



Full wwPDB EM Validation Report ⓘ

Mar 21, 2026 – 05:54 PM UTC

PDB ID : 5ARE / pdb_00005are
EMDB ID : EMD-3165
Title : Bovine mitochondrial ATP synthase state 1b
Authors : Zhou, A.; Rohou, A.; Schep, D.G.; Bason, J.V.; Montgomery, M.G.; Walker, J.E.; Grigorieff, N.; Rubinstein, J.L.
Deposited on : 2015-09-24
Resolution : 6.70 Å(reported)
Based on initial models : 2XND, 2CLY, 2WSS

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

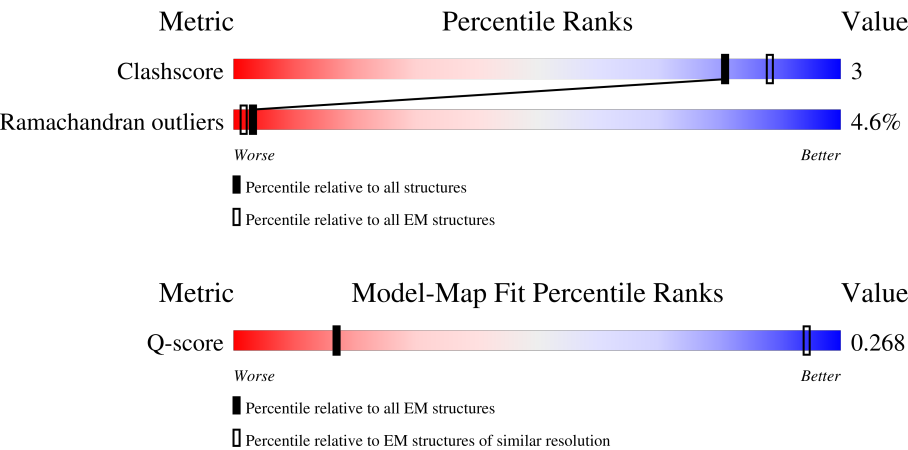
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 6.70 Å.

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



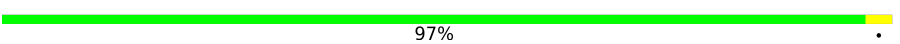
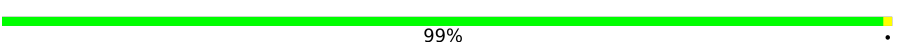
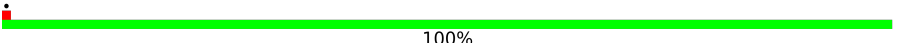
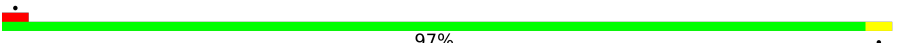
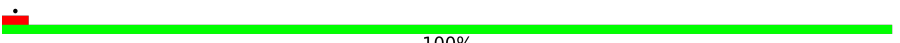
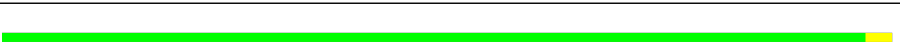
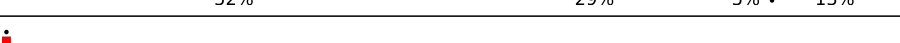
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Q-score	-	25397	412 (6.90 - 7.90)

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

Mol	Chain	Length	Quality of chain
1	A	510	40% 54% 5%
1	B	510	40% 50% 6%
1	C	510	45% 47% 5%
2	D	482	48% 48% ••
2	E	482	43% 51% ••

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Mol	Chain	Length	Quality of chain
2	F	482	
3	G	273	
4	H	146	
5	I	50	
6	J	72	
6	K	72	
6	L	72	
6	M	72	
6	N	72	
6	O	72	
6	P	72	
6	Q	72	
7	S	190	
8	T	174	
9	U	124	
10	V	77	
11	W	217	

2 Entry composition [i](#)

There are 11 unique types of molecules in this entry. The entry contains 18545 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called ATP SYNTHASE SUBUNIT ALPHA, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
1	A	509	Total	C	N	O	0	0
			2035	1018	509	508		
1	B	480	Total	C	N	O	0	0
			1918	960	480	478		
1	C	487	Total	C	N	O	0	0
			1947	974	487	486		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	481	GLY	SER	conflict	UNP P19483
B	481	GLY	SER	conflict	UNP P19483
C	481	GLY	SER	conflict	UNP P19483

- Molecule 2 is a protein called ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
2	D	467	Total	C	N	O	0	0
			1867	934	467	466		
2	E	466	Total	C	N	O	0	0
			1863	932	466	465		
2	F	466	Total	C	N	O	0	0
			1863	932	466	465		

- Molecule 3 is a protein called ATP SYNTHASE SUBUNIT GAMMA, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	G	264	Total	C	N	O	0	0
			1053	528	264	261		

- Molecule 4 is a protein called ATP SYNTHASE SUBUNIT DELTA, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
4	H	131	Total	C	N	O	0	0
			523	262	131	130		

- Molecule 5 is a protein called ATP SYNTHASE SUBUNIT EPSILON, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	I	47	Total	C	N	O	0	0
			187	94	47	46		

- Molecule 6 is a protein called ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	J	72	Total	C	N	O	0	0
			288	144	72	72		
6	K	72	Total	C	N	O	0	0
			288	144	72	72		
6	L	72	Total	C	N	O	0	0
			288	144	72	72		
6	M	72	Total	C	N	O	0	0
			288	144	72	72		
6	N	72	Total	C	N	O	0	0
			288	144	72	72		
6	O	72	Total	C	N	O	0	0
			288	144	72	72		
6	P	72	Total	C	N	O	0	0
			288	144	72	72		
6	Q	72	Total	C	N	O	0	0
			288	144	72	72		

- Molecule 7 is a protein called ATP SYNTHASE SUBUNIT O, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	S	168	Total	C	N	O	0	1
			669	334	168	167		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
S	129	THR	ALA	conflict	UNP P13621

- Molecule 8 is a protein called ATP SYNTHASE F(0) COMPLEX SUBUNIT B1, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	T	174	Total	C	N	O	0	0
			697	348	174	175		

- Molecule 9 is a protein called ATP SYNTHASE SUBUNIT D, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	U	122	Total	C	N	O	0	1
			485	242	122	121		

- Molecule 10 is a protein called ATP SYNTHASE-COUPPLING FACTOR 6, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	V	67	Total	C	N	O	0	1
			265	132	67	66		

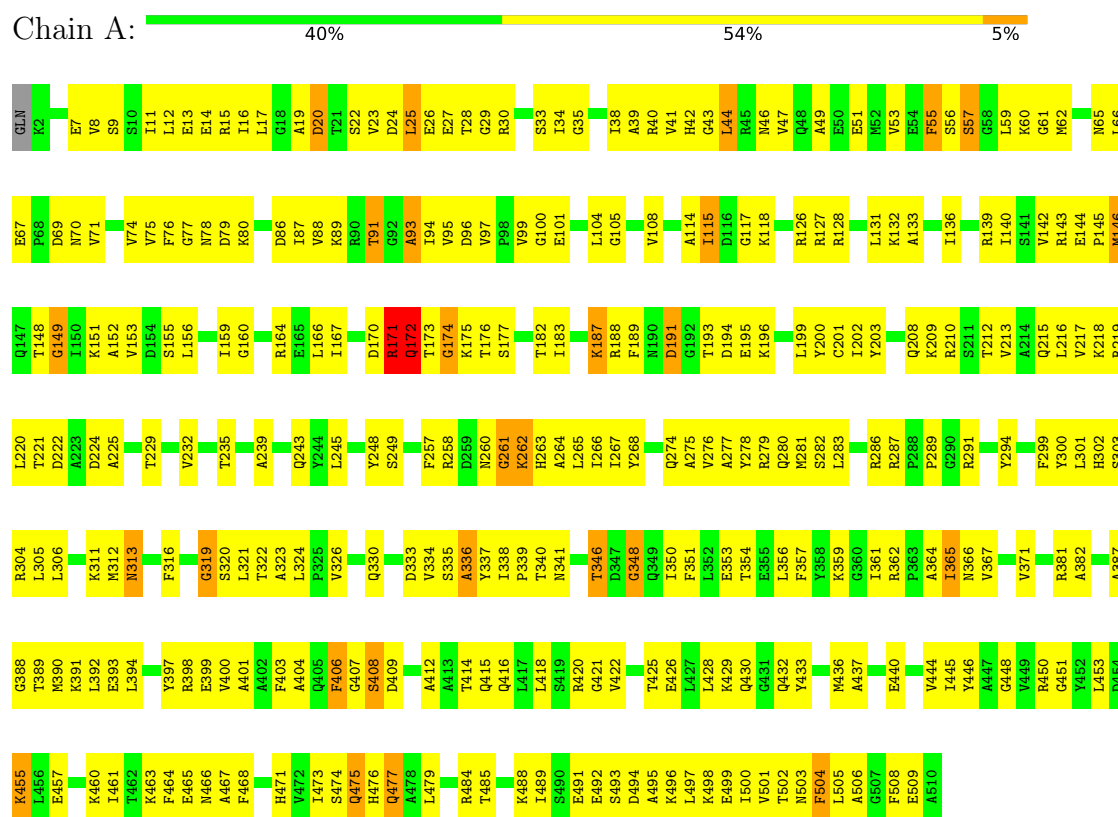
- Molecule 11 is a protein called ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	W	217	Total	C	N	O	0	0
			869	434	217	218		

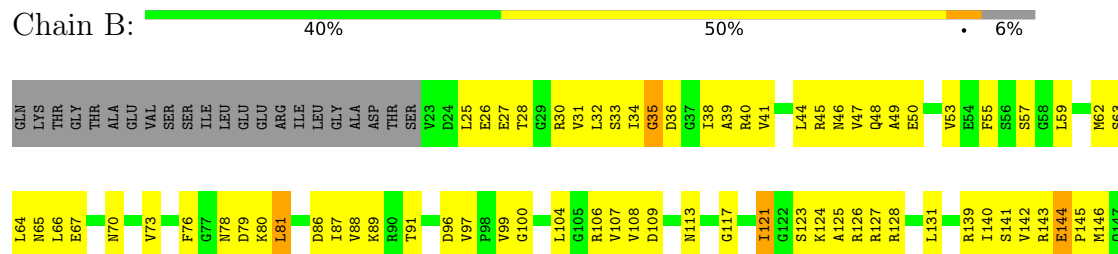
3 Residue-property plots

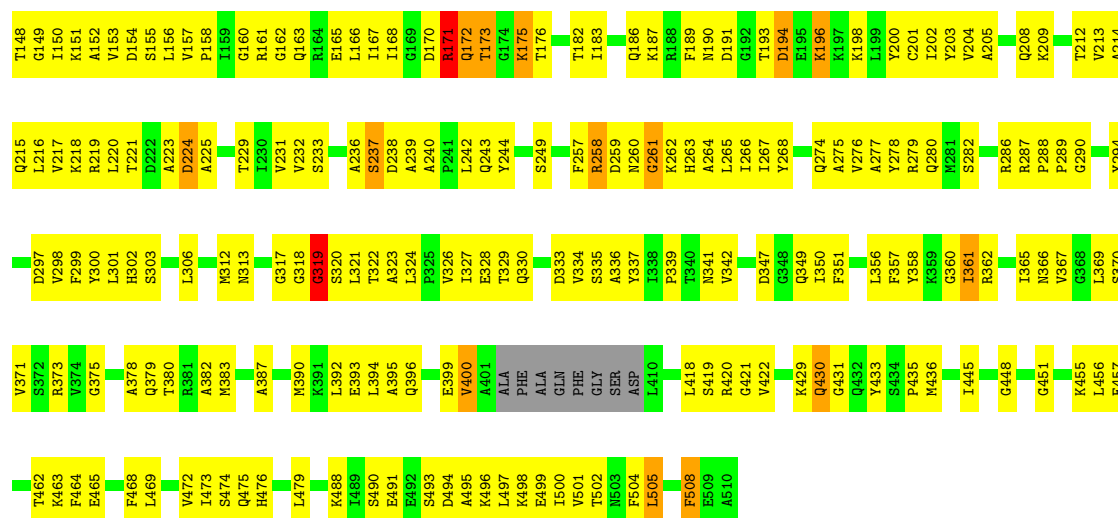
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

• Molecule 1: ATP SYNTHASE SUBUNIT ALPHA, MITOCHONDRIAL



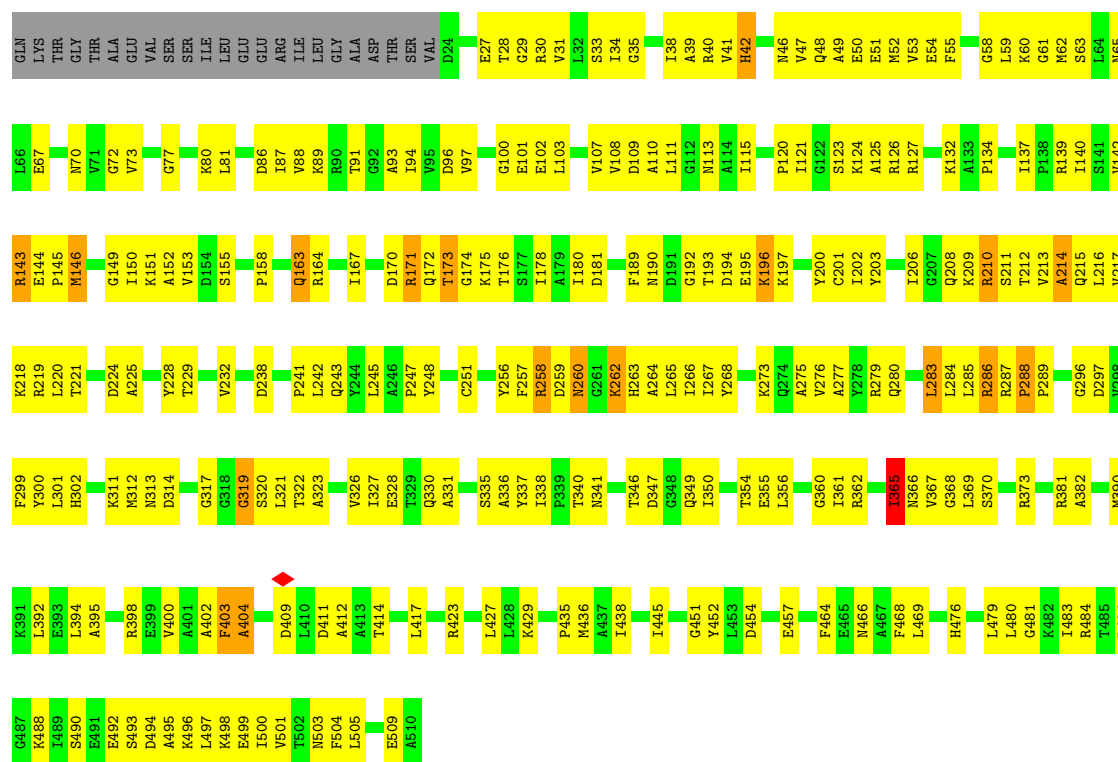
• Molecule 1: ATP SYNTHASE SUBUNIT ALPHA, MITOCHONDRIAL





• Molecule 1: ATP SYNTHASE SUBUNIT ALPHA, MITOCHONDRIAL

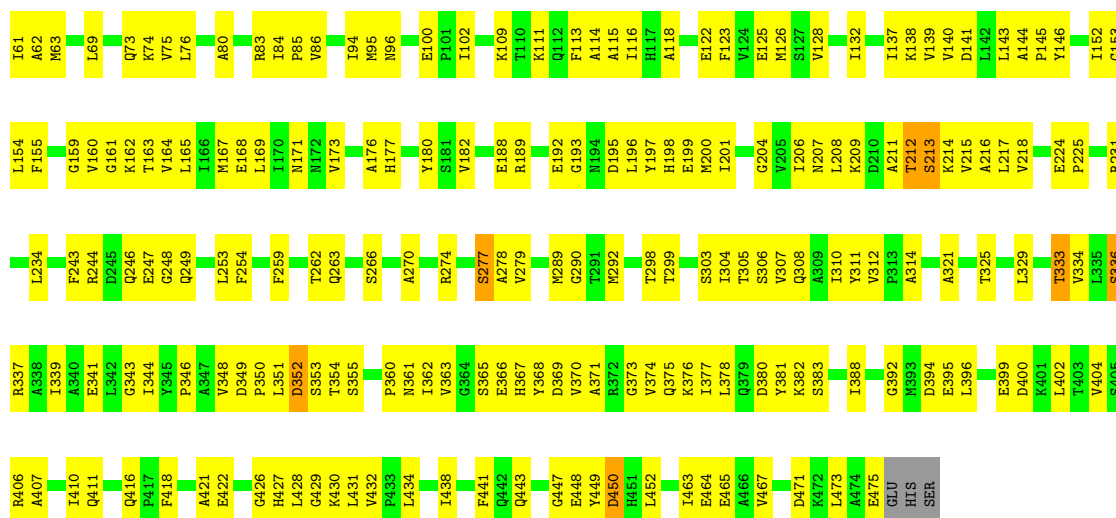
Chain C: 45% 47% 5%



• Molecule 2: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

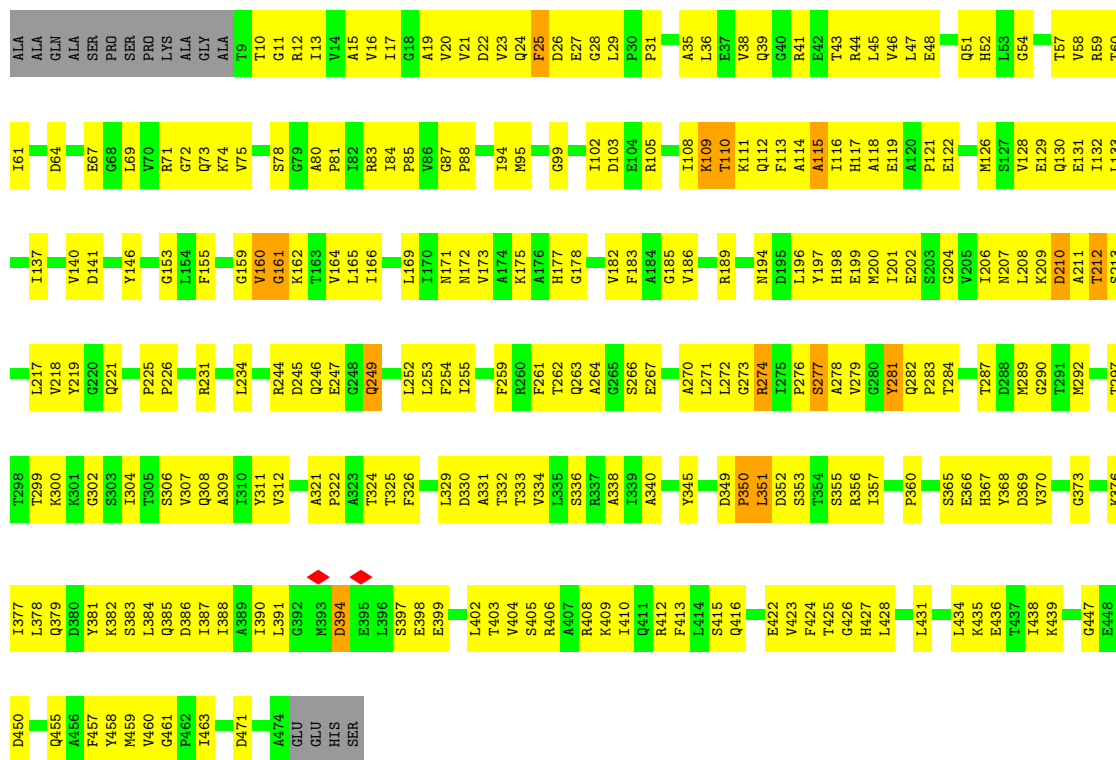
Chain D: 48% 48% 5%





• Molecule 2: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

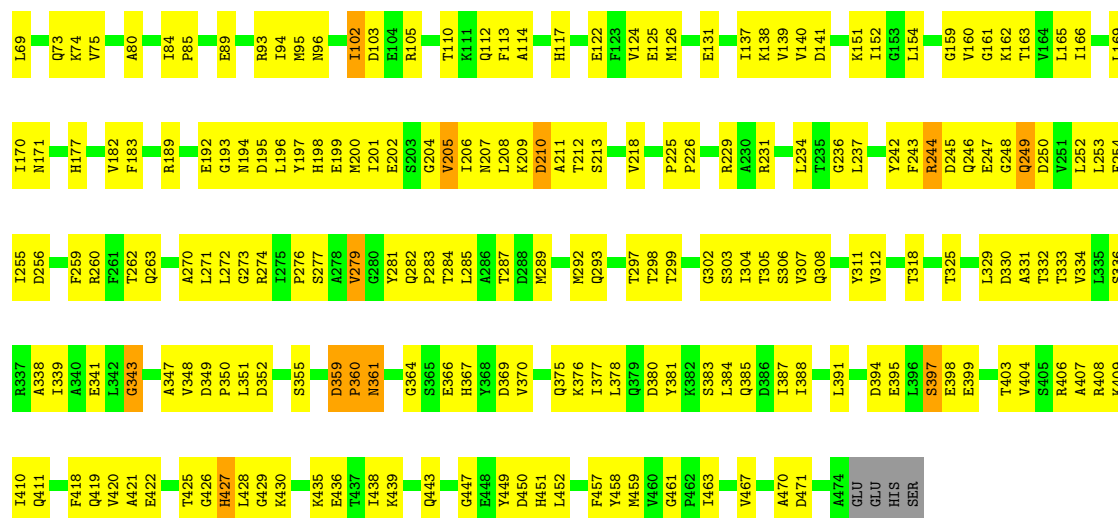
Chain E: 43% 51%



• Molecule 2: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

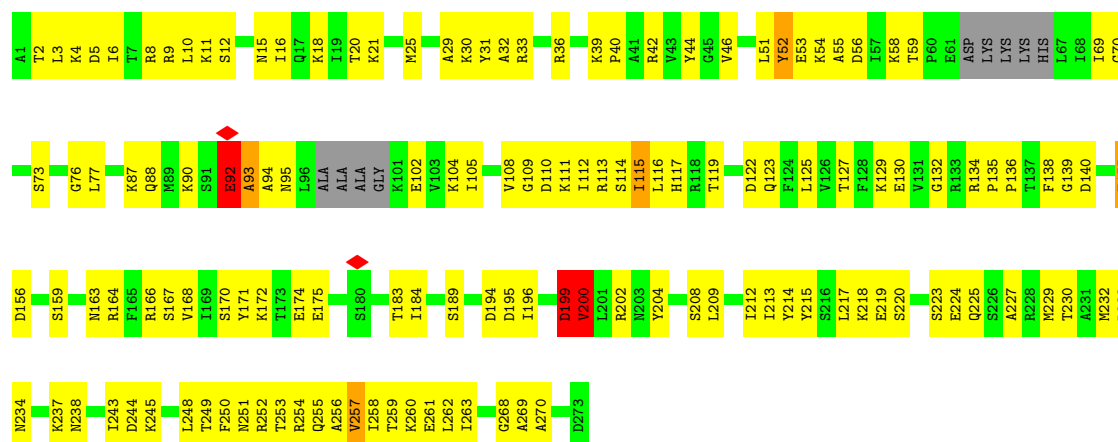
Chain F: 47% 47%





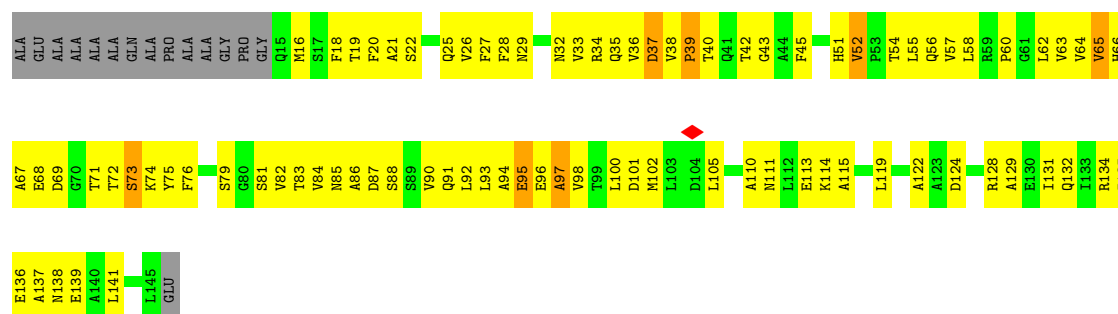
• Molecule 3: ATP SYNTHASE SUBUNIT GAMMA, MITOCHONDRIAL

Chain G: 45% 48%



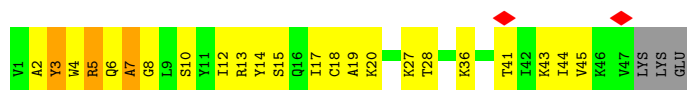
• Molecule 4: ATP SYNTHASE SUBUNIT DELTA, MITOCHONDRIAL

Chain H: 31% 54% 5% 10%

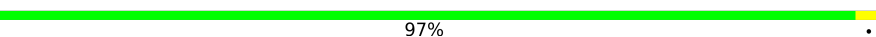


• Molecule 5: ATP SYNTHASE SUBUNIT EPSILON, MITOCHONDRIAL

Chain I: 48% 40% 6% 6%

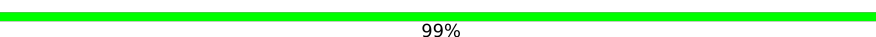


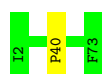
- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain J:  97%



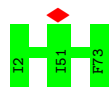
- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain K:  99%

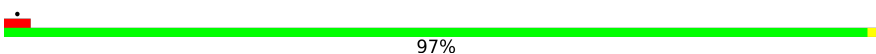


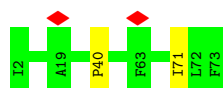
- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain L:  100%



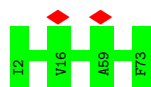
- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain M:  97%



- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain N:  100%

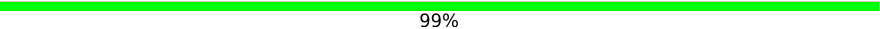


- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain O:  99%

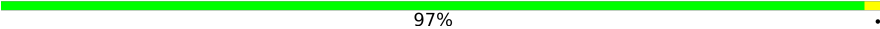


- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain P:  99%



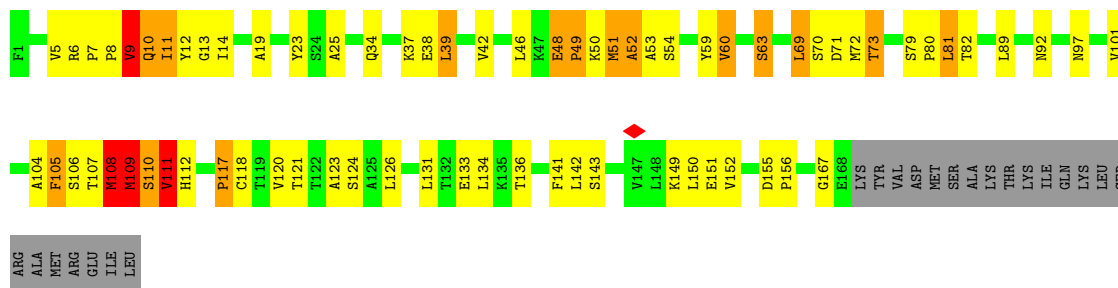
- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain Q:  97%



- Molecule 7: ATP SYNTHASE SUBUNIT O, MITOCHONDRIAL

Chain S:  51% 28% 8% 12%



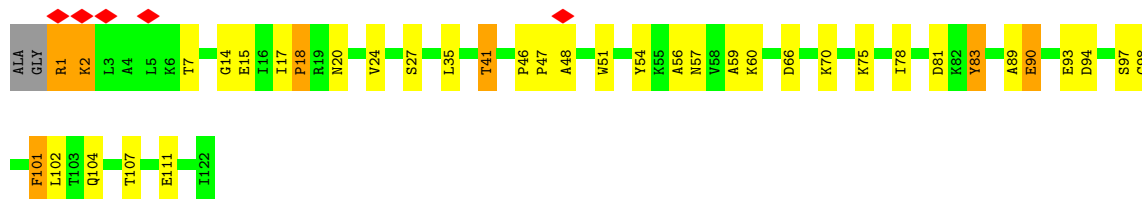
- Molecule 8: ATP SYNTHASE F(0) COMPLEX SUBUNIT B1, MITOCHONDRIAL

Chain T:  84% 11% 5%



- Molecule 9: ATP SYNTHASE SUBUNIT D, MITOCHONDRIAL

Chain U:  68% 25% 6%

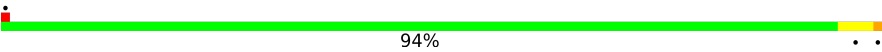


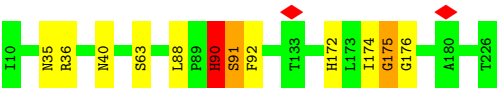
- Molecule 10: ATP SYNTHASE-COUPPLING FACTOR 6, MITOCHONDRIAL

Chain V:  52% 29% 5% 13%



● Molecule 11: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

Chain W:  94%



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	22935	Depositor
Resolution determination method	Not provided	
CTF correction method	EACH PARTICLE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60.3	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	4100	Depositor
Magnification	30487	Depositor
Image detector	GATAN K2 (4k x 4k)	Depositor
Maximum map value	0.411	Depositor
Minimum map value	-0.087	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.022	Depositor
Recommended contour level	0.13	Depositor
Map size ($\text{\AA}$)	419.84, 419.84, 419.84	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.64, 1.64, 1.64	Depositor

5 Model quality

5.1 Standard geometry

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	3.19	248/2034 (12.2%)	2.58	167/2541 (6.6%)
1	B	3.21	250/1916 (13.0%)	2.60	146/2392 (6.1%)
1	C	3.06	206/1946 (10.6%)	2.62	151/2431 (6.2%)
2	D	3.07	192/1866 (10.3%)	2.58	141/2331 (6.0%)
2	E	3.11	205/1862 (11.0%)	2.67	160/2326 (6.9%)
2	F	3.09	211/1862 (11.3%)	2.61	159/2326 (6.8%)
3	G	2.98	98/1050 (9.3%)	2.66	82/1308 (6.3%)
4	H	3.45	79/522 (15.1%)	2.99	65/651 (10.0%)
5	I	3.05	18/186 (9.7%)	2.38	11/231 (4.8%)
6	J	0.51	0/287	1.01	0/357
6	K	0.50	0/287	0.99	0/357
6	L	0.51	0/287	0.98	0/357
6	M	0.49	0/287	1.04	0/357
6	N	0.50	0/287	0.99	0/357
6	O	0.50	0/287	1.02	0/357
6	P	0.49	0/287	1.00	0/357
6	Q	0.50	0/287	0.98	0/357
7	S	1.76	11/668 (1.6%)	3.07	57/834 (6.8%)
8	T	1.55	9/696 (1.3%)	2.10	16/867 (1.8%)
9	U	1.34	1/484 (0.2%)	2.27	26/604 (4.3%)
10	V	1.33	2/264 (0.8%)	2.38	15/329 (4.6%)
11	W	0.77	2/868 (0.2%)	1.53	6/1082 (0.6%)
All	All	2.70	1532/18520 (8.3%)	2.43	1202/23109 (5.2%)

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	4
1	B	0	3
1	C	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	D	0	1
2	E	0	5
2	F	0	4
3	G	0	5
4	H	0	2
7	S	0	38
8	T	0	16
9	U	0	30
10	V	0	16
11	W	0	5
All	All	0	132

All (1532) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	T	93	ASP	N-CA	15.87	1.65	1.46
7	S	6	ARG	CA-C	14.47	1.70	1.52
1	C	500	ILE	CA-C	-13.13	1.36	1.52
2	D	153	GLY	CA-C	-12.57	1.43	1.52
5	I	44	ILE	CA-C	-11.72	1.42	1.53
7	S	6	ARG	C-N	11.64	1.47	1.33
2	E	12	ARG	CA-C	-11.04	1.38	1.52
2	D	429	GLY	CA-C	-11.01	1.40	1.52
2	E	51	GLN	CA-C	-10.88	1.39	1.52
1	A	257	PHE	CA-C	-10.83	1.38	1.52
3	G	174	GLU	CA-C	-10.82	1.40	1.52
2	F	25	PHE	CA-C	-10.65	1.39	1.52
1	A	97	VAL	CA-C	-10.64	1.41	1.52
1	A	500	ILE	CA-C	-10.55	1.40	1.52
2	E	74	LYS	CA-C	-10.47	1.40	1.52
1	A	501	VAL	CA-C	-10.47	1.40	1.52
2	F	11	GLY	CA-C	-10.33	1.43	1.52
1	A	46	ASN	CA-C	-10.32	1.43	1.52
7	S	48	GLU	C-N	10.14	1.45	1.34
2	E	60	THR	CA-C	-10.00	1.40	1.52
2	F	12	ARG	CA-C	-10.00	1.40	1.52
2	E	23	VAL	CA-C	-9.92	1.40	1.52
2	F	94	ILE	CA-C	-9.91	1.40	1.52
1	C	263	HIS	CA-C	-9.89	1.41	1.52
4	H	28	PHE	CA-C	-9.89	1.40	1.52
1	C	301	LEU	CA-C	-9.85	1.39	1.52
2	D	74	LYS	CA-C	-9.84	1.40	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	337	TYR	CA-C	-9.83	1.40	1.52
2	E	58	VAL	CA-C	-9.79	1.40	1.52
1	A	260	ASN	CA-C	-9.78	1.41	1.53
1	A	87	ILE	CA-C	-9.71	1.41	1.52
1	A	361	ILE	CA-C	-9.69	1.43	1.53
2	F	51	GLN	CA-C	-9.65	1.41	1.52
4	H	19	THR	CA-C	-9.57	1.41	1.52
2	D	12	ARG	CA-C	-9.52	1.40	1.52
1	A	70	ASN	CA-C	-9.48	1.41	1.52
1	A	299	PHE	CA-C	-9.33	1.40	1.52
2	E	21	VAL	CA-C	-9.24	1.41	1.52
2	E	57	THR	CA-C	-9.18	1.41	1.52
1	C	171	ARG	CA-C	-9.12	1.40	1.52
1	B	201	CYS	CA-C	-9.07	1.41	1.52
2	E	274	ARG	CA-C	-9.07	1.41	1.52
1	C	70	ASN	CA-C	-9.05	1.41	1.52
2	E	58	VAL	N-CA	-9.04	1.35	1.46
3	G	11	LYS	CA-C	-9.02	1.41	1.52
2	F	95	MET	CA-C	-9.02	1.41	1.52
2	F	198	HIS	CA-C	-9.01	1.40	1.52
2	F	74	LYS	CA-C	-8.99	1.41	1.52
4	H	84	VAL	CA-C	-8.99	1.41	1.52
1	B	200	TYR	CA-C	-8.97	1.41	1.52
2	D	84	ILE	CA-C	-8.95	1.43	1.52
1	C	41	VAL	CA-C	-8.95	1.41	1.52
1	A	127	ARG	CA-C	-8.93	1.41	1.52
1	B	97	VAL	CA-C	-8.93	1.43	1.52
1	A	498	LYS	CA-C	-8.92	1.41	1.52
1	B	324	LEU	CA-C	-8.90	1.43	1.52
2	F	244	ARG	CA-C	-8.88	1.41	1.52
2	F	162	LYS	CA-C	-8.86	1.41	1.52
2	D	333	THR	CA-C	-8.86	1.42	1.52
1	B	263	HIS	CA-C	-8.85	1.42	1.52
2	F	253	LEU	CA-C	-8.85	1.42	1.52
2	F	305	THR	CA-C	-8.85	1.42	1.52
7	S	71	ASP	N-CA	8.85	1.57	1.46
2	E	41	ARG	CA-C	-8.85	1.42	1.52
4	H	128	ARG	CA-C	-8.82	1.41	1.52
4	H	29	ASN	CA-C	-8.80	1.43	1.53
7	S	6	ARG	N-CA	8.77	1.56	1.46
1	C	62	MET	CA-C	-8.76	1.41	1.52
1	A	505	LEU	CA-C	-8.71	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	40	ARG	CA-C	-8.69	1.42	1.52
2	D	377	ILE	CA-C	-8.68	1.41	1.52
4	H	94	ALA	CA-C	-8.68	1.42	1.52
2	F	312	VAL	N-CA	-8.68	1.39	1.46
5	I	13	ARG	CA-C	-8.66	1.42	1.52
2	D	334	VAL	CA-C	-8.65	1.41	1.52
1	C	213	VAL	N-CA	-8.63	1.36	1.46
1	C	197	LYS	CA-C	-8.63	1.44	1.52
1	B	62	MET	CA-C	-8.60	1.41	1.52
1	B	175	LYS	CA-C	-8.60	1.41	1.52
1	B	202	ILE	CA-C	-8.60	1.41	1.52
4	H	56	GLN	CA-C	-8.60	1.42	1.52
1	C	266	ILE	CA-C	-8.57	1.42	1.52
2	F	312	VAL	CA-C	-8.56	1.46	1.53
2	F	57	THR	CA-C	-8.55	1.42	1.52
2	F	254	PHE	CA-C	-8.54	1.42	1.52
2	D	400	ASP	N-CA	-8.54	1.36	1.46
1	B	286	ARG	CA-C	-8.47	1.42	1.53
2	E	376	LYS	CA-C	-8.47	1.42	1.52
1	A	175	LYS	CA-C	-8.47	1.42	1.52
1	B	172	GLN	CA-C	-8.43	1.42	1.53
2	F	331	ALA	N-CA	-8.40	1.36	1.46
1	B	26	GLU	CA-C	-8.39	1.43	1.52
4	H	75	TYR	CA-C	-8.38	1.42	1.52
1	C	279	ARG	CA-C	-8.38	1.42	1.52
1	A	70	ASN	N-CA	-8.35	1.36	1.46
2	F	274	ARG	CA-C	-8.33	1.41	1.53
1	B	323	ALA	CA-C	-8.30	1.42	1.52
2	D	57	THR	CA-C	-8.28	1.42	1.52
2	F	421	ALA	CA-C	-8.27	1.44	1.53
1	A	65	ASN	CA-C	-8.27	1.42	1.52
1	A	279	ARG	CA-C	-8.27	1.42	1.52
1	B	73	VAL	CA-C	-8.25	1.41	1.52
2	D	59	ARG	CA-C	-8.24	1.42	1.52
4	H	20	PHE	N-CA	-8.24	1.36	1.46
1	B	217	VAL	CA-C	-8.23	1.42	1.52
1	C	493	SER	CA-C	-8.23	1.42	1.52
1	C	214	ALA	CA-C	-8.23	1.42	1.52
8	T	94	VAL	N-CA	-8.22	1.36	1.46
2	D	290	GLY	CA-C	-8.22	1.43	1.52
1	C	302	HIS	CA-C	-8.21	1.41	1.52
2	D	369	ASP	CA-C	-8.21	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	162	LYS	CA-C	-8.20	1.42	1.52
4	H	85	ASN	CA-C	-8.19	1.42	1.52
1	B	341	ASN	CA-C	-8.16	1.42	1.52
3	G	33	ARG	CA-C	-8.16	1.42	1.52
1	A	301	LEU	CA-C	-8.16	1.42	1.52
1	C	501	VAL	CA-C	-8.15	1.42	1.52
1	C	203	TYR	N-CA	-8.14	1.36	1.46
1	B	203	TYR	CA-C	-8.13	1.43	1.52
2	E	11	GLY	CA-C	-8.13	1.45	1.52
2	F	21	VAL	CA-C	-8.13	1.42	1.52
4	H	66	HIS	CA-C	-8.12	1.41	1.52
1	C	215	GLN	N-CA	-8.10	1.36	1.46
1	B	266	ILE	CA-C	-8.10	1.43	1.52
1	B	378	ALA	CA-C	-8.10	1.44	1.52
5	I	10	SER	CA-C	-8.09	1.42	1.53
1	C	497	LEU	CA-C	-8.09	1.42	1.52
2	F	436	GLU	CA-C	-8.07	1.41	1.52
1	C	202	ILE	CA-C	-8.07	1.42	1.52
1	C	262	LYS	CA-C	-8.07	1.42	1.52
2	D	113	PHE	CA-C	-8.06	1.43	1.52
1	A	8	VAL	CA-C	-8.06	1.43	1.52
1	C	170	ASP	CA-C	-8.04	1.42	1.52
4	H	74	LYS	CA-C	-8.04	1.43	1.52
1	C	337	TYR	CA-C	-8.04	1.43	1.52
5	I	43	LYS	CA-C	-8.04	1.43	1.52
1	A	278	TYR	CA-C	-8.04	1.42	1.52
1	A	277	ALA	CA-C	-8.02	1.42	1.52
3	G	36	ARG	CA-C	-8.00	1.43	1.52
2	E	24	GLN	CA-C	-8.00	1.43	1.52
1	A	41	VAL	CA-C	-7.98	1.42	1.52
1	A	201	CYS	CA-C	-7.98	1.42	1.52
2	E	252	LEU	CA-C	-7.98	1.43	1.52
2	F	23	VAL	CA-C	-7.97	1.43	1.52
2	D	51	GLN	CA-C	-7.97	1.43	1.52
2	D	200	MET	CA-C	-7.97	1.42	1.52
2	E	244	ARG	CA-C	-7.95	1.43	1.52
4	H	65	VAL	CA-C	-7.95	1.42	1.52
1	A	275	ALA	CA-C	-7.95	1.42	1.52
1	A	323	ALA	CA-C	-7.93	1.43	1.52
1	B	258	ARG	CA-C	-7.93	1.42	1.52
1	A	208	GLN	CA-C	-7.92	1.43	1.53
1	C	212	THR	CA-C	-7.92	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	92	LEU	CA-C	-7.91	1.43	1.52
2	E	206	ILE	CA-C	-7.91	1.43	1.52
2	E	25	PHE	CA-C	-7.90	1.43	1.52
1	C	496	LYS	CA-C	-7.90	1.42	1.52
1	C	283	LEU	CA-C	-7.88	1.42	1.52
2	D	305	THR	CA-C	-7.88	1.43	1.52
2	E	308	GLN	CA-C	-7.85	1.43	1.52
2	F	95	MET	N-CA	-7.85	1.36	1.45
1	C	499	GLU	N-CA	-7.85	1.36	1.46
2	D	60	THR	CA-C	-7.84	1.42	1.52
1	B	30	ARG	CA-C	-7.84	1.43	1.52
1	A	302	HIS	CA-C	-7.83	1.42	1.52
4	H	62	LEU	CA-C	-7.82	1.43	1.52
1	C	210	ARG	CA-C	-7.82	1.42	1.52
2	D	375	GLN	CA-C	-7.81	1.42	1.52
2	F	140	VAL	CA-C	-7.80	1.43	1.52
1	A	220	LEU	CA-C	-7.80	1.42	1.52
2	E	48	GLU	CA-C	-7.80	1.43	1.52
3	G	234	ASN	CA-C	-7.79	1.43	1.52
1	C	476	HIS	CA-C	-7.78	1.40	1.52
2	E	365	SER	CA-C	-7.77	1.42	1.52
1	B	356	LEU	CA-C	-7.76	1.43	1.52
1	B	473	ILE	CA-C	-7.76	1.43	1.52
2	D	23	VAL	CA-C	-7.75	1.43	1.52
1	B	215	GLN	CA-C	-7.75	1.42	1.52
2	D	246	GLN	CA-C	-7.75	1.42	1.52
2	D	410	ILE	CA-C	-7.75	1.43	1.52
3	G	248	LEU	CA-C	-7.75	1.46	1.52
1	C	480	LEU	CA-C	-7.74	1.42	1.52
2	D	83	ARG	CA-C	-7.74	1.43	1.52
2	E	20	VAL	CA-C	-7.74	1.42	1.52
2	E	22	ASP	CA-C	-7.74	1.43	1.52
1	C	35	GLY	CA-C	-7.73	1.41	1.51
1	B	502	THR	CA-C	-7.73	1.42	1.52
1	A	33	SER	CA-C	-7.72	1.43	1.52
2	E	409	LYS	CA-C	-7.72	1.42	1.52
2	D	11	GLY	CA-C	-7.71	1.45	1.52
1	C	55	PHE	CA-C	-7.68	1.42	1.52
1	A	312	MET	CA-C	-7.68	1.43	1.52
2	E	332	THR	CA-C	-7.68	1.43	1.52
3	G	172	LYS	N-CA	-7.66	1.37	1.46
2	F	459	MET	CA-C	-7.64	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	159	ILE	CA-C	-7.64	1.46	1.52
3	G	219	GLU	CA-C	-7.63	1.43	1.52
1	B	421	GLY	CA-C	-7.63	1.43	1.52
1	A	263	HIS	CA-C	-7.63	1.43	1.52
4	H	19	THR	N-CA	-7.63	1.37	1.46
1	A	381	ARG	CA-C	-7.62	1.42	1.52
1	C	299	PHE	CA-C	-7.62	1.43	1.52
1	C	40	ARG	CA-C	-7.62	1.43	1.52
1	A	26	GLU	CA-C	-7.61	1.42	1.52
1	B	501	VAL	CA-C	-7.61	1.43	1.52
1	B	153	VAL	CA-C	-7.59	1.43	1.52
2	F	376	LYS	N-CA	-7.59	1.37	1.46
3	G	31	TYR	N-CA	-7.58	1.37	1.46
1	A	219	ARG	CA-C	-7.58	1.43	1.52
4	H	18	PHE	CA-C	-7.58	1.43	1.52
2	E	245	ASP	CA-C	-7.57	1.43	1.52
1	C	108	VAL	CA-C	-7.55	1.43	1.52
2	E	207	ASN	N-CA	-7.55	1.36	1.46
5	I	19	ALA	CA-C	-7.54	1.43	1.52
1	B	349	GLN	CA-C	-7.54	1.43	1.52
4	H	38	VAL	N-CA	-7.54	1.39	1.46
4	H	111	ASN	CA-C	-7.52	1.43	1.52
1	A	282	SER	CA-C	-7.51	1.43	1.52
2	D	376	LYS	N-CA	-7.51	1.37	1.46
2	E	385	GLN	CA-C	-7.50	1.42	1.52
1	A	324	LEU	CA-C	-7.49	1.45	1.52
2	F	202	GLU	CA-C	-7.49	1.43	1.52
1	B	259	ASP	CA-C	-7.49	1.42	1.52
1	C	208	GLN	CA-C	-7.49	1.43	1.52
2	D	22	ASP	CA-C	-7.48	1.43	1.52
1	A	176	THR	N-CA	-7.48	1.37	1.46
2	D	21	VAL	CA-C	-7.47	1.43	1.52
2	E	17	ILE	CA-C	-7.47	1.43	1.52
1	A	468	PHE	CA-C	-7.46	1.43	1.52
2	E	45	LEU	CA-C	-7.46	1.43	1.53
3	G	30	LYS	CA-C	-7.45	1.43	1.52
1	B	320	SER	CA-C	-7.45	1.43	1.52
2	D	38	VAL	CA-C	-7.44	1.44	1.52
1	B	324	LEU	N-CA	-7.43	1.38	1.46
1	B	203	TYR	N-CA	-7.43	1.37	1.46
1	C	203	TYR	CA-C	-7.43	1.43	1.52
1	B	40	ARG	CA-C	-7.42	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	67	GLU	C-N	-7.42	1.25	1.34
1	B	127	ARG	CA-C	-7.42	1.43	1.52
1	B	299	PHE	CA-C	-7.41	1.43	1.52
1	A	392	LEU	N-CA	-7.41	1.37	1.46
2	E	197	TYR	CA-C	-7.41	1.43	1.52
1	B	88	VAL	CA-C	-7.40	1.43	1.52
2	E	325	THR	CA-C	-7.40	1.43	1.52
1	C	175	LYS	CA-C	-7.39	1.43	1.52
4	H	138	ASN	CA-C	-7.38	1.43	1.52
2	D	438	ILE	CA-C	-7.37	1.43	1.52
3	G	255	GLN	CA-C	-7.36	1.43	1.52
1	B	294	TYR	CA-C	-7.36	1.43	1.53
2	E	196	LEU	CA-C	-7.35	1.43	1.52
3	G	163	ASN	CA-C	-7.34	1.43	1.52
2	E	199	GLU	CA-C	-7.34	1.42	1.52
1	A	75	VAL	CA-C	-7.33	1.43	1.52
2	E	13	ILE	CA-C	-7.33	1.44	1.52
3	G	257	VAL	CA-C	-7.33	1.43	1.52
1	B	278	TYR	CA-C	-7.32	1.43	1.52
1	C	152	ALA	CA-C	-7.32	1.42	1.52
1	B	301	LEU	CA-C	-7.30	1.43	1.52
4	H	20	PHE	CA-C	-7.30	1.44	1.52
1	B	39	ALA	CA-C	-7.30	1.43	1.52
1	C	176	THR	N-CA	-7.30	1.37	1.46
2	F	375	GLN	CA-C	-7.30	1.43	1.52
5	I	15	SER	CA-C	-7.28	1.43	1.52
1	A	492	GLU	CA-C	-7.28	1.43	1.52
1	B	87	ILE	CA-C	-7.27	1.44	1.52
1	A	153	VAL	CA-C	-7.27	1.44	1.52
2	F	182	VAL	CA-C	-7.27	1.43	1.52
3	G	171	TYR	N-CA	-7.27	1.36	1.45
3	G	252	ARG	CA-C	-7.27	1.43	1.52
3	G	256	ALA	CA-C	-7.26	1.43	1.52
2	D	45	LEU	CA-C	-7.26	1.43	1.53
2	E	378	LEU	CA-C	-7.26	1.43	1.52
1	B	89	LYS	CA-C	-7.26	1.43	1.52
1	A	38	ILE	CA-C	-7.25	1.43	1.52
2	E	406	ARG	CA-C	-7.25	1.43	1.52
4	H	139	GLU	CA-C	-7.25	1.43	1.52
1	B	219	ARG	CA-C	-7.24	1.43	1.52
1	A	202	ILE	CA-C	-7.23	1.43	1.52
2	F	41	ARG	CA-C	-7.23	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	47	LEU	CA-C	-7.22	1.44	1.52
1	A	460	LYS	CA-C	-7.22	1.42	1.52
1	B	41	VAL	CA-C	-7.21	1.43	1.52
1	C	126	ARG	CA-C	-7.21	1.43	1.52
2	E	246	GLN	CA-C	-7.20	1.43	1.52
1	B	27	GLU	CA-C	-7.20	1.44	1.52
1	B	33	SER	CA-C	-7.20	1.43	1.52
2	D	114	ALA	CA-C	-7.20	1.43	1.52
2	E	59	ARG	CA-C	-7.20	1.43	1.52
1	B	167	ILE	CA-C	-7.20	1.43	1.52
3	G	213	ILE	CA-C	-7.20	1.43	1.52
2	E	255	ILE	CA-C	-7.19	1.43	1.52
3	G	42	ARG	CA-C	-7.19	1.44	1.52
1	B	279	ARG	CA-C	-7.18	1.43	1.52
2	F	366	GLU	CA-C	-7.18	1.43	1.52
4	H	91	GLN	CA-C	-7.18	1.44	1.52
3	G	104	LYS	CA-C	-7.17	1.43	1.52
1	C	395	ALA	CA-C	-7.15	1.43	1.52
1	A	86	ASP	CA-C	-7.15	1.43	1.52
4	H	115	ALA	CA-C	-7.15	1.43	1.52
1	A	278	TYR	N-CA	-7.15	1.37	1.46
1	C	151	LYS	CA-C	-7.14	1.43	1.52
2	E	345	TYR	N-CA	-7.14	1.39	1.46
1	A	187	LYS	CA-C	-7.14	1.43	1.52
1	B	194	ASP	CA-C	-7.13	1.44	1.52
1	C	276	VAL	CA-C	-7.13	1.44	1.52
2	E	368	TYR	N-CA	-7.13	1.37	1.46
1	B	475	GLN	CA-C	-7.12	1.43	1.52
1	A	333	ASP	CA-C	-7.12	1.43	1.52
2	E	382	LYS	CA-C	-7.11	1.43	1.52
2	E	399	GLU	CA-C	-7.11	1.43	1.52
2	F	93	ARG	CA-C	-7.11	1.44	1.52
3	G	112	ILE	CA-C	-7.11	1.44	1.52
1	C	503	ASN	CA-C	-7.10	1.43	1.52
2	D	336	SER	CA-C	-7.10	1.44	1.52
7	S	5	VAL	CA-C	7.10	1.61	1.52
1	C	121	ILE	CA-C	-7.10	1.43	1.52
1	B	257	PHE	CA-C	-7.09	1.43	1.52
1	C	153	VAL	CA-C	-7.09	1.44	1.52
1	A	499	GLU	N-CA	-7.09	1.37	1.46
1	C	350	ILE	CA-C	-7.08	1.45	1.52
1	A	504	PHE	CA-C	-7.08	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	267	ILE	N-CA	-7.08	1.37	1.46
2	E	12	ARG	N-CA	-7.07	1.37	1.46
1	B	499	GLU	CA-C	-7.07	1.43	1.52
1	A	280	GLN	CA-C	-7.07	1.43	1.52
1	C	258	ARG	CA-C	-7.06	1.43	1.52
1	C	494	ASP	CA-C	-7.05	1.43	1.52
2	D	231	ARG	CA-C	-7.05	1.43	1.52
1	B	420	ARG	CA-C	-7.05	1.43	1.52
1	B	464	PHE	CA-C	-7.05	1.43	1.52
1	C	42	HIS	N-CA	-7.05	1.36	1.46
2	D	201	ILE	N-CA	-7.04	1.38	1.46
1	B	462	THR	CA-C	-7.04	1.43	1.52
4	H	131	ILE	CA-C	-7.03	1.43	1.52
2	F	377	ILE	CA-C	-7.03	1.43	1.52
2	E	35	ALA	CA-C	-7.03	1.43	1.52
2	E	384	LEU	CA-C	-7.03	1.43	1.52
2	E	140	VAL	CA-C	-7.02	1.44	1.52
2	F	255	ILE	CA-C	-7.02	1.44	1.52
1	C	260	ASN	CA-C	-7.02	1.44	1.53
1	A	62	MET	CA-C	-7.00	1.44	1.52
1	A	499	GLU	CA-C	-7.00	1.43	1.52
2	F	306	SER	CA-C	-6.99	1.44	1.52
1	B	312	MET	CA-C	-6.99	1.43	1.53
4	H	55	LEU	CA-C	-6.98	1.44	1.52
3	G	251	ASN	CA-C	-6.98	1.43	1.52
1	C	139	ARG	CA-C	-6.97	1.43	1.53
2	D	54	GLY	N-CA	-6.97	1.39	1.45
1	B	31	VAL	CA-C	-6.97	1.45	1.53
2	E	217	LEU	CA-C	-6.97	1.44	1.52
7	S	108	MET	C-O	-6.97	1.15	1.24
1	A	473	ILE	CA-C	-6.97	1.44	1.52
3	G	208	SER	CA-C	-6.97	1.43	1.52
2	D	13	ILE	CA-C	-6.97	1.45	1.52
2	F	194	ASN	CA-C	-6.96	1.44	1.52
1	B	395	ALA	CA-C	-6.96	1.44	1.52
1	C	349	GLN	CA-C	-6.96	1.44	1.52
2	D	80	ALA	CA-C	-6.94	1.44	1.52
1	B	333	ASP	CA-C	-6.93	1.44	1.53
2	F	60	THR	CA-C	-6.93	1.43	1.52
2	D	312	VAL	CA-C	-6.93	1.45	1.52
2	E	333	THR	CA-C	-6.93	1.44	1.52
4	H	97	ALA	CA-C	-6.93	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	24	GLN	N-CA	-6.92	1.37	1.46
4	H	93	LEU	CA-C	-6.92	1.44	1.53
3	G	223	SER	CA-C	-6.92	1.43	1.52
4	H	25	GLN	CA-C	-6.92	1.44	1.52
1	B	176	THR	N-CA	-6.92	1.38	1.46
2	F	293	GLN	CA-C	-6.92	1.43	1.52
3	G	204	TYR	CA-C	-6.92	1.43	1.52
2	D	173	VAL	CA-C	-6.92	1.44	1.52
2	D	383	SER	CA-C	-6.91	1.43	1.52
1	A	493	SER	CA-C	-6.91	1.43	1.52
1	A	217	VAL	CA-C	-6.90	1.44	1.52
3	G	170	SER	CA-C	-6.90	1.43	1.52
2	E	262	THR	CA-C	-6.89	1.44	1.52
4	H	71	THR	CA-C	-6.89	1.44	1.52
2	E	231	ARG	CA-C	-6.88	1.43	1.52
2	D	144	ALA	N-CA	-6.88	1.39	1.46
2	E	61	ILE	N-CA	-6.88	1.38	1.46
2	F	112	GLN	CA-C	-6.88	1.44	1.52
2	E	162	LYS	CA-C	-6.88	1.44	1.52
2	D	244	ARG	CA-C	-6.87	1.44	1.52
1	A	367	VAL	CA-C	-6.87	1.44	1.52
2	F	263	GLN	N-CA	-6.87	1.38	1.46
2	E	52	HIS	CA-C	-6.87	1.44	1.52
2	E	336	SER	CA-C	-6.86	1.44	1.52
2	D	429	GLY	N-CA	-6.85	1.38	1.44
2	D	139	VAL	N-CA	-6.85	1.38	1.46
1	A	69	ASP	CA-C	-6.84	1.44	1.52
1	C	89	LYS	CA-C	-6.84	1.44	1.52
1	A	420	ARG	CA-C	-6.83	1.43	1.52
2	D	254	PHE	CA-C	-6.83	1.44	1.52
4	H	83	THR	CA-C	-6.83	1.44	1.52
1	B	173	THR	CA-C	-6.82	1.45	1.53
2	F	192	GLU	CA-C	-6.82	1.43	1.52
2	D	353	SER	CA-C	-6.82	1.45	1.52
1	C	245	LEU	CA-C	-6.81	1.44	1.52
1	A	216	LEU	CA-C	-6.81	1.44	1.52
2	D	75	VAL	CA-C	-6.81	1.44	1.52
2	E	122	GLU	CA-C	-6.80	1.44	1.53
1	A	218	LYS	N-CA	-6.80	1.38	1.46
2	D	17	ILE	CA-C	-6.80	1.44	1.52
1	C	30	ARG	CA-C	-6.80	1.44	1.52
1	C	356	LEU	CA-C	-6.80	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	59	ARG	CA-C	-6.80	1.44	1.52
2	F	200	MET	CA-C	-6.79	1.43	1.52
1	B	394	LEU	CA-C	-6.79	1.43	1.52
1	C	498	LYS	CA-C	-6.79	1.43	1.52
1	A	276	VAL	CA-C	-6.79	1.44	1.52
2	E	83	ARG	CA-C	-6.79	1.44	1.52
1	A	393	GLU	CA-C	-6.79	1.43	1.52
2	F	193	GLY	CA-C	-6.78	1.43	1.51
2	F	58	VAL	N-CA	-6.77	1.38	1.46
2	F	171	ASN	N-CA	-6.77	1.38	1.46
1	C	468	PHE	CA-C	-6.77	1.44	1.52
2	F	189	ARG	CA-C	-6.77	1.44	1.52
1	C	464	PHE	CA-C	-6.77	1.43	1.52
3	G	254	ARG	N-CA	-6.77	1.38	1.46
1	C	200	TYR	CA-C	-6.77	1.44	1.52
1	C	504	PHE	N-CA	-6.76	1.38	1.46
2	D	24	GLN	N-CA	-6.76	1.38	1.46
3	G	261	GLU	CA-C	-6.76	1.44	1.53
1	C	34	ILE	CA-C	-6.76	1.44	1.52
2	F	169	LEU	CA-C	-6.76	1.44	1.52
4	H	73	SER	CA-C	-6.76	1.44	1.52
4	H	96	GLU	CA-C	-6.76	1.44	1.52
5	I	3	TYR	N-CA	-6.76	1.37	1.46
4	H	141	LEU	CA-C	-6.76	1.43	1.52
1	A	88	VAL	N-CA	-6.75	1.38	1.46
2	E	165	LEU	CA-C	-6.75	1.44	1.52
1	B	399	GLU	CA-C	-6.75	1.43	1.52
3	G	113	ARG	N-CA	-6.75	1.36	1.46
1	B	392	LEU	N-CA	-6.74	1.38	1.46
2	D	95	MET	CA-C	-6.74	1.44	1.52
2	F	80	ALA	CA-C	-6.74	1.44	1.52
2	D	355	SER	N-CA	-6.74	1.38	1.46
1	A	390	MET	CA-C	-6.73	1.44	1.52
2	D	41	ARG	CA-C	-6.73	1.44	1.52
1	A	203	TYR	CA-C	-6.73	1.44	1.52
5	I	20	LYS	CA-C	-6.73	1.44	1.52
3	G	225	GLN	CA-C	-6.72	1.43	1.52
2	E	71	ARG	CA-C	-6.72	1.43	1.52
1	C	323	ALA	CA-C	-6.71	1.44	1.52
3	G	252	ARG	N-CA	-6.70	1.38	1.46
1	A	71	VAL	N-CA	-6.70	1.37	1.46
2	F	196	LEU	N-CA	-6.70	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	201	ILE	CA-C	-6.70	1.45	1.52
3	G	167	SER	CA-C	-6.69	1.44	1.52
2	F	245	ASP	CA-C	-6.69	1.44	1.52
1	C	217	VAL	CA-C	-6.68	1.44	1.52
2	F	407	ALA	CA-C	-6.68	1.44	1.52
2	E	200	MET	CA-C	-6.68	1.44	1.52
1	A	43	GLY	CA-C	-6.68	1.42	1.51
1	B	302	HIS	CA-C	-6.68	1.43	1.52
2	D	188	GLU	CA-C	-6.68	1.44	1.52
2	D	277	SER	CA-C	-6.68	1.43	1.52
2	D	54	GLY	CA-C	-6.67	1.45	1.52
2	E	183	PHE	CA-C	-6.67	1.44	1.52
2	F	210	ASP	N-CA	-6.67	1.38	1.46
2	F	114	ALA	CA-C	-6.67	1.44	1.52
1	C	314	ASP	CA-C	-6.67	1.43	1.52
2	D	306	SER	CA-C	-6.67	1.44	1.52
4	H	37	ASP	CA-C	-6.67	1.44	1.52
2	E	387	ILE	CA-C	-6.66	1.44	1.52
2	F	289	MET	CA-C	-6.66	1.44	1.52
1	B	38	ILE	CA-C	-6.65	1.44	1.52
2	D	311	TYR	CA-C	-6.65	1.44	1.52
2	D	406	ARG	CA-C	-6.65	1.44	1.52
1	B	59	LEU	CA-C	-6.65	1.44	1.52
2	E	349	ASP	CA-C	-6.65	1.44	1.52
1	A	243	GLN	CA-C	-6.64	1.44	1.52
1	A	203	TYR	N-CA	-6.64	1.38	1.46
1	B	497	LEU	CA-C	-6.64	1.44	1.52
1	C	220	LEU	CA-C	-6.64	1.44	1.52
1	A	338	ILE	CA-C	-6.64	1.46	1.52
1	B	277	ALA	CA-C	-6.64	1.44	1.52
1	C	93	ALA	CA-C	-6.64	1.44	1.52
2	D	381	TYR	CA-C	-6.63	1.44	1.52
1	C	493	SER	N-CA	-6.63	1.38	1.46
1	B	382	ALA	CA-C	-6.63	1.44	1.52
2	F	195	ASP	CA-C	-6.63	1.44	1.52
3	G	194	ASP	CA-C	-6.62	1.44	1.52
1	C	265	LEU	CA-C	-6.62	1.44	1.52
1	A	346	THR	CA-C	-6.62	1.44	1.52
1	B	268	TYR	CA-C	-6.61	1.44	1.52
2	D	24	GLN	CA-C	-6.61	1.44	1.52
1	B	128	ARG	CA-C	-6.61	1.44	1.52
1	A	340	THR	CA-C	-6.61	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	218	LYS	N-CA	-6.61	1.38	1.46
2	D	167	MET	CA-C	-6.61	1.44	1.52
1	C	280	GLN	CA-C	-6.61	1.44	1.52
1	B	367	VAL	CA-C	-6.60	1.44	1.52
2	F	197	TYR	CA-C	-6.59	1.44	1.52
2	F	329	LEU	CA-C	-6.59	1.44	1.52
1	B	369	LEU	CA-C	-6.59	1.43	1.52
2	E	198	HIS	CA-C	-6.59	1.43	1.52
1	C	54	GLU	CA-C	-6.58	1.44	1.52
2	F	16	VAL	CA-C	-6.58	1.44	1.52
3	G	15	ASN	CA-C	-6.58	1.44	1.52
2	D	259	PHE	CA-C	-6.58	1.44	1.52
2	D	206	ILE	N-CA	-6.58	1.38	1.46
2	D	378	LEU	CA-C	-6.57	1.44	1.52
1	C	60	LYS	CA-C	-6.57	1.44	1.52
2	D	367	HIS	N-CA	-6.57	1.38	1.46
2	E	416	GLN	CA-C	-6.57	1.46	1.53
1	A	189	PHE	CA-C	-6.57	1.43	1.52
2	D	465	GLU	CA-C	-6.56	1.43	1.52
1	A	128	ARG	CA-C	-6.56	1.44	1.52
1	B	476	HIS	CA-C	-6.56	1.43	1.52
1	C	320	SER	CA-C	-6.55	1.44	1.52
2	F	80	ALA	N-CA	-6.55	1.40	1.46
2	F	429	GLY	CA-C	-6.55	1.43	1.52
2	D	312	VAL	N-CA	-6.54	1.38	1.46
1	A	39	ALA	N-CA	-6.54	1.38	1.46
2	E	38	VAL	CA-C	-6.54	1.45	1.52
2	E	153	GLY	CA-C	-6.54	1.47	1.52
2	F	282	GLN	CA-C	-6.54	1.46	1.52
3	G	171	TYR	CA-C	-6.53	1.44	1.52
1	A	406	PHE	N-CA	-6.52	1.38	1.46
4	H	93	LEU	N-CA	-6.52	1.38	1.46
1	A	245	LEU	CA-C	-6.51	1.44	1.52
1	C	27	GLU	CA-C	-6.51	1.46	1.53
2	D	427	HIS	CA-C	-6.51	1.44	1.52
1	C	319	GLY	CA-C	-6.51	1.42	1.52
2	F	439	LYS	N-CA	-6.51	1.38	1.46
2	F	355	SER	CA-C	-6.51	1.44	1.52
3	G	212	ILE	CA-C	-6.50	1.44	1.52
2	D	25	PHE	CA-C	-6.50	1.45	1.52
2	F	404	VAL	CA-C	-6.50	1.44	1.52
2	D	109	LYS	CA-C	-6.49	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	465	GLU	CA-C	-6.49	1.44	1.52
4	H	16	MET	CA-C	-6.49	1.44	1.52
2	E	436	GLU	CA-C	-6.49	1.44	1.52
2	F	35	ALA	CA-C	-6.49	1.44	1.52
1	B	463	LYS	CA-C	-6.48	1.44	1.52
1	C	172	GLN	CA-C	-6.48	1.44	1.52
1	A	16	ILE	CA-C	-6.48	1.45	1.52
2	F	58	VAL	CA-C	-6.48	1.45	1.52
1	C	140	ILE	N-CA	-6.48	1.39	1.46
2	F	271	LEU	CA-C	-6.48	1.45	1.53
2	E	377	ILE	CA-C	-6.48	1.44	1.52
1	A	216	LEU	N-CA	-6.47	1.38	1.46
3	G	59	THR	C-N	-6.47	1.27	1.33
1	C	73	VAL	CA-C	-6.47	1.44	1.52
2	D	321	ALA	N-CA	-6.47	1.41	1.46
2	F	449	TYR	CA-C	-6.47	1.45	1.52
1	C	267	ILE	CA-C	-6.47	1.44	1.52
1	B	337	TYR	CA-C	-6.47	1.44	1.52
1	C	469	LEU	N-CA	-6.47	1.38	1.46
2	F	376	LYS	CA-C	-6.46	1.44	1.52
1	A	400	VAL	N-CA	-6.46	1.38	1.46
4	H	35	GLN	CA-C	-6.46	1.44	1.52
2	F	253	LEU	N-CA	-6.46	1.38	1.46
2	D	95	MET	N-CA	-6.46	1.37	1.45
2	E	253	LEU	CA-C	-6.45	1.45	1.52
2	F	61	ILE	CA-C	-6.45	1.44	1.52
2	D	39	GLN	CA-C	-6.45	1.45	1.52
2	F	24	GLN	CA-C	-6.45	1.44	1.52
2	E	218	VAL	CA-C	-6.45	1.44	1.52
2	F	113	PHE	CA-C	-6.44	1.45	1.52
4	H	72	THR	CA-C	-6.44	1.44	1.52
2	D	197	TYR	CA-C	-6.44	1.44	1.52
1	B	40	ARG	N-CA	-6.43	1.38	1.46
3	G	21	LYS	N-CA	-6.43	1.38	1.46
3	G	105	ILE	N-CA	-6.43	1.38	1.46
1	B	287	ARG	CA-C	-6.42	1.45	1.52
2	D	164	VAL	CA-C	-6.42	1.44	1.52
2	F	254	PHE	N-CA	-6.42	1.38	1.46
4	H	135	ILE	CA-C	-6.42	1.45	1.52
1	A	389	THR	CA-C	-6.42	1.44	1.52
2	D	274	ARG	CA-C	-6.42	1.44	1.52
2	D	94	ILE	CA-C	-6.41	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	367	VAL	CA-C	-6.41	1.45	1.52
1	B	350	ILE	CA-C	-6.41	1.45	1.52
1	A	399	GLU	CA-C	-6.40	1.44	1.52
1	B	326	VAL	N-CA	-6.40	1.39	1.46
3	G	172	LYS	CA-C	-6.40	1.45	1.52
1	B	469	LEU	CA-C	-6.40	1.44	1.52
1	A	34	ILE	N-CA	-6.39	1.38	1.46
1	A	131	LEU	CA-C	-6.39	1.45	1.52
1	B	429	LYS	CA-C	-6.39	1.44	1.52
4	H	75	TYR	N-CA	-6.39	1.38	1.46
1	B	244	TYR	N-CA	-6.38	1.38	1.46
1	C	479	LEU	CA-C	-6.38	1.44	1.52
1	A	142	VAL	CA-C	-6.37	1.47	1.52
1	A	356	LEU	CA-C	-6.37	1.44	1.52
1	A	464	PHE	CA-C	-6.37	1.44	1.52
2	F	308	GLN	CA-C	-6.36	1.45	1.52
8	T	93	ASP	CA-C	-6.36	1.44	1.52
2	E	428	LEU	CA-C	-6.35	1.44	1.52
1	A	416	GLN	CA-C	-6.35	1.44	1.52
1	A	336	ALA	CA-C	-6.35	1.44	1.52
1	C	398	ARG	CA-C	-6.35	1.44	1.52
8	T	159	GLU	N-CA	-6.35	1.37	1.45
1	C	180	ILE	CA-C	-6.34	1.45	1.52
1	A	187	LYS	N-CA	-6.34	1.38	1.46
2	D	368	TYR	CA-C	-6.34	1.44	1.52
2	F	270	ALA	CA-C	-6.34	1.44	1.52
1	A	248	TYR	CA-C	-6.34	1.44	1.52
1	C	302	HIS	N-CA	-6.34	1.38	1.46
2	D	363	VAL	CA-C	-6.33	1.44	1.52
2	F	331	ALA	CA-C	-6.33	1.44	1.52
1	B	465	GLU	N-CA	-6.33	1.38	1.46
1	B	342	VAL	N-CA	-6.33	1.39	1.46
2	E	254	PHE	CA-C	-6.33	1.45	1.52
1	B	168	ILE	CA-C	-6.33	1.44	1.52
3	G	110	ASP	N-CA	-6.33	1.38	1.46
1	C	481	GLY	CA-C	-6.32	1.44	1.51
3	G	175	GLU	CA-C	-6.32	1.45	1.52
2	F	139	VAL	N-CA	-6.32	1.39	1.46
1	B	76	PHE	CA-C	-6.32	1.46	1.53
2	E	131	GLU	CA-C	-6.32	1.44	1.52
2	D	47	LEU	CA-C	-6.32	1.45	1.52
2	E	321	ALA	CA-C	-6.31	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	108	VAL	CA-C	-6.31	1.45	1.52
1	A	362	ARG	N-CA	-6.31	1.40	1.46
2	D	308	GLN	CA-C	-6.30	1.45	1.52
1	B	151	LYS	CA-C	-6.30	1.44	1.52
2	E	48	GLU	N-CA	-6.29	1.38	1.46
1	B	505	LEU	CA-C	-6.29	1.44	1.52
2	E	13	ILE	N-CA	-6.29	1.39	1.46
3	G	33	ARG	N-CA	-6.29	1.38	1.46
2	D	299	THR	CA-C	-6.28	1.44	1.53
2	D	418	PHE	CA-C	-6.28	1.45	1.52
2	F	52	HIS	CA-C	-6.28	1.44	1.52
1	B	216	LEU	CA-C	-6.28	1.45	1.52
2	D	84	ILE	N-CA	-6.28	1.41	1.46
2	E	405	SER	CA-C	-6.28	1.44	1.52
2	E	457	PHE	CA-C	-6.28	1.44	1.52
1	C	173	THR	N-CA	-6.27	1.36	1.45
1	B	212	THR	CA-C	-6.27	1.45	1.52
2	E	22	ASP	N-CA	-6.27	1.38	1.46
2	F	391	LEU	CA-C	-6.27	1.44	1.52
2	D	75	VAL	N-CA	-6.27	1.38	1.46
2	E	377	ILE	N-CA	-6.27	1.39	1.46
1	C	33	SER	CA-C	-6.27	1.44	1.52
3	G	249	THR	CA-C	-6.26	1.44	1.52
4	H	57	VAL	CA-C	-6.26	1.44	1.52
2	D	125	GLU	CA-C	-6.26	1.44	1.52
2	E	266	SER	CA-C	-6.26	1.44	1.52
1	A	382	ALA	CA-C	-6.25	1.44	1.52
1	C	369	LEU	N-CA	-6.25	1.39	1.46
2	F	246	GLN	CA-C	-6.25	1.44	1.52
2	E	284	THR	N-CA	-6.25	1.38	1.46
2	E	234	LEU	CA-C	-6.25	1.44	1.52
1	A	319	GLY	CA-C	-6.25	1.43	1.51
2	E	59	ARG	N-CA	-6.24	1.38	1.46
3	G	20	THR	CA-C	-6.24	1.44	1.52
2	F	428	LEU	CA-C	-6.24	1.44	1.52
1	B	166	LEU	CA-C	-6.24	1.45	1.52
1	B	183	ILE	CA-C	-6.24	1.45	1.52
1	B	187	LYS	CA-C	-6.24	1.45	1.52
1	A	61	GLY	CA-C	-6.24	1.44	1.51
1	B	463	LYS	N-CA	-6.23	1.38	1.46
1	C	31	VAL	CA-C	-6.23	1.46	1.52
2	D	58	VAL	CA-C	-6.23	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	63	VAL	CA-C	-6.23	1.45	1.52
8	T	91	LEU	N-CA	-6.23	1.38	1.46
1	B	276	VAL	CA-C	-6.23	1.45	1.52
1	C	312	MET	CA-C	-6.23	1.44	1.52
1	C	55	PHE	N-CA	-6.22	1.38	1.45
4	H	136	GLU	CA-C	-6.22	1.44	1.52
1	B	34	ILE	CA-C	-6.22	1.44	1.52
2	D	430	LYS	CA-C	-6.21	1.45	1.52
2	E	271	LEU	CA-C	-6.21	1.44	1.52
3	G	25	MET	CA-C	-6.21	1.44	1.52
1	A	104	LEU	CA-C	-6.21	1.45	1.52
1	A	156	LEU	CA-C	-6.21	1.44	1.52
1	C	38	ILE	CA-C	-6.21	1.44	1.52
4	H	27	PHE	CA-C	-6.21	1.45	1.52
3	G	253	THR	CA-C	-6.21	1.44	1.52
3	G	217	LEU	CA-C	-6.20	1.45	1.52
1	B	498	LYS	CA-C	-6.20	1.44	1.52
4	H	98	VAL	N-CA	-6.20	1.39	1.46
1	B	161	ARG	CA-C	-6.20	1.45	1.53
1	C	466	ASN	CA-C	-6.20	1.44	1.52
2	F	206	ILE	CA-C	-6.20	1.46	1.52
2	F	467	VAL	CA-C	-6.20	1.45	1.52
2	E	284	THR	CA-C	-6.20	1.43	1.52
2	F	17	ILE	CA-C	-6.20	1.44	1.52
1	B	267	ILE	CA-C	-6.19	1.44	1.52
4	H	57	VAL	N-CA	-6.19	1.38	1.46
1	C	369	LEU	CA-C	-6.18	1.45	1.53
1	B	448	GLY	CA-C	-6.18	1.45	1.52
1	A	503	ASN	CA-C	-6.18	1.44	1.52
1	C	248	TYR	CA-C	-6.18	1.44	1.52
3	G	122	ASP	CA-C	-6.18	1.45	1.52
1	A	89	LYS	CA-C	-6.18	1.45	1.52
2	E	95	MET	CA-C	-6.18	1.45	1.52
2	D	196	LEU	CA-C	-6.18	1.44	1.52
5	I	3	TYR	CA-C	-6.18	1.44	1.52
1	B	202	ILE	N-CA	-6.17	1.38	1.46
2	E	39	GLN	CA-C	-6.17	1.44	1.52
2	E	333	THR	N-CA	-6.17	1.38	1.46
1	A	494	ASP	CA-C	-6.17	1.45	1.52
2	D	365	SER	CA-C	-6.17	1.44	1.52
2	F	218	VAL	CA-C	-6.17	1.45	1.52
2	E	75	VAL	N-CA	-6.17	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	427	HIS	CA-C	-6.17	1.44	1.52
4	H	51	HIS	CA-C	-6.16	1.45	1.52
2	E	183	PHE	N-CA	-6.16	1.38	1.46
2	E	307	VAL	CA-C	-6.16	1.44	1.52
2	D	464	GLU	CA-C	-6.16	1.44	1.52
5	I	4	TRP	CA-C	-6.15	1.45	1.52
2	D	337	ARG	CA-C	-6.15	1.44	1.52
3	G	175	GLU	N-CA	-6.14	1.38	1.45
4	H	92	LEU	N-CA	-6.14	1.38	1.46
2	F	449	TYR	N-CA	-6.14	1.38	1.46
1	A	496	LYS	CA-C	-6.14	1.44	1.52
2	E	94	ILE	CA-C	-6.14	1.44	1.52
2	F	299	THR	CA-C	-6.14	1.44	1.53
1	A	501	VAL	N-CA	-6.13	1.39	1.46
1	C	268	TYR	CA-C	-6.13	1.45	1.52
2	D	329	LEU	CA-C	-6.13	1.44	1.53
3	G	155	PHE	CA-C	-6.13	1.44	1.52
1	B	319	GLY	CA-C	-6.13	1.43	1.51
1	C	123	SER	CA-C	-6.13	1.45	1.53
2	D	20	VAL	CA-C	-6.13	1.44	1.52
1	B	186	GLN	CA-C	-6.13	1.44	1.52
1	A	475	GLN	CA-C	-6.12	1.45	1.52
1	C	341	ASN	CA-C	-6.12	1.45	1.52
2	E	259	PHE	N-CA	-6.12	1.39	1.46
1	C	172	GLN	N-CA	-6.12	1.38	1.46
1	B	196	LYS	N-CA	-6.12	1.38	1.46
2	D	13	ILE	N-CA	-6.12	1.39	1.46
2	F	48	GLU	CA-C	-6.12	1.45	1.52
3	G	29	ALA	CA-C	-6.11	1.45	1.52
2	E	366	GLU	CA-C	-6.11	1.45	1.52
2	D	141	ASP	CA-C	-6.11	1.44	1.52
1	A	66	LEU	CA-C	-6.11	1.45	1.53
2	F	378	LEU	CA-C	-6.10	1.45	1.52
2	D	234	LEU	CA-C	-6.10	1.45	1.52
2	F	237	LEU	CA-C	-6.10	1.45	1.52
1	A	497	LEU	CA-C	-6.10	1.45	1.52
1	B	468	PHE	CA-C	-6.10	1.44	1.52
1	C	362	ARG	N-CA	-6.10	1.40	1.46
11	W	90	HIS	N-CA	-6.10	1.38	1.46
1	A	218	LYS	CA-C	-6.09	1.44	1.52
2	F	419	GLN	CA-C	-6.09	1.45	1.52
2	D	361	ASN	CA-C	-6.08	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	461	ILE	CA-C	-6.08	1.45	1.52
1	C	39	ALA	CA-C	-6.08	1.45	1.52
4	H	129	ALA	CA-C	-6.08	1.44	1.52
1	B	150	ILE	CA-C	-6.08	1.45	1.52
2	F	170	ILE	CA-C	-6.07	1.45	1.52
2	E	304	ILE	CA-C	-6.07	1.44	1.52
1	A	466	ASN	CA-C	-6.07	1.45	1.52
1	B	264	ALA	CA-C	-6.07	1.45	1.52
2	D	224	GLU	CA-C	-6.07	1.44	1.52
2	D	169	LEU	CA-C	-6.07	1.45	1.52
1	B	167	ILE	N-CA	-6.06	1.38	1.46
1	A	24	ASP	CA-C	-6.06	1.45	1.52
1	C	300	TYR	N-CA	-6.06	1.38	1.46
4	H	141	LEU	N-CA	-6.06	1.38	1.46
1	C	142	VAL	CA-C	-6.05	1.45	1.52
1	C	155	SER	CA-C	-6.05	1.45	1.53
1	A	484	ARG	CA-C	-6.05	1.45	1.52
2	D	432	VAL	N-CA	-6.05	1.40	1.46
1	B	496	LYS	CA-C	-6.05	1.45	1.52
2	D	216	ALA	CA-C	-6.05	1.45	1.52
2	D	58	VAL	N-CA	-6.04	1.39	1.46
2	F	333	THR	CA-C	-6.04	1.45	1.52
1	A	183	ILE	CA-C	-6.04	1.45	1.52
1	A	463	LYS	CA-C	-6.04	1.45	1.52
2	D	416	GLN	CA-C	-6.04	1.47	1.52
2	D	199	GLU	N-CA	-6.03	1.39	1.46
2	E	16	VAL	CA-C	-6.03	1.44	1.52
2	E	369	ASP	CA-C	-6.03	1.45	1.52
1	B	430	GLN	N-CA	-6.03	1.38	1.46
3	G	6	ILE	N-CA	-6.03	1.39	1.46
1	B	393	GLU	CA-C	-6.03	1.44	1.52
2	F	262	THR	CA-C	-6.03	1.45	1.52
1	A	263	HIS	N-CA	-6.03	1.39	1.46
1	A	451	GLY	CA-C	-6.03	1.43	1.51
1	B	229	THR	CA-C	-6.02	1.45	1.52
1	B	370	SER	CA-C	-6.02	1.44	1.52
2	E	172	ASN	CA-C	-6.02	1.45	1.52
2	E	113	PHE	CA-C	-6.02	1.45	1.52
2	E	449	TYR	CA-C	-6.02	1.44	1.52
1	A	39	ALA	CA-C	-6.01	1.45	1.52
1	B	88	VAL	N-CA	-6.01	1.39	1.46
1	B	156	LEU	CA-C	-6.01	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	G	220	SER	N-CA	-6.01	1.39	1.46
1	B	303	SER	CA-C	-6.01	1.45	1.52
1	C	263	HIS	N-CA	-6.00	1.39	1.46
2	D	154	LEU	CA-C	-6.00	1.45	1.53
2	F	380	ASP	CA-C	-6.00	1.45	1.52
1	C	153	VAL	N-CA	-6.00	1.39	1.46
1	A	341	ASN	CA-C	-6.00	1.45	1.52
1	A	194	ASP	CA-C	-6.00	1.45	1.52
1	A	465	GLU	CA-C	-6.00	1.45	1.52
1	B	213	VAL	N-CA	-6.00	1.39	1.46
2	E	197	TYR	N-CA	-5.99	1.39	1.46
2	D	61	ILE	CA-C	-5.99	1.45	1.52
2	F	243	PHE	CA-C	-5.99	1.44	1.52
1	A	322	THR	CA-C	-5.99	1.45	1.52
1	A	51	GLU	CA-C	-5.99	1.45	1.52
1	A	53	VAL	CA-C	-5.99	1.45	1.52
1	C	367	VAL	N-CA	-5.99	1.39	1.46
1	C	67	GLU	CA-C	-5.98	1.44	1.52
1	B	278	TYR	N-CA	-5.98	1.39	1.46
2	E	292	MET	N-CA	-5.98	1.38	1.46
2	F	201	ILE	CA-C	-5.98	1.45	1.52
1	A	87	ILE	N-CA	-5.98	1.39	1.46
2	F	12	ARG	N-CA	-5.98	1.38	1.46
2	F	57	THR	N-CA	-5.98	1.38	1.46
1	A	136	ILE	CA-C	-5.97	1.45	1.52
1	A	267	ILE	CA-C	-5.97	1.44	1.52
3	G	214	TYR	N-CA	-5.97	1.39	1.46
2	F	198	HIS	N-CA	-5.97	1.38	1.46
1	A	155	SER	CA-C	-5.97	1.45	1.53
3	G	218	LYS	CA-C	-5.97	1.44	1.52
2	E	43	THR	CA-C	-5.97	1.45	1.52
2	F	250	ASP	CA-C	-5.96	1.45	1.52
1	C	213	VAL	CA-C	-5.96	1.45	1.52
2	E	373	GLY	CA-C	-5.96	1.45	1.52
1	C	257	PHE	CA-C	-5.96	1.45	1.52
1	B	488	LYS	CA-C	-5.96	1.44	1.52
9	U	47	PRO	N-CA	-5.96	1.39	1.47
2	E	169	LEU	CA-C	-5.95	1.45	1.52
1	A	300	TYR	N-CA	-5.95	1.39	1.46
2	D	262	THR	CA-C	-5.95	1.45	1.52
3	G	218	LYS	N-CA	-5.95	1.38	1.46
2	D	382	LYS	N-CA	-5.95	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	378	LEU	N-CA	-5.95	1.39	1.46
1	C	88	VAL	N-CA	-5.95	1.39	1.46
1	C	259	ASP	CA-C	-5.94	1.44	1.52
1	C	501	VAL	N-CA	-5.94	1.39	1.46
2	D	21	VAL	N-CA	-5.94	1.39	1.46
1	B	265	LEU	CA-C	-5.94	1.45	1.52
1	C	346	THR	CA-C	-5.94	1.45	1.53
1	A	477	GLN	N-CA	-5.94	1.38	1.46
1	B	124	LYS	CA-C	-5.93	1.45	1.52
1	C	494	ASP	N-CA	-5.93	1.39	1.46
1	C	150	ILE	CA-C	-5.93	1.44	1.52
1	C	469	LEU	CA-C	-5.93	1.45	1.52
1	B	35	GLY	CA-C	-5.92	1.43	1.51
2	F	259	PHE	CA-C	-5.92	1.45	1.52
2	F	287	THR	CA-C	-5.92	1.45	1.52
1	C	267	ILE	N-CA	-5.91	1.38	1.46
1	A	173	THR	CA-C	-5.91	1.45	1.53
2	E	182	VAL	CA-C	-5.91	1.45	1.52
2	F	355	SER	N-CA	-5.91	1.38	1.46
2	D	354	THR	CA-C	-5.91	1.45	1.52
2	F	252	LEU	CA-C	-5.91	1.45	1.52
4	H	36	VAL	CA-C	-5.91	1.45	1.52
1	A	421	GLY	CA-C	-5.90	1.45	1.52
8	T	92	PHE	CA-C	5.90	1.60	1.52
2	E	166	ILE	CA-C	-5.90	1.45	1.52
2	D	140	VAL	CA-C	-5.88	1.46	1.52
2	F	75	VAL	CA-C	-5.88	1.45	1.52
1	A	406	PHE	CA-C	-5.88	1.45	1.52
2	E	27	GLU	CA-C	-5.88	1.45	1.52
5	I	14	TYR	CA-C	-5.88	1.45	1.52
2	E	201	ILE	N-CA	-5.88	1.39	1.46
2	E	326	PHE	CA-C	-5.88	1.45	1.52
1	B	39	ALA	N-CA	-5.88	1.39	1.46
4	H	83	THR	N-CA	-5.87	1.39	1.46
2	D	198	HIS	CA-C	-5.87	1.44	1.52
3	G	232	MET	CA-C	-5.87	1.44	1.52
1	A	60	LYS	CA-C	-5.87	1.45	1.52
1	A	126	ARG	CA-C	-5.87	1.45	1.52
1	A	448	GLY	CA-C	-5.87	1.43	1.51
2	E	270	ALA	CA-C	-5.87	1.45	1.52
2	D	215	VAL	CA-C	-5.86	1.45	1.52
1	A	258	ARG	CA-C	-5.86	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	370	VAL	CA-C	-5.86	1.45	1.52
1	A	139	ARG	CA-C	-5.85	1.45	1.52
3	G	243	ILE	CA-C	-5.85	1.45	1.52
2	D	163	THR	N-CA	-5.85	1.39	1.46
2	E	186	VAL	CA-C	-5.85	1.45	1.52
7	S	109	MET	N-CA	5.85	1.53	1.46
2	E	75	VAL	CA-C	-5.84	1.45	1.52
3	G	238	ASN	CA-C	-5.84	1.45	1.52
3	G	244	ASP	CA-C	-5.84	1.44	1.52
4	H	45	PHE	CA-C	-5.84	1.45	1.52
5	I	12	ILE	N-CA	-5.84	1.40	1.46
1	B	221	THR	CA-C	-5.84	1.45	1.52
1	B	326	VAL	CA-C	-5.84	1.45	1.52
2	F	39	GLN	CA-C	-5.84	1.45	1.52
2	D	339	ILE	CA-C	-5.84	1.45	1.52
2	D	373	GLY	CA-C	-5.83	1.45	1.52
2	F	242	TYR	N-CA	-5.83	1.39	1.46
1	B	421	GLY	N-CA	-5.83	1.38	1.45
2	D	366	GLU	CA-C	-5.83	1.45	1.52
2	E	194	ASN	CA-C	-5.83	1.45	1.52
2	E	166	ILE	N-CA	-5.83	1.40	1.46
1	C	108	VAL	N-CA	-5.83	1.39	1.46
1	C	390	MET	CA-C	-5.83	1.45	1.52
1	B	34	ILE	N-CA	-5.82	1.39	1.46
1	B	215	GLN	N-CA	-5.82	1.39	1.46
1	C	496	LYS	N-CA	-5.82	1.39	1.46
2	E	46	VAL	CA-C	-5.82	1.45	1.52
2	F	33	LEU	CA-C	-5.82	1.45	1.52
3	G	212	ILE	N-CA	-5.82	1.39	1.46
2	D	341	GLU	CA-C	-5.82	1.44	1.52
2	D	303	SER	CA-C	-5.81	1.45	1.52
2	E	415	SER	CA-C	-5.81	1.45	1.52
1	A	80	LYS	CA-C	-5.81	1.45	1.52
1	B	139	ARG	N-CA	-5.81	1.39	1.45
1	C	201	CYS	CA-C	-5.81	1.45	1.52
2	E	10	THR	CA-C	-5.81	1.45	1.52
2	E	21	VAL	N-CA	-5.81	1.39	1.46
1	A	485	THR	N-CA	-5.81	1.39	1.46
2	E	459	MET	CA-C	-5.81	1.45	1.52
2	F	200	MET	N-CA	-5.80	1.39	1.46
2	E	46	VAL	N-CA	-5.80	1.39	1.46
2	E	263	GLN	N-CA	-5.80	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	212	THR	CA-C	-5.79	1.45	1.52
1	B	168	ILE	N-CA	-5.79	1.39	1.46
2	F	165	LEU	CA-C	-5.79	1.45	1.52
2	E	80	ALA	CA-C	-5.79	1.45	1.52
2	D	49	VAL	CA-C	-5.79	1.46	1.52
2	D	367	HIS	CA-C	-5.79	1.45	1.52
1	A	29	GLY	N-CA	-5.78	1.39	1.45
1	A	266	ILE	CA-C	-5.78	1.45	1.52
2	E	331	ALA	N-CA	-5.78	1.38	1.46
1	A	42	HIS	CA-C	-5.77	1.45	1.52
2	D	48	GLU	CA-C	-5.77	1.45	1.52
2	D	337	ARG	N-CA	-5.77	1.39	1.46
2	E	112	GLN	CA-C	-5.77	1.45	1.52
1	B	208	GLN	CA-C	-5.76	1.45	1.52
3	G	16	ILE	CA-C	-5.76	1.45	1.52
1	B	63	SER	CA-C	-5.76	1.45	1.52
2	E	324	THR	CA-C	-5.76	1.45	1.52
1	A	457	GLU	CA-C	-5.76	1.45	1.52
3	G	233	ASP	CA-C	-5.75	1.45	1.52
2	F	298	THR	CA-C	-5.75	1.45	1.52
1	A	199	LEU	CA-C	-5.75	1.45	1.52
1	C	381	ARG	N-CA	-5.75	1.39	1.46
1	B	280	GLN	CA-C	-5.74	1.45	1.52
3	G	263	ILE	CA-C	-5.74	1.45	1.52
1	A	324	LEU	N-CA	-5.74	1.39	1.46
2	D	378	LEU	N-CA	-5.74	1.39	1.46
5	I	6	GLN	CA-C	-5.74	1.44	1.52
1	B	321	LEU	N-CA	-5.73	1.39	1.46
1	A	166	LEU	CA-C	-5.73	1.45	1.52
1	B	419	SER	CA-C	-5.73	1.45	1.52
2	D	292	MET	CA-C	-5.73	1.45	1.53
2	E	141	ASP	CA-C	-5.73	1.45	1.52
2	F	334	VAL	CA-C	-5.73	1.45	1.52
1	A	171	ARG	CA-C	-5.73	1.45	1.52
2	D	16	VAL	CA-C	-5.73	1.45	1.52
1	B	474	SER	N-CA	-5.72	1.39	1.46
1	C	336	ALA	CA-C	-5.72	1.45	1.52
3	G	254	ARG	CA-C	-5.72	1.45	1.52
2	D	362	ILE	CA-C	-5.72	1.46	1.52
1	C	229	THR	CA-C	-5.72	1.45	1.52
2	E	413	PHE	N-CA	-5.72	1.39	1.46
1	B	327	ILE	CA-C	-5.72	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	126	ARG	CA-C	-5.72	1.45	1.52
2	F	74	LYS	N-CA	-5.71	1.38	1.46
1	C	100	GLY	CA-C	-5.71	1.46	1.52
2	F	369	ASP	CA-C	-5.71	1.45	1.52
3	G	109	GLY	CA-C	-5.71	1.43	1.51
1	C	46	ASN	CA-C	-5.71	1.45	1.52
2	F	141	ASP	CA-C	-5.71	1.45	1.52
2	D	289	MET	N-CA	-5.70	1.39	1.46
2	F	307	VAL	CA-C	-5.70	1.45	1.52
2	E	439	LYS	N-CA	-5.70	1.39	1.46
1	C	153	VAL	C-O	-5.70	1.18	1.24
1	B	125	ALA	CA-C	-5.70	1.45	1.52
1	B	334	VAL	N-CA	-5.70	1.40	1.46
2	F	183	PHE	N-CA	-5.70	1.39	1.46
1	A	215	GLN	CA-C	-5.70	1.45	1.52
1	B	329	THR	CA-C	-5.70	1.45	1.53
2	D	411	GLN	CA-C	-5.70	1.45	1.52
2	F	231	ARG	CA-C	-5.70	1.45	1.52
7	S	167	GLY	C-N	-5.69	1.25	1.33
1	A	151	LYS	CA-C	-5.69	1.45	1.52
3	G	113	ARG	CA-C	-5.69	1.45	1.53
1	A	303	SER	CA-C	-5.69	1.45	1.52
2	D	165	LEU	CA-C	-5.69	1.45	1.52
2	F	404	VAL	N-CA	-5.69	1.39	1.46
4	H	139	GLU	N-CA	-5.69	1.39	1.46
1	C	243	GLN	CA-C	-5.69	1.45	1.52
4	H	134	ARG	CA-C	-5.69	1.45	1.52
1	C	256	TYR	CA-C	-5.68	1.45	1.52
2	D	123	PHE	N-CA	-5.68	1.39	1.46
1	B	322	THR	CA-C	-5.68	1.45	1.52
1	B	476	HIS	N-CA	-5.68	1.40	1.46
1	B	157	VAL	CA-C	-5.68	1.47	1.52
2	F	410	ILE	CA-C	-5.68	1.45	1.52
1	B	418	LEU	CA-C	-5.68	1.45	1.52
1	C	96	ASP	CA-C	-5.68	1.45	1.52
1	B	371	VAL	N-CA	-5.67	1.39	1.46
1	C	330	GLN	CA-C	-5.67	1.45	1.52
2	E	379	GLN	CA-C	-5.67	1.45	1.52
1	B	383	MET	CA-C	-5.67	1.45	1.52
2	F	306	SER	N-CA	-5.67	1.39	1.46
3	G	115	ILE	CA-C	-5.67	1.45	1.52
1	C	275	ALA	CA-C	-5.67	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	329	LEU	CA-C	-5.67	1.45	1.52
2	E	128	VAL	CA-C	-5.67	1.45	1.52
1	A	291	ARG	CA-C	-5.66	1.45	1.52
1	A	422	VAL	CA-C	-5.66	1.45	1.52
2	E	423	VAL	N-CA	-5.66	1.39	1.46
1	A	28	THR	CA-C	-5.66	1.45	1.52
1	B	182	THR	CA-C	-5.66	1.45	1.52
1	B	500	ILE	CA-C	-5.66	1.46	1.52
2	F	303	SER	CA-C	-5.66	1.45	1.52
2	D	139	VAL	CA-C	-5.65	1.45	1.52
2	E	290	GLY	CA-C	-5.65	1.46	1.52
2	F	126	MET	CA-C	-5.65	1.45	1.52
3	G	5	ASP	CA-C	-5.65	1.45	1.52
1	C	144	GLU	CA-C	-5.64	1.46	1.53
1	C	320	SER	N-CA	-5.64	1.38	1.45
2	D	253	LEU	CA-C	-5.64	1.46	1.52
2	E	404	VAL	CA-C	-5.64	1.46	1.52
1	C	97	VAL	CA-C	-5.64	1.45	1.52
2	F	383	SER	CA-C	-5.64	1.45	1.52
2	F	259	PHE	N-CA	-5.64	1.39	1.46
3	G	58	LYS	CA-C	-5.64	1.45	1.53
2	E	307	VAL	N-CA	-5.63	1.38	1.46
1	B	113	ASN	CA-C	-5.63	1.45	1.52
1	C	495	ALA	CA-C	-5.63	1.45	1.52
2	E	427	HIS	CA-C	-5.63	1.45	1.53
2	E	80	ALA	N-CA	-5.63	1.40	1.46
1	A	9	SER	N-CA	-5.63	1.39	1.46
1	A	42	HIS	N-CA	-5.62	1.38	1.46
1	B	86	ASP	CA-C	-5.62	1.45	1.52
2	E	202	GLU	CA-C	-5.62	1.45	1.52
2	F	131	GLU	CA-C	-5.62	1.45	1.52
2	D	189	ARG	CA-C	-5.62	1.45	1.52
2	D	263	GLN	CA-C	-5.62	1.45	1.52
1	B	214	ALA	CA-C	-5.62	1.45	1.52
2	D	325	THR	CA-C	-5.62	1.45	1.52
1	A	182	THR	N-CA	-5.61	1.39	1.46
1	C	322	THR	CA-C	-5.61	1.45	1.52
3	G	209	LEU	CA-C	-5.61	1.45	1.52
1	B	342	VAL	CA-C	-5.61	1.45	1.52
1	B	378	ALA	N-CA	-5.61	1.41	1.46
2	E	312	VAL	CA-C	-5.61	1.47	1.52
1	C	370	SER	CA-C	-5.61	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	438	ILE	CA-C	-5.61	1.46	1.52
2	E	287	THR	CA-C	-5.61	1.45	1.52
1	B	300	TYR	N-CA	-5.61	1.39	1.46
2	F	166	ILE	CA-C	-5.61	1.45	1.52
4	H	81	SER	CA-C	-5.61	1.45	1.52
1	B	312	MET	N-CA	-5.60	1.38	1.45
1	B	362	ARG	CA-C	-5.60	1.46	1.52
2	D	165	LEU	N-CA	-5.60	1.39	1.46
1	A	394	LEU	CA-C	-5.60	1.45	1.52
7	S	7	PRO	N-CA	5.60	1.58	1.46
1	C	504	PHE	CA-C	-5.59	1.45	1.52
1	A	326	VAL	N-CA	-5.59	1.39	1.46
1	B	501	VAL	N-CA	-5.59	1.40	1.46
2	F	47	LEU	CA-C	-5.59	1.46	1.52
1	B	27	GLU	N-CA	-5.58	1.40	1.46
2	F	84	ILE	C-O	-5.58	1.20	1.24
1	A	281	MET	N-CA	-5.58	1.39	1.46
3	G	16	ILE	N-CA	-5.58	1.40	1.46
2	F	20	VAL	CA-C	-5.58	1.45	1.52
2	E	29	LEU	N-CA	-5.58	1.40	1.46
2	E	388	ILE	N-CA	-5.58	1.39	1.46
1	A	265	LEU	CA-C	-5.58	1.45	1.52
1	C	143	ARG	N-CA	-5.57	1.39	1.46
2	F	349	ASP	C-N	-5.57	1.28	1.34
1	A	74	VAL	CA-C	-5.57	1.46	1.52
1	A	41	VAL	N-CA	-5.57	1.39	1.46
3	G	237	LYS	CA-C	-5.57	1.45	1.52
2	E	322	PRO	CA-C	-5.57	1.43	1.52
3	G	69	ILE	CA-C	-5.57	1.46	1.52
1	A	59	LEU	CA-C	-5.57	1.45	1.52
2	D	137	ILE	CA-C	-5.57	1.45	1.52
2	D	370	VAL	CA-C	-5.57	1.45	1.52
1	C	480	LEU	N-CA	-5.56	1.39	1.46
1	A	306	LEU	CA-C	-5.56	1.45	1.52
2	D	161	GLY	N-CA	-5.56	1.37	1.45
2	D	443	GLN	CA-C	-5.56	1.45	1.52
2	F	27	GLU	N-CA	-5.56	1.39	1.46
4	H	95	GLU	N-CA	-5.56	1.39	1.46
2	D	206	ILE	CA-C	-5.56	1.45	1.52
3	G	199	ASP	CA-C	-5.56	1.45	1.52
1	C	167	ILE	CA-C	-5.56	1.45	1.52
1	B	396	GLN	CA-C	-5.56	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	321	LEU	N-CA	-5.55	1.39	1.46
1	B	430	GLN	CA-C	-5.55	1.45	1.52
2	D	61	ILE	N-CA	-5.55	1.39	1.46
1	B	126	ARG	N-CA	-5.55	1.38	1.45
3	G	12	SER	CA-C	-5.55	1.45	1.52
1	B	107	VAL	CA-C	-5.55	1.45	1.52
1	C	193	THR	CA-C	-5.54	1.45	1.52
1	A	264	ALA	CA-C	-5.54	1.45	1.52
1	C	338	ILE	CA-C	-5.54	1.47	1.52
2	F	439	LYS	CA-C	-5.54	1.45	1.52
2	E	309	ALA	CA-C	-5.54	1.45	1.52
1	A	104	LEU	N-CA	-5.53	1.39	1.46
2	D	259	PHE	N-CA	-5.53	1.39	1.46
2	F	213	SER	CA-C	-5.53	1.45	1.52
2	D	126	MET	CA-C	-5.53	1.45	1.52
1	A	387	ALA	CA-C	-5.53	1.45	1.52
1	A	412	ALA	CA-C	-5.53	1.45	1.52
2	F	138	LYS	CA-C	-5.53	1.45	1.52
1	B	26	GLU	N-CA	-5.53	1.40	1.46
2	F	15	ALA	CA-C	-5.53	1.45	1.52
2	F	403	THR	CA-C	-5.53	1.45	1.52
7	S	70	SER	C-N	5.53	1.41	1.33
1	A	167	ILE	CA-C	-5.53	1.45	1.52
1	A	172	GLN	CA-C	-5.52	1.45	1.52
2	E	31	PRO	CA-C	-5.52	1.46	1.52
2	D	355	SER	CA-C	-5.52	1.45	1.52
2	D	307	VAL	CA-C	-5.52	1.45	1.52
2	F	435	LYS	CA-C	-5.52	1.45	1.52
1	C	218	LYS	N-CA	-5.51	1.39	1.46
2	D	380	ASP	CA-C	-5.51	1.45	1.52
1	A	47	VAL	N-CA	-5.51	1.39	1.46
1	C	127	ARG	N-CA	-5.51	1.39	1.46
2	F	244	ARG	N-CA	-5.51	1.39	1.46
1	A	27	GLU	CA-C	-5.51	1.45	1.52
1	C	39	ALA	N-CA	-5.51	1.39	1.46
1	C	181	ASP	CA-C	-5.51	1.45	1.52
1	C	221	THR	CA-C	-5.51	1.45	1.52
1	C	490	SER	CA-C	-5.51	1.45	1.53
2	F	61	ILE	N-CA	-5.51	1.39	1.46
3	G	52	TYR	CA-C	-5.51	1.45	1.52
2	F	272	LEU	N-CA	-5.51	1.39	1.46
2	F	26	ASP	CA-C	-5.50	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	387	ILE	CA-C	-5.50	1.46	1.52
2	F	443	GLN	CA-C	-5.50	1.45	1.52
4	H	21	ALA	CA-C	-5.50	1.45	1.52
1	A	200	TYR	CA-C	-5.50	1.46	1.52
3	G	229	MET	CA-C	-5.50	1.45	1.52
3	G	245	LYS	CA-C	-5.50	1.46	1.52
1	A	339	PRO	N-CA	-5.49	1.40	1.47
1	B	224	ASP	CA-C	-5.49	1.45	1.52
2	E	177	HIS	CA-C	-5.49	1.45	1.52
1	A	279	ARG	N-CA	-5.49	1.39	1.46
1	A	361	ILE	N-CA	-5.49	1.39	1.46
1	A	195	GLU	CA-C	-5.49	1.45	1.52
1	B	220	LEU	CA-C	-5.49	1.45	1.52
1	B	395	ALA	N-CA	-5.49	1.39	1.46
2	F	339	ILE	CA-C	-5.49	1.45	1.52
4	H	84	VAL	N-CA	-5.49	1.38	1.46
2	D	152	ILE	CA-C	-5.48	1.46	1.52
1	B	193	THR	CA-C	-5.48	1.45	1.52
1	C	53	VAL	CA-C	-5.48	1.45	1.53
1	C	113	ASN	CA-C	-5.48	1.46	1.52
1	A	221	THR	CA-C	-5.47	1.45	1.52
2	F	194	ASN	N-CA	-5.47	1.39	1.46
2	F	443	GLN	N-CA	-5.47	1.39	1.46
5	I	18	CYS	CA-C	-5.47	1.45	1.52
1	A	268	TYR	CA-C	-5.47	1.46	1.52
2	D	402	LEU	CA-C	-5.47	1.45	1.52
1	A	416	GLN	N-CA	-5.47	1.39	1.46
1	B	495	ALA	CA-C	-5.47	1.45	1.52
2	F	125	GLU	CA-C	-5.46	1.45	1.52
2	F	226	PRO	CA-C	-5.46	1.44	1.52
1	B	422	VAL	CA-C	-5.46	1.45	1.52
3	G	166	ARG	CA-C	-5.46	1.45	1.52
2	D	34	ASN	CA-C	-5.45	1.45	1.52
1	C	509	GLU	CA-C	-5.45	1.45	1.52
2	D	160	VAL	CA-C	-5.45	1.46	1.52
1	B	258	ARG	N-CA	-5.45	1.39	1.46
1	B	337	TYR	N-CA	-5.45	1.40	1.46
2	F	152	ILE	N-CA	-5.45	1.39	1.46
8	T	105	VAL	CA-C	-5.45	1.46	1.52
2	F	24	GLN	N-CA	-5.44	1.39	1.46
1	A	389	THR	N-CA	-5.44	1.39	1.46
1	B	205	ALA	CA-C	-5.44	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	63	MET	CA-C	-5.44	1.45	1.52
2	F	27	GLU	CA-C	-5.44	1.46	1.53
2	E	383	SER	CA-C	-5.44	1.45	1.52
2	F	22	ASP	N-CA	-5.44	1.39	1.46
2	E	129	GLU	CA-C	-5.44	1.45	1.52
2	E	206	ILE	N-CA	-5.44	1.40	1.46
2	D	213	SER	CA-C	-5.43	1.45	1.52
1	A	337	TYR	N-CA	-5.43	1.40	1.46
10	V	70	GLU	C-N	-5.43	1.25	1.33
2	E	15	ALA	CA-C	-5.43	1.45	1.52
2	E	289	MET	CA-C	-5.43	1.45	1.52
2	E	334	VAL	N-CA	-5.43	1.39	1.46
1	B	260	ASN	N-CA	-5.43	1.39	1.46
1	A	99	VAL	N-CA	-5.42	1.40	1.46
2	F	69	LEU	CA-C	-5.42	1.46	1.53
1	A	426	GLU	CA-C	-5.42	1.45	1.52
1	B	500	ILE	N-CA	-5.42	1.40	1.46
1	C	155	SER	N-CA	-5.42	1.39	1.46
2	E	278	ALA	CA-C	-5.42	1.46	1.52
4	H	18	PHE	N-CA	-5.42	1.39	1.46
1	A	359	LYS	N-CA	-5.42	1.38	1.46
1	B	445	ILE	CA-C	-5.42	1.45	1.52
1	B	494	ASP	CA-C	-5.42	1.46	1.52
2	E	126	MET	CA-C	-5.41	1.45	1.52
2	F	292	MET	CA-C	-5.41	1.46	1.53
1	A	97	VAL	N-CA	-5.41	1.41	1.46
1	B	213	VAL	CA-C	-5.41	1.46	1.52
1	A	30	ARG	CA-C	-5.41	1.46	1.52
1	B	152	ALA	CA-C	-5.41	1.45	1.52
2	E	218	VAL	N-CA	-5.41	1.39	1.46
2	E	198	HIS	N-CA	-5.41	1.39	1.46
4	H	52	VAL	CA-C	-5.41	1.47	1.52
1	B	146	MET	CA-C	-5.40	1.46	1.52
1	B	165	GLU	CA-C	-5.40	1.46	1.52
4	H	67	ALA	CA-C	-5.40	1.45	1.52
1	A	446	TYR	CA-C	-5.40	1.45	1.52
3	G	110	ASP	CA-C	-5.40	1.45	1.52
1	B	298	VAL	N-CA	-5.40	1.39	1.46
1	C	273	LYS	CA-C	-5.40	1.45	1.52
8	T	121	ARG	N-CA	-5.40	1.39	1.46
2	E	410	ILE	N-CA	-5.39	1.40	1.46
2	F	73	GLN	CA-C	-5.39	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	263	GLN	CA-C	-5.39	1.46	1.52
2	F	408	ARG	N-CA	-5.39	1.39	1.46
1	B	106	ARG	CA-C	-5.38	1.46	1.52
3	G	164	ARG	CA-C	-5.38	1.46	1.52
4	H	40	THR	CA-C	-5.38	1.45	1.52
2	F	388	ILE	CA-C	-5.38	1.46	1.52
3	G	70	GLY	CA-C	-5.38	1.47	1.52
1	A	311	LYS	CA-C	-5.38	1.46	1.52
1	B	479	LEU	N-CA	-5.38	1.39	1.46
2	E	52	HIS	N-CA	-5.38	1.39	1.46
2	F	152	ILE	CA-C	-5.38	1.46	1.52
1	A	25	LEU	CA-C	-5.37	1.46	1.53
2	D	298	THR	CA-C	-5.37	1.46	1.52
1	C	394	LEU	CA-C	-5.37	1.45	1.52
2	E	171	ASN	N-CA	-5.37	1.40	1.46
1	C	211	SER	CA-C	-5.37	1.45	1.52
1	B	260	ASN	CA-C	-5.37	1.46	1.53
1	B	261	GLY	CA-C	-5.37	1.44	1.51
1	A	202	ILE	N-CA	-5.37	1.39	1.46
1	A	258	ARG	N-CA	-5.37	1.40	1.46
1	C	277	ALA	CA-C	-5.37	1.46	1.52
1	C	403	PHE	CA-C	-5.37	1.45	1.52
2	D	247	GLU	CA-C	-5.37	1.44	1.52
2	D	143	LEU	CA-C	-5.36	1.45	1.52
4	H	29	ASN	N-CA	-5.36	1.40	1.46
2	F	137	ILE	CA-C	-5.36	1.46	1.52
2	F	154	LEU	CA-C	-5.36	1.46	1.52
8	T	121	ARG	C-N	-5.36	1.27	1.33
1	B	383	MET	N-CA	-5.36	1.39	1.46
2	D	43	THR	CA-C	-5.36	1.46	1.52
2	E	245	ASP	N-CA	-5.35	1.39	1.46
3	G	127	THR	CA-C	-5.35	1.46	1.52
4	H	21	ALA	N-CA	-5.35	1.39	1.46
4	H	98	VAL	CA-C	-5.35	1.46	1.52
5	I	17	ILE	CA-C	-5.35	1.44	1.52
1	B	508	PHE	CA-C	-5.35	1.45	1.52
2	F	165	LEU	N-CA	-5.35	1.40	1.46
1	A	444	VAL	N-CA	-5.34	1.39	1.46
2	D	407	ALA	N-CA	-5.34	1.39	1.46
1	A	196	LYS	N-CA	-5.34	1.39	1.46
2	E	408	ARG	N-CA	-5.34	1.39	1.46
1	A	146	MET	CA-C	-5.34	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	242	LEU	CA-C	-5.34	1.46	1.52
2	E	413	PHE	CA-C	-5.34	1.45	1.52
4	H	135	ILE	N-CA	-5.34	1.40	1.46
2	F	428	LEU	N-CA	-5.33	1.38	1.46
2	F	447	GLY	CA-C	-5.33	1.44	1.51
1	C	241	PRO	CA-C	-5.33	1.43	1.52
4	H	102	MET	CA-C	-5.33	1.45	1.52
2	D	168	GLU	N-CA	-5.33	1.40	1.46
2	D	199	GLU	CA-C	-5.33	1.46	1.52
2	E	424	PHE	CA-C	-5.33	1.46	1.52
3	G	199	ASP	C-O	-5.33	1.17	1.24
1	C	279	ARG	N-CA	-5.33	1.40	1.46
1	B	390	MET	CA-C	-5.32	1.46	1.52
2	E	57	THR	N-CA	-5.32	1.39	1.46
2	F	139	VAL	CA-C	-5.32	1.46	1.52
1	A	152	ALA	CA-C	-5.32	1.45	1.52
1	C	86	ASP	CA-C	-5.32	1.46	1.52
1	C	340	THR	CA-C	-5.32	1.45	1.52
1	A	502	THR	N-CA	-5.31	1.40	1.46
1	B	87	ILE	N-CA	-5.31	1.40	1.46
2	D	146	TYR	CA-C	-5.31	1.46	1.53
1	A	479	LEU	CA-C	-5.31	1.46	1.52
2	D	180	TYR	CA-C	-5.31	1.45	1.53
2	E	357	ILE	N-CA	-5.31	1.39	1.46
1	B	66	LEU	CA-C	-5.31	1.46	1.52
1	B	504	PHE	CA-C	-5.31	1.45	1.52
1	B	280	GLN	N-CA	-5.30	1.40	1.46
2	E	119	GLU	CA-C	-5.30	1.45	1.53
2	E	367	HIS	CA-C	-5.30	1.45	1.52
1	B	32	LEU	N-CA	-5.30	1.40	1.46
1	A	220	LEU	N-CA	-5.30	1.39	1.46
1	B	144	GLU	CA-C	-5.30	1.46	1.52
1	A	312	MET	N-CA	-5.30	1.39	1.45
1	A	440	GLU	CA-C	-5.30	1.45	1.52
2	E	366	GLU	N-CA	-5.30	1.40	1.46
1	C	260	ASN	N-CA	-5.29	1.40	1.46
1	C	392	LEU	CA-C	-5.29	1.46	1.52
2	D	201	ILE	CA-C	-5.29	1.46	1.52
1	C	111	LEU	CA-C	-5.29	1.45	1.52
1	C	347	ASP	CA-C	-5.29	1.46	1.53
1	C	505	LEU	CA-C	-5.29	1.46	1.52
1	A	429	LYS	CA-C	-5.29	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	89	LYS	N-CA	-5.29	1.39	1.46
2	F	151	LYS	N-CA	-5.29	1.39	1.46
1	A	280	GLN	N-CA	-5.28	1.40	1.46
2	D	382	LYS	CA-C	-5.28	1.46	1.52
1	C	356	LEU	N-CA	-5.28	1.40	1.46
1	A	222	ASP	CA-C	-5.28	1.46	1.52
1	A	476	HIS	CA-C	-5.28	1.44	1.52
1	C	63	SER	CA-C	-5.28	1.46	1.52
1	B	63	SER	N-CA	-5.28	1.40	1.46
1	C	361	ILE	CA-C	-5.28	1.46	1.52
2	D	182	VAL	CA-C	-5.28	1.46	1.52
2	F	94	ILE	N-CA	-5.28	1.39	1.46
2	F	96	ASN	CA-C	-5.28	1.45	1.53
4	H	58	LEU	CA-C	-5.28	1.46	1.52
2	F	11	GLY	N-CA	-5.28	1.39	1.44
2	F	21	VAL	N-CA	-5.27	1.40	1.46
1	B	493	SER	CA-C	-5.26	1.46	1.52
1	C	178	ILE	N-CA	-5.26	1.40	1.46
2	E	403	THR	CA-C	-5.26	1.45	1.52
2	D	122	GLU	CA-C	-5.26	1.45	1.53
2	F	409	LYS	CA-C	-5.26	1.46	1.52
3	G	224	GLU	N-CA	-5.26	1.40	1.46
2	D	361	ASN	N-CA	-5.26	1.39	1.46
2	D	471	ASP	CA-C	-5.26	1.46	1.52
1	A	471	HIS	N-CA	-5.26	1.40	1.46
2	D	76	LEU	CA-C	-5.26	1.46	1.52
5	I	7	ALA	CA-C	-5.26	1.45	1.52
2	F	255	ILE	N-CA	-5.26	1.40	1.46
1	A	27	GLU	N-CA	-5.26	1.38	1.45
3	G	159	SER	CA-C	-5.26	1.46	1.52
2	D	374	VAL	CA-C	-5.25	1.46	1.52
1	B	46	ASN	CA-C	-5.25	1.45	1.52
1	B	146	MET	N-CA	-5.25	1.39	1.46
3	G	260	LYS	CA-C	-5.25	1.45	1.52
1	A	502	THR	CA-C	-5.25	1.46	1.52
1	C	65	ASN	CA-C	-5.25	1.46	1.52
1	C	492	GLU	CA-C	-5.25	1.46	1.52
4	H	132	GLN	CA-C	-5.25	1.46	1.52
4	H	33	VAL	N-CA	-5.24	1.39	1.46
1	A	76	PHE	N-CA	-5.24	1.40	1.46
1	B	350	ILE	N-CA	-5.24	1.39	1.46
1	C	392	LEU	N-CA	-5.24	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	287	ARG	CA-C	-5.24	1.45	1.52
2	D	310	ILE	CA-C	-5.24	1.45	1.52
1	A	55	PHE	CA-C	-5.23	1.45	1.53
2	D	304	ILE	CA-C	-5.23	1.46	1.52
2	E	173	VAL	CA-C	-5.23	1.46	1.52
1	B	166	LEU	N-CA	-5.23	1.39	1.46
2	E	381	TYR	CA-C	-5.23	1.46	1.52
1	B	220	LEU	N-CA	-5.23	1.40	1.46
1	C	107	VAL	CA-C	-5.22	1.46	1.52
1	A	210	ARG	CA-C	-5.22	1.46	1.52
2	D	53	LEU	CA-C	-5.22	1.45	1.52
2	E	412	ARG	CA-C	-5.22	1.45	1.52
1	B	242	LEU	N-CA	-5.22	1.40	1.46
4	H	45	PHE	N-CA	-5.22	1.39	1.46
2	E	164	VAL	N-CA	-5.21	1.40	1.46
2	E	458	TYR	CA-C	-5.21	1.46	1.52
1	B	451	GLY	CA-C	-5.21	1.44	1.51
1	C	34	ILE	N-CA	-5.21	1.40	1.46
1	C	50	GLU	CA-C	-5.21	1.46	1.53
2	F	183	PHE	CA-C	-5.21	1.46	1.52
2	F	325	THR	CA-C	-5.21	1.46	1.52
1	A	283	LEU	CA-C	-5.21	1.46	1.52
2	F	411	GLN	CA-C	-5.21	1.45	1.52
1	B	351	PHE	CA-C	-5.21	1.46	1.52
1	C	382	ALA	CA-C	-5.21	1.46	1.52
2	E	391	LEU	CA-C	-5.21	1.45	1.52
1	A	127	ARG	N-CA	-5.20	1.39	1.46
1	B	28	THR	N-CA	-5.20	1.39	1.45
1	B	371	VAL	CA-C	-5.20	1.46	1.52
1	C	48	GLN	CA-C	-5.20	1.46	1.52
3	G	140	ASP	N-CA	-5.20	1.40	1.46
1	B	190	ASN	CA-C	-5.20	1.45	1.52
1	A	213	VAL	N-CA	-5.20	1.40	1.46
1	A	320	SER	CA-C	-5.20	1.46	1.52
1	A	321	LEU	N-CA	-5.20	1.40	1.46
1	A	351	PHE	CA-C	-5.20	1.46	1.52
2	F	236	GLY	CA-C	-5.20	1.46	1.52
1	C	242	LEU	N-CA	-5.19	1.40	1.46
1	B	297	ASP	CA-C	-5.19	1.44	1.52
2	F	234	LEU	CA-C	-5.19	1.46	1.52
1	C	146	MET	N-CA	-5.19	1.39	1.46
1	B	361	ILE	CA-C	-5.19	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	137	ILE	CA-C	-5.19	1.47	1.52
3	G	18	LYS	CA-C	-5.19	1.46	1.52
1	A	467	ALA	CA-C	-5.18	1.46	1.52
1	C	251	CYS	CA-C	-5.18	1.46	1.52
2	D	12	ARG	N-CA	-5.18	1.39	1.46
2	E	47	LEU	N-CA	-5.18	1.39	1.46
1	B	142	VAL	CA-C	-5.18	1.47	1.52
1	C	284	LEU	N-CA	-5.18	1.39	1.46
2	E	428	LEU	N-CA	-5.18	1.40	1.46
2	E	386	ASP	CA-C	-5.17	1.45	1.52
2	D	57	THR	N-CA	-5.17	1.39	1.46
1	B	274	GLN	CA-C	-5.17	1.46	1.52
2	E	321	ALA	N-CA	-5.17	1.42	1.46
2	F	399	GLU	CA-C	-5.17	1.46	1.52
2	F	406	ARG	CA-C	-5.17	1.46	1.52
3	G	32	ALA	CA-C	-5.17	1.46	1.52
1	B	431	GLY	CA-C	-5.17	1.47	1.52
2	E	109	LYS	CA-C	-5.17	1.45	1.52
3	G	12	SER	N-CA	-5.17	1.39	1.46
1	A	305	LEU	CA-C	-5.17	1.46	1.52
1	B	140	ILE	N-CA	-5.17	1.40	1.46
1	A	428	LEU	CA-C	-5.16	1.45	1.52
1	B	104	LEU	CA-C	-5.16	1.46	1.52
2	D	225	PRO	CA-C	-5.16	1.47	1.52
2	E	84	ILE	N-CA	-5.16	1.41	1.46
1	C	87	ILE	CA-C	-5.16	1.46	1.52
1	A	494	ASP	N-CA	-5.16	1.40	1.46
5	I	45	VAL	N-CA	-5.16	1.39	1.46
1	B	151	LYS	N-CA	-5.16	1.40	1.46
1	A	301	LEU	N-CA	-5.15	1.40	1.46
1	B	339	PRO	CA-C	-5.15	1.44	1.52
1	A	418	LEU	CA-C	-5.15	1.46	1.52
1	B	139	ARG	CA-C	-5.15	1.46	1.52
2	D	218	VAL	N-CA	-5.15	1.40	1.46
1	B	242	LEU	CA-C	-5.14	1.46	1.52
2	F	260	ARG	CA-C	-5.14	1.45	1.52
2	E	207	ASN	CA-C	-5.14	1.46	1.52
2	F	336	SER	CA-C	-5.14	1.46	1.52
2	F	398	GLU	CA-C	-5.14	1.45	1.52
1	C	245	LEU	N-CA	-5.14	1.40	1.46
1	B	64	LEU	N-CA	-5.14	1.39	1.46
1	B	65	ASN	CA-C	-5.14	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	322	PRO	N-CA	-5.14	1.40	1.47
2	E	196	LEU	N-CA	-5.14	1.40	1.46
2	F	54	GLY	CA-C	-5.14	1.46	1.52
2	F	411	GLN	N-CA	-5.14	1.40	1.46
10	V	20	ARG	C-O	-5.14	1.17	1.24
1	B	28	THR	CA-C	-5.13	1.46	1.52
3	G	2	THR	N-CA	-5.13	1.39	1.46
1	A	153	VAL	N-CA	-5.13	1.40	1.46
1	B	55	PHE	CA-C	-5.13	1.46	1.52
1	B	204	VAL	N-CA	-5.13	1.40	1.46
1	B	282	SER	CA-C	-5.13	1.46	1.52
1	C	366	ASN	CA-C	-5.12	1.46	1.52
1	A	474	SER	N-CA	-5.12	1.40	1.46
2	E	175	LYS	N-CA	-5.12	1.40	1.46
2	E	281	TYR	CA-C	-5.12	1.46	1.52
2	E	308	GLN	N-CA	-5.12	1.40	1.46
2	F	13	ILE	CA-C	-5.12	1.47	1.52
2	F	196	LEU	CA-C	-5.12	1.46	1.52
2	F	271	LEU	N-CA	-5.12	1.40	1.46
2	E	435	LYS	CA-C	-5.12	1.46	1.52
2	F	199	GLU	CA-C	-5.12	1.45	1.52
1	A	316	PHE	CA-C	-5.12	1.46	1.52
1	A	390	MET	N-CA	-5.12	1.40	1.46
2	E	114	ALA	CA-C	-5.12	1.46	1.52
2	F	22	ASP	CA-C	-5.12	1.46	1.52
2	F	284	THR	CA-C	-5.12	1.44	1.52
2	F	425	THR	CA-C	-5.12	1.46	1.52
3	G	262	LEU	CA-C	-5.12	1.46	1.52
2	F	307	VAL	N-CA	-5.12	1.39	1.46
2	F	408	ARG	CA-C	-5.12	1.46	1.52
3	G	174	GLU	N-CA	-5.12	1.39	1.45
2	F	151	LYS	CA-C	-5.11	1.46	1.52
1	A	366	ASN	CA-C	-5.11	1.46	1.52
2	E	402	LEU	CA-C	-5.11	1.46	1.52
2	D	366	GLU	N-CA	-5.11	1.40	1.46
1	A	286	ARG	CA-C	-5.11	1.45	1.53
1	B	491	GLU	CA-C	-5.10	1.45	1.52
1	C	445	ILE	CA-C	-5.10	1.46	1.52
2	F	102	ILE	N-CA	-5.10	1.40	1.46
1	A	294	TYR	CA-C	-5.10	1.46	1.52
2	E	213	SER	CA-C	-5.10	1.46	1.53
2	E	434	LEU	CA-C	-5.10	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	G	259	THR	CA-C	-5.10	1.46	1.52
2	D	371	ALA	N-CA	-5.10	1.40	1.46
1	B	394	LEU	N-CA	-5.10	1.39	1.46
1	A	182	THR	CA-C	-5.09	1.46	1.52
2	D	171	ASN	N-CA	-5.09	1.40	1.46
1	A	425	THR	CA-C	-5.09	1.46	1.52
1	C	414	THR	CA-C	-5.09	1.45	1.52
2	F	384	LEU	CA-C	-5.09	1.45	1.52
1	B	189	PHE	CA-C	-5.09	1.45	1.52
1	B	275	ALA	CA-C	-5.09	1.46	1.52
1	B	53	VAL	CA-C	-5.09	1.46	1.52
1	C	423	ARG	CA-C	-5.09	1.46	1.52
1	A	67	GLU	C-N	-5.08	1.29	1.34
1	A	450	ARG	CA-C	-5.08	1.45	1.52
2	E	384	LEU	N-CA	-5.08	1.39	1.46
1	A	495	ALA	CA-C	-5.08	1.46	1.52
1	A	88	VAL	CA-C	-5.08	1.46	1.52
1	A	149	GLY	CA-C	-5.08	1.45	1.51
1	B	145	PRO	CA-C	-5.08	1.46	1.52
1	C	35	GLY	N-CA	-5.08	1.38	1.45
1	C	297	ASP	CA-C	-5.08	1.44	1.52
2	E	422	GLU	CA-C	-5.08	1.45	1.52
1	C	264	ALA	N-CA	-5.07	1.39	1.45
2	D	116	ILE	CA-C	-5.07	1.46	1.52
1	A	188	ARG	CA-C	-5.07	1.45	1.52
1	B	387	ALA	CA-C	-5.07	1.46	1.52
2	D	123	PHE	CA-C	-5.07	1.46	1.52
1	C	102	GLU	CA-C	-5.07	1.46	1.53
2	E	306	SER	CA-C	-5.07	1.46	1.52
1	A	341	ASN	N-CA	-5.06	1.40	1.46
4	H	54	THR	CA-C	-5.06	1.46	1.52
4	H	91	GLN	N-CA	-5.06	1.40	1.46
1	B	508	PHE	N-CA	-5.06	1.39	1.46
2	D	243	PHE	CA-C	-5.06	1.45	1.52
4	H	36	VAL	N-CA	-5.06	1.40	1.46
1	C	326	VAL	CA-C	-5.06	1.46	1.52
1	C	28	THR	N-CA	-5.06	1.39	1.45
1	C	228	TYR	CA-C	-5.05	1.46	1.52
2	D	376	LYS	CA-C	-5.05	1.46	1.52
11	W	172	HIS	N-CA	-5.05	1.39	1.46
1	B	358	TYR	N-CA	-5.05	1.40	1.46
2	D	192	GLU	CA-C	-5.05	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	167	MET	N-CA	-5.04	1.40	1.46
4	H	76	PHE	N-CA	-5.04	1.39	1.45
2	E	261	PHE	CA-C	-5.04	1.46	1.52
3	G	10	LEU	CA-C	-5.04	1.46	1.52
4	H	113	GLU	CA-C	-5.04	1.46	1.52
1	A	414	THR	N-CA	-5.04	1.40	1.46
1	B	96	ASP	CA-C	-5.04	1.46	1.52
1	B	155	SER	CA-C	-5.04	1.47	1.53
2	D	62	ALA	CA-C	-5.04	1.46	1.52
4	H	68	GLU	CA-C	-5.04	1.46	1.52
1	C	258	ARG	N-CA	-5.04	1.40	1.46
2	E	282	GLN	CA-C	-5.04	1.47	1.53
2	F	471	ASP	CA-C	-5.04	1.46	1.52
2	F	430	LYS	CA-C	-5.03	1.46	1.52
3	G	138	PHE	CA-C	-5.03	1.46	1.52
2	F	84	ILE	CA-C	-5.03	1.46	1.52
5	I	20	LYS	N-CA	-5.02	1.40	1.46
1	A	229	THR	CA-C	-5.02	1.46	1.52
1	B	469	LEU	N-CA	-5.02	1.40	1.46
1	C	311	LYS	CA-C	-5.02	1.46	1.52
2	F	311	TYR	CA-C	-5.02	1.46	1.52
1	B	154	ASP	N-CA	-5.02	1.39	1.46
2	D	344	ILE	CA-C	-5.02	1.46	1.52
2	F	141	ASP	N-CA	-5.02	1.40	1.46
1	C	216	LEU	CA-C	-5.02	1.46	1.52
2	F	458	TYR	CA-C	-5.02	1.46	1.52
2	F	381	TYR	N-CA	-5.02	1.40	1.46
1	A	108	VAL	CA-C	-5.01	1.46	1.52
1	B	472	VAL	CA-C	-5.01	1.45	1.52
1	B	313	ASN	N-CA	-5.01	1.39	1.45
1	A	304	ARG	N-CA	-5.01	1.40	1.46
2	D	467	VAL	CA-C	-5.01	1.46	1.52
1	B	194	ASP	N-CA	-5.00	1.40	1.46
1	B	218	LYS	CA-C	-5.00	1.46	1.52
2	F	302	GLY	CA-C	-5.00	1.45	1.51

All (1202) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	S	48	GLU	O-C-N	20.46	147.63	121.64
7	S	48	GLU	CA-C-N	18.69	139.31	119.87
7	S	48	GLU	C-N-CA	18.69	139.31	119.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	S	6	ARG	CA-C-O	-18.63	100.79	121.28
8	T	92	PHE	CA-C-N	16.49	142.87	120.44
8	T	92	PHE	C-N-CA	16.49	142.87	120.44
2	D	54	GLY	N-CA-C	-14.04	97.72	112.04
7	S	108	MET	CA-C-O	-13.65	100.99	120.51
1	C	91	THR	N-CA-C	-13.07	97.42	113.50
7	S	108	MET	CA-C-N	12.96	141.34	120.60
7	S	108	MET	C-N-CA	12.96	141.34	120.60
2	D	399	GLU	N-CA-C	-12.83	97.75	113.41
2	F	80	ALA	N-CA-C	-12.83	96.65	108.07
2	D	80	ALA	N-CA-C	-12.74	96.73	108.07
1	B	373	ARG	N-CA-C	-12.40	97.74	111.14
7	S	51	MET	CA-C-N	-12.38	102.40	122.95
7	S	51	MET	C-N-CA	-12.38	102.40	122.95
1	C	67	GLU	N-CA-C	-12.20	94.41	110.40
2	E	16	VAL	N-CA-C	-12.04	89.96	107.77
1	C	288	PRO	N-CA-C	11.99	125.33	110.70
1	C	172	GLN	CA-C-N	11.84	140.82	122.23
1	C	172	GLN	C-N-CA	11.84	140.82	122.23
1	A	504	PHE	CA-C-N	11.68	135.62	120.44
1	A	504	PHE	C-N-CA	11.68	135.62	120.44
1	B	313	ASN	CA-C-N	11.60	135.82	120.28
1	B	313	ASN	C-N-CA	11.60	135.82	120.28
2	E	54	GLY	N-CA-C	-11.49	96.99	111.70
2	F	329	LEU	CA-C-N	11.36	136.63	120.28
2	F	329	LEU	C-N-CA	11.36	136.63	120.28
9	U	1	ARG	CA-C-O	-11.35	101.50	120.80
1	B	202	ILE	N-CA-C	-11.34	90.99	107.77
1	C	115	ILE	N-CA-C	-11.31	102.97	113.71
4	H	83	THR	N-CA-C	-11.27	89.55	108.26
1	C	97	VAL	N-CA-C	-11.23	99.98	109.19
2	E	161	GLY	N-CA-C	-11.21	98.73	115.32
11	W	88	LEU	CA-C-N	11.18	133.81	119.84
11	W	88	LEU	C-N-CA	11.18	133.81	119.84
1	B	327	ILE	N-CA-C	-11.13	92.10	108.12
3	G	123	GLN	N-CA-C	-11.07	99.33	113.72
2	D	355	SER	N-CA-C	-10.97	88.73	108.48
2	E	59	ARG	N-CA-C	-10.97	91.36	109.24
3	G	248	LEU	CA-C-N	10.87	135.28	120.38
3	G	248	LEU	C-N-CA	10.87	135.28	120.38
2	F	95	MET	N-CA-C	-10.85	92.36	109.72
2	F	54	GLY	N-CA-C	-10.85	97.82	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	173	THR	N-CA-C	-10.57	99.42	114.12
2	D	20	VAL	N-CA-C	-10.57	92.47	107.80
11	W	88	LEU	CA-C-O	-10.54	105.72	120.16
2	D	138	LYS	CA-C-N	10.53	134.88	120.46
2	D	138	LYS	C-N-CA	10.53	134.88	120.46
2	D	399	GLU	CA-C-N	10.43	134.63	120.44
2	D	399	GLU	C-N-CA	10.43	134.63	120.44
2	F	20	VAL	N-CA-C	-10.32	92.83	107.80
1	C	483	ILE	CA-C-N	10.32	133.86	120.44
1	C	483	ILE	C-N-CA	10.32	133.86	120.44
1	B	67	GLU	N-CA-C	-10.28	94.54	110.58
3	G	94	ALA	N-CA-C	10.24	122.03	111.07
1	B	198	LYS	N-CA-C	-10.23	91.94	108.41
2	D	27	GLU	N-CA-C	-10.19	89.10	110.80
2	F	211	ALA	N-CA-C	-10.15	100.20	112.59
2	F	398	GLU	N-CA-C	10.13	123.36	111.71
7	S	59	TYR	CA-C-N	10.12	140.18	121.97
7	S	59	TYR	C-N-CA	10.12	140.18	121.97
7	S	9	VAL	O-C-N	-10.02	110.04	122.57
1	C	219	ARG	N-CA-C	10.01	122.19	111.28
1	A	313	ASN	CA-C-N	10.00	133.68	120.28
1	A	313	ASN	C-N-CA	10.00	133.68	120.28
3	G	54	LYS	N-CA-C	-9.91	101.32	113.41
2	E	88	PRO	N-CA-C	9.88	126.73	113.98
2	E	21	VAL	N-CA-C	-9.85	94.32	108.11
7	S	50	LYS	N-CA-C	-9.82	100.41	111.71
3	G	117	HIS	N-CA-C	-9.81	100.55	111.14
1	A	202	ILE	N-CA-C	-9.80	93.27	107.77
1	A	432	GLN	N-CA-C	-9.79	95.97	110.46
2	E	20	VAL	N-CA-C	-9.78	93.61	107.80
7	S	109	MET	N-CA-C	9.75	124.28	112.38
2	F	272	LEU	N-CA-C	-9.74	100.32	112.88
1	A	88	VAL	N-CA-C	-9.65	94.60	108.11
1	A	348	GLY	N-CA-C	-9.64	101.63	111.85
2	F	332	THR	N-CA-C	-9.62	93.23	108.90
1	C	225	ALA	N-CA-C	-9.59	101.58	113.28
5	I	28	THR	N-CA-C	9.59	121.73	111.28
2	F	94	ILE	N-CA-C	-9.56	93.93	107.80
2	E	300	LYS	N-CA-C	-9.56	103.73	114.62
1	A	407	GLY	N-CA-C	-9.55	90.54	113.18
2	F	449	TYR	N-CA-C	-9.51	92.47	108.26
4	H	56	GLN	N-CA-C	-9.48	94.53	109.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	330	ASP	N-CA-C	-9.40	103.90	114.62
2	F	64	ASP	CA-C-N	9.39	129.02	120.10
2	F	64	ASP	C-N-CA	9.39	129.02	120.10
2	D	207	ASN	N-CA-C	-9.38	95.07	110.17
2	E	80	ALA	N-CA-C	-9.38	99.73	108.07
2	E	273	GLY	N-CA-C	-9.32	103.10	115.21
3	G	46	VAL	CA-C-N	9.30	130.50	119.99
3	G	46	VAL	C-N-CA	9.30	130.50	119.99
3	G	171	TYR	N-CA-C	-9.28	95.13	108.96
2	D	395	GLU	N-CA-C	-9.27	99.87	112.94
3	G	172	LYS	N-CA-C	-9.25	93.16	108.34
1	A	94	ILE	N-CA-C	-9.25	99.97	110.05
2	F	209	LYS	N-CA-C	-9.24	102.58	112.93
1	C	402	ALA	N-CA-C	9.21	125.30	112.04
2	D	206	ILE	N-CA-C	-9.18	94.49	107.80
1	B	290	GLY	N-CA-C	-9.17	91.44	113.18
2	E	27	GLU	N-CA-C	-9.15	96.12	108.74
1	B	47	VAL	CA-C-N	9.11	138.94	121.54
1	B	47	VAL	C-N-CA	9.11	138.94	121.54
2	E	130	GLN	N-CA-C	-9.07	95.53	109.85
1	B	334	VAL	CA-C-N	9.06	132.77	120.54
1	B	334	VAL	C-N-CA	9.06	132.77	120.54
4	H	36	VAL	N-CA-C	-9.05	95.06	108.45
2	F	12	ARG	N-CA-C	-9.04	94.67	109.40
1	A	148	THR	N-CA-C	-9.03	103.38	114.75
2	D	59	ARG	N-CA-C	-9.00	95.10	109.59
7	S	49	PRO	N-CA-C	9.00	125.10	114.03
1	B	232	VAL	N-CA-C	-8.98	95.52	108.36
2	D	392	GLY	N-CA-C	8.97	126.94	111.78
3	G	95	ASN	N-CA-C	8.96	121.87	111.11
1	C	125	ALA	N-CA-C	-8.96	97.26	110.52
2	E	426	GLY	N-CA-C	-8.90	103.03	115.32
2	F	41	ARG	CA-C-N	8.88	131.99	120.44
2	F	41	ARG	C-N-CA	8.88	131.99	120.44
2	F	225	PRO	CA-C-N	8.86	128.46	119.24
2	F	225	PRO	C-N-CA	8.86	128.46	119.24
8	T	88	ARG	CA-C-O	-8.87	110.40	120.24
1	C	417	LEU	CA-C-N	8.86	131.96	120.44
1	C	417	LEU	C-N-CA	8.86	131.96	120.44
1	A	117	GLY	N-CA-C	-8.85	102.22	115.32
2	F	207	ASN	N-CA-C	-8.85	95.92	110.17
1	C	103	LEU	N-CA-C	-8.83	102.67	113.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	399	GLU	N-CA-C	-8.83	101.73	111.36
1	B	91	THR	N-CA-C	-8.81	102.66	113.50
3	G	94	ALA	CA-C-N	8.81	132.43	120.54
3	G	94	ALA	C-N-CA	8.81	132.43	120.54
7	S	52	ALA	N-CA-C	-8.79	100.30	112.25
2	F	161	GLY	N-CA-C	-8.78	103.68	115.36
1	C	197	LYS	N-CA-C	-8.73	100.42	112.12
2	D	57	THR	N-CA-C	-8.69	95.24	109.40
4	H	72	THR	N-CA-C	-8.66	94.12	108.76
2	D	388	ILE	N-CA-C	8.64	121.86	111.05
7	S	110	SER	CA-C-N	8.63	137.51	121.97
7	S	110	SER	C-N-CA	8.63	137.51	121.97
2	D	312	VAL	N-CA-C	-8.63	90.23	108.88
4	H	43	GLY	N-CA-C	-8.62	98.14	110.63
2	F	16	VAL	N-CA-C	-8.59	95.06	107.77
3	G	195	ASP	N-CA-C	-8.59	99.16	112.99
1	B	25	LEU	N-CA-C	-8.59	99.89	110.88
1	C	354	THR	N-CA-C	8.58	120.63	111.28
4	H	113	GLU	CA-C-N	8.58	132.12	120.54
4	H	113	GLU	C-N-CA	8.58	132.12	120.54
2	D	16	VAL	N-CA-C	-8.56	95.11	107.77
1	A	299	PHE	N-CA-C	-8.55	100.97	111.40
7	S	51	MET	O-C-N	-8.54	112.36	122.87
1	A	493	SER	CA-C-N	8.52	131.52	120.44
1	A	493	SER	C-N-CA	8.52	131.52	120.44
2	E	118	ALA	N-CA-C	-8.49	95.84	109.76
4	H	54	THR	N-CA-C	-8.46	95.65	108.52
1	A	335	SER	N-CA-C	-8.39	102.13	111.28
2	E	355	SER	N-CA-C	-8.34	93.46	108.48
4	H	34	ARG	N-CA-C	-8.32	103.26	113.41
2	D	426	GLY	N-CA-C	-8.30	105.20	115.08
2	D	463	ILE	CA-C-N	8.29	131.74	120.38
2	D	463	ILE	C-N-CA	8.29	131.74	120.38
2	D	262	THR	CA-C-N	8.29	131.39	120.28
2	D	262	THR	C-N-CA	8.29	131.39	120.28
2	F	59	ARG	N-CA-C	-8.27	96.28	109.59
1	C	170	ASP	CA-C-N	8.25	137.29	121.54
1	C	170	ASP	C-N-CA	8.25	137.29	121.54
1	B	148	THR	N-CA-C	-8.24	105.22	114.62
2	D	161	GLY	N-CA-C	-8.24	93.66	113.18
2	E	311	TYR	N-CA-C	-8.24	95.09	108.52
1	B	267	ILE	N-CA-C	-8.22	95.75	107.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	283	PRO	CA-C-N	8.21	135.96	122.73
2	E	283	PRO	C-N-CA	8.21	135.96	122.73
1	A	8	VAL	N-CA-C	-8.19	98.09	108.89
4	H	40	THR	N-CA-C	-8.18	97.28	110.20
4	H	76	PHE	N-CA-C	-8.18	96.63	109.72
2	E	81	PRO	CA-C-N	8.16	131.48	120.63
2	E	81	PRO	C-N-CA	8.16	131.48	120.63
1	A	194	ASP	N-CA-C	-8.14	95.14	108.41
1	C	480	LEU	N-CA-C	-8.14	102.49	111.36
2	E	267	GLU	N-CA-C	-8.14	102.41	111.28
2	D	306	SER	N-CA-C	-8.10	95.20	108.41
2	F	32	ILE	N-CA-C	-8.09	96.57	108.54
3	G	55	ALA	N-CA-C	-8.08	96.07	109.24
1	A	96	ASP	N-CA-C	-8.07	97.05	109.24
8	T	90	TYR	CA-C-O	8.07	129.94	121.07
2	D	400	ASP	N-CA-C	-8.06	102.43	111.14
2	F	17	ILE	N-CA-C	-8.06	93.70	107.24
2	D	396	LEU	CA-C-N	8.04	134.47	120.87
2	D	396	LEU	C-N-CA	8.04	134.47	120.87
1	B	328	GLU	N-CA-C	-8.03	95.64	108.73
1	C	232	VAL	N-CA-C	-8.03	96.88	108.36
2	F	218	VAL	N-CA-C	-8.00	96.59	108.12
1	A	100	GLY	N-CA-C	-7.99	94.24	113.18
1	B	194	ASP	N-CA-C	-7.99	95.54	108.41
1	B	488	LYS	N-CA-C	-7.99	93.79	110.80
1	C	101	GLU	N-CA-C	-7.97	102.59	112.88
1	A	20	ASP	N-CA-C	-7.97	93.82	110.80
2	F	262	THR	CA-C-N	7.96	130.79	120.44
2	F	262	THR	C-N-CA	7.96	130.79	120.44
2	E	182	VAL	N-CA-C	-7.93	96.64	108.46
1	A	69	ASP	N-CA-C	-7.93	105.58	114.62
8	T	90	TYR	N-CA-C	7.93	120.69	111.02
1	A	35	GLY	N-CA-C	-7.92	94.40	113.18
1	C	409	ASP	N-CA-C	7.92	120.16	110.41
2	E	84	ILE	N-CA-C	-7.92	102.70	109.19
1	B	123	SER	CA-C-N	7.91	130.88	120.28
1	B	123	SER	C-N-CA	7.91	130.88	120.28
1	A	7	GLU	N-CA-C	-7.89	103.37	113.16
2	F	124	VAL	N-CA-C	7.89	120.95	111.09
1	C	175	LYS	CA-C-N	7.88	131.48	120.29
1	C	175	LYS	C-N-CA	7.88	131.48	120.29
9	U	78	ILE	CA-C-N	7.88	127.93	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	U	78	ILE	C-N-CA	7.88	127.93	119.90
1	C	300	TYR	CA-C-N	7.87	131.16	120.54
1	C	300	TYR	C-N-CA	7.87	131.16	120.54
2	D	23	VAL	N-CA-C	-7.86	96.75	108.46
1	A	404	ALA	CA-C-N	7.85	131.12	120.44
1	A	404	ALA	C-N-CA	7.85	131.12	120.44
1	B	38	ILE	N-CA-C	-7.85	97.11	108.11
1	B	499	GLU	CA-C-N	7.85	130.45	120.56
1	B	499	GLU	C-N-CA	7.85	130.45	120.56
4	H	27	PHE	N-CA-C	-7.85	102.24	112.68
3	G	270	ALA	N-CA-C	-7.84	103.03	112.59
2	F	457	PHE	N-CA-C	-7.84	103.72	113.28
2	E	116	ILE	CA-C-N	7.83	136.50	121.54
2	E	116	ILE	C-N-CA	7.83	136.50	121.54
1	C	438	ILE	N-CA-C	7.82	118.60	110.62
1	C	263	HIS	N-CA-C	-7.82	95.67	108.41
1	A	91	THR	N-CA-C	-7.82	103.56	113.72
1	A	455	LYS	N-CA-C	-7.80	103.60	113.43
1	B	288	PRO	N-CA-C	7.79	120.20	110.70
1	B	334	VAL	N-CA-C	-7.77	104.97	113.43
1	C	35	GLY	N-CA-C	-7.76	94.78	113.18
2	E	455	GLN	CA-C-N	7.76	130.52	120.44
2	E	455	GLN	C-N-CA	7.76	130.52	120.44
5	I	2	ALA	N-CA-C	-7.76	103.84	113.38
4	H	20	PHE	N-CA-C	-7.74	95.64	108.34
9	U	93	GLU	CA-C-N	7.74	131.28	120.29
9	U	93	GLU	C-N-CA	7.74	131.28	120.29
2	F	467	VAL	N-CA-C	-7.72	103.28	110.53
3	G	94	ALA	CA-C-O	-7.71	112.73	120.82
2	E	110	THR	CA-C-N	7.69	136.23	121.54
2	E	110	THR	C-N-CA	7.69	136.23	121.54
2	D	212	THR	N-CA-C	-7.68	94.44	110.80
8	T	93	ASP	O-C-N	-7.68	113.79	122.09
2	F	273	GLY	N-CA-C	-7.67	105.16	115.36
2	E	103	ASP	N-CA-C	-7.64	102.92	111.71
2	D	40	GLY	N-CA-C	-7.64	105.20	115.36
7	S	50	LYS	CA-C-N	7.63	133.45	122.85
7	S	50	LYS	C-N-CA	7.63	133.45	122.85
2	D	52	HIS	N-CA-C	-7.62	95.17	108.20
1	B	243	GLN	CA-C-N	7.61	130.47	120.28
1	B	243	GLN	C-N-CA	7.61	130.47	120.28
1	A	118	LYS	N-CA-C	-7.60	104.42	112.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	25	PHE	N-CA-C	-7.60	97.35	109.59
4	H	67	ALA	N-CA-C	-7.60	98.24	110.32
4	H	82	VAL	N-CA-C	-7.59	97.35	108.89
1	A	41	VAL	N-CA-C	-7.59	97.20	108.12
1	A	39	ALA	N-CA-C	-7.58	96.16	108.52
3	G	200	VAL	N-CA-C	7.58	125.10	109.34
2	D	12	ARG	N-CA-C	-7.57	96.59	109.24
1	A	97	VAL	N-CA-C	-7.57	100.46	109.01
10	V	20	ARG	CA-C-O	-7.55	110.19	119.18
1	C	28	THR	N-CA-C	-7.55	97.89	109.14
2	E	189	ARG	N-CA-C	-7.54	96.98	108.67
1	B	173	THR	N-CA-C	-7.53	100.21	110.68
3	G	53	GLU	N-CA-C	-7.53	103.20	114.64
7	S	111	VAL	CA-C-N	7.52	134.98	120.99
7	S	111	VAL	C-N-CA	7.52	134.98	120.99
1	C	77	GLY	CA-C-N	7.52	131.38	120.71
1	C	77	GLY	C-N-CA	7.52	131.38	120.71
2	F	22	ASP	N-CA-C	-7.51	96.49	108.73
2	F	27	GLU	N-CA-C	-7.50	100.25	111.81
2	F	355	SER	N-CA-C	-7.50	95.93	108.75
2	E	129	GLU	N-CA-C	-7.49	96.42	108.55
1	A	263	HIS	N-CA-C	-7.48	96.21	108.41
2	D	204	GLY	N-CA-C	-7.47	105.02	115.32
2	E	213	SER	N-CA-C	-7.46	100.05	110.35
1	B	490	SER	CA-C-N	7.46	130.60	120.38
1	B	490	SER	C-N-CA	7.46	130.60	120.38
2	D	349	ASP	N-CA-C	-7.46	93.97	108.59
1	B	191	ASP	N-CA-C	-7.46	104.18	113.28
2	E	219	TYR	N-CA-C	-7.44	96.81	109.24
2	D	380	ASP	CA-C-N	7.43	130.24	120.28
2	D	380	ASP	C-N-CA	7.43	130.24	120.28
2	E	17	ILE	N-CA-C	-7.43	94.75	107.24
2	E	276	PRO	N-CA-C	-7.43	97.17	112.47
1	C	360	GLY	N-CA-C	-7.43	104.24	114.64
2	D	118	ALA	N-CA-C	-7.42	97.41	107.88
2	D	193	GLY	CA-C-N	7.41	130.08	120.44
2	D	193	GLY	C-N-CA	7.41	130.08	120.44
1	C	321	LEU	N-CA-C	-7.40	96.20	108.34
1	B	237	SER	CA-C-N	7.40	135.67	121.54
1	B	237	SER	C-N-CA	7.40	135.67	121.54
1	B	121	ILE	N-CA-C	-7.39	93.98	109.34
1	C	225	ALA	CA-C-N	7.37	130.90	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	225	ALA	C-N-CA	7.37	130.90	120.28
4	H	92	LEU	N-CA-C	-7.35	97.23	109.07
7	S	104	ALA	CA-C-O	-7.35	112.76	120.55
2	F	201	ILE	N-CA-C	-7.33	103.19	110.30
2	E	22	ASP	N-CA-C	-7.33	96.58	108.52
1	A	196	LYS	N-CA-C	-7.32	102.28	112.45
2	E	345	TYR	N-CA-C	-7.31	92.94	108.73
1	A	89	LYS	N-CA-C	-7.31	97.49	109.40
8	T	89	HIS	CA-C-O	-7.29	112.75	120.63
2	E	218	VAL	N-CA-C	-7.29	97.62	108.12
1	A	170	ASP	N-CA-C	7.28	120.40	110.35
2	D	21	VAL	N-CA-C	-7.28	97.92	108.11
2	D	422	GLU	N-CA-C	-7.27	103.67	112.54
4	H	32	ASN	CA-C-N	7.27	134.34	122.64
4	H	32	ASN	C-N-CA	7.27	134.34	122.64
1	B	335	SER	N-CA-C	-7.26	102.40	111.11
2	F	331	ALA	N-CA-C	-7.25	96.42	108.32
2	E	410	ILE	N-CA-C	-7.25	103.46	110.42
3	G	215	TYR	CA-C-N	7.23	130.29	120.38
3	G	215	TYR	C-N-CA	7.23	130.29	120.38
3	G	3	LEU	CA-C-N	7.23	130.19	120.65
3	G	3	LEU	C-N-CA	7.23	130.19	120.65
2	E	398	GLU	N-CA-C	7.23	120.02	111.71
2	E	57	THR	N-CA-C	-7.22	97.62	109.40
2	E	47	LEU	N-CA-C	-7.21	97.98	109.59
2	F	163	THR	N-CA-C	-7.21	103.42	111.28
2	F	206	ILE	CA-C-N	7.21	134.90	122.64
2	F	206	ILE	C-N-CA	7.21	134.90	122.64
1	C	299	PHE	N-CA-C	-7.21	103.36	111.14
1	A	177	SER	CA-C-N	7.21	129.64	120.56
1	A	177	SER	C-N-CA	7.21	129.64	120.56
2	D	218	VAL	N-CA-C	-7.19	97.77	108.12
7	S	70	SER	CA-C-N	7.19	135.27	121.54
7	S	70	SER	C-N-CA	7.19	135.27	121.54
1	A	406	PHE	N-CA-C	-7.18	96.55	108.32
1	A	504	PHE	O-C-N	7.18	129.46	122.07
2	E	357	ILE	N-CA-C	-7.17	104.41	113.22
2	F	103	ASP	N-CA-C	-7.16	102.89	111.69
1	B	107	VAL	N-CA-C	-7.14	97.44	107.80
5	I	10	SER	N-CA-C	-7.14	99.41	109.69
8	T	89	HIS	N-CA-C	-7.14	102.69	111.33
4	H	19	THR	N-CA-C	-7.13	96.79	108.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	364	ALA	CA-C-N	7.11	134.78	121.97
1	A	364	ALA	C-N-CA	7.11	134.78	121.97
2	D	431	LEU	N-CA-C	-7.10	96.12	108.69
4	H	98	VAL	N-CA-C	-7.10	97.28	108.86
1	A	323	ALA	N-CA-C	-7.10	97.33	108.90
4	H	93	LEU	N-CA-C	-7.10	92.86	107.70
1	C	479	LEU	CA-C-N	7.08	130.35	120.29
1	C	479	LEU	C-N-CA	7.08	130.35	120.29
2	F	75	VAL	N-CA-C	-7.08	97.91	108.46
4	H	85	ASN	N-CA-C	-7.08	97.67	109.07
2	D	334	VAL	N-CA-C	-7.07	97.54	107.80
9	U	57	ASN	CA-C-N	7.07	131.20	122.37
9	U	57	ASN	C-N-CA	7.07	131.20	122.37
1	C	368	GLY	N-CA-C	-7.05	103.92	113.37
2	E	161	GLY	CA-C-N	7.05	129.96	120.65
2	E	161	GLY	C-N-CA	7.05	129.96	120.65
3	G	204	TYR	N-CA-C	-7.02	95.84	110.80
2	E	435	LYS	CA-C-N	7.02	130.97	120.31
2	E	435	LYS	C-N-CA	7.02	130.97	120.31
2	E	212	THR	N-CA-C	-7.01	95.88	110.80
1	A	225	ALA	N-CA-C	-7.00	103.92	113.30
2	F	463	ILE	CA-C-N	7.00	129.99	120.54
2	F	463	ILE	C-N-CA	7.00	129.99	120.54
1	A	398	ARG	N-CA-C	6.99	118.98	111.36
7	S	105	PHE	CA-C-O	-6.99	113.01	120.42
1	B	36	ASP	N-CA-C	-6.98	104.64	113.02
3	G	58	LYS	N-CA-C	-6.98	94.76	107.75
2	F	312	VAL	N-CA-C	-6.98	100.13	107.60
1	B	127	ARG	N-CA-C	-6.98	96.82	108.75
1	B	28	THR	N-CA-C	-6.96	98.73	109.24
2	F	282	GLN	N-CA-C	-6.96	98.24	109.58
2	E	45	LEU	N-CA-C	-6.95	93.92	107.62
3	G	156	ASP	N-CA-C	-6.95	103.87	114.16
8	T	104	GLU	CA-C-N	6.94	129.31	120.56
8	T	104	GLU	C-N-CA	6.94	129.31	120.56
1	A	33	SER	N-CA-C	-6.94	98.09	108.99
2	F	40	GLY	N-CA-C	-6.94	105.66	115.30
1	A	461	ILE	N-CA-C	-6.94	104.01	110.53
1	B	333	ASP	CA-C-N	6.93	130.90	122.16
1	B	333	ASP	C-N-CA	6.93	130.90	122.16
2	E	463	ILE	CA-C-N	6.92	129.85	120.38
2	E	463	ILE	C-N-CA	6.92	129.85	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	H	131	ILE	CA-C-N	6.89	129.40	120.44
4	H	131	ILE	C-N-CA	6.89	129.40	120.44
2	D	434	LEU	N-CA-C	6.89	118.79	111.28
3	G	104	LYS	N-CA-C	-6.89	96.97	108.75
1	C	215	GLN	N-CA-C	6.88	118.78	111.28
1	A	232	VAL	N-CA-C	-6.88	98.52	108.36
2	E	20	VAL	CA-C-N	-6.87	114.14	123.14
2	E	20	VAL	C-N-CA	-6.87	114.14	123.14
2	E	423	VAL	N-CA-C	6.87	117.66	110.72
3	G	5	ASP	CA-C-N	6.87	129.22	120.56
3	G	5	ASP	C-N-CA	6.87	129.22	120.56
1	A	40	ARG	N-CA-C	-6.86	98.07	109.46
1	C	88	VAL	N-CA-C	-6.86	98.57	108.17
2	F	306	SER	N-CA-C	-6.86	97.23	108.41
1	A	101	GLU	N-CA-C	-6.86	103.61	113.21
1	A	274	GLN	CA-C-N	6.85	129.46	120.28
1	A	274	GLN	C-N-CA	6.85	129.46	120.28
2	E	105	ARG	N-CA-C	-6.84	100.28	110.06
2	D	448	GLU	N-CA-C	6.83	118.61	111.03
1	C	267	ILE	N-CA-C	-6.83	97.78	107.75
2	E	115	ALA	N-CA-C	-6.83	98.91	109.76
2	E	225	PRO	CA-C-N	6.83	126.07	118.97
2	E	225	PRO	C-N-CA	6.83	126.07	118.97
1	C	349	GLN	N-CA-C	-6.82	98.28	108.99
4	H	114	LYS	CA-C-N	6.82	129.31	120.44
4	H	114	LYS	C-N-CA	6.82	129.31	120.44
10	V	23	ARG	CA-C-N	6.82	136.40	122.55
10	V	23	ARG	C-N-CA	6.82	136.40	122.55
2	D	96	ASN	N-CA-C	-6.82	99.87	110.17
2	E	60	THR	N-CA-C	-6.82	98.98	109.14
4	H	135	ILE	CA-C-N	6.81	129.71	120.38
4	H	135	ILE	C-N-CA	6.81	129.71	120.38
1	C	113	ASN	CA-C-N	6.81	132.09	121.26
1	C	113	ASN	C-N-CA	6.81	132.09	121.26
2	E	108	ILE	N-CA-C	-6.80	100.00	109.45
2	E	360	PRO	CA-C-N	6.79	129.39	120.28
2	E	360	PRO	C-N-CA	6.79	129.39	120.28
1	A	164	ARG	N-CA-C	-6.78	96.46	108.13
2	D	399	GLU	CA-C-O	6.78	127.07	119.41
2	F	394	ASP	N-CA-C	6.77	121.93	112.72
1	C	163	GLN	CA-C-N	6.77	134.47	121.54
1	C	163	GLN	C-N-CA	6.77	134.47	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	G	90	LYS	N-CA-C	-6.77	104.03	112.90
2	E	204	GLY	N-CA-C	-6.76	106.42	115.21
3	G	129	LYS	N-CA-C	-6.76	99.59	109.18
1	C	365	ILE	N-CA-C	6.75	123.39	109.34
1	A	187	LYS	CA-C-O	-6.74	113.69	120.90
1	C	152	ALA	CA-C-N	-6.74	112.66	120.88
1	C	152	ALA	C-N-CA	-6.74	112.66	120.88
2	E	394	ASP	N-CA-C	-6.73	96.46	110.80
2	F	152	ILE	N-CA-C	-6.73	98.75	108.17
2	F	255	ILE	N-CA-C	-6.72	98.44	108.12
4	H	139	GLU	N-CA-C	-6.72	103.88	111.07
2	D	421	ALA	CA-C-N	6.72	131.94	120.72
2	D	421	ALA	C-N-CA	6.72	131.94	120.72
1	C	132	LYS	N-CA-C	6.72	119.48	110.35
1	A	143	ARG	N-CA-C	-6.71	104.84	113.16
1	A	381	ARG	CA-C-N	6.71	130.11	120.79
1	A	381	ARG	C-N-CA	6.71	130.11	120.79
7	S	39	LEU	CA-C-N	6.71	130.11	120.79
7	S	39	LEU	C-N-CA	6.71	130.11	120.79
10	V	8	VAL	O-C-N	-6.71	115.58	122.75
2	D	24	GLN	N-CA-C	-6.71	98.28	109.07
7	S	72	MET	CA-C-N	6.69	134.32	121.54
7	S	72	MET	C-N-CA	6.69	134.32	121.54
3	G	102	GLU	N-CA-C	6.69	120.36	109.59
1	B	279	ARG	CA-C-N	6.68	129.13	120.44
1	B	279	ARG	C-N-CA	6.68	129.13	120.44
2	D	17	ILE	N-CA-C	-6.68	94.72	106.61
2	D	248	GLY	CA-C-N	6.68	134.30	121.54
2	D	248	GLY	C-N-CA	6.68	134.30	121.54
1	C	264	ALA	N-CA-C	-6.68	99.30	109.85
2	F	25	PHE	N-CA-C	-6.68	98.32	109.07
7	S	13	GLY	CA-C-O	-6.67	116.68	121.88
10	V	36	TYR	N-CA-C	-6.67	103.93	111.07
2	D	441	PHE	CA-C-N	6.65	129.86	120.28
2	D	441	PHE	C-N-CA	6.65	129.86	120.28
4	H	110	ALA	CA-C-N	6.65	129.74	120.29
4	H	110	ALA	C-N-CA	6.65	129.74	120.29
2	F	57	THR	N-CA-C	-6.65	98.57	109.40
4	H	91	GLN	N-CA-C	-6.64	96.31	107.80
5	I	7	ALA	N-CA-C	-6.63	96.67	110.80
2	E	112	GLN	N-CA-C	-6.62	99.12	109.72
1	A	488	LYS	N-CA-C	-6.62	96.70	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	100	GLY	N-CA-C	-6.62	97.50	113.18
1	B	336	ALA	CA-C-N	6.62	129.04	120.44
1	B	336	ALA	C-N-CA	6.62	129.04	120.44
1	B	430	GLN	N-CA-C	-6.61	96.71	110.80
4	H	63	VAL	N-CA-C	-6.61	98.92	108.17
1	A	322	THR	N-CA-C	-6.61	98.47	109.24
3	G	111	LYS	N-CA-C	-6.60	105.14	113.72
3	G	51	LEU	N-CA-C	-6.58	93.28	107.49
1	B	44	LEU	CA-C-N	6.57	134.09	121.54
1	B	44	LEU	C-N-CA	6.57	134.09	121.54
2	E	52	HIS	CA-C-O	6.57	127.37	120.54
2	E	35	ALA	N-CA-C	-6.57	99.32	109.76
4	H	105	LEU	CA-C-N	6.57	127.41	119.99
4	H	105	LEU	C-N-CA	6.57	127.41	119.99
2	E	208	LEU	N-CA-C	-6.56	104.90	113.17
2	D	41	ARG	CA-C-N	6.56	129.37	120.38
2	D	41	ARG	C-N-CA	6.56	129.37	120.38
1	A	173	THR	N-CA-C	-6.56	102.37	111.81
2	F	204	GLY	N-CA-C	-6.56	106.64	115.36
1	A	176	THR	N-CA-C	-6.55	104.22	111.36
1	B	319	GLY	CA-C-N	-6.55	110.26	121.85
1	B	319	GLY	C-N-CA	-6.55	110.26	121.85
1	B	176	THR	N-CA-C	-6.54	104.08	111.14
1	C	62	MET	N-CA-C	-6.54	98.32	109.24
2	F	370	VAL	N-CA-C	-6.54	103.95	110.62
1	B	66	LEU	N-CA-C	-6.53	97.03	108.20
3	G	8	ARG	N-CA-C	-6.53	104.08	111.07
1	B	62	MET	N-CA-C	-6.53	98.34	109.24
1	C	196	LYS	N-CA-C	-6.52	105.06	114.12
2	F	229	ARG	CA-C-N	6.52	129.02	120.28
2	F	229	ARG	C-N-CA	6.52	129.02	120.28
1	B	140	ILE	N-CA-C	-6.52	99.34	108.27
2	E	23	VAL	N-CA-C	-6.51	98.75	108.46
1	A	46	ASN	N-CA-C	-6.51	104.09	113.21
1	A	404	ALA	N-CA-C	-6.51	104.37	112.90
1	C	347	ASP	N-CA-C	-6.51	102.69	111.87
3	G	93	ALA	N-CA-C	6.50	124.65	110.80
2	F	162	LYS	N-CA-C	-6.49	104.12	111.07
1	C	202	ILE	N-CA-C	-6.49	98.17	107.77
3	G	248	LEU	N-CA-C	-6.48	103.25	112.13
1	A	57	SER	N-CA-C	-6.47	104.06	114.09
2	F	438	ILE	CA-C-N	6.47	128.85	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	438	ILE	C-N-CA	6.47	128.85	120.44
1	C	412	ALA	CA-C-N	6.46	129.27	120.54
1	C	412	ALA	C-N-CA	6.46	129.27	120.54
2	E	84	ILE	CA-C-N	6.46	126.42	119.76
2	E	84	ILE	C-N-CA	6.46	126.42	119.76
2	E	283	PRO	O-C-N	6.46	129.47	122.17
2	E	438	ILE	CA-C-N	6.46	128.83	120.44
2	E	438	ILE	C-N-CA	6.46	128.83	120.44
1	A	505	LEU	N-CA-C	-6.45	104.17	111.07
1	A	506	ALA	CA-C-N	6.45	127.10	120.00
1	A	506	ALA	C-N-CA	6.45	127.10	120.00
2	D	406	ARG	N-CA-C	-6.45	104.18	111.14
1	C	328	GLU	N-CA-C	-6.45	98.22	108.73
1	C	146	MET	N-CA-C	-6.44	97.07	110.80
1	A	429	LYS	N-CA-C	-6.44	98.77	109.46
2	F	201	ILE	CA-C-N	6.44	129.23	120.54
2	F	201	ILE	C-N-CA	6.44	129.23	120.54
1	C	195	GLU	N-CA-C	-6.43	105.72	112.93
1	B	260	ASN	N-CA-C	-6.43	101.91	111.81
2	D	209	LYS	N-CA-C	-6.42	103.98	113.61
2	E	471	ASP	CA-C-N	6.42	129.53	120.28
2	E	471	ASP	C-N-CA	6.42	129.53	120.28
1	A	437	ALA	CA-C-N	6.42	129.25	120.46
1	A	437	ALA	C-N-CA	6.42	129.25	120.46
1	B	26	GLU	N-CA-C	-6.42	104.66	114.16
1	C	330	GLN	N-CA-C	-6.42	98.81	109.46
2	D	50	ALA	N-CA-C	-6.41	105.35	113.43
1	A	362	ARG	N-CA-C	-6.41	94.88	108.73
8	T	121	ARG	N-CA-C	6.41	124.44	110.80
1	B	380	THR	CA-C-N	6.40	128.86	120.28
1	B	380	THR	C-N-CA	6.40	128.86	120.28
1	C	176	THR	N-CA-C	-6.40	104.38	111.36
2	E	178	GLY	N-CA-C	-6.40	105.22	115.08
1	A	61	GLY	N-CA-C	-6.40	98.57	110.73
1	B	27	GLU	N-CA-C	-6.40	104.69	114.16
1	B	162	GLY	N-CA-C	-6.39	98.02	113.18
3	G	4	LYS	CA-C-N	6.39	129.17	120.54
3	G	4	LYS	C-N-CA	6.39	129.17	120.54
2	D	449	TYR	N-CA-C	-6.39	98.96	108.99
2	F	96	ASN	N-CA-C	-6.39	99.92	109.94
2	E	36	LEU	N-CA-C	-6.38	99.51	109.72
2	F	276	PRO	N-CA-C	-6.38	99.33	112.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	175	LYS	CA-C-O	6.38	127.31	120.55
5	I	41	THR	N-CA-C	-6.38	102.89	110.41
9	U	27	SER	CA-C-N	6.37	128.82	120.28
9	U	27	SER	C-N-CA	6.37	128.82	120.28
2	D	163	THR	N-CA-C	-6.36	104.35	111.28
9	U	104	GLN	CA-C-N	6.36	129.32	120.29
9	U	104	GLN	C-N-CA	6.36	129.32	120.29
2	E	399	GLU	N-CA-C	-6.36	104.43	111.36
2	F	395	GLU	N-CA-C	-6.35	103.02	113.50
2	E	177	HIS	N-CA-C	-6.35	104.08	113.61
1	A	16	ILE	CA-C-N	6.34	131.32	120.72
1	A	16	ILE	C-N-CA	6.34	131.32	120.72
1	C	327	ILE	N-CA-C	-6.34	98.99	108.12
3	G	170	SER	CA-C-O	6.34	127.87	120.89
2	F	398	GLU	CA-C-N	6.33	129.28	120.29
2	F	398	GLU	C-N-CA	6.33	129.28	120.29
1	B	171	ARG	N-CA-C	6.33	124.29	110.80
1	B	300	TYR	CA-C-N	6.33	129.09	120.54
1	B	300	TYR	C-N-CA	6.33	129.09	120.54
3	G	184	ILE	N-CA-C	-6.33	104.11	111.00
1	C	174	GLY	N-CA-C	-6.32	98.20	113.18
1	C	247	PRO	CA-C-N	6.32	129.27	120.29
1	C	247	PRO	C-N-CA	6.32	129.27	120.29
1	C	296	GLY	N-CA-C	6.30	121.79	114.16
7	S	46	LEU	CA-C-N	6.30	130.77	120.63
7	S	46	LEU	C-N-CA	6.30	130.77	120.63
1	A	70	ASN	N-CA-C	-6.29	99.41	108.60
1	B	88	VAL	N-CA-C	-6.29	99.30	108.11
1	C	480	LEU	CA-C-N	6.29	127.10	119.99
1	C	480	LEU	C-N-CA	6.29	127.10	119.99
3	G	268	GLY	N-CA-C	-6.29	106.86	114.66
1	A	16	ILE	O-C-N	6.28	128.75	121.96
1	B	125	ALA	N-CA-C	-6.28	100.34	110.32
1	A	334	VAL	CA-C-N	6.28	128.69	120.28
1	A	334	VAL	C-N-CA	6.28	128.69	120.28
4	H	138	ASN	CA-C-N	6.27	128.59	120.44
4	H	138	ASN	C-N-CA	6.27	128.59	120.44
1	C	488	LYS	N-CA-C	-6.26	99.00	108.52
3	G	40	PRO	CA-C-N	6.26	128.96	120.38
3	G	40	PRO	C-N-CA	6.26	128.96	120.38
2	E	99	GLY	N-CA-C	-6.26	104.82	115.08
4	H	128	ARG	CA-C-N	6.25	128.98	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	H	128	ARG	C-N-CA	6.25	128.98	120.54
3	G	92	GLU	N-CA-C	6.25	124.11	110.80
1	A	338	ILE	N-CA-C	-6.25	104.86	112.35
1	A	387	ALA	N-CA-C	6.24	118.17	111.36
1	B	117	GLY	N-CA-C	-6.24	106.53	115.64
1	B	287	ARG	N-CA-C	-6.24	100.71	110.14
2	F	360	PRO	CA-C-N	6.24	133.46	121.54
2	F	360	PRO	C-N-CA	6.24	133.46	121.54
2	D	225	PRO	CA-C-N	6.23	125.72	119.24
2	D	225	PRO	C-N-CA	6.23	125.72	119.24
1	C	370	SER	N-CA-C	-6.23	98.75	108.90
2	F	387	ILE	N-CA-C	-6.23	104.67	110.53
1	B	419	SER	CA-C-N	6.22	128.94	120.54
1	B	419	SER	C-N-CA	6.22	128.94	120.54
3	G	196	ILE	N-CA-C	-6.22	99.53	108.42
4	H	64	VAL	N-CA-C	-6.21	98.58	107.77
1	B	126	ARG	N-CA-C	-6.21	99.86	109.24
1	C	102	GLU	CA-C-N	6.21	132.29	122.11
1	C	102	GLU	C-N-CA	6.21	132.29	122.11
1	B	387	ALA	N-CA-C	6.20	118.12	111.36
1	C	427	LEU	N-CA-C	6.20	119.01	111.82
3	G	109	GLY	N-CA-C	-6.20	98.50	113.18
4	H	137	ALA	CA-C-N	6.20	128.58	120.28
4	H	137	ALA	C-N-CA	6.20	128.58	120.28
4	H	97	ALA	N-CA-C	-6.19	98.18	108.34
1	A	430	GLN	N-CA-C	-6.19	99.33	108.79
1	C	509	GLU	N-CA-C	-6.19	97.62	110.80
2	F	23	VAL	CA-C-N	-6.19	114.39	123.05
2	F	23	VAL	C-N-CA	-6.19	114.39	123.05
2	F	343	GLY	N-CA-C	-6.18	107.17	115.21
10	V	47	LEU	N-CA-C	-6.18	103.85	111.33
1	B	280	GLN	N-CA-C	-6.18	104.46	111.07
2	D	428	LEU	N-CA-C	-6.17	101.80	110.50
3	G	167	SER	N-CA-C	-6.17	98.26	108.07
2	F	304	ILE	N-CA-C	-6.17	97.47	107.28
3	G	76	GLY	N-CA-C	-6.17	101.96	111.64
1	B	40	ARG	N-CA-C	-6.16	99.16	108.96
2	D	60	THR	N-CA-C	-6.16	99.96	109.14
2	E	211	ALA	CA-C-N	6.16	133.31	121.54
2	E	211	ALA	C-N-CA	6.16	133.31	121.54
2	F	126	MET	N-CA-C	-6.15	99.98	109.76
4	H	26	VAL	N-CA-C	-6.14	99.52	108.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	330	GLN	N-CA-C	-6.14	98.26	108.75
2	F	26	ASP	N-CA-C	-6.13	104.29	112.94
4	H	132	GLN	N-CA-C	-6.12	104.52	111.07
1	A	287	ARG	CA-C-O	-6.12	114.64	119.66
1	A	15	ARG	CA-C-N	6.12	128.78	120.77
1	A	15	ARG	C-N-CA	6.12	128.78	120.77
1	B	321	LEU	N-CA-C	-6.12	98.11	108.26
2	E	422	GLU	N-CA-C	-6.12	104.72	111.82
2	F	364	GLY	N-CA-C	-6.12	98.68	113.18
1	B	182	THR	CA-C-N	6.12	128.27	120.56
1	B	182	THR	C-N-CA	6.12	128.27	120.56
2	E	404	VAL	N-CA-C	-6.12	104.55	110.42
1	A	267	ILE	N-CA-C	-6.11	98.83	107.75
1	B	299	PHE	N-CA-C	-6.11	103.95	111.40
2	D	311	TYR	N-CA-C	-6.11	100.55	110.20
1	B	298	VAL	N-CA-C	-6.10	104.02	112.50
1	C	102	GLU	N-CA-C	-6.10	104.21	112.26
2	F	418	PHE	CA-C-N	6.10	128.95	120.29
2	F	418	PHE	C-N-CA	6.10	128.95	120.29
1	B	476	HIS	N-CA-C	-6.09	105.68	112.57
2	E	41	ARG	CA-C-N	6.09	128.94	120.29
2	E	41	ARG	C-N-CA	6.09	128.94	120.29
3	G	227	ALA	N-CA-C	-6.09	104.56	112.23
2	E	226	PRO	CA-C-N	6.09	126.87	119.99
2	E	226	PRO	C-N-CA	6.09	126.87	119.99
3	G	189	SER	CA-C-N	6.09	128.72	120.38
3	G	189	SER	C-N-CA	6.09	128.72	120.38
2	E	270	ALA	CA-C-N	6.08	129.56	120.31
2	E	270	ALA	C-N-CA	6.08	129.56	120.31
7	S	6	ARG	O-C-N	6.08	126.16	121.23
1	A	191	ASP	N-CA-C	-6.07	105.87	113.28
2	E	72	GLY	N-CA-C	-6.06	106.88	115.43
1	C	452	TYR	N-CA-C	-6.06	103.61	113.19
2	E	340	ALA	CA-C-N	6.06	129.52	120.31
2	E	340	ALA	C-N-CA	6.06	129.52	120.31
1	A	194	ASP	CA-C-N	6.05	131.74	121.14
1	A	194	ASP	C-N-CA	6.05	131.74	121.14
4	H	90	VAL	N-CA-C	-6.05	99.44	108.46
1	A	30	ARG	N-CA-C	-6.05	99.54	109.40
1	A	279	ARG	CA-C-N	6.05	128.70	120.54
1	A	279	ARG	C-N-CA	6.05	128.70	120.54
1	A	38	ILE	N-CA-C	-6.05	98.82	107.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	264	ALA	CA-C-N	6.04	126.69	119.98
2	E	264	ALA	C-N-CA	6.04	126.69	119.98
4	H	39	PRO	N-CA-C	-6.04	100.02	112.47
1	C	46	ASN	N-CA-C	-6.04	104.73	114.09
10	V	12	PHE	CA-C-O	-6.04	114.15	120.55
1	A	400	VAL	N-CA-C	-6.03	104.53	113.39
2	D	299	THR	N-CA-C	-6.03	99.56	109.80
2	F	420	VAL	N-CA-C	-6.02	104.98	110.82
1	B	365	ILE	N-CA-C	6.02	118.29	109.63
2	E	141	ASP	N-CA-C	6.01	117.83	111.28
1	B	151	LYS	CA-C-N	6.00	128.61	120.38
1	B	151	LYS	C-N-CA	6.00	128.61	120.38
2	D	438	ILE	CA-C-N	6.00	128.24	120.44
2	D	438	ILE	C-N-CA	6.00	128.24	120.44
1	B	128	ARG	N-CA-C	-6.00	101.17	110.10
1	B	400	VAL	N-CA-C	-5.99	105.85	113.22
1	B	239	ALA	CA-C-N	5.99	128.49	120.58
1	B	239	ALA	C-N-CA	5.99	128.49	120.58
1	B	113	ASN	N-CA-C	-5.99	99.14	108.90
2	F	338	ALA	CA-C-N	5.98	128.91	120.42
2	F	338	ALA	C-N-CA	5.98	128.91	120.42
10	V	35	GLU	CA-C-N	5.98	128.22	120.44
10	V	35	GLU	C-N-CA	5.98	128.22	120.44
2	E	121	PRO	N-CA-C	-5.98	100.15	112.47
3	G	183	THR	N-CA-C	-5.98	105.95	113.72
2	F	422	GLU	N-CA-C	-5.98	105.48	112.89
2	F	105	ARG	N-CA-C	-5.97	103.45	111.87
2	F	243	PHE	N-CA-C	5.96	119.66	112.38
1	A	239	ALA	N-CA-C	-5.96	101.66	110.48
1	C	96	ASP	N-CA-C	-5.96	100.27	109.14
1	C	51	GLU	CA-C-N	5.94	129.27	120.95
1	C	51	GLU	C-N-CA	5.94	129.27	120.95
1	C	411	ASP	CA-C-N	5.94	128.24	120.28
1	C	411	ASP	C-N-CA	5.94	128.24	120.28
2	F	471	ASP	N-CA-C	5.94	117.56	111.14
1	C	314	ASP	N-CA-C	5.94	118.54	111.71
2	E	221	GLN	N-CA-C	5.94	117.71	110.41
2	F	318	THR	N-CA-C	-5.93	104.89	111.71
1	B	163	GLN	CA-C-N	5.92	129.76	121.24
1	B	163	GLN	C-N-CA	5.92	129.76	121.24
4	H	100	LEU	CA-C-N	5.92	132.84	121.54
4	H	100	LEU	C-N-CA	5.92	132.84	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	84	ILE	O-C-N	-5.91	117.97	121.69
1	B	430	GLN	CA-C-N	5.90	125.71	120.10
1	B	430	GLN	C-N-CA	5.90	125.71	120.10
1	C	109	ASP	N-CA-C	-5.90	102.03	110.59
2	F	29	LEU	CA-C-N	5.90	126.46	120.38
2	F	29	LEU	C-N-CA	5.90	126.46	120.38
2	E	262	THR	N-CA-C	-5.90	104.77	111.14
1	C	503	ASN	CA-C-N	5.89	128.10	120.44
1	C	503	ASN	C-N-CA	5.89	128.10	120.44
1	B	431	GLY	N-CA-C	-5.89	105.16	111.93
1	A	381	ARG	O-C-N	5.89	128.36	122.12
1	A	300	TYR	CA-C-N	5.88	128.48	120.54
1	A	300	TYR	C-N-CA	5.88	128.48	120.54
1	A	67	GLU	N-CA-C	-5.88	101.41	110.58
2	F	13	ILE	CA-C-N	-5.88	115.20	121.84
2	F	13	ILE	C-N-CA	-5.88	115.20	121.84
1	B	81	LEU	N-CA-C	-5.87	105.77	113.17
1	B	233	SER	CA-C-N	5.87	131.99	123.13
1	B	233	SER	C-N-CA	5.87	131.99	123.13
1	C	27	GLU	N-CA-C	-5.87	100.78	109.11
2	D	188	GLU	N-CA-C	-5.87	100.14	109.23
11	W	88	LEU	O-C-N	5.86	128.06	121.32
2	F	212	THR	N-CA-C	-5.86	103.48	111.56
7	S	52	ALA	CA-C-N	-5.85	110.36	121.54
7	S	52	ALA	C-N-CA	-5.85	110.36	121.54
1	C	63	SER	N-CA-C	-5.85	96.98	107.98
1	C	493	SER	CA-C-N	5.85	128.05	120.44
1	C	493	SER	C-N-CA	5.85	128.05	120.44
1	A	56	SER	N-CA-C	-5.85	104.76	112.72
1	A	476	HIS	N-CA-C	-5.85	106.77	112.97
1	C	52	MET	N-CA-C	-5.85	101.19	109.96
2	D	182	VAL	N-CA-C	-5.85	99.75	108.46
2	D	353	SER	N-CA-C	-5.85	97.43	107.61
2	F	367	HIS	CA-C-N	5.84	128.04	120.44
2	F	367	HIS	C-N-CA	5.84	128.04	120.44
2	F	470	ALA	CA-C-N	5.84	128.39	120.44
2	F	470	ALA	C-N-CA	5.84	128.39	120.44
8	T	87	LYS	N-CA-C	5.84	117.64	111.28
1	C	190	ASN	N-CA-C	-5.83	105.66	112.89
1	C	134	PRO	N-CA-C	5.83	119.66	111.33
10	V	56	MET	N-CA-C	5.83	120.12	113.19
1	A	366	ASN	CA-C-N	5.82	127.90	120.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	366	ASN	C-N-CA	5.82	127.90	120.56
1	C	206	ILE	CA-C-N	5.82	130.90	120.77
1	C	206	ILE	C-N-CA	5.82	130.90	120.77
1	A	357	PHE	CA-C-N	5.82	128.56	120.29
1	A	357	PHE	C-N-CA	5.82	128.56	120.29
2	F	205	VAL	N-CA-C	-5.82	105.10	113.07
1	A	23	VAL	CA-C-N	5.82	128.00	120.44
1	A	23	VAL	C-N-CA	5.82	128.00	120.44
2	D	111	LYS	N-CA-C	-5.81	98.42	110.80
2	F	302	GLY	N-CA-C	-5.81	103.91	111.52
2	E	137	ILE	CA-C-N	5.80	127.98	120.44
2	E	137	ILE	C-N-CA	5.80	127.98	120.44
1	B	420	ARG	CA-C-N	5.79	126.37	119.94
1	B	420	ARG	C-N-CA	5.79	126.37	119.94
2	D	145	PRO	N-CA-C	-5.79	100.54	112.47
4	H	60	PRO	N-CA-C	-5.79	101.41	111.32
2	E	78	SER	N-CA-C	-5.78	106.18	113.18
4	H	62	LEU	CA-C-N	-5.78	116.02	123.19
4	H	62	LEU	C-N-CA	-5.78	116.02	123.19
1	C	335	SER	N-CA-C	-5.78	105.49	112.54
1	B	203	TYR	N-CA-C	-5.78	97.91	108.02
2	F	60	THR	N-CA-C	-5.77	100.55	109.14
1	B	80	LYS	N-CA-C	-5.77	106.10	113.02
2	D	343	GLY	N-CA-C	-5.76	107.29	115.30
1	A	467	ALA	CA-C-N	5.76	128.00	120.28
1	A	467	ALA	C-N-CA	5.76	128.00	120.28
2	D	132	ILE	N-CA-C	5.76	116.84	109.30
2	E	209	LYS	N-CA-C	-5.76	105.84	112.92
8	T	162	ALA	CA-C-N	5.76	130.34	121.19
8	T	162	ALA	C-N-CA	5.76	130.34	121.19
1	C	94	ILE	N-CA-C	-5.75	101.29	108.89
1	B	123	SER	CA-C-O	5.75	127.04	120.54
1	B	223	ALA	CA-C-N	5.75	132.52	121.54
1	B	223	ALA	C-N-CA	5.75	132.52	121.54
1	B	330	GLN	N-CA-C	-5.75	98.91	108.34
3	G	108	VAL	N-CA-C	-5.75	99.47	107.80
1	B	360	GLY	N-CA-C	-5.75	107.13	114.37
2	E	331	ALA	N-CA-C	-5.75	99.79	108.52
1	B	508	PHE	N-CA-C	-5.74	98.57	110.80
2	F	138	LYS	CA-C-N	5.74	128.32	120.46
2	F	138	LYS	C-N-CA	5.74	128.32	120.46
2	F	189	ARG	N-CA-C	-5.74	100.33	109.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	U	54	TYR	CA-C-N	5.73	128.28	120.54
9	U	54	TYR	C-N-CA	5.73	128.28	120.54
1	A	261	GLY	CA-C-N	5.73	132.48	121.54
1	A	261	GLY	C-N-CA	5.73	132.48	121.54
11	W	175	GLY	CA-C-N	5.72	126.44	120.03
11	W	175	GLY	C-N-CA	5.72	126.44	120.03
1	B	322	THR	N-CA-C	-5.72	99.92	109.24
2	F	93	ARG	N-CA-C	-5.72	100.86	109.95
8	T	93	ASP	N-CA-C	-5.71	104.97	111.14
1	C	411	ASP	O-C-N	-5.71	116.97	123.48
2	E	201	ILE	CA-C-N	5.70	128.24	120.54
2	E	201	ILE	C-N-CA	5.70	128.24	120.54
3	G	168	VAL	N-CA-C	5.70	116.35	110.36
1	A	25	LEU	N-CA-C	-5.70	104.28	111.92
3	G	125	LEU	N-CA-C	-5.70	105.42	112.72
2	E	431	LEU	N-CA-C	-5.70	99.38	109.06
3	G	135	PRO	CA-C-N	5.70	126.96	119.84
3	G	135	PRO	C-N-CA	5.70	126.96	119.84
2	E	425	THR	N-CA-C	-5.69	104.69	111.69
1	A	95	VAL	N-CA-C	5.69	117.65	109.51
1	A	415	GLN	CA-C-N	5.69	127.84	120.44
1	A	415	GLN	C-N-CA	5.69	127.84	120.44
2	E	289	MET	CA-C-N	5.69	126.26	119.94
2	E	289	MET	C-N-CA	5.69	126.26	119.94
2	D	176	ALA	CA-C-N	5.68	132.40	121.54
2	D	176	ALA	C-N-CA	5.68	132.40	121.54
2	D	49	VAL	N-CA-C	-5.68	102.25	109.58
4	H	102	MET	N-CA-C	-5.68	105.08	113.61
2	F	113	PHE	N-CA-C	-5.68	100.88	109.85
7	S	70	SER	CA-C-O	-5.68	112.91	119.61
2	E	304	ILE	N-CA-C	-5.68	98.25	107.28
7	S	7	PRO	CA-C-N	5.68	126.94	119.84
7	S	7	PRO	C-N-CA	5.68	126.94	119.84
2	D	115	ALA	N-CA-C	-5.67	100.74	109.76
1	A	371	VAL	CA-C-N	5.67	130.76	122.77
1	A	371	VAL	C-N-CA	5.67	130.76	122.77
2	F	209	LYS	CA-C-N	5.66	130.81	121.86
2	F	209	LYS	C-N-CA	5.66	130.81	121.86
7	S	71	ASP	O-C-N	-5.66	115.06	122.59
2	F	254	PHE	N-CA-C	-5.66	100.02	109.24
4	H	119	LEU	CA-C-N	5.65	128.42	120.28
4	H	119	LEU	C-N-CA	5.65	128.42	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	430	LYS	N-CA-C	-5.65	100.71	109.24
2	D	13	ILE	N-CA-C	-5.64	101.39	108.84
2	D	278	ALA	N-CA-C	-5.64	101.93	110.28
2	F	30	PRO	CA-C-N	5.64	126.89	119.84
2	F	30	PRO	C-N-CA	5.64	126.89	119.84
2	F	287	THR	N-CA-C	-5.64	105.21	111.36
2	E	26	ASP	N-CA-C	-5.64	105.99	112.92
1	C	172	GLN	O-C-N	5.63	130.08	122.59
1	A	105	GLY	N-CA-C	-5.62	106.73	115.67
3	G	261	GLU	N-CA-C	-5.62	103.95	112.04
1	B	47	VAL	O-C-N	5.62	129.59	122.57
1	C	484	ARG	N-CA-C	-5.62	105.06	111.07
2	D	438	ILE	O-C-N	5.61	127.41	121.91
2	F	351	LEU	N-CA-C	-5.61	106.47	113.15
3	G	113	ARG	N-CA-C	-5.61	96.08	107.41
9	U	51	TRP	CA-C-O	-5.60	114.94	120.82
2	F	206	ILE	N-CA-C	-5.59	98.38	106.88
1	A	354	THR	N-CA-C	5.59	117.38	111.28
2	F	397	SER	CA-C-N	5.59	128.33	120.28
2	F	397	SER	C-N-CA	5.59	128.33	120.28
4	H	73	SER	N-CA-C	-5.59	101.17	110.17
10	V	24	GLN	N-CA-C	-5.59	106.78	113.21
1	C	286	ARG	CA-C-N	5.59	128.82	120.83
1	C	286	ARG	C-N-CA	5.59	128.82	120.83
1	C	322	THR	N-CA-C	-5.59	100.13	109.24
2	E	387	ILE	N-CA-C	-5.58	105.28	110.53
2	E	412	ARG	N-CA-C	-5.58	105.20	112.23
1	A	501	VAL	N-CA-C	-5.58	105.06	110.42
7	S	25	ALA	CA-C-N	5.57	130.11	120.58
7	S	25	ALA	C-N-CA	5.57	130.11	120.58
1	A	277	ALA	CA-C-N	5.57	127.74	120.28
1	A	277	ALA	C-N-CA	5.57	127.74	120.28
7	S	89	LEU	CA-C-N	5.57	128.02	120.44
7	S	89	LEU	C-N-CA	5.57	128.02	120.44
2	D	85	PRO	CA-C-O	-5.57	114.99	121.34
2	D	143	LEU	N-CA-C	-5.57	104.71	112.45
2	D	314	ALA	CA-C-N	5.56	130.25	122.08
2	D	314	ALA	C-N-CA	5.56	130.25	122.08
1	C	164	ARG	N-CA-C	-5.56	98.96	110.80
2	D	100	GLU	N-CA-C	-5.56	103.12	110.40
2	D	225	PRO	N-CA-C	-5.54	103.94	110.70
1	B	200	TYR	CA-C-N	-5.54	114.39	122.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	200	TYR	C-N-CA	-5.54	114.39	122.65
2	D	370	VAL	N-CA-C	-5.54	104.97	110.62
9	U	7	THR	CA-C-N	-5.54	115.58	123.11
9	U	7	THR	C-N-CA	-5.54	115.58	123.11
1	A	491	GLU	CA-C-N	5.54	127.97	120.44
1	A	491	GLU	C-N-CA	5.54	127.97	120.44
2	E	24	GLN	N-CA-C	-5.54	100.15	109.07
2	F	16	VAL	CA-C-N	-5.54	115.47	123.11
2	F	16	VAL	C-N-CA	-5.54	115.47	123.11
1	A	391	LYS	CA-C-O	5.54	126.42	120.55
2	F	387	ILE	CA-C-N	5.53	128.04	120.46
2	F	387	ILE	C-N-CA	5.53	128.04	120.46
2	F	311	TYR	N-CA-C	-5.53	101.46	110.20
1	A	350	ILE	CA-C-N	5.53	129.98	122.19
1	A	350	ILE	C-N-CA	5.53	129.98	122.19
2	F	110	THR	CA-C-N	5.52	128.13	120.29
2	F	110	THR	C-N-CA	5.52	128.13	120.29
2	E	249	GLN	CA-C-N	5.51	131.16	122.34
2	E	249	GLN	C-N-CA	5.51	131.16	122.34
1	A	24	ASP	N-CA-C	-5.51	105.17	111.07
2	D	162	LYS	CA-C-O	5.51	126.61	120.82
3	G	132	GLY	N-CA-C	-5.51	102.07	112.10
9	U	35	LEU	CA-C-N	5.51	127.92	120.65
9	U	35	LEU	C-N-CA	5.51	127.92	120.65
2	D	404	VAL	CA-C-N	5.50	127.65	120.28
2	D	404	VAL	C-N-CA	5.50	127.65	120.28
2	E	338	ALA	N-CA-C	5.50	117.99	111.33
2	F	242	TYR	O-C-N	-5.50	116.40	122.07
1	B	455	LYS	N-CA-C	-5.49	106.43	113.02
2	D	336	SER	CA-C-O	5.49	126.36	120.32
2	E	334	VAL	N-CA-C	-5.49	99.85	107.80
2	E	353	SER	N-CA-C	-5.49	101.53	110.20
10	V	46	LYS	CA-C-N	5.49	127.89	120.38
10	V	46	LYS	C-N-CA	5.49	127.89	120.38
2	F	159	GLY	N-CA-C	-5.48	106.46	114.90
1	C	132	LYS	CA-C-N	5.48	128.98	120.60
1	C	132	LYS	C-N-CA	5.48	128.98	120.60
2	D	122	GLU	CA-C-N	5.48	127.62	120.28
2	D	122	GLU	C-N-CA	5.48	127.62	120.28
1	A	403	PHE	N-CA-C	-5.47	99.14	110.80
1	A	316	PHE	N-CA-C	-5.47	105.91	112.59
2	F	84	ILE	N-CA-C	-5.47	104.70	109.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	361	ASN	CA-C-N	5.47	131.82	121.97
2	F	361	ASN	C-N-CA	5.47	131.82	121.97
2	F	407	ALA	N-CA-C	-5.47	105.32	111.28
3	G	199	ASP	CA-C-O	-5.47	112.69	120.51
1	B	172	GLN	N-CA-C	-5.46	103.85	111.39
2	D	195	ASP	CA-C-N	5.46	128.05	120.29
2	D	195	ASP	C-N-CA	5.46	128.05	120.29
2	E	19	ALA	CA-C-N	-5.46	116.02	123.12
2	E	19	ALA	C-N-CA	-5.46	116.02	123.12
1	A	77	GLY	CA-C-N	5.46	131.97	121.54
1	A	77	GLY	C-N-CA	5.46	131.97	121.54
2	E	85	PRO	CA-C-O	-5.46	115.11	121.34
3	G	2	THR	CA-C-N	5.46	131.96	121.54
3	G	2	THR	C-N-CA	5.46	131.96	121.54
1	C	175	LYS	N-CA-C	-5.46	105.33	111.28
2	D	243	PHE	N-CA-C	5.46	119.19	112.54
4	H	22	SER	N-CA-C	-5.46	97.75	109.81
2	E	302	GLY	N-CA-C	-5.45	103.44	110.69
1	C	120	PRO	CA-C-N	5.45	131.78	121.97
1	C	120	PRO	C-N-CA	5.45	131.78	121.97
1	C	216	LEU	CA-C-N	5.45	127.93	120.46
1	C	216	LEU	C-N-CA	5.45	127.93	120.46
1	C	355	GLU	CA-C-N	5.45	127.53	120.44
1	C	355	GLU	C-N-CA	5.45	127.53	120.44
9	U	24	VAL	CA-C-O	-5.45	115.60	121.27
2	D	304	ILE	N-CA-C	-5.45	98.62	107.28
3	G	70	GLY	N-CA-C	-5.45	101.65	111.19
2	F	256	ASP	N-CA-C	-5.44	98.38	107.80
1	B	457	GLU	N-CA-C	-5.44	97.79	109.81
2	D	95	MET	N-CA-C	-5.43	101.27	109.85
1	B	193	THR	N-CA-C	-5.43	99.24	110.80
1	B	282	SER	N-CA-C	5.43	117.62	111.11
1	B	347	ASP	N-CA-C	-5.43	106.53	112.72
1	C	366	ASN	CA-C-N	5.43	130.04	121.09
1	C	366	ASN	C-N-CA	5.43	130.04	121.09
2	F	52	HIS	N-CA-C	-5.43	98.92	108.20
2	F	85	PRO	CA-C-O	-5.42	115.16	121.34
2	E	169	LEU	CA-C-N	5.42	127.89	120.46
2	E	169	LEU	C-N-CA	5.42	127.89	120.46
2	F	89	GLU	N-CA-C	-5.42	106.65	113.20
1	C	58	GLY	CA-C-N	5.41	131.88	121.54
1	C	58	GLY	C-N-CA	5.41	131.88	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	452	LEU	N-CA-C	-5.41	102.84	110.31
2	D	266	SER	CA-C-N	5.41	127.52	120.28
2	D	266	SER	C-N-CA	5.41	127.52	120.28
2	E	398	GLU	CA-C-N	5.41	127.97	120.29
2	E	398	GLU	C-N-CA	5.41	127.97	120.29
10	V	59	PHE	CA-C-N	5.40	126.59	119.84
10	V	59	PHE	C-N-CA	5.40	126.59	119.84
2	F	117	HIS	N-CA-C	-5.40	100.89	109.96
7	S	34	GLN	CA-C-N	5.40	129.17	121.02
7	S	34	GLN	C-N-CA	5.40	129.17	121.02
1	C	34	ILE	CA-C-O	5.39	126.41	120.64
2	E	46	VAL	N-CA-C	-5.39	100.67	108.87
2	E	155	PHE	N-CA-C	-5.39	101.78	110.14
1	B	318	GLY	CA-C-N	5.39	131.98	121.41
1	B	318	GLY	C-N-CA	5.39	131.98	121.41
2	D	217	LEU	N-CA-C	-5.39	100.91	109.59
1	C	41	VAL	N-CA-C	-5.39	100.56	108.11
1	A	350	ILE	N-CA-C	5.39	115.34	107.37
1	B	358	TYR	N-CA-C	-5.39	105.49	111.36
3	G	230	THR	N-CA-C	-5.39	105.31	111.07
4	H	55	LEU	N-CA-C	-5.39	99.66	108.76
2	F	20	VAL	CA-C-N	-5.38	116.09	123.14
2	F	20	VAL	C-N-CA	-5.38	116.09	123.14
1	C	124	LYS	N-CA-C	-5.38	104.41	112.54
1	C	80	LYS	CA-C-N	5.38	127.43	120.44
1	C	80	LYS	C-N-CA	5.38	127.43	120.44
2	E	409	LYS	CA-C-N	5.38	127.34	120.56
2	E	409	LYS	C-N-CA	5.38	127.34	120.56
1	B	109	ASP	N-CA-C	-5.38	103.29	110.55
3	G	44	TYR	CA-C-N	5.37	125.91	120.00
3	G	44	TYR	C-N-CA	5.37	125.91	120.00
2	F	285	LEU	CA-C-N	5.37	127.92	120.29
2	F	285	LEU	C-N-CA	5.37	127.92	120.29
1	B	240	ALA	CA-C-O	-5.37	113.39	118.33
3	G	39	LYS	N-CA-C	5.37	121.67	109.81
2	D	450	ASP	CA-C-N	5.36	128.00	120.28
2	D	450	ASP	C-N-CA	5.36	128.00	120.28
3	G	130	GLU	CA-C-N	5.36	127.32	120.56
3	G	130	GLU	C-N-CA	5.36	127.32	120.56
3	G	139	GLY	CA-C-N	5.36	127.90	120.29
3	G	139	GLY	C-N-CA	5.36	127.90	120.29
2	E	133	LEU	N-CA-C	-5.36	101.27	109.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	G	209	LEU	N-CA-C	-5.36	105.52	111.36
2	F	13	ILE	N-CA-C	-5.36	101.77	108.84
1	B	59	LEU	N-CA-C	-5.35	101.55	110.17
1	B	249	SER	CA-C-N	5.35	126.02	120.03
1	B	249	SER	C-N-CA	5.35	126.02	120.03
2	D	16	VAL	CA-C-N	-5.34	116.33	123.17
2	D	16	VAL	C-N-CA	-5.34	116.33	123.17
2	E	450	ASP	N-CA-C	-5.34	106.61	113.01
4	H	73	SER	CA-C-N	-5.34	114.28	122.87
4	H	73	SER	C-N-CA	-5.34	114.28	122.87
2	D	360	PRO	N-CA-C	-5.33	107.47	114.03
2	D	213	SER	N-CA-C	-5.33	105.55	111.36
1	B	456	LEU	N-CA-C	-5.33	101.33	109.65
2	D	208	LEU	N-CA-C	-5.33	106.09	112.59
1	A	388	GLY	CA-C-O	5.33	126.54	121.05
4	H	122	ALA	CA-C-N	5.33	129.87	121.56
4	H	122	ALA	C-N-CA	5.33	129.87	121.56
9	U	46	PRO	N-CA-C	-5.33	104.20	110.70
9	U	70	LYS	CA-C-N	5.33	127.36	120.44
9	U	70	LYS	C-N-CA	5.33	127.36	120.44
1	A	262	LYS	CA-C-O	5.32	128.12	120.51
2	F	421	ALA	CA-C-N	5.32	130.45	121.14
2	F	421	ALA	C-N-CA	5.32	130.45	121.14
2	D	211	ALA	N-CA-C	-5.32	103.62	111.81
7	S	105	PHE	CA-C-N	5.32	132.74	122.53
7	S	105	PHE	C-N-CA	5.32	132.74	122.53
1	B	49	ALA	N-CA-C	-5.31	99.67	108.75
1	C	400	VAL	N-CA-C	-5.30	106.70	113.22
1	A	353	GLU	CA-C-N	5.30	127.38	120.28
1	A	353	GLU	C-N-CA	5.30	127.38	120.28
3	G	110	ASP	N-CA-C	-5.29	106.14	112.59
2	D	32	ILE	N-CA-C	-5.29	104.24	110.21
1	C	457	GLU	N-CA-C	-5.28	103.41	110.07
2	D	75	VAL	N-CA-C	-5.28	100.59	108.46
1	C	501	VAL	N-CA-C	-5.28	105.35	110.42
1	B	201	CYS	N-CA-C	-5.27	101.12	109.76
2	D	162	LYS	CA-C-N	5.27	127.34	120.28
2	D	162	LYS	C-N-CA	5.27	127.34	120.28
7	S	23	TYR	CA-C-O	-5.27	115.27	120.90
2	D	128	VAL	N-CA-C	5.26	116.04	110.72
2	E	51	GLN	N-CA-C	-5.26	101.07	109.23
2	F	29	LEU	CA-C-O	-5.26	114.93	120.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	404	ALA	N-CA-C	-5.26	99.59	110.80
2	D	351	LEU	N-CA-C	-5.26	104.23	111.81
1	A	249	SER	CA-C-N	5.26	125.92	120.03
1	A	249	SER	C-N-CA	5.26	125.92	120.03
1	A	408	SER	N-CA-C	-5.25	99.61	110.80
1	B	67	GLU	O-C-N	-5.25	117.36	121.14
1	C	373	ARG	CA-C-N	5.25	131.43	121.97
1	C	373	ARG	C-N-CA	5.25	131.43	121.97
2	E	211	ALA	N-CA-C	-5.25	104.24	111.81
1	C	495	ALA	N-CA-C	-5.25	105.64	111.36
2	E	394	ASP	CA-C-N	5.25	131.57	121.54
2	E	394	ASP	C-N-CA	5.25	131.57	121.54
2	E	58	VAL	O-C-N	5.25	128.59	122.97
2	E	356	ARG	N-CA-C	-5.25	106.46	112.92
1	B	225	ALA	N-CA-C	-5.25	106.65	113.16
2	D	25	PHE	N-CA-C	-5.25	101.14	109.59
2	E	463	ILE	N-CA-C	5.25	117.61	111.05
1	B	231	VAL	N-CA-C	-5.24	98.95	107.28
9	U	41	THR	CA-C-O	-5.24	115.51	120.90
1	C	454	ASP	N-CA-C	-5.23	106.40	112.89
5	I	27	LYS	CA-C-N	5.23	127.29	120.28
5	I	27	LYS	C-N-CA	5.23	127.29	120.28
1	A	12	LEU	CA-C-O	-5.23	115.06	120.92
1	C	158	PRO	CA-C-O	-5.23	115.38	121.34
2	E	87	GLY	CA-C-N	5.23	124.94	119.82
2	E	87	GLY	C-N-CA	5.23	124.94	119.82
2	E	255	ILE	N-CA-C	-5.23	100.12	107.75
2	F	366	GLU	CA-C-N	5.22	127.59	120.54
2	F	366	GLU	C-N-CA	5.22	127.59	120.54
3	G	269	ALA	N-CA-C	-5.22	106.50	112.92
1	B	357	PHE	CA-C-N	5.22	127.70	120.29
1	B	357	PHE	C-N-CA	5.22	127.70	120.29
7	S	11	ILE	CA-C-O	-5.22	114.25	120.78
4	H	134	ARG	CA-C-N	5.22	127.14	120.56
4	H	134	ARG	C-N-CA	5.22	127.14	120.56
4	H	75	TYR	N-CA-C	-5.22	100.81	108.79
1	A	433	TYR	N-CA-C	-5.21	104.93	111.92
1	B	216	LEU	CA-C-N	5.21	127.60	120.46
1	B	216	LEU	C-N-CA	5.21	127.60	120.46
1	B	70	ASN	N-CA-C	-5.21	101.34	108.38
2	F	283	PRO	N-CA-C	-5.21	106.94	114.18
7	S	101	VAL	CA-C-N	5.21	127.82	120.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	S	101	VAL	C-N-CA	5.21	127.82	120.42
1	B	89	LYS	N-CA-C	-5.20	100.92	109.40
1	A	489	ILE	N-CA-C	-5.20	100.63	108.12
1	A	115	ILE	CA-C-N	5.20	127.56	120.54
1	A	115	ILE	C-N-CA	5.20	127.56	120.54
7	S	117	PRO	CA-C-N	5.20	131.47	121.54
7	S	117	PRO	C-N-CA	5.20	131.47	121.54
9	U	101	PHE	CA-C-O	-5.19	113.66	120.00
1	C	81	LEU	CA-C-N	5.19	127.56	120.35
1	C	81	LEU	C-N-CA	5.19	127.56	120.35
1	B	158	PRO	CA-C-O	-5.19	115.44	122.08
1	A	145	PRO	N-CA-C	-5.18	101.80	112.47
1	A	280	GLN	N-CA-C	-5.18	104.89	111.11
1	B	306	LEU	N-CA-C	5.18	118.76	112.23
9	U	2	LYS	N-CA-C	5.18	118.89	111.02
2	F	21	VAL	N-CA-C	-5.17	100.87	108.11
2	F	347	ALA	CA-C-N	5.17	131.28	121.97
2	F	347	ALA	C-N-CA	5.17	131.28	121.97
3	G	127	THR	N-CA-C	-5.17	101.22	109.07
1	C	317	GLY	N-CA-C	-5.16	108.50	115.36
2	D	196	LEU	CA-C-N	5.16	127.50	120.54
2	D	196	LEU	C-N-CA	5.16	127.50	120.54
3	G	92	GLU	CA-C-N	5.16	131.39	121.54
3	G	92	GLU	C-N-CA	5.16	131.39	121.54
1	A	34	ILE	CA-C-O	5.16	126.16	120.64
3	G	122	ASP	CA-C-N	5.15	130.44	122.26
3	G	122	ASP	C-N-CA	5.15	130.44	122.26
1	A	261	GLY	N-CA-C	-5.15	100.98	113.18
2	D	361	ASN	N-CA-C	-5.15	99.84	110.80
2	D	63	MET	N-CA-C	-5.14	107.03	113.72
2	F	426	GLY	N-CA-C	-5.14	100.99	113.18
2	D	84	ILE	N-CA-C	-5.14	103.20	109.01
2	D	111	LYS	CA-C-N	5.14	128.14	120.95
2	D	111	LYS	C-N-CA	5.14	128.14	120.95
1	C	72	GLY	N-CA-C	-5.14	101.00	113.18
2	E	447	GLY	CA-C-N	5.14	127.17	120.28
2	E	447	GLY	C-N-CA	5.14	127.17	120.28
1	A	93	ALA	N-CA-C	5.14	117.99	109.46
1	A	140	ILE	N-CA-C	-5.13	101.20	108.65
1	C	110	ALA	N-CA-C	5.12	117.60	111.71
1	C	335	SER	CA-C-N	5.12	131.33	121.54
1	C	335	SER	C-N-CA	5.12	131.33	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	365	ILE	N-CA-C	5.12	120.00	109.34
1	A	175	LYS	CA-C-O	5.12	126.20	120.82
2	D	270	ALA	O-C-N	-5.11	116.77	122.09
2	E	306	SER	CA-C-O	5.11	126.13	120.71
7	S	5	VAL	CA-C-O	-5.11	114.57	121.32
5	I	12	ILE	N-CA-C	5.11	115.72	110.36
2	D	213	SER	O-C-N	5.11	127.97	122.15
2	E	185	GLY	N-CA-C	-5.11	101.08	113.18
2	E	461	GLY	N-CA-C	-5.11	101.92	112.34
1	A	421	GLY	CA-C-N	5.10	127.45	120.46
1	A	421	GLY	C-N-CA	5.10	127.45	120.46
1	B	366	ASN	CA-C-N	5.10	127.67	120.42
1	B	366	ASN	C-N-CA	5.10	127.67	120.42
2	E	292	MET	N-CA-C	-5.10	104.69	112.04
2	E	383	SER	N-CA-C	-5.10	105.80	111.36
2	D	20	VAL	CA-C-N	-5.10	116.46	123.14
2	D	20	VAL	C-N-CA	-5.10	116.46	123.14
2	F	461	GLY	CA-C-N	5.10	125.10	119.90
2	F	461	GLY	C-N-CA	5.10	125.10	119.90
2	F	349	ASP	N-CA-C	-5.09	98.46	109.01
1	A	445	ILE	CA-C-N	5.09	127.36	120.38
1	A	445	ILE	C-N-CA	5.09	127.36	120.38
1	A	203	TYR	N-CA-C	-5.09	99.11	108.02
2	D	73	GLN	N-CA-C	5.08	117.26	110.35
1	B	30	ARG	N-CA-C	-5.08	101.12	109.40
2	F	279	VAL	CA-C-N	-5.08	114.53	122.51
2	F	279	VAL	C-N-CA	-5.08	114.53	122.51
2	F	122	GLU	CA-C-N	5.07	127.08	120.28
2	F	122	GLU	C-N-CA	5.07	127.08	120.28
2	D	36	LEU	N-CA-C	-5.07	101.61	109.72
2	D	336	SER	CA-C-N	5.06	127.06	120.28
2	D	336	SER	C-N-CA	5.06	127.06	120.28
1	A	174	GLY	N-CA-C	-5.06	108.01	115.30
1	C	313	ASN	CA-C-N	5.06	127.57	120.28
1	C	313	ASN	C-N-CA	5.06	127.57	120.28
8	T	105	VAL	N-CA-C	5.06	115.28	110.42
1	B	170	ASP	N-CA-C	5.05	117.92	110.59
5	I	8	GLY	CA-C-N	5.05	131.19	121.54
5	I	8	GLY	C-N-CA	5.05	131.19	121.54
5	I	5	ARG	N-CA-C	-5.05	100.05	110.80
7	S	11	ILE	O-C-N	-5.04	116.27	122.57
9	U	57	ASN	CA-C-O	-5.04	113.38	119.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	330	ASP	CA-C-O	5.04	125.79	120.10
1	C	61	GLY	N-CA-C	-5.03	101.17	110.73
1	C	366	ASN	CA-C-O	5.03	125.77	120.33
1	A	136	ILE	CA-C-N	5.03	123.41	120.24
1	A	136	ILE	C-N-CA	5.03	123.41	120.24
1	B	99	VAL	N-CA-C	-5.03	100.56	108.90
1	C	486	ASP	N-CA-C	5.03	118.67	112.54
2	D	76	LEU	CA-C-N	5.03	127.91	120.82
2	D	76	LEU	C-N-CA	5.03	127.91	120.82
1	A	335	SER	CA-C-N	5.02	131.13	121.54
1	A	335	SER	C-N-CA	5.02	131.13	121.54
2	F	385	GLN	N-CA-C	5.02	117.48	111.71
1	A	133	ALA	CA-C-N	5.02	126.11	119.84
1	A	133	ALA	C-N-CA	5.02	126.11	119.84
1	B	204	VAL	N-CA-C	-5.01	100.67	107.99
2	E	390	ILE	N-CA-C	5.01	115.24	110.53
2	E	369	ASP	CA-C-N	5.01	127.54	120.42
2	E	369	ASP	C-N-CA	5.01	127.54	120.42
1	C	40	ARG	N-CA-C	-5.01	101.14	109.46
2	E	455	GLN	N-CA-C	-5.01	106.95	113.16
3	G	140	ASP	N-CA-C	-5.01	105.90	111.36
1	A	132	LYS	CA-C-N	5.00	127.34	120.39
1	A	132	LYS	C-N-CA	5.00	127.34	120.39

There are no chirality outliers.

All (132) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	406	PHE	Mainchain,Peptide
1	A	408	SER	Mainchain
1	A	509	GLU	Mainchain
1	B	379	GLN	Peptide
1	B	400	VAL	Mainchain
1	B	78	ASN	Mainchain
1	C	173	THR	Mainchain
1	C	365	ILE	Peptide
1	C	403	PHE	Mainchain
2	D	213	SER	Mainchain
2	E	110	THR	Mainchain
2	E	160	VAL	Mainchain
2	E	25	PHE	Mainchain
2	E	351	LEU	Mainchain

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Mol	Chain	Res	Type	Group
2	E	397	SER	Mainchain
2	F	205	VAL	Peptide
2	F	359	ASP	Mainchain
2	F	397	SER	Mainchain
2	F	63	MET	Mainchain
3	G	116	LEU	Mainchain
3	G	200	VAL	Mainchain
3	G	56	ASP	Mainchain
3	G	92	GLU	Mainchain,Peptide
4	H	37	ASP	Peptide
4	H	97	ALA	Mainchain
7	S	10	GLN	Mainchain
7	S	107	THR	Peptide
7	S	108	MET	Mainchain
7	S	109	MET	Mainchain
7	S	11	ILE	Mainchain
7	S	110	SER	Peptide
7	S	111	VAL	Mainchain
7	S	123	ALA	Mainchain
7	S	124	SER	Mainchain
7	S	126	LEU	Mainchain
7	S	131	LEU	Mainchain
7	S	133	GLU	Mainchain
7	S	134	LEU	Mainchain
7	S	136	THR	Mainchain
7	S	141	PHE	Mainchain
7	S	142	LEU	Peptide
7	S	150	LEU	Mainchain,Peptide
7	S	152	VAL	Mainchain,Peptide
7	S	155	ASP	Mainchain
7	S	156	PRO	Mainchain,Peptide
7	S	19	ALA	Mainchain
7	S	37	LYS	Peptide
7	S	42	VAL	Mainchain
7	S	48	GLU	Mainchain
7	S	52	ALA	Peptide
7	S	60	VAL	Mainchain,Peptide
7	S	63	SER	Mainchain
7	S	69	LEU	Peptide
7	S	73	THR	Mainchain,Peptide
7	S	82	THR	Mainchain
7	S	9	VAL	Mainchain,Peptide

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Mol	Chain	Res	Type	Group
7	S	97	ASN	Mainchain
8	T	104	GLU	Mainchain
8	T	113	ARG	Mainchain
8	T	135	LYS	Mainchain
8	T	137	GLN	Mainchain
8	T	148	VAL	Peptide
8	T	155	GLN	Mainchain,Peptide
8	T	158	LYS	Mainchain
8	T	169	LYS	Mainchain
8	T	50	ASP	Peptide
8	T	86	GLN	Mainchain
8	T	87	LYS	Mainchain
8	T	88	ARG	Mainchain
8	T	89	HIS	Mainchain
8	T	93	ASP	Mainchain
8	T	98	ASN	Mainchain
9	U	1	ARG	Mainchain
9	U	101	PHE	Mainchain
9	U	107	THR	Mainchain
9	U	111	GLU	Mainchain
9	U	14	GLY	Peptide
9	U	15	GLU	Mainchain,Peptide
9	U	17	ILE	Mainchain,Peptide
9	U	18	PRO	Mainchain,Peptide
9	U	2	LYS	Mainchain
9	U	41	THR	Mainchain,Peptide
9	U	48	ALA	Mainchain,Peptide
9	U	56	ALA	Peptide
9	U	59	ALA	Mainchain,Peptide
9	U	60	LYS	Mainchain,Peptide
9	U	66	ASP	Mainchain
9	U	75	LYS	Mainchain,Peptide
9	U	81	ASP	Peptide
9	U	83	TYR	Mainchain,Peptide
9	U	89	ALA	Peptide
9	U	90	GLU	Peptide
9	U	94	ASP	Mainchain
10	V	19	TYR	Mainchain
10	V	20	ARG	Mainchain
10	V	21	THR	Mainchain
10	V	22	LYS	Mainchain
10	V	29	PRO	Peptide

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Mol	Chain	Res	Type	Group
10	V	31	ASP	Mainchain,Peptide
10	V	32	ALA	Mainchain
10	V	5	LEU	Mainchain
10	V	51	TYR	Mainchain,Peptide
10	V	65	GLU	Mainchain
10	V	69	PHE	Peptide
10	V	7	PRO	Mainchain,Peptide
10	V	8	VAL	Mainchain
11	W	176	GLY	Mainchain
11	W	35	ASN	Peptide
11	W	63	SER	Mainchain
11	W	90	HIS	Mainchain
11	W	91	SER	Mainchain

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2035	0	589	16	0
1	B	1918	0	553	9	0
1	C	1947	0	563	10	0
2	D	1867	0	533	5	0
2	E	1863	0	532	8	0
2	F	1863	0	532	5	0
3	G	1053	0	283	1	0
4	H	523	0	140	1	0
5	I	187	0	53	0	0
6	J	288	0	92	0	0
6	K	288	0	92	0	0
6	L	288	0	92	0	0
6	M	288	0	92	0	0
6	N	288	0	92	0	0
6	O	288	0	92	0	0
6	P	288	0	92	0	0
6	Q	288	0	92	0	0
7	S	669	0	179	6	0
8	T	697	0	182	0	0
9	U	485	0	121	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	V	265	0	68	1	0
11	W	869	0	226	2	0
All	All	18545	0	5290	61	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 3.

All (61) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:17:LEU:CA	7:S:81:LEU:O	2.45	0.64
2:F:208:LEU:C	2:F:210:ASP:H	2.12	0.58
7:S:108:MET:O	7:S:112:HIS:CA	2.51	0.58
4:H:65:VAL:H	4:H:73:SER:H	1.55	0.55
7:S:106:SER:CA	7:S:109:MET:H	2.20	0.54
1:B:261:GLY:HA2	1:B:317:GLY:HA3	1.90	0.53
1:A:49:ALA:H	2:E:69:LEU:N	2.07	0.53
2:E:159:GLY:C	2:E:161:GLY:H	2.17	0.53
1:C:149:GLY:HA3	1:C:436:MET:H	1.74	0.52
1:B:194:ASP:C	1:B:196:LYS:H	2.15	0.52
2:D:473:LEU:C	2:D:475:GLU:H	2.18	0.52
1:C:258:ARG:O	1:C:319:GLY:HA3	2.10	0.52
2:E:115:ALA:C	2:E:117:HIS:H	2.16	0.51
2:E:350:PRO:C	2:E:352:ASP:H	2.19	0.51
2:E:247:GLU:C	2:E:249:GLN:H	2.18	0.50
2:E:210:ASP:C	2:E:212:THR:H	2.20	0.50
1:A:171:ARG:O	1:A:172:GLN:C	2.55	0.49
10:V:20:ARG:O	10:V:24:GLN:N	2.44	0.49
2:E:272:LEU:C	2:E:274:ARG:H	2.19	0.49
1:C:194:ASP:C	1:C:196:LYS:H	2.21	0.48
1:C:285:LEU:C	1:C:287:ARG:H	2.20	0.48
1:A:149:GLY:HA3	1:A:436:MET:H	1.78	0.47
11:W:90:HIS:CA	11:W:91:SER:C	2.88	0.46
7:S:108:MET:O	7:S:112:HIS:N	2.48	0.46
1:A:475:GLN:C	1:A:477:GLN:H	2.23	0.46
1:C:260:ASN:C	1:C:262:LYS:H	2.24	0.45
1:A:261:GLY:O	1:A:319:GLY:HA2	2.16	0.45
7:S:49:PRO:C	7:S:51:MET:N	2.70	0.45
1:C:29:GLY:HA3	1:C:42:HIS:O	2.17	0.45
3:G:199:ASP:O	3:G:202:ARG:N	2.50	0.45
1:A:25:LEU:C	1:A:44:LEU:H	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:173:THR:N	1:B:175:LYS:H	2.15	0.44
1:A:453:LEU:C	1:A:455:LYS:H	2.25	0.44
1:A:346:THR:C	1:A:348:GLY:H	2.25	0.44
1:B:258:ARG:O	1:B:319:GLY:CA	2.65	0.44
1:C:283:LEU:C	1:C:286:ARG:H	2.25	0.43
1:C:49:ALA:H	2:D:69:LEU:N	2.16	0.43
2:F:341:GLU:C	2:F:343:GLY:H	2.26	0.43
2:D:336:SER:H	2:D:348:VAL:C	2.26	0.43
2:F:350:PRO:C	2:F:352:ASP:H	2.24	0.43
1:A:187:LYS:O	1:A:191:ASP:N	2.52	0.43
1:A:397:TYR:O	1:A:401:ALA:N	2.52	0.43
1:A:504:PHE:O	1:A:508:PHE:N	2.52	0.43
7:S:105:PHE:O	7:S:109:MET:N	2.52	0.43
1:B:79:ASP:C	1:B:81:LEU:H	2.26	0.42
2:E:277:SER:N	2:E:281:TYR:O	2.51	0.42
1:B:149:GLY:HA3	1:B:436:MET:H	1.84	0.42
2:D:155:PHE:N	2:D:333:THR:O	2.52	0.42
1:A:144:GLU:O	1:A:160:GLY:HA3	2.20	0.41
2:D:350:PRO:C	2:D:352:ASP:H	2.28	0.41
1:B:258:ARG:O	1:B:319:GLY:HA2	2.20	0.41
1:C:189:PHE:C	1:C:192:GLY:H	2.29	0.41
2:F:244:ARG:O	2:F:248:GLY:C	2.63	0.41
1:A:91:THR:C	1:A:93:ALA:H	2.27	0.41
1:B:144:GLU:O	1:B:160:GLY:HA2	2.20	0.41
1:C:210:ARG:O	1:C:214:ALA:N	2.53	0.41
1:B:171:ARG:O	1:B:172:GLN:C	2.64	0.41
1:A:172:GLN:C	1:A:174:GLY:N	2.80	0.41
2:F:247:GLU:C	2:F:249:GLN:H	2.29	0.41
1:A:55:PHE:C	1:A:57:SER:H	2.29	0.40
11:W:174:ILE:O	11:W:175:GLY:C	2.64	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	507/510 (99%)	441 (87%)	42 (8%)	24 (5%)	2	16
1	B	476/510 (93%)	420 (88%)	31 (6%)	25 (5%)	1	14
1	C	485/510 (95%)	433 (89%)	34 (7%)	18 (4%)	2	19
2	D	465/482 (96%)	404 (87%)	44 (10%)	17 (4%)	2	19
2	E	464/482 (96%)	413 (89%)	31 (7%)	20 (4%)	2	17
2	F	464/482 (96%)	414 (89%)	33 (7%)	17 (4%)	2	19
3	G	258/273 (94%)	204 (79%)	35 (14%)	19 (7%)	1	10
4	H	129/146 (88%)	110 (85%)	8 (6%)	11 (8%)	0	9
5	I	45/50 (90%)	34 (76%)	7 (16%)	4 (9%)	0	8
6	J	70/72 (97%)	62 (89%)	6 (9%)	2 (3%)	3	23
6	K	70/72 (97%)	64 (91%)	5 (7%)	1 (1%)	9	40
6	L	70/72 (97%)	57 (81%)	13 (19%)	0	100	100
6	M	70/72 (97%)	64 (91%)	4 (6%)	2 (3%)	3	23
6	N	70/72 (97%)	61 (87%)	9 (13%)	0	100	100
6	O	70/72 (97%)	64 (91%)	5 (7%)	1 (1%)	9	40
6	P	70/72 (97%)	64 (91%)	5 (7%)	1 (1%)	9	40
6	Q	70/72 (97%)	61 (87%)	7 (10%)	2 (3%)	3	23
7	S	166/190 (87%)	112 (68%)	28 (17%)	26 (16%)	0	2
8	T	172/174 (99%)	156 (91%)	9 (5%)	7 (4%)	2	18
9	U	120/124 (97%)	103 (86%)	10 (8%)	7 (6%)	1	13
10	V	65/77 (84%)	49 (75%)	10 (15%)	6 (9%)	0	8
11	W	215/217 (99%)	192 (89%)	20 (9%)	3 (1%)	9	40
All	All	4591/4803 (96%)	3982 (87%)	396 (9%)	213 (5%)	3	16

All (213) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	13	GLU
1	A	14	GLU
1	A	224	ASP
1	A	262	LYS
1	A	365	ILE
1	B	48	GLN

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Mol	Chain	Res	Type
1	B	57	SER
1	B	141	SER
1	B	171	ARG
1	B	224	ASP
1	B	237	SER
1	B	238	ASP
1	B	289	PRO
1	B	319	GLY
1	B	435	PRO
1	C	59	LEU
1	C	146	MET
1	C	163	GLN
1	C	171	ARG
1	C	224	ASP
1	C	238	ASP
1	C	289	PRO
1	C	365	ILE
2	D	177	HIS
2	D	214	LYS
2	D	249	GLN
2	D	352	ASP
2	D	394	ASP
2	E	109	LYS
2	F	277	SER
2	F	281	TYR
2	F	450	ASP
2	F	451	HIS
3	G	9	ARG
3	G	52	TYR
3	G	114	SER
3	G	119	THR
3	G	134	ARG
3	G	199	ASP
3	G	250	PHE
4	H	69	ASP
4	H	87	ASP
5	I	3	TYR
5	I	5	ARG
5	I	7	ALA
7	S	10	GLN
7	S	38	GLU
7	S	53	ALA

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Mol	Chain	Res	Type
7	S	63	SER
7	S	73	THR
7	S	111	VAL
7	S	117	PRO
7	S	118	CYS
9	U	90	GLU
9	U	98	CYS
10	V	6	ASP
10	V	7	PRO
10	V	30	VAL
1	A	11	ILE
1	A	19	ALA
1	A	20	ASP
1	A	44	LEU
1	A	78	ASN
1	A	172	GLN
1	A	193	THR
1	A	209	LYS
1	A	289	PRO
1	B	143	ARG
1	B	361	ILE
1	B	433	TYR
1	B	505	LEU
1	B	508	PHE
1	C	47	VAL
1	C	209	LYS
1	C	429	LYS
1	C	451	GLY
2	D	28	GLY
2	D	159	GLY
2	E	28	GLY
2	E	64	ASP
2	E	67	GLU
2	E	73	GLN
2	E	111	LYS
2	E	132	ILE
2	E	146	TYR
2	E	299	THR
2	E	394	ASP
2	F	31	PRO
2	F	102	ILE
2	F	249	GLN

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Mol	Chain	Res	Type
2	F	348	VAL
2	F	427	HIS
3	G	73	SER
3	G	87	LYS
3	G	93	ALA
3	G	155	PHE
3	G	200	VAL
4	H	42	THR
4	H	88	SER
5	I	36	LYS
7	S	8	PRO
7	S	60	VAL
7	S	80	PRO
7	S	92	ASN
7	S	108	MET
7	S	143	SER
8	T	155	GLN
9	U	18	PRO
10	V	61	ASN
1	A	115	ILE
1	A	171	ARG
1	A	313	ASN
1	B	35	GLY
1	B	45	ARG
1	B	209	LYS
1	B	236	ALA
1	B	262	LYS
1	B	375	GLY
1	C	143	ARG
1	C	145	PRO
1	C	331	ALA
2	D	55	GLU
2	D	212	THR
2	E	44	ARG
2	E	277	SER
2	E	350	PRO
2	E	351	LEU
2	F	297	THR
2	F	360	PRO
3	G	88	GLN
3	G	257	VAL
4	H	86	ALA

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Mol	Chain	Res	Type
4	H	95	GLU
4	H	101	ASP
6	J	45	GLN
7	S	12	TYR
7	S	69	LEU
7	S	120	VAL
7	S	149	LYS
7	S	151	GLU
8	T	171	LEU
9	U	20	ASN
9	U	83	TYR
9	U	102	LEU
10	V	29	PRO
11	W	92	PHE
1	A	22	SER
1	A	79	ASP
1	A	146	MET
1	A	336	ALA
1	B	50	GLU
1	B	131	LEU
1	C	435	PRO
2	E	210	ASP
2	E	297	THR
2	F	33	LEU
2	F	177	HIS
2	F	359	ASP
3	G	92	GLU
4	H	79	SER
6	P	40	PRO
6	Q	44	GLN
7	S	9	VAL
7	S	39	LEU
7	S	121	THR
8	T	99	ILE
9	U	97	SER
11	W	36	ARG
11	W	40	ASN
1	A	409	ASP
1	B	430	GLN
1	C	404	ALA
2	D	86	VAL
2	D	102	ILE

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Mol	Chain	Res	Type
2	D	277	SER
2	D	450	ASP
2	E	102	ILE
2	F	361	ASN
3	G	77	LEU
3	G	258	ILE
6	O	39	ASN
7	S	54	SER
7	S	81	LEU
8	T	147	ARG
10	V	55	ASP
1	A	114	ALA
1	A	235	THR
1	B	121	ILE
2	F	160	VAL
4	H	124	ASP
6	M	40	PRO
7	S	79	SER
8	T	121	ARG
2	D	279	VAL
2	D	452	LEU
2	E	160	VAL
2	E	279	VAL
2	F	279	VAL
3	G	136	PRO
4	H	52	VAL
2	D	447	GLY
3	G	115	ILE
1	C	288	PRO
2	E	460	VAL
4	H	39	PRO
6	J	40	PRO
6	M	71	ILE
8	T	148	VAL
8	T	149	VAL
7	S	14	ILE
6	K	40	PRO
2	D	346	PRO
6	Q	40	PRO

5.3.2 Protein sidechains [i](#)

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3165. These allow visual inspection of the internal detail of the map and identification of artifacts.

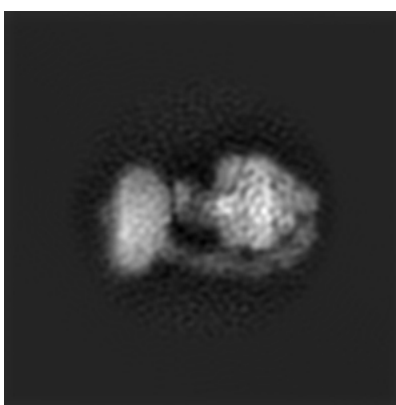
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

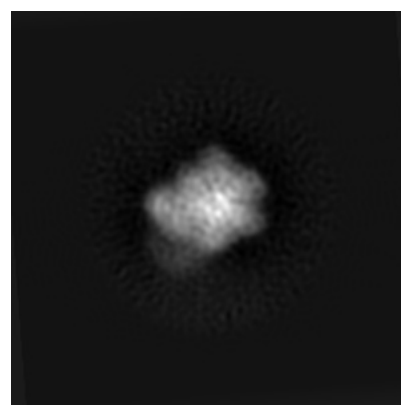
6.1.1 Primary map



X



Y

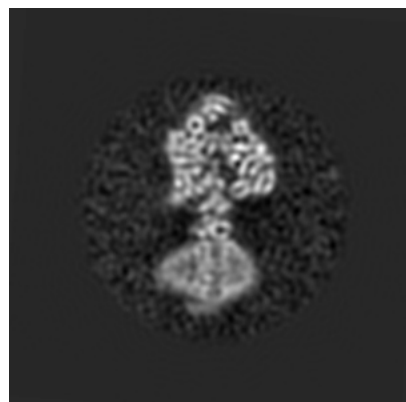


Z

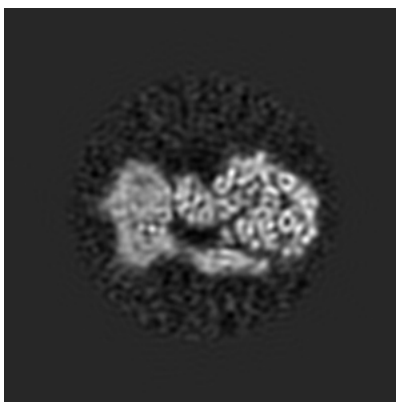
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

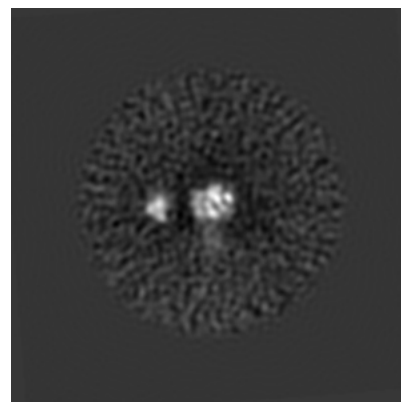
6.2.1 Primary map



X Index: 128



Y Index: 128

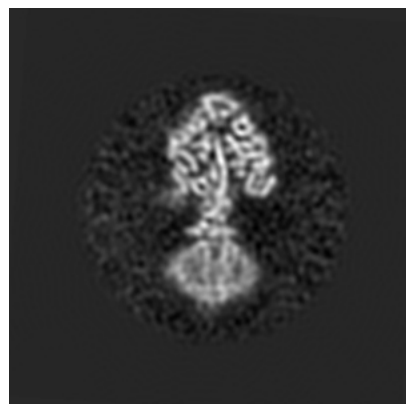


Z Index: 128

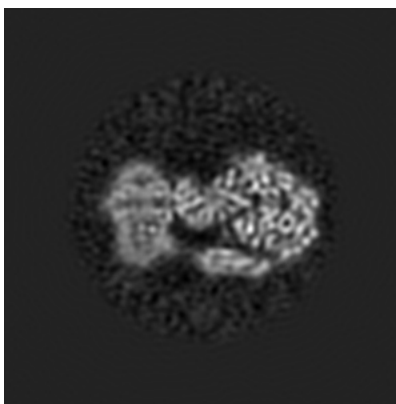
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

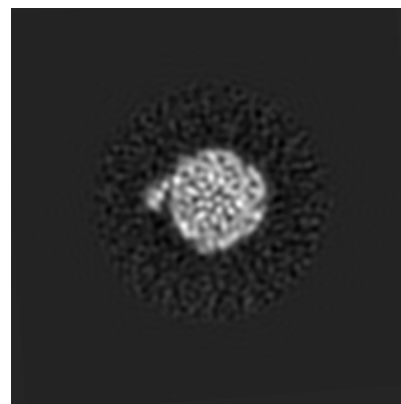
6.3.1 Primary map



X Index: 133



Y Index: 130

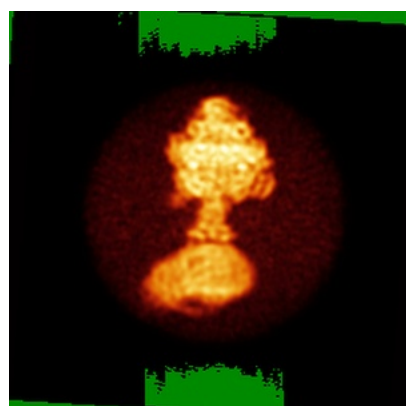


Z Index: 167

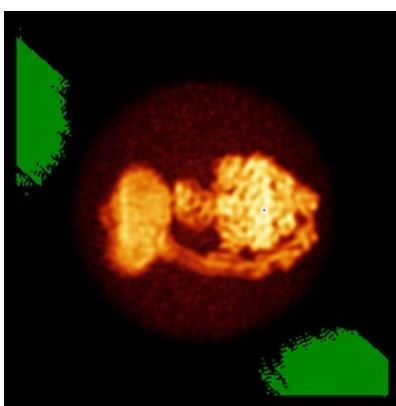
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

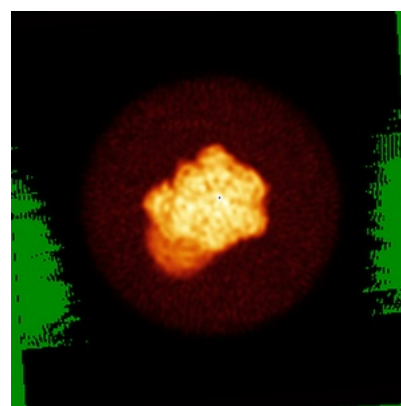
6.4.1 Primary map



X



Y

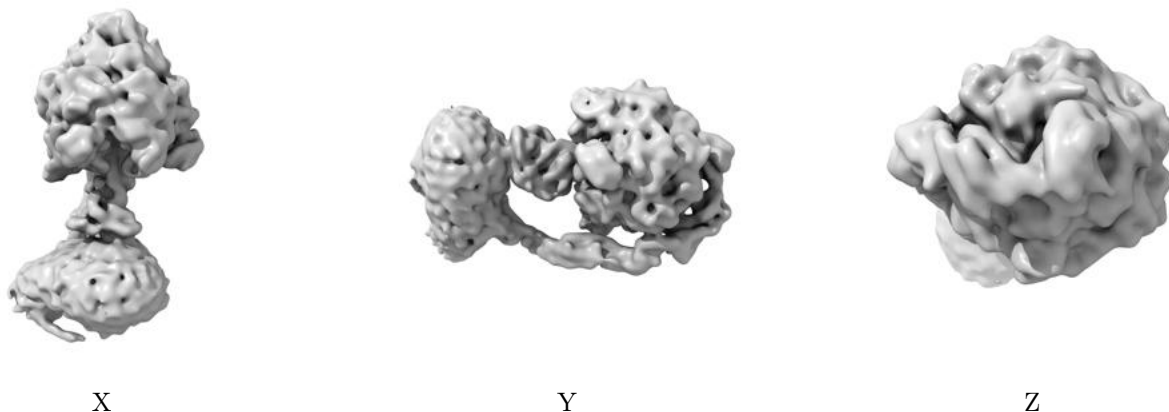


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.13. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

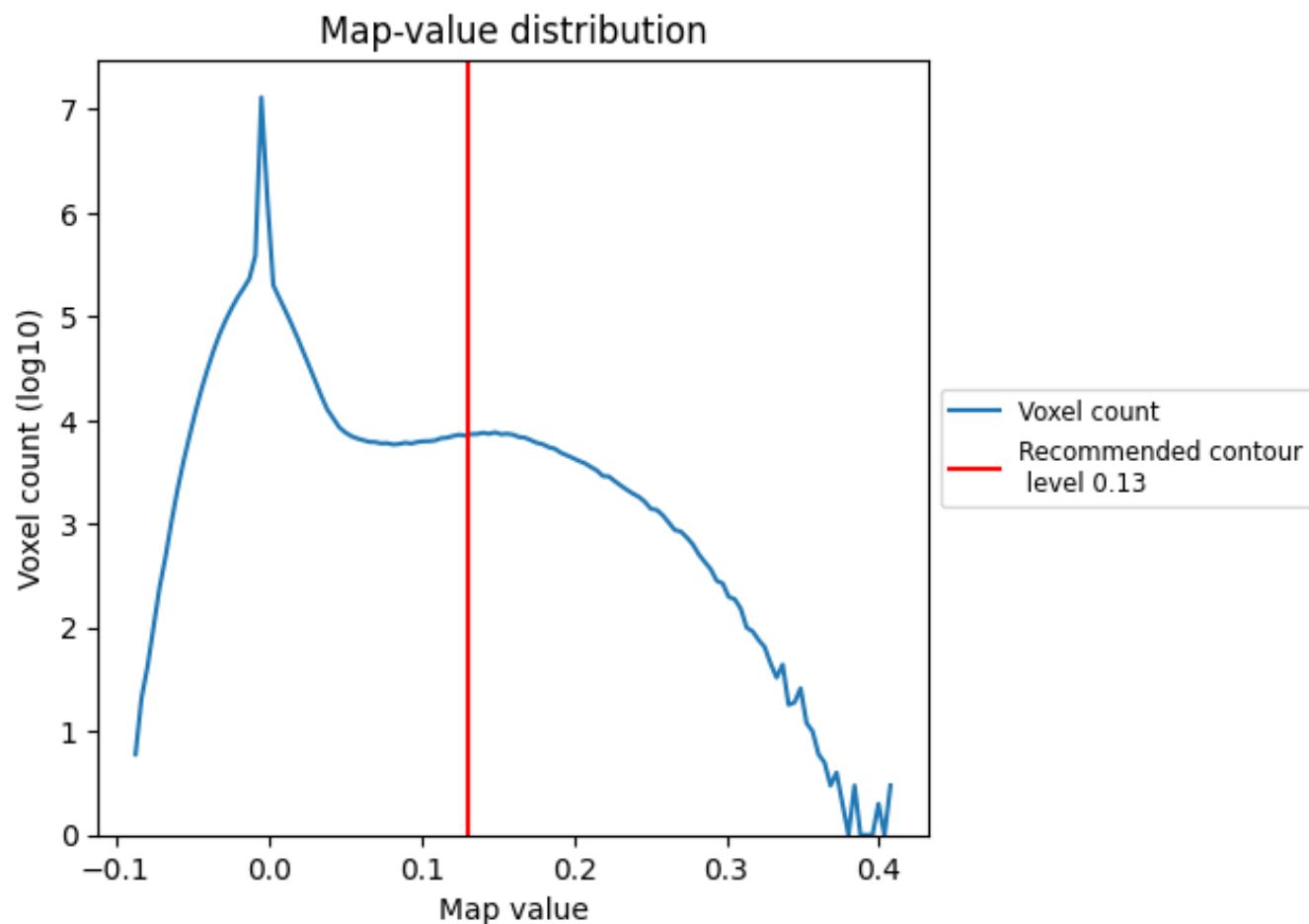
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

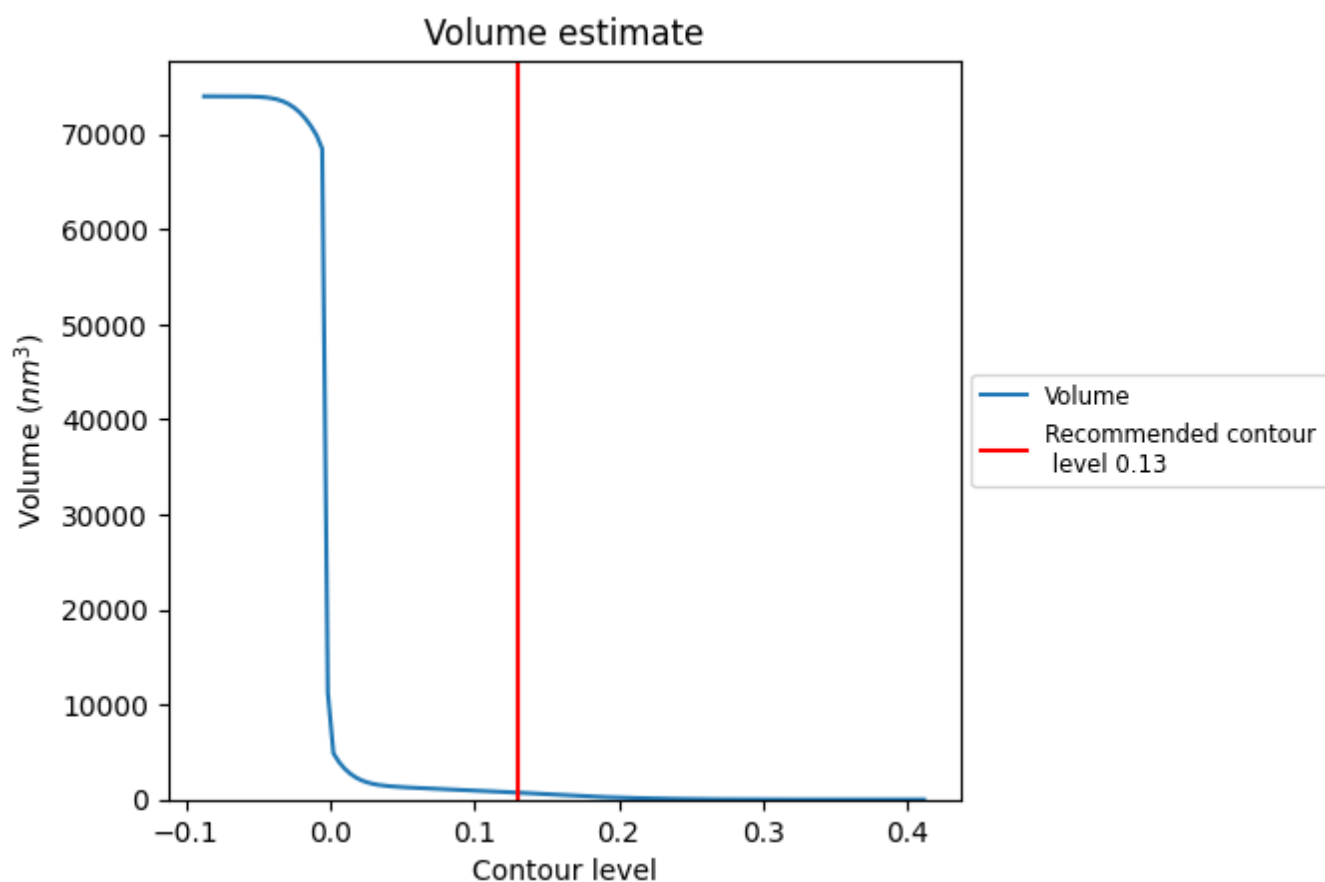
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

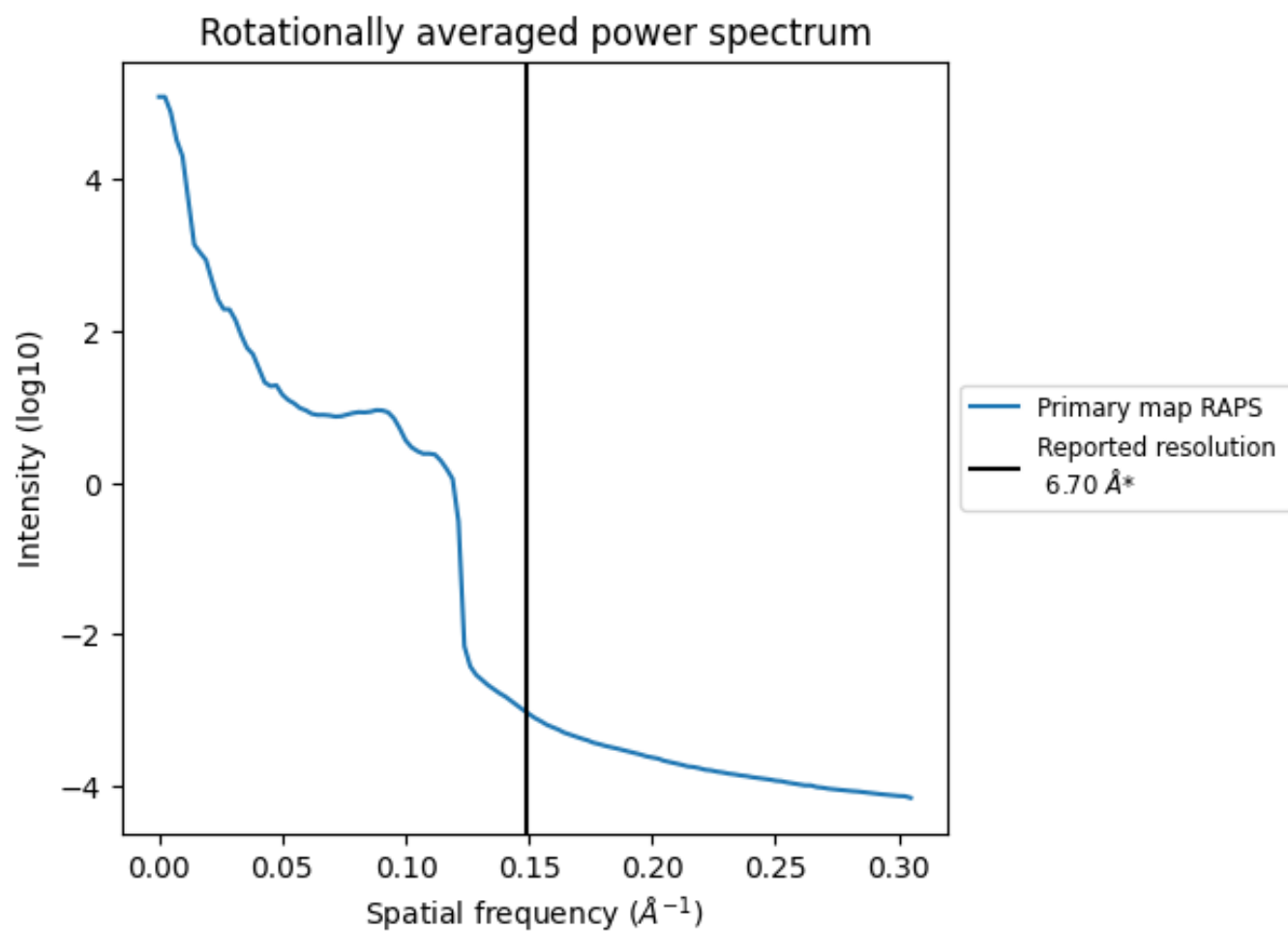
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 727 nm³; this corresponds to an approximate mass of 656 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.149 Å⁻¹

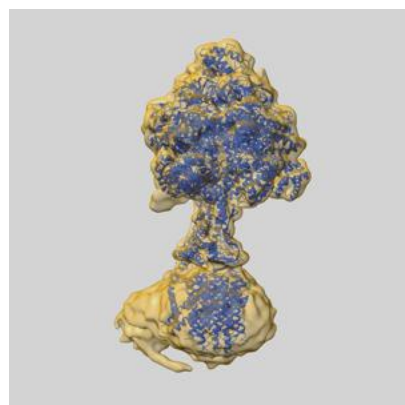
8 Fourier-Shell correlation

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

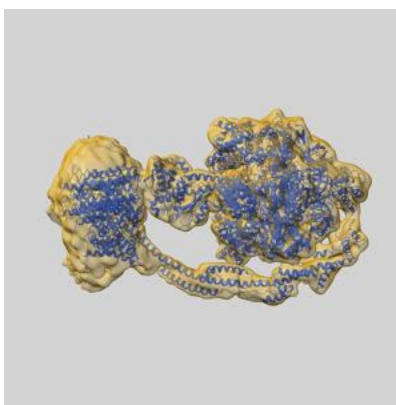
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-3165 and PDB model 5ARE. Per-residue inclusion information can be found in section 3 on page 7.

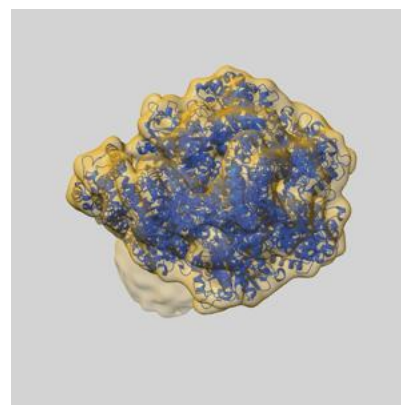
9.1 Map-model overlay [i](#)



X



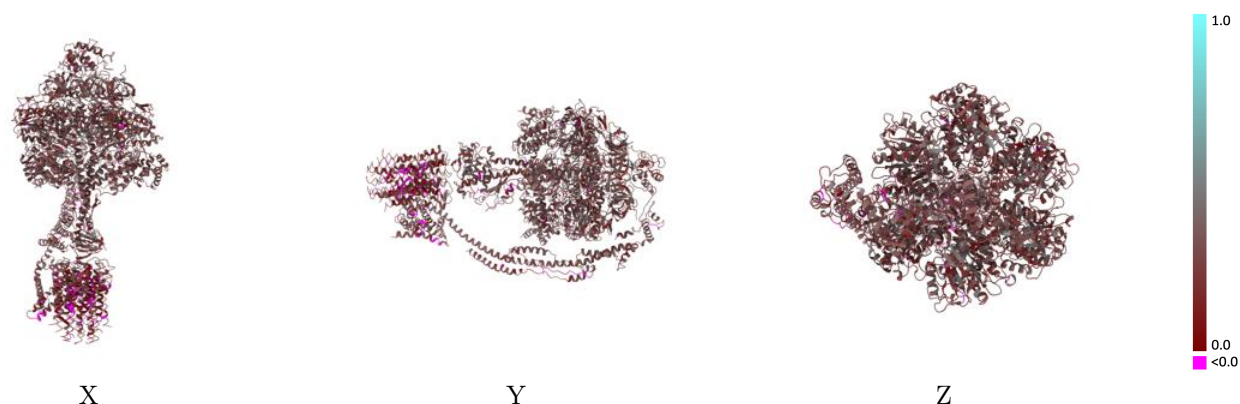
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.13 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

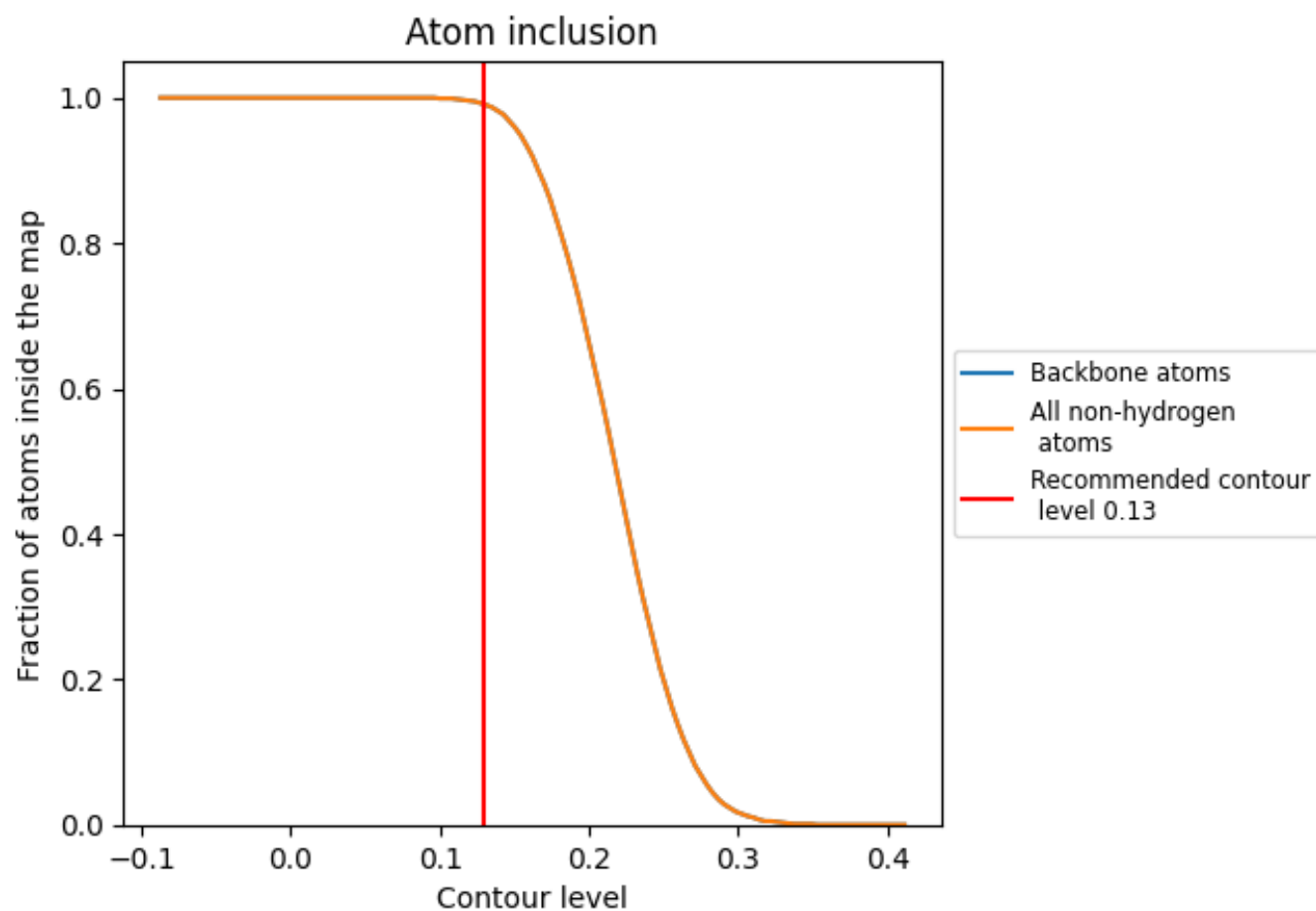


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 99% of all backbone atoms, 99% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.13) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9910	 0.2680
A	 0.9990	 0.2920
B	 1.0000	 0.2990
C	 0.9950	 0.2930
D	 1.0000	 0.2870
E	 0.9950	 0.2890
F	 0.9980	 0.2960
G	 0.9800	 0.2650
H	 0.9870	 0.2920
I	 0.9470	 0.2480
J	 0.9790	 0.1570
K	 0.9720	 0.1830
L	 0.9620	 0.1860
M	 0.9650	 0.1660
N	 0.9690	 0.1650
O	 0.9930	 0.1810
P	 0.9970	 0.1730
Q	 0.9830	 0.1700
S	 0.9900	 0.2670
T	 0.9990	 0.2870
U	 0.9440	 0.2220
V	 0.9960	 0.2490
W	 0.9780	 0.2110

