:236:THR:O	1:A:237:TYR:HD1	1.92	0.51
3:K:117:ILE:HD11	3:K:126:ILE:HG23	1.92	0.51
3:K:150:MET:CE	3:K:167:LEU:HD13	2.41	0.51
2:B:15:GLY:HA2	2:B:18:ASN:OD1	2.11	0.51
1:C:15:ARG:HG3	1:C:15:ARG:HH11	1.76	0.51
1:E:84:ASN:ND2	1:E:84:ASN:C	2.64	0.51
2:B:316:ILE:CD1	2:B:316:ILE:H	2.10	0.51
2:H:178:ILE:N	2:H:178:ILE:HD12	2.25	0.51
2:D:16:ARG:NH2	2:D:116:PRO:HB2	2.25	0.51
2:H:96:PRO:O	2:H:99:ILE:HG13	2.11	0.51
2:F:46:LEU:O	2:F:73:ARG:HB2	2.11	0.51
2:H:90:ARG:HG2	2:H:90:ARG:HH11	1.74	0.51
1:G:260:GLU:HB3	1:G:261:ASP:OD1	2.10	0.51
2:F:380:ALA:CB	2:F:394:LEU:HB2	2.40	0.51
3:I:150:MET:CE	3:I:167:LEU:HD13	2.41	0.51
3:L:117:ILE:HD11	3:L:126:ILE:HG23	1.92	0.51
2:D:111:LEU:O	2:D:111:LEU:HD23	2.10	0.51
3:L:107:THR:HG22	3:L:111:LYS:N	2.26	0.51
2:H:232:VAL:HG11	2:H:263:LYS:HB2	1.93	0.51
1:C:166:ILE:HD11	1:C:508:ILE:HD13	1.93	0.51
2:B:59:LEU:HD12	3:I:176:GLY:CA	2.41	0.51
1:C:244:ARG:HD3	1:C:269:ILE:CG2	2.41	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:54:ILE:HD12	2:D:154:ILE:HG13	1.93	0.51
1:E:232:ARG:CB	1:E:234:PRO:HD3	2.34	0.51
3:J:155:THR:O	3:J:158:ASP:HB2	2.11	0.51
3:K:107:THR:HG22	3:K:111:LYS:N	2.26	0.51
2:F:320:ASN:O	2:F:321:TYR:HB2	2.11	0.51
1:E:317:LYS:HB3	1:E:318:GLU:OE1	2.11	0.51
2:F:360:LYS:N	2:F:363:GLU:OE1	2.44	0.50
1:C:140:ALA:HA	1:C:150:LEU:HD22	1.93	0.50
1:C:481:GLU:OE2	1:C:525:MET:HE3	2.10	0.50
1:E:163:ARG:NH1	1:E:163:ARG:HG2	2.24	0.50
1:G:163:ARG:NH1	1:G:163:ARG:HG2	2.24	0.50
2:D:178:ILE:HG21	2:D:303:CYS:HB3	1.93	0.50
1:A:19:LEU:HD21	2:B:290:PRO:HB2	1.93	0.50
1:C:236:THR:O	1:C:237:TYR:CD1	2.65	0.50
2:B:320:ASN:O	2:B:321:TYR:HB2	2.12	0.50
3:L:105:VAL:O	3:L:105:VAL:HG13	2.11	0.50
1:C:447:ASN:ND2	2:D:26:ARG:HE	2.09	0.50
1:G:407:ILE:C	1:G:407:ILE:HD13	2.31	0.50
1:C:317:LYS:HB3	1:C:318:GLU:OE1	2.11	0.50
2:F:371:SER:O	2:F:373:SER:N	2.44	0.50
1:G:489:GLU:HG2	1:G:489:GLU:O	2.12	0.50
1:A:489:GLU:H	2:B:19:HIS:CD2	2.29	0.50
1:A:181:GLU:HA	1:A:181:GLU:OE1	2.10	0.50
2:F:361:LEU:CG	2:F:704:LEU:HA	2.40	0.50
2:F:322:LEU:C	2:F:322:LEU:HD12	2.31	0.50
1:G:309:ARG:HD2	1:G:313:GLU:HG2	1.94	0.50
1:G:47:LYS:O	1:G:51:LEU:HD12	2.11	0.50
1:G:140:ALA:HA	1:G:150:LEU:HD22	1.94	0.50
3:K:107:THR:HG23	3:K:109:THR:H	1.76	0.50
2:D:213:PHE:CB	2:D:218:ILE:HD11	2.40	0.50
2:H:217:THR:CG2	2:H:223:ARG:HH22	2.24	0.50
1:A:235:LYS:HB2	1:A:239:GLU:CD	2.31	0.50
2:H:49:CYS:HA	2:H:139:HIS:CD2	2.46	0.50
2:D:15:GLY:HA2	2:D:18:ASN:OD1	2.10	0.50
2:B:136:ARG:HH11	2:B:136:ARG:HG2	1.76	0.50
1:A:396:ARG:HH11	1:A:533:GLN:NE2	2.10	0.50
2:H:191:VAL:H	2:H:320:ASN:HA	1.77	0.50
1:C:163:ARG:HG2	1:C:163:ARG:NH1	2.25	0.50
1:C:422:GLU:CD	1:C:422:GLU:H	2.14	0.50
3:J:105:VAL:HG13	3:J:105:VAL:O	2.11	0.50
2:D:56:ALA:N	2:D:79:ASP:OD1	2.44	0.50
1:E:527:GLN:OE1	2:F:302:VAL:HG13	2.11	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:117:PRO:C	1:G:119:PHE:H	2.15	0.50
1:G:60:ILE:HD11	1:G:119:PHE:HE2	1.76	0.50
1:E:47:LYS:HD3	1:E:51:LEU:HD11	1.93	0.50
1:G:353:ASP:O	1:G:357:VAL:HG23	2.11	0.50
1:G:157:GLY:HA3	1:G:485:TYR:CG	2.46	0.50
2:B:62:GLU:HG2	2:B:297:ALA:HA	1.93	0.50
2:D:335:PHE:CE2	3:J:170:VAL:HG21	2.47	0.50
2:H:235:LEU:O	2:H:238:PRO:HD2	2.12	0.50
2:H:342:ASN:N	2:H:342:ASN:HD22	2.03	0.50
1:A:407:ILE:HD13	1:A:407:ILE:C	2.31	0.50
2:D:62:GLU:HG2	2:D:297:ALA:HA	1.94	0.50
2:B:157:MET:HA	2:B:157:MET:HE3	1.94	0.50
1:E:133:GLU:O	1:E:134:SER:C	2.50	0.50
2:F:85:VAL:HG13	2:F:86:SER:N	2.27	0.50
1:E:244:ARG:HD3	1:E:269:ILE:HG23	1.93	0.50
1:G:244:ARG:HD3	1:G:269:ILE:HG23	1.93	0.50
2:F:126:LYS:HA	5:F:7:ATP:C2	2.47	0.50
2:F:342:ASN:ND2	2:F:342:ASN:H	2.07	0.50
2:B:64:LEU:HD21	2:B:77:VAL:CG2	2.42	0.50
1:C:128:ALA:HB1	1:C:131:LEU:HD11	1.93	0.50
2:D:217:THR:CG2	2:D:223:ARG:HH22	2.25	0.50
1:E:407:ILE:HD13	1:E:407:ILE:C	2.31	0.50
2:B:199:CYS:HG	2:B:343:CYS:HG	1.59	0.50
1:A:140:ALA:HA	1:A:150:LEU:HD22	1.94	0.50
3:K:105:VAL:HG13	3:K:105:VAL:O	2.12	0.50
2:B:164:TYR:CE2	2:B:169:LEU:HB2	2.45	0.50
1:G:46:LEU:HD21	1:G:57:PHE:CD1	2.47	0.50
1:A:447:ASN:HD22	2:B:26:ARG:HH21	1.60	0.50
2:D:371:SER:C	2:D:373:SER:H	2.15	0.50
1:G:39:THR:O	1:G:43:THR:HB	2.12	0.50
1:A:166:ILE:HD11	1:A:508:ILE:HD13	1.94	0.50
2:B:371:SER:O	2:B:373:SER:N	2.45	0.50
2:B:371:SER:C	2:B:373:SER:H	2.16	0.50
1:E:221:TYR:OH	1:E:250:GLY:HA3	2.11	0.49
3:J:103:ILE:HD11	3:J:115:ILE:HB	1.93	0.49
1:A:37:ASN:HB2	1:A:129:THR:O	2.12	0.49
1:C:50:VAL:HA	1:C:54:ILE:HG22	1.94	0.49
1:A:489:GLU:HG2	1:A:489:GLU:O	2.12	0.49
2:H:15:GLY:HA2	2:H:18:ASN:OD1	2.11	0.49
1:E:251:ILE:HG23	1:E:262:GLU:CG	2.42	0.49
2:D:360:LYS:N	2:D:363:GLU:OE1	2.45	0.49
2:F:267:ARG:NH1	2:F:267:ARG:HG2	2.15	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:107:THR:HG22	3:I:111:LYS:N	2.26	0.49
1:C:489:GLU:H	2:D:19:HIS:CD2	2.30	0.49
2:B:131:ASN:O	2:B:132:ASP:C	2.50	0.49
2:H:195:GLY:O	2:H:196:MET:HG3	2.12	0.49
1:E:416:MET:C	1:E:418:ASN:H	2.16	0.49
1:G:15:ARG:HG3	1:G:15:ARG:HH11	1.77	0.49
1:G:251:ILE:HG23	1:G:262:GLU:CG	2.42	0.49
1:G:261:ASP:O	1:G:262:GLU:HG2	2.12	0.49
1:E:84:ASN:C	1:E:84:ASN:HD22	2.14	0.49
2:B:380:ALA:O	2:B:904:VAL:HA	2.12	0.49
1:C:236:THR:O	1:C:237:TYR:HD1	1.95	0.49
3:K:161:ILE:O	3:K:162:LEU:HD23	2.12	0.49
2:F:213:PHE:CB	2:F:218:ILE:HD11	2.42	0.49
1:G:37:ASN:HB2	1:G:129:THR:O	2.12	0.49
2:H:131:ASN:O	2:H:132:ASP:C	2.50	0.49
1:E:192:LEU:O	1:E:195:HIS:HB3	2.11	0.49
2:D:85:VAL:HG13	2:D:86:SER:N	2.27	0.49
1:G:78:ARG:O	1:G:81:ILE:HG13	2.12	0.49
2:D:393:TYR:HB3	2:D:606:ARG:CB	2.42	0.49
2:B:360:LYS:N	2:B:363:GLU:OE1	2.46	0.49
2:F:235:LEU:O	2:F:238:PRO:HD2	2.12	0.49
2:D:162:LEU:HD21	2:D:174:ILE:HG23	1.94	0.49
2:B:73:ARG:HD3	2:B:117:ASN:O	2.12	0.49
1:E:353:ASP:O	1:E:357:VAL:HG23	2.12	0.49
1:A:39:THR:O	1:A:43:THR:HB	2.11	0.49
1:G:192:LEU:O	1:G:195:HIS:HB3	2.11	0.49
1:E:503:GLN:HA	1:E:503:GLN:OE1	2.12	0.49
1:C:253:LYS:O	1:C:253:LYS:CA	2.49	0.49
1:C:533:GLN:O	1:C:534:LEU:CB	2.60	0.49
2:F:80:MET:HG2	5:F:7:ATP:C4	2.47	0.49
1:C:38:ALA:O	1:C:85:ARG:HD3	2.11	0.49
1:A:41:THR:O	1:A:45:ILE:HG13	2.12	0.49
2:D:164:TYR:CE2	2:D:169:LEU:HB2	2.44	0.49
2:H:178:ILE:HG21	2:H:303:CYS:HB3	1.94	0.49
1:A:481:GLU:OE2	1:A:525:MET:HE3	2.13	0.49
1:C:407:ILE:C	1:C:407:ILE:HD13	2.33	0.49
2:H:139:HIS:O	2:H:176:PRO:HD2	2.13	0.49
2:B:49:CYS:HA	2:B:139:HIS:CD2	2.47	0.49
1:C:192:LEU:O	1:C:195:HIS:HB3	2.12	0.49
2:D:123:HIS:O	2:D:125:ASN:N	2.46	0.49
2:D:232:VAL:HG11	2:D:263:LYS:HB2	1.95	0.49
2:F:128:GLN:HE22	5:F:7:ATP:HN62	1.60	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:191:VAL:H	2:D:320:ASN:HA	1.77	0.49
1:E:143:LEU:HD22	1:E:148:ILE:HG21	1.94	0.49
1:E:34:CYS:HB2	1:E:123:PHE:CG	2.47	0.49
3:J:106:LYS:HG3	3:J:112:GLU:HB2	1.94	0.49
1:C:34:CYS:HB2	1:C:123:PHE:CG	2.47	0.49
1:E:444:GLY:HA2	1:E:449:GLN:HB2	1.95	0.49
1:C:181:GLU:OE1	1:C:181:GLU:HA	2.13	0.49
1:A:133:GLU:O	1:A:134:SER:C	2.51	0.49
2:F:394:LEU:HD11	2:F:396:SER:CB	2.43	0.49
2:F:54:ILE:HD12	2:F:154:ILE:HG13	1.94	0.49
2:B:199:CYS:SG	2:B:346:CYS:SG	3.10	0.49
3:K:150:MET:HE1	3:K:167:LEU:HD22	1.93	0.49
3:L:150:MET:CE	3:L:167:LEU:HD13	2.43	0.49
1:A:192:LEU:O	1:A:195:HIS:HB3	2.12	0.49
2:H:112:ASN:HD21	2:H:120:VAL:HB	1.77	0.49
1:E:293:ARG:HG2	1:E:305:TRP:CD1	2.48	0.49
2:F:62:GLU:HG2	2:F:297:ALA:HA	1.93	0.49
2:D:380:ALA:O	2:D:904:VAL:HA	2.13	0.49
2:F:380:ALA:O	2:F:904:VAL:HA	2.13	0.49
2:B:74:GLN:NE2	2:B:74:GLN:HA	2.28	0.49
3:L:106:LYS:HG2	3:L:110:GLY:HA2	1.95	0.49
2:H:241:GLN:HE21	2:H:246:GLY:H	1.61	0.49
1:E:60:ILE:HD11	1:E:119:PHE:HE2	1.76	0.49
2:B:190:ARG:NH2	2:B:203:THR:OG1	2.45	0.49
1:A:244:ARG:HD3	1:A:269:ILE:CG2	2.42	0.49
1:C:260:GLU:HB3	1:C:261:ASP:OD1	2.12	0.49
1:E:253:LYS:O	1:E:260:GLU:CD	2.51	0.49
2:H:380:ALA:O	2:H:904:VAL:HA	2.12	0.49
2:D:380:ALA:CB	2:D:394:LEU:HB2	2.42	0.49
2:B:322:LEU:C	2:B:322:LEU:HD12	2.33	0.49
2:H:900:ALA:O	2:H:901:VAL:CB	2.61	0.49
2:B:235:LEU:O	2:B:238:PRO:HD2	2.11	0.49
2:D:141:ILE:HD12	2:D:158:LEU:HD11	1.93	0.49
2:B:78:ILE:O	2:B:79:ASP:HB2	2.12	0.49
1:E:50:VAL:HA	1:E:54:ILE:HG22	1.94	0.49
1:G:166:ILE:HD11	1:G:508:ILE:HD13	1.93	0.49
1:C:430:ARG:NH1	1:C:430:ARG:HB3	2.28	0.49
2:F:190:ARG:NH2	2:F:203:THR:OG1	2.46	0.49
2:B:58:GLY:N	2:B:91:GLN:HG2	2.19	0.49
2:F:191:VAL:H	2:F:320:ASN:HA	1.78	0.49
2:D:49:CYS:HA	2:D:139:HIS:CD2	2.48	0.49
2:F:49:CYS:HA	2:F:139:HIS:CD2	2.48	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:133:GLU:O	1:G:134:SER:C	2.52	0.49
1:C:252:LEU:O	1:C:259:PRO:N	2.46	0.48
2:B:236:GLN:HE22	2:B:263:LYS:HB3	1.78	0.48
3:L:117:ILE:HD13	3:L:126:ILE:HG12	1.94	0.48
1:E:422:GLU:H	1:E:422:GLU:CD	2.16	0.48
1:G:481:GLU:HG2	1:G:525:MET:HE3	1.95	0.48
2:D:131:ASN:O	2:D:132:ASP:C	2.51	0.48
1:A:430:ARG:NH1	1:A:430:ARG:HB3	2.28	0.48
2:B:335:PHE:CE2	3:I:170:VAL:HG21	2.48	0.48
3:I:105:VAL:HG21	3:I:143:LEU:HD21	1.94	0.48
1:G:50:VAL:HA	1:G:54:ILE:HG22	1.94	0.48
2:D:241:GLN:NE2	2:D:246:GLY:H	2.11	0.48
1:C:18:ARG:CZ	2:D:288:ILE:HD12	2.42	0.48
2:H:112:ASN:ND2	2:H:120:VAL:HB	2.28	0.48
1:C:336:SER:OG	2:D:271:TYR:HD2	1.94	0.48
1:G:181:GLU:HA	1:G:181:GLU:OE1	2.13	0.48
1:G:252:LEU:O	1:G:259:PRO:N	2.44	0.48
2:H:355:PHE:O	2:H:356:SER:CB	2.61	0.48
2:F:164:TYR:CE2	2:F:169:LEU:HB2	2.47	0.48
1:G:192:LEU:HG	1:G:196:PHE:CE1	2.48	0.48
1:E:177:ASP:O	1:E:178:ASN:HB2	2.13	0.48
2:F:183:GLU:HG3	2:F:289:ILE:CG2	2.43	0.48
1:C:133:GLU:O	1:C:134:SER:C	2.51	0.48
1:A:78:ARG:O	1:A:81:ILE:HG13	2.13	0.48
1:A:244:ARG:HD3	1:A:269:ILE:HG23	1.95	0.48
1:G:264:ASN:N	1:G:264:ASN:ND2	2.61	0.48
1:E:15:ARG:HG3	1:E:15:ARG:HH11	1.79	0.48
2:D:320:ASN:O	2:D:321:TYR:HB2	2.13	0.48
3:J:117:ILE:HD11	3:J:126:ILE:HG23	1.94	0.48
3:I:123:VAL:HA	3:I:126:ILE:HD12	1.95	0.48
3:L:101:MET:SD	3:L:162:LEU:HA	2.53	0.48
2:F:217:THR:CG2	2:F:223:ARG:HH22	2.27	0.48
2:D:78:ILE:O	2:D:79:ASP:HB2	2.13	0.48
2:H:78:ILE:O	2:H:79:ASP:HB2	2.12	0.48
2:D:900:ALA:O	2:D:901:VAL:CB	2.61	0.48
2:F:241:GLN:HE21	2:F:246:GLY:H	1.61	0.48
1:A:244:ARG:O	1:A:247:ILE:N	2.46	0.48
1:A:261:ASP:O	1:A:262:GLU:CG	2.62	0.48
1:A:307:LEU:CB	1:A:383:LEU:HD22	2.38	0.48
1:A:50:VAL:HA	1:A:54:ILE:HG22	1.95	0.48
2:H:232:VAL:HG12	2:H:232:VAL:O	2.12	0.48
2:H:85:VAL:HG13	2:H:86:SER:N	2.28	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:335:PHE:CZ	3:J:144:ILE:HD13	2.48	0.48
3:J:107:THR:HG22	3:J:111:LYS:N	2.28	0.48
1:G:235:LYS:HB2	1:G:239:GLU:OE1	2.14	0.48
1:A:474:VAL:O	1:A:475:LYS:C	2.51	0.48
2:H:355:PHE:O	2:H:356:SER:OG	2.24	0.48
1:E:140:ALA:HA	1:E:150:LEU:HD22	1.96	0.48
1:A:177:ASP:O	1:A:178:ASN:HB2	2.13	0.48
2:H:908:GLN:O	2:H:909:THR:C	2.52	0.48
2:H:32:HIS:CE1	2:H:33:PRO:HD2	2.48	0.48
2:B:197:THR:CG2	2:B:198:ALA:N	2.77	0.48
3:K:106:LYS:HG2	3:K:110:GLY:HA2	1.95	0.48
1:C:157:GLY:HA3	1:C:485:TYR:CG	2.49	0.48
1:A:157:GLY:HA3	1:A:485:TYR:CG	2.49	0.48
2:B:30:PHE:CD1	2:B:30:PHE:N	2.82	0.48
1:A:251:ILE:HG23	1:A:262:GLU:CG	2.44	0.48
2:D:394:LEU:CD2	2:D:396:SER:HB3	2.44	0.48
2:D:199:CYS:SG	2:D:346:CYS:SG	3.10	0.48
1:G:84:ASN:ND2	1:G:84:ASN:C	2.67	0.48
1:C:235:LYS:HB2	1:C:239:GLU:CD	2.34	0.48
3:L:150:MET:HE3	3:L:167:LEU:HD22	1.95	0.48
1:G:236:THR:O	1:G:237:TYR:HD1	1.97	0.48
3:L:107:THR:HG23	3:L:109:THR:H	1.78	0.48
1:E:335:ASP:HB3	1:E:338:LYS:HB2	1.96	0.48
1:A:366:GLN:C	1:A:368:ILE:N	2.67	0.48
1:C:177:ASP:O	1:C:178:ASN:CB	2.61	0.48
1:C:117:PRO:C	1:C:119:PHE:H	2.16	0.48
2:B:139:HIS:O	2:B:176:PRO:HD2	2.13	0.48
2:H:361:LEU:CG	2:H:704:LEU:HA	2.44	0.48
2:D:87:ASN:HB3	2:D:91:GLN:NE2	2.29	0.48
2:D:197:THR:HG21	2:D:320:ASN:HB3	1.96	0.48
2:B:191:VAL:H	2:B:320:ASN:HA	1.79	0.48
1:C:35:LEU:HD23	1:C:46:LEU:HD22	1.95	0.48
2:F:371:SER:C	2:F:373:SER:H	2.16	0.48
1:A:426:TYR:CZ	1:A:430:ARG:HD3	2.49	0.48
1:G:124:THR:HG22	1:G:125:VAL:HG23	1.96	0.48
1:A:221:TYR:CD2	1:A:247:ILE:HA	2.49	0.47
1:G:307:LEU:CD1	1:G:383:LEU:HD22	2.42	0.47
3:K:103:ILE:O	3:K:103:ILE:HD12	2.14	0.47
2:F:64:LEU:HD21	2:F:77:VAL:CG2	2.43	0.47
3:J:106:LYS:HG2	3:J:110:GLY:HA2	1.96	0.47
1:A:34:CYS:HB2	1:A:123:PHE:CG	2.48	0.47
1:C:37:ASN:HB2	1:C:129:THR:O	2.13	0.47

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:489:GLU:H	2:F:19:HIS:CD2	2.32	0.47
2:B:312:THR:O	2:B:313:SER:HB2	2.14	0.47
1:C:244:ARG:HD3	1:C:269:ILE:HG23	1.95	0.47
2:B:394:LEU:HG	2:B:396:SER:HB3	1.95	0.47
3:J:101:MET:SD	3:J:162:LEU:HA	2.54	0.47
2:B:325:ASN:HD22	2:B:326:ASP:N	2.12	0.47
2:B:13:TRP:CZ3	2:B:116:PRO:HG2	2.48	0.47
1:E:235:LYS:HB2	1:E:239:GLU:CD	2.33	0.47
2:D:236:GLN:HE22	2:D:263:LYS:HB3	1.79	0.47
2:D:30:PHE:N	2:D:30:PHE:CD1	2.82	0.47
1:C:340:ILE:HD11	2:D:273:ILE:HG12	1.95	0.47
2:B:356:SER:HA	2:B:357:PRO:HD3	1.55	0.47
2:F:394:LEU:HD11	2:F:396:SER:HB3	1.97	0.47
1:A:285:ILE:HD11	1:A:388:ALA:CA	2.36	0.47
3:I:117:ILE:HD11	3:I:126:ILE:HG23	1.96	0.47
3:L:106:LYS:HG3	3:L:112:GLU:HB2	1.96	0.47
1:C:16:GLN:CB	2:D:292:VAL:HG12	2.43	0.47
2:H:73:ARG:HD3	2:H:117:ASN:O	2.13	0.47
1:E:117:PRO:C	1:E:119:PHE:H	2.16	0.47
2:D:190:ARG:NH2	2:D:203:THR:OG1	2.47	0.47
2:D:112:ASN:ND2	2:D:120:VAL:HB	2.29	0.47
1:E:124:THR:HG22	1:E:125:VAL:HG23	1.96	0.47
2:F:112:ASN:ND2	2:F:120:VAL:HB	2.28	0.47
2:F:112:ASN:HD21	2:F:120:VAL:HB	1.79	0.47
2:D:136:ARG:HG2	2:D:136:ARG:HH11	1.79	0.47
2:H:394:LEU:CD2	2:H:396:SER:HB3	2.44	0.47
2:B:901:VAL:O	2:B:902:ALA:C	2.51	0.47
1:G:236:THR:O	1:G:237:TYR:CD1	2.67	0.47
2:F:73:ARG:HD3	2:F:117:ASN:O	2.14	0.47
1:C:496:PHE:CE1	2:D:298:VAL:HG13	2.50	0.47
1:C:78:ARG:O	1:C:81:ILE:HG13	2.14	0.47
1:A:503:GLN:OE1	1:A:503:GLN:HA	2.14	0.47
1:E:264:ASN:N	1:E:264:ASN:ND2	2.61	0.47
2:B:351:GLN:HB3	2:B:916:PHE:CB	2.44	0.47
2:H:267:ARG:CG	2:H:267:ARG:HH11	2.17	0.47
1:G:211:HIS:O	1:G:338:LYS:HD2	2.15	0.47
1:C:264:ASN:ND2	1:C:264:ASN:N	2.61	0.47
1:G:307:LEU:CB	1:G:383:LEU:HD22	2.39	0.47
3:K:106:LYS:HG3	3:K:112:GLU:HB2	1.97	0.47
2:D:162:LEU:HD22	2:D:169:LEU:HD11	1.96	0.47
2:B:162:LEU:HD22	2:B:169:LEU:HD11	1.97	0.47
1:E:157:GLY:HA3	1:E:485:TYR:CG	2.49	0.47

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:78:ARG:O	1:E:81:ILE:HG13	2.14	0.47
1:E:426:TYR:CZ	1:E:430:ARG:HD3	2.49	0.47
1:A:262:GLU:CA	1:A:262:GLU:OE1	2.63	0.47
2:B:394:LEU:HD11	2:B:396:SER:HB3	1.96	0.47
1:G:225:TRP:CE2	1:G:233:ILE:HG12	2.50	0.47
1:G:422:GLU:H	1:G:422:GLU:CD	2.17	0.47
1:E:45:ILE:CG1	1:E:498:GLY:HA2	2.44	0.47
2:F:392:LEU:HD23	2:F:392:LEU:HA	1.45	0.47
3:K:105:VAL:HG11	3:K:130:VAL:CG2	2.41	0.47
1:A:264:ASN:N	1:A:264:ASN:ND2	2.60	0.47
3:I:106:LYS:HG3	3:I:112:GLU:HB2	1.97	0.47
1:A:128:ALA:HB1	1:A:131:LEU:HD11	1.96	0.47
2:H:241:GLN:NE2	2:H:246:GLY:H	2.12	0.47
2:F:78:ILE:O	2:F:79:ASP:HB2	2.15	0.47
2:D:241:GLN:HE21	2:D:246:GLY:H	1.61	0.47
2:F:241:GLN:NE2	2:F:246:GLY:H	2.12	0.47
1:G:489:GLU:H	2:H:19:HIS:CD2	2.33	0.47
2:F:312:THR:O	2:F:313:SER:HB2	2.14	0.47
2:F:157:MET:HA	2:F:157:MET:HE3	1.96	0.47
2:F:351:GLN:HB3	2:F:916:PHE:CB	2.45	0.47
2:D:361:LEU:N	2:D:361:LEU:HD23	2.29	0.47
2:B:394:LEU:HD11	2:B:396:SER:CB	2.45	0.47
1:A:143:LEU:HD22	1:A:148:ILE:HG21	1.96	0.47
1:G:447:ASN:HD22	2:H:26:ARG:HH21	1.61	0.47
2:H:52:LEU:HD11	2:H:78:ILE:HG13	1.96	0.47
2:D:139:HIS:O	2:D:176:PRO:HD2	2.14	0.47
2:H:314:ALA:O	2:H:315:TYR:CD1	2.67	0.47
1:G:331:ASP:HB2	2:H:224:LEU:HD11	1.96	0.47
2:D:908:GLN:O	2:D:909:THR:C	2.51	0.47
2:F:30:PHE:N	2:F:30:PHE:CD1	2.83	0.47
1:A:265:PHE:O	1:A:269:ILE:HG13	2.15	0.47
2:F:394:LEU:HG	2:F:396:SER:HB3	1.96	0.47
1:E:396:ARG:HH11	1:E:533:GLN:NE2	2.13	0.47
3:I:155:THR:HG22	3:I:158:ASP:CG	2.35	0.47
3:K:123:VAL:HA	3:K:126:ILE:HD12	1.97	0.47
2:B:146:ASP:HB3	5:B:5:ATP:H5'2	1.97	0.47
3:L:113:ILE:HD11	3:L:130:VAL:HG13	1.97	0.47
3:I:106:LYS:HG2	3:I:110:GLY:HA2	1.96	0.47
2:H:342:ASN:ND2	2:H:342:ASN:H	2.10	0.47
3:I:105:VAL:O	3:I:105:VAL:HG13	2.15	0.47
1:G:415:SER:O	1:G:417:ASP:N	2.48	0.47
1:E:474:VAL:O	1:E:475:LYS:C	2.52	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:221:TYR:CD2	1:C:247:ILE:HA	2.50	0.47
2:H:356:SER:CB	2:H:359:ALA:HB3	2.45	0.47
1:C:225:TRP:CE2	1:C:233:ILE:HG12	2.50	0.47
2:H:64:LEU:HD21	2:H:77:VAL:CG2	2.44	0.47
1:A:163:ARG:HG2	1:A:163:ARG:NH1	2.26	0.47
2:F:197:THR:HG21	2:F:320:ASN:HB3	1.96	0.47
1:A:211:HIS:O	1:A:338:LYS:HD2	2.15	0.47
1:C:357:VAL:O	1:C:361:VAL:HG23	2.14	0.47
1:A:117:PRO:C	1:A:119:PHE:H	2.19	0.47
1:G:218:ILE:HD11	1:G:268:ALA:O	2.14	0.47
1:G:177:ASP:O	1:G:178:ASN:HB2	2.15	0.47
2:H:190:ARG:NH2	2:H:203:THR:OG1	2.48	0.47
2:H:351:GLN:HB3	2:H:916:PHE:CB	2.45	0.46
2:B:394:LEU:CD2	2:B:396:SER:HB3	2.45	0.46
2:H:126:LYS:HA	5:H:8:ATP:C2	2.50	0.46
2:D:229:ILE:HG21	2:D:284:VAL:HB	1.96	0.46
3:L:103:ILE:O	3:L:103:ILE:HD12	2.15	0.46
2:H:158:LEU:HD12	2:H:177:LEU:HB2	1.96	0.46
1:G:335:ASP:HB3	1:G:338:LYS:HB2	1.97	0.46
3:J:105:VAL:HG21	3:J:143:LEU:HD21	1.97	0.46
1:G:366:GLN:C	1:G:368:ILE:N	2.69	0.46
2:H:16:ARG:NH2	2:H:116:PRO:HB2	2.30	0.46
1:G:235:LYS:HB2	1:G:239:GLU:CD	2.34	0.46
2:F:236:GLN:HE22	2:F:263:LYS:HB3	1.79	0.46
2:B:236:GLN:NE2	2:B:263:LYS:HB3	2.30	0.46
2:D:158:LEU:CD1	2:D:177:LEU:HB2	2.44	0.46
3:L:105:VAL:HG21	3:L:143:LEU:HD21	1.96	0.46
1:C:366:GLN:C	1:C:368:ILE:N	2.68	0.46
2:B:178:ILE:HG21	2:B:303:CYS:HB3	1.97	0.46
2:D:232:VAL:HG12	2:D:232:VAL:O	2.14	0.46
1:A:124:THR:HG22	1:A:125:VAL:HG23	1.97	0.46
2:F:212:ASN:HA	2:F:212:ASN:HD22	1.59	0.46
1:G:221:TYR:CD2	1:G:247:ILE:HA	2.50	0.46
2:B:54:ILE:HD12	2:B:154:ILE:HG13	1.98	0.46
2:D:335:PHE:CE1	2:D:337:ALA:HB2	2.49	0.46
1:G:84:ASN:HD22	1:G:84:ASN:C	2.17	0.46
1:G:416:MET:C	1:G:418:ASN:H	2.19	0.46
1:A:421:ASN:O	1:A:423:ILE:N	2.48	0.46
3:K:105:VAL:HG21	3:K:143:LEU:HD21	1.97	0.46
2:D:80:MET:HG2	5:D:6:ATP:N3	2.29	0.46
1:G:444:GLY:HA2	1:G:449:GLN:HB2	1.98	0.46
1:A:33:VAL:CG2	1:A:54:ILE:HD11	2.46	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:13:TRP:CZ3	2:D:116:PRO:HG2	2.49	0.46
2:B:112:ASN:ND2	2:B:120:VAL:HB	2.30	0.46
1:E:262:GLU:CA	1:E:262:GLU:OE1	2.64	0.46
1:C:396:ARG:HH11	1:C:533:GLN:NE2	2.12	0.46
2:D:197:THR:CG2	2:D:198:ALA:N	2.78	0.46
1:C:84:ASN:ND2	1:C:84:ASN:C	2.69	0.46
3:J:107:THR:HG23	3:J:109:THR:H	1.79	0.46
3:I:105:VAL:HG11	3:I:130:VAL:CG2	2.44	0.46
1:C:299:LYS:HA	1:C:368:ILE:CG2	2.46	0.46
2:D:73:ARG:HD3	2:D:117:ASN:O	2.15	0.46
1:A:416:MET:C	1:A:418:ASN:H	2.19	0.46
1:G:112:LEU:C	1:G:114:ASP:N	2.68	0.46
1:E:143:LEU:HD13	1:E:150:LEU:HD13	1.95	0.46
1:A:143:LEU:HD13	1:A:150:LEU:HD13	1.96	0.46
2:F:340:LYS:HB3	2:F:342:ASN:ND2	2.30	0.46
2:F:197:THR:CG2	2:F:198:ALA:N	2.78	0.46
2:B:158:LEU:HD12	2:B:177:LEU:HB2	1.98	0.46
1:E:128:ALA:HB1	1:E:131:LEU:HD11	1.98	0.46
1:C:175:HIS:HD2	1:C:512:GLN:O	1.99	0.46
1:G:481:GLU:OE2	1:G:525:MET:HE3	2.16	0.46
2:F:13:TRP:C	2:F:13:TRP:CD1	2.88	0.46
2:D:112:ASN:HD21	2:D:120:VAL:HB	1.80	0.46
2:F:908:GLN:O	2:F:909:THR:C	2.54	0.46
1:A:357:VAL:O	1:A:361:VAL:HG23	2.16	0.46
1:A:355:ALA:O	1:A:358:GLY:N	2.48	0.46
2:B:232:VAL:HG11	2:B:263:LYS:HB2	1.97	0.46
2:B:229:ILE:HD12	2:B:284:VAL:HG21	1.97	0.46
1:C:47:LYS:O	1:C:51:LEU:HD12	2.16	0.46
2:F:193:LEU:O	2:F:194:PRO:C	2.54	0.46
1:G:140:ALA:HA	1:G:150:LEU:CD2	2.45	0.46
1:A:422:GLU:H	1:A:422:GLU:CD	2.17	0.46
1:E:211:HIS:O	1:E:338:LYS:HD2	2.15	0.46
2:H:340:LYS:HB3	2:H:342:ASN:ND2	2.30	0.46
1:C:15:ARG:HD3	1:C:15:ARG:HA	1.82	0.46
1:E:288:ILE:HG23	1:E:305:TRP:CZ3	2.51	0.46
2:F:182:THR:CG2	2:F:183:GLU:N	2.77	0.46
2:H:30:PHE:N	2:H:30:PHE:CD1	2.83	0.46
2:D:157:MET:HE3	2:D:157:MET:HA	1.98	0.46
2:B:127:ILE:HG13	2:B:128:GLN:NE2	2.30	0.46
3:J:103:ILE:HD12	3:J:103:ILE:O	2.16	0.46
3:J:161:ILE:O	3:J:162:LEU:HD23	2.15	0.46
2:B:900:ALA:O	2:B:901:VAL:CB	2.64	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:335:ASP:HB3	1:A:338:LYS:HB2	1.98	0.46
1:C:19:LEU:HD21	2:D:290:PRO:HB2	1.98	0.46
1:E:221:TYR:CD2	1:E:247:ILE:HA	2.51	0.46
1:E:244:ARG:O	1:E:247:ILE:N	2.48	0.46
2:D:394:LEU:HD11	2:D:396:SER:CB	2.46	0.46
2:H:222:PRO:HD2	2:H:271:TYR:CD2	2.50	0.46
3:L:123:VAL:HA	3:L:126:ILE:HD12	1.97	0.46
1:C:33:VAL:CG2	1:C:54:ILE:HD11	2.44	0.46
1:E:215:ILE:HD12	1:E:342:LEU:HD21	1.98	0.46
1:A:15:ARG:HD3	1:A:15:ARG:HA	1.84	0.46
2:D:236:GLN:NE2	2:D:263:LYS:HB3	2.31	0.46
1:E:430:ARG:NH1	1:E:430:ARG:HB3	2.30	0.46
1:E:218:ILE:HD11	1:E:268:ALA:O	2.15	0.46
1:E:336:SER:OG	2:F:271:TYR:HD2	1.99	0.46
2:F:267:ARG:CG	2:F:267:ARG:HH11	2.19	0.46
1:A:38:ALA:O	1:A:85:ARG:HD3	2.16	0.46
1:C:84:ASN:C	1:C:84:ASN:HD22	2.19	0.46
2:F:74:GLN:HA	2:F:74:GLN:NE2	2.31	0.46
3:L:105:VAL:HG11	3:L:130:VAL:CG2	2.43	0.46
1:C:96:LEU:HD23	2:D:95:ARG:HH21	1.79	0.46
1:C:426:TYR:CZ	1:C:430:ARG:HD3	2.51	0.46
2:F:123:HIS:O	2:F:125:ASN:N	2.47	0.46
2:B:262:GLN:NE2	1:E:66:SER:OG	2.49	0.46
2:H:271:TYR:N	2:H:271:TYR:CD1	2.84	0.46
3:J:107:THR:OG1	3:J:108:LEU:N	2.49	0.46
2:B:49:CYS:HA	2:B:139:HIS:HD2	1.80	0.46
1:C:265:PHE:O	1:C:269:ILE:HG13	2.16	0.45
2:H:127:ILE:CG1	2:H:128:GLN:NE2	2.79	0.45
2:B:335:PHE:CZ	3:I:144:ILE:HD13	2.51	0.45
2:F:32:HIS:CE1	2:F:33:PRO:HD2	2.51	0.45
2:D:33:PRO:C	2:D:35:PHE:H	2.18	0.45
1:G:128:ALA:HB1	1:G:131:LEU:HD11	1.97	0.45
2:F:182:THR:O	2:F:183:GLU:HB2	2.16	0.45
2:B:112:ASN:HD21	2:B:120:VAL:HB	1.81	0.45
1:C:218:ILE:HD11	1:C:268:ALA:O	2.15	0.45
1:E:84:ASN:HD22	1:E:85:ARG:N	2.13	0.45
3:K:115:ILE:HG22	3:K:116:ASP:N	2.32	0.45
2:D:74:GLN:HA	2:D:74:GLN:NE2	2.30	0.45
3:I:161:ILE:O	3:I:162:LEU:HD23	2.15	0.45
1:E:41:THR:O	1:E:45:ILE:HG13	2.16	0.45
1:C:140:ALA:HA	1:C:150:LEU:CD2	2.46	0.45
2:H:236:GLN:HE22	2:H:263:LYS:HB3	1.80	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:192:LEU:HG	1:E:196:PHE:CE1	2.50	0.45
2:D:183:GLU:HG3	2:D:289:ILE:CG2	2.46	0.45
1:G:262:GLU:CA	1:G:262:GLU:OE1	2.64	0.45
1:C:518:ASN:ND2	1:C:533:GLN:CG	2.69	0.45
1:G:233:ILE:HG22	1:G:233:ILE:O	2.16	0.45
1:C:61:ASP:OD2	1:C:85:ARG:HD2	2.17	0.45
1:G:47:LYS:HD2	1:G:47:LYS:C	2.37	0.45
1:G:47:LYS:CD	1:G:51:LEU:HD11	2.46	0.45
2:H:74:GLN:NE2	2:H:74:GLN:HA	2.31	0.45
3:J:105:VAL:HG11	3:J:130:VAL:CG2	2.44	0.45
1:G:215:ILE:HD12	1:G:342:LEU:HD21	1.99	0.45
1:G:333:ILE:HA	2:H:223:ARG:HH21	1.81	0.45
1:E:37:ASN:HB2	1:E:129:THR:O	2.16	0.45
1:E:299:LYS:HA	1:E:368:ILE:CG2	2.46	0.45
2:H:232:VAL:HA	2:H:236:GLN:HB3	1.99	0.45
2:D:182:THR:CG2	2:D:183:GLU:N	2.79	0.45
2:D:377:LYS:O	2:D:378:SER:C	2.54	0.45
1:A:311:LEU:HD12	1:A:311:LEU:HA	1.82	0.45
2:F:361:LEU:HD23	2:F:361:LEU:N	2.29	0.45
3:J:150:MET:CE	3:J:167:LEU:HD13	2.46	0.45
1:C:42:GLY:HA2	1:C:129:THR:HG21	1.99	0.45
1:A:46:LEU:HD21	1:A:57:PHE:CD1	2.52	0.45
1:C:444:GLY:HA2	1:C:449:GLN:HB2	1.98	0.45
1:G:488:ALA:C	1:G:490:PRO:HD3	2.36	0.45
1:C:481:GLU:O	1:C:484:ARG:HB3	2.16	0.45
2:F:136:ARG:HG2	2:F:136:ARG:NH1	2.31	0.45
1:C:416:MET:C	1:C:418:ASN:H	2.18	0.45
2:D:312:THR:O	2:D:313:SER:HB2	2.16	0.45
1:A:404:LEU:HD21	1:A:467:GLU:O	2.16	0.45
2:F:314:ALA:O	2:F:315:TYR:CD1	2.69	0.45
1:C:186:ASP:OD2	1:C:279:THR:HB	2.16	0.45
2:B:232:VAL:O	2:B:232:VAL:HG12	2.14	0.45
1:E:233:ILE:O	1:E:233:ILE:HG22	2.17	0.45
2:H:33:PRO:C	2:H:35:PHE:H	2.20	0.45
1:G:143:LEU:HD22	1:G:148:ILE:HG21	1.99	0.45
2:B:32:HIS:CE1	2:B:33:PRO:HD2	2.51	0.45
1:E:75:PHE:O	1:E:76:LEU:HD23	2.16	0.45
1:A:227:SER:C	1:A:229:THR:H	2.20	0.45
2:B:102:PRO:HB3	2:B:124:PHE:CD2	2.52	0.45
1:G:15:ARG:HA	1:G:15:ARG:HD3	1.83	0.45
1:A:415:SER:O	1:A:417:ASP:N	2.50	0.45
1:E:274:THR:O	1:E:276:LEU:N	2.50	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:253:LYS:HA	1:A:259:PRO:CD	2.47	0.45
2:D:394:LEU:HG	2:D:396:SER:HB3	1.97	0.45
2:F:229:ILE:HD12	2:F:284:VAL:HG21	1.98	0.45
2:H:392:LEU:HD23	2:H:392:LEU:HA	1.50	0.45
1:A:47:LYS:CD	1:A:51:LEU:HD11	2.46	0.45
1:A:143:LEU:HD22	1:A:148:ILE:CG2	2.47	0.45
2:F:158:LEU:HD12	2:F:177:LEU:HB2	1.99	0.45
3:J:113:ILE:HD11	3:J:130:VAL:HG13	1.98	0.45
2:B:136:ARG:NH1	2:B:136:ARG:HG2	2.32	0.45
2:D:49:CYS:HA	2:D:139:HIS:HD2	1.82	0.45
1:E:112:LEU:C	1:E:114:ASP:N	2.68	0.45
2:H:228:CYS:O	2:H:231:TYR:HB3	2.17	0.45
1:G:288:ILE:HG23	1:G:305:TRP:CZ3	2.52	0.45
2:H:377:LYS:O	2:H:378:SER:C	2.54	0.45
1:C:262:GLU:CA	1:C:262:GLU:OE1	2.65	0.45
2:F:232:VAL:HA	2:F:236:GLN:HB3	1.99	0.45
2:H:335:PHE:CZ	3:L:144:ILE:CD1	2.99	0.45
1:E:143:LEU:HD22	1:E:148:ILE:CG2	2.46	0.45
2:D:342:ASN:ND2	2:D:342:ASN:N	2.63	0.45
2:H:162:LEU:HD22	2:H:169:LEU:HD11	1.98	0.45
1:A:37:ASN:HA	1:A:37:ASN:HD22	1.62	0.45
2:F:95:ARG:HD3	2:F:95:ARG:HA	1.67	0.45
2:H:236:GLN:NE2	2:H:263:LYS:HB3	2.32	0.45
1:E:177:ASP:O	1:E:178:ASN:CB	2.65	0.45
2:F:377:LYS:O	2:F:378:SER:C	2.55	0.45
1:G:474:VAL:O	1:G:475:LYS:C	2.54	0.45
2:F:90:ARG:HH11	2:F:90:ARG:HG2	1.81	0.45
1:C:474:VAL:O	1:C:475:LYS:C	2.55	0.45
1:C:259:PRO:N	1:C:260:GLU:HG2	2.32	0.45
2:F:356:SER:HA	2:F:357:PRO:HD3	1.52	0.45
1:A:518:ASN:ND2	1:A:534:LEU:HD12	2.32	0.45
1:C:518:ASN:ND2	1:C:534:LEU:HD12	2.32	0.45
2:B:229:ILE:HG21	2:B:284:VAL:HB	1.99	0.45
1:E:285:ILE:HD11	1:E:387:SER:O	2.17	0.45
3:J:155:THR:HG22	3:J:158:ASP:CG	2.37	0.45
3:L:161:ILE:O	3:L:162:LEU:HD23	2.17	0.45
2:B:342:ASN:ND2	2:B:342:ASN:H	2.09	0.45
1:E:366:GLN:C	1:E:368:ILE:N	2.66	0.45
1:C:288:ILE:HG23	1:C:305:TRP:CZ3	2.52	0.45
1:A:177:ASP:O	1:A:178:ASN:CB	2.65	0.45
1:E:504:GLU:O	1:E:508:ILE:HG13	2.17	0.45
2:B:183:GLU:HG3	2:B:289:ILE:CG2	2.47	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:18:ARG:NH2	2:F:288:ILE:HD12	2.31	0.45
1:C:274:THR:O	1:C:276:LEU:N	2.49	0.45
2:H:136:ARG:HH11	2:H:136:ARG:HG2	1.82	0.45
2:D:90:ARG:HH11	2:D:90:ARG:HG2	1.80	0.45
1:E:265:PHE:O	1:E:269:ILE:HG13	2.17	0.45
1:G:396:ARG:HH11	1:G:533:GLN:NE2	2.15	0.45
2:H:229:ILE:HG21	2:H:284:VAL:HB	1.99	0.45
2:F:110:PHE:HE2	2:F:114:ARG:HB2	1.82	0.45
1:G:293:ARG:HG2	1:G:305:TRP:CD1	2.52	0.45
2:H:182:THR:O	2:H:183:GLU:HB2	2.16	0.45
1:G:18:ARG:NH2	2:H:288:ILE:HD12	2.32	0.45
2:H:356:SER:HA	2:H:357:PRO:HD3	1.55	0.45
2:D:351:GLN:HB3	2:D:916:PHE:CB	2.47	0.45
2:F:236:GLN:NE2	2:F:263:LYS:HB3	2.31	0.45
2:D:199:CYS:HG	2:D:346:CYS:HG	1.60	0.45
1:A:233:ILE:HG22	1:A:233:ILE:O	2.17	0.45
3:J:107:THR:CG2	3:J:111:LYS:HB3	2.47	0.45
2:D:340:LYS:HB3	2:D:342:ASN:ND2	2.32	0.45
1:C:335:ASP:HB3	1:C:338:LYS:HB2	1.99	0.45
1:G:227:SER:C	1:G:229:THR:H	2.21	0.45
2:F:183:GLU:HG3	2:F:289:ILE:HG21	1.99	0.45
1:A:353:ASP:O	1:A:357:VAL:HG23	2.17	0.45
2:B:306:GLU:OE2	2:B:309:LYS:HD2	2.17	0.45
1:C:355:ALA:O	1:C:358:GLY:N	2.49	0.45
2:F:232:VAL:HG12	2:F:232:VAL:O	2.16	0.44
2:F:80:MET:HB3	2:F:126:LYS:HB3	1.98	0.44
2:D:127:ILE:HG13	2:D:128:GLN:NE2	2.33	0.44
1:A:225:TRP:CE2	1:A:233:ILE:HG12	2.52	0.44
1:C:211:HIS:O	1:C:338:LYS:HD2	2.16	0.44
1:E:42:GLY:HA2	1:E:129:THR:HG21	1.99	0.44
1:C:447:ASN:ND2	2:D:26:ARG:HH21	2.12	0.44
1:A:16:GLN:CB	2:B:292:VAL:HG12	2.47	0.44
2:D:236:GLN:HE22	2:D:263:LYS:HD2	1.82	0.44
1:E:112:LEU:C	1:E:114:ASP:H	2.20	0.44
1:G:432:VAL:HG13	1:G:443:PRO:CD	2.46	0.44
2:B:908:GLN:O	2:B:909:THR:C	2.52	0.44
2:D:607:THR:O	2:D:608:ARG:CB	2.65	0.44
2:F:360:LYS:HG3	2:F:360:LYS:H	1.61	0.44
2:D:394:LEU:HD11	2:D:396:SER:HB3	1.98	0.44
2:F:335:PHE:HE2	3:K:170:VAL:HG21	1.81	0.44
2:H:197:THR:CG2	2:H:198:ALA:N	2.79	0.44
1:G:421:ASN:O	1:G:423:ILE:N	2.50	0.44

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:K:155:THR:HG22	3:K:158:ASP:CG	2.37	0.44
1:G:42:GLY:HA2	1:G:129:THR:HG21	2.00	0.44
1:A:288:ILE:HG23	1:A:305:TRP:CZ3	2.52	0.44
1:G:112:LEU:C	1:G:114:ASP:H	2.19	0.44
2:H:283:GLY:HA2	2:H:288:ILE:HG13	1.98	0.44
2:H:312:THR:O	2:H:313:SER:HB2	2.16	0.44
1:A:218:ILE:HD11	1:A:268:ALA:O	2.17	0.44
1:E:146:SER:O	1:E:147:GLN:HB2	2.17	0.44
2:B:361:LEU:N	2:B:361:LEU:HD23	2.31	0.44
2:B:33:PRO:C	2:B:35:PHE:H	2.21	0.44
1:C:143:LEU:HD22	1:C:148:ILE:HG21	1.99	0.44
1:A:43:THR:HG22	1:A:44:GLU:N	2.33	0.44
1:G:357:VAL:O	1:G:361:VAL:HG23	2.16	0.44
2:B:156:GLY:O	2:B:157:MET:C	2.55	0.44
1:E:133:GLU:HG3	1:E:433:ASP:HB3	1.99	0.44
2:F:268:ALA:HB1	2:F:273:ILE:O	2.16	0.44
1:A:432:VAL:HG13	1:A:443:PRO:CD	2.47	0.44
2:D:314:ALA:O	2:D:315:TYR:CD1	2.70	0.44
1:C:331:ASP:HB2	2:D:224:LEU:HD11	1.99	0.44
1:G:281:ILE:HA	1:G:282:PRO:HD3	1.84	0.44
1:A:112:LEU:C	1:A:114:ASP:N	2.70	0.44
2:F:187:GLY:CA	3:K:173:LEU:CD1	2.95	0.44
2:H:394:LEU:HD11	2:H:396:SER:HB3	2.00	0.44
2:D:335:PHE:CD1	2:D:335:PHE:C	2.91	0.44
1:C:233:ILE:O	1:C:233:ILE:HG22	2.17	0.44
3:J:123:VAL:HA	3:J:126:ILE:HD12	1.98	0.44
2:B:197:THR:HG21	2:B:320:ASN:HB3	1.99	0.44
2:F:33:PRO:C	2:F:35:PHE:H	2.20	0.44
2:B:342:ASN:ND2	2:B:342:ASN:N	2.64	0.44
1:A:488:ALA:C	1:A:490:PRO:HD3	2.38	0.44
2:B:124:PHE:CD1	2:B:124:PHE:O	2.70	0.44
2:H:112:ASN:OD1	2:H:120:VAL:N	2.46	0.44
1:C:156:TYR:CE1	1:C:487:ALA:HA	2.53	0.44
2:D:321:TYR:CD2	2:D:322:LEU:N	2.86	0.44
3:L:155:THR:HG22	3:L:158:ASP:CG	2.37	0.44
3:L:115:ILE:HG22	3:L:116:ASP:N	2.33	0.44
1:E:47:LYS:HD2	1:E:47:LYS:C	2.37	0.44
2:D:192:ILE:HG22	2:D:194:PRO:CD	2.47	0.44
1:C:488:ALA:C	1:C:490:PRO:HD3	2.38	0.44
2:H:13:TRP:CZ3	2:H:116:PRO:HG2	2.51	0.44
2:F:13:TRP:CZ3	2:F:116:PRO:HG2	2.52	0.44
2:H:236:GLN:HE22	2:H:263:LYS:HD2	1.82	0.44

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:50:LYS:H	2:H:139:HIS:CD2	2.35	0.44
2:B:132:ASP:O	2:B:133:THR:C	2.56	0.44
3:I:145:TYR:O	3:I:146:SER:C	2.55	0.44
1:E:415:SER:O	1:E:417:ASP:N	2.50	0.44
2:F:131:ASN:O	2:F:132:ASP:C	2.55	0.44
1:G:393:VAL:HG13	1:G:517:ASN:ND2	2.28	0.44
1:A:61:ASP:OD2	1:A:85:ARG:HD2	2.17	0.44
1:A:131:LEU:HA	1:A:132:PRO:HD3	1.86	0.44
2:D:78:ILE:HD11	2:D:134:PHE:HE2	1.83	0.44
1:C:43:THR:HG22	1:C:44:GLU:N	2.31	0.44
1:A:112:LEU:C	1:A:114:ASP:H	2.21	0.44
2:F:187:GLY:HA2	3:K:173:LEU:CD1	2.47	0.44
2:H:123:HIS:O	2:H:125:ASN:N	2.49	0.44
2:B:314:ALA:O	2:B:315:TYR:CD1	2.71	0.44
2:F:351:GLN:O	2:F:353:ILE:N	2.51	0.44
2:H:80:MET:HG2	5:H:8:ATP:C2	2.52	0.44
2:H:229:ILE:HD12	2:H:284:VAL:HG21	1.99	0.44
2:D:343:CYS:O	2:D:347:SER:HB3	2.18	0.44
1:A:299:LYS:HA	1:A:368:ILE:CG2	2.47	0.44
1:C:227:SER:C	1:C:229:THR:H	2.22	0.44
2:D:80:MET:HB3	2:D:126:LYS:HB3	1.98	0.44
1:A:444:GLY:HA2	1:A:449:GLN:HB2	1.98	0.44
1:A:481:GLU:O	1:A:484:ARG:HB3	2.18	0.44
2:B:131:ASN:HD22	2:D:131:ASN:HB3	1.83	0.44
2:H:268:ALA:HB1	2:H:273:ILE:O	2.18	0.44
2:F:343:CYS:O	2:F:347:SER:HB3	2.18	0.44
1:E:266:GLU:HG3	1:E:270:LYS:HE3	2.00	0.44
1:C:532:PHE:HB3	1:C:533:GLN:H	1.37	0.44
2:B:335:PHE:CE1	2:B:337:ALA:HB2	2.51	0.44
3:K:155:THR:O	3:K:158:ASP:N	2.51	0.44
2:H:141:ILE:HD12	2:H:158:LEU:HD11	2.00	0.44
2:F:192:ILE:HG22	2:F:194:PRO:CD	2.43	0.44
3:K:113:ILE:HD11	3:K:130:VAL:HG13	1.99	0.44
1:A:42:GLY:HA2	1:A:129:THR:HG21	1.99	0.44
1:C:39:THR:HB	1:C:489:GLU:OE1	2.17	0.44
2:F:50:LYS:H	2:F:139:HIS:CD2	2.36	0.44
1:C:112:LEU:C	1:C:114:ASP:H	2.20	0.44
2:H:250:ASP:H	2:H:256:HIS:CE1	2.36	0.44
1:A:480:HIS:HB2	2:B:29:PRO:HG2	1.99	0.44
1:G:261:ASP:O	1:G:262:GLU:CG	2.66	0.44
2:D:353:ILE:HG23	2:D:355:PHE:HE1	1.82	0.44
3:L:155:THR:O	3:L:158:ASP:N	2.51	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:421:ASN:O	1:E:423:ILE:N	2.50	0.44
1:C:131:LEU:HA	1:C:132:PRO:HD3	1.85	0.44
1:E:447:ASN:ND2	2:F:26:ARG:HH21	2.14	0.44
1:G:35:LEU:HD23	1:G:46:LEU:HD22	2.00	0.44
2:H:110:PHE:HE2	2:H:114:ARG:HB2	1.83	0.44
2:F:52:LEU:HD11	2:F:78:ILE:HG13	1.98	0.44
2:F:156:GLY:O	2:F:157:MET:C	2.54	0.44
2:H:306:GLU:OE2	2:H:309:LYS:HD2	2.18	0.44
2:B:123:HIS:O	2:B:125:ASN:N	2.49	0.44
2:B:250:ASP:OD2	2:B:253:ASP:HB2	2.17	0.44
3:J:115:ILE:HG22	3:J:116:ASP:N	2.33	0.43
1:E:481:GLU:O	1:E:484:ARG:N	2.51	0.43
1:E:47:LYS:HD2	1:E:51:LEU:HD12	2.00	0.43
3:K:107:THR:OG1	3:K:108:LEU:N	2.51	0.43
3:K:107:THR:CG2	3:K:111:LYS:HB3	2.48	0.43
1:A:504:GLU:O	1:A:508:ILE:HG13	2.18	0.43
2:H:187:GLY:CA	3:L:173:LEU:CD1	2.96	0.43
1:G:497:LEU:HD12	1:G:497:LEU:HA	1.87	0.43
2:H:361:LEU:HD23	2:H:361:LEU:N	2.31	0.43
1:A:518:ASN:ND2	1:A:533:GLN:CG	2.71	0.43
1:G:532:PHE:HB3	1:G:533:GLN:H	1.37	0.43
2:B:127:ILE:CG1	2:B:128:GLN:NE2	2.81	0.43
2:F:236:GLN:HE22	2:F:263:LYS:HD2	1.83	0.43
2:B:236:GLN:HE22	2:B:263:LYS:HD2	1.83	0.43
3:I:150:MET:HE3	3:I:167:LEU:HD13	1.99	0.43
1:G:47:LYS:HD2	1:G:51:LEU:HD12	2.00	0.43
2:H:242:PRO:HG3	2:H:259:TRP:CH2	2.53	0.43
1:E:35:LEU:HD12	1:E:36:ILE:N	2.33	0.43
2:B:16:ARG:HH22	2:B:116:PRO:HB2	1.83	0.43
1:G:323:LEU:HB3	1:G:324:PRO:CD	2.48	0.43
1:G:323:LEU:HD22	1:G:387:SER:HB2	2.00	0.43
1:G:146:SER:O	1:G:147:GLN:HB2	2.17	0.43
2:F:228:CYS:O	2:F:231:TYR:HB3	2.19	0.43
2:F:335:PHE:CZ	3:K:144:ILE:CD1	3.01	0.43
1:C:47:LYS:CD	1:C:51:LEU:HD11	2.48	0.43
2:B:134:PHE:O	2:B:137:GLN:HG3	2.17	0.43
2:B:78:ILE:HD11	2:B:134:PHE:HE2	1.83	0.43
2:H:49:CYS:HA	2:H:139:HIS:HD2	1.81	0.43
1:G:340:ILE:HD11	2:H:273:ILE:HG12	2.00	0.43
2:B:80:MET:HB3	2:B:126:LYS:HB3	2.00	0.43
1:C:281:ILE:HA	1:C:282:PRO:HD3	1.85	0.43
1:C:432:VAL:HG13	1:C:443:PRO:CD	2.48	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:19:LEU:HD13	2:F:185:PHE:CE1	2.54	0.43
1:C:503:GLN:OE1	1:C:503:GLN:HA	2.18	0.43
1:G:221:TYR:O	1:G:243:PHE:HE1	2.01	0.43
2:D:333:TYR:CZ	2:D:335:PHE:HB3	2.54	0.43
2:H:335:PHE:HE2	3:L:170:VAL:HG21	1.83	0.43
2:H:335:PHE:CE1	2:H:337:ALA:HB2	2.52	0.43
1:G:333:ILE:HA	2:H:223:ARG:NH2	2.34	0.43
1:A:50:VAL:HG13	1:A:100:VAL:HG21	2.00	0.43
2:F:178:ILE:HG21	2:F:303:CYS:HB3	1.99	0.43
1:G:430:ARG:HB3	1:G:430:ARG:NH1	2.32	0.43
2:B:50:LYS:H	2:B:139:HIS:CD2	2.36	0.43
1:C:192:LEU:HG	1:C:196:PHE:CE1	2.52	0.43
1:A:133:GLU:HG3	1:A:433:ASP:HB3	2.00	0.43
2:F:49:CYS:HA	2:F:139:HIS:HD2	1.81	0.43
2:H:182:THR:CG2	2:H:183:GLU:N	2.81	0.43
1:C:112:LEU:C	1:C:114:ASP:N	2.70	0.43
1:C:415:SER:O	1:C:417:ASP:N	2.50	0.43
1:G:265:PHE:O	1:G:269:ILE:HG13	2.19	0.43
1:G:518:ASN:ND2	1:G:534:LEU:HD12	2.33	0.43
1:E:285:ILE:HD11	1:E:388:ALA:CA	2.39	0.43
1:E:225:TRP:CE2	1:E:233:ILE:HG12	2.54	0.43
2:B:333:TYR:CZ	2:B:335:PHE:HB3	2.54	0.43
1:C:236:THR:HG23	1:C:240:LYS:HE3	2.01	0.43
1:E:236:THR:O	1:E:237:TYR:HD1	2.02	0.43
3:K:103:ILE:HD11	3:K:117:ILE:HD12	2.01	0.43
1:C:421:ASN:O	1:C:423:ILE:N	2.51	0.43
3:J:111:LYS:O	3:J:112:GLU:HB3	2.18	0.43
3:L:107:THR:CG2	3:L:111:LYS:HB3	2.48	0.43
1:G:183:LEU:HD22	1:G:215:ILE:HD11	2.00	0.43
2:F:139:HIS:O	2:F:176:PRO:HD2	2.18	0.43
1:A:340:ILE:O	1:A:343:GLN:N	2.51	0.43
1:A:253:LYS:O	1:A:260:GLU:OE2	2.36	0.43
1:G:244:ARG:O	1:G:247:ILE:N	2.51	0.43
2:F:267:ARG:NH1	2:F:267:ARG:CG	2.80	0.43
2:F:124:PHE:CD1	2:F:124:PHE:C	2.92	0.43
2:F:182:THR:HG23	2:F:183:GLU:N	2.33	0.43
1:G:177:ASP:O	1:G:178:ASN:CB	2.67	0.43
1:A:113:LEU:HD22	1:A:142:VAL:HG21	2.01	0.43
2:B:377:LYS:O	2:B:378:SER:C	2.56	0.43
2:H:395:GLN:HG3	2:H:395:GLN:H	1.67	0.43
1:C:266:GLU:HG3	1:C:270:LYS:HE3	2.00	0.43
2:B:351:GLN:HE21	2:B:351:GLN:CA	2.26	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:F:335:PHE:CE1	2:F:337:ALA:HB2	2.51	0.43
1:C:47:LYS:C	1:C:47:LYS:HD2	2.38	0.43
1:G:75:PHE:CZ	1:G:96:LEU:HD11	2.53	0.43
2:D:32:HIS:CE1	2:D:33:PRO:HD2	2.54	0.43
1:C:96:LEU:HD23	2:D:95:ARG:NH2	2.33	0.43
1:G:504:GLU:O	1:G:508:ILE:HG13	2.19	0.43
2:D:271:TYR:N	2:D:271:TYR:CD1	2.85	0.43
1:C:124:THR:HG22	1:C:125:VAL:HG23	2.01	0.43
1:E:264:ASN:ND2	1:E:265:PHE:H	2.16	0.43
1:G:266:GLU:HG3	1:G:270:LYS:HE3	2.01	0.43
1:G:285:ILE:HD11	1:G:388:ALA:CA	2.38	0.43
2:H:267:ARG:CG	2:H:267:ARG:NH1	2.78	0.43
1:A:84:ASN:C	1:A:84:ASN:ND2	2.71	0.43
1:C:107:GLU:OE2	1:G:351:LYS:NZ	2.51	0.43
1:E:47:LYS:CD	1:E:51:LEU:HD11	2.48	0.43
1:C:139:LEU:HG	1:C:143:LEU:HD12	2.01	0.43
1:E:175:HIS:HD2	1:E:512:GLN:O	2.02	0.43
1:E:53:GLY:O	1:E:54:ILE:C	2.57	0.43
3:I:115:ILE:HG22	3:I:116:ASP:N	2.33	0.43
1:C:133:GLU:HG3	1:C:433:ASP:HB3	2.01	0.43
1:E:166:ILE:HD11	1:E:508:ILE:HD13	2.00	0.43
1:E:186:ASP:OD2	1:E:279:THR:HB	2.19	0.43
1:C:261:ASP:O	1:C:262:GLU:HG2	2.18	0.43
1:E:518:ASN:ND2	1:E:534:LEU:HD12	2.34	0.43
1:A:84:ASN:C	1:A:84:ASN:HD22	2.22	0.43
1:A:47:LYS:HD2	1:A:51:LEU:HD12	2.00	0.43
1:C:128:ALA:HB1	1:C:131:LEU:CD1	2.49	0.43
1:E:227:SER:C	1:E:229:THR:H	2.23	0.43
2:H:178:ILE:CG2	2:H:303:CYS:HB3	2.49	0.43
2:D:178:ILE:CG2	2:D:303:CYS:HB3	2.49	0.43
1:G:496:PHE:CE1	2:H:298:VAL:HG13	2.53	0.43
2:H:320:ASN:O	2:H:321:TYR:CB	2.67	0.43
2:B:207:TYR:HA	2:B:208:PRO:HD3	1.90	0.43
1:G:84:ASN:O	1:G:85:ARG:C	2.56	0.43
1:C:163:ARG:HH11	1:C:163:ARG:CG	2.25	0.43
2:D:235:LEU:O	2:D:238:PRO:HD2	2.18	0.43
2:H:164:TYR:HD2	2:H:169:LEU:HA	1.84	0.43
3:I:113:ILE:HD11	3:I:130:VAL:HG13	2.01	0.43
2:D:126:LYS:HA	5:D:6:ATP:C2	2.54	0.43
1:A:172:ILE:HA	1:A:390:LEU:HD23	2.01	0.43
3:K:118:GLU:O	3:K:121:ASP:OD1	2.37	0.43
1:C:215:ILE:HD12	1:C:342:LEU:HD21	2.01	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:43:THR:HG22	1:G:44:GLU:N	2.33	0.43
2:H:314:ALA:O	2:H:315:TYR:CG	2.72	0.43
3:K:145:TYR:O	3:K:146:SER:C	2.58	0.43
3:J:149:GLN:O	3:J:149:GLN:HG3	2.19	0.43
2:D:229:ILE:HD12	2:D:284:VAL:HG21	2.00	0.42
1:C:56:SER:HB3	1:C:101:SER:HG	1.80	0.42
3:J:150:MET:HE3	3:J:167:LEU:HD22	1.99	0.42
1:C:35:LEU:HD12	1:C:36:ILE:N	2.34	0.42
2:D:130:PHE:CG	2:D:134:PHE:CD2	3.07	0.42
1:A:53:GLY:O	1:A:54:ILE:C	2.57	0.42
1:E:16:GLN:HB2	2:F:292:VAL:HG12	2.00	0.42
1:E:305:TRP:O	1:E:308:ALA:HB3	2.19	0.42
1:G:415:SER:C	1:G:417:ASP:H	2.22	0.42
2:H:228:CYS:SG	2:H:268:ALA:HA	2.59	0.42
2:B:182:THR:O	2:B:183:GLU:HB2	2.18	0.42
2:F:187:GLY:HA2	3:K:173:LEU:HD12	2.01	0.42
1:C:415:SER:C	1:C:417:ASP:H	2.22	0.42
2:F:250:ASP:OD2	2:F:253:ASP:HB2	2.19	0.42
2:D:306:GLU:OE2	2:D:309:LYS:HD2	2.19	0.42
2:D:228:CYS:O	2:D:231:TYR:HB3	2.19	0.42
1:G:462:THR:O	1:G:463:GLY:C	2.57	0.42
1:C:497:LEU:HD12	1:C:497:LEU:HA	1.91	0.42
2:D:395:GLN:HG3	2:D:395:GLN:H	1.69	0.42
1:C:244:ARG:O	1:C:247:ILE:N	2.50	0.42
1:E:260:GLU:HB3	1:E:261:ASP:OD1	2.19	0.42
1:A:401:GLU:HG3	1:A:533:GLN:HE22	1.85	0.42
1:A:517:ASN:OD1	1:A:534:LEU:HB2	2.18	0.42
2:D:54:ILE:HG22	2:D:145:LEU:HD21	2.01	0.42
2:F:207:TYR:HA	2:F:208:PRO:HD3	1.90	0.42
2:B:232:VAL:HA	2:B:236:GLN:HB3	2.00	0.42
2:H:335:PHE:CD1	2:H:335:PHE:C	2.93	0.42
1:C:84:ASN:O	1:C:85:ARG:C	2.57	0.42
2:D:242:PRO:HG3	2:D:259:TRP:CH2	2.54	0.42
1:C:46:LEU:HD21	1:C:57:PHE:CD1	2.54	0.42
1:E:96:LEU:HD23	2:F:95:ARG:HH21	1.84	0.42
1:A:16:GLN:NE2	1:A:20:TRP:CZ2	2.85	0.42
2:B:124:PHE:C	2:B:124:PHE:HD1	2.22	0.42
2:B:241:GLN:NE2	2:B:246:GLY:H	2.17	0.42
2:D:232:VAL:HA	2:D:236:GLN:HB3	2.01	0.42
2:B:182:THR:CG2	2:B:183:GLU:N	2.81	0.42
2:F:132:ASP:O	2:F:133:THR:C	2.58	0.42
1:E:355:ALA:O	1:E:358:GLY:N	2.52	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:520:TYR:CG	2:D:330:LEU:HD12	2.54	0.42
2:B:271:TYR:N	2:B:271:TYR:CD1	2.87	0.42
2:D:250:ASP:OD2	2:D:253:ASP:HB2	2.19	0.42
2:H:353:ILE:HG23	2:H:355:PHE:HE1	1.84	0.42
2:H:360:LYS:HG3	2:H:360:LYS:H	1.65	0.42
3:J:136:ILE:HG22	3:J:141:GLN:HG2	2.01	0.42
1:E:236:THR:O	1:E:237:TYR:CD1	2.71	0.42
1:G:47:LYS:HD2	1:G:51:LEU:CD1	2.49	0.42
2:F:141:ILE:HD12	2:F:158:LEU:HD11	2.02	0.42
2:D:193:LEU:O	2:D:194:PRO:C	2.58	0.42
1:C:72:ASN:HD22	1:C:73:ASN:N	2.17	0.42
1:G:299:LYS:HA	1:G:368:ILE:CG2	2.49	0.42
1:A:183:LEU:HD22	1:A:215:ILE:HD11	2.01	0.42
2:D:222:PRO:HD2	2:D:271:TYR:CD2	2.54	0.42
1:G:503:GLN:HA	1:G:503:GLN:OE1	2.19	0.42
1:G:311:LEU:O	1:G:314:PHE:HB3	2.19	0.42
2:B:351:GLN:O	2:B:353:ILE:N	2.52	0.42
1:E:84:ASN:O	1:E:85:ARG:C	2.58	0.42
2:F:335:PHE:C	2:F:335:PHE:CD1	2.93	0.42
3:I:107:THR:OG1	3:I:108:LEU:N	2.52	0.42
1:E:72:ASN:HD22	1:E:73:ASN:N	2.17	0.42
1:G:72:ASN:HD22	1:G:73:ASN:N	2.18	0.42
2:D:232:VAL:HG12	2:D:260:ILE:HG23	2.01	0.42
2:D:136:ARG:NH1	2:D:136:ARG:HG2	2.34	0.42
2:F:222:PRO:HD2	2:F:271:TYR:CD2	2.54	0.42
2:D:182:THR:HG23	2:D:183:GLU:N	2.34	0.42
2:F:314:ALA:O	2:F:315:TYR:CG	2.73	0.42
2:B:222:PRO:HD2	2:B:271:TYR:CD2	2.54	0.42
1:E:491:HIS:NE2	2:F:65:LYS:NZ	2.64	0.42
2:B:293:ALA:O	2:B:294:SER:C	2.57	0.42
1:A:266:GLU:HG3	1:A:270:LYS:HE3	2.00	0.42
1:G:259:PRO:CA	1:G:260:GLU:HG2	2.50	0.42
1:E:61:ASP:OD2	1:E:85:ARG:HD2	2.19	0.42
2:F:353:ILE:HG23	2:F:355:PHE:HE1	1.84	0.42
2:D:355:PHE:O	2:D:356:SER:CB	2.68	0.42
2:D:356:SER:HA	2:D:357:PRO:HD3	1.53	0.42
5:H:8:ATP:H3'	5:H:8:ATP:O1B	2.18	0.42
1:A:47:LYS:O	1:A:51:LEU:HD12	2.19	0.42
3:I:107:THR:CG2	3:I:111:LYS:HB3	2.50	0.42
2:H:124:PHE:C	2:H:124:PHE:CD1	2.92	0.42
2:H:124:PHE:C	2:H:124:PHE:HD1	2.22	0.42
2:F:124:PHE:CD1	2:F:124:PHE:O	2.72	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:52:LEU:HD11	2:D:78:ILE:HG13	2.01	0.42
1:C:189:PHE:CE1	1:C:192:LEU:HB2	2.55	0.42
1:A:415:SER:C	1:A:417:ASP:H	2.23	0.42
2:H:183:GLU:HG3	2:H:289:ILE:CG2	2.50	0.42
1:C:371:ALA:O	1:C:374:SER:N	2.48	0.42
2:B:228:CYS:O	2:B:231:TYR:HB3	2.19	0.42
1:G:355:ALA:O	1:G:358:GLY:N	2.53	0.42
2:H:343:CYS:O	2:H:347:SER:HB3	2.19	0.42
1:A:274:THR:O	1:A:276:LEU:N	2.52	0.42
2:H:249:LEU:CD1	2:H:260:ILE:HD11	2.49	0.42
1:G:404:LEU:HD21	1:G:467:GLU:O	2.19	0.42
2:D:392:LEU:HA	2:D:392:LEU:HD23	1.46	0.42
2:B:353:ILE:HG23	2:B:355:PHE:HE1	1.84	0.42
2:H:351:GLN:CA	2:H:351:GLN:HE21	2.27	0.42
1:E:111:ASN:OD1	1:E:111:ASN:O	2.37	0.42
1:C:517:ASN:OD1	1:C:534:LEU:HB2	2.20	0.42
2:H:102:PRO:HB3	2:H:124:PHE:CD2	2.55	0.42
2:B:241:GLN:HE21	2:B:246:GLY:H	1.67	0.42
1:A:195:HIS:O	1:A:198:SER:HB3	2.20	0.42
1:E:317:LYS:HG2	1:E:318:GLU:N	2.35	0.42
1:G:39:THR:HB	1:G:489:GLU:OE1	2.19	0.42
1:A:261:ASP:HB2	1:A:262:GLU:H	1.66	0.42
2:F:355:PHE:O	2:F:356:SER:CB	2.67	0.42
2:D:351:GLN:O	2:D:353:ILE:N	2.53	0.42
2:F:127:ILE:HG13	2:F:128:GLN:NE2	2.34	0.42
1:G:84:ASN:HD22	1:G:85:ARG:N	2.16	0.42
2:B:74:GLN:HE21	2:B:74:GLN:HA	1.84	0.42
1:C:47:LYS:HD2	1:C:51:LEU:HD12	2.02	0.42
1:A:47:LYS:HD2	1:A:51:LEU:CD1	2.49	0.42
1:G:143:LEU:HD13	1:G:150:LEU:HD13	2.00	0.42
1:E:47:LYS:HD2	1:E:51:LEU:CD1	2.50	0.42
1:A:331:ASP:OD1	2:B:223:ARG:HD2	2.19	0.42
2:B:130:PHE:CG	2:B:134:PHE:CD2	3.08	0.42
1:C:504:GLU:HG3	1:C:516:PHE:CE2	2.55	0.42
2:B:183:GLU:HG3	2:B:289:ILE:HG21	2.02	0.42
2:F:96:PRO:O	2:F:99:ILE:HG13	2.20	0.42
1:A:146:SER:O	1:A:147:GLN:HB2	2.19	0.42
3:L:145:TYR:O	3:L:146:SER:C	2.58	0.42
1:E:281:ILE:HA	1:E:282:PRO:HD3	1.85	0.42
2:B:148:ILE:O	2:B:149:ILE:C	2.58	0.42
2:B:243:PHE:O	2:B:247:VAL:HG21	2.19	0.42
1:C:221:TYR:O	1:C:243:PHE:HE1	2.03	0.42

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:74:GLN:HA	2:D:74:GLN:HE21	1.85	0.42
1:A:47:LYS:C	1:A:47:LYS:HD2	2.40	0.42
1:G:163:ARG:NH1	1:G:163:ARG:CG	2.82	0.42
2:B:158:LEU:HA	2:B:158:LEU:HD23	1.79	0.42
2:D:164:TYR:HD2	2:D:169:LEU:HA	1.84	0.42
1:E:144:TRP:CZ3	1:E:397:SER:HA	2.55	0.42
1:C:75:PHE:O	1:C:76:LEU:HD23	2.20	0.42
1:A:175:HIS:HD2	1:A:512:GLN:O	2.02	0.42
2:B:13:TRP:CD1	2:B:13:TRP:C	2.93	0.42
1:C:504:GLU:O	1:C:508:ILE:HG13	2.20	0.42
2:H:132:ASP:O	2:H:133:THR:C	2.58	0.42
1:G:305:TRP:O	1:G:308:ALA:HB3	2.19	0.42
1:E:19:LEU:HD21	2:F:290:PRO:HB2	2.01	0.42
1:A:323:LEU:HD22	1:A:387:SER:HB2	2.01	0.42
1:G:274:THR:O	1:G:276:LEU:N	2.53	0.42
2:F:130:PHE:CG	2:F:134:PHE:CD2	3.07	0.42
2:H:321:TYR:CD2	2:H:322:LEU:N	2.87	0.42
1:A:84:ASN:O	1:A:85:ARG:C	2.58	0.42
1:G:143:LEU:HD22	1:G:148:ILE:CG2	2.50	0.42
2:F:140:ILE:HG22	2:F:141:ILE:N	2.35	0.42
2:B:703:GLY:C	2:B:705:VAL:H	2.23	0.42
1:A:35:LEU:HD23	1:A:46:LEU:HD22	2.01	0.42
2:B:193:LEU:O	2:B:194:PRO:C	2.57	0.42
1:A:39:THR:HB	1:A:489:GLU:OE1	2.19	0.42
2:B:131:ASN:HB3	2:D:131:ASN:HD22	1.85	0.42
1:G:18:ARG:CZ	2:H:288:ILE:HD12	2.49	0.42
3:J:122:LYS:HA	3:J:154:LYS:O	2.20	0.42
1:G:264:ASN:ND2	1:G:265:PHE:H	2.17	0.42
1:A:348:GLU:OE2	1:E:107:GLU:OE1	2.38	0.42
2:B:274:ARG:NH1	1:E:106:GLU:O	2.53	0.42
2:H:80:MET:HB3	2:H:126:LYS:HB3	2.02	0.42
2:B:232:VAL:HG21	2:B:264:SER:N	2.35	0.42
1:E:140:ALA:HA	1:E:150:LEU:CD2	2.49	0.42
1:A:140:ALA:HA	1:A:150:LEU:CD2	2.49	0.42
1:A:46:LEU:HD12	1:A:46:LEU:HA	1.94	0.42
2:F:124:PHE:C	2:F:124:PHE:HD1	2.22	0.42
1:E:54:ILE:HG12	1:E:55:GLY:N	2.35	0.42
2:D:50:LYS:H	2:D:139:HIS:CD2	2.38	0.42
2:F:250:ASP:H	2:F:256:HIS:CE1	2.38	0.42
1:A:323:LEU:HB3	1:A:324:PRO:CD	2.50	0.42
1:C:404:LEU:HD21	1:C:467:GLU:O	2.20	0.42
2:H:157:MET:HE3	2:H:157:MET:HA	2.01	0.42

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:441:ARG:HH21	1:E:453:ASP:CG	2.23	0.42
1:A:347:ARG:HH22	2:B:274:ARG:NH1	2.17	0.41
2:B:394:LEU:CD1	2:B:396:SER:HB3	2.50	0.41
3:L:103:ILE:HD11	3:L:117:ILE:HD12	2.01	0.41
1:G:96:LEU:HD23	2:H:95:ARG:HH21	1.84	0.41
1:C:113:LEU:HD11	1:C:139:LEU:HB2	2.02	0.41
2:D:110:PHE:HE2	2:D:114:ARG:HB2	1.85	0.41
1:G:33:VAL:CG2	1:G:54:ILE:HD11	2.49	0.41
1:E:432:VAL:HG13	1:E:443:PRO:CD	2.49	0.41
1:G:480:HIS:HB2	2:H:29:PRO:HG2	2.02	0.41
2:H:362:GLN:H	2:H:362:GLN:HG3	1.49	0.41
1:E:260:GLU:HB2	1:E:261:ASP:OD1	2.20	0.41
3:L:144:ILE:HD12	3:L:170:VAL:HG11	2.02	0.41
1:C:239:GLU:O	1:C:240:LYS:C	2.59	0.41
3:K:150:MET:HE3	3:K:167:LEU:HD13	2.01	0.41
1:E:47:LYS:O	1:E:51:LEU:HD12	2.20	0.41
3:I:111:LYS:O	3:I:112:GLU:HB3	2.21	0.41
1:A:171:VAL:HG13	1:A:391:ARG:O	2.20	0.41
2:B:124:PHE:C	2:B:124:PHE:CD1	2.92	0.41
1:G:175:HIS:HD2	1:G:512:GLN:O	2.03	0.41
1:C:19:LEU:HD23	1:C:19:LEU:HA	1.90	0.41
2:H:250:ASP:OD2	2:H:253:ASP:HB2	2.20	0.41
1:G:435:PHE:CD2	1:G:435:PHE:C	2.94	0.41
1:A:186:ASP:OD2	1:A:279:THR:HB	2.19	0.41
3:L:149:GLN:O	3:L:149:GLN:HG3	2.20	0.41
1:A:253:LYS:O	1:A:260:GLU:CD	2.59	0.41
2:H:126:LYS:HA	5:H:8:ATP:N1	2.35	0.41
2:B:343:CYS:O	2:B:347:SER:HB3	2.19	0.41
1:G:61:ASP:OD2	1:G:85:ARG:HD2	2.20	0.41
3:J:103:ILE:HD11	3:J:117:ILE:HD12	2.02	0.41
2:B:340:LYS:HB3	2:B:342:ASN:ND2	2.34	0.41
1:G:332:MET:HE1	1:G:342:LEU:CD2	2.49	0.41
2:H:124:PHE:CD1	2:H:124:PHE:O	2.73	0.41
2:F:187:GLY:CA	3:K:173:LEU:HD12	2.51	0.41
1:E:441:ARG:HG2	1:E:441:ARG:HH11	1.85	0.41
3:K:122:LYS:HA	3:K:154:LYS:O	2.19	0.41
3:L:122:LYS:HA	3:L:154:LYS:O	2.20	0.41
2:B:355:PHE:O	2:B:356:SER:CB	2.68	0.41
2:H:351:GLN:O	2:H:353:ILE:N	2.53	0.41
2:H:333:TYR:CZ	2:H:335:PHE:HB3	2.56	0.41
1:E:323:LEU:HB3	1:E:324:PRO:CD	2.50	0.41
2:F:316:ILE:N	2:F:316:ILE:HD12	2.23	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:143:LEU:HD12	1:E:150:LEU:HD13	1.97	0.41
2:F:174:ILE:HG23	2:F:194:PRO:O	2.20	0.41
2:D:158:LEU:HD12	2:D:177:LEU:HB2	2.01	0.41
1:A:333:ILE:HA	2:B:223:ARG:HH21	1.85	0.41
1:E:36:ILE:HD13	1:E:36:ILE:HA	1.92	0.41
1:E:488:ALA:C	1:E:490:PRO:HD3	2.40	0.41
1:A:481:GLU:O	1:A:484:ARG:N	2.53	0.41
1:A:317:LYS:HG2	1:A:318:GLU:N	2.36	0.41
2:F:130:PHE:HB2	2:F:135:TYR:CE1	2.56	0.41
2:B:96:PRO:O	2:B:99:ILE:HG13	2.20	0.41
2:B:95:ARG:HD3	2:B:95:ARG:HA	1.66	0.41
2:H:394:LEU:HD11	2:H:396:SER:CB	2.49	0.41
1:E:66:SER:O	1:E:69:ASP:HB2	2.20	0.41
1:C:84:ASN:HD22	1:C:85:ARG:N	2.18	0.41
1:C:40:ALA:HB3	1:C:489:GLU:CD	2.41	0.41
2:D:283:GLY:HA2	2:D:288:ILE:HG13	2.03	0.41
2:F:271:TYR:CD1	2:F:271:TYR:N	2.88	0.41
1:A:112:LEU:HD23	1:A:112:LEU:HA	1.87	0.41
2:B:603:ILE:O	2:B:607:THR:N	2.53	0.41
3:I:122:LYS:HA	3:I:154:LYS:O	2.20	0.41
1:A:462:THR:O	1:A:463:GLY:C	2.59	0.41
1:E:404:LEU:HD21	1:E:467:GLU:O	2.21	0.41
2:F:306:GLU:OE2	2:F:309:LYS:HD2	2.20	0.41
1:C:220:LYS:HA	1:C:220:LYS:HD2	1.94	0.41
1:E:311:LEU:HA	1:E:311:LEU:HD12	1.81	0.41
3:K:149:GLN:HG3	3:K:149:GLN:O	2.21	0.41
1:G:253:LYS:O	1:G:260:GLU:HG2	2.20	0.41
1:C:307:LEU:CD1	1:C:383:LEU:HD22	2.50	0.41
2:F:320:ASN:O	2:F:321:TYR:CB	2.68	0.41
2:F:102:PRO:HB3	2:F:124:PHE:CD2	2.56	0.41
2:H:309:LYS:O	2:H:313:SER:N	2.39	0.41
2:F:134:PHE:O	2:F:137:GLN:HG3	2.20	0.41
1:A:156:TYR:CE1	1:A:487:ALA:HA	2.56	0.41
2:H:148:ILE:O	2:H:149:ILE:C	2.59	0.41
2:F:351:GLN:HE21	2:F:351:GLN:CA	2.28	0.41
1:E:323:LEU:HD22	1:E:387:SER:HB2	2.03	0.41
2:B:335:PHE:CD1	2:B:335:PHE:C	2.94	0.41
1:E:163:ARG:CG	1:E:163:ARG:NH1	2.83	0.41
1:A:139:LEU:HG	1:A:143:LEU:HD12	2.02	0.41
2:F:33:PRO:O	2:F:35:PHE:N	2.54	0.41
1:G:75:PHE:O	1:G:76:LEU:HD23	2.21	0.41
2:F:703:GLY:C	2:F:705:VAL:H	2.23	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:118:GLU:O	3:I:121:ASP:OD1	2.38	0.41
2:D:130:PHE:HB2	2:D:135:TYR:CE1	2.56	0.41
1:E:16:GLN:NE2	1:E:20:TRP:CZ2	2.86	0.41
3:I:103:ILE:HD12	3:I:103:ILE:C	2.40	0.41
2:D:182:THR:O	2:D:183:GLU:HB2	2.20	0.41
2:H:187:GLY:CA	3:L:173:LEU:HD12	2.50	0.41
2:H:249:LEU:HD11	2:H:260:ILE:HD11	2.03	0.41
2:D:59:LEU:HD12	3:J:176:GLY:CA	2.50	0.41
1:C:164:ILE:HD13	1:C:515:ILE:HD12	2.02	0.41
1:E:158:LEU:HA	1:E:158:LEU:HD23	1.82	0.41
2:D:82:THR:HG23	2:D:82:THR:O	2.20	0.41
1:A:259:PRO:CA	1:A:260:GLU:HG2	2.51	0.41
1:C:253:LYS:O	1:C:260:GLU:CD	2.58	0.41
1:C:264:ASN:ND2	1:C:265:PHE:H	2.18	0.41
3:K:150:MET:HE3	3:K:167:LEU:CD2	2.51	0.41
1:G:45:ILE:CG1	1:G:498:GLY:HA2	2.43	0.41
2:B:124:PHE:HD1	2:B:124:PHE:O	2.04	0.41
1:G:117:PRO:O	1:G:119:PHE:N	2.53	0.41
1:G:157:GLY:HA3	1:G:485:TYR:CD1	2.55	0.41
1:C:311:LEU:O	1:C:314:PHE:HB3	2.21	0.41
2:F:247:VAL:HA	2:F:248:PRO:HD3	1.81	0.41
1:E:261:ASP:HB2	1:E:262:GLU:H	1.64	0.41
2:B:274:ARG:NH2	1:E:108:SER:N	2.69	0.41
2:D:361:LEU:CA	2:D:364:VAL:CG2	2.99	0.41
2:F:394:LEU:CD1	2:F:396:SER:HB3	2.51	0.41
1:E:532:PHE:HB3	1:E:533:GLN:H	1.40	0.41
2:B:127:ILE:HG13	2:B:128:GLN:N	2.36	0.41
2:F:232:VAL:HG21	2:F:264:SER:N	2.35	0.41
2:B:232:VAL:HG12	2:B:260:ILE:HG23	2.03	0.41
2:B:339:ARG:NH2	2:B:346:CYS:O	2.54	0.41
1:E:225:TRP:CD1	1:E:225:TRP:O	2.74	0.41
2:D:202:CYS:SG	2:D:343:CYS:SG	3.02	0.41
2:B:74:GLN:HE22	2:B:119:ASN:ND2	2.08	0.41
1:A:236:THR:HG23	1:A:240:LYS:HE3	2.03	0.41
1:G:34:CYS:HB3	1:G:126:VAL:HG22	2.02	0.41
2:D:158:LEU:HA	2:D:158:LEU:HD23	1.85	0.41
2:F:392:LEU:O	2:F:393:TYR:O	2.39	0.41
2:B:320:ASN:O	2:B:321:TYR:CB	2.68	0.41
3:K:111:LYS:O	3:K:112:GLU:HB3	2.20	0.41
1:C:37:ASN:HA	1:C:37:ASN:HD22	1.60	0.41
2:B:110:PHE:HE2	2:B:114:ARG:HB2	1.85	0.41
1:G:481:GLU:O	1:G:484:ARG:N	2.54	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:16:GLN:HB2	2:H:292:VAL:HG12	2.03	0.41
2:D:13:TRP:C	2:D:13:TRP:CD1	2.94	0.41
2:D:268:ALA:HB1	2:D:273:ILE:O	2.20	0.41
1:G:311:LEU:HA	1:G:311:LEU:HD12	1.87	0.41
1:G:435:PHE:CZ	1:G:439:GLN:HG3	2.56	0.41
1:A:155:THR:HG23	1:A:493:ILE:CG2	2.51	0.41
1:C:146:SER:O	1:C:147:GLN:HB2	2.21	0.41
3:K:151:ASN:C	3:K:153:GLU:H	2.24	0.41
3:I:149:GLN:O	3:I:149:GLN:HG3	2.21	0.41
1:E:371:ALA:O	1:E:374:SER:N	2.51	0.41
3:J:145:TYR:O	3:J:146:SER:C	2.59	0.41
1:C:369:GLY:O	1:C:370:GLN:C	2.59	0.41
2:D:392:LEU:O	2:D:393:TYR:O	2.39	0.41
2:F:396:SER:O	2:F:600:VAL:N	2.54	0.41
1:E:15:ARG:HD3	1:E:15:ARG:HA	1.81	0.41
2:D:127:ILE:CG1	2:D:128:GLN:NE2	2.84	0.41
1:E:232:ARG:C	1:E:233:ILE:HG13	2.41	0.41
1:A:232:ARG:C	1:A:233:ILE:HG13	2.42	0.41
3:L:111:LYS:O	3:L:112:GLU:HB3	2.21	0.41
1:G:172:ILE:HA	1:G:390:LEU:HD23	2.02	0.41
2:F:164:TYR:HD2	2:F:169:LEU:HA	1.86	0.41
2:D:124:PHE:C	2:D:124:PHE:HD1	2.25	0.41
1:E:512:GLN:C	1:E:513:PHE:CD1	2.95	0.41
1:C:462:THR:O	1:C:463:GLY:C	2.59	0.41
1:E:369:GLY:O	1:E:370:GLN:C	2.59	0.41
2:H:293:ALA:O	2:H:294:SER:C	2.59	0.41
1:E:221:TYR:O	1:E:243:PHE:HE1	2.04	0.40
2:B:267:ARG:CG	2:B:267:ARG:NH1	2.77	0.40
2:H:207:TYR:HA	2:H:208:PRO:HD3	1.90	0.40
2:B:335:PHE:CZ	3:I:144:ILE:CD1	3.04	0.40
2:H:392:LEU:O	2:H:393:TYR:O	2.39	0.40
2:B:237:TRP:O	2:B:242:PRO:HD3	2.21	0.40
1:A:139:LEU:C	1:A:141:ASP:H	2.24	0.40
1:A:36:ILE:HD13	1:A:36:ILE:HA	1.91	0.40
1:C:143:LEU:HD13	1:C:150:LEU:HD13	1.99	0.40
1:A:331:ASP:HB2	2:B:224:LEU:HD11	2.02	0.40
2:B:218:ILE:HG22	2:B:218:ILE:O	2.21	0.40
2:D:102:PRO:HB3	2:D:124:PHE:CD2	2.56	0.40
2:D:134:PHE:O	2:D:137:GLN:HG3	2.21	0.40
1:G:53:GLY:O	1:G:54:ILE:C	2.59	0.40
1:G:317:LYS:HG2	1:G:318:GLU:N	2.37	0.40
2:D:249:LEU:CD1	2:D:260:ILE:HD11	2.51	0.40

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:117:PRO:O	1:E:119:PHE:N	2.54	0.40
1:C:457:LEU:HD23	1:C:479:VAL:HG12	2.02	0.40
1:C:111:ASN:OD1	1:C:111:ASN:O	2.39	0.40
1:G:113:LEU:HD23	1:G:113:LEU:HA	1.87	0.40
1:C:261:ASP:O	1:C:262:GLU:CG	2.69	0.40
1:G:517:ASN:OD1	1:G:534:LEU:HB2	2.22	0.40
2:F:84:ASP:H	2:F:87:ASN:HD22	1.67	0.40
1:G:232:ARG:C	1:G:233:ILE:HG13	2.42	0.40
2:H:316:ILE:HA	2:H:317:PRO:HD3	1.95	0.40
3:J:155:THR:O	3:J:158:ASP:N	2.54	0.40
1:A:148:ILE:HA	1:A:149:PRO:HD3	1.95	0.40
2:B:164:TYR:HD2	2:B:169:LEU:HA	1.85	0.40
1:C:143:LEU:HD22	1:C:148:ILE:CG2	2.50	0.40
2:D:703:GLY:C	2:D:705:VAL:H	2.23	0.40
1:E:239:GLU:O	1:E:240:LYS:C	2.59	0.40
1:G:239:GLU:O	1:G:240:LYS:C	2.59	0.40
2:H:187:GLY:HA2	3:L:173:LEU:CD1	2.51	0.40
1:A:493:ILE:HD13	1:A:493:ILE:HA	1.91	0.40
2:H:134:PHE:O	2:H:137:GLN:HG3	2.20	0.40
2:F:362:GLN:H	2:F:362:GLN:HG3	1.48	0.40
1:E:517:ASN:OD1	1:E:534:LEU:HB2	2.21	0.40
3:I:150:MET:HE3	3:I:167:LEU:HD22	2.03	0.40
2:H:140:ILE:HG22	2:H:141:ILE:N	2.36	0.40
3:L:107:THR:OG1	3:L:108:LEU:N	2.54	0.40
2:B:141:ILE:HD12	2:B:158:LEU:HD11	2.03	0.40
1:A:45:ILE:CG1	1:A:498:GLY:HA2	2.49	0.40
2:H:95:ARG:HD3	2:H:95:ARG:HA	1.67	0.40
1:G:481:GLU:O	1:G:484:ARG:HB3	2.21	0.40
3:J:118:GLU:O	3:J:121:ASP:OD1	2.39	0.40
1:E:507:LYS:HG2	1:E:513:PHE:HB2	2.02	0.40
1:A:215:ILE:HD12	1:A:342:LEU:HD21	2.03	0.40
2:H:130:PHE:CG	2:H:134:PHE:CD2	3.08	0.40
2:B:83:ILE:HD13	2:B:94:PHE:CG	2.57	0.40
2:D:247:VAL:HA	2:D:248:PRO:HD3	1.80	0.40
1:E:113:LEU:HA	1:E:113:LEU:HD23	1.90	0.40
2:B:362:GLN:H	2:B:362:GLN:HG3	1.50	0.40
2:D:357:PRO:CG	2:D:357:PRO:O	2.69	0.40
2:F:229:ILE:HG21	2:F:284:VAL:HB	2.04	0.40
1:A:225:TRP:CD1	1:A:225:TRP:O	2.75	0.40
1:A:84:ASN:HD22	1:A:85:ARG:N	2.19	0.40
1:G:416:MET:SD	1:G:423:ILE:HG23	2.61	0.40
1:C:105:VAL:HG12	1:C:107:GLU:H	1.86	0.40

*Continued on next page...*

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:D:213:PHE:HA	2:D:214:PRO:HD3	1.98	0.40
2:D:33:PRO:O	2:D:35:PHE:N	2.53	0.40
2:B:52:LEU:HD11	2:B:78:ILE:HG13	2.02	0.40
2:H:339:ARG:NH2	2:H:346:CYS:O	2.54	0.40
1:A:457:LEU:HD23	1:A:479:VAL:CG1	2.52	0.40
1:E:359:ASN:HA	1:E:359:ASN:HD22	1.69	0.40
1:A:252:LEU:O	1:A:259:PRO:N	2.54	0.40
1:G:264:ASN:H	1:G:264:ASN:ND2	2.14	0.40
2:H:316:ILE:CD1	2:H:316:ILE:H	2.12	0.40
2:F:141:ILE:HD12	2:F:158:LEU:HD21	2.04	0.40
2:F:242:PRO:HG3	2:F:259:TRP:CH2	2.56	0.40
1:C:45:ILE:CG1	1:C:498:GLY:HA2	2.48	0.40
1:A:128:ALA:HB1	1:A:131:LEU:CD1	2.52	0.40
1:A:144:TRP:CZ3	1:A:397:SER:HA	2.56	0.40
1:G:171:VAL:HG13	1:G:391:ARG:O	2.21	0.40
1:A:72:ASN:HD22	1:A:73:ASN:N	2.19	0.40
1:E:340:ILE:O	1:E:341:LYS:C	2.60	0.40
1:G:16:GLN:NE2	1:G:20:TRP:CZ2	2.86	0.40
3:L:118:GLU:O	3:L:121:ASP:OD1	2.39	0.40
2:H:136:ARG:NH1	2:H:136:ARG:HG2	2.37	0.40
1:C:180:LEU:HD23	3:J:135:GLY:CA	2.52	0.40
1:A:158:LEU:HA	1:A:158:LEU:HD23	1.87	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 X-ray entries followed by that with respect to entries of similar resolution. 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	512/529 (97%)	418 (82%)	66 (13%)	28 (6%)	3	38
1	C	512/529 (97%)	418 (82%)	67 (13%)	27 (5%)	3	38
1	E	512/529 (97%)	416 (81%)	70 (14%)	26 (5%)	3	40
1	G	512/529 (97%)	412 (80%)	72 (14%)	28 (6%)	3	38
2	B	408/431 (95%)	310 (76%)	73 (18%)	25 (6%)	2	34

Continued on next page...

*Continued from previous page...*

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	D	410/431 (95%)	307 (75%)	76 (18%)	27 (7%)	2	32
2	F	408/431 (95%)	309 (76%)	75 (18%)	24 (6%)	2	35
2	H	408/431 (95%)	308 (76%)	77 (19%)	23 (6%)	3	37
3	I	74/76 (97%)	65 (88%)	7 (10%)	2 (3%)	8	59
3	J	74/76 (97%)	65 (88%)	6 (8%)	3 (4%)	4	47
3	K	74/76 (97%)	66 (89%)	6 (8%)	2 (3%)	8	59
3	L	74/76 (97%)	66 (89%)	6 (8%)	2 (3%)	8	59
All	All	3978/4144 (96%)	3160 (79%)	601 (15%)	217 (6%)	3	38

All (217) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	233	ILE
1	A	259	PRO
1	A	262	GLU
1	A	275	ALA
1	A	533	GLN
2	B	116	PRO
2	B	356	SER
2	B	357	PRO
2	B	393	TYR
2	B	901	VAL
1	C	36	ILE
1	C	233	ILE
1	C	259	PRO
1	C	262	GLU
1	C	275	ALA
1	C	533	GLN
2	D	116	PRO
2	D	356	SER
2	D	357	PRO
2	D	393	TYR
2	D	607	THR
2	D	608	ARG
2	D	700	LYS
2	D	901	VAL
1	E	233	ILE
1	E	259	PRO
1	E	262	GLU
1	E	275	ALA

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	E	533	GLN
2	F	116	PRO
2	F	356	SER
2	F	357	PRO
2	F	393	TYR
2	F	901	VAL
2	F	902	ALA
1	G	233	ILE
1	G	259	PRO
1	G	262	GLU
1	G	275	ALA
1	G	533	GLN
2	H	116	PRO
2	H	356	SER
2	H	357	PRO
2	H	393	TYR
2	H	901	VAL
2	H	902	ALA
1	A	21	GLY
1	A	36	ILE
1	A	237	TYR
1	A	317	LYS
1	A	367	SER
1	A	408	ASN
1	A	416	MET
1	A	422	GLU
2	B	34	ASP
2	B	127	ILE
2	B	132	ASP
2	B	183	GLU
2	B	294	SER
2	B	320	ASN
2	B	352	ASN
2	B	358	SER
2	B	372	ALA
2	B	902	ALA
3	I	152	ASP
1	C	21	GLY
1	C	237	TYR
1	C	317	LYS
1	C	367	SER
1	C	408	ASN

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type
1	C	416	MET
1	C	422	GLU
2	D	34	ASP
2	D	127	ILE
2	D	132	ASP
2	D	183	GLU
2	D	294	SER
2	D	320	ASN
2	D	352	ASN
2	D	358	SER
2	D	372	ALA
3	J	152	ASP
1	E	21	GLY
1	E	36	ILE
1	E	237	TYR
1	E	276	LEU
1	E	367	SER
1	E	408	ASN
1	E	416	MET
1	E	422	GLU
2	F	34	ASP
2	F	127	ILE
2	F	132	ASP
2	F	183	GLU
2	F	294	SER
2	F	320	ASN
2	F	352	ASN
2	F	358	SER
2	F	372	ALA
3	K	152	ASP
1	G	21	GLY
1	G	36	ILE
1	G	237	TYR
1	G	276	LEU
1	G	367	SER
1	G	408	ASN
1	G	416	MET
1	G	422	GLU
2	H	34	ASP
2	H	127	ILE
2	H	183	GLU
2	H	294	SER

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
2	H	320	ASN
2	H	352	ASN
2	H	358	SER
2	H	372	ALA
3	L	152	ASP
1	A	118	SER
1	A	228	GLU
1	A	249	GLN
1	A	276	LEU
1	A	318	GLU
2	B	86	SER
2	B	360	LYS
2	B	607	THR
1	C	118	SER
1	C	190	PRO
1	C	228	GLU
1	C	249	GLN
1	C	276	LEU
1	C	318	GLU
2	D	86	SER
2	D	360	LYS
2	D	375	GLN
1	E	118	SER
1	E	190	PRO
1	E	228	GLU
1	E	249	GLN
1	E	317	LYS
1	E	318	GLU
2	F	86	SER
2	F	360	LYS
2	F	801	GLN
1	G	118	SER
1	G	190	PRO
1	G	228	GLU
1	G	249	GLN
1	G	317	LYS
1	G	318	GLU
2	H	86	SER
2	H	132	ASP
2	H	360	LYS
2	H	801	GLN
1	A	106	GLU

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	190	PRO
1	A	230	ASN
1	A	450	VAL
2	B	90	ARG
2	B	241	GLN
2	B	801	GLN
2	B	907	PRO
3	I	119	PRO
1	C	106	GLU
1	C	450	VAL
2	D	801	GLN
2	D	907	PRO
3	J	119	PRO
1	E	106	GLU
1	E	450	VAL
2	F	375	GLN
2	F	907	PRO
3	K	119	PRO
2	H	375	GLN
2	H	907	PRO
3	L	119	PRO
1	A	280	GLN
1	C	230	ASN
1	C	280	GLN
1	C	519	THR
2	D	88	LEU
2	D	90	ARG
2	D	241	GLN
1	E	230	ASN
1	E	280	GLN
2	F	90	ARG
2	F	241	GLN
1	G	106	GLU
1	G	280	GLN
1	G	519	THR
2	H	90	ARG
2	H	241	GLN
1	A	443	PRO
1	A	519	THR
2	B	196	MET
2	B	375	GLN
2	D	194	PRO

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
2	D	196	MET
3	J	146	SER
1	E	419	PRO
2	F	194	PRO
2	F	196	MET
1	G	230	ASN
1	G	419	PRO
1	G	450	VAL
1	A	419	PRO
2	B	194	PRO
1	C	419	PRO
1	C	443	PRO
1	G	54	ILE
2	H	194	PRO
1	A	54	ILE
1	A	333	ILE
1	E	54	ILE
1	E	443	PRO
1	G	443	PRO
1	C	372	PRO
1	G	333	ILE

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. 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	450/461 (98%)	428 (95%)	22 (5%)	35	81
1	C	450/461 (98%)	428 (95%)	22 (5%)	35	81
1	E	450/461 (98%)	428 (95%)	22 (5%)	35	81
1	G	450/461 (98%)	427 (95%)	23 (5%)	33	80
2	B	334/379 (88%)	301 (90%)	33 (10%)	11	50
2	D	334/379 (88%)	302 (90%)	32 (10%)	12	52
2	F	334/379 (88%)	302 (90%)	32 (10%)	12	52
2	H	334/379 (88%)	304 (91%)	30 (9%)	14	57
3	I	66/66 (100%)	64 (97%)	2 (3%)	53	90

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	J	66/66 (100%)	63 (96%)	3 (4%)	38	83
3	K	66/66 (100%)	63 (96%)	3 (4%)	38	83
3	L	66/66 (100%)	63 (96%)	3 (4%)	38	83
All	All	3400/3624 (94%)	3173 (93%)	227 (7%)	23	72

All (227) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	22	ASP
1	A	43	THR
1	A	56	SER
1	A	72	ASN
1	A	84	ASN
1	A	171	VAL
1	A	214	TRP
1	A	234	PRO
1	A	237	TYR
1	A	259	PRO
1	A	261	ASP
1	A	262	GLU
1	A	264	ASN
1	A	293	ARG
1	A	311	LEU
1	A	332	MET
1	A	353	ASP
1	A	406	THR
1	A	407	ILE
1	A	410	ASP
1	A	418	ASN
1	A	525	MET
2	B	49	CYS
2	B	110	PHE
2	B	111	LEU
2	B	114	ARG
2	B	116	PRO
2	B	124	PHE
2	B	128	GLN
2	B	132	ASP
2	B	142	VAL
2	B	154	ILE
2	B	174	ILE

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
2	B	182	THR
2	B	212	ASN
2	B	265	LEU
2	B	267	ARG
2	B	294	SER
2	B	306	GLU
2	B	316	ILE
2	B	318	LEU
2	B	319	ASN
2	B	321	TYR
2	B	322	LEU
2	B	325	ASN
2	B	326	ASP
2	B	327	VAL
2	B	342	ASN
2	B	348	GLN
2	B	357	PRO
2	B	362	GLN
2	B	363	GLU
2	B	364	VAL
2	B	392	LEU
2	B	393	TYR
3	I	121	ASP
3	I	170	VAL
1	C	22	ASP
1	C	43	THR
1	C	56	SER
1	C	72	ASN
1	C	84	ASN
1	C	171	VAL
1	C	214	TRP
1	C	234	PRO
1	C	237	TYR
1	C	259	PRO
1	C	261	ASP
1	C	262	GLU
1	C	264	ASN
1	C	293	ARG
1	C	311	LEU
1	C	332	MET
1	C	353	ASP
1	C	406	THR

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	C	407	ILE
1	C	410	ASP
1	C	418	ASN
1	C	525	MET
2	D	49	CYS
2	D	110	PHE
2	D	111	LEU
2	D	114	ARG
2	D	116	PRO
2	D	124	PHE
2	D	128	GLN
2	D	132	ASP
2	D	142	VAL
2	D	154	ILE
2	D	174	ILE
2	D	182	THR
2	D	212	ASN
2	D	265	LEU
2	D	267	ARG
2	D	294	SER
2	D	306	GLU
2	D	316	ILE
2	D	318	LEU
2	D	319	ASN
2	D	321	TYR
2	D	322	LEU
2	D	325	ASN
2	D	326	ASP
2	D	327	VAL
2	D	342	ASN
2	D	348	GLN
2	D	357	PRO
2	D	362	GLN
2	D	363	GLU
2	D	364	VAL
2	D	393	TYR
3	J	121	ASP
3	J	150	MET
3	J	170	VAL
1	E	22	ASP
1	E	43	THR
1	E	56	SER

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	E	72	ASN
1	E	84	ASN
1	E	171	VAL
1	E	214	TRP
1	E	234	PRO
1	E	237	TYR
1	E	259	PRO
1	E	261	ASP
1	E	262	GLU
1	E	264	ASN
1	E	293	ARG
1	E	311	LEU
1	E	332	MET
1	E	353	ASP
1	E	406	THR
1	E	407	ILE
1	E	410	ASP
1	E	418	ASN
1	E	525	MET
2	F	49	CYS
2	F	110	PHE
2	F	111	LEU
2	F	114	ARG
2	F	116	PRO
2	F	124	PHE
2	F	128	GLN
2	F	132	ASP
2	F	142	VAL
2	F	154	ILE
2	F	174	ILE
2	F	182	THR
2	F	212	ASN
2	F	265	LEU
2	F	267	ARG
2	F	294	SER
2	F	306	GLU
2	F	316	ILE
2	F	318	LEU
2	F	319	ASN
2	F	321	TYR
2	F	322	LEU
2	F	325	ASN

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type
2	F	326	ASP
2	F	327	VAL
2	F	342	ASN
2	F	348	GLN
2	F	357	PRO
2	F	362	GLN
2	F	363	GLU
2	F	364	VAL
2	F	393	TYR
3	K	121	ASP
3	K	150	MET
3	K	170	VAL
1	G	22	ASP
1	G	43	THR
1	G	56	SER
1	G	72	ASN
1	G	84	ASN
1	G	171	VAL
1	G	214	TRP
1	G	234	PRO
1	G	237	TYR
1	G	259	PRO
1	G	261	ASP
1	G	262	GLU
1	G	264	ASN
1	G	293	ARG
1	G	311	LEU
1	G	318	GLU
1	G	332	MET
1	G	353	ASP
1	G	406	THR
1	G	407	ILE
1	G	410	ASP
1	G	418	ASN
1	G	525	MET
2	H	110	PHE
2	H	111	LEU
2	H	114	ARG
2	H	116	PRO
2	H	124	PHE
2	H	128	GLN
2	H	132	ASP

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
2	H	142	VAL
2	H	154	ILE
2	H	174	ILE
2	H	182	THR
2	H	212	ASN
2	H	265	LEU
2	H	267	ARG
2	H	294	SER
2	H	306	GLU
2	H	316	ILE
2	H	318	LEU
2	H	319	ASN
2	H	321	TYR
2	H	322	LEU
2	H	325	ASN
2	H	326	ASP
2	H	327	VAL
2	H	342	ASN
2	H	348	GLN
2	H	357	PRO
2	H	363	GLU
2	H	364	VAL
2	H	393	TYR
3	L	121	ASP
3	L	150	MET
3	L	170	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (108) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	37	ASN
1	A	72	ASN
1	A	77	GLN
1	A	197	GLN
1	A	264	ASN
1	A	271	ASN
1	A	277	ASN
1	A	320	GLN
1	A	344	ASN
1	A	359	ASN
1	A	418	ASN
1	A	439	GLN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	447	ASN
1	A	533	GLN
2	B	19	HIS
2	B	74	GLN
2	B	87	ASN
2	B	125	ASN
2	B	128	GLN
2	B	139	HIS
2	B	212	ASN
2	B	236	GLN
2	B	262	GLN
2	B	325	ASN
2	B	342	ASN
2	B	348	GLN
2	B	351	GLN
3	I	141	GLN
1	C	37	ASN
1	C	72	ASN
1	C	77	GLN
1	C	197	GLN
1	C	264	ASN
1	C	271	ASN
1	C	277	ASN
1	C	320	GLN
1	C	359	ASN
1	C	418	ASN
1	C	439	GLN
1	C	447	ASN
1	C	533	GLN
2	D	19	HIS
2	D	74	GLN
2	D	87	ASN
2	D	125	ASN
2	D	128	GLN
2	D	139	HIS
2	D	212	ASN
2	D	236	GLN
2	D	325	ASN
2	D	342	ASN
2	D	348	GLN
2	D	351	GLN
3	J	141	GLN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	E	37	ASN
1	E	72	ASN
1	E	77	GLN
1	E	115	ASN
1	E	178	ASN
1	E	197	GLN
1	E	264	ASN
1	E	271	ASN
1	E	277	ASN
1	E	320	GLN
1	E	359	ASN
1	E	418	ASN
1	E	439	GLN
1	E	447	ASN
1	E	533	GLN
2	F	19	HIS
2	F	74	GLN
2	F	87	ASN
2	F	125	ASN
2	F	128	GLN
2	F	139	HIS
2	F	212	ASN
2	F	236	GLN
2	F	325	ASN
2	F	342	ASN
2	F	348	GLN
2	F	351	GLN
3	K	141	GLN
1	G	37	ASN
1	G	72	ASN
1	G	77	GLN
1	G	197	GLN
1	G	264	ASN
1	G	271	ASN
1	G	277	ASN
1	G	320	GLN
1	G	359	ASN
1	G	418	ASN
1	G	439	GLN
1	G	447	ASN
1	G	533	GLN
2	H	19	HIS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
2	H	74	GLN
2	H	87	ASN
2	H	125	ASN
2	H	128	GLN
2	H	139	HIS
2	H	212	ASN
2	H	236	GLN
2	H	325	ASN
2	H	342	ASN
2	H	348	GLN
2	H	351	GLN
3	L	141	GLN

### 5.3.3 RNA ⓘ

There are no RNA chains in this entry.

## 5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 8 ligands modelled in this entry, 4 are monoatomic - leaving 4 for Mogul analysis.

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$
5	ATP	B	5	-	33,33,33	1.85	7 (21%)	52,52,52	2.80	18 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
5	ATP	D	6	-	33,33,33	1.72	5 (15%)	52,52,52	2.64	17 (32%)
5	ATP	F	7	-	33,33,33	1.38	4 (12%)	52,52,52	2.83	15 (28%)
5	ATP	H	8	-	33,33,33	1.28	5 (15%)	52,52,52	2.63	16 (30%)

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
5	ATP	B	5	-	-	0/22/38/38	0/1/3/3
5	ATP	D	6	-	-	0/22/38/38	0/1/3/3
5	ATP	F	7	-	-	0/22/38/38	0/1/3/3
5	ATP	H	8	-	-	0/22/38/38	0/1/3/3

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	B	5	ATP	PB-O3A	6.51	1.71	1.59
5	D	6	ATP	PB-O3A	6.04	1.70	1.59
5	D	6	ATP	PA-O3A	4.82	1.68	1.59
5	B	5	ATP	C2-N3	4.04	1.40	1.32
5	B	5	ATP	PA-O3A	3.95	1.67	1.59
5	F	7	ATP	PB-O3A	3.42	1.66	1.59
5	F	7	ATP	C2-N3	3.21	1.38	1.32
5	D	6	ATP	C2-N3	3.05	1.38	1.32
5	H	8	ATP	O4'-C1'	2.85	1.45	1.41
5	H	8	ATP	PB-O3A	2.82	1.65	1.59
5	H	8	ATP	C2-N3	2.74	1.37	1.32
5	D	6	ATP	C2'-C1'	-2.69	1.49	1.53
5	F	7	ATP	C2'-C1'	-2.68	1.49	1.53
5	F	7	ATP	O2'-C2'	-2.54	1.36	1.43
5	B	5	ATP	O4'-C1'	2.49	1.45	1.41
5	H	8	ATP	C2'-C1'	-2.42	1.50	1.53
5	B	5	ATP	C2'-C1'	-2.39	1.50	1.53
5	H	8	ATP	O2'-C2'	-2.39	1.37	1.43
5	D	6	ATP	O2'-C2'	-2.23	1.37	1.43
5	B	5	ATP	C2-N1	2.17	1.38	1.33
5	B	5	ATP	O2'-C2'	-2.06	1.38	1.43

All (66) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	F	7	ATP	N3-C2-N1	-11.04	119.48	128.71
5	B	5	ATP	N3-C2-N1	-10.14	120.23	128.71
5	H	8	ATP	N3-C2-N1	-10.10	120.26	128.71
5	F	7	ATP	O3A-PB-O3B	-9.56	82.23	101.66
5	D	6	ATP	N3-C2-N1	-9.54	120.74	128.71
5	D	6	ATP	O3A-PB-O3B	-9.42	82.51	101.66
5	B	5	ATP	O3A-PB-O3B	-8.35	84.67	101.66
5	B	5	ATP	O4'-C1'-N9	-8.04	100.97	108.44
5	H	8	ATP	O3A-PB-O3B	-7.07	87.29	101.66
5	H	8	ATP	O4'-C1'-N9	-6.63	102.27	108.44
5	F	7	ATP	O4'-C1'-N9	-6.25	102.62	108.44
5	D	6	ATP	O4'-C1'-N9	-5.21	103.60	108.44
5	H	8	ATP	O3A-PB-O1B	-4.95	75.73	111.28
5	F	7	ATP	PB-O3B-PG	-4.77	117.71	131.68
5	F	7	ATP	C4-C5-N7	-4.53	105.64	109.52
5	F	7	ATP	O3A-PB-O1B	-4.51	78.88	111.28
5	B	5	ATP	O3A-PB-O1B	-4.46	79.24	111.28
5	D	6	ATP	C4-C5-N7	-4.35	105.79	109.52
5	B	5	ATP	C4-C5-N7	-4.30	105.84	109.52
5	D	6	ATP	O3A-PB-O1B	-4.18	81.27	111.28
5	B	5	ATP	PB-O3B-PG	-4.16	119.49	131.68
5	D	6	ATP	PB-O3B-PG	-3.82	120.49	131.68
5	H	8	ATP	C4-C5-N7	-3.82	106.25	109.52
5	H	8	ATP	O2B-PB-O3A	-3.68	87.68	105.14
5	B	5	ATP	O2B-PB-O3A	-3.61	88.02	105.14
5	D	6	ATP	O2B-PB-O3A	-3.50	88.54	105.14
5	H	8	ATP	PB-O3B-PG	-3.27	122.10	131.68
5	F	7	ATP	O2B-PB-O3A	-3.23	89.80	105.14
5	B	5	ATP	N3-C4-N9	3.22	131.24	125.43
5	D	6	ATP	N3-C4-N9	3.16	131.14	125.43
5	F	7	ATP	N3-C4-N9	3.14	131.11	125.43
5	H	8	ATP	N6-C6-N1	-3.10	113.27	119.36
5	H	8	ATP	N3-C4-N9	3.03	130.91	125.43
5	B	5	ATP	O2B-PB-O1B	2.98	128.84	112.21
5	F	7	ATP	C8-N7-C5	2.88	112.50	103.58
5	H	8	ATP	C5-C6-N6	2.87	127.20	120.72
5	H	8	ATP	O2B-PB-O1B	2.86	128.17	112.21
5	F	7	ATP	N6-C6-N1	-2.79	113.88	119.36
5	H	8	ATP	O2B-PB-O3B	2.73	118.09	105.14
5	D	6	ATP	O2B-PB-O1B	2.71	127.36	112.21
5	F	7	ATP	N7-C8-N9	-2.69	106.74	114.36
5	H	8	ATP	C2'-C1'-N9	2.68	120.16	113.27
5	B	5	ATP	O2'-C2'-C3'	2.66	120.49	111.83

Continued on next page...

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	B	5	ATP	O2B-PB-O3B	2.66	117.75	105.14
5	H	8	ATP	N7-C8-N9	-2.61	106.97	114.36
5	D	6	ATP	C8-N7-C5	2.60	111.64	103.58
5	H	8	ATP	C8-N7-C5	2.59	111.61	103.58
5	D	6	ATP	N6-C6-N1	-2.54	114.38	119.36
5	B	5	ATP	C8-N7-C5	2.54	111.45	103.58
5	D	6	ATP	C5-C6-N6	2.53	126.43	120.72
5	H	8	ATP	O4'-C1'-C2'	-2.50	102.94	106.77
5	D	6	ATP	O2B-PB-O3B	2.47	116.88	105.14
5	F	7	ATP	C5-C6-N6	2.47	126.30	120.72
5	D	6	ATP	N7-C8-N9	-2.45	107.43	114.36
5	F	7	ATP	O2B-PB-O3B	2.43	116.67	105.14
5	F	7	ATP	O2B-PB-O1B	2.35	125.35	112.21
5	B	5	ATP	O4'-C1'-C2'	-2.32	103.21	106.77
5	F	7	ATP	C2'-C1'-N9	2.32	119.23	113.27
5	B	5	ATP	C8-N9-C1'	-2.31	121.83	126.38
5	D	6	ATP	O4'-C1'-C2'	-2.31	103.23	106.77
5	B	5	ATP	C1'-N9-C4	2.25	130.52	126.64
5	B	5	ATP	O3'-C3'-C4'	-2.21	104.57	111.08
5	D	6	ATP	O2'-C2'-C3'	2.18	118.92	111.83
5	D	6	ATP	C2'-C1'-N9	2.11	118.68	113.27
5	B	5	ATP	C2'-C1'-N9	2.08	118.60	113.27
5	B	5	ATP	N7-C8-N9	-2.08	108.49	114.36

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.



## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

### 6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

### 6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

### 6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

### 6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.