



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 12:29 AM UTC

PDB ID : 5ARA / pdb_00005ara
EMDB ID : EMD-3164
Title : Bovine mitochondrial ATP synthase state 1a
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 : 7.40 Å (reported)
Based on initial models : 2WSS, 2XND, 2CLY

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:

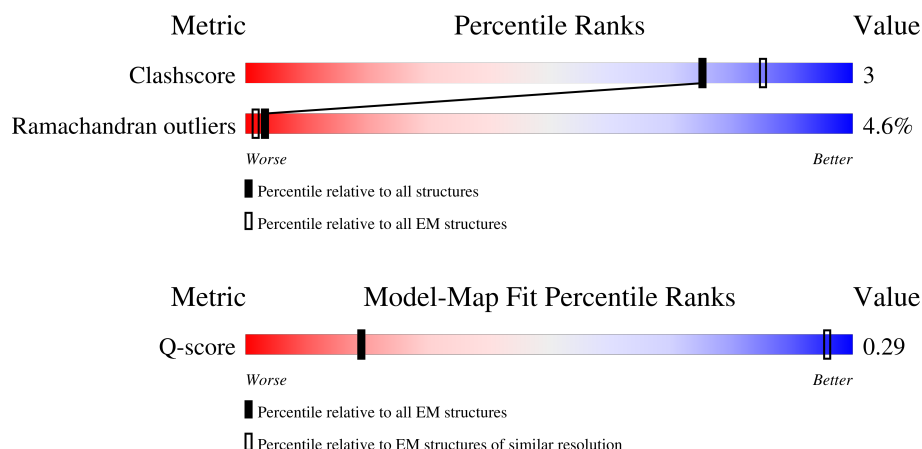
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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 7.40 Å.

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



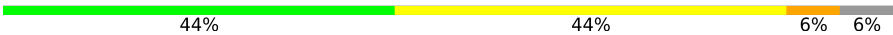
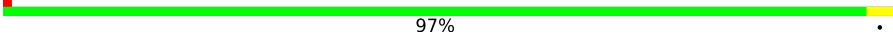
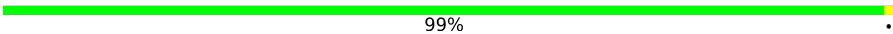
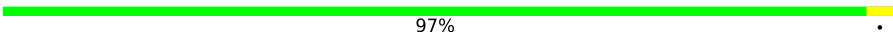
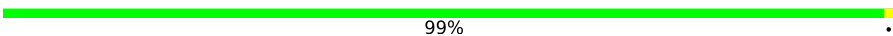
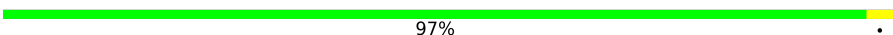
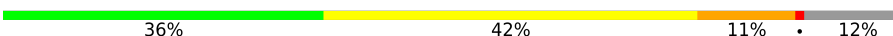
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Q-score	-	25397	523 (6.20 - 7.20)

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	45% 52% .
1	B	510	41% 50% .. 6%
1	C	510	42% 50% . 5%
2	D	482	46% 48% ..
2	E	482	46% 50% ..

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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 18544 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	66	Total	C	N	O	0	0
			264	132	66	66		

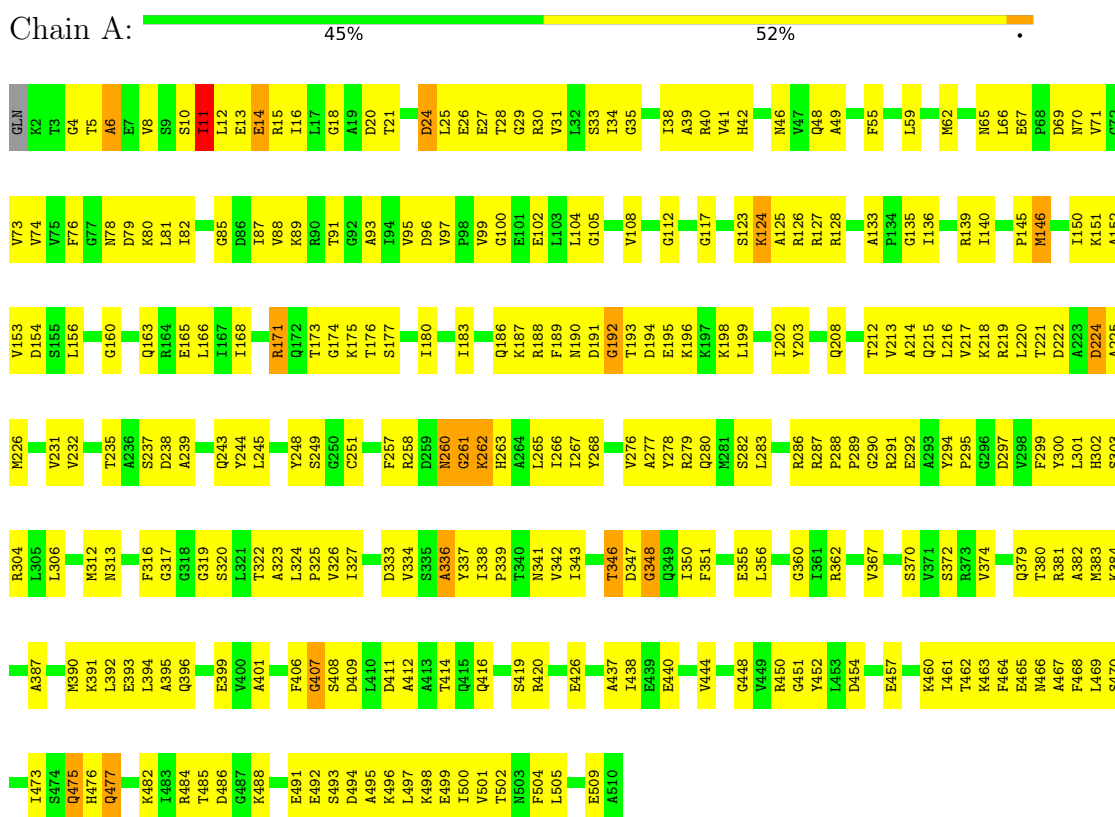
- Molecule 11 is a protein called ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL.

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

3 Residue-property plots [i](#)

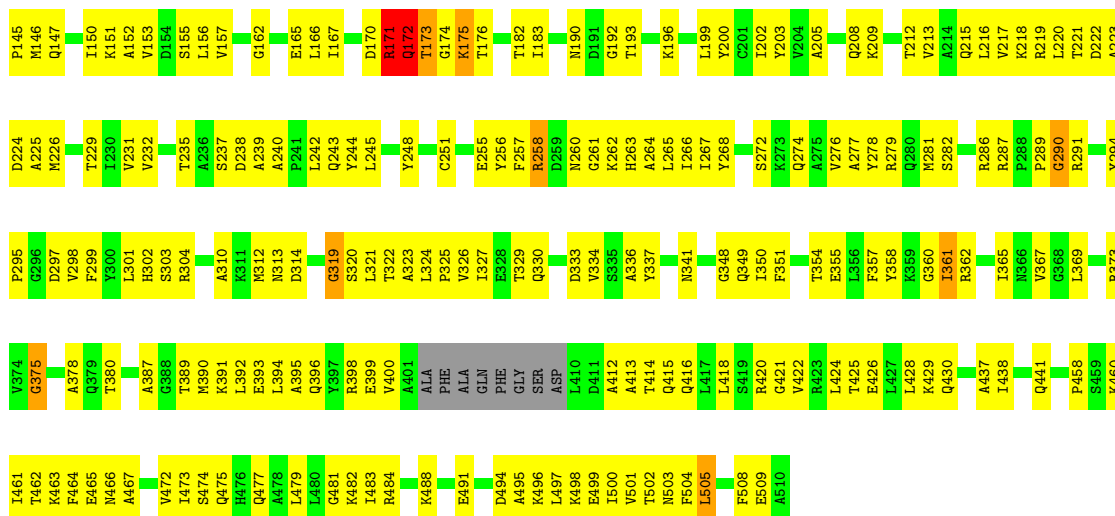
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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



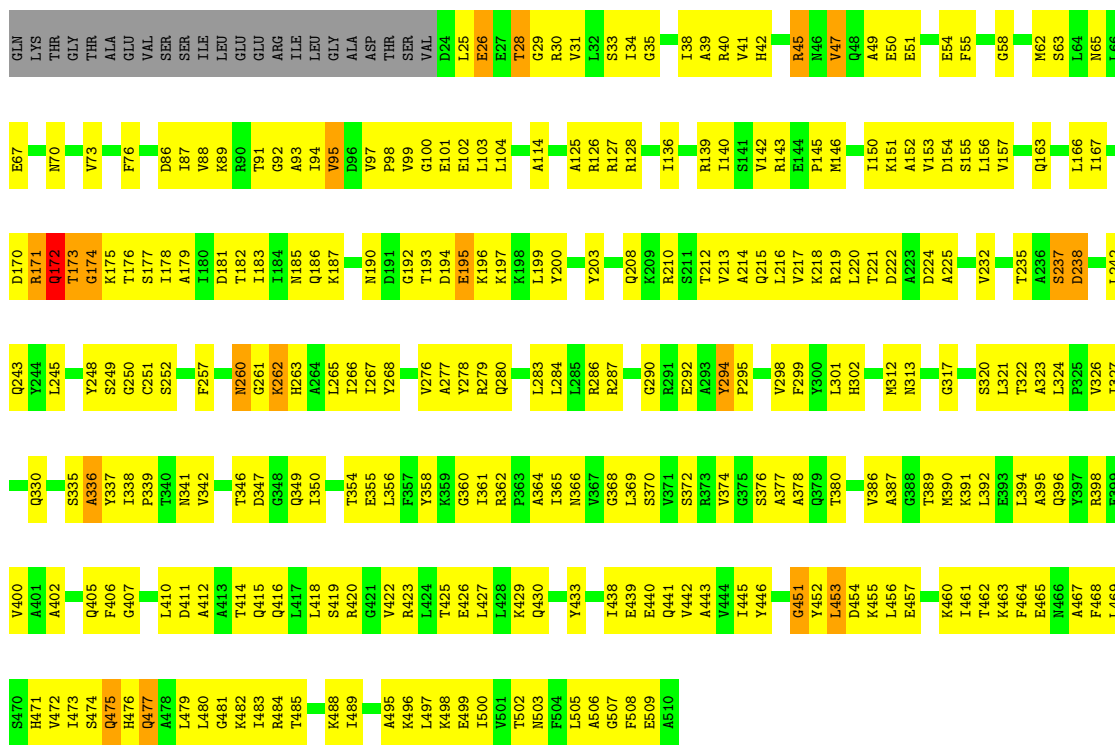
• Molecule 1: ATP SYNTHASE SUBUNIT ALPHA, MITOCHONDRIAL





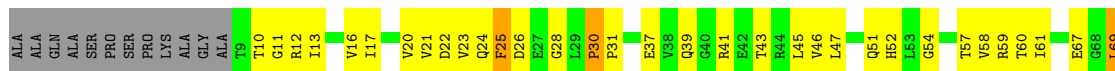
• Molecule 1: ATP SYNTHASE SUBUNIT ALPHA, MITOCHONDRIAL

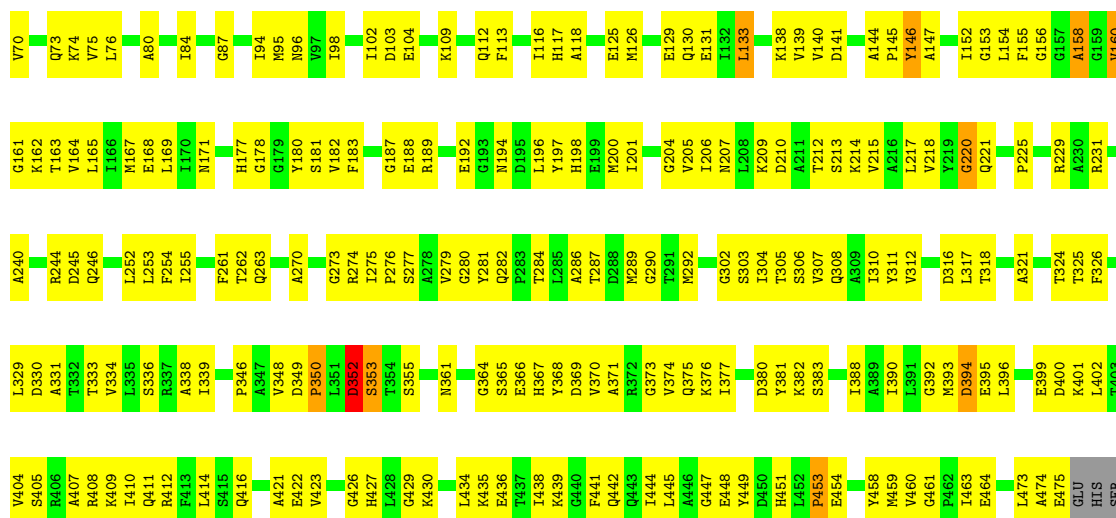
Chain C: 42% 50% 5%



• Molecule 2: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

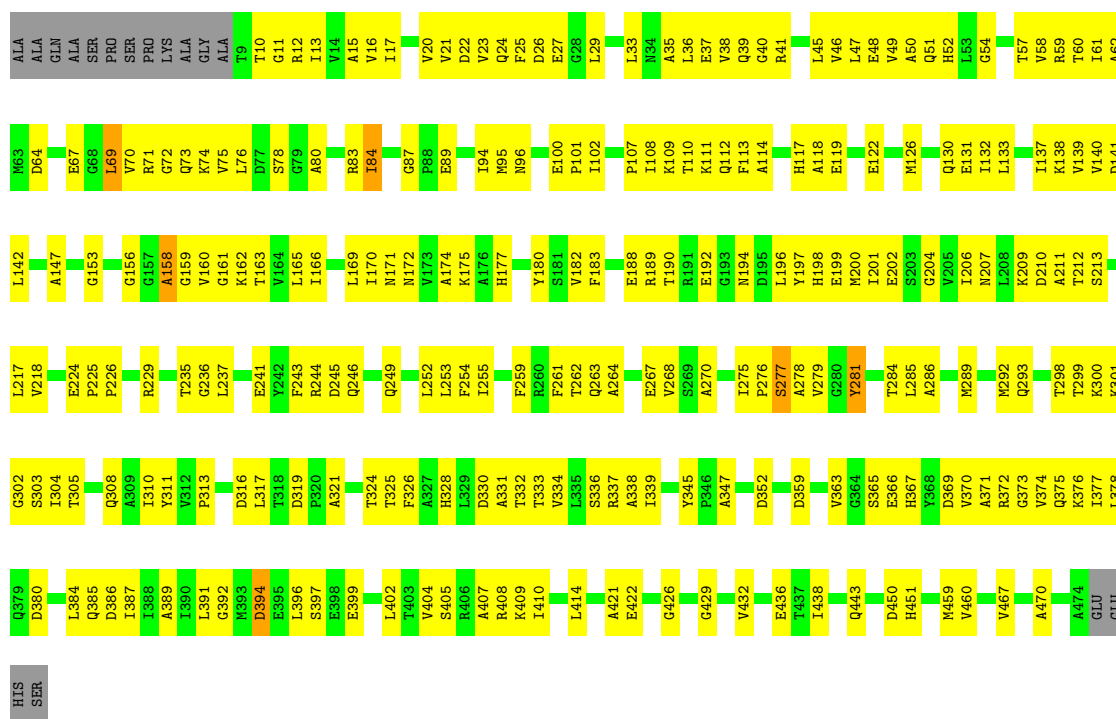
Chain D: 46% 48%





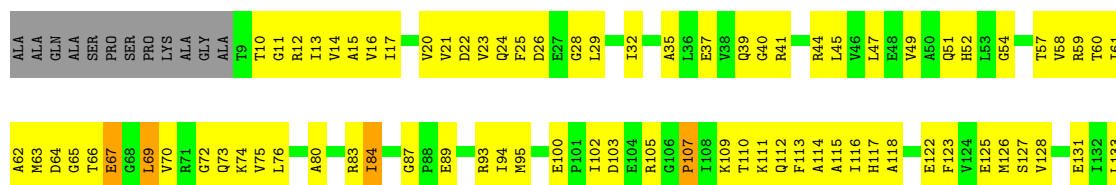
• Molecule 2: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

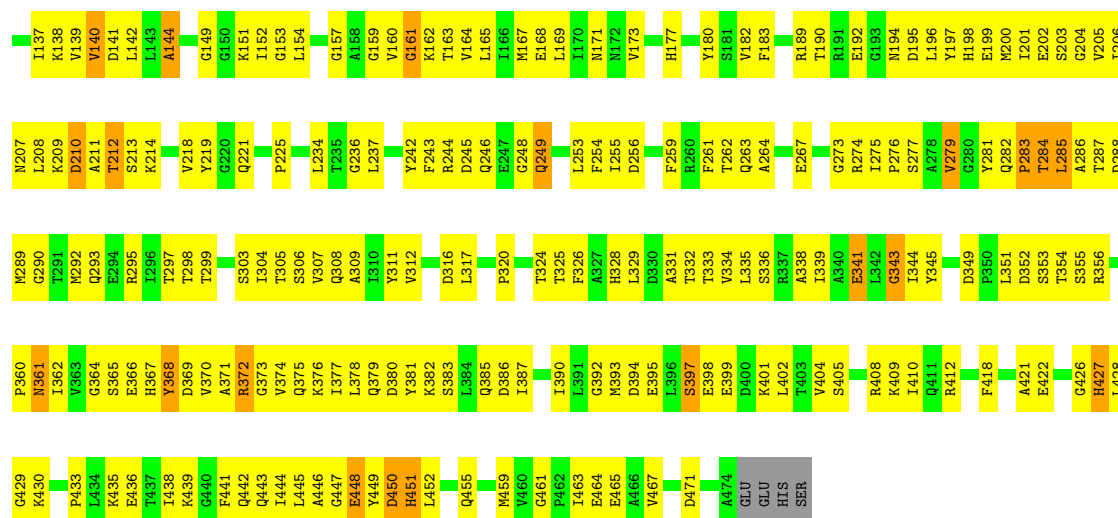
Chain E: 46% 50%



• Molecule 2: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

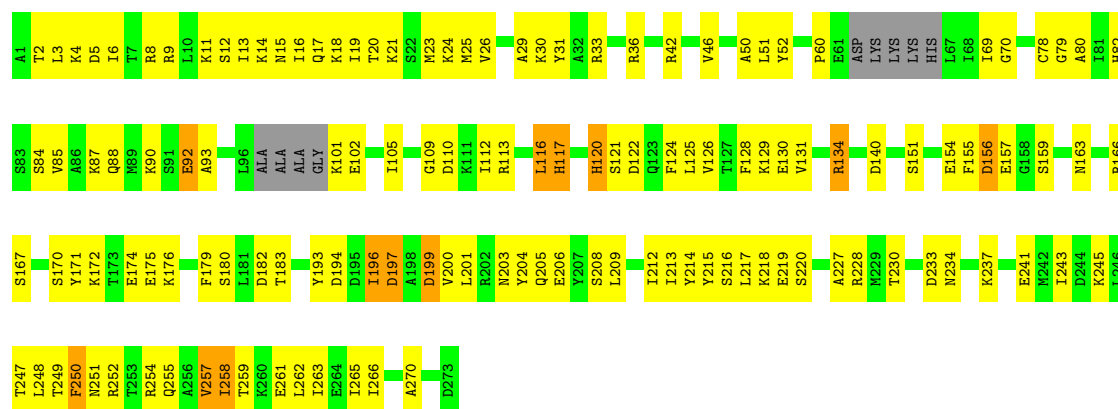
Chain F: 37% 55% 5%





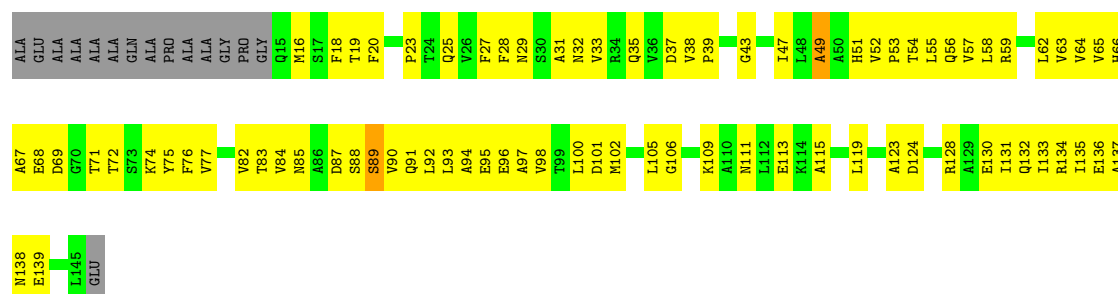
• Molecule 3: ATP SYNTHASE SUBUNIT GAMMA, MITOCHONDRIAL

Chain G: 48% 45%



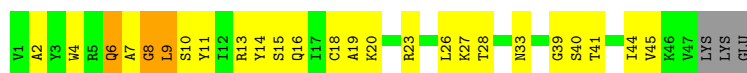
• Molecule 4: ATP SYNTHASE SUBUNIT DELTA, MITOCHONDRIAL

Chain H: 34% 54% 10%



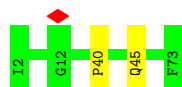
• Molecule 5: ATP SYNTHASE SUBUNIT EPSILON, MITOCHONDRIAL

Chain I: 44% 44% 6% 6%



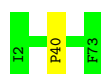
- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

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%

There are no outlier residues recorded for this chain.

- 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%

There are no outlier residues recorded for this chain.

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

Chain O:  99%



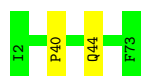
- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain P:  99%

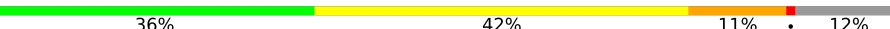


- Molecule 6: ATP SYNTHASE F(0) COMPLEX SUBUNIT C1, MITOCHONDRIAL

Chain Q:  97% .



- Molecule 7: ATP SYNTHASE SUBUNIT O, MITOCHONDRIAL

Chain S:  36% 42% 11% . 12%



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

Chain T:  74% 16% 10%



- Molecule 9: ATP SYNTHASE SUBUNIT D, MITOCHONDRIAL

Chain U:  69% 18% 10% . .



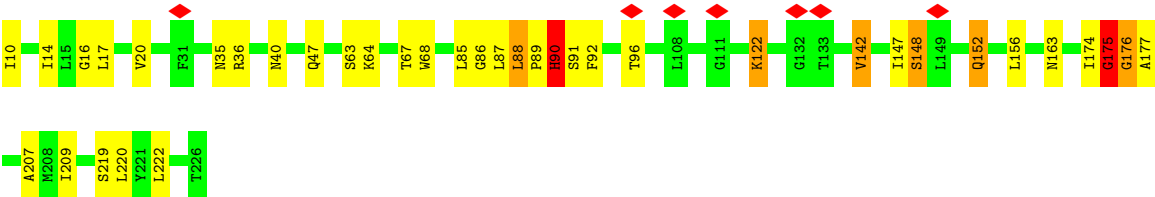
- Molecule 10: ATP SYNTHASE-COUPLING FACTOR 6, MITOCHONDRIAL

Chain V:  68% 16% . 14%



- Molecule 11: ATP SYNTHASE SUBUNIT BETA, MITOCHONDRIAL

Chain W:  82% 14% . .



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	20104	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	0.515	Depositor
Minimum map value	-0.103	Depositor
Average map value	-0.001	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	3.14	224/2034 (11.0%)	2.47	135/2541 (5.3%)
1	B	3.21	265/1916 (13.8%)	2.40	113/2392 (4.7%)
1	C	3.18	238/1946 (12.2%)	2.47	117/2431 (4.8%)
2	D	3.18	220/1866 (11.8%)	2.48	123/2331 (5.3%)
2	E	3.12	211/1862 (11.3%)	2.54	146/2326 (6.3%)
2	F	3.27	262/1862 (14.1%)	2.67	165/2326 (7.1%)
3	G	3.17	119/1050 (11.3%)	2.45	69/1308 (5.3%)
4	H	3.25	76/522 (14.6%)	2.51	44/651 (6.8%)
5	I	2.88	19/186 (10.2%)	2.37	14/231 (6.1%)
6	J	0.51	0/287	1.01	0/357
6	K	0.50	0/287	1.00	0/357
6	L	0.51	0/287	0.98	0/357
6	M	0.49	0/287	1.04	0/357
6	N	0.49	0/287	1.00	0/357
6	O	0.51	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	2.82	51/668 (7.6%)	3.41	70/834 (8.4%)
8	T	2.18	28/696 (4.0%)	2.72	49/867 (5.7%)
9	U	1.52	4/484 (0.8%)	2.39	29/604 (4.8%)
10	V	1.37	3/263 (1.1%)	1.79	3/327 (0.9%)
11	W	4.87	15/868 (1.7%)	2.17	33/1082 (3.0%)
All	All	2.99	1735/18519 (9.4%)	2.39	1110/23107 (4.8%)

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	3
1	B	0	1
1	C	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	D	0	5
2	F	0	1
3	G	0	2
7	S	0	11
8	T	0	22
9	U	0	19
10	V	0	6
11	W	0	16
All	All	0	89

All (1735) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	W	88	LEU	CA-C	128.78	3.15	1.52
11	W	88	LEU	N-CA	29.79	1.88	1.46
11	W	89	PRO	N-CA	-24.68	1.15	1.47
11	W	88	LEU	C-O	-21.77	0.96	1.24
8	T	160	THR	N-CA	15.02	1.65	1.46
8	T	110	ARG	N-CA	-14.22	1.29	1.46
2	D	361	ASN	CA-C	-13.63	1.43	1.52
8	T	135	LYS	CA-C	13.55	1.72	1.52
2	E	74	LYS	CA-C	-12.64	1.37	1.52
2	D	153	GLY	CA-C	-12.25	1.43	1.52
2	F	366	GLU	CA-C	-11.59	1.38	1.52
2	E	12	ARG	CA-C	-11.23	1.39	1.52
7	S	107	THR	CA-C	-11.01	1.37	1.52
2	D	333	THR	CA-C	-10.69	1.40	1.52
8	T	109	GLU	CA-C	-10.46	1.38	1.52
2	E	244	ARG	CA-C	-10.46	1.39	1.52
1	C	97	VAL	CA-C	-10.34	1.42	1.52
2	D	449	TYR	CA-C	-10.18	1.41	1.53
1	C	172	GLN	CA-C	-10.00	1.39	1.52
2	F	312	VAL	N-CA	-9.94	1.39	1.46
1	A	362	ARG	CA-C	-9.90	1.44	1.52
2	F	369	ASP	CA-C	-9.74	1.40	1.52
2	F	375	GLN	CA-C	-9.73	1.40	1.52
1	C	301	LEU	CA-C	-9.73	1.40	1.52
2	D	51	GLN	CA-C	-9.68	1.41	1.52
2	F	140	VAL	CA-C	-9.55	1.41	1.52
2	E	51	GLN	CA-C	-9.51	1.41	1.52
8	T	163	LYS	N-CA	9.46	1.58	1.46
3	G	248	LEU	CA-C	-9.41	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	41	VAL	CA-C	-9.30	1.41	1.52
1	A	70	ASN	CA-C	-9.26	1.41	1.52
4	H	91	GLN	CA-C	-9.21	1.41	1.52
1	A	257	PHE	CA-C	-9.19	1.40	1.52
2	D	312	VAL	CA-C	-9.18	1.45	1.53
1	C	171	ARG	CA-C	-9.17	1.40	1.52
1	A	153	VAL	CA-C	-9.16	1.41	1.52
3	G	252	ARG	CA-C	-9.16	1.41	1.52
1	A	286	ARG	CA-C	-9.15	1.41	1.53
2	D	57	THR	CA-C	-9.13	1.41	1.52
1	B	97	VAL	CA-C	-9.10	1.43	1.52
3	G	36	ARG	CA-C	-9.10	1.41	1.52
8	T	99	ILE	CA-C	-9.10	1.42	1.52
2	E	11	GLY	CA-C	-9.09	1.44	1.52
1	A	263	HIS	CA-C	-9.04	1.42	1.52
2	D	162	LYS	CA-C	-8.95	1.41	1.52
1	C	475	GLN	CA-C	-8.94	1.41	1.52
1	B	157	VAL	N-CA	-8.93	1.39	1.46
2	D	273	GLY	CA-C	-8.90	1.40	1.51
3	G	128	PHE	CA-C	-8.90	1.41	1.52
2	E	375	GLN	CA-C	-8.89	1.41	1.52
2	D	11	GLY	CA-C	-8.88	1.44	1.52
2	F	122	GLU	CA-C	-8.88	1.41	1.52
2	E	75	VAL	CA-C	-8.88	1.42	1.52
2	E	404	VAL	CA-C	-8.88	1.42	1.52
1	A	176	THR	N-CA	-8.87	1.35	1.46
1	A	337	TYR	CA-C	-8.86	1.41	1.52
1	C	473	ILE	CA-C	-8.84	1.42	1.52
2	F	74	LYS	CA-C	-8.83	1.41	1.52
8	T	95	GLN	CA-C	8.80	1.65	1.52
2	E	60	THR	CA-C	-8.80	1.41	1.52
1	A	62	MET	CA-C	-8.71	1.41	1.52
1	A	464	PHE	CA-C	-8.71	1.41	1.52
3	G	172	LYS	CA-C	-8.69	1.42	1.52
1	C	324	LEU	CA-C	-8.69	1.44	1.52
4	H	28	PHE	CA-C	-8.69	1.41	1.52
8	T	100	ALA	N-CA	-8.67	1.36	1.46
2	F	399	GLU	CA-C	-8.66	1.41	1.52
3	G	175	GLU	CA-C	-8.63	1.42	1.52
1	C	356	LEU	CA-C	-8.61	1.41	1.52
2	F	141	ASP	CA-C	-8.60	1.41	1.52
1	A	497	LEU	CA-C	-8.60	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	66	HIS	CA-C	-8.59	1.41	1.52
1	A	203	TYR	CA-C	-8.58	1.42	1.52
2	F	253	LEU	CA-C	-8.56	1.42	1.52
1	A	499	GLU	CA-C	-8.54	1.41	1.52
8	T	159	GLU	C-N	8.52	1.45	1.34
2	D	37	GLU	CA-C	-8.50	1.42	1.52
2	E	196	LEU	CA-C	-8.48	1.41	1.52
2	F	169	LEU	CA-C	-8.48	1.41	1.52
2	D	24	GLN	CA-C	-8.47	1.42	1.52
2	F	293	GLN	CA-C	-8.47	1.41	1.52
1	A	208	GLN	CA-C	-8.45	1.42	1.52
2	E	37	GLU	CA-C	-8.45	1.42	1.52
1	C	496	LYS	CA-C	-8.43	1.41	1.52
2	E	57	THR	CA-C	-8.41	1.42	1.52
2	D	74	LYS	CA-C	-8.38	1.42	1.52
3	G	15	ASN	CA-C	-8.37	1.42	1.52
2	E	54	GLY	CA-C	-8.35	1.43	1.52
1	A	494	ASP	CA-C	-8.34	1.42	1.52
5	I	13	ARG	CA-C	-8.31	1.42	1.52
1	C	498	LYS	CA-C	-8.31	1.41	1.52
2	F	439	LYS	N-CA	-8.31	1.36	1.46
2	D	21	VAL	CA-C	-8.29	1.42	1.52
2	E	253	LEU	CA-C	-8.29	1.42	1.52
1	C	175	LYS	CA-C	-8.28	1.42	1.52
2	F	60	THR	CA-C	-8.27	1.42	1.52
2	F	441	PHE	CA-C	-8.26	1.42	1.52
2	F	67	GLU	CA-C	-8.25	1.41	1.52
2	F	244	ARG	CA-C	-8.25	1.42	1.52
1	B	248	TYR	CA-C	-8.24	1.42	1.52
3	G	11	LYS	CA-C	-8.22	1.42	1.52
1	A	351	PHE	CA-C	-8.22	1.42	1.52
1	C	263	HIS	CA-C	-8.21	1.43	1.52
7	S	102	ILE	CA-C	-8.20	1.42	1.52
2	E	289	MET	CA-C	-8.20	1.42	1.52
2	F	409	LYS	CA-C	-8.17	1.42	1.52
1	A	73	VAL	CA-C	-8.16	1.42	1.52
1	A	390	MET	CA-C	-8.16	1.42	1.52
1	C	33	SER	CA-C	-8.14	1.42	1.52
1	C	245	LEU	CA-C	-8.13	1.42	1.52
2	F	254	PHE	CA-C	-8.13	1.42	1.52
2	D	409	LYS	CA-C	-8.12	1.42	1.52
1	C	220	LEU	CA-C	-8.12	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	12	ARG	CA-C	-8.12	1.42	1.52
2	F	94	ILE	CA-C	-8.11	1.42	1.52
1	B	73	VAL	CA-C	-8.09	1.42	1.52
2	F	113	PHE	CA-C	-8.09	1.43	1.52
1	C	355	GLU	CA-C	-8.06	1.42	1.52
2	F	312	VAL	CA-C	-8.05	1.47	1.53
2	D	129	GLU	CA-C	-8.05	1.42	1.52
1	C	208	GLN	CA-C	-8.03	1.42	1.52
1	B	262	LYS	CA-C	-8.01	1.42	1.52
2	D	59	ARG	CA-C	-8.01	1.43	1.52
1	B	479	LEU	CA-C	-8.01	1.42	1.52
2	F	25	PHE	CA-C	-8.00	1.43	1.52
2	D	12	ARG	CA-C	-8.00	1.42	1.52
1	A	215	GLN	CA-C	-7.99	1.42	1.52
1	C	150	ILE	CA-C	-7.98	1.42	1.52
2	E	22	ASP	CA-C	-7.98	1.43	1.52
2	D	43	THR	CA-C	-7.95	1.45	1.53
1	B	266	ILE	CA-C	-7.94	1.43	1.52
1	B	286	ARG	CA-C	-7.93	1.43	1.53
2	D	334	VAL	CA-C	-7.93	1.42	1.52
2	D	140	VAL	CA-C	-7.93	1.43	1.52
1	B	166	LEU	CA-C	-7.93	1.43	1.52
1	B	30	ARG	CA-C	-7.93	1.43	1.52
2	F	404	VAL	CA-C	-7.92	1.43	1.52
1	A	505	LEU	CA-C	-7.91	1.42	1.52
1	C	218	LYS	N-CA	-7.89	1.36	1.46
2	D	177	HIS	CA-C	-7.89	1.43	1.52
2	F	449	TYR	CA-C	-7.88	1.43	1.52
7	S	57	ASN	CA-C	-7.88	1.43	1.52
3	G	20	THR	CA-C	-7.87	1.42	1.52
1	B	473	ILE	CA-C	-7.85	1.43	1.52
1	A	97	VAL	CA-C	-7.85	1.44	1.52
1	B	46	ASN	CA-C	-7.84	1.43	1.52
2	D	45	LEU	CA-C	-7.83	1.43	1.52
4	H	29	ASN	CA-C	-7.82	1.44	1.53
3	G	172	LYS	N-CA	-7.82	1.36	1.46
2	D	404	VAL	CA-C	-7.82	1.43	1.52
1	A	89	LYS	CA-C	-7.81	1.43	1.52
2	F	61	ILE	CA-C	-7.80	1.43	1.52
1	C	157	VAL	CA-C	-7.78	1.44	1.52
1	A	217	VAL	CA-C	-7.77	1.43	1.52
2	E	21	VAL	CA-C	-7.77	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	41	VAL	CA-C	-7.77	1.43	1.52
1	A	33	SER	CA-C	-7.77	1.43	1.52
1	B	175	LYS	CA-C	-7.76	1.43	1.52
1	A	11	ILE	CA-C	-7.76	1.42	1.52
1	B	108	VAL	CA-C	-7.75	1.43	1.52
3	G	174	GLU	CA-C	-7.74	1.43	1.52
1	C	153	VAL	CA-C	-7.74	1.43	1.52
1	A	302	HIS	CA-C	-7.74	1.42	1.52
3	G	82	HIS	CA-C	-7.74	1.43	1.52
2	D	58	VAL	N-CA	-7.73	1.37	1.46
1	C	215	GLN	CA-C	-7.72	1.42	1.52
1	B	337	TYR	CA-C	-7.71	1.43	1.52
1	B	498	LYS	CA-C	-7.71	1.42	1.52
1	A	39	ALA	CA-C	-7.70	1.43	1.52
1	A	16	ILE	CA-C	-7.70	1.43	1.52
1	C	151	LYS	CA-C	-7.70	1.43	1.52
2	D	441	PHE	CA-C	-7.69	1.42	1.52
4	H	75	TYR	CA-C	-7.69	1.43	1.52
1	C	279	ARG	CA-C	-7.69	1.43	1.52
2	D	246	GLN	CA-C	-7.68	1.43	1.52
2	E	76	LEU	CA-C	-7.68	1.43	1.52
3	G	251	ASN	CA-C	-7.68	1.42	1.52
1	C	415	GLN	CA-C	-7.67	1.42	1.52
2	F	376	LYS	CA-C	-7.67	1.43	1.52
1	B	62	MET	CA-C	-7.66	1.43	1.52
2	D	253	LEU	CA-C	-7.66	1.43	1.52
1	B	202	ILE	CA-C	-7.66	1.42	1.52
2	E	192	GLU	CA-C	-7.65	1.42	1.52
2	F	376	LYS	N-CA	-7.65	1.37	1.46
1	C	55	PHE	CA-C	-7.65	1.42	1.52
1	B	355	GLU	CA-C	-7.64	1.42	1.52
1	C	472	VAL	CA-C	-7.64	1.42	1.52
2	F	61	ILE	N-CA	-7.64	1.37	1.46
2	F	117	HIS	CA-C	-7.64	1.43	1.52
2	D	23	VAL	CA-C	-7.63	1.43	1.52
3	G	249	THR	CA-C	-7.62	1.42	1.52
1	C	299	PHE	CA-C	-7.62	1.43	1.52
1	B	299	PHE	CA-C	-7.62	1.43	1.52
1	B	291	ARG	CA-C	-7.62	1.43	1.52
2	F	245	ASP	CA-C	-7.62	1.42	1.52
2	E	292	MET	CA-C	-7.62	1.43	1.53
1	B	217	VAL	CA-C	-7.61	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	203	TYR	CA-C	-7.60	1.43	1.52
2	D	152	ILE	CA-C	-7.60	1.43	1.52
2	D	312	VAL	N-CA	-7.60	1.40	1.46
2	D	17	ILE	CA-C	-7.60	1.43	1.52
3	G	255	GLN	CA-C	-7.59	1.43	1.52
8	T	103	LEU	N-CA	-7.58	1.37	1.46
2	E	399	GLU	CA-C	-7.58	1.43	1.52
4	H	19	THR	N-CA	-7.57	1.37	1.46
2	D	95	MET	CA-C	-7.56	1.43	1.52
2	F	57	THR	CA-C	-7.55	1.43	1.52
4	H	18	PHE	CA-C	-7.55	1.43	1.52
2	F	308	GLN	CA-C	-7.55	1.43	1.52
1	B	267	ILE	N-CA	-7.54	1.36	1.46
3	G	208	SER	CA-C	-7.54	1.42	1.52
2	E	376	LYS	N-CA	-7.53	1.37	1.46
1	A	381	ARG	CA-C	-7.52	1.43	1.52
1	A	396	GLN	CA-C	-7.52	1.43	1.52
2	E	131	GLU	CA-C	-7.52	1.43	1.52
1	C	139	ARG	CA-C	-7.52	1.43	1.52
1	C	349	GLN	CA-C	-7.51	1.43	1.52
2	F	37	GLU	CA-C	-7.50	1.43	1.52
3	G	204	TYR	CA-C	-7.49	1.42	1.52
3	G	154	GLU	CA-C	-7.49	1.45	1.53
1	B	41	VAL	CA-C	-7.49	1.43	1.52
2	F	165	LEU	CA-C	-7.48	1.43	1.52
1	B	312	MET	CA-C	-7.48	1.43	1.52
2	F	408	ARG	N-CA	-7.48	1.37	1.46
2	F	428	LEU	CA-C	-7.48	1.43	1.52
1	A	460	LYS	CA-C	-7.47	1.42	1.52
2	E	23	VAL	CA-C	-7.47	1.43	1.52
1	A	46	ASN	CA-C	-7.47	1.42	1.52
1	B	499	GLU	CA-C	-7.46	1.43	1.52
2	F	54	GLY	CA-C	-7.46	1.44	1.52
2	E	182	VAL	CA-C	-7.45	1.43	1.52
1	B	460	LYS	CA-C	-7.45	1.42	1.52
1	A	245	LEU	CA-C	-7.45	1.43	1.52
10	V	56	PRO	CA-C	7.45	1.61	1.52
3	G	219	GLU	CA-C	-7.44	1.43	1.52
1	C	217	VAL	CA-C	-7.44	1.43	1.52
1	C	426	GLU	CA-C	-7.44	1.43	1.52
1	B	26	GLU	CA-C	-7.44	1.43	1.52
2	D	117	HIS	CA-C	-7.43	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	267	ILE	CA-C	-7.42	1.43	1.52
2	F	51	GLN	CA-C	-7.42	1.43	1.52
2	D	20	VAL	CA-C	-7.42	1.43	1.52
2	E	189	ARG	CA-C	-7.40	1.43	1.52
4	H	94	ALA	CA-C	-7.38	1.43	1.52
1	C	212	THR	CA-C	-7.37	1.43	1.52
2	E	246	GLN	CA-C	-7.37	1.43	1.52
1	C	362	ARG	N-CA	-7.36	1.39	1.46
1	B	173	THR	CA-C	-7.36	1.42	1.53
2	E	369	ASP	CA-C	-7.36	1.43	1.52
2	E	410	ILE	CA-C	-7.36	1.43	1.52
2	E	61	ILE	CA-C	-7.36	1.43	1.52
4	H	130	GLU	CA-C	-7.36	1.43	1.52
3	G	140	ASP	CA-C	-7.35	1.43	1.52
2	D	292	MET	CA-C	-7.35	1.43	1.53
1	B	146	MET	CA-C	-7.34	1.44	1.52
2	E	332	THR	CA-C	-7.34	1.43	1.52
2	F	21	VAL	CA-C	-7.34	1.43	1.52
2	E	75	VAL	N-CA	-7.33	1.37	1.46
1	B	59	LEU	CA-C	-7.32	1.43	1.52
1	A	108	VAL	CA-C	-7.32	1.44	1.52
2	F	439	LYS	CA-C	-7.32	1.43	1.52
1	B	67	GLU	C-N	-7.31	1.26	1.34
2	D	375	GLN	CA-C	-7.31	1.43	1.52
1	A	395	ALA	CA-C	-7.30	1.43	1.52
2	D	306	SER	CA-C	-7.30	1.44	1.52
2	F	306	SER	CA-C	-7.30	1.44	1.52
2	D	200	MET	CA-C	-7.29	1.43	1.52
2	F	372	ARG	CA-C	-7.28	1.42	1.52
1	B	341	ASN	CA-C	-7.28	1.43	1.52
2	D	58	VAL	CA-C	-7.28	1.44	1.52
1	B	127	ARG	CA-C	-7.27	1.43	1.52
2	E	140	VAL	CA-C	-7.26	1.44	1.52
1	C	463	LYS	N-CA	-7.26	1.37	1.46
8	T	90	TYR	N-CA	-7.26	1.36	1.46
2	D	244	ARG	CA-C	-7.26	1.43	1.52
2	F	289	MET	CA-C	-7.26	1.43	1.52
1	A	31	VAL	CA-C	-7.25	1.44	1.53
7	S	41	ARG	CA-C	-7.25	1.43	1.52
4	H	19	THR	CA-C	-7.25	1.44	1.52
1	A	268	TYR	CA-C	-7.24	1.43	1.52
1	B	87	ILE	CA-C	-7.24	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	217	LEU	CA-C	-7.23	1.44	1.52
4	H	92	LEU	CA-C	-7.22	1.43	1.52
2	D	401	LYS	CA-C	-7.21	1.43	1.52
1	A	498	LYS	CA-C	-7.20	1.43	1.52
1	C	330	GLN	CA-C	-7.20	1.43	1.52
2	F	303	SER	CA-C	-7.20	1.43	1.52
2	F	84	ILE	CA-C	-7.19	1.44	1.52
2	D	321	ALA	N-CA	-7.19	1.41	1.46
8	T	96	ARG	CA-C	-7.19	1.43	1.52
1	A	306	LEU	CA-C	-7.18	1.42	1.52
1	B	301	LEU	CA-C	-7.18	1.43	1.52
2	D	442	GLN	CA-C	-7.18	1.43	1.52
2	F	52	HIS	CA-C	-7.18	1.43	1.53
1	A	350	ILE	CA-C	-7.17	1.44	1.52
1	B	128	ARG	CA-C	-7.17	1.43	1.52
1	B	224	ASP	CA-C	-7.17	1.43	1.53
1	C	460	LYS	CA-C	-7.16	1.42	1.52
2	D	308	GLN	CA-C	-7.16	1.44	1.52
2	F	380	ASP	CA-C	-7.16	1.43	1.52
1	B	501	VAL	CA-C	-7.15	1.44	1.52
4	H	85	ASN	CA-C	-7.15	1.43	1.53
2	D	400	ASP	N-CA	-7.14	1.37	1.46
3	G	258	ILE	CA-C	-7.14	1.43	1.52
1	A	243	GLN	CA-C	-7.14	1.43	1.52
1	B	475	GLN	CA-C	-7.14	1.44	1.53
2	D	154	LEU	CA-C	-7.13	1.43	1.53
1	B	153	VAL	CA-C	-7.13	1.44	1.52
1	A	38	ILE	CA-C	-7.13	1.43	1.52
1	B	278	TYR	CA-C	-7.13	1.43	1.52
1	A	55	PHE	CA-C	-7.12	1.43	1.52
2	D	80	ALA	CA-C	-7.12	1.44	1.52
1	A	492	GLU	CA-C	-7.12	1.43	1.52
3	G	16	ILE	CA-C	-7.12	1.44	1.52
2	F	152	ILE	CA-C	-7.12	1.44	1.52
2	F	171	ASN	CA-C	-7.12	1.43	1.52
1	C	248	TYR	CA-C	-7.11	1.43	1.52
2	F	292	MET	CA-C	-7.11	1.43	1.53
2	E	333	THR	CA-C	-7.11	1.44	1.52
1	A	87	ILE	CA-C	-7.10	1.44	1.52
1	A	186	GLN	CA-C	-7.10	1.42	1.52
7	S	108	MET	N-CA	-7.10	1.34	1.47
1	B	221	THR	CA-C	-7.09	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	131	ILE	CA-C	-7.09	1.44	1.52
2	F	154	LEU	CA-C	-7.09	1.43	1.53
2	E	459	MET	CA-C	-7.09	1.44	1.53
2	D	167	MET	CA-C	-7.08	1.43	1.52
4	H	138	ASN	CA-C	-7.08	1.43	1.52
1	B	505	LEU	CA-C	-7.07	1.43	1.52
2	D	376	LYS	N-CA	-7.07	1.38	1.46
2	F	438	ILE	CA-C	-7.07	1.44	1.52
1	B	55	PHE	CA-C	-7.07	1.43	1.53
1	B	76	PHE	CA-C	-7.06	1.45	1.53
7	S	37	LYS	CA-C	-7.06	1.43	1.52
4	H	20	PHE	N-CA	-7.06	1.37	1.46
2	D	131	GLU	CA-C	-7.06	1.43	1.52
3	G	262	LEU	CA-C	-7.05	1.43	1.52
2	F	195	ASP	CA-C	-7.05	1.43	1.52
2	D	196	LEU	CA-C	-7.04	1.43	1.52
1	B	65	ASN	CA-C	-7.04	1.44	1.52
7	S	67	LYS	N-CA	-7.04	1.38	1.46
3	G	265	ILE	CA-C	-7.04	1.44	1.52
2	D	439	LYS	CA-C	-7.03	1.43	1.52
2	F	378	LEU	CA-C	-7.03	1.43	1.52
1	A	65	ASN	CA-C	-7.03	1.44	1.52
2	F	206	ILE	CA-C	-7.03	1.45	1.52
2	F	23	VAL	CA-C	-7.03	1.44	1.52
2	E	38	VAL	CA-C	-7.02	1.44	1.52
1	C	464	PHE	CA-C	-7.02	1.44	1.52
7	S	82	THR	CA-C	-7.02	1.43	1.52
1	C	93	ALA	CA-C	-7.02	1.43	1.52
2	E	52	HIS	CA-C	-7.01	1.44	1.52
1	C	337	TYR	CA-C	-7.00	1.44	1.52
1	A	127	ARG	CA-C	-7.00	1.43	1.52
1	C	503	ASN	CA-C	-7.00	1.43	1.52
2	F	255	ILE	CA-C	-7.00	1.44	1.52
2	E	25	PHE	CA-C	-7.00	1.44	1.52
1	C	218	LYS	CA-C	-6.99	1.44	1.52
1	C	88	VAL	CA-C	-6.99	1.44	1.52
3	G	166	ARG	CA-C	-6.99	1.44	1.52
1	A	468	PHE	CA-C	-6.98	1.43	1.52
1	C	127	ARG	CA-C	-6.98	1.43	1.52
2	E	59	ARG	CA-C	-6.98	1.44	1.52
2	F	196	LEU	CA-C	-6.98	1.43	1.52
4	H	20	PHE	CA-C	-6.98	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	16	VAL	CA-C	-6.97	1.43	1.52
1	A	139	ARG	CA-C	-6.97	1.44	1.52
1	A	202	ILE	CA-C	-6.97	1.43	1.52
2	F	325	THR	CA-C	-6.97	1.43	1.52
2	F	76	LEU	CA-C	-6.97	1.44	1.52
2	F	345	TYR	N-CA	-6.97	1.39	1.46
1	A	175	LYS	CA-C	-6.96	1.44	1.52
1	A	221	THR	CA-C	-6.96	1.43	1.52
2	F	329	LEU	CA-C	-6.96	1.43	1.53
1	C	266	ILE	CA-C	-6.95	1.44	1.52
2	E	321	ALA	N-CA	-6.95	1.41	1.46
1	B	278	TYR	N-CA	-6.95	1.38	1.46
1	A	301	LEU	CA-C	-6.95	1.43	1.52
1	C	299	PHE	N-CA	-6.95	1.38	1.46
1	A	26	GLU	CA-C	-6.94	1.43	1.52
2	E	201	ILE	CA-C	-6.93	1.44	1.52
2	F	197	TYR	CA-C	-6.93	1.43	1.52
2	D	126	MET	CA-C	-6.92	1.44	1.52
2	F	464	GLU	CA-C	-6.92	1.43	1.52
2	F	259	PHE	N-CA	-6.91	1.38	1.46
3	G	110	ASP	CA-C	-6.91	1.44	1.52
1	B	54	GLU	CA-C	-6.91	1.44	1.52
2	D	116	ILE	CA-C	-6.91	1.44	1.52
1	C	370	SER	CA-C	-6.90	1.44	1.52
2	F	192	GLU	CA-C	-6.90	1.43	1.52
3	G	194	ASP	CA-C	-6.90	1.43	1.52
1	B	199	LEU	CA-C	-6.90	1.44	1.52
2	F	20	VAL	CA-C	-6.89	1.43	1.52
2	F	58	VAL	N-CA	-6.89	1.38	1.46
1	A	465	GLU	CA-C	-6.89	1.43	1.52
2	E	200	MET	CA-C	-6.89	1.43	1.52
2	F	355	SER	CA-C	-6.88	1.44	1.52
3	G	21	LYS	N-CA	-6.88	1.37	1.46
8	T	97	ASN	CA-C	-6.88	1.43	1.52
1	A	416	GLN	CA-C	-6.88	1.44	1.52
1	A	304	ARG	N-CA	-6.87	1.38	1.46
1	A	500	ILE	CA-C	-6.87	1.44	1.52
1	B	324	LEU	CA-C	-6.87	1.45	1.52
2	F	58	VAL	CA-C	-6.87	1.44	1.52
2	F	142	LEU	CA-C	-6.86	1.44	1.52
1	C	294	TYR	CA-C	-6.86	1.45	1.52
1	C	481	GLY	CA-C	-6.85	1.44	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	83	THR	CA-C	-6.84	1.44	1.52
3	G	261	GLU	CA-C	-6.84	1.43	1.52
2	E	20	VAL	CA-C	-6.83	1.44	1.52
4	H	55	LEU	CA-C	-6.83	1.44	1.52
2	D	60	THR	CA-C	-6.82	1.44	1.52
2	D	218	VAL	CA-C	-6.82	1.44	1.52
1	A	475	GLN	CA-C	-6.81	1.44	1.52
3	G	116	LEU	CA-C	-6.80	1.43	1.52
3	G	217	LEU	CA-C	-6.80	1.44	1.52
1	B	33	SER	CA-C	-6.80	1.44	1.52
2	E	380	ASP	CA-C	-6.80	1.44	1.52
2	F	256	ASP	CA-C	-6.79	1.45	1.52
2	E	67	GLU	CA-C	-6.79	1.44	1.52
1	B	380	THR	CA-C	-6.78	1.44	1.52
3	G	42	ARG	CA-C	-6.78	1.44	1.52
3	G	199	ASP	CA-C	-6.78	1.43	1.52
1	A	382	ALA	CA-C	-6.78	1.44	1.52
2	D	459	MET	CA-C	-6.78	1.45	1.53
2	E	443	GLN	CA-C	-6.77	1.44	1.52
1	B	182	THR	CA-C	-6.76	1.44	1.52
2	D	61	ILE	N-CA	-6.76	1.38	1.46
3	G	18	LYS	CA-C	-6.76	1.44	1.52
3	G	254	ARG	N-CA	-6.76	1.38	1.46
1	C	173	THR	N-CA	-6.76	1.38	1.46
1	C	278	TYR	CA-C	-6.76	1.44	1.52
2	E	199	GLU	CA-C	-6.76	1.43	1.52
1	C	213	VAL	N-CA	-6.75	1.38	1.46
5	I	6	GLN	CA-C	-6.75	1.43	1.52
1	C	394	LEU	CA-C	-6.75	1.43	1.52
1	A	341	ASN	CA-C	-6.75	1.44	1.52
1	C	390	MET	CA-C	-6.75	1.44	1.52
2	F	364	GLY	CA-C	-6.74	1.42	1.51
1	A	493	SER	CA-C	-6.74	1.44	1.52
2	D	146	TYR	CA-C	-6.74	1.44	1.52
3	G	163	ASN	CA-C	-6.74	1.44	1.52
4	H	74	LYS	CA-C	-6.74	1.44	1.52
1	B	79	ASP	CA-C	-6.73	1.44	1.52
2	D	47	LEU	CA-C	-6.73	1.44	1.52
2	D	169	LEU	CA-C	-6.73	1.44	1.52
2	F	194	ASN	CA-C	-6.73	1.44	1.52
2	D	370	VAL	CA-C	-6.73	1.44	1.52
1	B	390	MET	CA-C	-6.73	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	77	VAL	CA-C	-6.72	1.44	1.52
1	B	330	GLN	CA-C	-6.72	1.45	1.52
1	A	30	ARG	CA-C	-6.72	1.44	1.52
1	A	216	LEU	CA-C	-6.72	1.44	1.52
4	H	128	ARG	CA-C	-6.72	1.44	1.52
8	T	161	ILE	N-CA	-6.72	1.38	1.46
2	E	36	LEU	CA-C	-6.72	1.44	1.52
1	B	263	HIS	N-CA	-6.72	1.38	1.46
2	E	324	THR	CA-C	-6.72	1.44	1.52
2	D	182	VAL	CA-C	-6.71	1.44	1.52
4	H	132	GLN	N-CA	-6.71	1.38	1.46
1	C	499	GLU	CA-C	-6.71	1.44	1.52
2	D	31	PRO	CA-C	-6.71	1.45	1.53
2	D	198	HIS	CA-C	-6.71	1.43	1.52
1	B	326	VAL	N-CA	-6.70	1.38	1.46
1	B	245	LEU	CA-C	-6.70	1.44	1.52
3	G	261	GLU	N-CA	-6.70	1.37	1.46
1	A	152	ALA	CA-C	-6.69	1.43	1.52
2	E	84	ILE	CA-C	-6.68	1.44	1.52
4	H	97	ALA	CA-C	-6.68	1.44	1.52
1	A	151	LYS	CA-C	-6.67	1.44	1.52
1	A	501	VAL	CA-C	-6.67	1.44	1.52
1	B	257	PHE	CA-C	-6.67	1.44	1.52
2	D	39	GLN	CA-C	-6.67	1.44	1.52
7	S	48	GLU	C-N	-6.66	1.26	1.34
1	C	338	ILE	CA-C	-6.66	1.46	1.52
2	D	10	THR	CA-C	-6.66	1.44	1.52
2	F	165	LEU	N-CA	-6.66	1.38	1.46
3	G	19	ILE	CA-C	-6.66	1.44	1.52
1	C	67	GLU	CA-C	-6.65	1.43	1.52
2	E	438	ILE	CA-C	-6.65	1.44	1.52
2	D	54	GLY	CA-C	-6.65	1.45	1.52
2	E	325	THR	CA-C	-6.65	1.44	1.52
3	G	84	SER	CA-C	-6.65	1.44	1.52
2	E	80	ALA	N-CA	-6.65	1.39	1.46
9	U	118	LEU	CA-C	-6.64	1.43	1.52
1	B	218	LYS	CA-C	-6.64	1.44	1.52
2	D	303	SER	CA-C	-6.63	1.44	1.52
1	A	277	ALA	CA-C	-6.63	1.44	1.52
2	F	199	GLU	CA-C	-6.62	1.43	1.52
1	A	218	LYS	CA-C	-6.62	1.44	1.52
7	S	21	ALA	CA-C	-6.62	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	183	PHE	CA-C	-6.62	1.44	1.52
1	C	221	THR	CA-C	-6.61	1.44	1.52
2	D	275	ILE	N-CA	-6.61	1.41	1.46
2	E	96	ASN	CA-C	-6.61	1.46	1.53
2	D	75	VAL	CA-C	-6.61	1.44	1.52
1	B	126	ARG	CA-C	-6.60	1.44	1.52
1	B	323	ALA	CA-C	-6.60	1.44	1.52
1	B	395	ALA	CA-C	-6.60	1.44	1.52
1	C	422	VAL	CA-C	-6.60	1.44	1.52
7	S	97	ASN	CA-C	-6.59	1.43	1.52
1	A	287	ARG	CA-C	-6.59	1.44	1.52
1	C	38	ILE	CA-C	-6.59	1.44	1.52
2	E	13	ILE	CA-C	-6.59	1.45	1.52
1	A	88	VAL	N-CA	-6.59	1.38	1.46
4	H	58	LEU	CA-C	-6.59	1.44	1.52
1	C	176	THR	N-CA	-6.59	1.38	1.46
2	E	399	GLU	N-CA	-6.58	1.38	1.46
2	D	141	ASP	CA-C	-6.58	1.44	1.52
1	A	244	TYR	N-CA	-6.58	1.38	1.46
1	B	277	ALA	CA-C	-6.57	1.44	1.52
1	C	474	SER	N-CA	-6.57	1.38	1.46
2	E	363	VAL	CA-C	-6.57	1.44	1.52
1	C	419	SER	CA-C	-6.57	1.44	1.52
1	B	140	ILE	CA-C	-6.56	1.44	1.52
2	E	139	VAL	CA-C	-6.56	1.44	1.52
1	B	497	LEU	CA-C	-6.55	1.44	1.52
1	C	366	ASN	CA-C	-6.55	1.44	1.52
2	E	319	ASP	CA-C	-6.55	1.45	1.53
2	F	131	GLU	CA-C	-6.55	1.44	1.52
1	C	465	GLU	CA-C	-6.55	1.44	1.52
1	C	326	VAL	N-CA	-6.54	1.38	1.46
1	B	155	SER	CA-C	-6.54	1.44	1.53
3	G	252	ARG	N-CA	-6.54	1.38	1.46
3	G	216	SER	CA-C	-6.54	1.44	1.52
1	A	463	LYS	N-CA	-6.53	1.38	1.46
1	B	215	GLN	CA-C	-6.53	1.44	1.52
2	F	202	GLU	CA-C	-6.53	1.44	1.52
1	A	203	TYR	N-CA	-6.52	1.38	1.46
1	B	60	LYS	CA-C	-6.52	1.44	1.52
1	C	414	THR	N-CA	-6.52	1.38	1.46
4	H	133	ILE	CA-C	-6.52	1.44	1.52
2	D	254	PHE	CA-C	-6.52	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	172	ASN	CA-C	-6.52	1.44	1.52
7	S	23	TYR	CA-C	-6.52	1.43	1.52
2	D	22	ASP	CA-C	-6.51	1.44	1.52
1	A	473	ILE	CA-C	-6.51	1.44	1.52
2	D	367	HIS	CA-C	-6.51	1.44	1.52
1	A	477	GLN	N-CA	-6.51	1.38	1.46
7	S	158	ILE	N-CA	-6.51	1.38	1.46
1	B	176	THR	CA-C	-6.50	1.44	1.52
1	B	40	ARG	CA-C	-6.50	1.44	1.52
2	E	212	THR	CA-C	-6.50	1.46	1.53
2	E	252	LEU	CA-C	-6.50	1.44	1.52
1	B	165	GLU	CA-C	-6.50	1.44	1.52
2	F	333	THR	CA-C	-6.50	1.44	1.52
1	B	351	PHE	CA-C	-6.49	1.44	1.52
1	C	126	ARG	CA-C	-6.49	1.44	1.52
1	C	30	ARG	CA-C	-6.49	1.44	1.52
10	V	6	LYS	N-CA	-6.49	1.38	1.46
1	B	461	ILE	CA-C	-6.49	1.45	1.52
2	F	164	VAL	CA-C	-6.49	1.44	1.52
2	E	47	LEU	N-CA	-6.48	1.38	1.46
2	F	139	VAL	N-CA	-6.47	1.38	1.46
1	B	361	ILE	CA-C	-6.47	1.44	1.52
11	W	90	HIS	N-CA	-6.47	1.38	1.46
1	C	302	HIS	CA-C	-6.47	1.43	1.52
3	G	167	SER	CA-C	-6.46	1.45	1.52
1	C	341	ASN	CA-C	-6.46	1.44	1.52
3	G	15	ASN	N-CA	-6.46	1.38	1.46
3	G	249	THR	N-CA	-6.46	1.38	1.46
1	B	212	THR	CA-C	-6.46	1.44	1.52
2	E	245	ASP	CA-C	-6.46	1.44	1.52
2	E	326	PHE	CA-C	-6.45	1.44	1.52
4	H	54	THR	CA-C	-6.45	1.44	1.52
1	B	429	LYS	CA-C	-6.45	1.44	1.52
1	A	219	ARG	CA-C	-6.45	1.44	1.52
1	C	178	ILE	N-CA	-6.45	1.39	1.46
1	B	145	PRO	CA-C	-6.44	1.46	1.53
2	D	410	ILE	CA-C	-6.44	1.45	1.52
1	A	324	LEU	CA-C	-6.44	1.46	1.52
3	G	206	GLU	CA-C	-6.44	1.44	1.52
1	B	465	GLU	CA-C	-6.44	1.44	1.52
2	F	402	LEU	CA-C	-6.43	1.44	1.52
2	E	249	GLN	CA-C	-6.43	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	362	ARG	N-CA	-6.42	1.39	1.46
2	E	24	GLN	CA-C	-6.42	1.45	1.52
2	E	107	PRO	CA-C	-6.42	1.46	1.53
1	A	173	THR	CA-C	-6.42	1.43	1.52
1	C	482	LYS	CA-C	-6.41	1.44	1.52
1	C	104	LEU	CA-C	-6.41	1.44	1.52
3	G	237	LYS	CA-C	-6.41	1.44	1.52
1	B	39	ALA	CA-C	-6.41	1.44	1.52
1	C	65	ASN	CA-C	-6.41	1.44	1.52
2	F	449	TYR	N-CA	-6.41	1.38	1.46
2	F	385	GLN	CA-C	-6.40	1.44	1.52
2	F	80	ALA	CA-C	-6.40	1.45	1.52
1	B	349	GLN	CA-C	-6.39	1.44	1.52
1	C	99	VAL	N-CA	-6.39	1.39	1.46
1	C	461	ILE	CA-C	-6.39	1.45	1.52
2	E	100	GLU	CA-C	-6.39	1.46	1.52
1	A	212	THR	CA-C	-6.39	1.44	1.52
3	G	70	GLY	CA-C	-6.38	1.46	1.52
8	T	160	THR	C-N	-6.38	1.25	1.33
1	B	279	ARG	CA-C	-6.38	1.44	1.52
8	T	11	TYR	N-CA	-6.37	1.38	1.46
3	G	263	ILE	CA-C	-6.37	1.44	1.52
1	A	448	GLY	CA-C	-6.37	1.44	1.52
2	E	373	GLY	CA-C	-6.36	1.44	1.52
3	G	21	LYS	CA-C	-6.36	1.44	1.52
1	C	312	MET	CA-C	-6.36	1.44	1.53
1	C	463	LYS	CA-C	-6.36	1.44	1.52
3	G	5	ASP	CA-C	-6.36	1.44	1.52
1	A	356	LEU	CA-C	-6.36	1.44	1.52
2	D	364	GLY	CA-C	-6.35	1.46	1.52
2	E	254	PHE	CA-C	-6.35	1.45	1.52
2	F	225	PRO	CA-C	-6.35	1.46	1.52
1	A	299	PHE	CA-C	-6.34	1.44	1.52
4	H	92	LEU	N-CA	-6.34	1.38	1.46
1	B	88	VAL	CA-C	-6.33	1.44	1.52
1	A	320	SER	CA-C	-6.33	1.44	1.52
1	B	369	LEU	CA-C	-6.33	1.43	1.52
2	D	436	GLU	CA-C	-6.33	1.44	1.52
2	E	138	LYS	CA-C	-6.33	1.45	1.52
7	S	84	ASN	CA-C	-6.33	1.44	1.52
1	C	322	THR	CA-C	-6.33	1.44	1.52
2	E	387	ILE	CA-C	-6.33	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	365	SER	N-CA	-6.33	1.37	1.46
3	G	69	ILE	CA-C	-6.32	1.45	1.52
2	D	464	GLU	CA-C	-6.32	1.44	1.52
2	F	198	HIS	CA-C	-6.32	1.44	1.52
3	G	33	ARG	CA-C	-6.32	1.44	1.52
2	F	139	VAL	CA-C	-6.31	1.44	1.52
3	G	254	ARG	CA-C	-6.31	1.44	1.52
2	E	429	GLY	CA-C	-6.30	1.42	1.52
1	B	47	VAL	CA-C	-6.30	1.44	1.52
1	A	39	ALA	N-CA	-6.29	1.38	1.46
1	C	42	HIS	N-CA	-6.29	1.38	1.46
2	E	15	ALA	CA-C	-6.29	1.44	1.52
2	E	48	GLU	CA-C	-6.29	1.45	1.52
2	E	71	ARG	CA-C	-6.29	1.44	1.53
1	B	290	GLY	CA-C	-6.29	1.43	1.51
2	F	382	LYS	CA-C	-6.29	1.44	1.52
3	G	52	TYR	CA-C	-6.28	1.44	1.52
3	G	250	PHE	N-CA	-6.28	1.38	1.46
5	I	16	GLN	CA-C	-6.28	1.44	1.52
2	E	183	PHE	CA-C	-6.28	1.45	1.52
1	B	387	ALA	CA-C	-6.27	1.44	1.52
2	D	367	HIS	N-CA	-6.27	1.39	1.46
4	H	93	LEU	CA-C	-6.27	1.45	1.53
1	A	248	TYR	CA-C	-6.27	1.44	1.52
2	E	153	GLY	CA-C	-6.27	1.47	1.52
1	C	277	ALA	CA-C	-6.27	1.44	1.52
1	B	243	GLN	CA-C	-6.26	1.44	1.52
1	C	430	GLN	N-CA	-6.26	1.39	1.46
9	U	78	VAL	C-O	-6.26	1.16	1.24
2	D	321	ALA	CA-C	-6.26	1.45	1.52
1	B	167	ILE	CA-C	-6.26	1.44	1.52
3	G	171	TYR	CA-C	-6.26	1.44	1.52
2	F	180	TYR	CA-C	-6.25	1.44	1.53
2	F	262	THR	CA-C	-6.25	1.44	1.52
1	C	156	LEU	CA-C	-6.25	1.44	1.52
1	C	451	GLY	CA-C	-6.25	1.43	1.51
2	D	25	PHE	N-CA	-6.25	1.38	1.46
2	D	365	SER	CA-C	-6.25	1.44	1.52
2	F	452	LEU	N-CA	-6.25	1.41	1.46
1	B	474	SER	N-CA	-6.24	1.39	1.46
2	D	290	GLY	CA-C	-6.24	1.45	1.52
2	E	409	LYS	CA-C	-6.24	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	73	VAL	N-CA	-6.24	1.38	1.46
1	B	225	ALA	N-CA	-6.24	1.37	1.45
4	H	89	SER	N-CA	-6.24	1.38	1.46
1	A	166	LEU	CA-C	-6.23	1.45	1.52
3	G	80	ALA	CA-C	-6.23	1.45	1.53
1	A	326	VAL	N-CA	-6.23	1.39	1.46
1	B	104	LEU	CA-C	-6.23	1.44	1.52
1	B	326	VAL	CA-C	-6.23	1.45	1.52
2	D	183	PHE	N-CA	-6.23	1.38	1.46
2	D	305	THR	CA-C	-6.22	1.45	1.52
2	D	352	ASP	N-CA	-6.22	1.38	1.46
1	B	500	ILE	CA-C	-6.22	1.45	1.52
2	F	448	GLU	CA-C	-6.22	1.45	1.52
2	F	201	ILE	CA-C	-6.21	1.45	1.52
1	B	216	LEU	N-CA	-6.21	1.39	1.46
1	B	265	LEU	CA-C	-6.21	1.45	1.52
1	A	466	ASN	CA-C	-6.21	1.44	1.52
2	E	262	THR	CA-C	-6.20	1.44	1.52
2	F	162	LYS	CA-C	-6.20	1.45	1.52
2	F	210	ASP	N-CA	-6.20	1.39	1.46
8	T	121	ARG	N-CA	6.20	1.54	1.46
1	B	239	ALA	CA-C	-6.19	1.44	1.52
1	C	210	ARG	CA-C	-6.19	1.44	1.52
7	S	98	THR	N-CA	-6.19	1.40	1.46
4	H	25	GLN	CA-C	-6.18	1.45	1.52
2	D	181	SER	CA-C	-6.18	1.45	1.52
1	B	38	ILE	CA-C	-6.18	1.44	1.52
1	C	214	ALA	CA-C	-6.18	1.44	1.52
2	F	237	LEU	CA-C	-6.18	1.45	1.52
3	G	26	VAL	N-CA	-6.18	1.39	1.46
1	A	25	LEU	CA-C	-6.18	1.44	1.53
1	B	193	THR	CA-C	-6.18	1.45	1.52
4	H	67	ALA	CA-C	-6.17	1.45	1.52
1	B	213	VAL	N-CA	-6.17	1.39	1.46
1	C	89	LYS	CA-C	-6.17	1.45	1.52
2	F	218	VAL	CA-C	-6.17	1.45	1.52
1	C	155	SER	CA-C	-6.17	1.45	1.53
7	S	33	GLU	CA-C	-6.17	1.44	1.52
2	F	304	ILE	CA-C	-6.17	1.44	1.52
1	B	299	PHE	N-CA	-6.16	1.38	1.46
1	A	27	GLU	CA-C	-6.16	1.44	1.52
1	C	452	TYR	CA-C	-6.16	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	98	ILE	CA-C	-6.16	1.46	1.53
2	E	83	ARG	CA-C	-6.15	1.45	1.52
1	C	31	VAL	CA-C	-6.15	1.46	1.53
1	C	378	ALA	N-CA	-6.15	1.37	1.46
1	C	396	GLN	CA-C	-6.15	1.44	1.52
2	E	166	ILE	N-CA	-6.15	1.39	1.46
3	G	259	THR	CA-C	-6.15	1.45	1.52
1	B	176	THR	N-CA	-6.14	1.38	1.46
2	F	206	ILE	N-CA	-6.14	1.38	1.46
1	C	483	ILE	CA-C	-6.14	1.44	1.52
2	D	289	MET	CA-C	-6.14	1.44	1.52
1	C	479	LEU	CA-C	-6.13	1.44	1.52
1	A	461	ILE	CA-C	-6.13	1.45	1.52
1	B	63	SER	N-CA	-6.12	1.39	1.46
1	B	156	LEU	CA-C	-6.12	1.44	1.52
3	G	125	LEU	CA-C	-6.12	1.46	1.52
1	B	172	GLN	CA-C	-6.12	1.44	1.52
1	C	140	ILE	CA-C	-6.12	1.45	1.52
7	S	90	ALA	CA-C	-6.12	1.45	1.52
1	A	419	SER	CA-C	-6.11	1.45	1.52
1	C	443	ALA	CA-C	-6.11	1.45	1.52
2	E	58	VAL	N-CA	-6.11	1.39	1.46
2	F	75	VAL	CA-C	-6.11	1.45	1.52
2	E	305	THR	CA-C	-6.11	1.45	1.52
2	D	165	LEU	N-CA	-6.10	1.39	1.46
2	E	334	VAL	N-CA	-6.10	1.38	1.46
3	G	25	MET	CA-C	-6.10	1.45	1.52
2	F	243	PHE	CA-C	-6.10	1.44	1.52
2	F	293	GLN	N-CA	-6.10	1.39	1.46
1	A	393	GLU	CA-C	-6.09	1.44	1.52
2	E	352	ASP	CA-C	-6.09	1.44	1.52
7	S	35	VAL	CA-C	-6.09	1.44	1.52
2	F	274	ARG	CA-C	-6.08	1.45	1.53
1	B	463	LYS	CA-C	-6.08	1.45	1.52
1	C	425	THR	CA-C	-6.08	1.44	1.52
2	D	414	LEU	CA-C	-6.08	1.44	1.52
3	G	24	LYS	CA-C	-6.08	1.45	1.52
2	E	183	PHE	N-CA	-6.08	1.39	1.46
2	F	365	SER	CA-C	-6.08	1.44	1.52
1	A	279	ARG	CA-C	-6.07	1.45	1.52
3	G	212	ILE	CA-C	-6.07	1.45	1.52
1	C	423	ARG	CA-C	-6.07	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	73	GLN	CA-C	-6.07	1.45	1.52
3	G	206	GLU	N-CA	-6.07	1.38	1.46
1	C	67	GLU	C-N	-6.07	1.26	1.33
2	D	16	VAL	CA-C	-6.07	1.44	1.52
2	E	432	VAL	CA-C	-6.07	1.47	1.53
11	W	85	LEU	CA-C	-6.06	1.44	1.52
1	B	74	VAL	N-CA	-6.06	1.39	1.46
1	C	238	ASP	CA-C	-6.06	1.44	1.52
1	C	495	ALA	CA-C	-6.06	1.45	1.52
2	E	80	ALA	CA-C	-6.06	1.45	1.52
2	E	142	LEU	CA-C	-6.06	1.45	1.52
3	G	23	MET	CA-C	-6.06	1.44	1.52
1	A	339	PRO	CA-C	-6.06	1.43	1.52
1	C	488	LYS	N-CA	-6.06	1.39	1.46
4	H	139	GLU	N-CA	-6.06	1.39	1.46
1	A	140	ILE	CA-C	-6.05	1.45	1.52
1	A	302	HIS	N-CA	-6.05	1.38	1.46
1	C	278	TYR	N-CA	-6.05	1.39	1.46
2	F	430	LYS	CA-C	-6.05	1.45	1.52
1	A	504	PHE	CA-C	-6.05	1.45	1.52
2	D	25	PHE	CA-C	-6.05	1.45	1.52
2	F	69	LEU	CA-C	-6.05	1.45	1.53
2	F	412	ARG	CA-C	-6.05	1.44	1.52
2	E	389	ALA	CA-C	-6.05	1.45	1.52
5	I	4	TRP	N-CA	-6.05	1.38	1.46
5	I	15	SER	N-CA	-6.05	1.39	1.46
1	C	146	MET	CA-C	-6.04	1.45	1.52
2	F	59	ARG	CA-C	-6.04	1.45	1.52
2	D	334	VAL	N-CA	-6.04	1.38	1.46
2	E	263	GLN	N-CA	-6.04	1.39	1.46
2	F	381	TYR	CA-C	-6.04	1.45	1.52
2	F	83	ARG	CA-C	-6.04	1.45	1.52
7	S	6	ARG	CA-C	-6.04	1.45	1.52
3	G	105	ILE	CA-C	-6.04	1.45	1.52
1	C	172	GLN	N-CA	-6.03	1.38	1.46
1	C	471	HIS	N-CA	-6.03	1.39	1.46
2	F	305	THR	CA-C	-6.03	1.45	1.52
7	S	77	LYS	CA-C	-6.03	1.47	1.52
2	F	373	GLY	CA-C	-6.03	1.45	1.52
2	D	84	ILE	CA-C	-6.03	1.46	1.52
2	D	376	LYS	CA-C	-6.03	1.45	1.52
2	E	197	TYR	CA-C	-6.03	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	216	LEU	CA-C	-6.03	1.45	1.52
1	B	495	ALA	CA-C	-6.03	1.45	1.52
1	C	497	LEU	N-CA	-6.03	1.39	1.46
2	F	198	HIS	N-CA	-6.03	1.38	1.46
1	A	35	GLY	CA-C	-6.02	1.43	1.51
1	C	166	LEU	CA-C	-6.02	1.45	1.52
1	B	430	GLN	N-CA	-6.02	1.39	1.46
1	B	274	GLN	CA-C	-6.02	1.45	1.52
1	B	333	ASP	CA-C	-6.01	1.45	1.53
1	C	91	THR	CA-C	-6.01	1.44	1.52
2	F	137	ILE	CA-C	-6.01	1.45	1.52
2	F	167	MET	CA-C	-6.01	1.45	1.52
2	D	12	ARG	N-CA	-6.01	1.38	1.46
2	F	371	ALA	N-CA	-6.01	1.39	1.46
1	B	35	GLY	CA-C	-6.01	1.43	1.51
1	C	179	ALA	CA-C	-6.01	1.45	1.52
2	D	125	GLU	CA-C	-6.01	1.44	1.52
2	E	163	THR	N-CA	-6.01	1.39	1.46
2	F	35	ALA	CA-C	-6.01	1.45	1.52
2	D	275	ILE	CA-C	-6.00	1.48	1.53
1	C	323	ALA	CA-C	-6.00	1.45	1.52
2	D	262	THR	CA-C	-6.00	1.45	1.52
1	B	113	ASN	CA-C	-6.00	1.45	1.52
2	F	196	LEU	N-CA	-6.00	1.39	1.46
1	B	26	GLU	N-CA	-5.99	1.39	1.46
1	C	87	ILE	CA-C	-5.99	1.45	1.52
1	C	145	PRO	CA-C	-5.99	1.46	1.52
2	E	331	ALA	N-CA	-5.99	1.38	1.46
2	F	352	ASP	CA-C	-5.99	1.45	1.52
1	C	181	ASP	CA-C	-5.99	1.44	1.52
1	C	70	ASN	CA-C	-5.99	1.45	1.52
2	E	54	GLY	N-CA	-5.99	1.39	1.45
2	E	376	LYS	CA-C	-5.99	1.45	1.52
1	A	67	GLU	CA-C	-5.98	1.44	1.52
1	A	346	THR	CA-C	-5.98	1.44	1.53
2	E	46	VAL	CA-C	-5.98	1.45	1.52
2	F	21	VAL	N-CA	-5.98	1.39	1.46
2	E	367	HIS	N-CA	-5.98	1.39	1.46
7	S	91	GLU	N-CA	-5.98	1.39	1.46
2	D	24	GLN	N-CA	-5.98	1.38	1.46
2	D	369	ASP	CA-C	-5.98	1.45	1.52
2	E	17	ILE	CA-C	-5.98	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	98	VAL	CA-C	-5.98	1.45	1.52
1	C	262	LYS	CA-C	-5.97	1.45	1.52
1	C	440	GLU	CA-C	-5.97	1.45	1.52
2	E	237	LEU	CA-C	-5.97	1.45	1.52
3	G	6	ILE	N-CA	-5.97	1.39	1.46
2	E	366	GLU	CA-C	-5.97	1.45	1.52
1	B	483	ILE	CA-C	-5.97	1.45	1.52
2	F	455	GLN	CA-C	-5.97	1.44	1.52
1	B	200	TYR	CA-C	-5.97	1.45	1.52
2	E	243	PHE	CA-C	-5.97	1.44	1.52
3	G	234	ASN	CA-C	-5.97	1.45	1.52
1	A	323	ALA	CA-C	-5.97	1.45	1.52
2	E	333	THR	N-CA	-5.97	1.39	1.46
1	C	280	GLN	N-CA	-5.96	1.39	1.46
2	D	155	PHE	CA-C	-5.96	1.45	1.52
2	D	196	LEU	N-CA	-5.96	1.39	1.46
2	E	139	VAL	N-CA	-5.96	1.39	1.46
2	F	383	SER	CA-C	-5.96	1.45	1.52
7	S	42	VAL	N-CA	-5.96	1.39	1.46
3	G	215	TYR	N-CA	-5.96	1.39	1.46
1	A	500	ILE	N-CA	-5.96	1.39	1.46
2	D	448	GLU	CA-C	-5.96	1.45	1.52
1	A	165	GLU	CA-C	-5.96	1.45	1.52
1	C	213	VAL	CA-C	-5.96	1.45	1.52
2	D	427	HIS	CA-C	-5.96	1.45	1.52
2	E	402	LEU	CA-C	-5.96	1.45	1.52
1	A	325	PRO	CA-C	-5.95	1.45	1.52
4	H	16	MET	CA-C	-5.95	1.45	1.52
5	I	44	ILE	CA-C	-5.95	1.46	1.53
2	D	80	ALA	N-CA	-5.95	1.40	1.46
2	F	263	GLN	N-CA	-5.95	1.39	1.46
1	A	467	ALA	CA-C	-5.94	1.45	1.52
4	H	27	PHE	CA-C	-5.94	1.46	1.52
2	E	284	THR	CA-C	-5.94	1.43	1.52
7	S	141	PHE	CA-C	-5.94	1.45	1.52
2	D	377	ILE	CA-C	-5.94	1.44	1.52
1	C	88	VAL	N-CA	-5.93	1.39	1.46
2	D	215	VAL	CA-C	-5.93	1.45	1.52
2	D	373	GLY	CA-C	-5.93	1.45	1.52
2	E	39	GLN	CA-C	-5.93	1.45	1.52
2	E	137	ILE	CA-C	-5.93	1.45	1.52
2	E	377	ILE	CA-C	-5.93	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	408	ARG	N-CA	-5.93	1.39	1.46
2	F	471	ASP	CA-C	-5.93	1.45	1.52
3	G	179	PHE	CA-C	-5.93	1.45	1.52
2	F	421	ALA	CA-C	-5.92	1.44	1.52
2	D	76	LEU	CA-C	-5.92	1.45	1.52
2	D	325	THR	CA-C	-5.92	1.45	1.52
1	B	394	LEU	CA-C	-5.92	1.44	1.52
2	F	100	GLU	CA-C	-5.92	1.46	1.53
2	F	377	ILE	CA-C	-5.92	1.45	1.52
1	C	462	THR	CA-C	-5.92	1.45	1.52
1	B	303	SER	CA-C	-5.92	1.45	1.52
2	D	61	ILE	CA-C	-5.92	1.45	1.52
1	A	457	GLU	CA-C	-5.92	1.44	1.52
1	C	177	SER	CA-C	-5.92	1.44	1.52
2	F	287	THR	CA-C	-5.91	1.45	1.52
2	E	397	SER	CA-C	-5.91	1.45	1.52
1	A	301	LEU	N-CA	-5.91	1.39	1.46
2	D	46	VAL	CA-C	-5.91	1.45	1.52
1	B	39	ALA	N-CA	-5.91	1.39	1.46
1	B	222	ASP	CA-C	-5.91	1.45	1.52
2	D	13	ILE	CA-C	-5.91	1.46	1.52
2	E	117	HIS	CA-C	-5.91	1.44	1.53
1	C	199	LEU	CA-C	-5.90	1.45	1.52
1	B	88	VAL	N-CA	-5.90	1.39	1.46
1	B	324	LEU	N-CA	-5.90	1.39	1.46
1	C	416	GLN	CA-C	-5.90	1.45	1.52
1	B	301	LEU	N-CA	-5.90	1.39	1.46
2	D	165	LEU	CA-C	-5.90	1.45	1.52
1	B	220	LEU	CA-C	-5.90	1.45	1.52
1	B	209	LYS	CA-C	-5.89	1.45	1.52
1	B	229	THR	CA-C	-5.89	1.45	1.52
1	A	213	VAL	N-CA	-5.89	1.39	1.46
1	A	343	ILE	CA-C	-5.89	1.45	1.52
1	C	216	LEU	CA-C	-5.89	1.45	1.52
2	D	281	TYR	CA-C	-5.89	1.45	1.52
1	B	465	GLU	N-CA	-5.89	1.39	1.46
2	E	165	LEU	CA-C	-5.89	1.45	1.52
2	F	45	LEU	CA-C	-5.89	1.45	1.53
3	G	170	SER	CA-C	-5.89	1.45	1.52
2	E	177	HIS	CA-C	-5.88	1.44	1.52
1	A	414	THR	CA-C	-5.88	1.44	1.52
1	B	481	GLY	CA-C	-5.88	1.45	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	135	ILE	CA-C	-5.88	1.46	1.52
2	E	41	ARG	CA-C	-5.88	1.45	1.52
1	A	278	TYR	CA-C	-5.88	1.45	1.52
1	A	299	PHE	N-CA	-5.88	1.39	1.46
2	F	309	ALA	CA-C	-5.88	1.45	1.52
1	A	150	ILE	CA-C	-5.88	1.45	1.52
1	B	302	HIS	CA-C	-5.88	1.44	1.52
2	F	367	HIS	N-CA	-5.87	1.39	1.46
1	A	177	SER	CA-C	-5.87	1.45	1.52
2	F	116	ILE	CA-C	-5.87	1.45	1.52
5	I	2	ALA	CA-C	-5.87	1.45	1.52
1	C	286	ARG	CA-C	-5.87	1.44	1.53
2	E	119	GLU	CA-C	-5.87	1.45	1.52
2	E	95	MET	CA-C	-5.87	1.45	1.52
4	H	89	SER	CA-C	-5.87	1.45	1.52
1	A	168	ILE	CA-C	-5.86	1.45	1.52
2	F	95	MET	CA-C	-5.86	1.45	1.52
7	S	32	LEU	N-CA	-5.86	1.39	1.46
1	A	216	LEU	N-CA	-5.86	1.39	1.46
2	F	200	MET	CA-C	-5.86	1.45	1.52
1	B	393	GLU	CA-C	-5.86	1.44	1.52
2	F	443	GLN	CA-C	-5.86	1.45	1.52
2	E	113	PHE	CA-C	-5.86	1.45	1.52
2	E	61	ILE	N-CA	-5.85	1.39	1.46
4	H	113	GLU	CA-C	-5.85	1.45	1.52
2	E	450	ASP	CA-C	-5.85	1.45	1.52
1	B	263	HIS	CA-C	-5.85	1.45	1.52
4	H	137	ALA	CA-C	-5.85	1.45	1.52
1	A	498	LYS	N-CA	-5.85	1.39	1.46
1	A	391	LYS	CA-C	-5.85	1.45	1.52
1	B	47	VAL	N-CA	-5.85	1.39	1.46
2	F	112	GLN	CA-C	-5.85	1.45	1.52
1	C	430	GLN	CA-C	-5.84	1.46	1.53
2	E	194	ASN	CA-C	-5.84	1.45	1.52
1	A	406	PHE	CA-C	-5.84	1.45	1.52
2	F	234	LEU	CA-C	-5.84	1.45	1.52
1	A	412	ALA	CA-C	-5.84	1.45	1.52
1	B	503	ASN	CA-C	-5.84	1.45	1.52
2	D	405	SER	N-CA	-5.84	1.39	1.46
3	G	220	SER	N-CA	-5.84	1.39	1.46
1	C	484	ARG	CA-C	-5.83	1.45	1.52
2	E	278	ALA	CA-C	-5.83	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	267	ILE	CA-C	-5.83	1.45	1.52
1	C	477	GLN	N-CA	-5.83	1.39	1.46
2	D	263	GLN	N-CA	-5.83	1.39	1.46
2	F	289	MET	N-CA	-5.83	1.39	1.46
2	F	331	ALA	N-CA	-5.83	1.39	1.46
2	D	188	GLU	CA-C	-5.83	1.45	1.53
1	B	240	ALA	N-CA	-5.83	1.40	1.46
2	F	286	ALA	N-CA	-5.83	1.39	1.46
2	D	245	ASP	CA-C	-5.82	1.45	1.52
2	F	144	ALA	CA-C	-5.82	1.46	1.53
2	E	59	ARG	N-CA	-5.82	1.39	1.46
1	A	187	LYS	CA-C	-5.82	1.45	1.52
1	B	482	LYS	CA-C	-5.82	1.45	1.52
8	T	104	GLU	C-N	-5.82	1.26	1.33
2	E	58	VAL	CA-C	-5.82	1.45	1.52
2	D	139	VAL	CA-C	-5.82	1.45	1.52
2	E	345	TYR	N-CA	-5.82	1.40	1.46
2	E	10	THR	CA-C	-5.82	1.45	1.52
2	F	183	PHE	N-CA	-5.82	1.39	1.46
1	A	462	THR	CA-C	-5.81	1.45	1.52
1	A	469	LEU	CA-C	-5.81	1.45	1.52
4	H	65	VAL	CA-C	-5.81	1.45	1.52
7	S	123	ALA	CA-C	-5.81	1.47	1.53
11	W	20	VAL	CA-C	-5.81	1.45	1.52
1	A	42	HIS	N-CA	-5.81	1.38	1.46
3	G	209	LEU	N-CA	-5.81	1.39	1.46
2	E	218	VAL	CA-C	-5.81	1.45	1.52
2	F	49	VAL	CA-C	-5.81	1.46	1.52
1	C	257	PHE	CA-C	-5.80	1.45	1.52
1	C	392	LEU	N-CA	-5.80	1.39	1.46
2	E	255	ILE	CA-C	-5.80	1.45	1.52
1	C	86	ASP	CA-C	-5.80	1.45	1.52
1	A	214	ALA	CA-C	-5.80	1.45	1.52
1	B	416	GLN	CA-C	-5.80	1.45	1.52
8	T	114	VAL	N-CA	-5.80	1.39	1.46
1	C	302	HIS	N-CA	-5.80	1.38	1.46
2	E	235	THR	CA-C	-5.79	1.45	1.52
2	F	275	ILE	N-CA	-5.79	1.42	1.46
1	C	47	VAL	N-CA	-5.79	1.39	1.46
1	C	268	TYR	CA-C	-5.79	1.45	1.52
8	T	97	ASN	C-N	-5.79	1.26	1.33
1	B	205	ALA	CA-C	-5.79	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	498	LYS	N-CA	-5.78	1.39	1.46
1	B	150	ILE	CA-C	-5.78	1.45	1.52
4	H	75	TYR	N-CA	-5.78	1.38	1.45
3	G	241	GLU	CA-C	-5.78	1.45	1.52
4	H	38	VAL	CA-C	-5.78	1.47	1.52
1	C	29	GLY	CA-C	-5.78	1.45	1.51
1	C	40	ARG	CA-C	-5.78	1.45	1.52
1	B	464	PHE	CA-C	-5.78	1.45	1.52
4	H	84	VAL	CA-C	-5.78	1.45	1.52
2	D	382	LYS	N-CA	-5.77	1.39	1.46
1	B	479	LEU	N-CA	-5.77	1.39	1.46
2	F	326	PHE	CA-C	-5.77	1.45	1.52
1	A	10	SER	CA-C	-5.77	1.44	1.52
2	D	95	MET	N-CA	-5.77	1.38	1.45
5	I	20	LYS	CA-C	-5.77	1.45	1.52
2	F	190	THR	CA-C	-5.77	1.45	1.52
4	H	134	ARG	CA-C	-5.76	1.45	1.52
1	C	324	LEU	N-CA	-5.76	1.40	1.46
2	D	366	GLU	CA-C	-5.76	1.45	1.52
1	C	398	ARG	CA-C	-5.76	1.45	1.52
1	A	180	ILE	CA-C	-5.76	1.45	1.52
1	B	31	VAL	CA-C	-5.75	1.46	1.53
1	A	384	LYS	CA-C	-5.75	1.45	1.52
2	F	26	ASP	CA-C	-5.75	1.45	1.52
2	F	408	ARG	CA-C	-5.75	1.45	1.52
2	E	21	VAL	N-CA	-5.75	1.39	1.46
2	F	295	ARG	CA-C	-5.75	1.45	1.52
1	A	312	MET	CA-C	-5.75	1.45	1.53
2	D	270	ALA	CA-C	-5.75	1.45	1.52
2	F	173	VAL	N-CA	-5.75	1.39	1.46
2	F	22	ASP	N-CA	-5.75	1.39	1.46
1	B	322	THR	CA-C	-5.75	1.45	1.52
2	F	13	ILE	CA-C	-5.75	1.46	1.52
7	S	120	VAL	N-CA	-5.74	1.39	1.46
1	B	297	ASP	CA-C	-5.74	1.43	1.52
5	I	18	CYS	CA-C	-5.74	1.45	1.52
2	F	15	ALA	CA-C	-5.74	1.45	1.52
2	F	173	VAL	CA-C	-5.73	1.45	1.52
2	D	329	LEU	CA-C	-5.73	1.45	1.52
3	G	213	ILE	CA-C	-5.73	1.45	1.52
7	S	57	ASN	C-N	-5.73	1.28	1.33
7	S	38	GLU	CA-C	-5.72	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	109	LYS	CA-C	-5.72	1.45	1.52
2	F	328	HIS	CA-C	-5.72	1.44	1.52
2	D	70	VAL	CA-C	-5.72	1.45	1.52
1	B	89	LYS	CA-C	-5.72	1.45	1.52
1	A	40	ARG	CA-C	-5.71	1.45	1.52
1	A	303	SER	CA-C	-5.71	1.45	1.52
5	I	11	TYR	N-CA	-5.71	1.39	1.46
1	A	88	VAL	CA-C	-5.71	1.45	1.52
5	I	10	SER	CA-C	-5.71	1.45	1.52
2	E	196	LEU	N-CA	-5.71	1.39	1.46
3	G	12	SER	CA-C	-5.71	1.44	1.52
1	C	326	VAL	CA-C	-5.71	1.46	1.52
2	D	405	SER	CA-C	-5.71	1.45	1.52
2	F	168	GLU	N-CA	-5.71	1.39	1.46
3	G	14	LYS	CA-C	-5.71	1.45	1.52
7	S	88	LEU	CA-C	-5.71	1.47	1.53
1	A	222	ASP	CA-C	-5.71	1.45	1.52
1	A	265	LEU	CA-C	-5.71	1.45	1.52
1	B	203	TYR	N-CA	-5.71	1.39	1.46
1	B	477	GLN	N-CA	-5.71	1.39	1.46
1	B	294	TYR	CA-C	-5.70	1.45	1.52
1	C	216	LEU	N-CA	-5.70	1.39	1.46
1	C	438	ILE	CA-C	-5.70	1.45	1.52
2	F	264	ALA	CA-C	-5.70	1.45	1.52
2	E	245	ASP	N-CA	-5.70	1.39	1.46
4	H	90	VAL	CA-C	-5.70	1.45	1.52
1	A	502	THR	CA-C	-5.70	1.45	1.52
7	S	42	VAL	CA-C	-5.70	1.45	1.52
1	A	239	ALA	CA-C	-5.70	1.45	1.52
2	D	139	VAL	N-CA	-5.70	1.39	1.46
11	W	87	LEU	CA-C	-5.69	1.46	1.52
2	D	94	ILE	CA-C	-5.69	1.45	1.52
2	F	47	LEU	CA-C	-5.69	1.45	1.52
2	F	334	VAL	CA-C	-5.69	1.45	1.52
1	C	251	CYS	N-CA	-5.69	1.39	1.46
2	E	372	ARG	CA-C	-5.69	1.45	1.52
7	S	16	GLY	CA-C	-5.69	1.43	1.51
2	F	339	ILE	CA-C	-5.69	1.45	1.52
2	F	445	LEU	CA-C	-5.68	1.45	1.52
1	A	195	GLU	CA-C	-5.68	1.44	1.52
1	B	151	LYS	CA-C	-5.68	1.45	1.52
1	B	281	MET	CA-C	-5.68	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	71	VAL	N-CA	-5.68	1.39	1.46
1	C	320	SER	CA-C	-5.68	1.45	1.52
1	A	34	ILE	CA-C	-5.67	1.45	1.52
2	E	206	ILE	N-CA	-5.67	1.40	1.46
2	D	392	GLY	C-N	5.67	1.40	1.33
2	E	236	GLY	CA-C	-5.67	1.45	1.52
2	F	410	ILE	N-CA	-5.67	1.39	1.46
2	D	430	LYS	CA-C	-5.67	1.45	1.52
2	F	288	ASP	CA-C	-5.67	1.45	1.52
1	A	70	ASN	N-CA	-5.67	1.39	1.46
3	G	29	ALA	CA-C	-5.67	1.45	1.52
1	A	262	LYS	CA-C	-5.66	1.45	1.53
1	B	508	PHE	CA-C	-5.66	1.45	1.52
2	D	240	ALA	CA-C	-5.66	1.45	1.52
9	U	123	ASN	C-N	-5.66	1.25	1.33
1	B	421	GLY	CA-C	-5.66	1.46	1.52
2	F	11	GLY	CA-C	-5.65	1.47	1.52
2	F	307	VAL	CA-C	-5.65	1.45	1.52
1	C	283	LEU	CA-C	-5.65	1.45	1.52
2	E	378	LEU	CA-C	-5.65	1.45	1.52
11	W	90	HIS	C-O	-5.65	1.17	1.23
1	B	279	ARG	N-CA	-5.65	1.39	1.46
2	D	192	GLU	CA-C	-5.65	1.45	1.52
2	D	194	ASN	CA-C	-5.65	1.45	1.52
7	S	67	LYS	CA-C	-5.65	1.44	1.52
1	C	63	SER	CA-C	-5.64	1.45	1.52
2	D	458	TYR	CA-C	-5.64	1.45	1.52
1	C	356	LEU	N-CA	-5.64	1.39	1.46
9	U	99	SER	N-CA	-5.64	1.39	1.46
2	D	225	PRO	CA-C	-5.64	1.47	1.52
1	B	147	GLN	CA-C	-5.64	1.45	1.52
1	C	34	ILE	CA-C	-5.64	1.45	1.52
2	E	210	ASP	N-CA	-5.64	1.39	1.46
5	I	14	TYR	CA-C	-5.64	1.45	1.52
2	E	45	LEU	CA-C	-5.63	1.45	1.53
2	F	422	GLU	CA-C	-5.63	1.44	1.52
2	E	305	THR	N-CA	-5.63	1.39	1.46
2	F	115	ALA	CA-C	-5.63	1.45	1.52
8	T	163	LYS	C-O	-5.63	1.16	1.24
1	B	272	SER	CA-C	-5.63	1.45	1.52
2	D	371	ALA	CA-C	-5.63	1.45	1.52
2	F	305	THR	N-CA	-5.63	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	304	ILE	CA-C	-5.63	1.45	1.52
2	D	182	VAL	N-CA	-5.63	1.39	1.46
2	D	435	LYS	CA-C	-5.63	1.45	1.52
1	A	355	GLU	CA-C	-5.62	1.45	1.52
4	H	47	ILE	CA-C	-5.62	1.46	1.52
1	B	508	PHE	N-CA	-5.62	1.39	1.46
2	E	470	ALA	CA-C	-5.62	1.45	1.52
4	H	37	ASP	CA-C	-5.62	1.46	1.52
8	T	104	GLU	CA-C	-5.62	1.45	1.52
1	A	278	TYR	N-CA	-5.62	1.39	1.46
1	B	304	ARG	CA-C	-5.62	1.45	1.52
2	F	197	TYR	N-CA	-5.62	1.39	1.46
2	D	310	ILE	CA-C	-5.62	1.45	1.52
1	B	502	THR	CA-C	-5.61	1.45	1.52
2	D	407	ALA	CA-C	-5.61	1.45	1.52
8	T	94	VAL	CA-C	-5.61	1.45	1.52
1	B	137	ILE	CA-C	-5.61	1.47	1.52
2	D	213	SER	CA-C	-5.61	1.45	1.52
1	C	441	GLN	N-CA	-5.61	1.39	1.46
1	B	276	VAL	CA-C	-5.60	1.46	1.52
3	G	257	VAL	CA-C	-5.60	1.45	1.52
2	F	154	LEU	N-CA	-5.60	1.39	1.46
1	A	495	ALA	CA-C	-5.60	1.45	1.52
2	F	263	GLN	CA-C	-5.60	1.45	1.52
2	F	382	LYS	N-CA	-5.60	1.39	1.46
1	A	383	MET	N-CA	-5.59	1.39	1.46
3	G	109	GLY	CA-C	-5.59	1.44	1.52
2	E	244	ARG	N-CA	-5.59	1.39	1.46
2	F	379	GLN	CA-C	-5.59	1.45	1.52
2	E	365	SER	CA-C	-5.59	1.45	1.52
2	E	76	LEU	N-CA	-5.59	1.39	1.46
1	A	496	LYS	CA-C	-5.58	1.45	1.52
1	C	39	ALA	CA-C	-5.58	1.45	1.52
2	E	94	ILE	CA-C	-5.58	1.45	1.52
1	C	499	GLU	N-CA	-5.58	1.39	1.46
1	B	392	LEU	N-CA	-5.57	1.39	1.46
2	F	17	ILE	CA-C	-5.57	1.45	1.52
1	A	370	SER	CA-C	-5.57	1.45	1.52
2	F	459	MET	CA-C	-5.57	1.45	1.53
2	D	284	THR	CA-C	-5.57	1.43	1.52
2	F	22	ASP	CA-C	-5.57	1.46	1.52
1	C	242	LEU	N-CA	-5.57	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	152	ALA	CA-C	-5.57	1.45	1.52
1	C	182	THR	CA-C	-5.57	1.45	1.52
2	D	287	THR	CA-C	-5.57	1.45	1.52
2	E	384	LEU	CA-C	-5.56	1.45	1.52
1	B	358	TYR	N-CA	-5.56	1.39	1.46
1	B	74	VAL	CA-C	-5.56	1.46	1.52
2	F	371	ALA	C-O	-5.56	1.17	1.24
2	D	429	GLY	CA-C	-5.55	1.46	1.52
1	A	66	LEU	N-CA	-5.55	1.39	1.46
1	A	316	PHE	CA-C	-5.55	1.45	1.52
1	B	426	GLU	CA-C	-5.55	1.45	1.52
2	E	13	ILE	N-CA	-5.55	1.39	1.46
1	C	187	LYS	CA-C	-5.55	1.45	1.52
1	C	186	GLN	CA-C	-5.55	1.45	1.52
3	G	266	ILE	CA-C	-5.54	1.46	1.52
1	A	171	ARG	CA-C	-5.54	1.45	1.52
1	C	418	LEU	CA-C	-5.54	1.45	1.52
3	G	243	ILE	CA-C	-5.54	1.46	1.52
1	B	127	ARG	N-CA	-5.54	1.39	1.46
1	B	146	MET	N-CA	-5.54	1.39	1.46
2	D	447	GLY	CA-C	-5.54	1.45	1.51
2	E	391	LEU	CA-C	-5.54	1.45	1.52
2	F	284	THR	CA-C	-5.54	1.43	1.52
2	F	361	ASN	CA-C	-5.54	1.45	1.52
5	I	15	SER	CA-C	-5.54	1.45	1.52
1	C	429	LYS	CA-C	-5.54	1.45	1.52
1	C	480	LEU	CA-C	-5.54	1.45	1.52
2	E	130	GLN	CA-C	-5.54	1.45	1.52
7	S	106	SER	CA-C	-5.54	1.45	1.52
11	W	176	GLY	CA-C	-5.53	1.45	1.52
2	F	133	LEU	CA-C	-5.53	1.45	1.52
2	D	46	VAL	N-CA	-5.53	1.39	1.46
2	F	246	GLN	N-CA	-5.53	1.39	1.46
1	B	320	SER	CA-C	-5.53	1.45	1.52
2	E	47	LEU	CA-C	-5.53	1.46	1.52
2	E	111	LYS	N-CA	-5.53	1.41	1.46
1	B	96	ASP	CA-C	-5.52	1.45	1.52
1	B	509	GLU	N-CA	-5.52	1.40	1.46
1	C	39	ALA	N-CA	-5.52	1.39	1.46
1	C	469	LEU	N-CA	-5.52	1.39	1.46
2	F	361	ASN	N-CA	-5.52	1.39	1.46
4	H	119	LEU	CA-C	-5.52	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	244	TYR	N-CA	-5.52	1.39	1.46
1	C	222	ASP	CA-C	-5.52	1.45	1.52
1	B	357	PHE	CA-C	-5.52	1.45	1.52
2	E	261	PHE	CA-C	-5.52	1.45	1.52
2	F	142	LEU	N-CA	-5.52	1.39	1.46
2	F	401	LYS	CA-C	-5.52	1.45	1.52
7	S	6	ARG	N-CA	-5.52	1.41	1.46
1	B	65	ASN	N-CA	-5.51	1.39	1.46
1	B	424	LEU	CA-C	-5.51	1.45	1.52
2	D	206	ILE	CA-C	-5.51	1.45	1.52
2	D	316	ASP	N-CA	-5.51	1.39	1.46
7	S	150	LEU	CA-C	-5.51	1.46	1.53
7	S	122	THR	CA-C	-5.51	1.45	1.52
1	A	126	ARG	CA-C	-5.51	1.45	1.52
1	C	252	SER	CA-C	-5.51	1.45	1.52
2	D	217	LEU	CA-C	-5.50	1.46	1.52
1	C	445	ILE	CA-C	-5.50	1.46	1.52
2	F	353	SER	CA-C	-5.50	1.45	1.52
2	E	270	ALA	CA-C	-5.50	1.45	1.52
5	I	23	ARG	CA-C	-5.50	1.45	1.52
1	B	97	VAL	N-CA	-5.49	1.39	1.46
2	D	189	ARG	CA-C	-5.49	1.45	1.52
4	H	67	ALA	N-CA	-5.49	1.39	1.46
1	C	215	GLN	N-CA	-5.49	1.39	1.46
2	D	383	SER	CA-C	-5.49	1.45	1.52
1	A	283	LEU	CA-C	-5.49	1.45	1.52
1	B	428	LEU	CA-C	-5.49	1.45	1.52
2	D	445	LEU	CA-C	-5.49	1.45	1.52
3	G	183	THR	N-CA	-5.49	1.39	1.46
1	C	219	ARG	CA-C	-5.49	1.45	1.52
1	C	505	LEU	CA-C	-5.48	1.45	1.52
1	C	321	LEU	N-CA	-5.48	1.40	1.46
4	H	91	GLN	N-CA	-5.48	1.39	1.46
1	C	301	LEU	N-CA	-5.48	1.40	1.46
3	G	171	TYR	N-CA	-5.48	1.39	1.45
2	F	341	GLU	CA-C	-5.48	1.45	1.52
1	A	34	ILE	N-CA	-5.48	1.39	1.46
3	G	4	LYS	N-CA	-5.48	1.40	1.46
1	A	362	ARG	N-CA	-5.48	1.39	1.46
1	A	411	ASP	CA-C	-5.47	1.45	1.53
1	B	167	ILE	N-CA	-5.47	1.39	1.46
2	D	52	HIS	N-CA	-5.47	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	370	VAL	CA-C	-5.47	1.45	1.52
1	A	451	GLY	CA-C	-5.47	1.44	1.51
1	C	265	LEU	CA-C	-5.47	1.45	1.52
2	F	405	SER	CA-C	-5.47	1.45	1.52
2	E	308	GLN	CA-C	-5.46	1.46	1.52
8	T	24	THR	N-CA	-5.46	1.39	1.46
1	C	362	ARG	CA-C	-5.46	1.46	1.52
2	D	57	THR	N-CA	-5.46	1.39	1.46
2	D	371	ALA	N-CA	-5.46	1.39	1.46
2	F	402	LEU	N-CA	-5.46	1.39	1.46
2	F	398	GLU	CA-C	-5.46	1.45	1.52
1	A	59	LEU	CA-C	-5.46	1.45	1.53
2	F	138	LYS	CA-C	-5.46	1.45	1.52
2	D	368	TYR	N-CA	-5.45	1.39	1.46
7	S	86	ILE	CA-C	-5.45	1.46	1.52
2	F	436	GLU	CA-C	-5.45	1.45	1.52
1	A	276	VAL	CA-C	-5.45	1.46	1.52
3	G	259	THR	N-CA	-5.45	1.40	1.46
4	H	62	LEU	CA-C	-5.45	1.46	1.52
1	A	387	ALA	CA-C	-5.45	1.45	1.52
1	B	94	ILE	CA-C	-5.45	1.46	1.52
2	D	133	LEU	N-CA	-5.45	1.39	1.46
2	E	70	VAL	CA-C	-5.45	1.46	1.52
3	G	245	LYS	CA-C	-5.45	1.46	1.52
3	G	176	LYS	CA-C	-5.45	1.46	1.52
2	E	328	HIS	CA-C	-5.44	1.45	1.52
1	C	389	THR	CA-C	-5.44	1.45	1.52
1	C	503	ASN	N-CA	-5.44	1.39	1.46
3	G	16	ILE	N-CA	-5.43	1.40	1.46
1	B	266	ILE	N-CA	-5.43	1.40	1.46
4	H	31	ALA	CA-C	-5.43	1.45	1.52
1	A	338	ILE	CA-C	-5.43	1.47	1.52
2	E	12	ARG	N-CA	-5.43	1.39	1.46
3	G	113	ARG	CA-C	-5.43	1.45	1.52
3	G	159	SER	CA-C	-5.43	1.46	1.52
1	A	156	LEU	CA-C	-5.42	1.45	1.52
2	F	153	GLY	CA-C	-5.42	1.44	1.51
1	C	473	ILE	N-CA	-5.42	1.40	1.46
1	A	287	ARG	N-CA	-5.42	1.39	1.45
1	A	263	HIS	N-CA	-5.42	1.39	1.46
1	A	280	GLN	CA-C	-5.42	1.45	1.52
1	B	499	GLU	N-CA	-5.42	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	145	PRO	CA-C	-5.42	1.46	1.52
2	F	66	THR	CA-C	-5.42	1.45	1.52
4	H	63	VAL	CA-C	-5.42	1.46	1.52
2	E	405	SER	CA-C	-5.42	1.45	1.52
2	D	336	SER	CA-C	-5.41	1.46	1.52
4	H	57	VAL	N-CA	-5.41	1.39	1.46
7	S	82	THR	N-CA	-5.41	1.39	1.46
1	B	221	THR	N-CA	-5.41	1.39	1.46
2	D	255	ILE	CA-C	-5.41	1.45	1.52
2	E	259	PHE	N-CA	-5.41	1.39	1.46
2	D	331	ALA	N-CA	-5.41	1.40	1.46
2	D	408	ARG	CA-C	-5.41	1.45	1.52
3	G	182	ASP	CA-C	-5.41	1.45	1.52
1	A	174	GLY	N-CA	-5.40	1.37	1.45
1	B	42	HIS	N-CA	-5.40	1.39	1.46
1	B	399	GLU	CA-C	-5.40	1.45	1.52
1	C	395	ALA	N-CA	-5.40	1.40	1.46
2	F	242	TYR	N-CA	-5.40	1.40	1.46
1	B	329	THR	CA-C	-5.40	1.45	1.53
2	E	336	SER	CA-C	-5.40	1.46	1.52
2	F	290	GLY	CA-C	-5.40	1.46	1.52
1	C	151	LYS	N-CA	-5.40	1.40	1.46
2	F	344	ILE	CA-C	-5.40	1.46	1.52
1	B	73	VAL	N-CA	-5.40	1.39	1.46
1	B	136	ILE	CA-C	-5.40	1.46	1.52
1	B	260	ASN	CA-C	-5.39	1.46	1.53
1	B	412	ALA	CA-C	-5.39	1.45	1.52
3	G	90	LYS	CA-C	-5.39	1.45	1.52
1	C	391	LYS	CA-C	-5.39	1.45	1.52
2	F	368	TYR	CA-C	-5.39	1.46	1.52
8	T	159	GLU	N-CA	-5.39	1.39	1.46
1	A	220	LEU	CA-C	-5.38	1.45	1.52
1	B	362	ARG	CA-C	-5.38	1.45	1.52
1	C	35	GLY	CA-C	-5.38	1.44	1.51
2	F	236	GLY	CA-C	-5.38	1.46	1.52
3	G	117	HIS	CA-C	-5.38	1.45	1.52
3	G	194	ASP	N-CA	-5.38	1.39	1.46
1	B	425	THR	CA-C	-5.38	1.45	1.52
2	D	104	GLU	CA-C	-5.38	1.46	1.53
2	E	169	LEU	CA-C	-5.38	1.45	1.52
2	F	126	MET	CA-C	-5.38	1.45	1.52
1	B	290	GLY	N-CA	-5.38	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	286	ALA	CA-C	-5.38	1.45	1.52
2	F	292	MET	N-CA	-5.38	1.39	1.46
3	G	30	LYS	CA-C	-5.38	1.45	1.52
1	A	343	ILE	N-CA	-5.38	1.40	1.46
2	F	207	ASN	N-CA	-5.38	1.39	1.46
1	A	342	VAL	CA-C	-5.38	1.45	1.52
3	G	218	LYS	CA-C	-5.38	1.45	1.52
4	H	136	GLU	CA-C	-5.38	1.45	1.52
1	B	213	VAL	CA-C	-5.37	1.46	1.52
2	F	182	VAL	CA-C	-5.37	1.46	1.52
4	H	93	LEU	N-CA	-5.37	1.40	1.46
3	G	201	LEU	CA-C	-5.37	1.45	1.52
1	B	218	LYS	N-CA	-5.37	1.40	1.46
1	C	395	ALA	CA-C	-5.37	1.46	1.52
1	A	213	VAL	CA-C	-5.37	1.46	1.52
1	C	101	GLU	CA-C	-5.37	1.48	1.52
3	G	255	GLN	N-CA	-5.37	1.39	1.46
2	E	170	ILE	CA-C	-5.37	1.46	1.52
2	F	410	ILE	CA-C	-5.37	1.46	1.52
2	D	41	ARG	CA-C	-5.37	1.46	1.52
2	F	316	ASP	CA-C	-5.37	1.46	1.52
1	A	48	GLN	CA-C	-5.36	1.45	1.53
1	C	500	ILE	CA-C	-5.36	1.46	1.52
3	G	214	TYR	N-CA	-5.36	1.40	1.46
2	F	371	ALA	CA-C	-5.36	1.46	1.52
1	A	251	CYS	CA-C	-5.36	1.46	1.52
2	D	163	THR	N-CA	-5.36	1.39	1.46
2	F	370	VAL	CA-C	-5.36	1.45	1.52
1	B	464	PHE	N-CA	-5.35	1.40	1.46
2	D	69	LEU	CA-C	-5.35	1.45	1.52
1	A	399	GLU	CA-C	-5.35	1.45	1.52
2	D	96	ASN	CA-C	-5.35	1.46	1.53
2	E	337	ARG	N-CA	-5.35	1.39	1.46
1	B	183	ILE	CA-C	-5.35	1.46	1.52
1	C	313	ASN	CA-C	-5.35	1.46	1.53
1	C	427	LEU	N-CA	-5.35	1.39	1.46
2	F	335	LEU	CA-C	-5.35	1.45	1.52
4	H	59	ARG	CA-C	-5.35	1.46	1.52
3	G	17	GLN	N-CA	-5.35	1.39	1.46
1	B	29	GLY	CA-C	-5.34	1.46	1.51
2	E	175	LYS	N-CA	-5.34	1.40	1.46
2	E	460	VAL	CA-C	-5.34	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	I	13	ARG	N-CA	-5.34	1.40	1.46
1	A	231	VAL	CA-C	-5.34	1.45	1.52
7	S	39	LEU	CA-C	-5.34	1.46	1.52
2	E	292	MET	N-CA	-5.34	1.39	1.46
1	B	484	ARG	N-CA	-5.33	1.40	1.46
1	B	258	ARG	N-CA	-5.33	1.40	1.46
1	B	219	ARG	N-CA	-5.33	1.40	1.46
1	B	321	LEU	N-CA	-5.33	1.40	1.46
1	B	152	ALA	CA-C	-5.33	1.45	1.52
2	D	189	ARG	N-CA	-5.33	1.39	1.46
2	E	310	ILE	CA-C	-5.33	1.46	1.52
11	W	90	HIS	CA-C	-5.33	1.46	1.52
2	F	203	SER	CA-C	-5.33	1.45	1.52
1	B	77	GLY	CA-C	-5.33	1.45	1.51
2	D	144	ALA	CA-C	-5.33	1.46	1.52
1	C	442	VAL	CA-C	-5.32	1.46	1.52
2	F	442	GLN	N-CA	-5.32	1.40	1.46
3	G	69	ILE	N-CA	-5.32	1.40	1.46
2	F	405	SER	N-CA	-5.32	1.40	1.46
1	B	414	THR	CA-C	-5.32	1.46	1.52
1	B	208	GLN	CA-C	-5.32	1.45	1.52
4	H	102	MET	CA-C	-5.32	1.45	1.52
1	A	450	ARG	CA-C	-5.32	1.44	1.52
2	D	59	ARG	N-CA	-5.32	1.39	1.46
2	F	344	ILE	N-CA	-5.32	1.39	1.46
2	E	218	VAL	N-CA	-5.31	1.40	1.46
7	S	56	LEU	CA-C	-5.31	1.45	1.52
1	C	457	GLU	CA-C	-5.31	1.45	1.52
2	D	374	VAL	CA-C	-5.31	1.46	1.52
1	B	416	GLN	N-CA	-5.31	1.40	1.46
2	E	158	ALA	CA-C	-5.31	1.46	1.52
1	C	243	GLN	CA-C	-5.31	1.45	1.52
2	D	410	ILE	N-CA	-5.31	1.40	1.46
2	E	253	LEU	N-CA	-5.31	1.40	1.46
1	B	112	GLY	CA-C	-5.31	1.44	1.51
1	B	418	LEU	CA-C	-5.31	1.46	1.52
1	A	294	TYR	CA-C	-5.30	1.45	1.52
1	B	41	VAL	N-CA	-5.30	1.40	1.46
2	E	467	VAL	CA-C	-5.30	1.46	1.52
2	F	160	VAL	CA-C	-5.30	1.46	1.52
1	B	420	ARG	CA-C	-5.30	1.45	1.52
1	C	336	ALA	CA-C	-5.30	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	342	VAL	CA-C	-5.30	1.46	1.52
1	C	349	GLN	N-CA	-5.30	1.39	1.45
1	C	167	ILE	CA-C	-5.30	1.46	1.52
7	S	105	PHE	N-CA	-5.29	1.40	1.46
1	B	320	SER	N-CA	-5.29	1.39	1.45
1	C	468	PHE	CA-C	-5.29	1.45	1.52
2	E	188	GLU	CA-C	-5.29	1.46	1.52
2	D	399	GLU	CA-C	-5.29	1.45	1.52
1	A	14	GLU	CA-C	-5.29	1.45	1.52
1	A	380	THR	CA-C	-5.29	1.46	1.52
1	C	387	ALA	CA-C	-5.29	1.46	1.52
1	C	479	LEU	N-CA	-5.29	1.39	1.46
2	D	307	VAL	N-CA	-5.29	1.38	1.46
2	D	402	LEU	N-CA	-5.29	1.40	1.46
2	F	380	ASP	N-CA	-5.29	1.39	1.46
2	E	303	SER	CA-C	-5.29	1.46	1.52
2	D	261	PHE	CA-C	-5.28	1.46	1.52
2	E	408	ARG	N-CA	-5.28	1.40	1.46
2	D	154	LEU	N-CA	-5.28	1.39	1.46
2	F	390	ILE	N-CA	-5.28	1.39	1.46
1	A	476	HIS	CA-C	-5.28	1.44	1.52
2	D	416	GLN	CA-C	-5.28	1.47	1.52
3	G	250	PHE	CA-C	-5.28	1.45	1.52
1	B	70	ASN	N-CA	-5.28	1.39	1.46
1	C	76	PHE	CA-C	-5.28	1.46	1.52
2	D	381	TYR	CA-C	-5.28	1.46	1.52
11	W	177	ALA	N-CA	-5.27	1.39	1.46
1	A	69	ASP	CA-C	-5.27	1.45	1.52
2	D	302	GLY	CA-C	-5.27	1.46	1.51
1	C	50	GLU	CA-C	-5.26	1.46	1.53
2	F	93	ARG	CA-C	-5.26	1.46	1.52
1	B	398	ARG	N-CA	-5.26	1.39	1.46
2	E	147	ALA	CA-C	-5.26	1.45	1.52
2	F	356	ARG	CA-C	-5.26	1.46	1.52
1	B	256	TYR	N-CA	-5.26	1.40	1.46
1	C	51	GLU	CA-C	-5.26	1.46	1.52
2	E	313	PRO	CA-C	-5.26	1.46	1.52
1	B	429	LYS	N-CA	-5.26	1.39	1.46
2	F	70	VAL	CA-C	-5.25	1.47	1.52
1	A	477	GLN	CA-C	-5.25	1.45	1.52
4	H	32	ASN	CA-C	-5.25	1.46	1.53
1	A	465	GLU	N-CA	-5.25	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	141	ASP	N-CA	-5.25	1.40	1.46
3	G	230	THR	CA-C	-5.25	1.46	1.52
1	A	128	ARG	CA-C	-5.25	1.45	1.52
1	A	469	LEU	N-CA	-5.25	1.40	1.46
1	B	265	LEU	N-CA	-5.25	1.39	1.46
2	E	198	HIS	N-CA	-5.25	1.39	1.46
1	B	66	LEU	N-CA	-5.25	1.39	1.46
1	B	367	VAL	CA-C	-5.25	1.46	1.52
2	F	140	VAL	N-CA	-5.25	1.40	1.46
1	C	154	ASP	N-CA	-5.25	1.39	1.46
1	C	175	LYS	N-CA	-5.24	1.40	1.46
2	F	465	GLU	CA-C	-5.24	1.45	1.52
1	C	142	VAL	CA-C	-5.24	1.47	1.53
7	S	25	ALA	CA-C	-5.24	1.46	1.52
2	E	339	ILE	CA-C	-5.24	1.46	1.52
1	B	462	THR	N-CA	-5.23	1.40	1.46
4	H	35	GLN	CA-C	-5.23	1.46	1.52
1	C	350	ILE	CA-C	-5.23	1.47	1.52
2	D	168	GLU	N-CA	-5.23	1.39	1.46
1	A	191	ASP	CA-C	-5.23	1.45	1.52
1	A	484	ARG	CA-C	-5.23	1.46	1.52
2	E	281	TYR	CA-C	-5.23	1.46	1.52
3	G	227	ALA	CA-C	-5.23	1.45	1.52
1	A	280	GLN	N-CA	-5.23	1.40	1.46
1	C	62	MET	CA-C	-5.23	1.46	1.52
1	A	89	LYS	N-CA	-5.23	1.39	1.46
1	A	326	VAL	CA-C	-5.23	1.46	1.52
2	D	439	LYS	N-CA	-5.23	1.40	1.46
4	H	124	ASP	CA-C	-5.23	1.46	1.52
1	C	358	TYR	CA-C	-5.23	1.46	1.52
1	B	255	GLU	CA-C	-5.22	1.45	1.52
4	H	123	ALA	CA-C	-5.22	1.46	1.53
1	A	282	SER	CA-C	-5.22	1.46	1.52
1	A	266	ILE	CA-C	-5.22	1.46	1.52
1	C	485	THR	N-CA	-5.22	1.40	1.46
2	F	320	PRO	CA-C	-5.22	1.44	1.52
1	A	482	LYS	CA-C	-5.22	1.46	1.52
2	D	197	TYR	CA-C	-5.22	1.46	1.52
2	E	190	THR	CA-C	-5.22	1.45	1.52
2	E	202	GLU	CA-C	-5.22	1.46	1.52
1	A	440	GLU	CA-C	-5.21	1.46	1.52
2	D	306	SER	N-CA	-5.21	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	128	ARG	CA-C	-5.21	1.45	1.52
1	C	420	ARG	N-CA	-5.21	1.40	1.46
2	F	117	HIS	N-CA	-5.21	1.39	1.46
1	B	430	GLN	CA-C	-5.21	1.46	1.52
2	E	374	VAL	CA-C	-5.21	1.46	1.52
1	A	292	GLU	CA-C	-5.21	1.45	1.53
1	C	127	ARG	N-CA	-5.21	1.39	1.46
2	D	252	LEU	CA-C	-5.20	1.46	1.52
2	E	436	GLU	CA-C	-5.20	1.45	1.52
2	F	133	LEU	N-CA	-5.20	1.40	1.46
8	T	120	ASN	CA-C	5.20	1.59	1.52
1	A	333	ASP	CA-C	-5.20	1.46	1.52
2	D	26	ASP	CA-C	-5.20	1.46	1.52
1	A	154	ASP	N-CA	-5.20	1.39	1.46
1	B	182	THR	N-CA	-5.20	1.40	1.46
1	A	199	LEU	CA-C	-5.19	1.46	1.52
2	D	324	THR	CA-C	-5.19	1.46	1.52
3	G	23	MET	N-CA	-5.19	1.39	1.46
4	H	71	THR	CA-C	-5.19	1.46	1.52
7	S	100	ALA	CA-C	-5.19	1.45	1.52
2	D	276	PRO	CA-C	-5.19	1.45	1.52
2	D	326	PHE	N-CA	-5.19	1.40	1.46
1	C	355	GLU	N-CA	-5.19	1.40	1.46
1	B	87	ILE	N-CA	-5.18	1.40	1.46
1	B	325	PRO	CA-C	-5.18	1.45	1.52
2	F	324	THR	CA-C	-5.18	1.46	1.52
1	C	47	VAL	CA-C	-5.18	1.46	1.52
2	D	180	TYR	CA-C	-5.18	1.46	1.53
1	B	27	GLU	N-CA	-5.18	1.39	1.46
2	E	166	ILE	CA-C	-5.18	1.46	1.52
2	E	404	VAL	N-CA	-5.18	1.40	1.46
2	E	26	ASP	CA-C	-5.18	1.46	1.52
2	F	433	PRO	CA-C	-5.18	1.47	1.52
1	C	54	GLU	N-CA	-5.17	1.39	1.46
3	G	233	ASP	N-CA	-5.17	1.40	1.46
4	H	56	GLN	CA-C	-5.17	1.46	1.52
1	C	250	GLY	CA-C	-5.17	1.45	1.52
1	C	390	MET	N-CA	-5.17	1.40	1.46
1	A	367	VAL	CA-C	-5.17	1.46	1.52
2	D	286	ALA	CA-C	-5.17	1.46	1.52
3	G	31	TYR	N-CA	-5.17	1.40	1.46
2	D	316	ASP	CA-C	-5.17	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	198	HIS	CA-C	-5.17	1.45	1.52
2	F	285	LEU	CA-C	-5.17	1.46	1.52
5	I	20	LYS	N-CA	-5.17	1.40	1.46
3	G	203	ASN	CA-C	-5.17	1.44	1.52
5	I	14	TYR	N-CA	-5.17	1.40	1.46
1	A	509	GLU	CA-C	-5.17	1.45	1.52
7	S	69	LEU	CA-C	-5.17	1.45	1.52
5	I	19	ALA	CA-C	-5.16	1.46	1.52
1	B	223	ALA	CA-C	-5.16	1.45	1.52
2	F	261	PHE	CA-C	-5.16	1.46	1.52
1	B	63	SER	CA-C	-5.16	1.46	1.52
2	D	183	PHE	CA-C	-5.16	1.46	1.52
1	B	396	GLN	CA-C	-5.16	1.46	1.52
1	A	420	ARG	CA-C	-5.16	1.46	1.52
1	C	346	THR	CA-C	-5.16	1.46	1.52
2	D	60	THR	N-CA	-5.15	1.39	1.45
3	G	4	LYS	CA-C	-5.15	1.46	1.52
11	W	148	SER	CA-C	-5.15	1.45	1.52
7	S	8	PRO	CA-C	-5.15	1.46	1.52
8	T	98	ASN	N-CA	-5.15	1.40	1.46
1	B	231	VAL	CA-C	-5.15	1.46	1.52
2	D	171	ASN	CA-C	-5.15	1.46	1.52
4	H	29	ASN	N-CA	-5.15	1.40	1.46
11	W	209	ILE	N-CA	-5.15	1.40	1.46
2	F	427	HIS	CA-C	-5.15	1.45	1.52
1	A	394	LEU	N-CA	-5.14	1.39	1.46
1	A	290	GLY	CA-C	-5.14	1.45	1.52
3	G	266	ILE	N-CA	-5.14	1.40	1.46
2	F	378	LEU	N-CA	-5.14	1.40	1.46
2	D	412	ARG	CA-C	-5.14	1.46	1.52
2	F	169	LEU	N-CA	-5.14	1.40	1.46
2	F	349	ASP	CA-C	-5.14	1.46	1.52
1	A	249	SER	CA-C	-5.13	1.46	1.52
1	A	392	LEU	N-CA	-5.13	1.40	1.46
1	B	137	ILE	N-CA	-5.13	1.40	1.46
1	B	166	LEU	N-CA	-5.13	1.39	1.46
1	C	439	GLU	CA-C	-5.13	1.46	1.52
2	F	41	ARG	CA-C	-5.13	1.46	1.52
3	G	2	THR	CA-C	-5.13	1.46	1.53
1	B	34	ILE	CA-C	-5.13	1.46	1.52
1	A	217	VAL	N-CA	-5.13	1.40	1.46
2	D	160	VAL	CA-C	-5.13	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	200	TYR	CA-C	-5.12	1.46	1.52
2	D	147	ALA	CA-C	-5.12	1.46	1.52
1	B	55	PHE	N-CA	-5.12	1.39	1.45
2	F	163	THR	N-CA	-5.12	1.40	1.46
2	D	460	VAL	CA-C	-5.12	1.46	1.52
2	E	385	GLN	CA-C	-5.12	1.45	1.52
2	F	105	ARG	CA-C	-5.12	1.47	1.53
4	H	84	VAL	N-CA	-5.12	1.39	1.46
2	F	273	GLY	CA-C	-5.12	1.45	1.51
2	D	380	ASP	CA-C	-5.12	1.46	1.52
2	E	174	ALA	CA-C	-5.11	1.46	1.52
3	G	24	LYS	N-CA	-5.11	1.40	1.46
1	B	491	GLU	CA-C	-5.11	1.45	1.52
1	C	185	ASN	N-CA	-5.11	1.40	1.46
2	F	246	GLN	CA-C	-5.11	1.46	1.52
5	I	9	LEU	CA-C	-5.11	1.46	1.52
2	E	226	PRO	CA-C	-5.11	1.44	1.52
2	D	307	VAL	CA-C	-5.11	1.46	1.52
1	A	76	PHE	CA-C	-5.11	1.47	1.53
1	A	99	VAL	CA-C	-5.11	1.46	1.52
1	B	415	GLN	CA-C	-5.11	1.46	1.52
1	A	183	ILE	CA-C	-5.10	1.46	1.52
1	B	25	LEU	CA-C	-5.10	1.46	1.52
1	B	245	LEU	N-CA	-5.10	1.40	1.46
1	B	441	GLN	N-CA	-5.10	1.40	1.46
2	E	386	ASP	CA-C	-5.10	1.45	1.52
7	S	131	LEU	CA-C	-5.10	1.46	1.52
2	D	155	PHE	N-CA	-5.10	1.39	1.46
3	G	51	LEU	CA-C	-5.10	1.46	1.52
1	C	114	ALA	CA-C	-5.10	1.46	1.52
1	B	264	ALA	N-CA	-5.09	1.39	1.45
1	C	183	ILE	CA-C	-5.09	1.46	1.52
1	C	276	VAL	CA-C	-5.09	1.46	1.52
2	D	274	ARG	N-CA	-5.09	1.39	1.46
2	F	286	ALA	CA-C	-5.09	1.46	1.52
4	H	52	VAL	CA-C	-5.09	1.47	1.52
4	H	96	GLU	CA-C	-5.09	1.46	1.52
4	H	109	LYS	CA-C	-5.09	1.46	1.52
1	B	264	ALA	CA-C	-5.09	1.46	1.52
2	F	267	GLU	CA-C	-5.09	1.46	1.52
1	A	463	LYS	CA-C	-5.09	1.46	1.52
1	B	475	GLN	N-CA	-5.09	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	43	THR	N-CA	-5.09	1.40	1.46
2	D	113	PHE	CA-C	-5.09	1.46	1.52
2	F	84	ILE	C-O	-5.09	1.20	1.24
1	B	60	LYS	N-CA	-5.09	1.40	1.45
1	C	73	VAL	CA-C	-5.09	1.46	1.52
1	B	242	LEU	CA-C	-5.09	1.46	1.52
1	B	413	ALA	CA-C	-5.09	1.46	1.52
1	C	446	TYR	N-CA	-5.09	1.40	1.46
1	B	251	CYS	CA-C	-5.08	1.46	1.52
1	A	426	GLU	CA-C	-5.08	1.46	1.52
1	B	422	VAL	CA-C	-5.08	1.46	1.52
2	D	75	VAL	N-CA	-5.08	1.40	1.46
2	F	467	VAL	CA-C	-5.08	1.46	1.52
4	H	135	ILE	N-CA	-5.08	1.40	1.46
7	S	68	SER	CA-C	-5.08	1.46	1.52
1	C	380	THR	CA-C	-5.08	1.46	1.52
2	D	144	ALA	N-CA	-5.08	1.41	1.46
3	G	88	GLN	CA-C	-5.08	1.46	1.52
8	T	95	GLN	C-N	5.08	1.40	1.33
2	E	162	LYS	CA-C	-5.08	1.46	1.52
4	H	83	THR	N-CA	-5.08	1.39	1.46
1	B	330	GLN	N-CA	-5.08	1.40	1.46
1	C	196	LYS	N-CA	-5.08	1.40	1.46
1	C	284	LEU	N-CA	-5.08	1.39	1.46
2	F	219	TYR	CA-C	-5.08	1.46	1.52
1	B	66	LEU	CA-C	-5.07	1.46	1.52
1	A	414	THR	N-CA	-5.07	1.39	1.46
1	B	304	ARG	N-CA	-5.07	1.40	1.46
1	B	494	ASP	CA-C	-5.07	1.46	1.52
2	E	180	TYR	CA-C	-5.07	1.46	1.52
1	A	262	LYS	N-CA	-5.07	1.39	1.45
2	E	109	LYS	CA-C	-5.07	1.46	1.53
2	E	371	ALA	N-CA	-5.07	1.40	1.46
3	G	13	ILE	CA-C	-5.07	1.44	1.52
1	C	339	PRO	CA-C	-5.07	1.44	1.52
1	C	476	HIS	N-CA	-5.07	1.40	1.46
2	F	394	ASP	CA-C	-5.07	1.46	1.52
1	A	464	PHE	N-CA	-5.06	1.40	1.46
1	B	319	GLY	CA-C	-5.06	1.44	1.52
1	B	389	THR	CA-C	-5.06	1.46	1.52
1	B	421	GLY	N-CA	-5.06	1.39	1.45
1	C	203	TYR	CA-C	-5.06	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	382	LYS	CA-C	-5.06	1.45	1.52
2	F	163	THR	CA-C	-5.06	1.46	1.52
1	A	488	LYS	CA-C	-5.06	1.46	1.52
1	B	108	VAL	N-CA	-5.06	1.40	1.46
2	E	293	GLN	N-CA	-5.06	1.40	1.46
2	D	213	SER	N-CA	-5.06	1.39	1.46
1	B	349	GLN	N-CA	-5.06	1.39	1.45
1	B	496	LYS	CA-C	-5.06	1.46	1.52
2	F	151	LYS	CA-C	-5.05	1.46	1.52
2	D	352	ASP	CA-C	-5.05	1.46	1.52
2	F	152	ILE	N-CA	-5.05	1.40	1.46
2	F	394	ASP	N-CA	-5.05	1.40	1.46
1	B	268	TYR	CA-C	-5.05	1.46	1.52
1	B	466	ASN	CA-C	-5.05	1.46	1.52
2	F	245	ASP	N-CA	-5.05	1.40	1.46
2	F	201	ILE	N-CA	-5.05	1.40	1.46
2	E	241	GLU	CA-C	-5.05	1.46	1.52
7	S	37	LYS	N-CA	-5.05	1.39	1.46
1	C	35	GLY	N-CA	-5.04	1.38	1.45
1	C	214	ALA	N-CA	-5.04	1.40	1.46
2	D	374	VAL	N-CA	-5.04	1.40	1.46
2	E	213	SER	CA-C	-5.04	1.46	1.53
1	A	470	SER	N-CA	-5.04	1.40	1.46
2	F	288	ASP	N-CA	-5.04	1.40	1.46
2	F	349	ASP	C-O	-5.04	1.21	1.25
4	H	38	VAL	N-CA	-5.04	1.42	1.46
3	G	212	ILE	N-CA	-5.04	1.40	1.46
7	S	157	SER	CA-C	-5.04	1.47	1.53
1	B	391	LYS	CA-C	-5.04	1.46	1.52
1	C	98	PRO	N-CA	-5.04	1.41	1.47
2	E	285	LEU	CA-C	-5.04	1.46	1.52
2	F	375	GLN	N-CA	-5.04	1.40	1.46
2	F	443	GLN	N-CA	-5.04	1.40	1.46
7	S	100	ALA	N-CA	-5.04	1.40	1.46
1	B	282	SER	CA-C	-5.03	1.46	1.52
1	C	502	THR	CA-C	-5.03	1.46	1.52
11	W	68	TRP	N-CA	-5.03	1.39	1.46
2	D	339	ILE	CA-C	-5.03	1.46	1.52
10	V	46	MET	CA-C	-5.03	1.46	1.52
3	G	247	THR	CA-C	-5.03	1.46	1.52
3	G	130	GLU	CA-C	-5.03	1.46	1.52
1	C	279	ARG	N-CA	-5.02	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	414	LEU	CA-C	-5.02	1.46	1.52
1	B	350	ILE	CA-C	-5.02	1.47	1.52
2	D	164	VAL	CA-C	-5.02	1.46	1.52
1	A	416	GLN	N-CA	-5.02	1.40	1.46
2	F	123	PHE	N-CA	-5.02	1.40	1.46
1	A	219	ARG	N-CA	-5.02	1.40	1.46
2	D	411	GLN	CA-C	-5.02	1.46	1.52
2	E	33	LEU	CA-C	-5.02	1.45	1.52
1	C	420	ARG	CA-C	-5.02	1.46	1.52
2	E	237	LEU	N-CA	-5.02	1.40	1.46
2	F	16	VAL	CA-C	-5.02	1.46	1.52
4	H	82	VAL	N-CA	-5.02	1.40	1.46
4	H	27	PHE	N-CA	-5.02	1.39	1.46
1	A	468	PHE	N-CA	-5.01	1.40	1.46
1	A	493	SER	N-CA	-5.01	1.40	1.46
2	F	336	SER	CA-C	-5.01	1.46	1.52
4	H	111	ASN	CA-C	-5.01	1.46	1.52
1	C	249	SER	CA-C	-5.01	1.46	1.52
1	C	369	LEU	CA-C	-5.01	1.46	1.52
2	E	171	ASN	N-CA	-5.01	1.40	1.46
4	H	72	THR	N-CA	-5.01	1.39	1.46
2	F	57	THR	N-CA	-5.01	1.39	1.46
2	E	95	MET	N-CA	-5.00	1.39	1.45
2	E	206	ILE	CA-C	-5.00	1.47	1.53
1	B	472	VAL	CA-C	-5.00	1.45	1.52
7	S	64	VAL	CA-C	-5.00	1.46	1.52

All (1110) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	S	73	THR	CA-C-N	31.81	162.91	120.28
7	S	73	THR	C-N-CA	31.81	162.91	120.28
8	T	88	ARG	CA-C-O	-19.84	99.99	120.82
7	S	110	SER	CA-C-N	-17.39	90.68	121.97
7	S	110	SER	C-N-CA	-17.39	90.68	121.97
1	C	406	PHE	N-CA-C	-16.04	94.19	114.56
8	T	159	GLU	CA-C-N	14.98	141.85	120.28
8	T	159	GLU	C-N-CA	14.98	141.85	120.28
9	U	78	VAL	CA-C-O	-14.94	99.94	119.95
8	T	159	GLU	CA-C-O	-14.62	101.18	119.31
7	S	109	MET	N-CA-C	-13.80	95.84	111.71
1	B	225	ALA	N-CA-C	-13.74	96.58	114.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	W	88	LEU	CA-C-N	-13.61	102.83	119.84
11	W	88	LEU	C-N-CA	-13.61	102.83	119.84
11	W	89	PRO	N-CA-C	-13.42	84.82	112.47
1	C	196	LYS	N-CA-C	-13.30	99.45	114.62
2	E	80	ALA	N-CA-C	-12.88	96.61	108.07
1	C	136	ILE	CA-C-N	12.79	128.30	120.24
1	C	136	ILE	C-N-CA	12.79	128.30	120.24
2	F	275	ILE	N-CA-C	-12.64	96.06	107.56
8	T	136	GLU	N-CA-C	-12.16	98.10	111.36
8	T	96	ARG	N-CA-C	-12.10	98.10	111.28
2	F	397	SER	CA-C-N	11.63	137.03	120.28
2	F	397	SER	C-N-CA	11.63	137.03	120.28
7	S	158	ILE	N-CA-C	-11.27	91.53	107.99
2	E	54	GLY	N-CA-C	-11.05	97.55	111.70
2	D	80	ALA	N-CA-C	-10.89	98.38	108.07
11	W	90	HIS	O-C-N	-10.85	108.48	123.34
7	S	106	SER	CA-C-N	10.61	136.72	121.02
7	S	106	SER	C-N-CA	10.61	136.72	121.02
2	F	207	ASN	N-CA-C	-10.53	92.64	109.59
8	T	121	ARG	N-CA-C	-10.52	99.97	113.12
11	W	85	LEU	CA-C-O	-10.40	106.59	119.38
1	A	486	ASP	N-CA-C	10.34	124.99	112.38
1	C	173	THR	N-CA-C	-10.31	100.97	112.72
9	U	78	VAL	CA-C-N	10.13	130.54	119.90
9	U	78	VAL	C-N-CA	10.13	130.54	119.90
11	W	88	LEU	O-C-N	10.07	132.91	121.32
1	A	504	PHE	CA-C-N	10.05	133.51	120.44
1	A	504	PHE	C-N-CA	10.05	133.51	120.44
1	B	91	THR	N-CA-C	-10.02	101.18	113.50
7	S	107	THR	CA-C-N	-10.00	105.41	122.92
7	S	107	THR	C-N-CA	-10.00	105.41	122.92
2	F	111	LYS	N-CA-C	-9.99	103.23	114.62
7	S	160	GLY	N-CA-C	9.97	124.70	112.73
2	E	16	VAL	N-CA-C	-9.97	93.01	107.77
1	A	348	GLY	N-CA-C	-9.95	101.31	111.85
7	S	81	LEU	CA-C-N	9.93	133.95	120.54
7	S	81	LEU	C-N-CA	9.93	133.95	120.54
2	F	399	GLU	N-CA-C	-9.93	100.53	111.36
3	G	171	TYR	N-CA-C	-9.90	94.20	108.96
2	E	84	ILE	N-CA-C	-9.88	101.09	109.19
3	G	248	LEU	N-CA-C	-9.86	99.57	112.68
2	F	20	VAL	N-CA-C	-9.85	93.52	107.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	488	LYS	N-CA-C	-9.83	95.17	108.74
2	E	275	ILE	N-CA-C	-9.83	100.18	108.63
2	F	447	GLY	CA-C-N	9.79	133.16	120.44
2	F	447	GLY	C-N-CA	9.79	133.16	120.44
1	C	376	SER	N-CA-C	9.78	123.17	111.82
2	F	370	VAL	N-CA-C	-9.77	100.85	110.72
8	T	96	ARG	CA-C-N	9.67	133.59	120.54
8	T	96	ARG	C-N-CA	9.67	133.59	120.54
2	D	16	VAL	N-CA-C	-9.60	93.56	107.77
2	E	210	ASP	N-CA-C	-9.53	93.72	109.07
2	F	83	ARG	N-CA-C	-9.52	94.26	109.59
4	H	124	ASP	N-CA-C	-9.47	94.57	109.72
7	S	136	THR	N-CA-C	-9.47	103.82	114.62
2	E	83	ARG	N-CA-C	-9.46	93.99	109.40
3	G	116	LEU	N-CA-C	-9.43	90.72	110.80
2	D	54	GLY	N-CA-C	-9.41	99.66	111.70
8	T	89	HIS	CA-C-O	9.40	130.78	120.63
7	S	157	SER	N-CA-C	-9.40	97.18	111.56
1	B	173	THR	N-CA-C	-9.35	96.73	109.54
1	B	327	ILE	N-CA-C	-9.34	94.66	108.12
9	U	48	PRO	N-CA-C	-9.34	99.30	110.70
3	G	3	LEU	CA-C-N	9.33	133.75	120.79
3	G	3	LEU	C-N-CA	9.33	133.75	120.79
3	G	125	LEU	N-CA-C	-9.27	100.85	112.72
8	T	93	ASP	CA-C-O	-9.27	110.59	120.42
2	F	368	TYR	CA-C-N	9.26	133.43	120.29
2	F	368	TYR	C-N-CA	9.26	133.43	120.29
3	G	156	ASP	N-CA-C	-9.22	101.34	112.59
1	A	175	LYS	N-CA-C	-9.22	101.20	111.07
11	W	68	TRP	N-CA-C	-9.20	102.18	113.50
1	A	313	ASN	CA-C-N	9.19	133.51	120.28
1	A	313	ASN	C-N-CA	9.19	133.51	120.28
2	D	118	ALA	N-CA-C	-9.19	96.18	110.42
2	D	399	GLU	N-CA-C	-9.17	102.22	113.41
2	E	27	GLU	N-CA-C	-9.13	99.19	110.61
2	E	102	ILE	N-CA-C	-9.12	103.51	112.17
1	A	192	GLY	N-CA-C	-9.09	97.93	112.66
2	E	20	VAL	N-CA-C	-9.04	94.69	107.80
8	T	117	GLU	CA-C-O	-9.03	109.89	120.10
2	D	349	ASP	N-CA-C	-9.02	97.87	110.31
1	A	91	THR	N-CA-C	-9.01	101.54	111.36
1	A	15	ARG	CA-C-N	9.00	131.95	120.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	15	ARG	C-N-CA	9.00	131.95	120.70
2	D	394	ASP	N-CA-C	-8.99	91.65	110.80
1	B	509	GLU	N-CA-C	-8.96	99.01	112.54
2	D	30	PRO	N-CA-C	-8.96	99.77	110.70
1	C	355	GLU	N-CA-C	8.96	121.86	111.11
2	D	304	ILE	N-CA-C	-8.87	93.18	107.28
1	B	30	ARG	N-CA-C	-8.87	95.32	109.59
1	C	88	VAL	N-CA-C	-8.84	95.74	108.11
1	B	336	ALA	CA-C-N	8.79	131.86	120.44
1	B	336	ALA	C-N-CA	8.79	131.86	120.44
1	C	237	SER	CA-C-N	8.78	138.32	121.54
1	C	237	SER	C-N-CA	8.78	138.32	121.54
1	A	196	LYS	N-CA-C	-8.77	101.80	111.36
1	B	263	HIS	N-CA-C	-8.77	94.12	108.41
8	T	100	ALA	N-CA-C	-8.75	101.71	111.07
1	C	91	THR	N-CA-C	-8.73	102.76	113.50
3	G	196	ILE	CA-C-N	8.73	138.22	121.54
3	G	196	ILE	C-N-CA	8.73	138.22	121.54
9	U	13	VAL	CA-C-O	-8.73	112.19	121.27
2	F	211	ALA	N-CA-C	-8.73	102.77	112.72
7	S	106	SER	O-C-N	8.71	134.17	122.59
9	U	79	PRO	N-CA-C	8.71	123.94	110.80
2	D	353	SER	N-CA-C	-8.70	92.27	110.80
2	F	118	ALA	N-CA-C	-8.69	96.11	109.24
2	E	397	SER	CA-C-N	8.69	132.79	120.28
2	E	397	SER	C-N-CA	8.69	132.79	120.28
2	D	210	ASP	N-CA-C	-8.65	94.42	108.52
11	W	175	GLY	CA-C-N	8.63	129.56	119.98
11	W	175	GLY	C-N-CA	8.63	129.56	119.98
2	E	225	PRO	CA-C-N	8.61	129.14	119.32
2	E	225	PRO	C-N-CA	8.61	129.14	119.32
2	E	87	GLY	CA-C-N	8.60	128.24	119.82
2	E	87	GLY	C-N-CA	8.60	128.24	119.82
2	F	109	LYS	N-CA-C	-8.59	92.98	108.02
1	C	412	ALA	N-CA-C	8.59	120.64	111.28
2	D	24	GLN	N-CA-C	-8.57	95.27	109.07
8	T	159	GLU	N-CA-C	-8.57	102.26	112.89
1	A	225	ALA	CA-C-N	8.54	132.57	120.28
1	A	225	ALA	C-N-CA	8.54	132.57	120.28
2	F	87	GLY	CA-C-N	8.53	128.18	119.82
2	F	87	GLY	C-N-CA	8.53	128.18	119.82
1	A	41	VAL	N-CA-C	-8.53	96.17	108.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	336	ALA	CA-C-N	8.47	131.45	120.44
1	C	336	ALA	C-N-CA	8.47	131.45	120.44
2	E	59	ARG	N-CA-C	-8.47	95.44	109.24
8	T	104	GLU	N-CA-C	8.46	120.51	111.28
2	D	59	ARG	N-CA-C	-8.44	96.00	109.59
2	E	40	GLY	N-CA-C	-8.43	102.99	115.72
11	W	14	ILE	CA-C-O	-8.41	111.38	120.47
2	E	89	GLU	CA-C-N	8.39	134.95	120.68
2	E	89	GLU	C-N-CA	8.39	134.95	120.68
1	A	261	GLY	CA-C-N	8.38	135.04	120.87
1	A	261	GLY	C-N-CA	8.38	135.04	120.87
11	W	89	PRO	CA-C-N	-8.38	108.62	121.86
11	W	89	PRO	C-N-CA	-8.38	108.62	121.86
5	I	2	ALA	N-CA-C	-8.38	97.82	110.14
9	U	7	LEU	N-CA-C	8.37	123.30	109.06
1	B	267	ILE	N-CA-C	-8.36	95.54	107.75
1	C	506	ALA	CA-C-N	8.35	130.82	120.22
1	C	506	ALA	C-N-CA	8.35	130.82	120.22
2	D	355	SER	N-CA-C	-8.34	93.47	108.48
2	F	161	GLY	N-CA-C	-8.33	102.25	115.08
9	U	99	SER	N-CA-C	8.33	121.18	111.02
2	F	338	ALA	CA-C-N	8.32	132.24	120.42
2	F	338	ALA	C-N-CA	8.32	132.24	120.42
1	C	313	ASN	CA-C-N	8.30	132.24	120.28
1	C	313	ASN	C-N-CA	8.30	132.24	120.28
1	C	102	GLU	N-CA-C	-8.29	101.32	112.26
2	F	209	LYS	N-CA-C	-8.28	101.32	112.26
2	F	285	LEU	N-CA-C	-8.27	102.27	111.28
2	F	304	ILE	N-CA-C	-8.26	94.14	107.28
2	F	317	LEU	CA-C-N	8.26	131.70	120.38
2	F	317	LEU	C-N-CA	8.26	131.70	120.38
2	F	205	VAL	N-CA-C	-8.25	102.00	111.00
1	A	81	LEU	CA-C-N	8.25	136.82	121.97
1	A	81	LEU	C-N-CA	8.25	136.82	121.97
2	E	268	VAL	N-CA-C	-8.24	102.67	110.42
1	C	125	ALA	N-CA-C	-8.22	98.35	110.52
1	C	488	LYS	N-CA-C	-8.21	95.66	108.14
2	D	422	GLU	N-CA-C	-8.17	102.57	112.54
2	F	463	ILE	CA-C-N	8.16	131.56	120.38
2	F	463	ILE	C-N-CA	8.16	131.56	120.38
1	C	103	LEU	N-CA-C	-8.15	103.54	113.97
1	A	4	GLY	N-CA-C	-8.15	93.87	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	102	GLU	CA-C-N	8.13	135.45	122.11
1	C	102	GLU	C-N-CA	8.13	135.45	122.11
2	D	206	ILE	CA-C-N	8.11	134.43	122.99
2	D	206	ILE	C-N-CA	8.11	134.43	122.99
1	C	25	LEU	CA-C-N	8.09	136.99	121.54
1	C	25	LEU	C-N-CA	8.09	136.99	121.54
2	E	118	ALA	N-CA-C	-8.09	96.42	108.79
1	B	354	THR	N-CA-C	8.04	119.83	111.14
2	D	275	ILE	N-CA-C	-8.04	100.24	107.56
5	I	45	VAL	N-CA-C	-8.04	95.93	108.23
1	B	67	GLU	N-CA-C	-8.03	98.05	110.58
1	A	126	ARG	N-CA-C	-8.01	97.10	109.52
7	S	71	ASP	CA-C-N	8.00	136.83	121.54
7	S	71	ASP	C-N-CA	8.00	136.83	121.54
2	E	162	LYS	CA-C-N	8.00	131.00	120.28
2	E	162	LYS	C-N-CA	8.00	131.00	120.28
2	D	109	LYS	CA-C-N	7.99	132.82	120.75
2	D	109	LYS	C-N-CA	7.99	132.82	120.75
1	A	327	ILE	N-CA-C	-7.99	96.51	108.17
1	B	70	ASN	N-CA-C	-7.97	97.62	108.38
2	F	206	ILE	CA-C-N	7.97	134.49	122.93
2	F	206	ILE	C-N-CA	7.97	134.49	122.93
2	D	17	ILE	N-CA-C	-7.96	92.79	109.34
2	D	182	VAL	N-CA-C	-7.95	96.62	108.46
2	D	438	ILE	CA-C-N	7.91	130.73	120.44
2	D	438	ILE	C-N-CA	7.91	130.73	120.44
2	D	20	VAL	N-CA-C	-7.91	96.33	107.80
1	A	89	LYS	N-CA-C	-7.90	96.52	109.40
1	B	264	ALA	N-CA-C	-7.90	97.36	109.85
7	S	150	LEU	N-CA-C	-7.90	94.82	108.56
1	C	67	GLU	N-CA-C	-7.89	98.50	110.50
1	B	313	ASN	CA-C-N	7.86	130.81	120.28
1	B	313	ASN	C-N-CA	7.86	130.81	120.28
2	F	345	TYR	N-CA-C	-7.85	91.78	108.73
7	S	84	ASN	N-CA-C	-7.83	103.33	113.12
8	T	91	LEU	CA-C-N	7.82	138.70	121.80
8	T	91	LEU	C-N-CA	7.82	138.70	121.80
1	C	45	ARG	N-CA-C	7.81	120.88	111.82
7	S	135	LYS	N-CA-C	-7.81	103.74	112.57
1	B	174	GLY	N-CA-C	-7.81	105.79	115.08
2	E	345	TYR	N-CA-C	-7.80	91.89	108.73
2	D	388	ILE	N-CA-C	7.79	120.79	111.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	102	GLU	N-CA-C	-7.79	103.36	113.17
8	T	156	GLN	O-C-N	-7.78	113.11	122.22
2	D	207	ASN	N-CA-C	-7.78	96.22	108.90
2	F	369	ASP	N-CA-C	7.78	119.83	111.36
2	D	444	ILE	CA-C-N	7.77	130.69	120.28
2	D	444	ILE	C-N-CA	7.77	130.69	120.28
2	F	10	THR	CA-C-N	7.77	128.35	121.82
2	F	10	THR	C-N-CA	7.77	128.35	121.82
1	A	136	ILE	CA-C-N	7.76	125.13	120.24
1	A	136	ILE	C-N-CA	7.76	125.13	120.24
2	D	102	ILE	N-CA-C	-7.75	105.01	112.29
2	F	59	ARG	N-CA-C	-7.75	97.12	109.59
1	B	508	PHE	N-CA-C	-7.73	95.53	108.75
7	S	41	ARG	CA-C-N	7.73	130.57	120.60
7	S	41	ARG	C-N-CA	7.73	130.57	120.60
1	A	88	VAL	N-CA-C	-7.72	97.30	108.11
2	F	105	ARG	N-CA-C	-7.72	100.93	110.65
2	D	28	GLY	N-CA-C	-7.71	94.91	113.18
1	C	140	ILE	N-CA-C	-7.70	97.05	108.45
2	E	122	GLU	CA-C-N	7.70	130.59	120.28
2	E	122	GLU	C-N-CA	7.70	130.59	120.28
2	E	17	ILE	N-CA-C	-7.69	94.31	107.24
3	G	80	ALA	CA-C-N	7.69	130.53	120.60
3	G	80	ALA	C-N-CA	7.69	130.53	120.60
1	A	372	SER	N-CA-C	-7.69	95.72	108.34
7	S	91	GLU	N-CA-C	-7.67	102.85	111.14
3	G	197	ASP	N-CA-C	7.66	127.11	110.80
2	F	312	VAL	CA-C-O	-7.65	114.83	119.12
1	C	30	ARG	N-CA-C	-7.65	96.93	109.40
8	T	159	GLU	O-C-N	7.65	133.01	122.46
2	D	21	VAL	N-CA-C	-7.64	97.41	108.11
2	E	52	HIS	N-CA-C	-7.64	95.14	108.20
2	E	47	LEU	N-CA-C	-7.63	96.78	109.07
1	C	355	GLU	CA-C-N	7.63	130.51	120.28
1	C	355	GLU	C-N-CA	7.63	130.51	120.28
8	T	117	GLU	CA-C-N	7.63	130.44	120.60
8	T	117	GLU	C-N-CA	7.63	130.44	120.60
4	H	32	ASN	CA-C-N	7.62	134.91	122.64
4	H	32	ASN	C-N-CA	7.62	134.91	122.64
8	T	135	LYS	O-C-N	-7.62	113.35	122.11
1	A	35	GLY	N-CA-C	-7.59	95.19	113.18
2	D	52	HIS	N-CA-C	-7.58	95.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	138	LYS	CA-C-N	7.58	130.84	120.46
2	D	138	LYS	C-N-CA	7.58	130.84	120.46
1	B	104	LEU	N-CA-C	-7.57	97.67	109.25
1	C	337	TYR	CA-C-N	7.57	125.01	120.24
1	C	337	TYR	C-N-CA	7.57	125.01	120.24
2	F	57	THR	N-CA-C	-7.56	97.08	109.40
1	C	372	SER	N-CA-C	-7.54	94.60	108.02
3	G	117	HIS	CA-C-N	7.54	130.38	120.28
3	G	117	HIS	C-N-CA	7.54	130.38	120.28
1	A	174	GLY	N-CA-C	-7.52	100.84	114.46
5	I	7	ALA	N-CA-C	-7.52	104.20	113.15
4	H	53	PRO	N-CA-C	-7.51	96.99	112.47
2	F	103	ASP	N-CA-C	-7.50	103.93	113.23
1	C	35	GLY	N-CA-C	-7.48	95.45	113.18
4	H	82	VAL	N-CA-C	-7.47	97.34	108.85
1	A	260	ASN	N-CA-C	-7.47	102.09	112.25
2	F	21	VAL	N-CA-C	-7.47	97.65	108.11
2	F	225	PRO	N-CA-C	-7.46	101.60	110.70
3	G	134	ARG	N-CA-C	-7.46	93.33	109.81
7	S	46	LEU	CA-C-N	7.45	135.76	121.54
7	S	46	LEU	C-N-CA	7.45	135.76	121.54
4	H	76	PHE	N-CA-C	-7.44	97.27	109.40
5	I	28	THR	CA-C-N	7.43	133.00	121.19
5	I	28	THR	C-N-CA	7.43	133.00	121.19
2	D	421	ALA	N-CA-C	-7.42	104.19	112.57
9	U	114	TYR	CA-C-O	-7.41	109.91	120.51
2	F	44	ARG	N-CA-C	-7.40	94.97	107.99
1	B	26	GLU	N-CA-C	-7.39	102.00	113.02
1	B	157	VAL	N-CA-C	-7.39	99.70	107.60
3	G	204	TYR	CA-C-N	7.38	130.49	120.38
3	G	204	TYR	C-N-CA	7.38	130.49	120.38
1	B	135	GLY	CA-C-N	7.38	129.86	120.56
1	B	135	GLY	C-N-CA	7.38	129.86	120.56
1	A	194	ASP	N-CA-C	-7.37	97.57	109.96
7	S	69	LEU	N-CA-C	-7.37	104.09	113.23
1	A	67	GLU	N-CA-C	-7.37	100.75	110.40
4	H	27	PHE	N-CA-C	-7.36	102.90	112.68
4	H	64	VAL	N-CA-C	-7.35	96.89	107.77
2	E	108	ILE	N-CA-C	-7.34	97.89	108.53
1	C	330	GLN	N-CA-C	-7.33	96.57	108.52
7	S	149	LYS	N-CA-C	-7.33	102.31	113.89
1	C	354	THR	N-CA-C	7.32	119.34	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	60	THR	N-CA-C	-7.31	98.30	109.41
9	U	3	ARG	CA-C-O	-7.30	108.38	120.80
7	S	73	THR	CA-C-O	7.30	127.76	120.32
1	B	192	GLY	N-CA-C	-7.29	101.11	112.85
2	F	385	GLN	CA-C-N	7.29	130.65	120.29
2	F	385	GLN	C-N-CA	7.29	130.65	120.29
2	D	87	GLY	CA-C-N	7.29	126.97	119.82
2	D	87	GLY	C-N-CA	7.29	126.97	119.82
2	D	463	ILE	CA-C-N	7.29	130.37	120.38
2	D	463	ILE	C-N-CA	7.29	130.37	120.38
2	E	213	SER	N-CA-C	-7.28	101.14	110.53
1	C	507	GLY	CA-C-N	7.27	130.75	120.28
1	C	507	GLY	C-N-CA	7.27	130.75	120.28
3	G	4	LYS	CA-C-N	7.26	130.35	120.54
3	G	4	LYS	C-N-CA	7.26	130.35	120.54
2	D	204	GLY	N-CA-C	-7.25	105.72	115.36
1	A	336	ALA	CA-C-N	7.25	129.86	120.44
1	A	336	ALA	C-N-CA	7.25	129.86	120.44
2	D	156	GLY	N-CA-C	-7.22	96.08	113.18
2	E	370	VAL	N-CA-C	-7.21	103.26	110.62
1	B	400	VAL	N-CA-C	-7.21	104.51	112.80
2	F	54	GLY	N-CA-C	-7.21	102.47	111.70
4	H	131	ILE	N-CA-C	-7.21	103.76	110.53
8	T	95	GLN	N-CA-C	-7.21	99.55	111.37
8	T	93	ASP	N-CA-C	-7.20	103.51	111.36
2	F	461	GLY	N-CA-C	-7.18	97.69	112.34
1	C	58	GLY	N-CA-C	-7.18	105.15	115.27
1	C	508	PHE	N-CA-C	-7.18	103.46	111.71
7	S	95	LEU	N-CA-C	7.16	119.17	111.36
2	F	22	ASP	N-CA-C	-7.16	97.06	108.73
1	A	40	ARG	N-CA-C	-7.16	97.58	109.46
2	E	331	ALA	N-CA-C	-7.16	97.40	108.42
4	H	63	VAL	N-CA-C	-7.15	98.16	108.17
1	B	126	ARG	N-CA-C	-7.15	98.44	109.24
1	C	402	ALA	N-CA-C	7.14	122.33	112.04
2	F	63	MET	CA-C-N	7.14	135.19	121.54
2	F	63	MET	C-N-CA	7.14	135.19	121.54
11	W	207	ALA	CA-C-N	7.14	129.85	120.28
11	W	207	ALA	C-N-CA	7.14	129.85	120.28
2	D	57	THR	N-CA-C	-7.14	97.76	109.40
2	E	426	GLY	N-CA-C	-7.13	104.76	115.32
9	U	118	LEU	N-CA-C	-7.13	102.54	112.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	41	ARG	CA-C-N	7.13	129.83	120.28
2	F	41	ARG	C-N-CA	7.13	129.83	120.28
1	A	139	ARG	N-CA-C	-7.13	97.80	108.99
2	F	387	ILE	N-CA-C	-7.13	103.83	110.53
8	T	160	THR	N-CA-C	7.12	119.90	111.71
11	W	147	ILE	CA-C-O	-7.11	113.32	120.85
1	A	153	VAL	N-CA-C	-7.10	104.28	110.74
2	D	213	SER	N-CA-C	-7.09	95.69	110.80
2	D	364	GLY	N-CA-C	-7.09	103.43	112.65
2	F	213	SER	N-CA-C	-7.08	101.40	110.53
2	D	76	LEU	CA-C-N	7.07	130.79	120.82
2	D	76	LEU	C-N-CA	7.07	130.79	120.82
2	E	302	GLY	N-CA-C	-7.06	103.52	111.63
1	A	85	GLY	N-CA-C	-7.05	105.58	115.32
2	F	61	ILE	N-CA-C	-7.05	98.23	108.11
3	G	182	ASP	CA-C-N	7.05	129.60	120.44
3	G	182	ASP	C-N-CA	7.05	129.60	120.44
2	F	102	ILE	N-CA-C	-7.04	105.67	112.29
2	F	360	PRO	CA-C-N	7.04	134.98	121.54
2	F	360	PRO	C-N-CA	7.04	134.98	121.54
2	E	49	VAL	N-CA-C	-7.03	100.51	109.30
1	C	175	LYS	CA-C-N	7.02	130.26	120.29
1	C	175	LYS	C-N-CA	7.02	130.26	120.29
2	E	451	HIS	N-CA-C	-7.00	103.08	111.69
2	D	454	GLU	N-CA-C	6.99	122.84	111.37
1	B	504	PHE	CA-C-N	6.99	134.88	121.54
1	B	504	PHE	C-N-CA	6.99	134.88	121.54
1	C	174	GLY	N-CA-C	-6.98	96.64	113.18
1	B	334	VAL	CA-C-N	6.97	134.86	121.54
1	B	334	VAL	C-N-CA	6.97	134.86	121.54
11	W	142	VAL	O-C-N	-6.97	114.76	121.94
2	D	423	VAL	N-CA-C	-6.97	103.68	110.72
2	E	72	GLY	N-CA-C	-6.97	105.59	114.37
3	G	60	PRO	N-CA-C	-6.96	102.92	114.75
7	S	137	VAL	N-CA-C	-6.95	103.70	110.72
1	A	294	TYR	CA-C-N	6.95	128.52	119.84
1	A	294	TYR	C-N-CA	6.95	128.52	119.84
2	E	75	VAL	N-CA-C	-6.94	98.48	108.48
4	H	20	PHE	N-CA-C	-6.94	96.96	108.34
1	C	489	ILE	N-CA-C	-6.93	98.47	108.17
1	A	300	TYR	CA-C-N	6.92	129.88	120.54
1	A	300	TYR	C-N-CA	6.92	129.88	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	100	GLY	N-CA-C	-6.92	96.77	113.18
2	E	229	ARG	CA-C-N	6.92	130.24	120.28
2	E	229	ARG	C-N-CA	6.92	130.24	120.28
3	G	154	GLU	N-CA-C	-6.92	95.86	108.65
7	S	120	VAL	CA-C-N	6.90	134.72	121.54
7	S	120	VAL	C-N-CA	6.90	134.72	121.54
7	S	98	THR	CA-C-O	-6.88	112.00	118.33
2	F	16	VAL	N-CA-C	-6.88	97.59	107.77
2	E	304	ILE	CA-C-N	6.88	132.21	122.72
2	E	304	ILE	C-N-CA	6.88	132.21	122.72
2	F	127	SER	N-CA-C	-6.88	98.52	109.59
4	H	83	THR	N-CA-C	-6.88	96.52	108.69
8	T	162	ALA	CA-C-O	-6.88	110.68	120.51
1	A	140	ILE	N-CA-C	-6.87	99.28	108.35
1	B	314	ASP	CA-C-N	6.87	130.18	120.28
1	B	314	ASP	C-N-CA	6.87	130.18	120.28
1	B	239	ALA	N-CA-C	-6.87	100.31	110.48
2	D	434	LEU	N-CA-C	6.87	118.42	111.07
3	G	248	LEU	CA-C-N	6.86	129.78	120.38
3	G	248	LEU	C-N-CA	6.86	129.78	120.38
1	C	225	ALA	N-CA-C	-6.86	104.92	113.28
2	E	21	VAL	N-CA-C	-6.86	98.51	108.11
5	I	8	GLY	CA-C-N	6.86	134.64	121.54
5	I	8	GLY	C-N-CA	6.86	134.64	121.54
1	B	373	ARG	N-CA-C	-6.85	103.74	111.14
7	S	79	SER	CA-C-O	-6.85	110.78	120.16
4	H	56	GLN	CA-C-N	6.84	133.65	122.64
4	H	56	GLN	C-N-CA	6.84	133.65	122.64
9	U	114	TYR	CA-C-N	6.84	130.36	120.38
9	U	114	TYR	C-N-CA	6.84	130.36	120.38
1	B	78	ASN	N-CA-C	-6.84	96.06	108.02
2	D	317	LEU	N-CA-C	-6.83	105.22	113.97
2	F	26	ASP	CA-C-N	6.83	129.43	120.28
2	F	26	ASP	C-N-CA	6.83	129.43	120.28
9	U	113	GLU	O-C-N	6.81	129.91	122.15
1	A	225	ALA	N-CA-C	-6.80	104.95	113.18
2	E	159	GLY	N-CA-C	-6.79	106.39	115.21
1	A	96	ASP	N-CA-C	-6.78	99.03	109.14
9	U	78	VAL	O-C-N	-6.78	113.38	121.10
1	A	438	ILE	N-CA-C	6.78	117.53	110.62
1	B	321	LEU	N-CA-C	-6.77	97.23	108.34
2	F	418	PHE	CA-C-N	6.77	129.90	120.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	418	PHE	C-N-CA	6.77	129.90	120.29
8	T	110	ARG	CA-C-O	-6.77	113.89	121.00
2	F	331	ALA	N-CA-C	-6.77	97.59	108.55
1	A	467	ALA	CA-C-N	6.75	129.32	120.28
1	A	467	ALA	C-N-CA	6.75	129.32	120.28
2	E	25	PHE	N-CA-C	-6.75	98.72	109.59
7	S	120	VAL	N-CA-C	-6.74	97.88	108.81
1	C	336	ALA	N-CA-C	-6.73	99.93	109.96
1	C	453	LEU	CA-C-N	6.72	134.38	121.54
1	C	453	LEU	C-N-CA	6.72	134.38	121.54
3	G	92	GLU	CA-C-N	6.72	134.38	121.54
3	G	92	GLU	C-N-CA	6.72	134.38	121.54
2	D	331	ALA	N-CA-C	-6.70	97.33	108.32
2	F	448	GLU	N-CA-C	-6.70	103.90	111.07
3	G	180	SER	N-CA-C	-6.70	104.42	112.59
1	B	127	ARG	N-CA-C	-6.69	97.71	108.55
7	S	86	ILE	N-CA-C	-6.69	104.66	110.74
1	B	170	ASP	CA-C-N	6.67	134.28	121.54
1	B	170	ASP	C-N-CA	6.67	134.28	121.54
2	E	209	LYS	N-CA-C	-6.67	102.43	112.04
1	A	24	ASP	N-CA-C	-6.67	96.60	110.80
1	B	125	ALA	N-CA-C	-6.66	100.66	110.52
2	F	256	ASP	N-CA-C	-6.66	96.28	107.80
8	T	95	GLN	CA-C-N	6.65	129.19	120.28
8	T	95	GLN	C-N-CA	6.65	129.19	120.28
2	D	361	ASN	N-CA-C	-6.64	100.93	111.02
1	C	190	ASN	N-CA-C	-6.64	104.66	112.89
2	D	103	ASP	N-CA-C	-6.62	104.14	111.82
2	D	51	GLN	N-CA-C	-6.60	99.00	109.23
7	S	26	ALA	CA-C-N	6.60	129.12	120.28
7	S	26	ALA	C-N-CA	6.60	129.12	120.28
1	B	458	PRO	N-CA-C	6.59	123.58	113.75
1	B	196	LYS	N-CA-C	-6.59	104.38	112.88
2	E	189	ARG	N-CA-C	-6.59	99.17	109.25
1	B	263	HIS	CA-C-O	6.57	127.33	120.30
1	A	288	PRO	N-CA-C	-6.56	102.69	110.70
2	F	298	THR	N-CA-C	-6.56	96.83	110.80
8	T	99	ILE	O-C-N	6.56	128.70	121.94
8	T	135	LYS	CA-C-N	6.56	129.60	120.29
8	T	135	LYS	C-N-CA	6.56	129.60	120.29
1	C	337	TYR	N-CA-C	-6.56	104.06	111.07
1	B	326	VAL	N-CA-C	-6.55	99.04	108.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	101	GLU	N-CA-C	-6.55	104.04	113.21
2	D	395	GLU	N-CA-C	6.55	124.75	110.80
1	B	38	ILE	N-CA-C	-6.54	98.21	107.75
2	E	334	VAL	N-CA-C	-6.53	98.33	107.80
2	E	267	GLU	CA-C-N	6.53	128.68	120.72
2	E	267	GLU	C-N-CA	6.53	128.68	120.72
4	H	54	THR	N-CA-C	-6.52	98.61	108.52
8	T	95	GLN	CA-C-O	-6.52	113.40	121.02
4	H	100	LEU	CA-C-N	6.51	133.97	121.54
4	H	100	LEU	C-N-CA	6.51	133.97	121.54
1	B	66	LEU	N-CA-C	-6.50	97.08	108.20
2	F	395	GLU	N-CA-C	-6.50	105.31	112.72
7	S	48	GLU	O-C-N	-6.50	113.71	121.31
2	E	201	ILE	CA-C-N	6.49	129.31	120.54
2	E	201	ILE	C-N-CA	6.49	129.31	120.54
2	F	29	LEU	N-CA-C	-6.48	95.49	109.81
7	S	123	ALA	N-CA-C	-6.47	97.00	109.24
2	F	211	ALA	CA-C-N	6.47	133.17	122.62
2	F	211	ALA	C-N-CA	6.47	133.17	122.62
1	B	102	GLU	N-CA-C	-6.46	105.39	113.28
11	W	152	GLN	CA-C-N	6.46	126.97	119.47
11	W	152	GLN	C-N-CA	6.46	126.97	119.47
1	A	175	LYS	CA-C-N	6.46	129.23	120.44
1	A	175	LYS	C-N-CA	6.46	129.23	120.44
3	G	82	HIS	N-CA-C	-6.46	104.17	111.14
3	G	204	TYR	N-CA-C	-6.46	97.04	110.80
3	G	46	VAL	CA-C-N	6.45	127.28	119.99
3	G	46	VAL	C-N-CA	6.45	127.28	119.99
8	T	97	ASN	N-CA-C	6.44	118.84	111.11
2	F	218	VAL	N-CA-C	-6.44	98.84	108.12
2	E	300	LYS	N-CA-C	-6.44	97.09	110.80
2	F	435	LYS	CA-C-N	6.42	130.07	120.31
2	F	435	LYS	C-N-CA	6.42	130.07	120.31
2	E	211	ALA	N-CA-C	-6.42	103.52	112.25
2	E	281	TYR	CA-C-O	-6.42	114.53	120.95
2	F	28	GLY	N-CA-C	-6.42	97.97	113.18
1	C	40	ARG	N-CA-C	-6.42	98.81	109.46
1	B	33	SER	CA-C-N	-6.41	113.45	122.75
1	B	33	SER	C-N-CA	-6.41	113.45	122.75
2	E	387	ILE	N-CA-C	-6.41	104.51	110.53
1	A	362	ARG	CA-C-O	-6.41	114.59	119.59
2	D	69	LEU	CA-C-N	6.40	129.08	120.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	69	LEU	C-N-CA	6.40	129.08	120.50
2	D	305	THR	N-CA-C	-6.38	98.33	108.73
2	F	245	ASP	N-CA-C	-6.38	103.84	111.69
9	U	113	GLU	CA-C-O	-6.37	113.67	120.42
1	B	360	GLY	CA-C-N	6.37	133.43	121.97
1	B	360	GLY	C-N-CA	6.37	133.43	121.97
1	B	438	ILE	CA-C-N	6.36	128.80	120.28
1	B	438	ILE	C-N-CA	6.36	128.80	120.28
2	D	178	GLY	N-CA-C	-6.36	106.99	115.32
7	S	67	LYS	N-CA-C	-6.35	103.71	112.03
1	A	74	VAL	N-CA-C	-6.35	100.51	108.89
3	G	80	ALA	N-CA-C	-6.35	103.88	112.26
1	C	495	ALA	N-CA-C	-6.34	104.45	111.36
8	T	103	LEU	CA-C-N	6.33	128.77	120.28
8	T	103	LEU	C-N-CA	6.33	128.77	120.28
2	F	282	GLN	N-CA-C	-6.33	101.68	109.65
2	E	311	TYR	N-CA-C	-6.33	98.59	108.90
7	S	149	LYS	CA-C-N	6.32	131.65	122.16
7	S	149	LYS	C-N-CA	6.32	131.65	122.16
2	D	225	PRO	CA-C-N	6.32	125.81	119.24
2	D	225	PRO	C-N-CA	6.32	125.81	119.24
8	T	114	VAL	N-CA-C	6.32	117.10	110.72
2	F	204	GLY	N-CA-C	-6.31	106.52	115.30
2	D	46	VAL	N-CA-C	-6.30	99.50	108.58
1	A	198	LYS	N-CA-C	-6.29	97.16	108.48
2	D	20	VAL	CA-C-N	-6.29	114.90	123.14
2	D	20	VAL	C-N-CA	-6.29	114.90	123.14
2	E	204	GLY	N-CA-C	-6.29	106.64	115.32
1	C	287	ARG	N-CA-C	-6.28	102.17	110.40
1	C	364	ALA	CA-C-N	6.28	133.28	121.97
1	C	364	ALA	C-N-CA	6.28	133.28	121.97
2	F	24	GLN	N-CA-C	-6.28	98.28	108.52
4	H	97	ALA	N-CA-C	-6.27	97.85	108.26
4	H	95	GLU	N-CA-C	-6.26	104.37	111.07
1	A	279	ARG	CA-C-N	6.26	128.99	120.54
1	A	279	ARG	C-N-CA	6.26	128.99	120.54
1	C	197	LYS	N-CA-C	-6.26	106.86	114.75
2	F	62	ALA	N-CA-C	-6.25	100.32	110.20
2	E	107	PRO	CA-C-N	6.25	131.16	123.10
2	E	107	PRO	C-N-CA	6.25	131.16	123.10
2	D	246	GLN	N-CA-C	-6.25	103.78	111.40
8	T	109	GLU	CA-C-N	-6.25	112.41	120.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	T	109	GLU	C-N-CA	-6.25	112.41	120.65
1	C	362	ARG	N-CA-C	-6.25	95.24	108.73
2	F	14	VAL	N-CA-C	-6.24	106.72	112.96
2	E	61	ILE	N-CA-C	-6.24	99.38	108.11
2	E	366	GLU	CA-C-N	6.24	128.96	120.54
2	E	366	GLU	C-N-CA	6.24	128.96	120.54
4	H	33	VAL	N-CA-C	-6.24	99.31	108.97
1	A	174	GLY	CA-C-N	6.23	128.54	120.44
1	A	174	GLY	C-N-CA	6.23	128.54	120.44
7	S	58	PRO	N-CA-C	-6.23	105.96	114.80
2	F	449	TYR	N-CA-C	-6.23	99.06	108.96
3	G	193	TYR	N-CA-C	-6.22	105.67	113.20
2	E	117	HIS	N-CA-C	-6.22	101.32	110.52
1	B	430	GLN	N-CA-C	-6.21	97.95	108.26
7	S	116	VAL	CA-C-N	6.21	127.60	119.84
7	S	116	VAL	C-N-CA	6.21	127.60	119.84
8	T	88	ARG	N-CA-C	-6.20	104.43	111.07
1	C	454	ASP	CA-C-N	6.20	133.39	121.54
1	C	454	ASP	C-N-CA	6.20	133.39	121.54
2	E	330	ASP	N-CA-C	-6.19	106.69	114.56
1	C	170	ASP	CA-C-N	6.19	133.36	121.54
1	C	170	ASP	C-N-CA	6.19	133.36	121.54
2	E	304	ILE	N-CA-C	-6.19	97.44	107.28
2	D	218	VAL	N-CA-C	-6.18	99.21	108.12
1	C	298	VAL	N-CA-C	-6.18	103.39	112.04
1	A	501	VAL	CA-C-N	6.18	128.56	120.28
1	A	501	VAL	C-N-CA	6.18	128.56	120.28
2	D	145	PRO	N-CA-C	-6.17	100.48	110.55
1	A	408	SER	CA-C-N	6.17	133.32	121.54
1	A	408	SER	C-N-CA	6.17	133.32	121.54
1	C	364	ALA	N-CA-C	-6.17	105.55	114.12
2	D	399	GLU	CA-C-O	6.16	126.37	119.41
11	W	122	LYS	CA-C-O	-6.16	112.04	119.49
1	B	287	ARG	N-CA-C	-6.15	100.04	109.64
2	F	438	ILE	CA-C-N	6.15	128.44	120.44
2	F	438	ILE	C-N-CA	6.15	128.44	120.44
2	D	217	LEU	N-CA-C	-6.14	99.71	109.59
2	F	317	LEU	N-CA-C	-6.14	106.33	113.88
1	C	377	ALA	CA-C-O	6.13	126.91	119.49
2	D	451	HIS	N-CA-C	-6.13	104.60	111.28
11	W	67	THR	CA-C-N	-6.13	111.31	121.92
11	W	67	THR	C-N-CA	-6.13	111.31	121.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	356	LEU	N-CA-C	-6.13	104.60	111.28
2	F	450	ASP	CA-C-N	6.13	133.25	121.54
2	F	450	ASP	C-N-CA	6.13	133.25	121.54
1	A	117	GLY	N-CA-C	-6.13	104.35	114.76
1	A	33	SER	N-CA-C	-6.12	99.38	108.99
3	G	78	CYS	N-CA-C	-6.12	100.29	108.74
8	T	62	GLU	CA-C-N	6.12	128.49	120.60
8	T	62	GLU	C-N-CA	6.12	128.49	120.60
1	A	492	GLU	N-CA-C	-6.12	104.53	111.07
2	E	41	ARG	CA-C-N	6.12	128.47	120.28
2	E	41	ARG	C-N-CA	6.12	128.47	120.28
3	G	166	ARG	N-CA-C	-6.11	107.65	114.62
2	F	311	TYR	N-CA-C	-6.10	100.56	110.20
1	A	267	ILE	N-CA-C	-6.09	98.97	107.80
2	D	370	VAL	N-CA-C	-6.08	104.58	110.72
1	C	476	HIS	N-CA-C	-6.08	106.53	112.97
7	S	122	THR	N-CA-C	-6.07	100.67	109.59
1	C	195	GLU	N-CA-C	-6.07	97.88	110.80
2	D	130	GLN	N-CA-C	-6.07	100.10	109.14
2	D	161	GLY	N-CA-C	-6.07	105.56	114.90
2	D	12	ARG	N-CA-C	-6.06	99.12	109.24
2	D	52	HIS	CA-C-O	6.06	126.84	120.54
2	F	355	SER	N-CA-C	-6.06	97.57	108.48
2	D	318	THR	N-CA-C	-6.06	105.74	113.01
1	B	298	VAL	N-CA-C	-6.05	104.09	112.50
2	E	394	ASP	CA-C-N	6.05	129.20	120.79
2	E	394	ASP	C-N-CA	6.05	129.20	120.79
2	D	380	ASP	CA-C-N	6.04	128.38	120.28
2	D	380	ASP	C-N-CA	6.04	128.38	120.28
2	D	131	GLU	N-CA-C	-6.04	99.15	109.24
11	W	148	SER	N-CA-C	6.03	120.50	113.20
1	B	348	GLY	N-CA-C	-6.03	105.46	111.85
7	S	158	ILE	CA-C-N	6.02	133.04	121.54
7	S	158	ILE	C-N-CA	6.02	133.04	121.54
2	F	354	THR	N-CA-C	-6.02	100.17	109.14
1	C	467	ALA	CA-C-N	6.01	128.33	120.28
1	C	467	ALA	C-N-CA	6.01	128.33	120.28
2	D	421	ALA	CA-C-N	6.01	130.75	120.72
2	D	421	ALA	C-N-CA	6.01	130.75	120.72
1	A	317	GLY	N-CA-C	-6.00	105.84	115.08
7	S	71	ASP	N-CA-C	-5.99	105.82	113.01
2	D	352	ASP	N-CA-C	-5.99	98.04	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	201	ILE	CA-C-N	5.98	128.62	120.54
2	D	201	ILE	C-N-CA	5.98	128.62	120.54
1	B	112	GLY	N-CA-C	-5.98	99.00	113.18
11	W	152	GLN	CA-C-O	-5.98	111.97	120.16
2	F	39	GLN	N-CA-C	-5.98	99.92	109.96
7	S	154	ILE	N-CA-C	-5.97	104.95	113.07
1	A	193	THR	N-CA-C	-5.97	103.38	112.99
2	E	207	ASN	N-CA-C	-5.97	99.97	109.76
11	W	96	THR	CA-C-O	-5.96	114.56	120.70
1	C	360	GLY	N-CA-C	-5.96	99.07	113.18
2	F	351	LEU	N-CA-C	-5.95	105.29	112.54
2	E	316	ASP	N-CA-C	-5.94	99.72	109.40
2	E	111	LYS	N-CA-C	-5.93	103.71	113.50
1	B	171	ARG	N-CA-C	5.93	123.43	110.80
2	D	153	GLY	N-CA-C	-5.93	100.16	110.71
1	A	175	LYS	CA-C-O	5.92	127.04	120.82
1	A	232	VAL	N-CA-C	-5.92	99.89	108.36
2	F	75	VAL	N-CA-C	-5.92	99.64	108.46
2	F	371	ALA	CA-C-O	-5.92	114.61	120.82
4	H	93	LEU	N-CA-C	-5.91	95.34	107.70
2	E	249	GLN	N-CA-C	5.91	119.22	110.48
2	D	26	ASP	N-CA-C	-5.90	106.11	113.55
7	S	161	GLY	CA-C-N	5.90	128.67	120.29
7	S	161	GLY	C-N-CA	5.90	128.67	120.29
4	H	23	PRO	CA-C-N	5.90	128.19	120.28
4	H	23	PRO	C-N-CA	5.90	128.19	120.28
2	E	126	MET	N-CA-C	-5.90	101.00	110.14
1	A	78	ASN	CA-C-N	5.90	132.80	121.54
1	A	78	ASN	C-N-CA	5.90	132.80	121.54
2	F	305	THR	N-CA-C	-5.88	99.14	108.73
1	B	461	ILE	N-CA-C	-5.88	104.77	110.42
1	C	192	GLY	N-CA-C	-5.88	103.13	112.66
3	G	183	THR	N-CA-C	5.88	117.36	111.07
11	W	68	TRP	CA-C-N	5.88	129.64	120.82
11	W	68	TRP	C-N-CA	5.88	129.64	120.82
2	F	244	ARG	CA-C-O	5.88	126.84	120.55
3	G	179	PHE	N-CA-C	-5.88	100.25	109.25
2	E	138	LYS	CA-C-N	5.88	128.51	120.46
2	E	138	LYS	C-N-CA	5.88	128.51	120.46
7	S	73	THR	O-C-N	5.87	129.49	122.21
2	E	161	GLY	CA-C-N	5.87	128.07	120.44
2	E	161	GLY	C-N-CA	5.87	128.07	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	387	ILE	CA-C-N	5.87	129.74	120.47
2	F	387	ILE	C-N-CA	5.87	129.74	120.47
2	D	96	ASN	N-CA-C	-5.86	100.89	109.63
2	F	214	LYS	N-CA-C	-5.86	106.11	113.20
1	B	375	GLY	CA-C-N	5.86	128.72	120.28
1	B	375	GLY	C-N-CA	5.86	128.72	120.28
2	F	287	THR	CA-C-N	5.85	128.44	120.54
2	F	287	THR	C-N-CA	5.85	128.44	120.54
1	C	410	LEU	N-CA-C	5.84	118.16	108.99
2	E	422	GLU	N-CA-C	-5.84	105.04	111.82
1	A	104	LEU	N-CA-C	-5.83	100.49	109.76
10	V	4	VAL	O-C-N	-5.83	115.54	122.77
1	A	407	GLY	CA-C-N	5.83	130.45	121.19
1	A	407	GLY	C-N-CA	5.83	130.45	121.19
2	F	393	MET	N-CA-C	-5.82	105.48	112.59
3	G	101	LYS	CA-C-N	5.82	132.66	121.54
3	G	101	LYS	C-N-CA	5.82	132.66	121.54
2	E	298	THR	N-CA-C	-5.82	98.93	108.76
2	E	78	SER	N-CA-C	-5.82	106.16	113.20
2	F	332	THR	N-CA-C	-5.81	99.54	109.24
2	D	426	GLY	N-CA-C	-5.81	107.64	115.36
2	E	264	ALA	CA-C-N	5.80	126.53	120.03
2	E	264	ALA	C-N-CA	5.80	126.53	120.03
1	B	25	LEU	N-CA-C	-5.80	98.45	110.80
2	E	277	SER	CA-C-N	5.80	128.94	120.71
2	E	277	SER	C-N-CA	5.80	128.94	120.71
2	E	246	GLN	N-CA-C	-5.78	104.58	111.69
3	G	25	MET	CA-C-N	5.77	128.05	120.60
3	G	25	MET	C-N-CA	5.77	128.05	120.60
8	T	109	GLU	O-C-N	5.77	128.24	122.12
2	F	292	MET	N-CA-C	-5.76	103.74	112.04
7	S	35	VAL	N-CA-C	-5.76	105.47	111.58
7	S	73	THR	N-CA-C	-5.76	103.99	111.71
2	F	117	HIS	N-CA-C	-5.76	99.85	109.24
1	A	73	VAL	N-CA-C	-5.75	99.35	107.75
1	A	18	GLY	N-CA-C	-5.75	107.16	115.27
4	H	43	GLY	N-CA-C	-5.75	99.56	113.18
1	C	400	VAL	N-CA-C	-5.75	105.20	113.07
1	B	120	PRO	CA-C-N	5.75	132.31	121.97
1	B	120	PRO	C-N-CA	5.75	132.31	121.97
10	V	32	TYR	O-C-N	-5.74	116.12	122.09
2	D	43	THR	N-CA-C	-5.74	97.64	107.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	H	84	VAL	N-CA-C	-5.74	98.15	107.28
2	D	23	VAL	N-CA-C	-5.74	100.22	108.48
2	E	51	GLN	CA-C-N	-5.74	115.38	122.84
2	E	51	GLN	C-N-CA	-5.74	115.38	122.84
1	A	297	ASP	N-CA-C	-5.74	106.51	112.93
2	F	450	ASP	N-CA-C	-5.74	98.58	110.80
1	C	55	PHE	CA-C-N	5.73	127.96	120.28
1	C	55	PHE	C-N-CA	5.73	127.96	120.28
2	D	229	ARG	CA-C-N	5.73	128.54	120.28
2	D	229	ARG	C-N-CA	5.73	128.54	120.28
2	F	426	GLY	N-CA-C	-5.73	99.60	113.18
1	C	335	SER	N-CA-C	-5.72	106.30	113.28
2	F	243	PHE	N-CA-C	5.72	119.52	112.54
1	B	232	VAL	N-CA-C	-5.72	100.18	108.36
2	D	311	TYR	N-CA-C	-5.71	101.17	110.20
2	E	110	THR	N-CA-C	-5.71	101.74	110.14
11	W	17	LEU	CA-C-N	5.71	125.39	119.05
11	W	17	LEU	C-N-CA	5.71	125.39	119.05
1	C	28	THR	N-CA-C	-5.70	100.63	109.24
7	S	134	LEU	N-CA-C	-5.70	107.32	114.56
2	D	393	MET	CA-C-N	5.69	132.41	121.54
2	D	393	MET	C-N-CA	5.69	132.41	121.54
1	C	327	ILE	N-CA-C	-5.69	100.03	108.45
2	E	76	LEU	CA-C-N	5.69	128.84	120.82
2	E	76	LEU	C-N-CA	5.69	128.84	120.82
1	A	290	GLY	N-CA-C	-5.69	102.95	110.74
2	F	89	GLU	N-CA-C	-5.68	106.33	113.20
7	S	155	ASP	O-C-N	-5.68	114.79	121.32
1	B	190	ASN	N-CA-C	-5.67	105.85	112.89
3	G	85	VAL	CA-C-N	5.67	128.67	120.79
3	G	85	VAL	C-N-CA	5.67	128.67	120.79
1	A	160	GLY	N-CA-C	-5.67	102.51	110.96
1	B	362	ARG	N-CA-C	-5.67	97.28	109.01
1	B	488	LYS	N-CA-C	-5.66	98.29	108.48
7	S	116	VAL	N-CA-C	5.66	121.11	108.88
3	G	109	GLY	N-CA-C	-5.65	104.45	112.81
2	D	284	THR	N-CA-C	-5.65	106.61	112.93
2	D	400	ASP	N-CA-C	-5.64	105.05	111.14
1	A	70	ASN	N-CA-C	-5.64	100.37	108.60
2	E	95	MET	N-CA-C	-5.63	100.70	109.72
1	B	310	ALA	CA-C-N	5.63	130.94	123.00
1	B	310	ALA	C-N-CA	5.63	130.94	123.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	338	ALA	N-CA-C	5.63	117.42	111.28
8	T	163	LYS	CA-C-O	-5.62	112.47	120.51
1	A	379	GLN	CA-C-N	5.62	131.37	122.94
1	A	379	GLN	C-N-CA	5.62	131.37	122.94
11	W	20	VAL	O-C-N	5.62	127.42	121.91
1	C	317	GLY	N-CA-C	-5.62	107.89	115.36
1	C	347	ASP	N-CA-C	-5.61	106.02	112.92
4	H	98	VAL	N-CA-C	-5.61	99.72	108.86
1	A	491	GLU	CA-C-N	5.61	127.73	120.44
1	A	491	GLU	C-N-CA	5.61	127.73	120.44
4	H	75	TYR	N-CA-C	-5.61	100.54	109.07
2	F	451	HIS	N-CA-C	-5.60	98.87	110.80
1	C	225	ALA	CA-C-N	5.60	128.34	120.28
1	C	225	ALA	C-N-CA	5.60	128.34	120.28
1	C	126	ARG	N-CA-C	-5.59	100.79	109.24
4	H	105	LEU	N-CA-C	5.59	117.05	111.07
1	A	100	GLY	N-CA-C	-5.59	99.94	113.18
2	F	392	GLY	N-CA-C	-5.59	100.72	112.45
2	D	453	PRO	CA-C-N	5.58	130.06	121.19
2	D	453	PRO	C-N-CA	5.58	130.06	121.19
2	E	35	ALA	N-CA-C	-5.58	100.89	109.76
1	B	58	GLY	N-CA-C	-5.57	107.95	115.36
1	B	113	ASN	N-CA-C	-5.57	99.23	108.75
1	B	226	MET	N-CA-C	-5.57	105.31	111.71
2	F	283	PRO	N-CA-C	-5.56	106.76	114.27
1	A	448	GLY	N-CA-C	-5.56	105.65	112.77
4	H	92	LEU	N-CA-C	-5.56	100.18	109.24
2	E	60	THR	N-CA-C	-5.55	100.97	109.41
7	S	49	PRO	CA-C-N	5.55	132.15	121.54
7	S	49	PRO	C-N-CA	5.55	132.15	121.54
3	G	121	SER	N-CA-C	-5.55	106.35	113.01
9	U	93	GLU	N-CA-C	-5.55	104.64	111.75
2	F	40	GLY	N-CA-C	-5.55	107.61	115.43
2	F	80	ALA	N-CA-C	-5.54	103.14	108.07
2	D	220	GLY	CA-C-N	5.54	132.12	121.54
2	D	220	GLY	C-N-CA	5.54	132.12	121.54
2	F	201	ILE	CA-C-N	5.54	128.02	120.54
2	F	201	ILE	C-N-CA	5.54	128.02	120.54
1	B	176	THR	N-CA-C	-5.54	105.33	111.36
4	H	106	GLY	CA-C-N	5.53	127.63	120.44
4	H	106	GLY	C-N-CA	5.53	127.63	120.44
2	D	25	PHE	N-CA-C	-5.53	100.69	109.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	146	MET	N-CA-C	-5.52	99.05	110.80
2	D	366	GLU	CA-C-N	5.52	128.46	120.79
2	D	366	GLU	C-N-CA	5.52	128.46	120.79
2	E	410	ILE	CA-C-N	5.52	127.94	120.38
2	E	410	ILE	C-N-CA	5.52	127.94	120.38
2	E	467	VAL	CA-C-N	5.52	127.61	120.44
2	E	467	VAL	C-N-CA	5.52	127.61	120.44
2	E	57	THR	N-CA-C	-5.51	100.90	109.72
1	A	28	THR	N-CA-C	-5.51	100.92	109.24
1	B	237	SER	CA-C-N	5.51	132.06	121.54
1	B	237	SER	C-N-CA	5.51	132.06	121.54
1	C	368	GLY	N-CA-C	-5.51	106.97	115.73
9	U	103	PHE	CA-C-O	-5.50	113.34	119.67
1	A	452	TYR	N-CA-C	-5.50	106.73	113.50
2	D	330	ASP	N-CA-C	-5.50	106.28	114.64
2	E	22	ASP	N-CA-C	-5.50	100.22	109.07
9	U	47	LYS	CA-C-O	-5.49	114.25	120.46
1	A	360	GLY	N-CA-C	-5.48	108.16	114.69
2	E	70	VAL	N-CA-C	-5.48	100.42	108.54
2	F	284	THR	CA-C-N	5.48	127.62	120.28
2	F	284	THR	C-N-CA	5.48	127.62	120.28
2	F	65	GLY	N-CA-C	-5.48	103.92	112.58
1	A	444	VAL	N-CA-C	-5.47	105.03	111.00
7	S	161	GLY	CA-C-O	5.47	125.94	120.09
2	F	248	GLY	CA-C-N	5.47	131.98	121.54
2	F	248	GLY	C-N-CA	5.47	131.98	121.54
3	G	88	GLN	N-CA-C	5.47	122.45	110.80
2	D	104	GLU	N-CA-C	-5.47	103.74	111.56
8	T	92	PHE	N-CA-C	-5.46	104.18	112.04
3	G	167	SER	N-CA-C	-5.46	98.95	107.73
2	E	206	ILE	CA-C-N	5.45	130.77	122.65
2	E	206	ILE	C-N-CA	5.45	130.77	122.65
3	G	205	GLN	N-CA-C	-5.45	104.74	111.33
1	C	42	HIS	CA-C-N	5.45	132.08	121.41
1	C	42	HIS	C-N-CA	5.45	132.08	121.41
4	H	67	ALA	CA-C-N	5.44	131.94	121.54
4	H	67	ALA	C-N-CA	5.44	131.94	121.54
2	F	94	ILE	N-CA-C	-5.44	99.92	107.80
1	C	94	ILE	N-CA-C	-5.43	101.72	108.89
2	D	306	SER	N-CA-C	-5.43	99.55	108.41
1	A	39	ALA	N-CA-C	-5.43	99.67	108.52
1	B	437	ALA	CA-C-N	5.43	127.90	120.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	437	ALA	C-N-CA	5.43	127.90	120.46
7	S	145	GLY	CA-C-N	5.43	131.91	121.54
7	S	145	GLY	C-N-CA	5.43	131.91	121.54
1	A	105	GLY	N-CA-C	-5.43	107.29	115.32
2	E	159	GLY	CA-C-N	5.42	129.03	120.47
2	E	159	GLY	C-N-CA	5.42	129.03	120.47
2	E	162	LYS	CA-C-O	5.42	126.51	120.82
2	F	25	PHE	N-CA-C	-5.42	100.86	109.59
1	A	347	ASP	CA-C-N	5.42	130.10	122.57
1	A	347	ASP	C-N-CA	5.42	130.10	122.57
1	C	261	GLY	CA-C-N	5.42	130.39	121.39
1	C	261	GLY	C-N-CA	5.42	130.39	121.39
3	G	124	PHE	N-CA-C	-5.42	102.51	110.52
2	D	87	GLY	N-CA-C	-5.41	101.30	112.34
2	F	386	ASP	N-CA-C	5.41	117.26	111.36
1	A	454	ASP	CA-C-N	5.41	127.47	120.44
1	A	454	ASP	C-N-CA	5.41	127.47	120.44
2	F	72	GLY	N-CA-C	-5.40	108.26	114.69
2	F	444	ILE	CA-C-N	5.40	127.52	120.28
2	F	444	ILE	C-N-CA	5.40	127.52	120.28
2	D	231	ARG	N-CA-C	-5.40	106.53	113.23
7	S	110	SER	CA-C-O	-5.40	113.89	119.51
1	B	358	TYR	N-CA-C	-5.40	105.48	111.36
2	D	262	THR	N-CA-C	-5.40	105.48	111.36
1	B	231	VAL	N-CA-C	-5.39	98.70	107.28
1	C	92	GLY	N-CA-C	-5.39	106.77	115.08
3	G	8	ARG	N-CA-C	-5.39	105.30	111.07
1	C	157	VAL	N-CA-C	-5.39	97.24	108.88
2	D	463	ILE	N-CA-C	5.38	117.78	111.05
1	B	358	TYR	CA-C-N	5.38	129.21	120.60
1	B	358	TYR	C-N-CA	5.38	129.21	120.60
9	U	5	LEU	N-CA-C	5.38	122.25	110.80
1	B	40	ARG	N-CA-C	-5.37	100.55	109.46
2	D	146	TYR	N-CA-C	-5.36	102.11	110.42
3	G	156	ASP	CA-C-N	5.36	131.78	121.54
3	G	156	ASP	C-N-CA	5.36	131.78	121.54
1	B	290	GLY	N-CA-C	-5.36	100.48	113.18
8	T	95	GLN	O-C-N	-5.36	115.72	122.20
2	F	361	ASN	CA-C-N	5.35	131.61	121.97
2	F	361	ASN	C-N-CA	5.35	131.61	121.97
2	F	438	ILE	O-C-N	5.35	127.15	121.91
2	F	125	GLU	CA-C-N	-5.35	113.77	121.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	125	GLU	C-N-CA	-5.35	113.77	121.42
1	A	163	GLN	N-CA-C	5.35	117.45	109.59
2	F	410	ILE	N-CA-C	-5.34	105.17	110.62
1	B	132	LYS	CA-C-N	5.34	128.77	120.60
1	B	132	LYS	C-N-CA	5.34	128.77	120.60
3	G	70	GLY	N-CA-C	-5.34	103.35	111.14
2	E	177	HIS	N-CA-C	-5.33	105.61	113.61
1	A	401	ALA	CA-C-N	5.33	127.68	120.38
1	A	401	ALA	C-N-CA	5.33	127.68	120.38
2	F	157	GLY	CA-C-N	5.32	128.32	120.82
2	F	157	GLY	C-N-CA	5.32	128.32	120.82
2	F	212	THR	N-CA-C	-5.32	102.45	110.06
4	H	94	ALA	N-CA-C	-5.32	100.51	109.07
2	F	115	ALA	N-CA-C	-5.32	102.41	110.28
1	A	76	PHE	N-CA-C	-5.31	103.29	110.68
1	C	104	LEU	N-CA-C	-5.31	101.81	110.20
9	U	112	GLN	O-C-N	-5.31	116.49	122.12
1	A	124	LYS	CA-C-N	5.31	132.74	122.07
1	A	124	LYS	C-N-CA	5.31	132.74	122.07
1	B	491	GLU	N-CA-C	5.31	117.75	111.33
1	C	95	VAL	N-CA-C	5.31	120.38	109.34
2	E	112	GLN	N-CA-C	-5.30	100.75	109.40
2	D	390	ILE	N-CA-C	-5.30	107.65	113.43
1	C	321	LEU	N-CA-C	-5.30	98.63	107.80
3	G	261	GLU	N-CA-C	-5.30	105.08	112.45
4	H	88	SER	N-CA-C	-5.30	106.84	113.15
1	B	85	GLY	N-CA-C	-5.30	108.31	115.36
11	W	20	VAL	N-CA-C	5.30	115.50	110.42
1	C	457	GLU	CA-C-N	5.29	125.61	119.47
1	C	457	GLU	C-N-CA	5.29	125.61	119.47
2	E	39	GLN	N-CA-C	-5.29	101.08	109.76
1	B	140	ILE	N-CA-C	-5.29	100.85	108.42
4	H	49	ALA	N-CA-C	5.29	122.07	110.80
1	A	112	GLY	N-CA-C	-5.29	100.65	113.18
4	H	115	ALA	CA-C-N	5.28	127.89	120.28
4	H	115	ALA	C-N-CA	5.28	127.89	120.28
1	B	131	LEU	N-CA-C	-5.28	99.56	110.80
1	B	500	ILE	CA-C-N	5.28	127.21	120.56
1	B	500	ILE	C-N-CA	5.28	127.21	120.56
2	F	356	ARG	N-CA-C	-5.28	105.53	111.28
5	I	6	GLN	N-CA-C	-5.27	106.86	113.72
2	E	212	THR	N-CA-C	-5.27	104.01	110.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	343	GLY	N-CA-C	-5.27	108.42	114.69
2	F	189	ARG	CA-C-N	5.26	127.59	120.38
2	F	189	ARG	C-N-CA	5.26	127.59	120.38
1	A	322	THR	N-CA-C	-5.26	100.66	109.24
3	G	270	ALA	N-CA-C	-5.26	106.09	112.88
2	E	29	LEU	N-CA-C	-5.26	102.05	110.10
5	I	33	ASN	N-CA-C	5.26	119.18	112.34
1	B	467	ALA	CA-C-N	5.26	127.32	120.28
1	B	467	ALA	C-N-CA	5.26	127.32	120.28
2	E	313	PRO	CA-C-N	5.26	131.30	123.05
2	E	313	PRO	C-N-CA	5.26	131.30	123.05
8	T	15	LYS	N-CA-C	5.25	117.41	111.11
2	D	461	GLY	N-CA-C	-5.25	101.63	112.34
2	F	139	VAL	CA-C-N	-5.25	114.31	120.72
2	F	139	VAL	C-N-CA	-5.25	114.31	120.72
2	F	385	GLN	N-CA-C	5.25	117.75	111.71
5	I	39	GLY	O-C-N	5.25	127.24	122.88
3	G	215	TYR	CA-C-N	5.25	127.57	120.38
3	G	215	TYR	C-N-CA	5.25	127.57	120.38
1	A	291	ARG	CA-C-N	5.25	129.79	122.08
1	A	291	ARG	C-N-CA	5.25	129.79	122.08
4	H	49	ALA	O-C-N	-5.25	115.61	122.59
9	U	46	GLU	N-CA-C	5.25	117.90	111.82
4	H	19	THR	N-CA-C	-5.24	99.86	108.41
7	S	55	LEU	N-CA-C	-5.24	105.48	111.14
1	C	47	VAL	CA-C-N	5.24	128.28	120.95
1	C	47	VAL	C-N-CA	5.24	128.28	120.95
1	C	386	VAL	N-CA-C	-5.24	107.31	111.81
8	T	119	LYS	N-CA-C	5.23	117.06	111.36
3	G	172	LYS	N-CA-C	-5.22	99.44	108.69
1	A	384	LYS	N-CA-C	5.22	116.97	111.28
1	B	257	PHE	CA-C-N	5.22	127.22	120.44
1	B	257	PHE	C-N-CA	5.22	127.22	120.44
2	E	60	THR	CA-C-N	-5.21	116.31	123.14
2	E	60	THR	C-N-CA	-5.21	116.31	123.14
2	F	95	MET	N-CA-C	-5.21	101.61	109.85
1	A	133	ALA	N-CA-C	-5.21	103.61	110.39
3	G	199	ASP	CA-C-N	5.21	131.35	121.97
3	G	199	ASP	C-N-CA	5.21	131.35	121.97
2	E	317	LEU	N-CA-C	5.21	120.00	113.43
2	E	407	ALA	CA-C-N	5.21	127.26	120.28
2	E	407	ALA	C-N-CA	5.21	127.26	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	G	120	HIS	N-CA-C	-5.21	106.52	112.92
2	E	62	ALA	N-CA-C	-5.20	101.98	110.20
9	U	104	LEU	N-CA-C	-5.20	99.73	110.80
1	A	496	LYS	CA-C-N	5.20	127.19	120.44
1	A	496	LYS	C-N-CA	5.20	127.19	120.44
11	W	90	HIS	CA-C-O	-5.20	112.99	120.11
1	A	46	ASN	N-CA-C	-5.19	106.63	113.17
1	B	162	GLY	CA-C-N	5.19	128.09	120.71
1	B	162	GLY	C-N-CA	5.19	128.09	120.71
2	E	133	LEU	N-CA-C	-5.19	101.69	109.95
7	S	25	ALA	N-CA-C	5.19	116.75	111.14
7	S	134	LEU	CA-C-O	5.19	124.47	118.55
7	S	37	LYS	N-CA-C	-5.19	105.23	112.45
9	U	3	ARG	O-C-N	5.19	131.30	123.00
8	T	118	VAL	CA-C-O	5.19	126.66	121.27
2	E	69	LEU	CA-C-N	5.18	129.06	121.80
2	E	69	LEU	C-N-CA	5.18	129.06	121.80
2	F	149	GLY	N-CA-C	-5.18	108.52	114.69
9	U	81	PRO	CA-C-O	-5.18	111.16	120.60
1	B	334	VAL	N-CA-C	-5.18	105.49	110.72
1	C	260	ASN	N-CA-C	-5.18	105.20	112.25
1	A	125	ALA	N-CA-C	-5.18	102.85	110.52
2	E	421	ALA	N-CA-C	-5.18	104.25	110.88
2	D	333	THR	N-CA-C	-5.17	99.98	108.41
2	F	284	THR	N-CA-C	-5.17	107.14	112.93
1	B	96	ASP	N-CA-C	-5.17	101.44	109.14
3	G	248	LEU	CA-C-O	5.17	127.36	120.13
2	E	58	VAL	N-CA-C	-5.17	100.93	108.99
1	B	100	GLY	N-CA-C	-5.17	103.54	110.56
1	C	39	ALA	N-CA-C	-5.16	100.10	108.52
1	B	294	TYR	N-CA-C	-5.16	103.44	110.36
1	C	38	ILE	N-CA-C	-5.16	98.57	107.24
2	F	206	ILE	CA-C-O	5.16	127.11	120.97
1	A	303	SER	CA-C-N	5.16	127.19	120.28
1	A	303	SER	C-N-CA	5.16	127.19	120.28
2	F	32	ILE	N-CA-C	-5.16	102.43	109.55
1	B	290	GLY	CA-C-N	5.16	129.60	121.56
1	B	290	GLY	C-N-CA	5.16	129.60	121.56
2	F	17	ILE	N-CA-C	-5.16	98.26	107.18
9	U	117	GLU	CA-C-O	5.16	125.72	119.38
2	D	338	ALA	CA-C-N	5.15	127.73	120.42
2	D	338	ALA	C-N-CA	5.15	127.73	120.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	319	ASP	O-C-N	5.14	125.60	121.38
11	W	64	LYS	CA-C-O	5.14	125.71	119.38
11	W	87	LEU	N-CA-C	5.14	119.52	112.68
1	A	135	GLY	N-CA-C	-5.14	104.73	112.60
2	D	73	GLN	N-CA-C	5.14	116.92	110.24
1	B	212	THR	N-CA-C	-5.13	105.76	111.36
2	F	276	PRO	N-CA-C	-5.13	101.90	112.47
1	A	88	VAL	CA-C-N	5.13	130.64	122.94
1	A	88	VAL	C-N-CA	5.13	130.64	122.94
4	H	51	HIS	N-CA-C	5.13	116.86	109.07
1	A	188	ARG	CA-C-N	5.13	130.95	121.52
1	A	188	ARG	C-N-CA	5.13	130.95	121.52
10	V	53	ASN	N-CA-C	-5.13	105.77	112.23
2	E	359	ASP	CA-C-N	5.12	124.92	119.28
2	E	359	ASP	C-N-CA	5.12	124.92	119.28
2	F	368	TYR	CA-C-O	-5.12	115.44	120.82
3	G	182	ASP	N-CA-C	-5.12	105.78	111.36
1	A	190	ASN	N-CA-C	-5.12	106.54	112.89
1	A	124	LYS	N-CA-C	-5.12	99.90	110.80
1	B	143	ARG	CA-C-N	5.11	129.04	120.86
1	B	143	ARG	C-N-CA	5.11	129.04	120.86
2	E	347	ALA	CA-C-N	5.11	131.17	121.97
2	E	347	ALA	C-N-CA	5.11	131.17	121.97
4	H	85	ASN	N-CA-C	-5.11	102.90	110.46
1	A	29	GLY	N-CA-C	-5.11	101.16	110.97
1	A	290	GLY	CA-C-N	5.11	129.53	121.56
1	A	290	GLY	C-N-CA	5.11	129.53	121.56
2	E	224	GLU	N-CA-C	-5.11	103.52	110.36
2	E	50	ALA	N-CA-C	-5.10	107.00	113.43
4	H	28	PHE	N-CA-C	-5.10	100.72	109.24
2	E	394	ASP	N-CA-C	-5.10	99.94	110.80
1	B	167	ILE	N-CA-C	-5.09	100.55	107.99
1	B	337	TYR	N-CA-C	-5.09	105.62	111.07
1	C	468	PHE	N-CA-C	-5.09	105.73	111.28
2	F	398	GLU	N-CA-C	5.09	117.57	111.71
1	C	232	VAL	N-CA-C	-5.09	101.08	108.36
2	D	399	GLU	CA-C-N	5.09	127.36	120.44
2	D	399	GLU	C-N-CA	5.09	127.36	120.44
2	E	169	LEU	CA-C-N	5.09	126.97	120.56
2	E	169	LEU	C-N-CA	5.09	126.97	120.56
1	A	237	SER	CA-C-N	5.08	131.25	121.54
1	A	237	SER	C-N-CA	5.08	131.25	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	53	VAL	CA-C-N	-5.08	114.91	122.74
1	B	53	VAL	C-N-CA	-5.08	114.91	122.74
2	F	249	GLN	N-CA-C	5.08	121.62	110.80
5	I	27	LYS	CA-C-N	5.08	131.24	121.54
5	I	27	LYS	C-N-CA	5.08	131.24	121.54
5	I	41	THR	CA-C-N	5.08	131.11	121.97
5	I	41	THR	C-N-CA	5.08	131.11	121.97
1	C	369	LEU	N-CA-C	-5.08	106.22	114.09
2	E	249	GLN	CA-C-O	5.08	127.31	121.47
2	F	374	VAL	CA-C-N	5.08	127.08	120.28
2	F	374	VAL	C-N-CA	5.08	127.08	120.28
9	U	16	GLY	CA-C-N	-5.08	112.73	121.66
9	U	16	GLY	C-N-CA	-5.08	112.73	121.66
3	G	129	LYS	CA-C-N	5.06	128.03	120.90
3	G	129	LYS	C-N-CA	5.06	128.03	120.90
2	E	330	ASP	CA-C-O	5.06	124.31	118.55
2	F	26	ASP	N-CA-C	-5.05	106.46	113.18
2	D	280	GLY	N-CA-C	-5.05	108.65	115.21
2	E	404	VAL	CA-C-N	5.05	127.04	120.28
2	E	404	VAL	C-N-CA	5.05	127.04	120.28
2	F	209	LYS	CA-C-N	5.05	129.07	121.40
2	F	209	LYS	C-N-CA	5.05	129.07	121.40
2	D	196	LEU	N-CA-C	-5.04	105.86	111.36
2	F	84	ILE	N-CA-C	-5.04	105.05	109.19
4	H	67	ALA	N-CA-C	-5.04	101.09	109.46
3	G	126	VAL	N-CA-C	-5.04	98.87	109.34
9	U	31	LYS	O-C-N	-5.03	116.79	122.12
2	F	421	ALA	N-CA-C	-5.03	104.66	111.55
2	F	443	GLN	N-CA-C	5.03	116.57	111.14
2	F	107	PRO	N-CA-C	-5.03	102.11	112.47
1	A	93	ALA	CA-C-N	5.03	127.23	120.50
1	A	93	ALA	C-N-CA	5.03	127.23	120.50
3	G	228	ARG	CA-C-N	5.03	126.97	120.44
3	G	228	ARG	C-N-CA	5.03	126.97	120.44
2	E	76	LEU	N-CA-C	-5.02	100.22	108.41
2	E	182	VAL	N-CA-C	-5.02	100.98	108.46
1	B	175	LYS	CA-C-O	5.02	126.09	120.82
1	C	193	THR	CA-C-N	5.02	131.12	121.54
1	C	193	THR	C-N-CA	5.02	131.12	121.54
1	C	495	ALA	CA-C-N	5.02	127.00	120.28
1	C	495	ALA	C-N-CA	5.02	127.00	120.28
2	E	380	ASP	CA-C-N	5.02	127.00	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	380	ASP	C-N-CA	5.02	127.00	120.28
1	A	457	GLU	CA-C-N	5.01	125.04	119.32
1	A	457	GLU	C-N-CA	5.01	125.04	119.32
1	C	167	ILE	N-CA-C	-5.01	100.68	107.99
1	C	500	ILE	CA-C-N	5.01	126.87	120.56
1	C	500	ILE	C-N-CA	5.01	126.87	120.56

There are no chirality outliers.

All (89) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	437	ALA	Mainchain,Peptide
1	A	485	THR	Mainchain
1	B	46	ASN	Mainchain
1	C	173	THR	Mainchain
1	C	336	ALA	Peptide
1	C	509	GLU	Peptide
2	D	158	ALA	Peptide
2	D	205	VAL	Peptide
2	D	209	LYS	Mainchain
2	D	25	PHE	Mainchain,Peptide
2	F	284	THR	Mainchain
3	G	156	ASP	Mainchain,Peptide
7	S	106	SER	Mainchain
7	S	13	GLY	Mainchain,Peptide
7	S	142	LEU	Peptide
7	S	151	GLU	Peptide
7	S	152	VAL	Peptide
7	S	156	PRO	Peptide
7	S	157	SER	Mainchain
7	S	49	PRO	Mainchain
7	S	69	LEU	Mainchain,Peptide
8	T	104	GLU	Mainchain
8	T	117	GLU	Mainchain
8	T	136	GLU	Mainchain
8	T	148	VAL	Mainchain,Peptide
8	T	155	GLN	Mainchain
8	T	156	GLN	Mainchain
8	T	160	THR	Mainchain
8	T	162	ALA	Mainchain,Peptide
8	T	166	ALA	Mainchain
8	T	172	SER	Peptide

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Mol	Chain	Res	Type	Group
8	T	173	LYS	Peptide
8	T	21	THR	Mainchain
8	T	23	GLU	Mainchain
8	T	25	PHE	Mainchain
8	T	51	LYS	Mainchain
8	T	88	ARG	Mainchain
8	T	90	TYR	Mainchain
8	T	91	LEU	Mainchain
8	T	92	PHE	Mainchain
8	T	93	ASP	Mainchain
9	U	104	LEU	Peptide
9	U	112	GLN	Mainchain
9	U	115	GLU	Mainchain
9	U	122	ARG	Mainchain
9	U	123	ASN	Mainchain
9	U	13	VAL	Mainchain
9	U	16	GLY	Peptide
9	U	17	GLU	Mainchain
9	U	19	ILE	Peptide
9	U	3	ARG	Peptide
9	U	50	ALA	Mainchain
9	U	6	ALA	Peptide
9	U	78	VAL	Mainchain
9	U	79	PRO	Mainchain
9	U	81	PRO	Mainchain,Peptide
9	U	88	GLN	Mainchain
9	U	92	GLU	Mainchain
9	U	96	ASP	Mainchain
10	V	22	SER	Peptide
10	V	23	GLY	Peptide
10	V	3	PRO	Mainchain
10	V	4	VAL	Mainchain
10	V	42	LYS	Mainchain
10	V	57	ASN	Mainchain
11	W	10	ILE	Mainchain
11	W	122	LYS	Mainchain
11	W	142	VAL	Mainchain
11	W	148	SER	Mainchain
11	W	16	GLY	Mainchain
11	W	163	ASN	Mainchain
11	W	175	GLY	Mainchain
11	W	176	GLY	Mainchain

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Mol	Chain	Res	Type	Group
11	W	219	SER	Mainchain
11	W	220	LEU	Mainchain
11	W	35	ASN	Peptide
11	W	47	GLN	Mainchain
11	W	63	SER	Mainchain
11	W	86	GLY	Mainchain
11	W	90	HIS	Mainchain
11	W	91	SER	Mainchain

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of 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	11	0
1	B	1918	0	553	8	0
1	C	1947	0	563	8	0
2	D	1867	0	533	6	0
2	E	1863	0	532	5	0
2	F	1863	0	532	12	0
3	G	1053	0	283	2	0
4	H	523	0	140	1	0
5	I	187	0	53	2	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	178	15	0
8	T	697	0	182	3	0
9	U	485	0	118	3	0
10	V	264	0	71	0	0
11	W	869	0	226	5	0
All	All	18544	0	5289	74	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 (74) 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)
11:W:88:LEU:N	11:W:88:LEU:CA	1.88	1.36
7:S:164:VAL:CA	7:S:167:GLY:O	2.28	0.80
2:F:84:ILE:H	2:F:114:ALA:H	1.42	0.68
1:B:49:ALA:H	2:F:69:LEU:H	1.43	0.67
1:A:49:ALA:H	2:E:69:LEU:N	2.00	0.59
2:E:84:ILE:H	2:E:114:ALA:H	1.52	0.58
1:B:173:THR:H	1:B:175:LYS:H	1.53	0.57
2:D:350:PRO:C	2:D:352:ASP:H	2.13	0.56
1:A:260:ASN:C	1:A:262:LYS:H	2.15	0.55
2:D:473:LEU:C	2:D:475:GLU:H	2.17	0.53
7:S:114:GLY:HA2	7:S:127:ASP:H	1.74	0.52
7:S:108:MET:CA	7:S:111:VAL:H	2.23	0.51
7:S:65:LYS:C	7:S:67:LYS:H	2.18	0.51
7:S:139:LYS:C	7:S:141:PHE:H	2.19	0.51
7:S:164:VAL:C	7:S:167:GLY:O	2.53	0.50
7:S:163:ILE:O	7:S:167:GLY:O	2.30	0.49
1:C:49:ALA:H	2:D:69:LEU:N	2.10	0.49
5:I:6:GLN:C	5:I:8:GLY:H	2.21	0.49
8:T:15:LYS:CA	11:W:90:HIS:C	2.86	0.48
1:C:26:GLU:C	1:C:28:THR:H	2.22	0.48
4:H:87:ASP:C	4:H:89:SER:H	2.20	0.48
1:C:260:ASN:C	1:C:262:LYS:H	2.23	0.47
1:A:49:ALA:H	2:E:69:LEU:H	1.62	0.47
1:C:475:GLN:C	1:C:477:GLN:H	2.23	0.47
1:B:290:GLY:HA3	2:F:279:VAL:O	2.15	0.46
1:C:290:GLY:H	1:C:295:PRO:N	2.13	0.46
7:S:114:GLY:CA	7:S:127:ASP:H	2.28	0.46
1:B:26:GLU:C	1:B:46:ASN:H	2.24	0.46
2:F:159:GLY:C	2:F:161:GLY:H	2.23	0.46
1:C:292:GLU:C	1:C:294:TYR:H	2.23	0.46
2:F:208:LEU:C	2:F:210:ASP:H	2.24	0.46
2:F:368:TYR:O	2:F:372:ARG:N	2.49	0.45
1:B:258:ARG:O	1:B:319:GLY:HA3	2.16	0.45
1:B:173:THR:N	1:B:175:LYS:H	2.13	0.45
2:F:210:ASP:C	2:F:212:THR:H	2.23	0.45
1:C:172:GLN:C	1:C:174:GLY:H	2.23	0.44
1:A:475:GLN:C	1:A:477:GLN:H	2.24	0.44
7:S:114:GLY:HA2	7:S:127:ASP:C	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:S:132:THR:C	7:S:134:LEU:H	2.25	0.44
9:U:103:PHE:O	9:U:104:LEU:C	2.61	0.43
1:B:49:ALA:N	2:F:69:LEU:H	2.11	0.43
7:S:70:SER:C	7:S:72:MET:N	2.75	0.43
1:B:171:ARG:O	1:B:172:GLN:C	2.61	0.43
9:U:100:CYS:O	9:U:101:ALA:C	2.60	0.43
8:T:99:ILE:O	8:T:100:ALA:C	2.62	0.43
7:S:95:LEU:C	7:S:97:ASN:H	2.27	0.42
1:C:45:ARG:C	1:C:47:VAL:H	2.27	0.42
1:A:261:GLY:O	1:A:319:GLY:HA2	2.19	0.42
2:D:187:GLY:H	2:D:220:GLY:C	2.27	0.42
7:S:134:LEU:C	7:S:136:THR:H	2.26	0.42
1:A:346:THR:C	1:A:348:GLY:H	2.28	0.42
7:S:30:ASN:C	7:S:32:LEU:H	2.27	0.42
11:W:88:LEU:O	11:W:90:HIS:N	2.52	0.42
2:D:133:LEU:N	2:D:146:TYR:O	2.52	0.42
9:U:92:GLU:C	9:U:94:LYS:N	2.76	0.42
1:A:189:PHE:C	1:A:192:GLY:H	2.28	0.42
11:W:174:ILE:O	11:W:175:GLY:C	2.61	0.42
2:F:446:ALA:C	2:F:448:GLU:H	2.23	0.41
3:G:155:PHE:C	3:G:157:GLU:H	2.29	0.41
2:F:341:GLU:C	2:F:343:GLY:H	2.29	0.41
2:F:283:PRO:C	2:F:285:LEU:H	2.28	0.41
7:S:70:SER:C	7:S:72:MET:H	2.26	0.41
2:E:158:ALA:C	2:E:160:VAL:H	2.28	0.41
2:F:140:VAL:O	2:F:144:ALA:C	2.64	0.41
3:G:120:HIS:C	3:G:122:ASP:H	2.29	0.41
1:A:11:ILE:O	1:A:12:LEU:C	2.63	0.40
1:A:224:ASP:C	1:A:226:MET:H	2.28	0.40
2:E:277:SER:N	2:E:281:TYR:O	2.55	0.40
8:T:95:GLN:O	8:T:96:ARG:C	2.64	0.40
1:A:6:ALA:C	1:A:8:VAL:H	2.30	0.40
5:I:6:GLN:C	5:I:8:GLY:N	2.80	0.40
11:W:152:GLN:O	11:W:156:LEU:N	2.50	0.40
1:A:258:ARG:O	1:A:319:GLY:HA3	2.22	0.40
2:D:350:PRO:C	2:D:352:ASP:N	2.79	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	507/510 (99%)	445 (88%)	35 (7%)	27 (5%)	1	15
1	B	476/510 (93%)	423 (89%)	30 (6%)	23 (5%)	2	16
1	C	485/510 (95%)	434 (90%)	28 (6%)	23 (5%)	2	16
2	D	465/482 (96%)	415 (89%)	30 (6%)	20 (4%)	2	17
2	E	464/482 (96%)	418 (90%)	34 (7%)	12 (3%)	4	25
2	F	464/482 (96%)	412 (89%)	32 (7%)	20 (4%)	2	17
3	G	258/273 (94%)	195 (76%)	43 (17%)	20 (8%)	1	10
4	H	129/146 (88%)	114 (88%)	10 (8%)	5 (4%)	2	19
5	I	45/50 (90%)	35 (78%)	7 (16%)	3 (7%)	1	12
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%)	110 (66%)	30 (18%)	26 (16%)	0	2
8	T	172/174 (99%)	154 (90%)	14 (8%)	4 (2%)	5	28
9	U	120/124 (97%)	95 (79%)	16 (13%)	9 (8%)	1	10
10	V	64/77 (83%)	51 (80%)	9 (14%)	4 (6%)	1	13
11	W	215/217 (99%)	192 (89%)	19 (9%)	4 (2%)	6	32
All	All	4590/4803 (96%)	3990 (87%)	391 (8%)	209 (5%)	3	17

All (209) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	5	THR
1	A	13	GLU
1	A	14	GLU
1	A	20	ASP
1	A	24	ASP
1	A	80	LYS
1	A	82	ILE
1	A	171	ARG
1	A	224	ASP
1	A	238	ASP
1	A	289	PRO
1	A	334	VAL
1	A	374	VAL
1	B	45	ARG
1	B	57	SER
1	B	143	ARG
1	B	171	ARG
1	B	172	GLN
1	B	238	ASP
1	B	361	ILE
1	C	26	GLU
1	C	171	ARG
1	C	195	GLU
1	C	237	SER
1	C	238	ASP
1	C	361	ILE
2	D	214	LYS
2	D	277	SER
2	D	350	PRO
2	D	352	ASP
2	D	353	SER
2	D	394	ASP
2	E	392	GLY
2	F	67	GLU
2	F	249	GLN
2	F	277	SER
2	F	299	THR
2	F	361	ASN
2	F	450	ASP
2	F	451	HIS
3	G	9	ARG
3	G	93	ALA
3	G	112	ILE

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Mol	Chain	Res	Type
3	G	116	LEU
3	G	151	SER
3	G	196	ILE
3	G	197	ASP
3	G	199	ASP
3	G	250	PHE
4	H	69	ASP
4	H	101	ASP
5	I	9	LEU
7	S	9	VAL
7	S	47	LYS
7	S	79	SER
7	S	106	SER
7	S	112	HIS
7	S	116	VAL
7	S	127	ASP
7	S	129	THR
7	S	143	SER
7	S	146	GLN
7	S	152	VAL
7	S	153	LYS
7	S	159	MET
9	U	4	LYS
9	U	18	ILE
9	U	19	ILE
9	U	100	CYS
10	V	3	PRO
10	V	26	VAL
10	V	63	PRO
1	A	6	ALA
1	A	235	THR
1	A	295	PRO
1	A	336	ALA
1	B	27	GLU
1	B	36	ASP
1	B	48	GLN
1	B	378	ALA
1	C	143	ARG
1	C	172	GLN
1	C	194	ASP
1	C	224	ASP
1	C	235	THR

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Mol	Chain	Res	Type
1	C	455	LYS
1	C	456	LEU
2	D	67	GLU
2	D	158	ALA
2	D	221	GLN
2	D	348	VAL
2	D	396	LEU
2	D	453	PRO
2	E	132	ILE
2	E	299	THR
2	E	394	ASP
2	F	64	ASP
2	F	177	HIS
2	F	281	TYR
2	F	397	SER
2	F	427	HIS
3	G	79	GLY
3	G	87	LYS
3	G	134	ARG
3	G	200	VAL
4	H	68	GLU
5	I	26	LEU
5	I	40	SER
7	S	121	THR
7	S	144	LYS
8	T	155	GLN
8	T	163	LYS
9	U	104	LEU
9	U	114	TYR
1	A	21	THR
1	A	95	VAL
1	A	123	SER
1	A	407	GLY
1	B	47	VAL
1	B	95	VAL
1	B	121	ILE
1	B	289	PRO
1	B	375	GLY
1	B	505	LEU
1	C	365	ILE
1	C	405	GLN
1	C	407	GLY

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Mol	Chain	Res	Type
2	D	30	PRO
2	D	112	GLN
2	D	212	THR
2	E	64	ASP
2	E	276	PRO
2	E	301	LYS
2	E	396	LEU
2	F	110	THR
2	F	221	GLN
3	G	50	ALA
3	G	92	GLU
3	G	117	HIS
3	G	257	VAL
4	H	39	PRO
6	J	45	GLN
7	S	70	SER
7	S	92	ASN
7	S	126	LEU
7	S	132	THR
8	T	147	ARG
9	U	101	ALA
11	W	40	ASN
1	A	11	ILE
1	A	79	ASP
1	A	124	LYS
1	A	146	MET
1	A	409	ASP
1	B	365	ILE
1	C	453	LEU
2	D	282	GLN
2	D	346	PRO
2	E	73	GLN
2	E	156	GLY
3	G	102	GLU
4	H	49	ALA
6	P	40	PRO
6	Q	44	GLN
7	S	72	MET
7	S	151	GLU
10	V	24	GLY
11	W	36	ARG
11	W	92	PHE

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Mol	Chain	Res	Type
1	B	37	GLY
1	B	235	THR
1	B	295	PRO
1	C	163	GLN
1	C	433	TYR
2	D	474	ALA
2	F	297	THR
6	O	39	ASN
7	S	61	LYS
7	S	140	SER
1	C	374	VAL
1	C	411	ASP
2	F	107	PRO
3	G	131	VAL
3	G	258	ILE
7	S	68	SER
9	U	123	ASN
11	W	222	LEU
1	C	95	VAL
2	D	279	VAL
2	E	279	VAL
2	F	279	VAL
2	F	362	ILE
2	F	429	GLY
6	M	40	PRO
7	S	80	PRO
1	B	82	ILE
1	C	451	GLY
9	U	20	PRO
1	A	145	PRO
1	B	261	GLY
2	D	160	VAL
2	F	128	VAL
6	J	40	PRO
6	M	71	ILE
7	S	66	VAL
8	T	152	ILE
2	E	101	PRO
6	K	40	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.

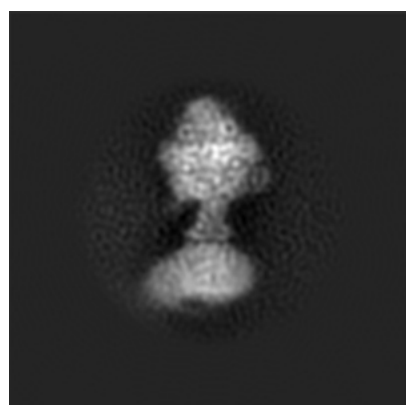
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3164. These allow visual inspection of the internal detail of the map and identification of artifacts.

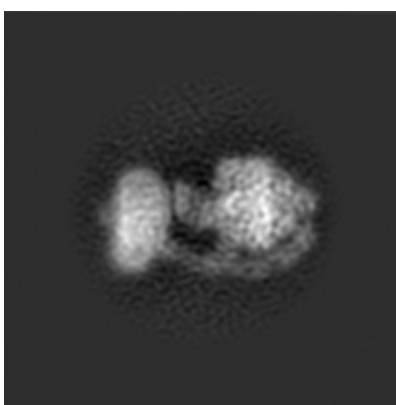
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

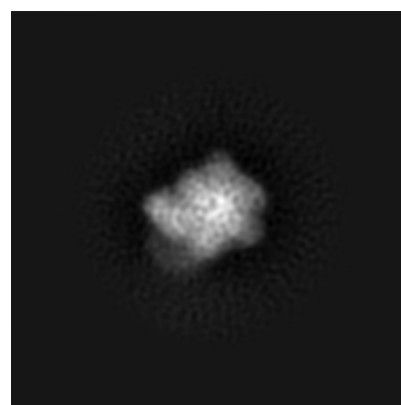
6.1.1 Primary map



X



Y

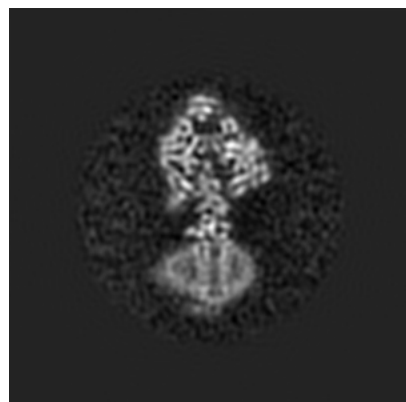


Z

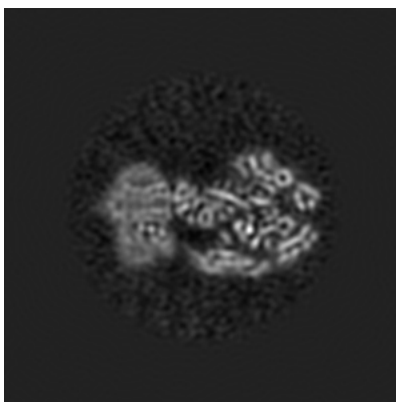
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

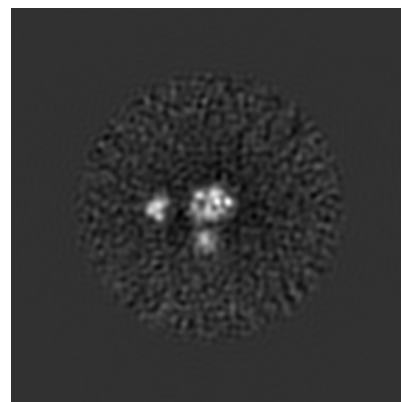
6.2.1 Primary map



X Index: 128



Y Index: 128



Z Index: 128

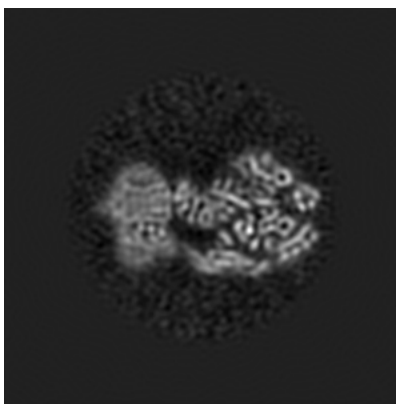
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

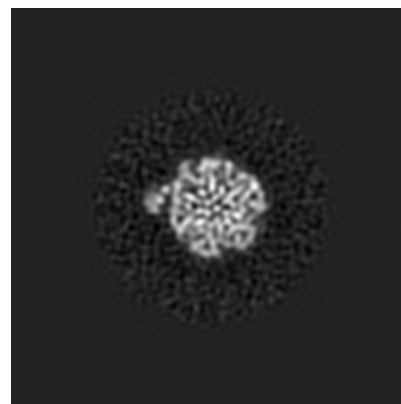
6.3.1 Primary map



X Index: 133



Y Index: 127

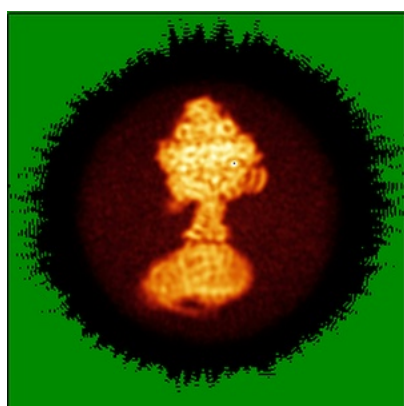


Z Index: 167

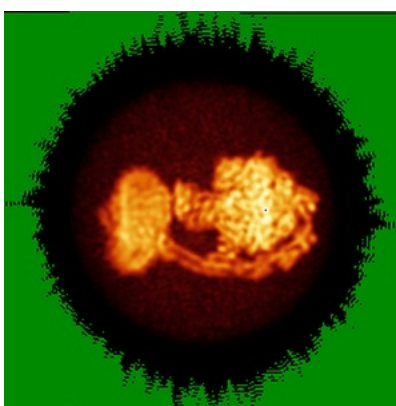
The images above show the largest variance slices of the map in three orthogonal directions.

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

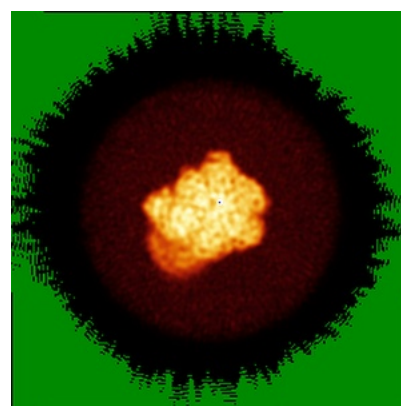
6.4.1 Primary map



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

This section was not generated.

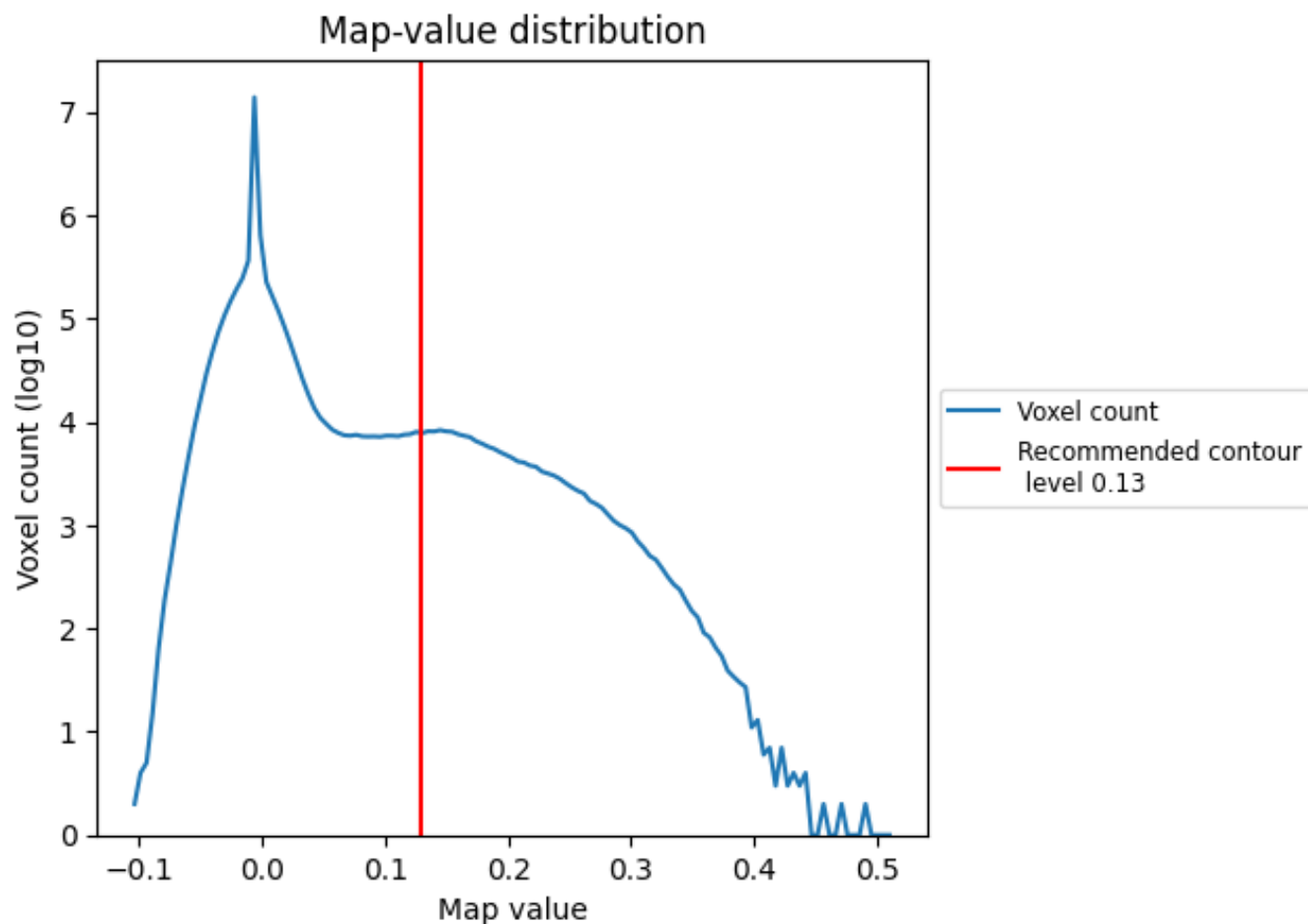
6.6 Mask visualisation

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

7 Map analysis [i](#)

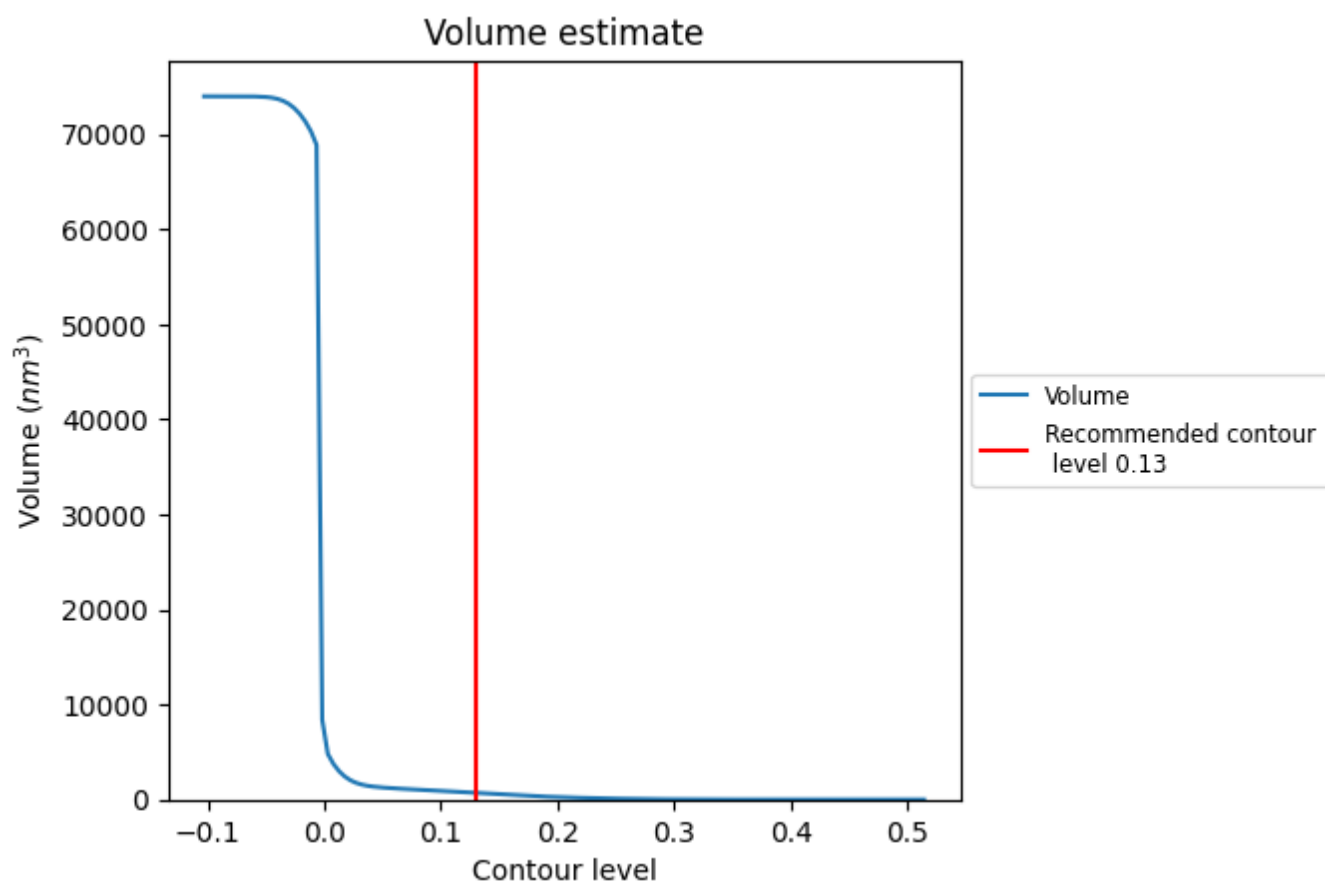
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

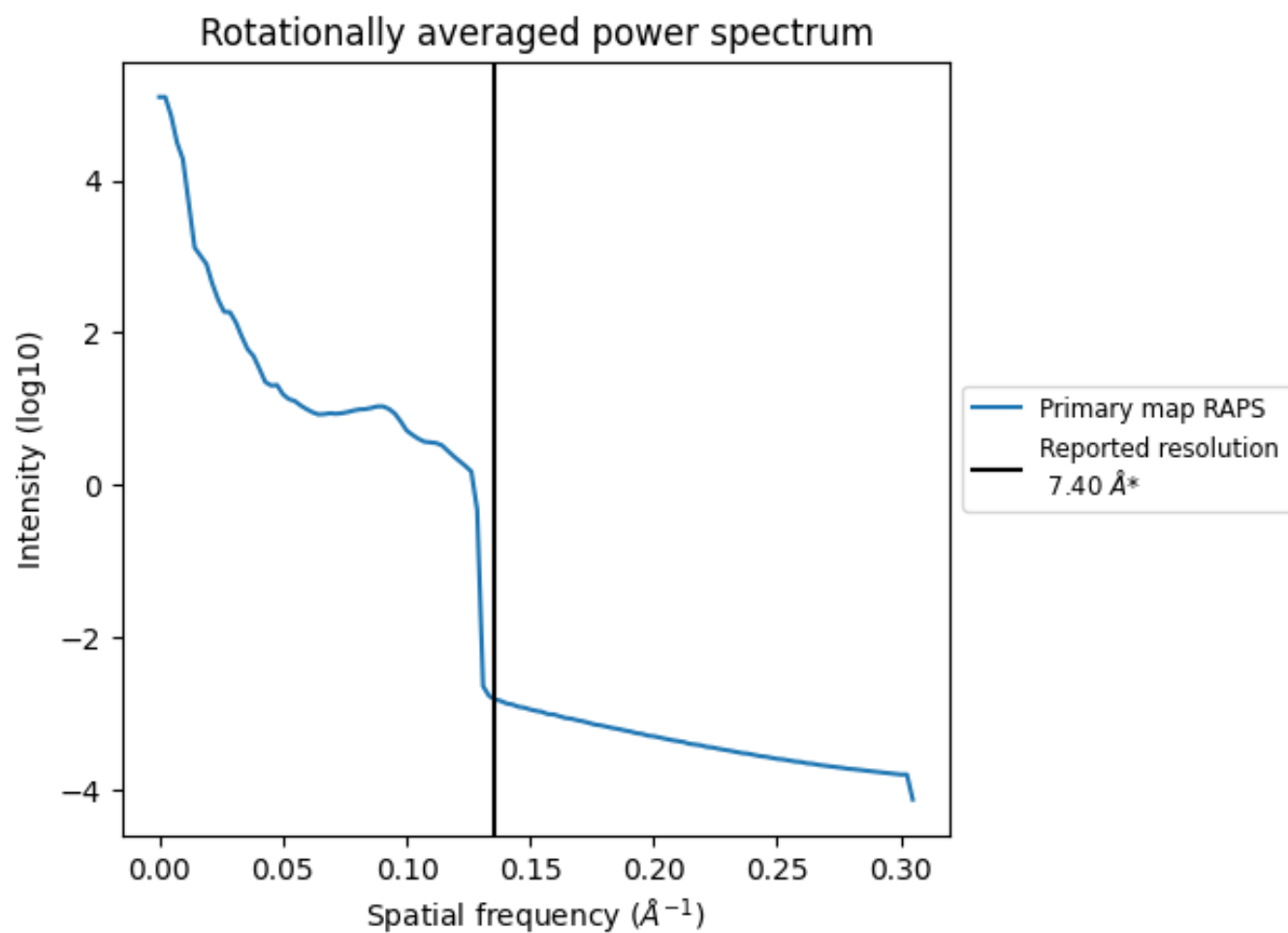
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 709 nm³; this corresponds to an approximate mass of 640 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 0.135 Å⁻¹

8 Fourier-Shell correlation

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

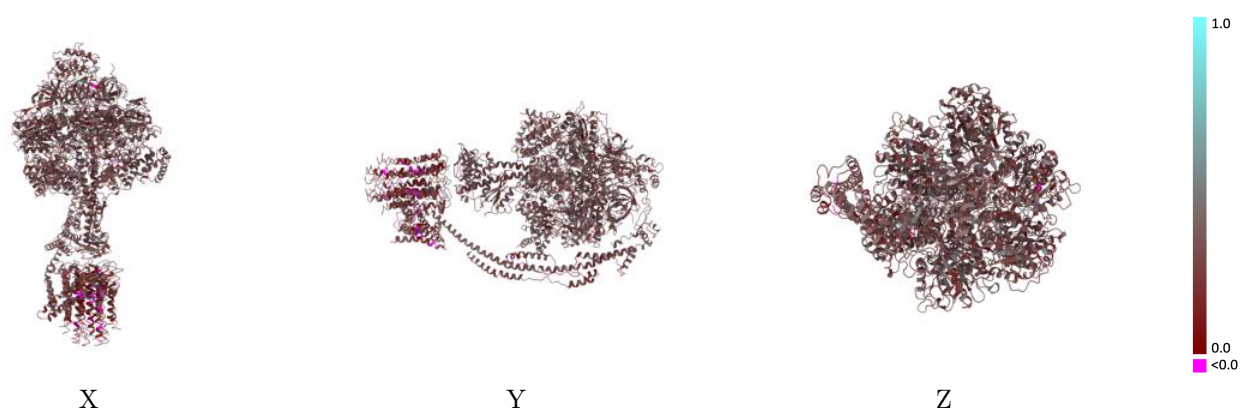
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-3164 and PDB model 5ARA. Per-residue inclusion information can be found in section 3 on page 7.

9.1 Map-model overlay [i](#)

This section was not generated.

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

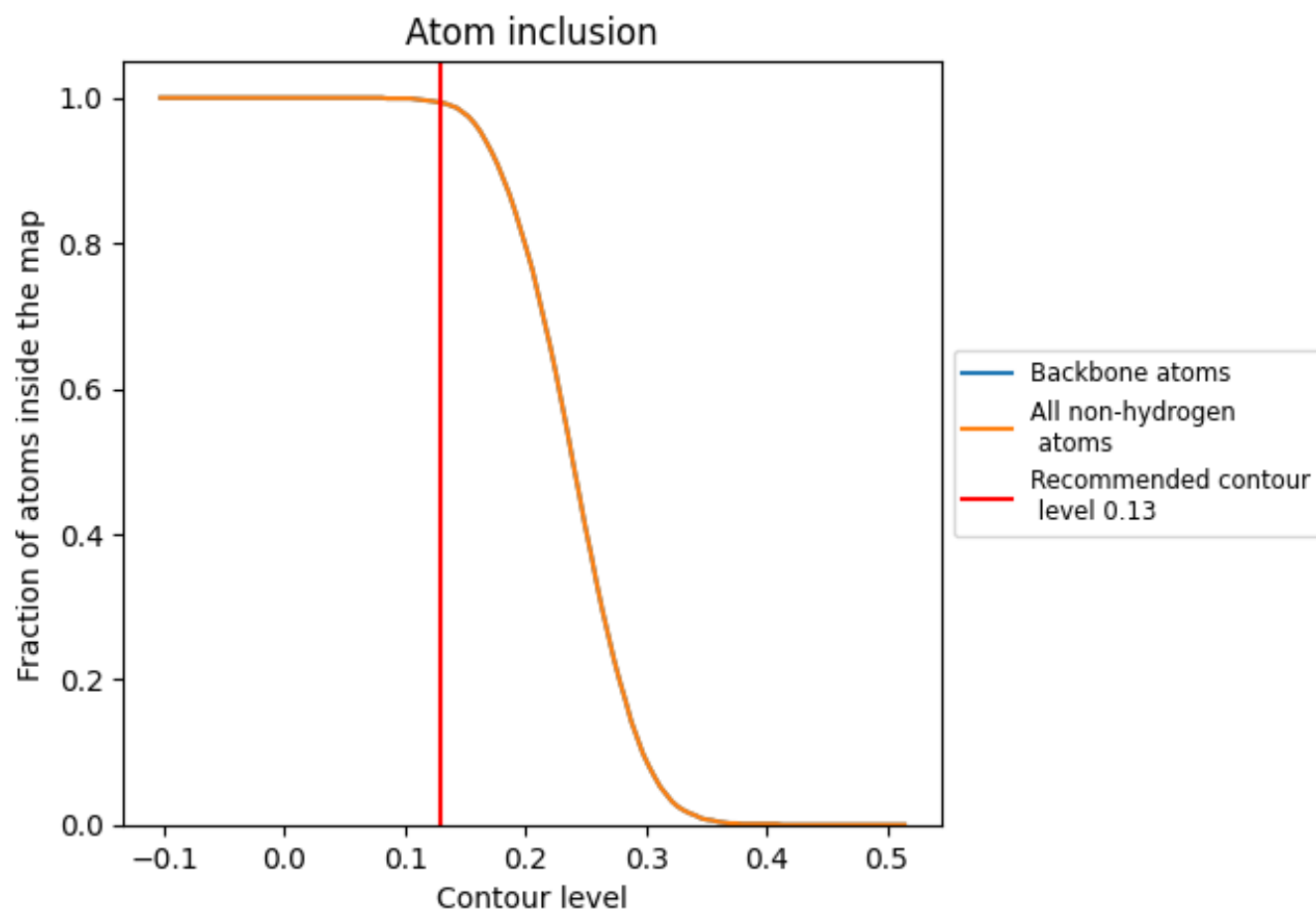


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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	 0.9930	 0.2900
A	 0.9990	 0.3130
B	 0.9990	 0.3170
C	 0.9970	 0.3120
D	 1.0000	 0.3150
E	 1.0000	 0.3040
F	 1.0000	 0.3170
G	 0.9980	 0.3140
H	 0.9920	 0.3080
I	 1.0000	 0.3140
J	 0.9760	 0.1810
K	 1.0000	 0.2320
L	 0.9900	 0.2040
M	 1.0000	 0.2230
N	 0.9830	 0.2050
O	 1.0000	 0.1800
P	 0.9900	 0.2050
Q	 0.9970	 0.2050
S	 0.9990	 0.3020
T	 0.9990	 0.3040
U	 0.9570	 0.2450
V	 0.9510	 0.2360
W	 0.9460	 0.1990

