Full wwPDB X-ray Structure Validation Report ⓘ

Aug 19, 2024 – 01:57 PM EDT

PDB ID	:	8TRI
Title	:	Crystal Structure of Mouse Cadherin-23 EC25-MAD28 F2894A
Authors	:	Ashraf, Q.; Sotomayor, M.
Deposited on	:	2023-08-09
Resolution	:	3.72 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
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:

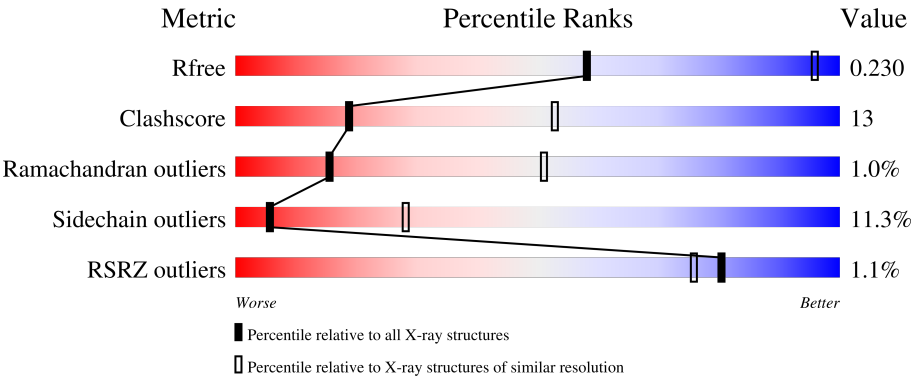
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.72 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1089 (3.90-3.54)
Clashscore	141614	1012 (3.88-3.56)
Ramachandran outliers	138981	1114 (3.90-3.54)
Sidechain outliers	138945	1110 (3.90-3.54)
RSRZ outliers	127900	1020 (3.90-3.54)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	474	61% 28% 5% • •
1	B	474	59% 31% 6% • •
1	C	474	3% 55% 29% • • 12%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 10517 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Cadherin-23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	453	Total	C	N	O	S	0	0	0
			3584	2266	616	697	5			
1	B	454	Total	C	N	O	S	0	0	0
			3590	2269	617	699	5			
1	C	419	Total	C	N	O	S	0	0	0
			3316	2093	572	647	4			

There are 36 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	2577	MET	-	initiating methionine	UNP Q99PF4
A	2578	ALA	-	expression tag	UNP Q99PF4
A	2579	SER	-	expression tag	UNP Q99PF4
A	2894	ALA	PHE	engineered mutation	UNP Q99PF4
A	3043	LEU	-	expression tag	UNP Q99PF4
A	3044	GLU	-	expression tag	UNP Q99PF4
A	3045	HIS	-	expression tag	UNP Q99PF4
A	3046	HIS	-	expression tag	UNP Q99PF4
A	3047	HIS	-	expression tag	UNP Q99PF4
A	3048	HIS	-	expression tag	UNP Q99PF4
A	3049	HIS	-	expression tag	UNP Q99PF4
A	3050	HIS	-	expression tag	UNP Q99PF4
B	2577	MET	-	initiating methionine	UNP Q99PF4
B	2578	ALA	-	expression tag	UNP Q99PF4
B	2579	SER	-	expression tag	UNP Q99PF4
B	2894	ALA	PHE	engineered mutation	UNP Q99PF4
B	3043	LEU	-	expression tag	UNP Q99PF4
B	3044	GLU	-	expression tag	UNP Q99PF4
B	3045	HIS	-	expression tag	UNP Q99PF4
B	3046	HIS	-	expression tag	UNP Q99PF4
B	3047	HIS	-	expression tag	UNP Q99PF4
B	3048	HIS	-	expression tag	UNP Q99PF4
B	3049	HIS	-	expression tag	UNP Q99PF4

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
B	3050	HIS	-	expression tag	UNP Q99PF4
C	2577	MET	-	initiating methionine	UNP Q99PF4
C	2578	ALA	-	expression tag	UNP Q99PF4
C	2579	SER	-	expression tag	UNP Q99PF4
C	2894	ALA	PHE	engineered mutation	UNP Q99PF4
C	3043	LEU	-	expression tag	UNP Q99PF4
C	3044	GLU	-	expression tag	UNP Q99PF4
C	3045	HIS	-	expression tag	UNP Q99PF4
C	3046	HIS	-	expression tag	UNP Q99PF4
C	3047	HIS	-	expression tag	UNP Q99PF4
C	3048	HIS	-	expression tag	UNP Q99PF4
C	3049	HIS	-	expression tag	UNP Q99PF4
C	3050	HIS	-	expression tag	UNP Q99PF4

- Molecule 2 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	6	Total Ca 6 6	0	0
2	B	6	Total Ca 6 6	0	0
2	C	6	Total Ca 6 6	0	0

- Molecule 3 is water.

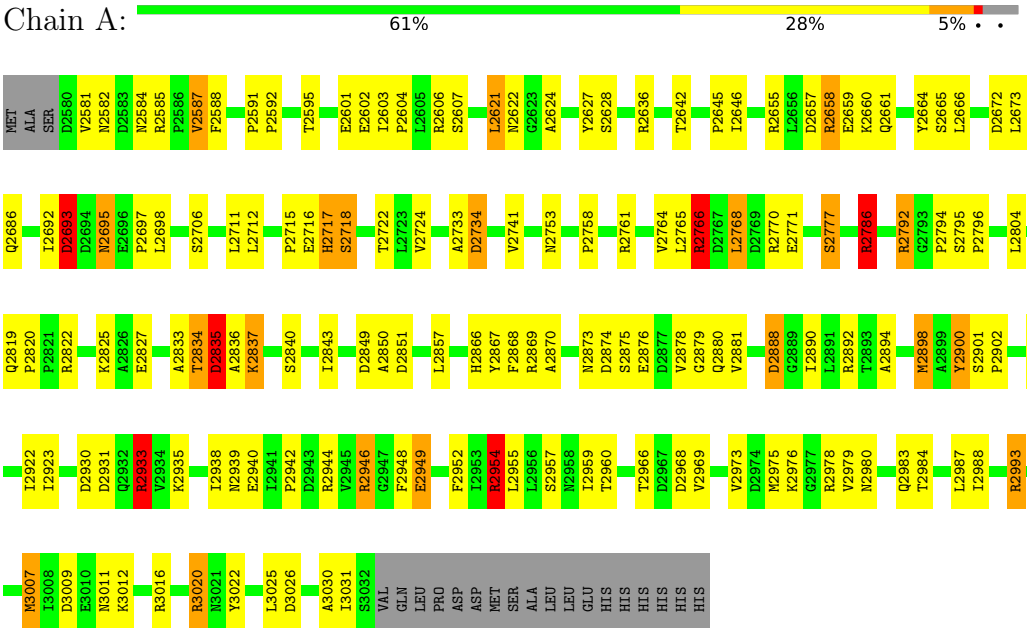
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	7	Total O 7 7	0	0
3	B	2	Total O 2 2	0	0

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 electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

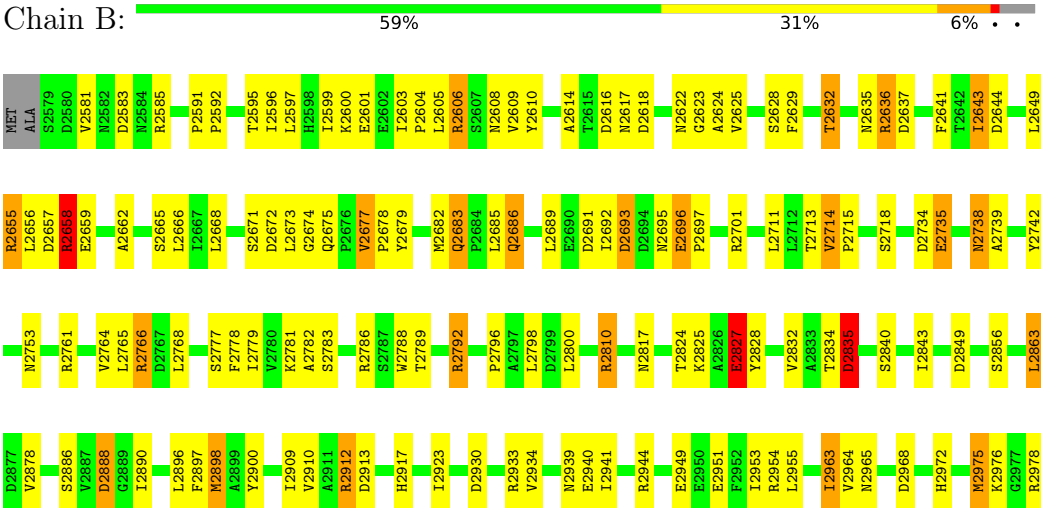
• Molecule 1: Cadherin-23

Chain A:



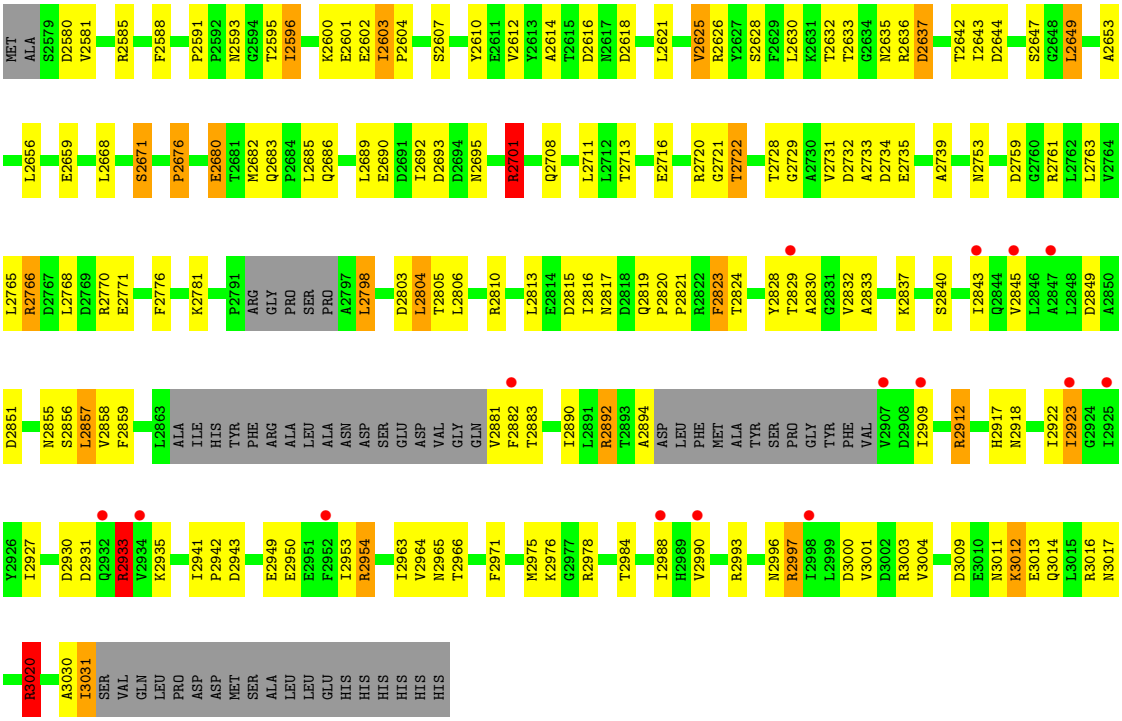
• Molecule 1: Cadherin-23

Chain B:



• Molecule 1: Cadherin-23

Chain C:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	146.99Å 164.66Å 183.63Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.56 – 3.72 49.51 – 3.72	Depositor EDS
% Data completeness (in resolution range)	98.7 (49.56-3.72) 98.7 (49.51-3.72)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.88 (at 3.67Å)	Xtriage
Refinement program	REFMAC 5.8.0415	Depositor
R, R_{free}	0.187 , 0.229 0.192 , 0.230	Depositor DCC
R_{free} test set	2329 reflections (4.95%)	wwPDB-VP
Wilson B-factor (Å^2)	98.8	Xtriage
Anisotropy	0.231	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 92.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	10517	wwPDB-VP
Average B, all atoms (Å^2)	126.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 31.10 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.1709e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.84	4/3654 (0.1%)	0.91	7/4982 (0.1%)
1	B	0.90	7/3660 (0.2%)	0.91	8/4990 (0.2%)
1	C	0.79	4/3373 (0.1%)	0.83	1/4594 (0.0%)
All	All	0.85	15/10687 (0.1%)	0.89	16/14566 (0.1%)

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	18
1	B	0	20
1	C	0	17
All	All	0	55

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	2949	GLU	CD-OE1	10.64	1.37	1.25
1	C	2680	GLU	CD-OE1	9.03	1.35	1.25
1	B	3013	GLU	CD-OE1	8.23	1.34	1.25
1	A	2827	GLU	CD-OE2	8.19	1.34	1.25
1	B	2827	GLU	CD-OE2	7.83	1.34	1.25
1	B	2827	GLU	CD-OE1	7.54	1.33	1.25
1	C	2949	GLU	CD-OE2	7.20	1.33	1.25
1	A	2628	SER	CA-CB	-6.09	1.43	1.52
1	C	2628	SER	CA-CB	-5.83	1.44	1.52
1	A	2602	GLU	CD-OE2	-5.70	1.19	1.25
1	B	2876	GLU	CD-OE1	5.68	1.31	1.25
1	B	2735	GLU	CD-OE2	5.63	1.31	1.25

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	2735	GLU	CD-OE2	5.46	1.31	1.25
1	B	3032	SER	C-O	5.16	1.33	1.23
1	A	2930	ASP	CG-OD1	5.09	1.37	1.25

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	2949	GLU	CB-CA-C	-8.80	92.80	110.40
1	A	2933	ARG	NE-CZ-NH2	-7.45	116.58	120.30
1	B	2834	THR	CA-CB-OG1	-7.39	93.48	109.00
1	A	2761	ARG	NE-CZ-NH1	-6.46	117.07	120.30
1	A	2655	ARG	NE-CZ-NH1	-6.22	117.19	120.30
1	B	2636	ARG	NE-CZ-NH1	5.91	123.25	120.30
1	C	2635	ASN	CB-CA-C	-5.83	98.74	110.40
1	B	2835	ASP	N-CA-CB	-5.71	100.33	110.60
1	A	2761	ARG	NE-CZ-NH2	5.59	123.09	120.30
1	B	2636	ARG	NE-CZ-NH2	-5.54	117.53	120.30
1	A	2954	ARG	NE-CZ-NH1	-5.54	117.53	120.30
1	A	2835	ASP	N-CA-CB	-5.46	100.78	110.60
1	A	2786	ARG	NE-CZ-NH1	-5.44	117.58	120.30
1	B	2949	GLU	N-CA-CB	5.31	120.17	110.60
1	B	2912	ARG	NE-CZ-NH2	5.05	122.83	120.30
1	B	2655	ARG	NE-CZ-NH1	5.01	122.81	120.30

There are no chirality outliers.

All (55) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	2585	ARG	Sidechain
1	A	2606	ARG	Sidechain
1	A	2636	ARG	Sidechain
1	A	2658	ARG	Sidechain
1	A	2675	GLN	Peptide
1	A	2766	ARG	Sidechain
1	A	2786	ARG	Sidechain
1	A	2792	ARG	Sidechain
1	A	2810	ARG	Sidechain
1	A	2822	ARG	Sidechain
1	A	2835	ASP	Peptide
1	A	2933	ARG	Sidechain
1	A	2944	ARG	Sidechain
1	A	2946	ARG	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	A	2954	ARG	Sidechain
1	A	2978	ARG	Sidechain
1	A	2993	ARG	Sidechain
1	A	3020	ARG	Sidechain
1	B	2585	ARG	Sidechain
1	B	2606	ARG	Sidechain
1	B	2636	ARG	Sidechain
1	B	2655	ARG	Sidechain
1	B	2658	ARG	Sidechain
1	B	2675	GLN	Peptide
1	B	2761	ARG	Sidechain
1	B	2766	ARG	Sidechain
1	B	2786	ARG	Sidechain
1	B	2792	ARG	Sidechain
1	B	2810	ARG	Sidechain
1	B	2835	ASP	Peptide
1	B	2912	ARG	Sidechain
1	B	2933	ARG	Sidechain
1	B	2944	ARG	Sidechain
1	B	2954	ARG	Sidechain
1	B	2993	ARG	Sidechain
1	B	2997	ARG	Sidechain
1	B	3003	ARG	Sidechain
1	B	3016	ARG	Sidechain
1	C	2585	ARG	Sidechain
1	C	2626	ARG	Sidechain
1	C	2636	ARG	Sidechain
1	C	2701	ARG	Sidechain
1	C	2720	ARG	Sidechain
1	C	2761	ARG	Sidechain
1	C	2766	ARG	Sidechain
1	C	2810	ARG	Sidechain
1	C	2892	ARG	Sidechain
1	C	2912	ARG	Sidechain
1	C	2933	ARG	Sidechain
1	C	2954	ARG	Sidechain
1	C	2978	ARG	Sidechain
1	C	2997	ARG	Sidechain
1	C	3003	ARG	Sidechain
1	C	3016	ARG	Sidechain
1	C	3020	ARG	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3584	0	3527	92	0
1	B	3590	0	3532	92	0
1	C	3316	0	3280	94	0
2	A	6	0	0	0	0
2	B	6	0	0	0	0
2	C	6	0	0	0	0
3	A	7	0	0	1	0
3	B	2	0	0	0	0
All	All	10517	0	10339	274	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 13.

All (274) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2657:ASP:OD1	1:B:2659:GLU:HG2	1.66	0.95
1:C:2603:ILE:HB	1:C:2604:PRO:HD2	1.52	0.91
1:C:2817:ASN:ND2	1:C:2855:ASN:HA	1.91	0.86
1:A:2604:PRO:HG2	1:A:2607:SER:HB3	1.59	0.83
1:C:2857:LEU:C	1:C:2857:LEU:HD13	1.98	0.83
1:B:2603:ILE:HD13	1:B:2652:THR:HG21	1.59	0.83
1:A:2888:ASP:OD1	3:A:3201:HOH:O	1.96	0.82
1:C:2716:GLU:HG2	1:C:2816:ILE:HG13	1.63	0.80
1:A:2786:ARG:HG3	1:A:2786:ARG:O	1.79	0.80
1:B:3025:LEU:O	1:B:3026:ASP:HB2	1.83	0.79
1:C:2883:THR:HB	1:C:2892:ARG:HB2	1.63	0.79
1:A:2693:ASP:HA	1:A:2734:ASP:OD2	1.87	0.74
1:A:2939:ASN:HB2	1:A:3025:LEU:HD21	1.67	0.74
1:C:2604:PRO:HG2	1:C:2607:SER:HB3	1.70	0.74
1:B:2677:VAL:HG22	1:B:2678:PRO:HD2	1.69	0.73
1:B:2608:ASN:HB3	1:B:2649:LEU:HD11	1.71	0.72
1:A:2603:ILE:HB	1:A:2604:PRO:HD2	1.70	0.71
1:C:2644:ASP:HB3	1:C:2647:SER:HB2	1.71	0.71
1:B:2875:SER:O	1:B:2875:SER:OG	2.08	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2734:ASP:HB3	1:B:2738:ASN:HB2	1.72	0.71
1:A:2817:ASN:HD22	1:A:2915:ALA:HB3	1.55	0.71
1:C:2770:ARG:NH2	1:C:2815:ASP:OD2	2.23	0.70
1:A:2715:PRO:HG2	1:A:2718:SER:OG	1.91	0.70
1:C:2817:ASN:HD22	1:C:2855:ASN:HA	1.57	0.69
1:A:2835:ASP:OD1	1:A:2835:ASP:O	2.11	0.69
1:A:2582:ASN:HD21	1:A:2672:ASP:CG	1.96	0.68
1:A:2952:PHE:HD1	1:A:3022:TYR:HD2	1.42	0.67
1:A:2833:ALA:O	1:A:2836:ALA:HB2	1.95	0.67
1:C:2857:LEU:HD13	1:C:2858:VAL:N	2.09	0.67
1:B:2624:ALA:HB3	1:B:2673:LEU:HB2	1.77	0.66
1:C:2656:LEU:HB3	1:C:2689:LEU:HD11	1.78	0.66
1:B:2714:VAL:HG22	1:B:2715:PRO:HD2	1.79	0.65
1:B:2597:LEU:HG	1:B:2685:LEU:HD11	1.78	0.64
1:B:2658:ARG:NH2	1:B:2691:ASP:OD2	2.31	0.64
1:B:2939:ASN:HB2	1:B:3025:LEU:HD11	1.79	0.64
1:B:2715:PRO:HG2	1:B:2718:SER:HB3	1.79	0.64
1:A:2786:ARG:HH12	1:C:2596:ILE:HD11	1.63	0.63
1:A:2792:ARG:HH11	1:A:2794:PRO:HB2	1.63	0.63
1:B:2753:ASN:HA	1:B:2766:ARG:HG3	1.80	0.62
1:A:2966:THR:HA	1:A:2988:ILE:HG22	1.80	0.62
1:B:2849:ASP:HB3	1:B:2856:SER:HA	1.80	0.62
1:A:2935:LYS:HE3	1:A:3030:ALA:HA	1.81	0.62
1:A:2879:GLY:O	1:A:2881:VAL:HG23	1.99	0.62
1:B:2656:LEU:HB3	1:B:2689:LEU:HD11	1.82	0.61
1:C:2603:ILE:CB	1:C:2604:PRO:HD2	2.28	0.61
1:B:2953:ILE:HG23	1:B:2964:VAL:HB	1.83	0.61
1:C:2820:PRO:HA	1:C:2917:HIS:HB3	1.82	0.61
1:C:2659:GLU:OE2	1:C:2695:ASN:ND2	2.34	0.60
1:B:2934:VAL:HG23	1:B:3001:VAL:HG22	1.84	0.60
1:B:3031:ILE:O	1:B:3031:ILE:HG13	2.01	0.60
1:A:2869:ARG:HH11	1:A:2876:GLU:HG2	1.66	0.59
1:B:2701:ARG:HG2	1:B:2701:ARG:HH11	1.67	0.59
1:B:2659:GLU:HG3	1:B:2695:ASN:HD21	1.66	0.59
1:A:2819:GLN:HG3	1:A:2850:ALA:HB3	1.84	0.58
1:A:2834:THR:HG23	1:A:2898:MET:HA	1.84	0.58
1:A:2881:VAL:C	1:A:2894:ALA:HB3	2.24	0.58
1:A:3009:ASP:O	1:A:3012:LYS:HB2	2.03	0.58
1:A:3025:LEU:O	1:A:3026:ASP:HB2	2.03	0.58
1:C:2845:VAL:HG12	1:C:2923:ILE:HD11	1.85	0.58
1:C:2857:LEU:C	1:C:2857:LEU:CD1	2.70	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3030:ALA:O	1:C:3031:ILE:C	2.42	0.58
1:B:2614:ALA:HB3	1:B:2625:VAL:HG21	1.84	0.58
1:B:2601:GLU:HG2	1:B:2692:ILE:HG13	1.85	0.58
1:B:2591:PRO:HA	1:B:2610:TYR:OH	2.05	0.57
1:A:2817:ASN:ND2	1:A:2915:ALA:HB3	2.19	0.57
1:A:2870:ALA:HB2	1:A:2902:PRO:HB2	1.87	0.57
1:C:2776:PHE:HE1	1:C:2813:LEU:HD11	1.69	0.57
1:B:2734:ASP:HB3	1:B:2738:ASN:CB	2.35	0.57
1:C:2603:ILE:HB	1:C:2604:PRO:CD	2.31	0.57
1:A:2902:PRO:O	1:A:2902:PRO:HG2	2.05	0.56
1:C:2728:THR:OG1	1:C:2729:GLY:N	2.35	0.56
1:A:2792:ARG:HE	1:A:2794:PRO:HD2	1.70	0.56
1:C:2912:ARG:HG3	1:C:2918:ASN:HD21	1.69	0.56
1:B:3001:VAL:HG11	1:B:3029:PRO:HG3	1.87	0.56
1:B:2888:ASP:HB2	1:B:2890:ILE:HG13	1.86	0.56
1:C:2851:ASP:O	1:C:2856:SER:HB3	2.06	0.56
1:A:3000:ASP:HB2	1:A:3003:ARG:HD3	1.87	0.56
1:B:2972:HIS:HA	1:B:2985:GLU:HG3	1.88	0.56
1:B:2668:LEU:HD11	1:B:2685:LEU:HD23	1.88	0.56
1:A:2849:ASP:OD1	1:A:2851:ASP:HB2	2.06	0.55
1:A:2931:ASP:O	1:A:3001:VAL:HG23	2.07	0.55
1:B:2609:VAL:HB	1:B:2650:ILE:O	2.05	0.55
1:B:2897:PHE:HA	1:B:2900:TYR:CD1	2.41	0.55
1:B:3015:LEU:O	1:B:3016:ARG:C	2.45	0.55
1:C:2601:GLU:HG3	1:C:2602:GLU:HG2	1.89	0.55
1:A:2622:ASN:HA	1:A:2674:GLY:CA	2.37	0.55
1:B:3012:LYS:HE2	1:B:3016:ARG:HB2	1.89	0.55
1:A:2868:PHE:CZ	1:A:2875:SER:HB3	2.41	0.54
1:B:2789:THR:HB	1:B:2792:ARG:NH1	2.22	0.54
1:C:2671:SER:HB3	1:C:2680:GLU:HG2	1.89	0.54
1:B:2734:ASP:O	1:B:2739:ALA:HB2	2.07	0.54
1:B:2591:PRO:HG2	1:B:2683:GLN:HE21	1.71	0.54
1:B:2753:ASN:O	1:B:2765:LEU:HB2	2.08	0.54
1:C:2966:THR:HA	1:C:2988:ILE:HG22	1.90	0.54
1:B:2616:ASP:HB3	1:B:2623:GLY:HA2	1.90	0.54
1:A:2697:PRO:HB3	1:A:2741:VAL:HG22	1.90	0.54
1:B:2592:PRO:HG2	1:B:2595:THR:HB	1.88	0.54
1:A:2913:ASP:OD2	1:A:2917:HIS:ND1	2.42	0.53
1:A:2960:THR:HB	1:A:3007:MET:SD	2.49	0.53
1:A:3012:LYS:O	1:A:3016:ARG:N	2.42	0.53
1:C:2815:ASP:C	1:C:2815:ASP:OD1	2.47	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2952:PHE:HD1	1:A:3022:TYR:CD2	2.25	0.53
1:C:2776:PHE:CE1	1:C:2813:LEU:HD11	2.43	0.53
1:C:2941:ILE:HD12	1:C:2943:ASP:HB3	1.91	0.52
1:A:2878:VAL:HG22	1:A:2879:GLY:N	2.24	0.52
1:A:2582:ASN:ND2	1:A:2672:ASP:OD1	2.42	0.52
1:A:2724:VAL:HG22	1:A:2764:VAL:HG23	1.92	0.52
1:B:2581:VAL:HG13	1:B:2583:ASP:OD1	2.10	0.52
1:C:2616:ASP:OD1	1:C:2618:ASP:HB2	2.09	0.52
1:A:2587:VAL:HG23	1:A:2588:PHE:N	2.25	0.51
1:A:2753:ASN:O	1:A:2765:LEU:HB2	2.09	0.51
1:C:2637:ASP:N	1:C:2637:ASP:OD1	2.42	0.51
1:B:2939:ASN:O	1:B:2940:GLU:HG2	2.11	0.51
1:A:2820:PRO:HA	1:A:2917:HIS:HB3	1.92	0.51
1:C:2857:LEU:HD11	1:C:2859:PHE:CE1	2.46	0.51
1:C:2732:ASP:HB3	1:C:2739:ALA:HB1	1.93	0.50
1:C:2820:PRO:HA	1:C:2917:HIS:CB	2.41	0.50
1:B:2685:LEU:HD12	1:B:2686:GLN:H	1.76	0.50
1:C:2953:ILE:HB	1:C:2964:VAL:HG13	1.94	0.50
1:B:2796:PRO:O	1:B:2798:LEU:HD13	2.11	0.50
1:C:2614:ALA:HB3	1:C:2625:VAL:HG21	1.92	0.50
1:B:2941:ILE:HD13	1:B:2982:ALA:HA	1.94	0.50
1:A:2624:ALA:O	1:A:2673:LEU:HD12	2.12	0.50
1:C:2837:LYS:O	1:C:2840:SER:HB2	2.12	0.50
1:C:2950:GLU:O	1:C:2953:ILE:HG13	2.12	0.50
1:C:3011:ASN:O	1:C:3013:GLU:N	2.37	0.49
1:A:2902:PRO:O	1:A:2902:PRO:CG	2.60	0.49
1:B:2628:SER:HA	1:B:2643:ILE:HD13	1.95	0.49
1:B:2672:ASP:HB3	1:B:2679:TYR:H	1.77	0.49
1:B:2696:GLU:HG2	1:B:2697:PRO:HD2	1.93	0.49
1:B:2939:ASN:HB2	1:B:3025:LEU:HD21	1.94	0.49
1:B:2789:THR:CB	1:B:2792:ARG:NH1	2.76	0.49
1:B:2817:ASN:OD1	1:B:2913:ASP:OD2	2.31	0.49
1:B:2979:VAL:O	1:B:2979:VAL:HG13	2.13	0.48
1:A:2658:ARG:NH1	1:A:2659:GLU:OE2	2.47	0.48
1:C:2647:SER:HB3	1:C:2649:LEU:HD12	1.95	0.48
1:C:2950:GLU:HB3	1:C:2954:ARG:HH11	1.77	0.48
1:A:2672:ASP:O	1:A:2678:PRO:HB3	2.13	0.48
1:C:2823:PHE:HZ	1:C:2909:ILE:HG22	1.79	0.48
1:A:2621:LEU:HD23	1:A:2621:LEU:H	1.79	0.48
1:C:2819:GLN:HB2	1:C:2849:ASP:OD1	2.13	0.48
1:A:2955:LEU:O	1:A:2959:ILE:HG13	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2963:ILE:HG13	1:B:2991:VAL:O	2.14	0.48
1:C:2935:LYS:HD2	1:C:3030:ALA:HA	1.94	0.48
1:C:3017:ASN:HA	1:C:3020:ARG:CZ	2.44	0.48
1:A:2770:ARG:NH2	1:A:2771:GLU:OE1	2.47	0.48
1:B:3026:ASP:OD2	1:B:3028:GLN:HG2	2.14	0.48
1:C:2933:ARG:HE	1:C:2933:ARG:HB3	1.46	0.47
1:C:2593:ASN:HA	1:C:2683:GLN:HE22	1.78	0.47
1:B:2595:THR:OG1	1:B:2596:ILE:N	2.48	0.47
1:C:2601:GLU:OE2	1:C:2692:ILE:HG12	2.15	0.47
1:A:2866:HIS:HB3	1:A:2875:SER:HB2	1.97	0.47
1:B:3011:ASN:O	1:B:3015:LEU:HG	2.15	0.47
1:B:2738:ASN:OD1	1:B:2738:ASN:N	2.47	0.47
1:B:2878:VAL:HG11	1:B:2900:TYR:HE2	1.80	0.47
1:C:2695:ASN:CB	1:C:2733:ALA:HB3	2.45	0.47
1:C:3020:ARG:HE	1:C:3020:ARG:HB2	1.46	0.47
1:A:2657:ASP:HB3	1:A:2660:LYS:HG2	1.97	0.46
1:B:2978:ARG:HH22	1:B:2980:ASN:HD22	1.62	0.46
1:C:2942:PRO:HA	1:C:2984:THR:HG21	1.98	0.46
1:A:2868:PHE:CE2	1:A:2875:SER:HB3	2.50	0.46
1:A:2980:ASN:HB3	1:A:2983:GLN:HB2	1.98	0.46
1:A:2645:PRO:HG2	1:A:2646:ILE:HD12	1.97	0.46
1:C:2593:ASN:HA	1:C:2683:GLN:NE2	2.30	0.46
1:B:2789:THR:CB	1:B:2792:ARG:HH12	2.28	0.46
1:B:2827:GLU:OE2	1:C:2621:LEU:CD1	2.64	0.46
1:B:2827:GLU:OE2	1:C:2621:LEU:HD13	2.16	0.46
1:B:2999:LEU:HD23	1:B:2999:LEU:HA	1.74	0.46
1:A:2604:PRO:HG2	1:A:2607:SER:CB	2.39	0.46
1:A:2786:ARG:O	1:A:2786:ARG:CG	2.60	0.46
1:B:2635:ASN:HD21	1:B:2637:ASP:HB2	1.81	0.46
1:B:2742:TYR:HB3	1:B:2744:PHE:CZ	2.51	0.46
1:A:2622:ASN:HA	1:A:2674:GLY:HA3	1.97	0.46
1:A:2898:MET:H	1:A:2898:MET:HG2	1.51	0.46
1:C:2630:LEU:HD13	1:C:2682:MET:CE	2.46	0.45
1:C:2823:PHE:CZ	1:C:2909:ILE:HG22	2.52	0.45
1:C:2963:ILE:O	1:C:2990:VAL:HA	2.16	0.45
1:C:2716:GLU:O	1:C:2816:ILE:HD11	2.16	0.45
1:C:2732:ASP:HB3	1:C:2739:ALA:CB	2.46	0.45
1:A:2786:ARG:NH1	1:C:2596:ILE:HD11	2.31	0.45
1:C:2820:PRO:CA	1:C:2917:HIS:HB3	2.47	0.45
1:C:3009:ASP:O	1:C:3012:LYS:HB2	2.17	0.45
1:B:2913:ASP:HB2	1:B:2917:HIS:HB2	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2711:LEU:O	1:A:2712:LEU:HD23	2.17	0.44
1:B:2659:GLU:OE1	1:B:2695:ASN:OD1	2.35	0.44
1:B:2863:LEU:HD11	1:B:2910:VAL:HB	1.99	0.44
1:C:2600:LYS:HD2	1:C:2690:GLU:HB2	1.99	0.44
1:A:2627:TYR:O	1:A:2645:PRO:HA	2.18	0.44
1:B:2618:ASP:O	1:B:2623:GLY:HA3	2.17	0.44
1:B:2658:ARG:HG3	1:B:2662:ALA:HB2	1.98	0.44
1:C:2591:PRO:HB3	1:C:2610:TYR:CE2	2.52	0.44
1:C:2935:LYS:HD2	1:C:3030:ALA:CB	2.48	0.44
1:C:2612:VAL:HG11	1:C:2668:LEU:HD13	1.99	0.44
1:C:2642:THR:HG23	1:C:2653:ALA:HB2	1.99	0.44
1:B:2617:ASN:O	1:B:2618:ASP:C	2.55	0.44
1:C:2770:ARG:NH2	1:C:2771:GLU:OE1	2.49	0.44
1:C:2701:ARG:NH1	1:C:2806:LEU:O	2.51	0.44
1:A:2741:VAL:O	1:A:2741:VAL:HG12	2.17	0.43
1:C:2832:VAL:O	1:C:2927:ILE:HA	2.17	0.43
1:C:2693:ASP:HA	1:C:2734:ASP:OD2	2.18	0.43
1:A:2592:PRO:O	1:A:2595:THR:HG22	2.18	0.43
1:B:2622:ASN:HA	1:B:2674:GLY:CA	2.48	0.43
1:C:2941:ILE:HB	1:C:2942:PRO:HD2	2.00	0.43
1:A:3011:ASN:O	1:A:3012:LYS:C	2.56	0.43
1:C:2830:ALA:HB2	1:C:2843:ILE:HD13	2.01	0.43
1:A:2591:PRO:HB2	1:A:2595:THR:HG21	2.01	0.43
1:C:2798:LEU:HD23	1:C:2798:LEU:HA	1.82	0.43
1:B:2951:GLU:OE1	1:B:2955:LEU:HD21	2.19	0.43
1:A:2695:ASN:ND2	1:A:2733:ALA:HB3	2.33	0.43
1:A:2948:PHE:O	1:A:2949:GLU:C	2.57	0.43
1:B:2965:ASN:HB2	1:B:2989:HIS:CE1	2.54	0.43
1:C:2803:ASP:OD1	1:C:2805:THR:HG22	2.18	0.43
1:C:3000:ASP:O	1:C:3004:VAL:HG23	2.19	0.43
1:A:2942:PRO:HA	1:A:2984:THR:HG21	2.01	0.43
1:B:2779:ILE:HD12	1:B:2800:LEU:HD11	2.00	0.43
1:C:2833:ALA:CB	1:C:2933:ARG:NH2	2.82	0.43
1:A:2724:VAL:CG2	1:A:2764:VAL:HG23	2.47	0.43
1:B:2748:GLY:HA3	1:B:2778:PHE:HB3	2.01	0.43
1:C:2781:LYS:HD2	1:C:2806:LEU:CD1	2.48	0.43
1:B:2591:PRO:HB2	1:B:2595:THR:HG21	2.00	0.43
1:B:2777:SER:HB2	1:B:2810:ARG:HG2	2.01	0.43
1:A:2621:LEU:HG	1:A:2622:ASN:N	2.34	0.42
1:A:2777:SER:HB2	1:A:2810:ARG:HD3	2.01	0.42
1:A:2601:GLU:HG2	1:A:2692:ILE:HG23	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2975:MET:SD	1:A:3031:ILE:HG23	2.59	0.42
1:C:2851:ASP:C	1:C:2856:SER:HB3	2.40	0.42
1:C:2721:GLY:O	1:C:2722:THR:C	2.56	0.42
1:A:2836:ALA:O	1:A:2837:LYS:C	2.58	0.42
1:A:2888:ASP:CB	1:A:2890:ILE:HG13	2.49	0.42
1:A:2969:VAL:HG12	1:A:2969:VAL:O	2.20	0.42
1:B:2599:ILE:O	1:B:2689:LEU:HA	2.20	0.42
1:C:2685:LEU:HG	1:C:2686:GLN:N	2.34	0.42
1:B:2781:LYS:HG2	1:B:2788:TRP:CE2	2.54	0.42
1:B:2963:ILE:O	1:B:2990:VAL:HA	2.20	0.42
1:A:2661:GLN:HB3	1:A:2664:TYR:CZ	2.55	0.42
1:B:2632:THR:OG1	1:B:2635:ASN:HB3	2.20	0.42
1:C:2931:ASP:O	1:C:3001:VAL:HG23	2.19	0.42
1:B:2898:MET:H	1:B:2898:MET:HG2	1.59	0.42
1:C:2942:PRO:HD3	1:C:2971:PHE:CE1	2.55	0.42
1:A:2624:ALA:O	1:A:2672:ASP:HA	2.19	0.42
1:A:2804:LEU:HA	1:A:2804:LEU:HD12	1.85	0.42
1:B:2828:TYR:O	1:B:2923:ILE:HA	2.20	0.42
1:A:2766:ARG:O	1:A:2768:LEU:HG	2.20	0.42
1:B:2975:MET:SD	1:B:2975:MET:N	2.88	0.42
1:B:2603:ILE:CD1	1:B:2652:THR:HG21	2.41	0.41
1:C:2581:VAL:HG13	1:C:2676:PRO:HG3	2.01	0.41
1:A:2973:VAL:HG13	1:A:2973:VAL:O	2.20	0.41
1:C:2630:LEU:HD13	1:C:2682:MET:HE2	2.03	0.41
1:B:2742:TYR:O	1:B:2782:ALA:HA	2.20	0.41
1:A:3012:LYS:HD2	1:A:3012:LYS:HA	1.83	0.41
1:B:2629:PHE:HE2	1:B:2641:PHE:HB2	1.85	0.41
1:C:2721:GLY:O	1:C:2763:LEU:HD22	2.20	0.41
1:C:2881:VAL:C	1:C:2894:ALA:HB3	2.41	0.41
1:A:2843:ILE:HD11	1:A:2923:ILE:HG21	2.03	0.41
1:C:2845:VAL:CG1	1:C:2923:ILE:HD11	2.49	0.41
1:A:2979:VAL:O	1:A:2979:VAL:HG13	2.20	0.41
1:C:2766:ARG:O	1:C:2768:LEU:HG	2.21	0.41
1:C:2804:LEU:HD23	1:C:2804:LEU:HA	1.87	0.41
1:C:2832:VAL:HG13	1:C:2927:ILE:HD13	2.02	0.41
1:B:2606:ARG:HA	1:B:2652:THR:O	2.21	0.41
1:B:2832:VAL:O	1:B:2832:VAL:HG13	2.21	0.41
1:A:2698:LEU:HD22	1:A:2804:LEU:HB3	2.03	0.40
1:A:2867:TYR:CZ	1:A:2900:TYR:HB3	2.56	0.40
1:A:2938:ILE:HG22	1:A:2940:GLU:H	1.86	0.40
1:A:2716:GLU:O	1:A:2717:HIS:C	2.59	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2817:ASN:HD22	1:A:2915:ALA:CB	2.26	0.40
1:A:2913:ASP:O	1:A:2915:ALA:N	2.55	0.40
1:A:2916:GLY:O	1:A:2917:HIS:C	2.59	0.40
1:B:2668:LEU:HD12	1:B:2668:LEU:N	2.35	0.40
1:B:2596:ILE:O	1:B:2596:ILE:HG22	2.20	0.40
1:B:2998:ILE:HD12	1:B:2999:LEU:H	1.85	0.40
1:C:2824:THR:HB	1:C:2828:TYR:OH	2.21	0.40
1:C:2781:LYS:HD2	1:C:2806:LEU:HD12	2.04	0.40
1:C:2817:ASN:ND2	1:C:2855:ASN:CA	2.75	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	451/474 (95%)	405 (90%)	41 (9%)	5 (1%)	14	50
1	B	452/474 (95%)	402 (89%)	47 (10%)	3 (1%)	22	59
1	C	411/474 (87%)	375 (91%)	31 (8%)	5 (1%)	13	48
All	All	1314/1422 (92%)	1182 (90%)	119 (9%)	13 (1%)	15	51

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2693	ASP
1	A	2880	GLN
1	B	2835	ASP
1	A	2717	HIS
1	C	2759	ASP
1	A	2734	ASP
1	B	2693	ASP
1	C	3012	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	2633	THR
1	C	2676	PRO
1	B	2604	PRO
1	C	2821	PRO
1	A	2796	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	395/414 (95%)	349 (88%)	46 (12%)	5	27
1	B	396/414 (96%)	350 (88%)	46 (12%)	5	27
1	C	368/414 (89%)	329 (89%)	39 (11%)	6	30
All	All	1159/1242 (93%)	1028 (89%)	131 (11%)	6	28

All (131) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2581	VAL
1	A	2584	ASN
1	A	2587	VAL
1	A	2621	LEU
1	A	2642	THR
1	A	2665	SER
1	A	2666	LEU
1	A	2675	GLN
1	A	2686	GLN
1	A	2693	ASP
1	A	2695	ASN
1	A	2706	SER
1	A	2718	SER
1	A	2722	THR
1	A	2758	PRO
1	A	2766	ARG
1	A	2768	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	2777	SER
1	A	2795	SER
1	A	2810	ARG
1	A	2825	LYS
1	A	2834	THR
1	A	2837	LYS
1	A	2840	SER
1	A	2857	LEU
1	A	2873	ASN
1	A	2874	ASP
1	A	2888	ASP
1	A	2892	ARG
1	A	2898	MET
1	A	2900	TYR
1	A	2901	SER
1	A	2922	ILE
1	A	2933	ARG
1	A	2946	ARG
1	A	2949	GLU
1	A	2954	ARG
1	A	2957	SER
1	A	2968	ASP
1	A	2976	LYS
1	A	2987	LEU
1	A	2993	ARG
1	A	3002	ASP
1	A	3003	ARG
1	A	3007	MET
1	A	3020	ARG
1	B	2600	LYS
1	B	2605	LEU
1	B	2632	THR
1	B	2643	ILE
1	B	2644	ASP
1	B	2658	ARG
1	B	2665	SER
1	B	2666	LEU
1	B	2671	SER
1	B	2677	VAL
1	B	2682	MET
1	B	2683	GLN
1	B	2686	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	2693	ASP
1	B	2696	GLU
1	B	2711	LEU
1	B	2713	THR
1	B	2714	VAL
1	B	2735	GLU
1	B	2738	ASN
1	B	2764	VAL
1	B	2768	LEU
1	B	2783	SER
1	B	2824	THR
1	B	2825	LYS
1	B	2827	GLU
1	B	2840	SER
1	B	2843	ILE
1	B	2863	LEU
1	B	2874	ASP
1	B	2875	SER
1	B	2886	SER
1	B	2888	ASP
1	B	2896	LEU
1	B	2898	MET
1	B	2909	ILE
1	B	2930	ASP
1	B	2963	ILE
1	B	2968	ASP
1	B	2975	MET
1	B	2976	LYS
1	B	2998	ILE
1	B	3012	LYS
1	B	3015	LEU
1	B	3018	LEU
1	B	3023	ASN
1	C	2580	ASP
1	C	2588	PHE
1	C	2595	THR
1	C	2596	ILE
1	C	2603	ILE
1	C	2625	VAL
1	C	2632	THR
1	C	2637	ASP
1	C	2643	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	2649	LEU
1	C	2671	SER
1	C	2701	ARG
1	C	2708	GLN
1	C	2711	LEU
1	C	2713	THR
1	C	2722	THR
1	C	2731	VAL
1	C	2753	ASN
1	C	2765	LEU
1	C	2798	LEU
1	C	2804	LEU
1	C	2823	PHE
1	C	2829	THR
1	C	2857	LEU
1	C	2882	PHE
1	C	2890	ILE
1	C	2922	ILE
1	C	2923	ILE
1	C	2930	ASP
1	C	2933	ARG
1	C	2965	ASN
1	C	2975	MET
1	C	2976	LYS
1	C	2993	ARG
1	C	2996	ASN
1	C	2997	ARG
1	C	3014	GLN
1	C	3020	ARG
1	C	3031	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (12) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	2675	GLN
1	A	2683	GLN
1	A	2880	GLN
1	B	2683	GLN
1	B	2695	ASN
1	B	2817	ASN
1	B	2965	ASN
1	C	2635	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	C	2654	GLN
1	C	2683	GLN
1	C	2695	ASN
1	C	2918	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 18 ligands modelled in this entry, 18 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	453/474 (95%)	-0.37	0 100 100	64, 106, 171, 212	0
1	B	454/474 (95%)	-0.35	0 100 100	68, 113, 166, 234	0
1	C	419/474 (88%)	0.14	15 (3%) 42 35	73, 147, 222, 269	0
All	All	1326/1422 (93%)	-0.20	15 (1%) 80 76	64, 117, 200, 269	0

All (15) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	2932	GLN	3.8
1	C	2909	ILE	3.7
1	C	2923	ILE	3.5
1	C	2998	ILE	3.3
1	C	2988	ILE	3.1
1	C	2843	ILE	3.1
1	C	2847	ALA	2.8
1	C	2907	VAL	2.6
1	C	2990	VAL	2.5
1	C	2845	VAL	2.4
1	C	2882	PHE	2.4
1	C	2925	ILE	2.2
1	C	2829	THR	2.2
1	C	2934	VAL	2.2
1	C	2952	PHE	2.1

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

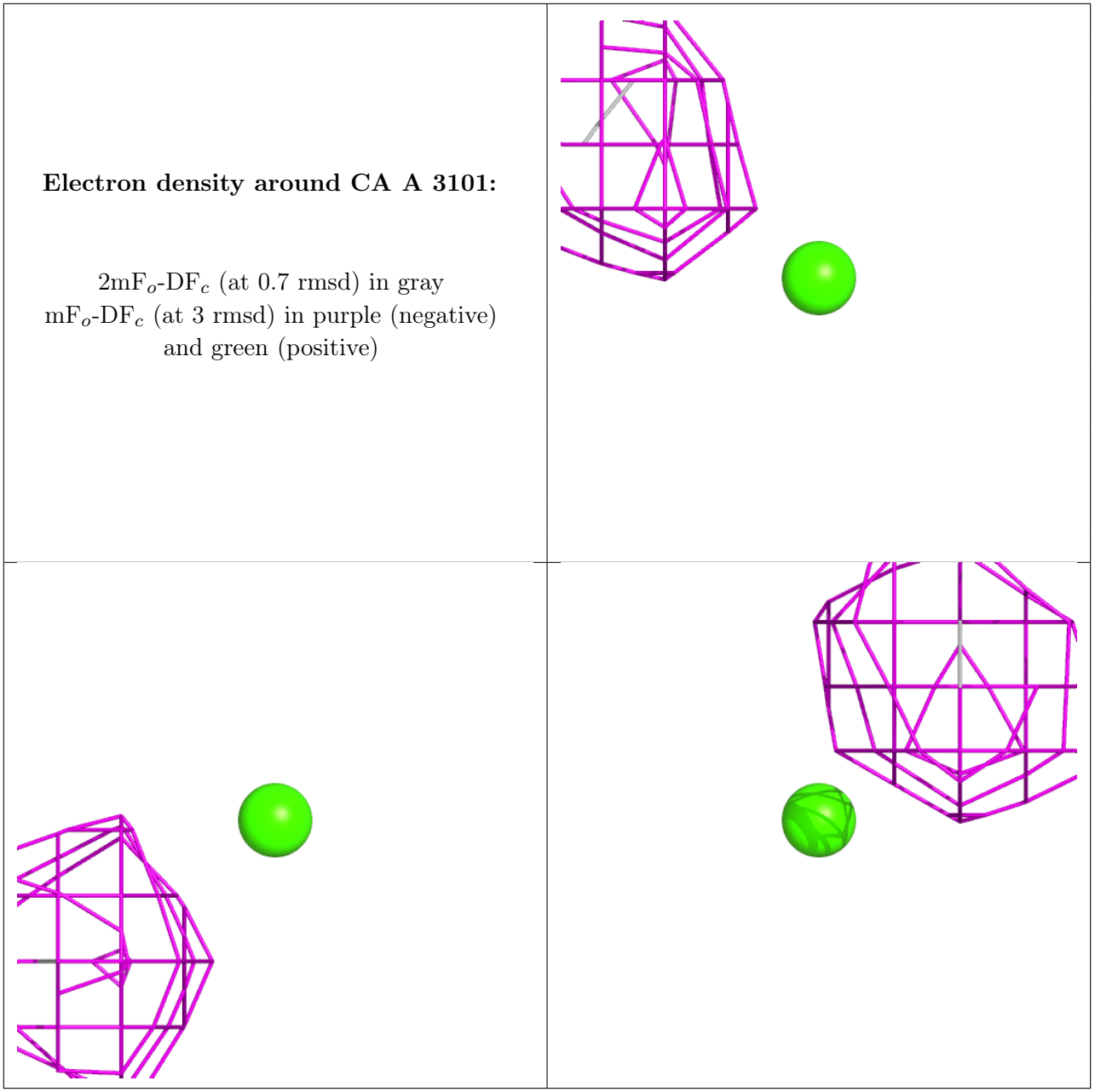
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	CA	A	3101	1/1	0.95	0.09	82,82,82,82	0
2	CA	C	3102	1/1	0.95	0.08	110,110,110,110	0
2	CA	B	3101	1/1	0.96	0.09	116,116,116,116	0
2	CA	C	3106	1/1	0.96	0.06	154,154,154,154	0
2	CA	C	3104	1/1	0.97	0.07	96,96,96,96	0
2	CA	C	3103	1/1	0.97	0.07	115,115,115,115	0
2	CA	B	3105	1/1	0.98	0.07	105,105,105,105	0
2	CA	B	3106	1/1	0.98	0.13	94,94,94,94	0
2	CA	A	3105	1/1	0.98	0.08	111,111,111,111	0
2	CA	A	3104	1/1	0.98	0.13	87,87,87,87	0
2	CA	B	3102	1/1	0.98	0.07	122,122,122,122	0
2	CA	B	3104	1/1	0.98	0.10	102,102,102,102	0
2	CA	C	3101	1/1	0.99	0.14	70,70,70,70	0
2	CA	B	3103	1/1	0.99	0.09	118,118,118,118	0
2	CA	A	3106	1/1	0.99	0.07	95,95,95,95	0
2	CA	A	3102	1/1	0.99	0.07	103,103,103,103	0
2	CA	C	3105	1/1	0.99	0.05	140,140,140,140	0
2	CA	A	3103	1/1	0.99	0.14	84,84,84,84	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

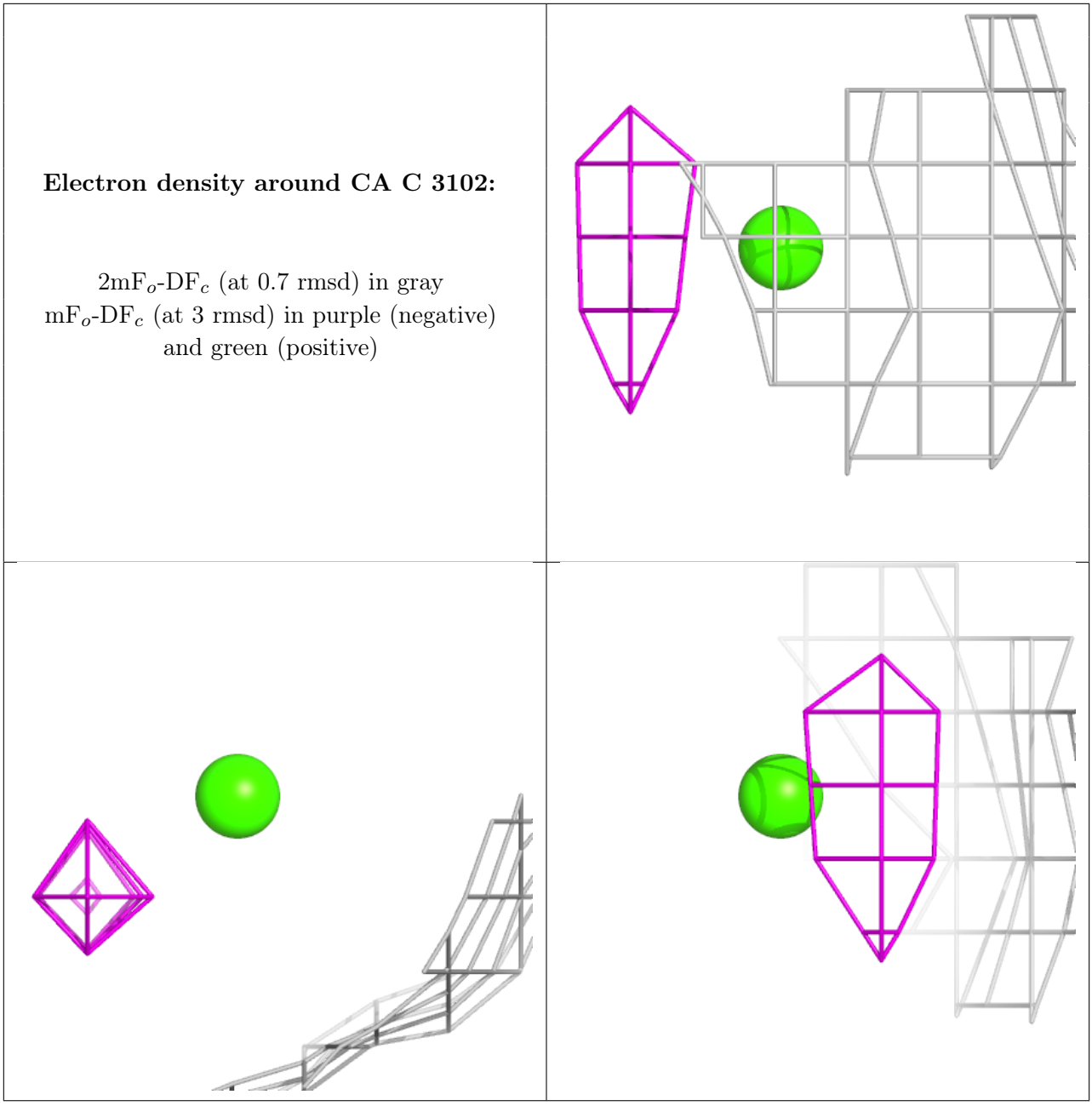
Electron density around CA A 3101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



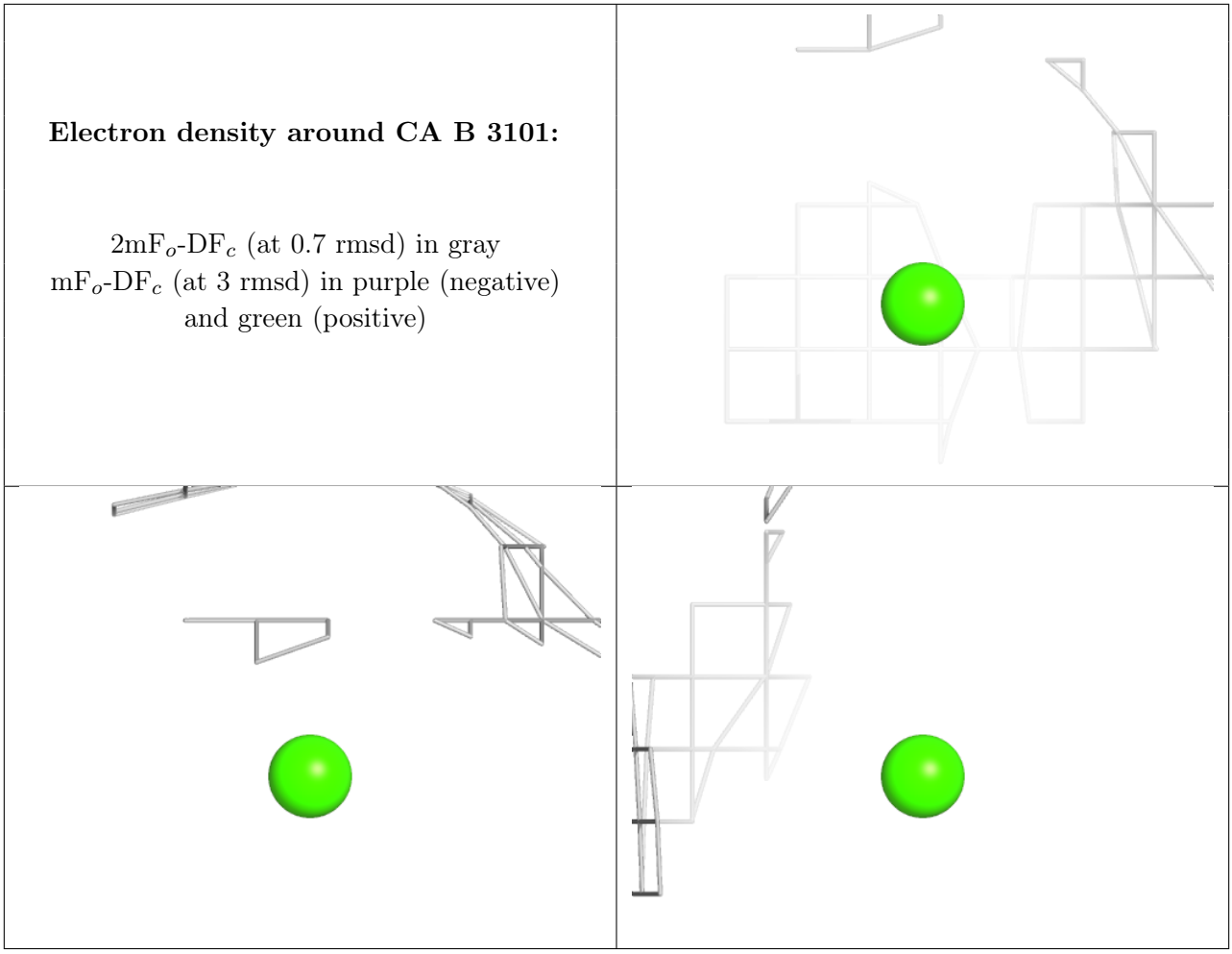
Electron density around CA C 3102:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



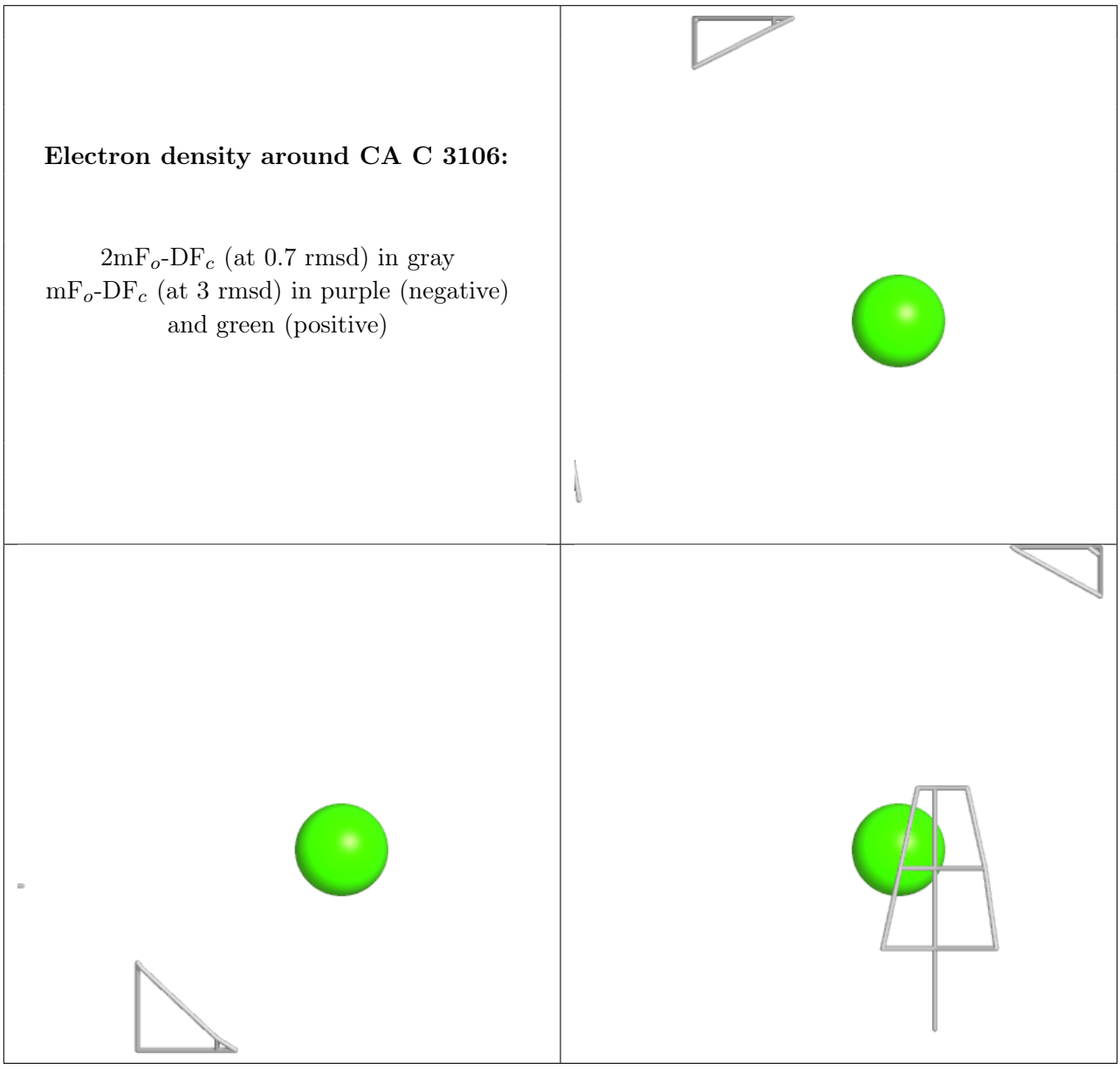
Electron density around CA B 3101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



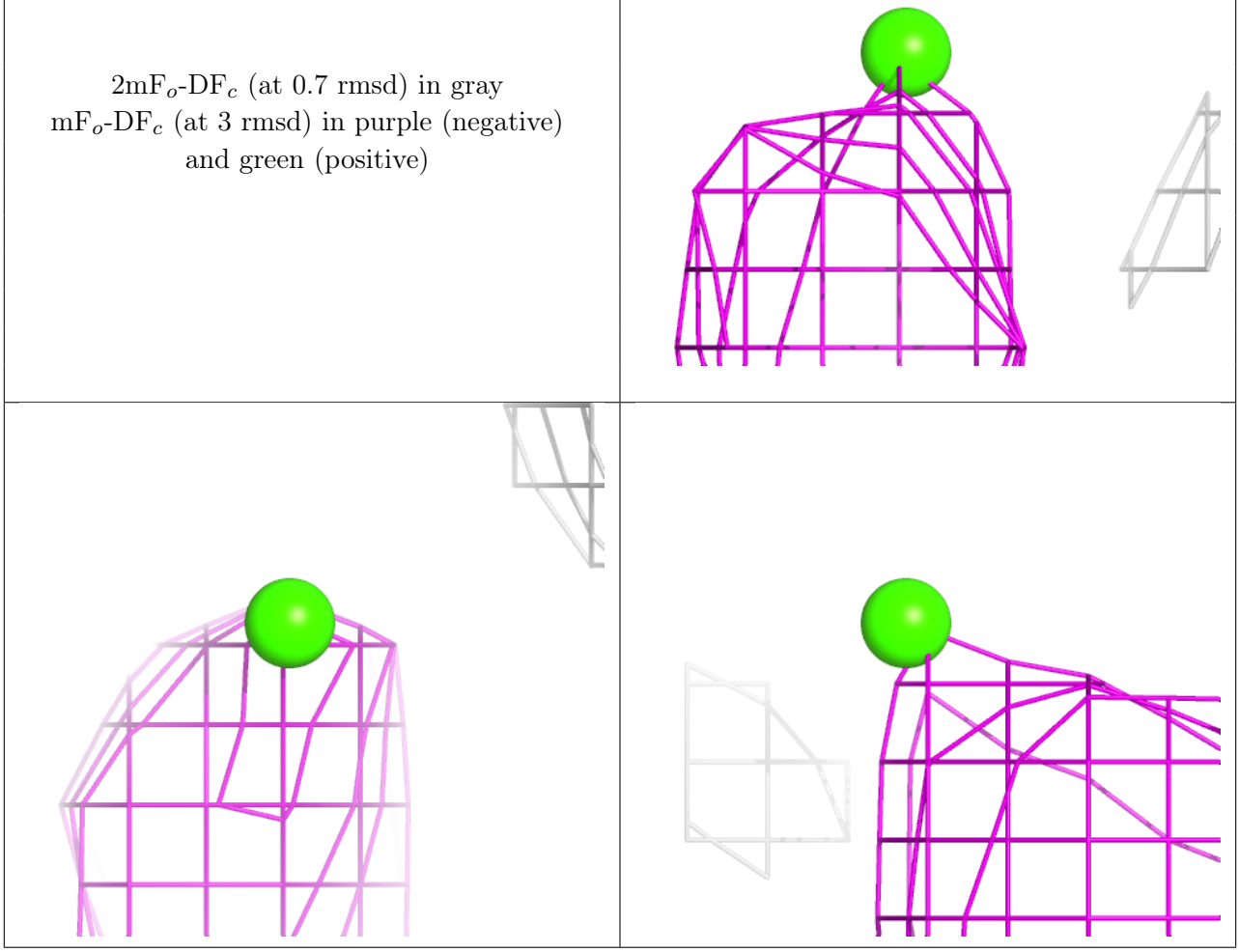
Electron density around CA C 3106:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



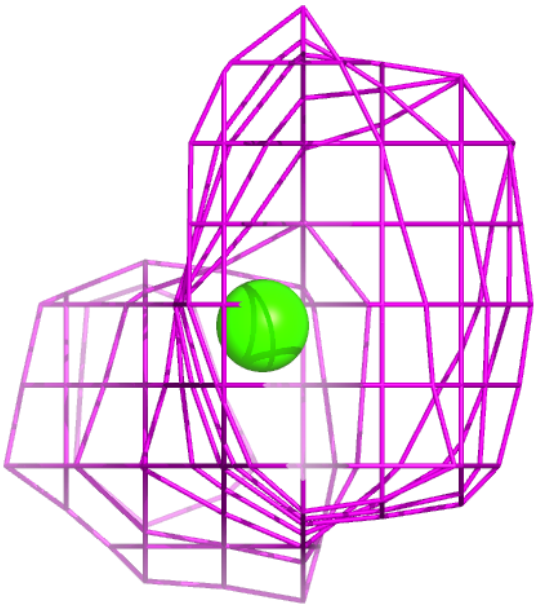
Electron density around CA C 3104:

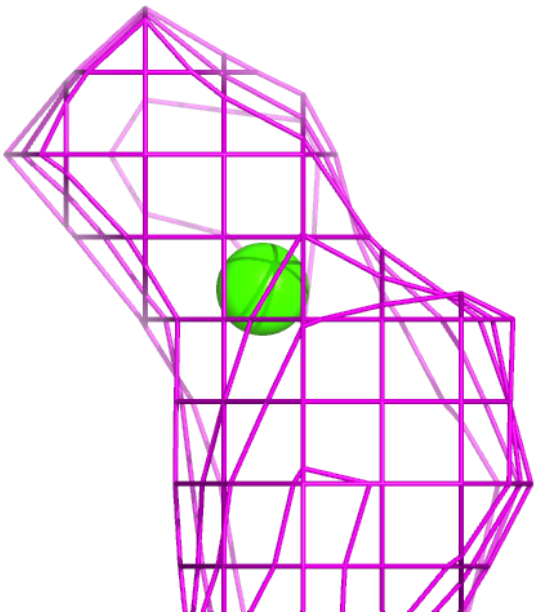
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

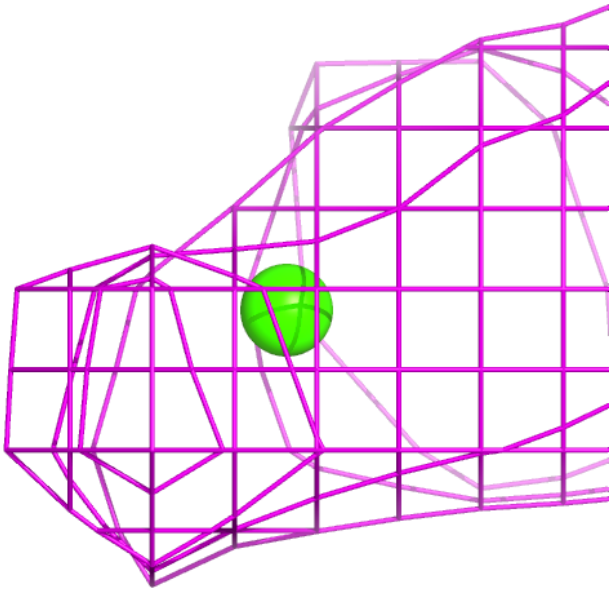


Electron density around CA C 3103:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

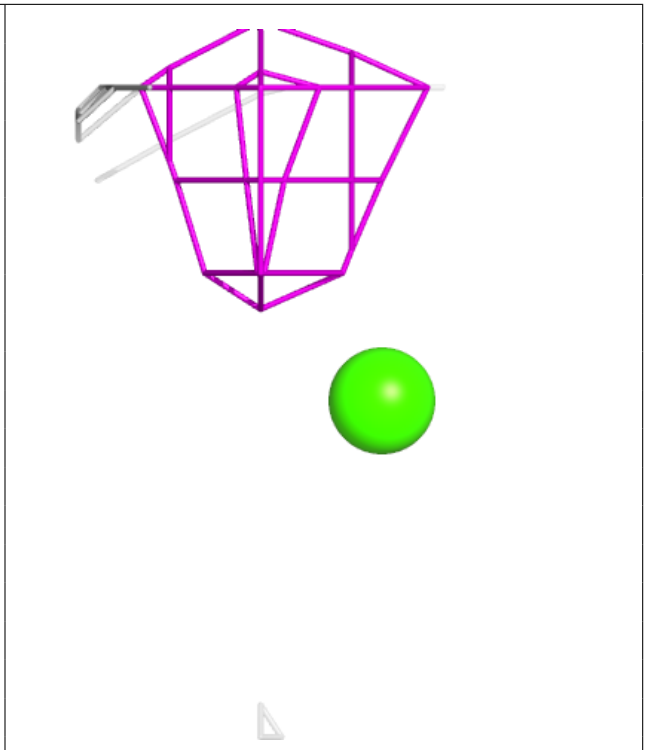


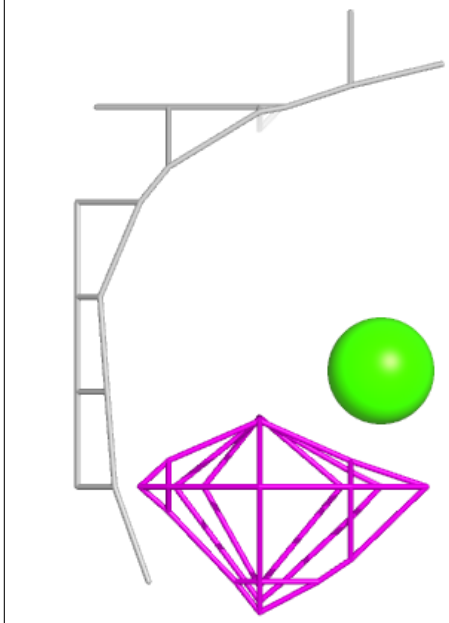


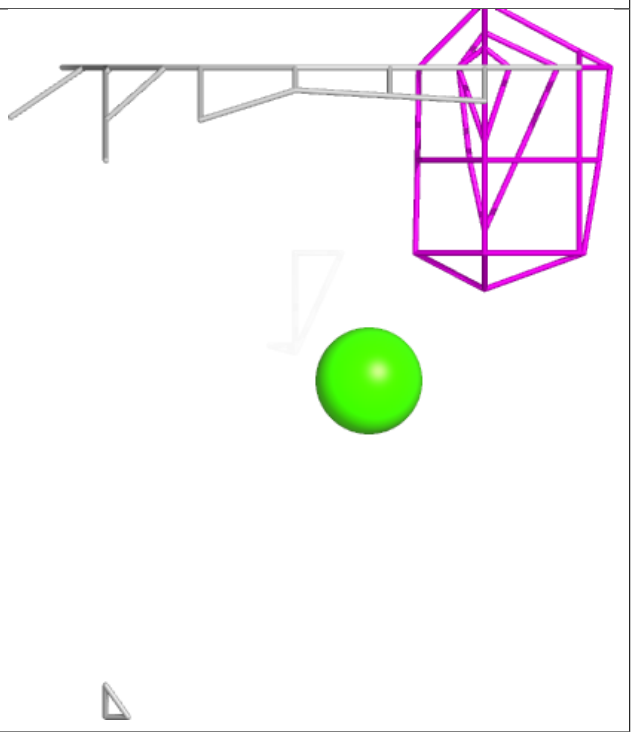


Electron density around CA B 3105:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

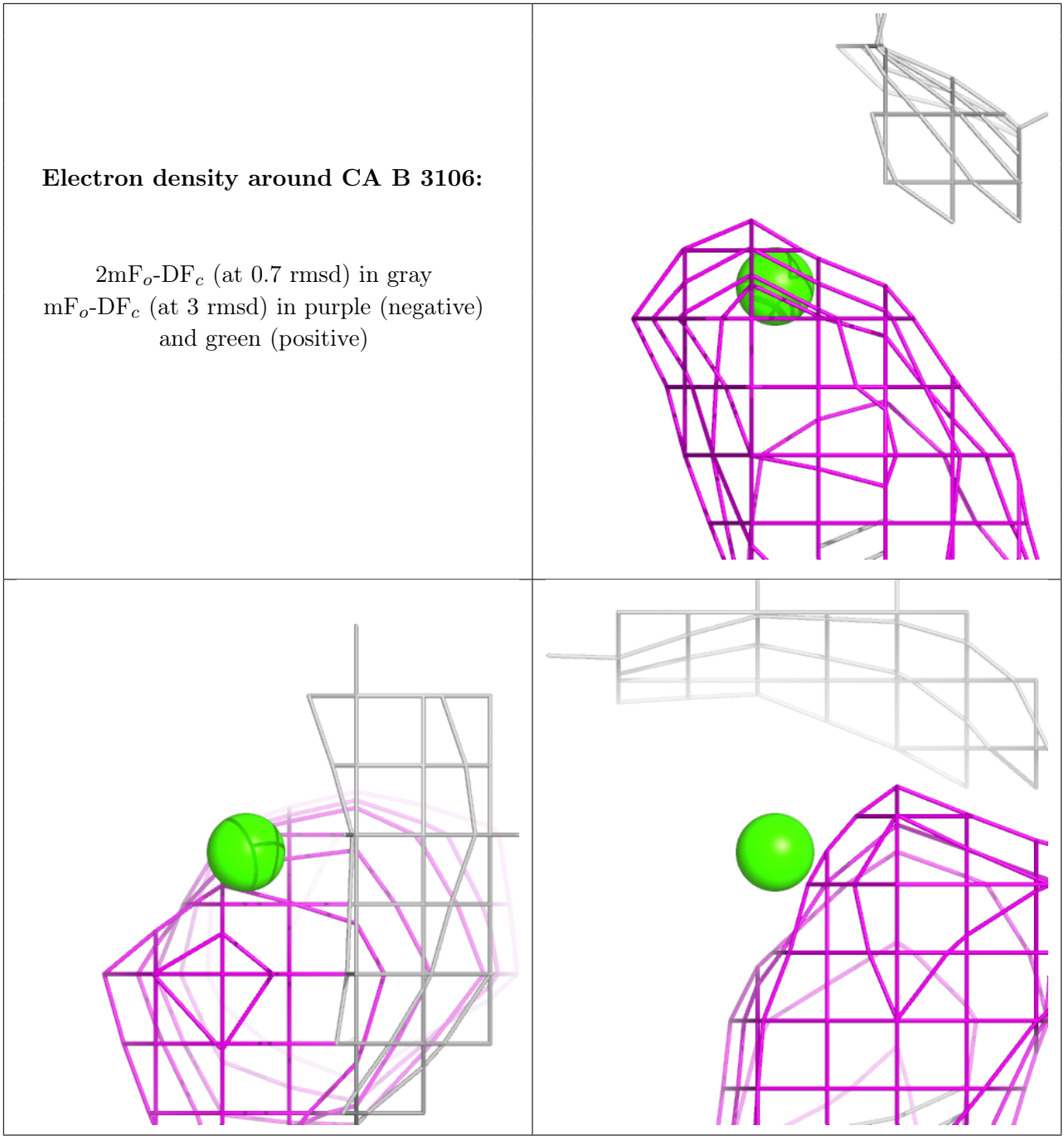






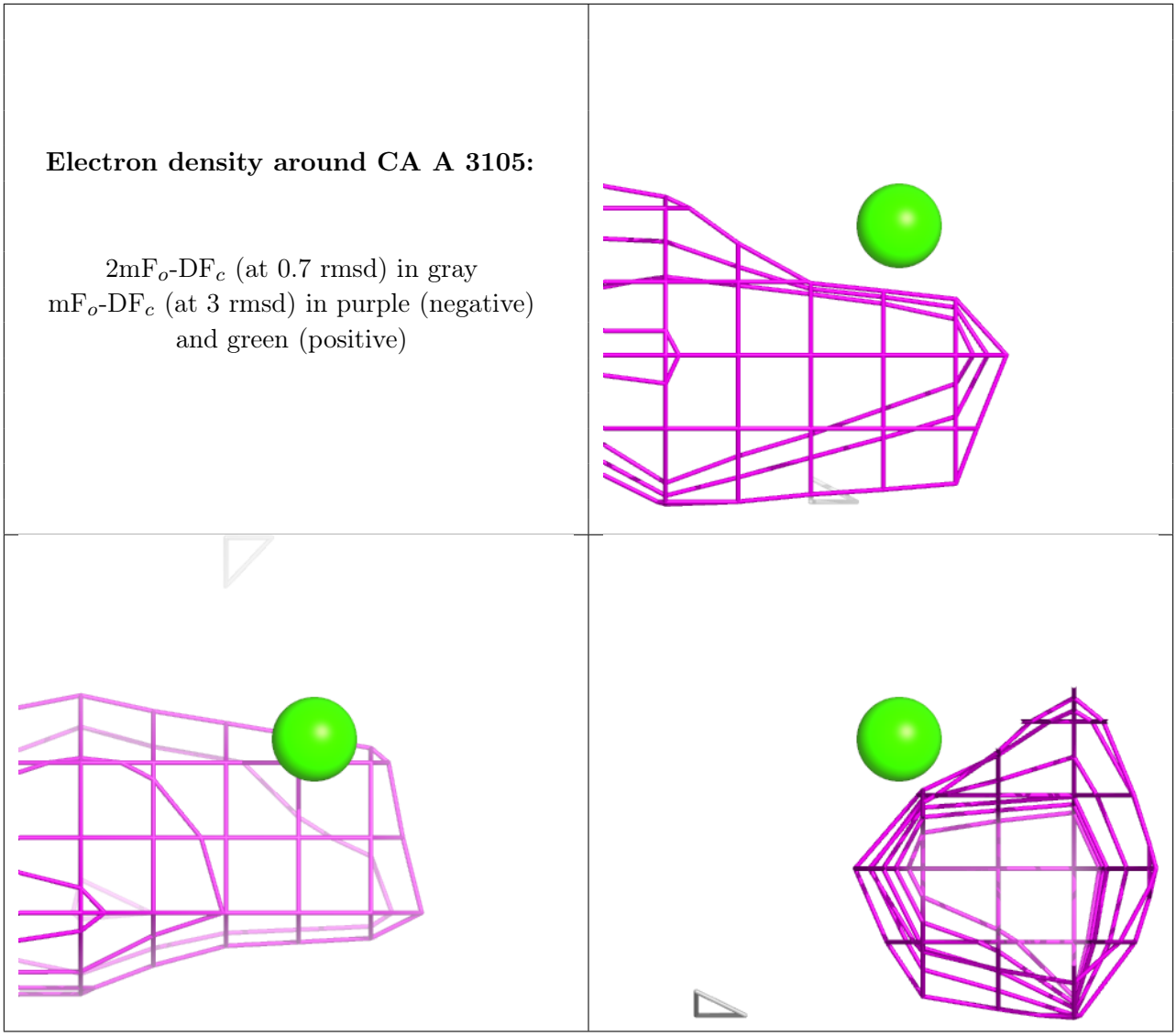
Electron density around CA B 3106:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



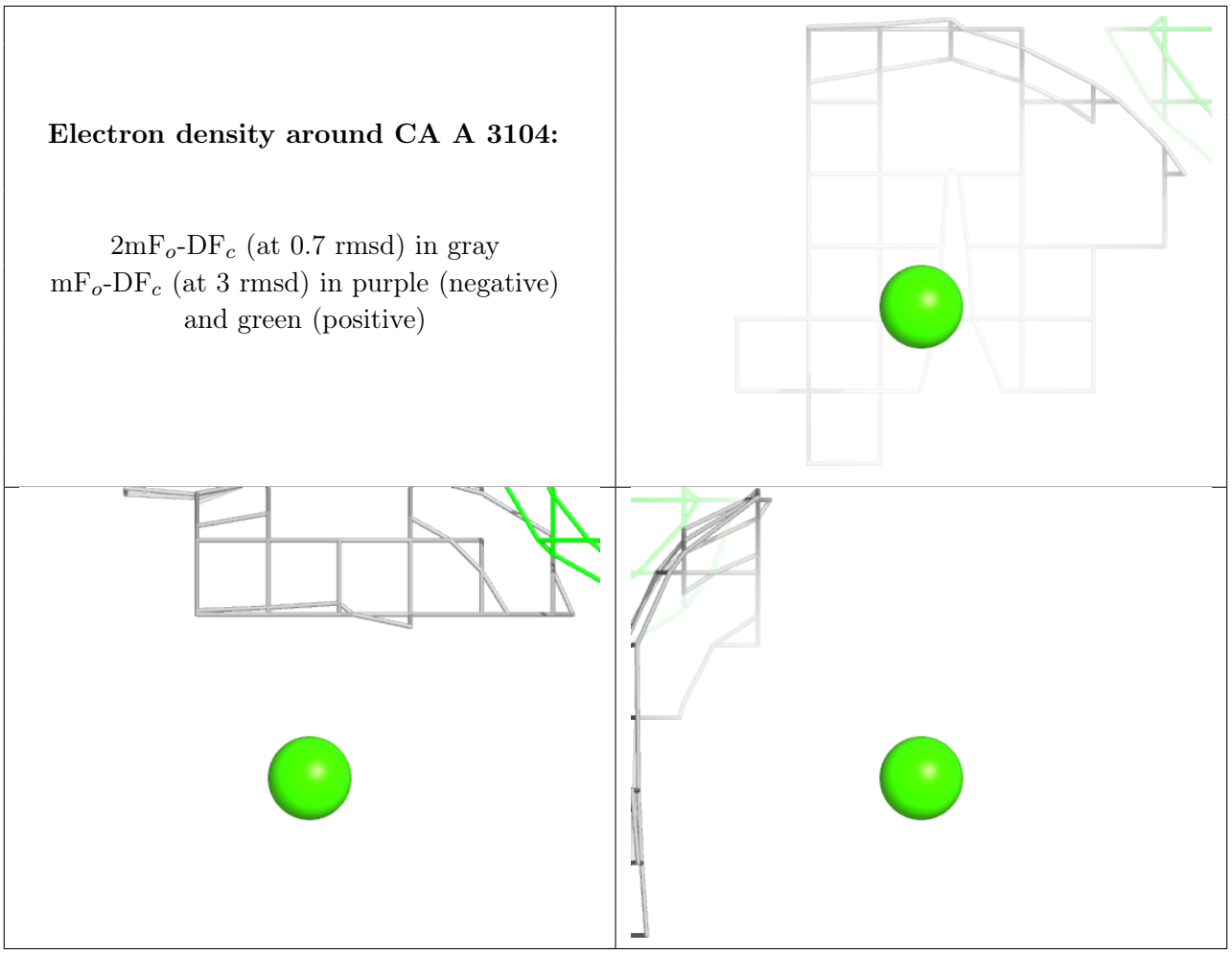
Electron density around CA A 3105:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



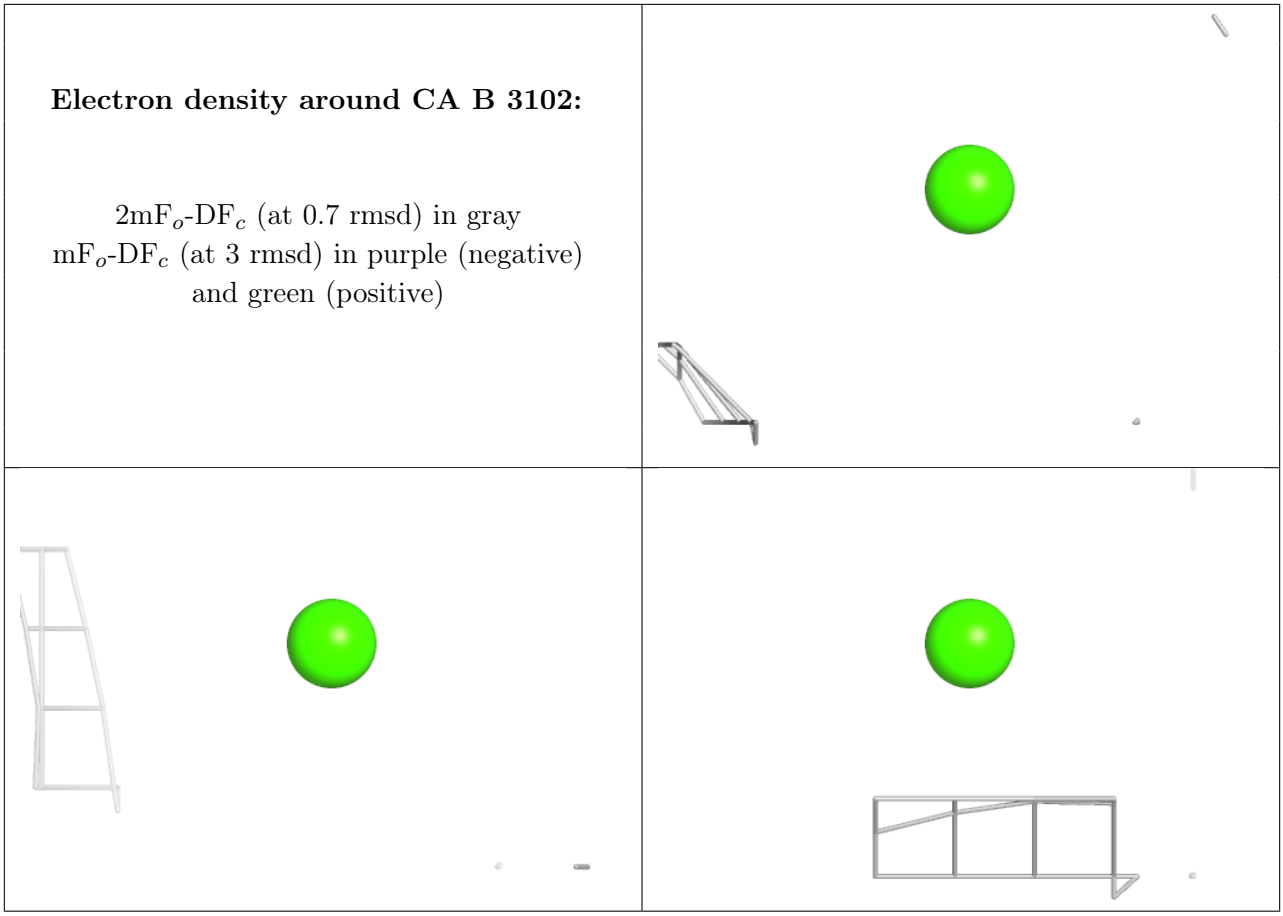
Electron density around CA A 3104:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



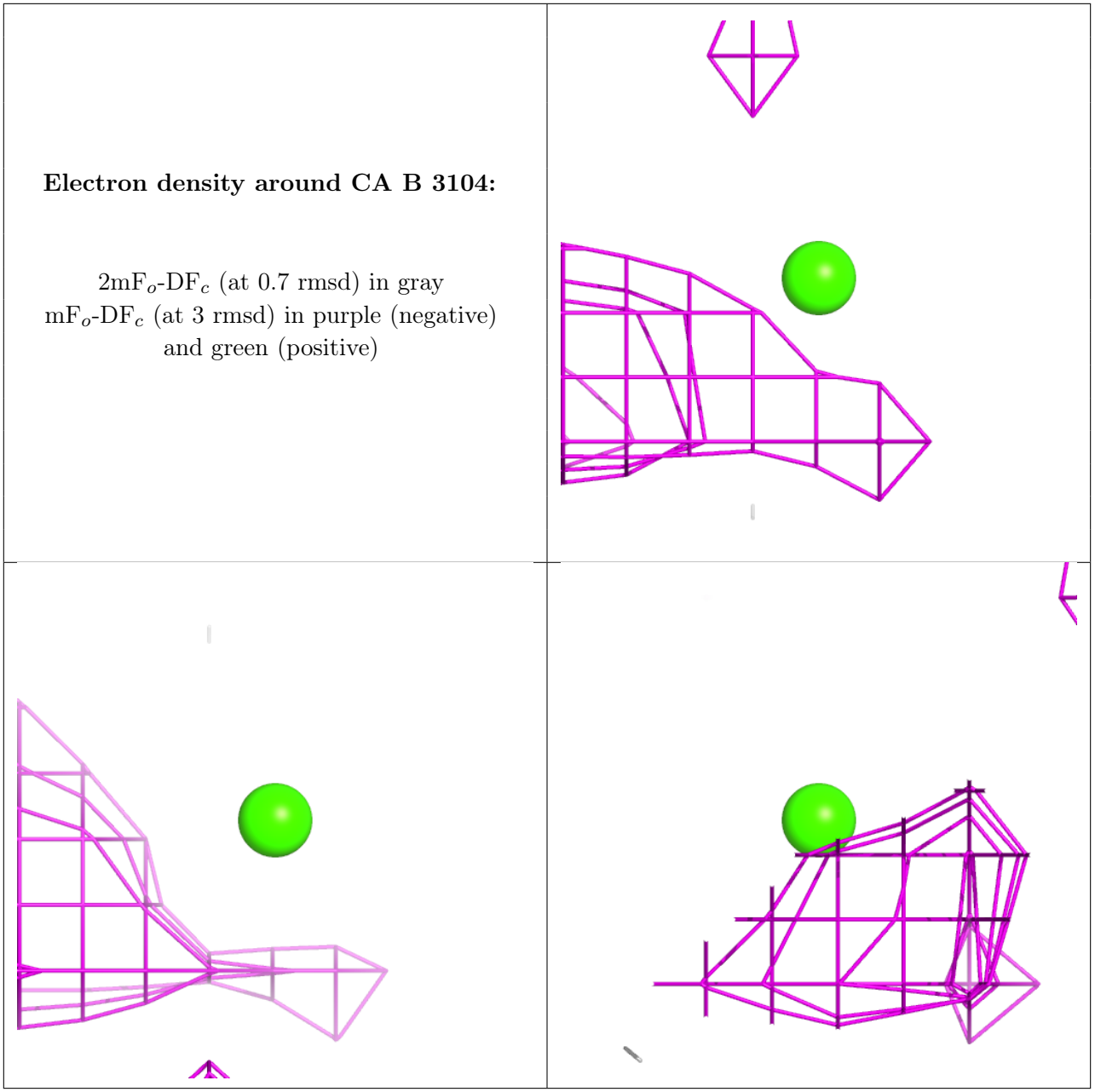
Electron density around CA B 3102:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



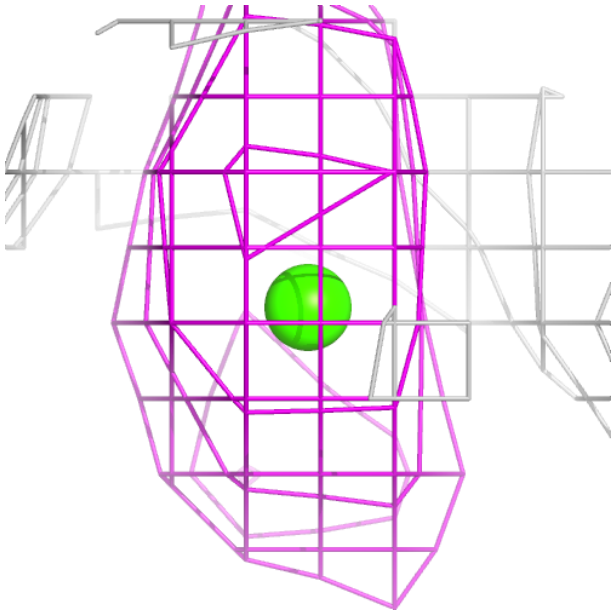
Electron density around CA B 3104:

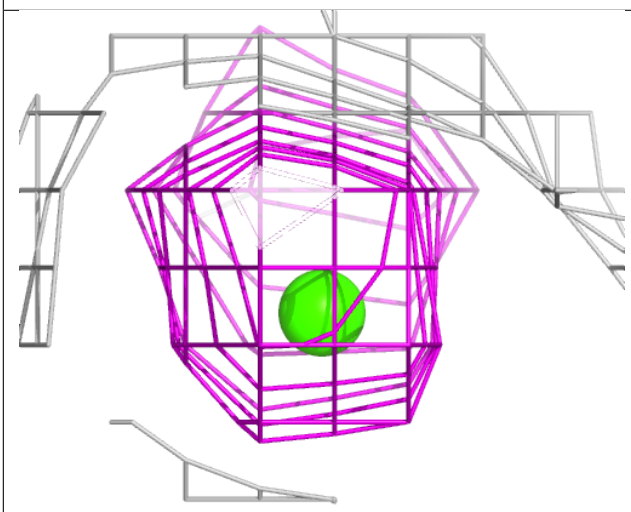
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

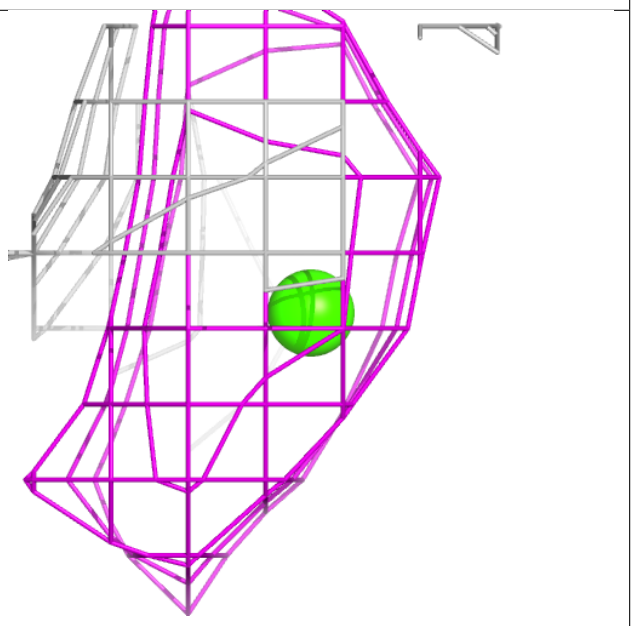


Electron density around CA C 3101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

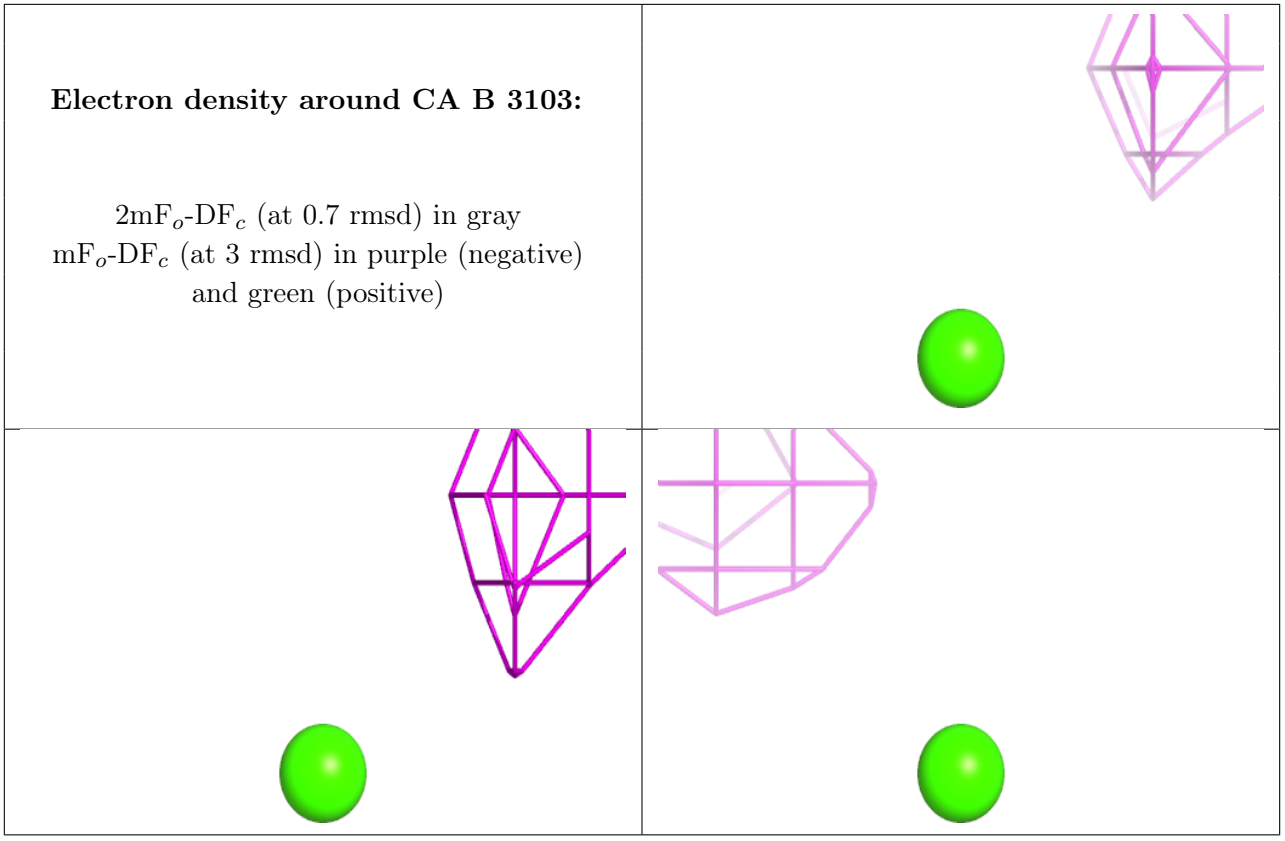






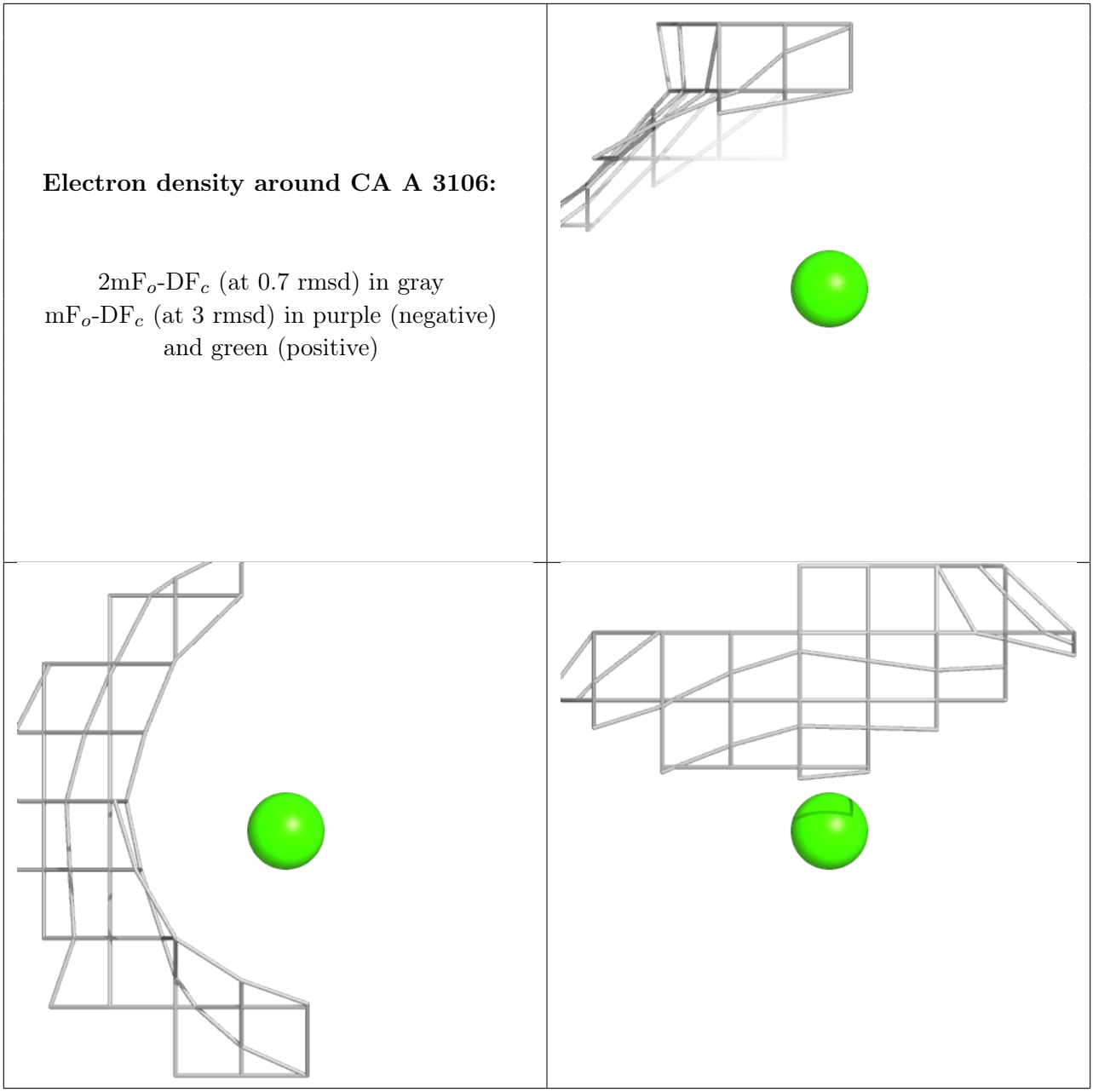
Electron density around CA B 3103:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



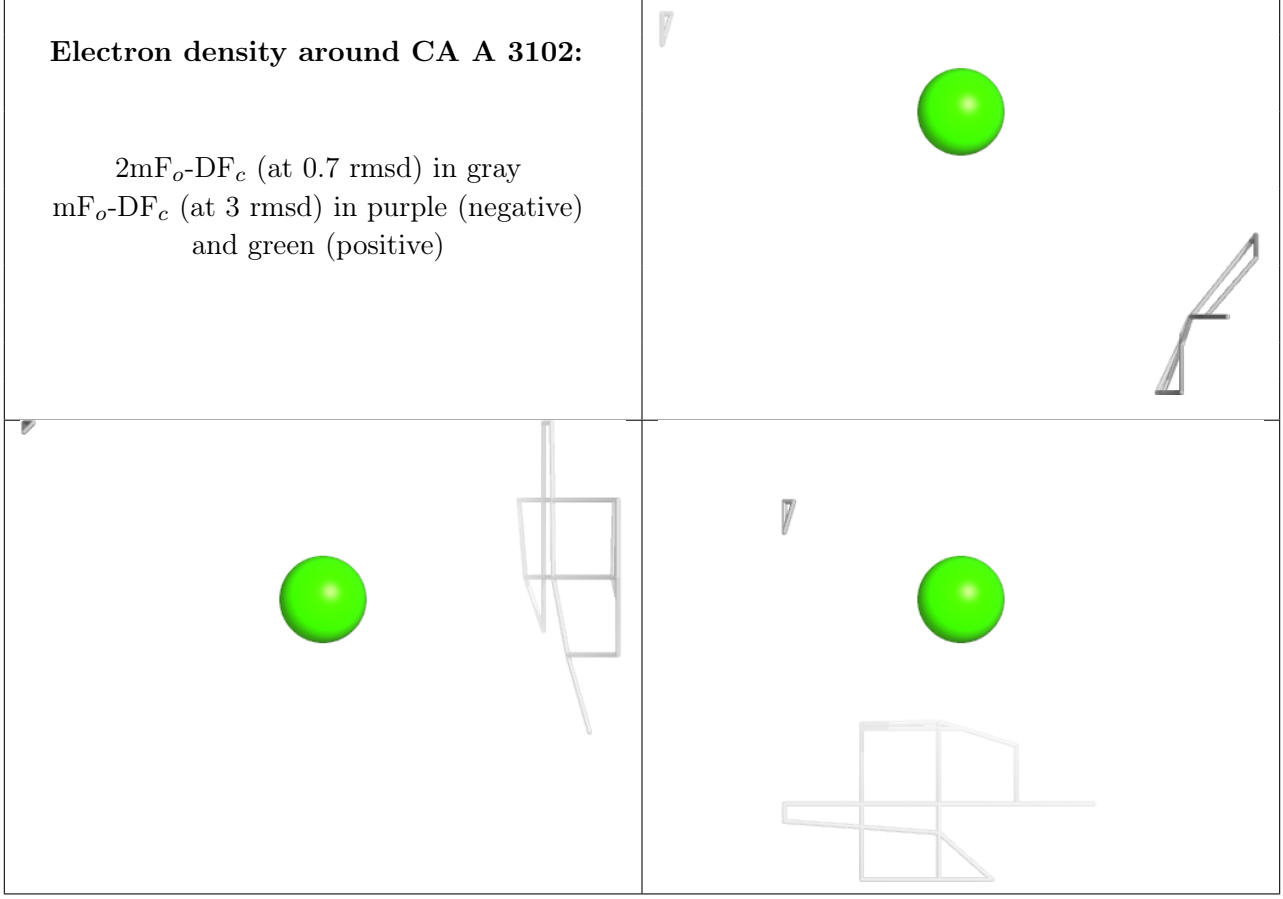
Electron density around CA A 3106:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



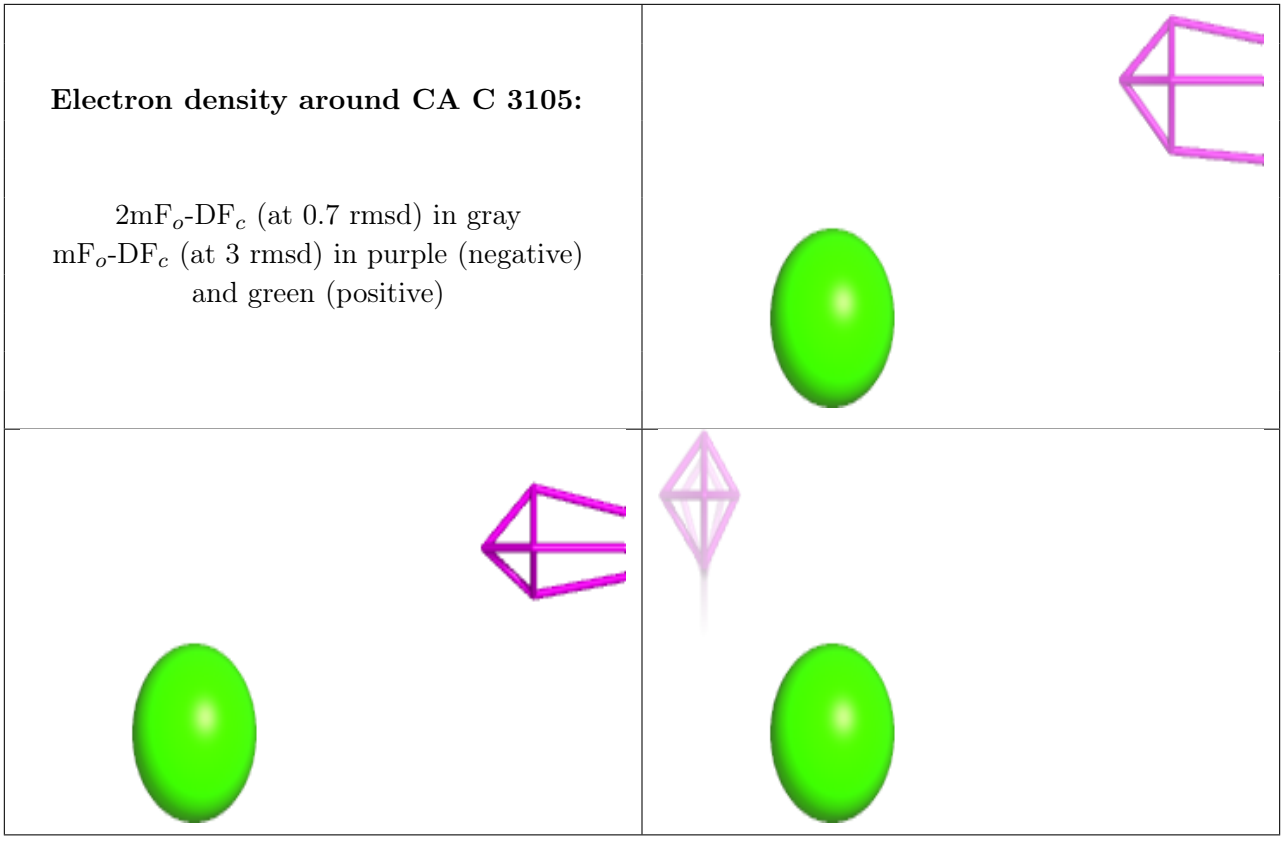
Electron density around CA A 3102:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



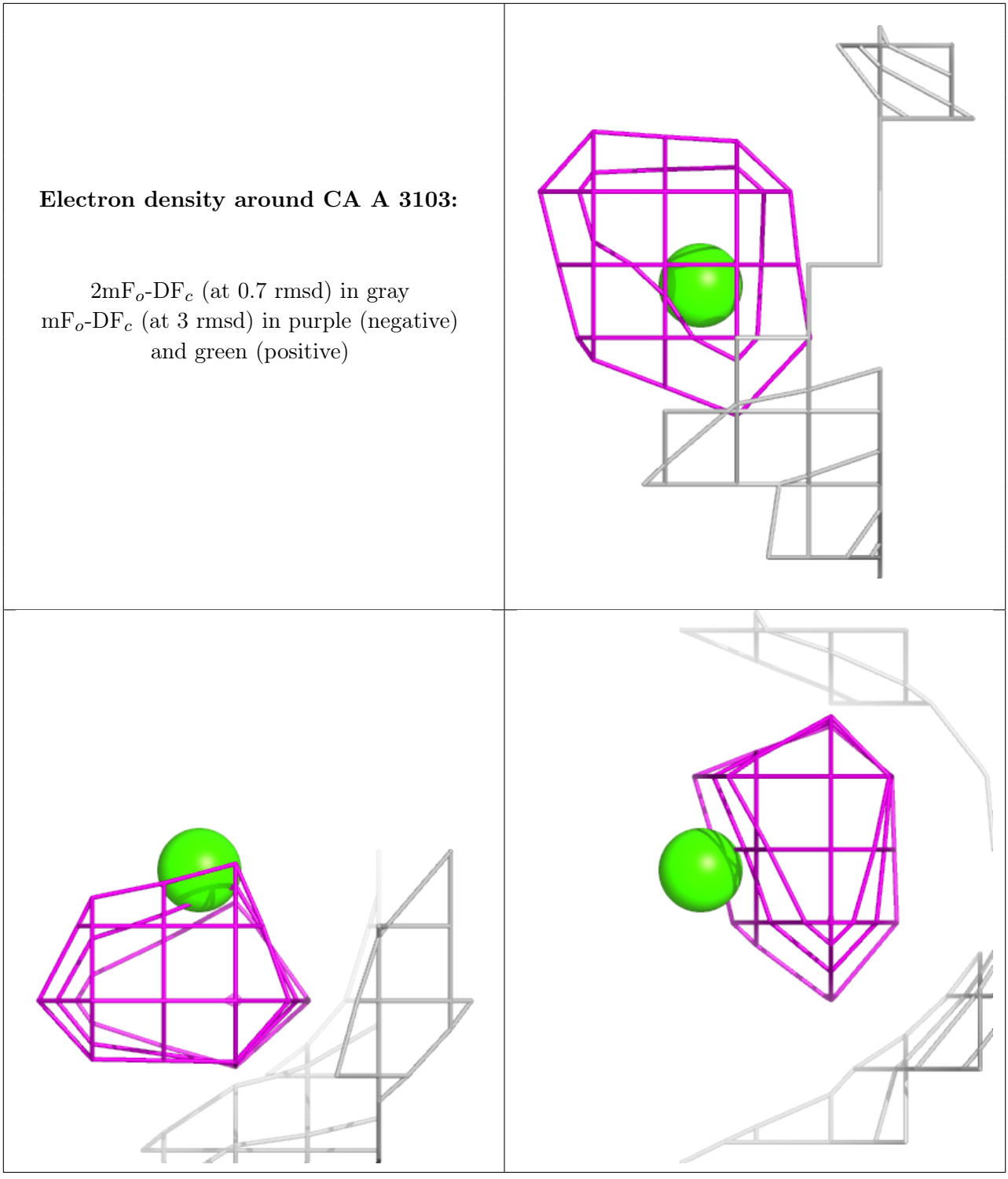
Electron density around CA C 3105:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around CA A 3103:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers

There are no such residues in this entry.