Full wwPDB X-ray Structure Validation Report ⓘ

Sep 2, 2024 – 06:08 PM JST

PDB ID	:	8W5S
Title	:	Crystal structure of Annexin A7 mutant
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Deposited on	:	2023-08-27
Resolution	:	2.12 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:

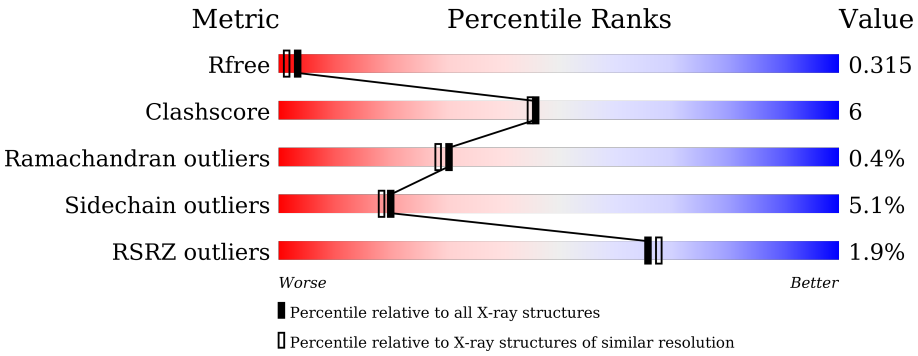
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.002 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.38.2

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 2.12 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}	164625	7689 (2.14-2.10)
Clashscore	180529	8431 (2.14-2.10)
Ramachandran outliers	177936	8366 (2.14-2.10)
Sidechain outliers	177891	8367 (2.14-2.10)
RSRZ outliers	164620	7689 (2.14-2.10)

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	301	81% 18%
1	B	301	80% 19%
1	C	301	84% 15%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 7402 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 Annexin A7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	301	Total	C	N	O	S	0	0	0
			2387	1481	428	460	18			
1	B	301	Total	C	N	O	S	0	0	0
			2388	1481	428	461	18			
1	C	301	Total	C	N	O	S	0	0	0
			2387	1481	428	460	18			

- 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	9	Total	Ca	0	0
			9	9		
2	B	8	Total	Ca	0	0
			8	8		
2	C	14	Total	Ca	0	0
			14	14		

- Molecule 3 is water.

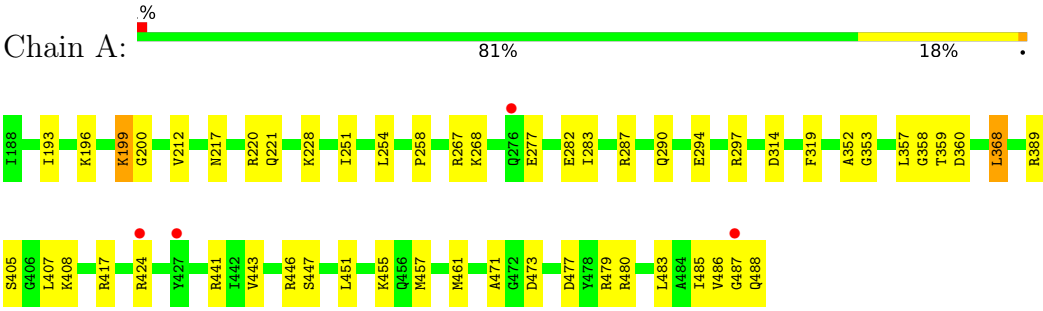
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	86	Total	O	0	0
			86	86		
3	B	77	Total	O	0	0
			77	77		
3	C	46	Total	O	0	0
			46	46		

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.

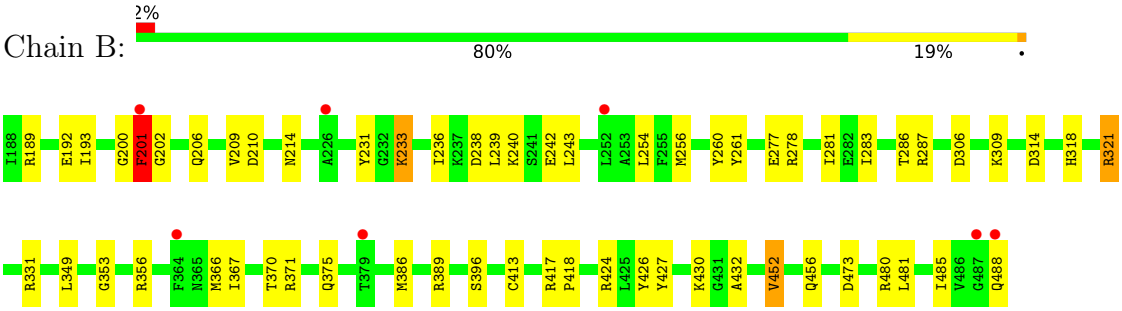
• Molecule 1: Annexin A7

Chain A:



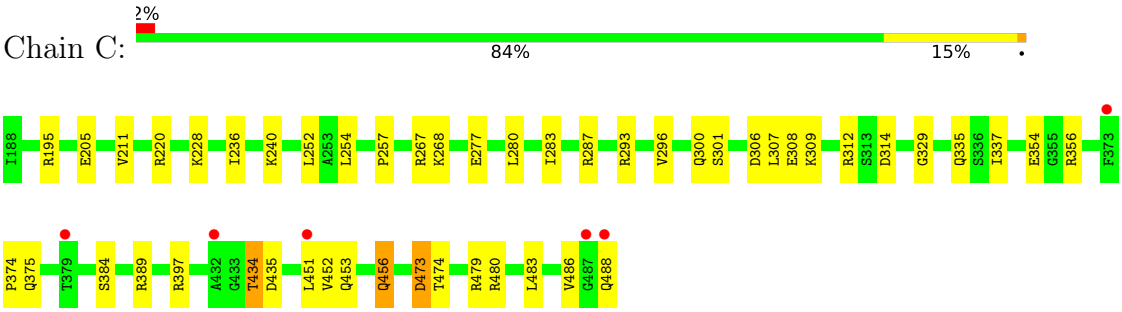
• Molecule 1: Annexin A7

Chain B:



• Molecule 1: Annexin A7

Chain C:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 65	Depositor
Cell constants a, b, c, α, β, γ	89.81Å 89.81Å 196.92Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	44.90 – 2.12 44.90 – 2.12	Depositor EDS
% Data completeness (in resolution range)	99.8 (44.90-2.12) 99.8 (44.90-2.12)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.36 (at 2.12Å)	Xtriage
Refinement program	PHENIX 1.19.2_4158	Depositor
R, R_{free}	0.257 , 0.315 0.258 , 0.315	Depositor DCC
R_{free} test set	49074 reflections (3.94%)	wwPDB-VP
Wilson B-factor (Å^2)	38.1	Xtriage
Anisotropy	0.211	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 20.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	0.072 for h,-h-k,-l	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	7402	wwPDB-VP
Average B, all atoms (Å^2)	39.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.81% of the height of the origin peak. No significant pseudotranslation is detected.*

[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	0.26	0/2416	0.53	0/3242
1	B	0.26	0/2417	0.53	0/3242
1	C	0.26	0/2416	0.50	0/3242
All	All	0.26	0/7249	0.52	0/9726

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

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	2387	0	2387	28	0
1	B	2388	0	2387	31	0
1	C	2387	0	2387	26	0
2	A	9	0	0	0	0
2	B	8	0	0	0	0
2	C	14	0	0	0	0
3	A	86	0	0	2	0
3	B	77	0	0	1	0
3	C	46	0	0	3	0
All	All	7402	0	7161	82	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 6.

All (82) 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:C:453:GLN:HA	1:C:456:GLN:HG3	1.68	0.76
1:A:254:LEU:HD11	1:A:485:ILE:HD11	1.71	0.71
1:C:337:ILE:HD11	1:C:374:PRO:HB2	1.74	0.69
1:A:282:GLU:OE1	1:A:424:ARG:NH2	2.26	0.69
1:C:306:ASP:HB3	1:C:309:LYS:HB2	1.76	0.68
1:C:308:GLU:OE2	1:C:312:ARG:NH1	2.28	0.67
1:B:233:LYS:NZ	1:B:238:ASP:OD1	2.29	0.65
1:C:434:THR:HB	1:C:473:ASP:OD2	1.95	0.65
1:A:404:GLU:HG2	1:A:408:LYS:HD2	1.82	0.61
1:A:455:LYS:HD2	1:A:486:VAL:HG13	1.83	0.60
1:B:318:HIS:HA	1:B:321:ARG:HG2	1.84	0.60
1:C:220:ARG:NH1	1:C:254:LEU:O	2.29	0.59
1:A:447:SER:HA	1:A:451:LEU:HD22	1.84	0.59
1:A:471:ALA:O	1:A:479:ARG:NH1	2.36	0.58
1:A:477:ASP:OD1	1:A:480:ARG:NH1	2.36	0.58
1:C:240:LYS:HG2	1:C:252:LEU:HD11	1.86	0.58
1:A:457:MET:O	1:A:461:MET:HG3	2.04	0.57
1:A:483:LEU:O	1:A:487:GLY:N	2.37	0.57
1:B:432:ALA:H	1:C:480:ARG:NH1	2.02	0.57
1:C:293:ARG:NH1	1:C:329:GLY:O	2.40	0.55
1:B:236:ILE:HG22	1:B:240:LYS:HD2	1.88	0.54
1:C:283:ILE:O	1:C:287:ARG:HG2	2.07	0.54
1:A:488:GLN:NE2	3:A:605:HOH:O	2.41	0.53
1:B:349:LEU:HG	1:B:367:ILE:HD12	1.90	0.52
1:A:352:ALA:HB1	1:A:360:ASP:HB3	1.91	0.52
1:C:268:LYS:NZ	3:C:604:HOH:O	2.43	0.51
1:B:209:VAL:HG13	1:B:481:LEU:HD13	1.93	0.51
1:B:366:MET:O	1:B:370:THR:HG23	2.12	0.50
1:A:290:GLN:O	1:A:294:GLU:HG2	2.13	0.49
1:C:296:VAL:HG12	1:C:307:LEU:HD23	1.95	0.48
1:C:384:SER:HA	1:C:389:ARG:O	2.14	0.48
1:A:424:ARG:HD2	3:A:624:HOH:O	2.13	0.47
1:C:354:GLU:OE2	1:C:397:ARG:NH1	2.47	0.47
1:A:217:ASN:O	1:A:221:GLN:HG2	2.14	0.47
1:B:254:LEU:HD11	1:B:485:ILE:HD11	1.96	0.47
1:A:368:LEU:HD12	1:A:407:LEU:HD22	1.96	0.47
1:C:335:GLN:HG3	1:C:374:PRO:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:256:MET:CE	1:B:261:TYR:HA	2.45	0.46
1:B:452:VAL:O	1:B:456:GLN:HG3	2.15	0.46
1:B:256:MET:HE2	1:B:261:TYR:HA	1.98	0.46
1:B:432:ALA:H	1:C:480:ARG:HH11	1.63	0.46
1:B:306:ASP:HB3	1:B:309:LYS:HB2	1.97	0.46
1:A:357:LEU:HD12	1:A:358:GLY:H	1.81	0.46
1:B:277:GLU:O	1:B:281:ILE:HG13	2.15	0.46
1:A:199:LYS:HA	1:A:199:LYS:HD2	1.40	0.45
1:A:443:VAL:O	1:A:447:SER:HB3	2.17	0.45
1:A:488:GLN:NE2	1:C:205:GLU:OE2	2.50	0.45
1:A:282:GLU:OE2	1:A:441:ARG:HD2	2.16	0.45
1:B:189:ARG:O	1:B:193:ILE:HG12	2.17	0.44
1:B:283:ILE:O	1:B:287:ARG:HG2	2.17	0.44
1:C:257:PRO:HB2	3:C:616:HOH:O	2.16	0.44
1:C:277:GLU:HA	1:C:280:LEU:HD12	2.00	0.44
1:C:375:GLN:NE2	3:C:605:HOH:O	2.47	0.44
1:A:353:GLY:HA2	1:A:359:THR:HG23	2.00	0.44
1:A:283:ILE:O	1:A:287:ARG:HG2	2.18	0.43
1:B:417:ARG:HB3	1:B:418:PRO:HD3	1.99	0.43
1:B:201:PHE:N	1:B:201:PHE:CD2	2.86	0.43
1:B:286:THR:HG22	1:B:413:CYS:SG	2.58	0.43
1:B:242:GLU:O	1:B:243:LEU:HD23	2.18	0.43
1:B:426:TYR:HD2	1:B:427:TYR:HD1	1.67	0.43
1:B:192:GLU:HG2	1:B:231:TYR:OH	2.18	0.43
1:C:308:GLU:O	1:C:312:ARG:HG3	2.18	0.43
1:B:331:ARG:NH1	1:B:371:ARG:O	2.46	0.43
1:B:481:LEU:O	1:B:485:ILE:HD12	2.18	0.43
1:A:217:ASN:OD1	1:A:258:PRO:HD3	2.19	0.43
1:C:483:LEU:HB3	1:C:488:GLN:OE1	2.19	0.43
1:B:201:PHE:N	1:B:201:PHE:HD2	2.18	0.42
1:B:426:TYR:HD2	1:B:427:TYR:CD1	2.37	0.42
1:A:417:ARG:HD3	1:A:446:ARG:NH2	2.35	0.42
1:C:195:ARG:HA	1:C:195:ARG:HD2	1.85	0.42
1:B:256:MET:HE3	1:B:260:TYR:CD2	2.55	0.42
1:A:277:GLU:HB3	1:A:319:PHE:CE2	2.55	0.42
1:B:210:ASP:O	1:B:214:ASN:ND2	2.51	0.41
1:B:239:LEU:O	1:B:243:LEU:HB2	2.21	0.41
1:C:474:THR:OG1	1:C:479:ARG:HB2	2.20	0.41
1:C:236:ILE:HG23	1:C:252:LEU:HD22	2.01	0.41
1:A:212:VAL:HG13	1:A:220:ARG:HD3	2.03	0.41
1:A:267:ARG:HD2	1:A:267:ARG:HA	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:375:GLN:HG3	3:B:613:HOH:O	2.21	0.41
1:A:199:LYS:NZ	1:A:200:GLY:H	2.19	0.40
1:B:200:GLY:O	1:B:202:GLY:N	2.54	0.40
1:C:451:LEU:HD21	1:C:486:VAL:HG12	2.02	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	299/301 (99%)	289 (97%)	9 (3%)	1 (0%)	37	36
1	B	299/301 (99%)	292 (98%)	5 (2%)	2 (1%)	19	15
1	C	299/301 (99%)	290 (97%)	8 (3%)	1 (0%)	37	36
All	All	897/903 (99%)	871 (97%)	22 (2%)	4 (0%)	30	28

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	201	PHE
1	B	353	GLY
1	C	435	ASP
1	A	389	ARG

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	256/256 (100%)	244 (95%)	12 (5%)	22 21
1	B	256/256 (100%)	240 (94%)	16 (6%)	15 12
1	C	256/256 (100%)	245 (96%)	11 (4%)	25 24
All	All	768/768 (100%)	729 (95%)	39 (5%)	20 18

All (39) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	193	ILE
1	A	196	LYS
1	A	199	LYS
1	A	228	LYS
1	A	251	ILE
1	A	268	LYS
1	A	297	ARG
1	A	314	ASP
1	A	368	LEU
1	A	393	SER
1	A	405	SER
1	A	473	ASP
1	B	201	PHE
1	B	206	GLN
1	B	233	LYS
1	B	278	ARG
1	B	314	ASP
1	B	321	ARG
1	B	356	ARG
1	B	386	MET
1	B	389	ARG
1	B	396	SER
1	B	424	ARG
1	B	430	LYS
1	B	452	VAL
1	B	473	ASP
1	B	480	ARG
1	B	488	GLN
1	C	211	VAL
1	C	228	LYS
1	C	267	ARG
1	C	300	GLN
1	C	301	SER
1	C	314	ASP

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Mol	Chain	Res	Type
1	C	356	ARG
1	C	434	THR
1	C	452	VAL
1	C	456	GLN
1	C	473	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	300	GLN
1	B	343	GLN
1	B	456	GLN
1	C	460	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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)

Of 31 ligands modelled in this entry, 31 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 (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

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	301/301 (100%)	0.52	4 (1%)	74	76	34, 37, 40, 46	0
1	B	301/301 (100%)	0.55	7 (2%)	61	63	34, 38, 43, 49	0
1	C	301/301 (100%)	0.65	6 (1%)	64	66	37, 41, 45, 51	0
All	All	903/903 (100%)	0.57	17 (1%)	66	68	34, 39, 44, 51	0

All (17) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	488	GLN	5.5
1	B	201	PHE	3.7
1	C	487	GLY	3.4
1	A	487	GLY	3.2
1	B	487	GLY	3.2
1	B	379	THR	3.1
1	B	488	GLN	3.0
1	A	427	TYR	2.8
1	A	424	ARG	2.4
1	C	432	ALA	2.4
1	C	373	PHE	2.3
1	A	276	GLN	2.3
1	B	226	ALA	2.2
1	B	364	PHE	2.1
1	B	252	LEU	2.1
1	C	451	LEU	2.1
1	C	379	THR	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)

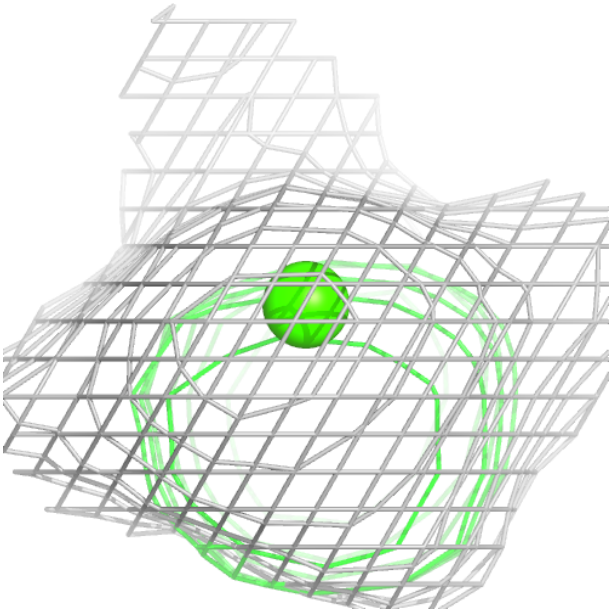
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

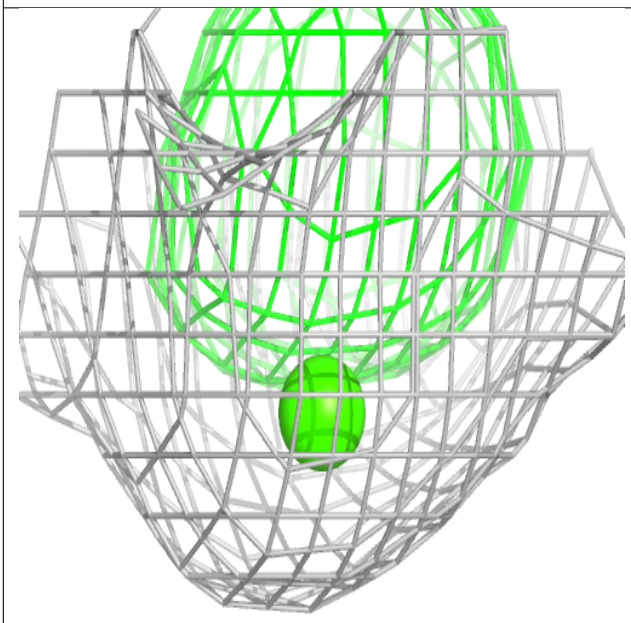
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	CA	A	508	1/1	0.41	0.23	73,73,73,73	0
2	CA	A	507	1/1	0.53	0.17	72,72,72,72	0
2	CA	A	502	1/1	0.80	0.11	64,64,64,64	0
2	CA	C	512	1/1	0.80	0.11	68,68,68,68	0
2	CA	C	509	1/1	0.82	0.23	62,62,62,62	0
2	CA	A	501	1/1	0.82	0.12	67,67,67,67	0
2	CA	C	507	1/1	0.84	0.09	67,67,67,67	0
2	CA	C	508	1/1	0.87	0.09	54,54,54,54	0
2	CA	C	505	1/1	0.87	0.08	55,55,55,55	0
2	CA	A	503	1/1	0.87	0.10	65,65,65,65	0
2	CA	A	506	1/1	0.88	0.08	56,56,56,56	0
2	CA	C	501	1/1	0.89	0.11	69,69,69,69	0
2	CA	C	506	1/1	0.89	0.12	69,69,69,69	0
2	CA	A	505	1/1	0.90	0.08	54,54,54,54	0
2	CA	C	504	1/1	0.91	0.07	56,56,56,56	0
2	CA	B	508	1/1	0.92	0.06	63,63,63,63	0
2	CA	B	506	1/1	0.93	0.10	56,56,56,56	0
2	CA	C	502	1/1	0.93	0.08	52,52,52,52	0
2	CA	A	504	1/1	0.93	0.06	62,62,62,62	0
2	CA	B	503	1/1	0.94	0.10	55,55,55,55	0
2	CA	B	507	1/1	0.94	0.07	45,45,45,45	0
2	CA	C	513	1/1	0.94	0.07	75,75,75,75	0
2	CA	C	514	1/1	0.95	0.08	67,67,67,67	0
2	CA	C	511	1/1	0.96	0.06	53,53,53,53	0
2	CA	B	505	1/1	0.96	0.07	46,46,46,46	0
2	CA	B	501	1/1	0.96	0.05	45,45,45,45	0
2	CA	B	504	1/1	0.96	0.04	49,49,49,49	0
2	CA	B	502	1/1	0.97	0.04	47,47,47,47	0
2	CA	C	503	1/1	0.97	0.07	49,49,49,49	0
2	CA	A	509	1/1	0.97	0.05	43,43,43,43	0
2	CA	C	510	1/1	0.98	0.03	42,42,42,42	0

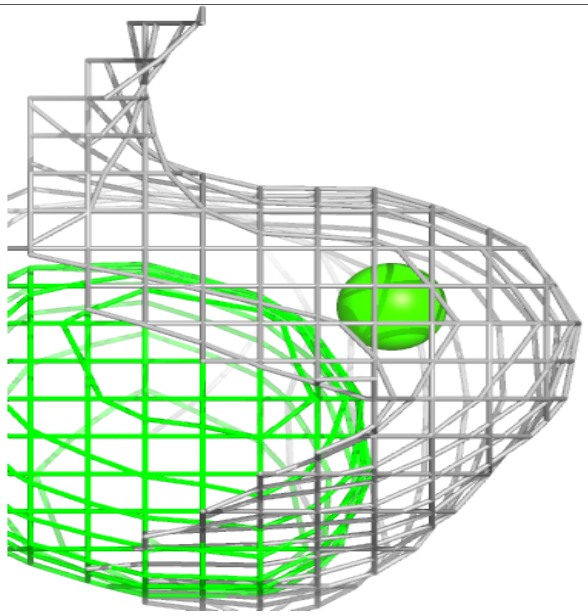
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around CA A 508:

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

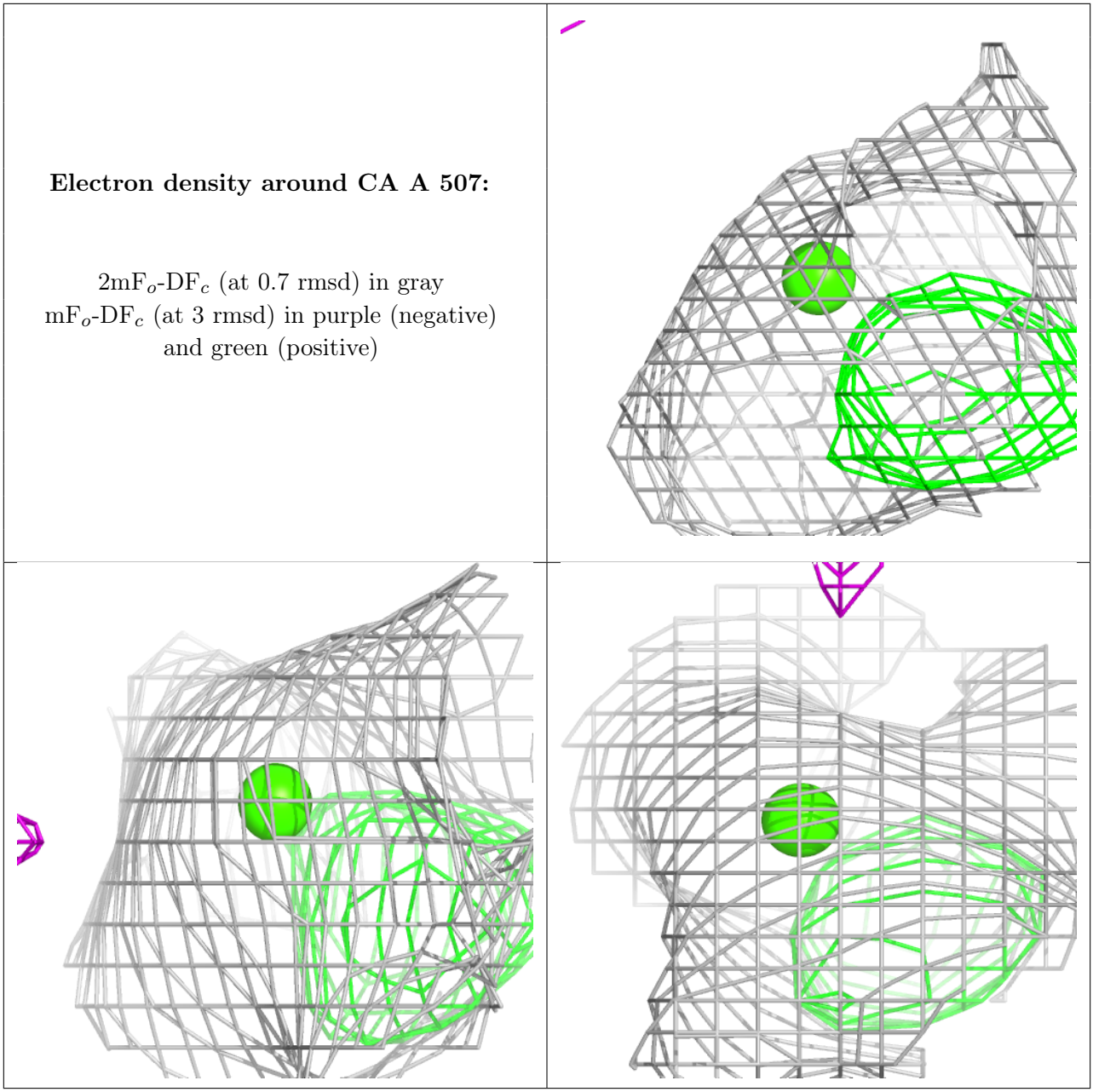






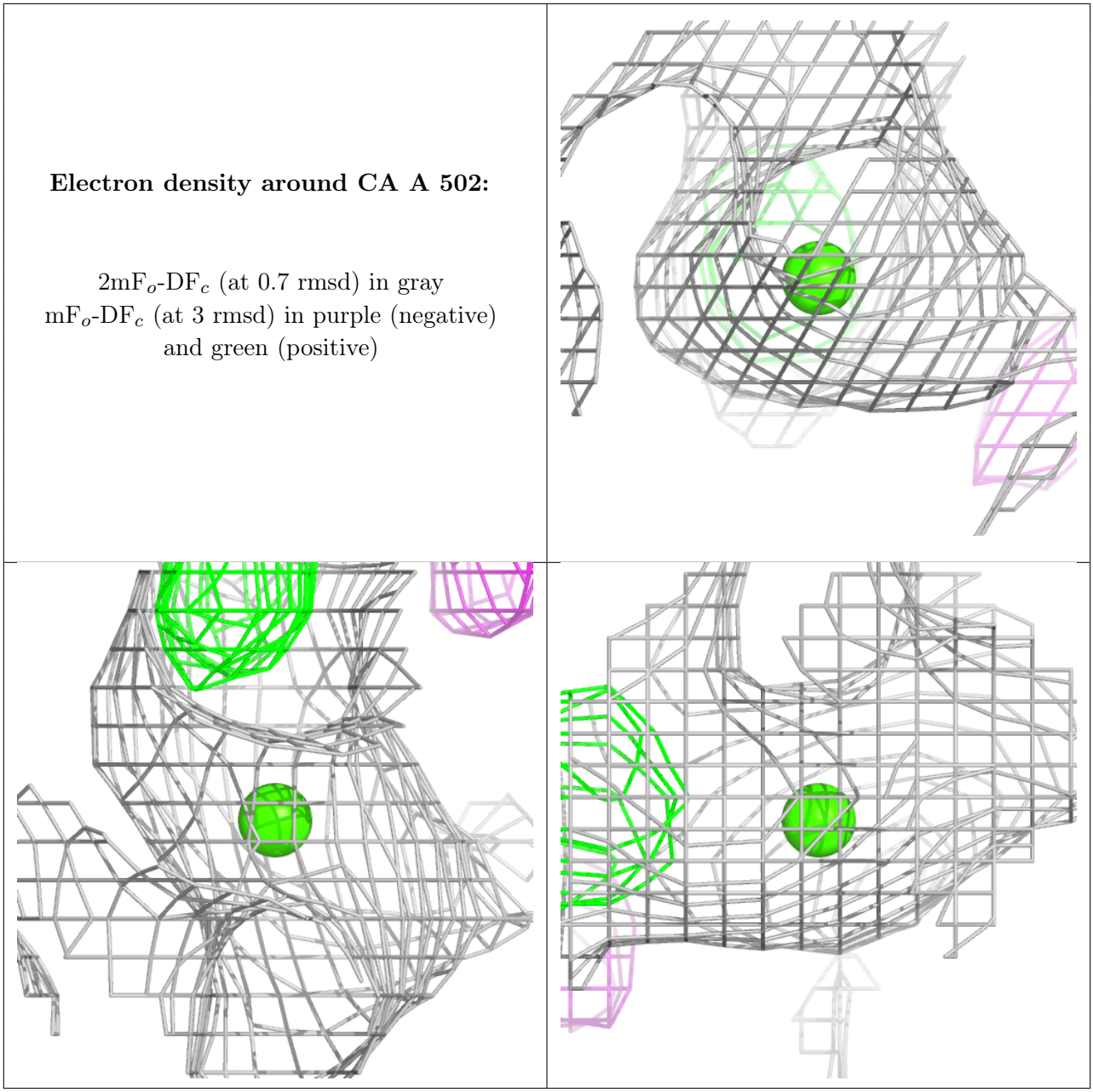
Electron density around CA A 507:

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



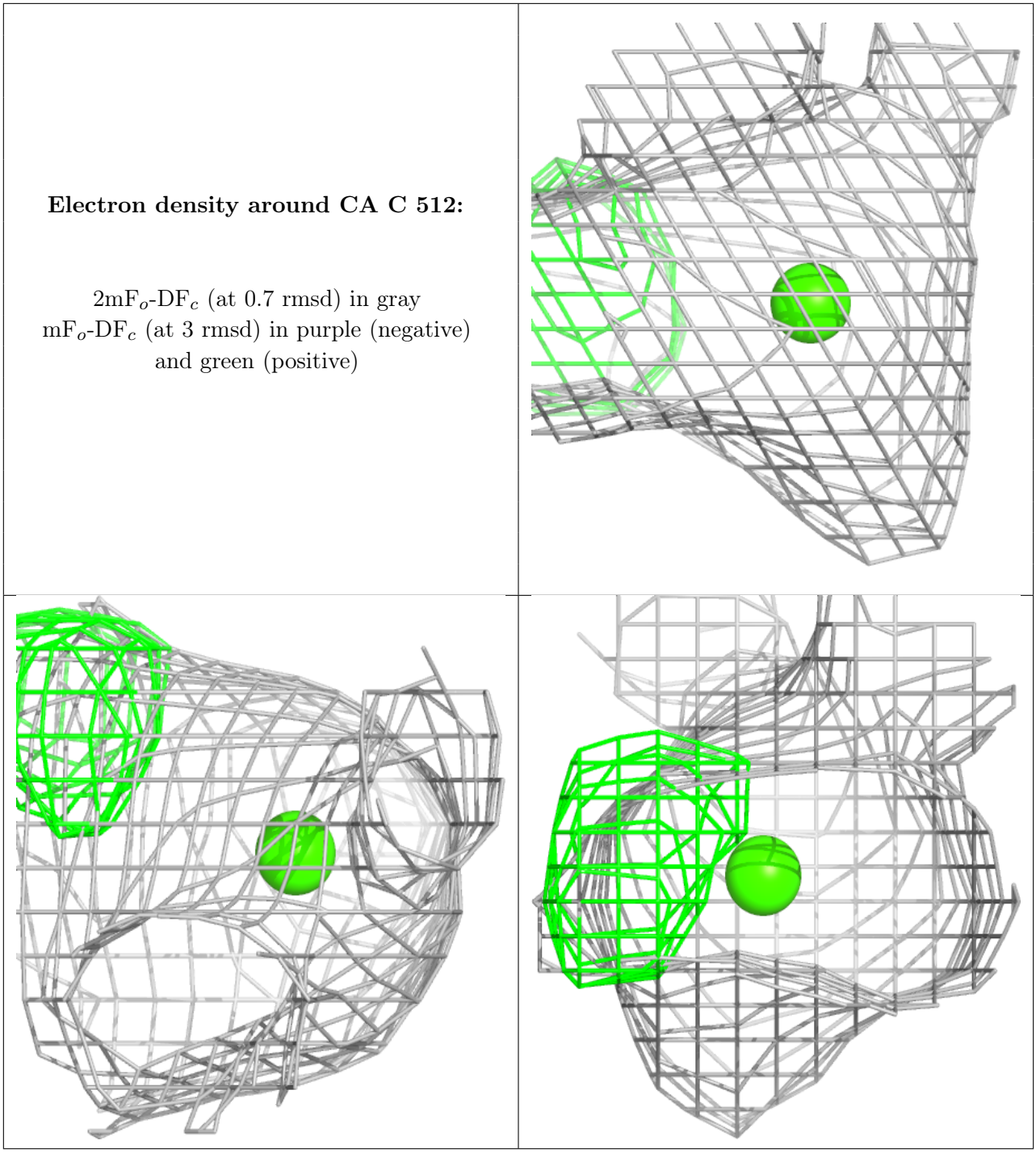
Electron density around CA A 502:

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



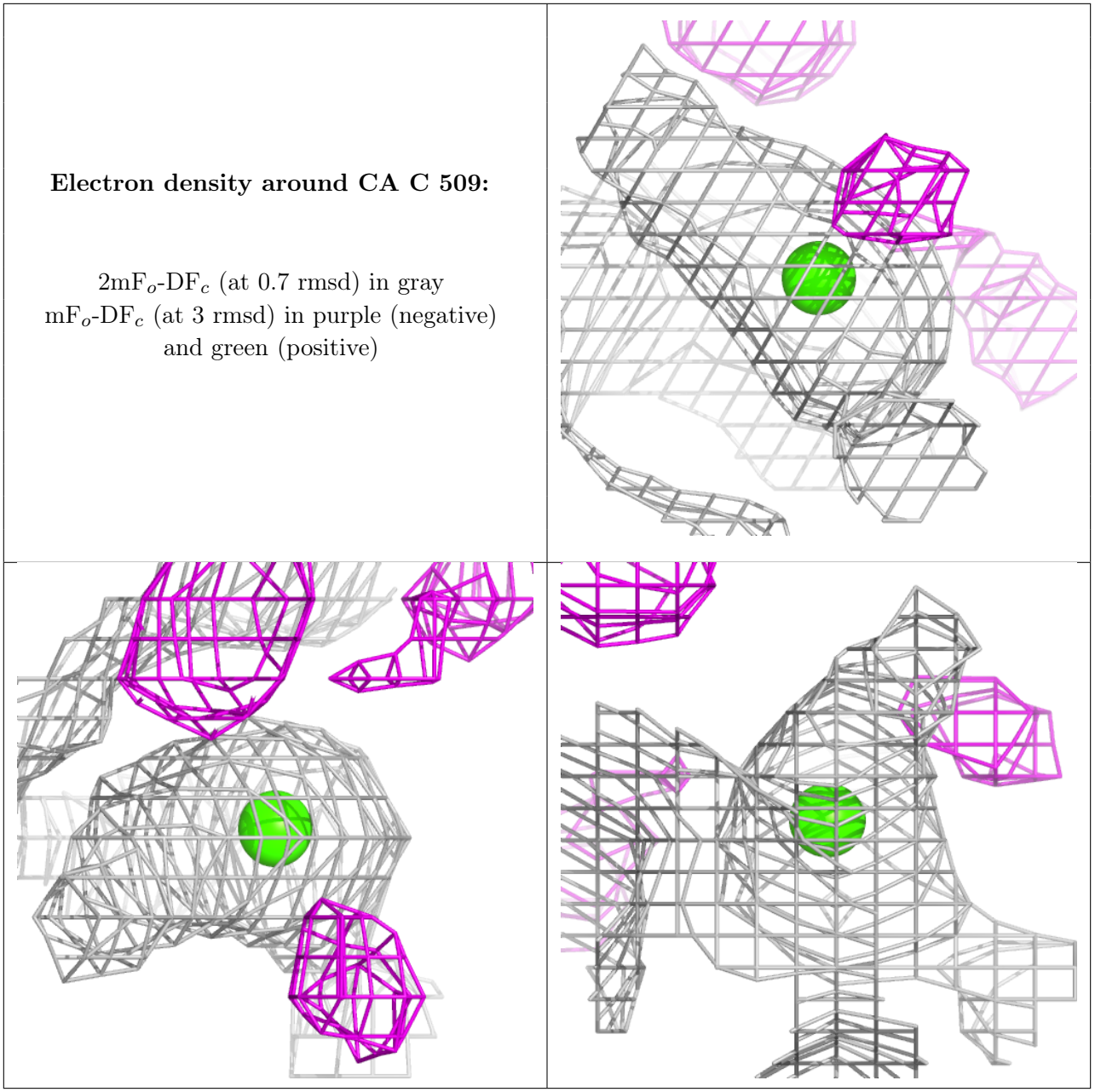
Electron density around CA C 512:

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



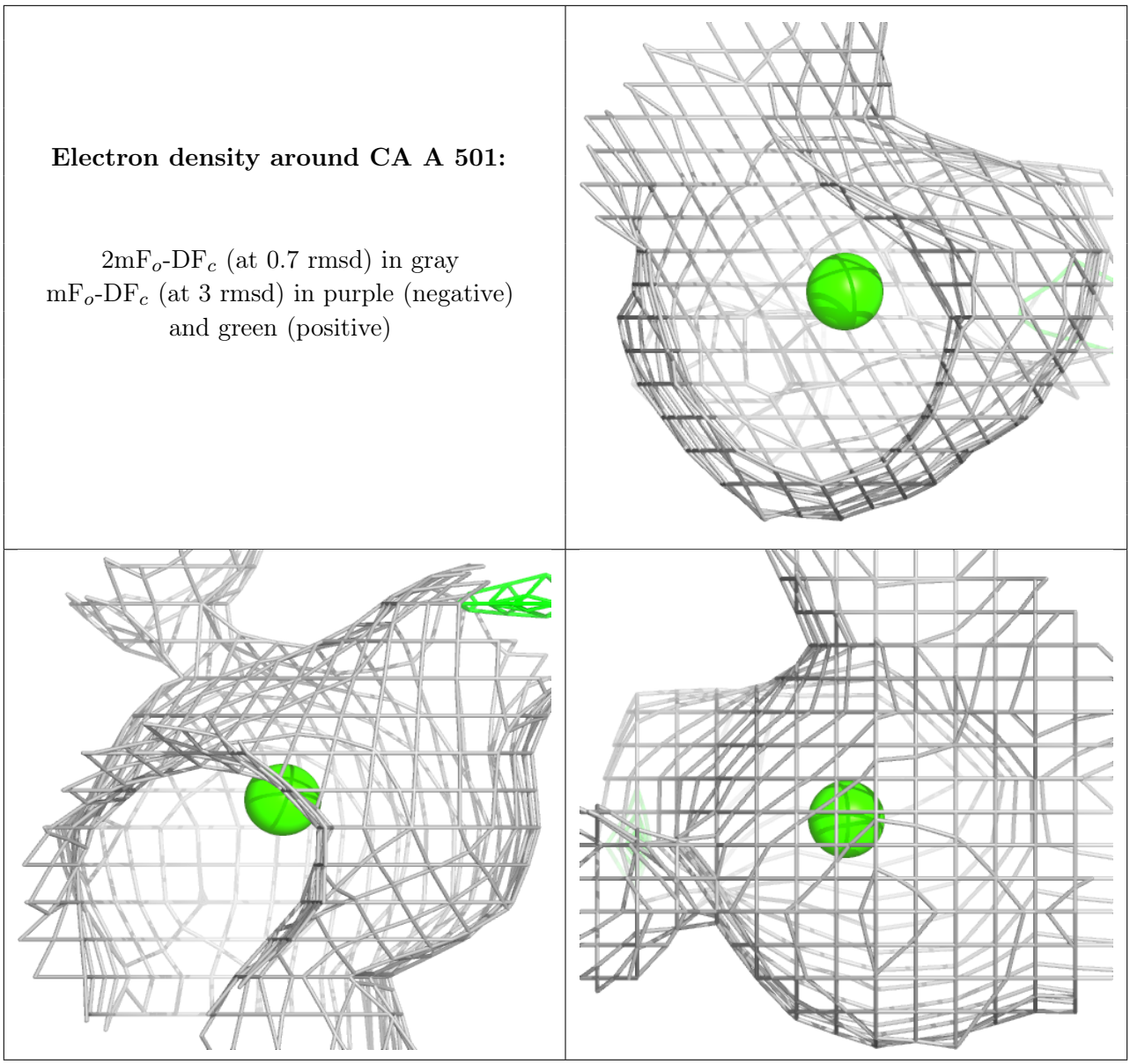
Electron density around CA C 509:

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



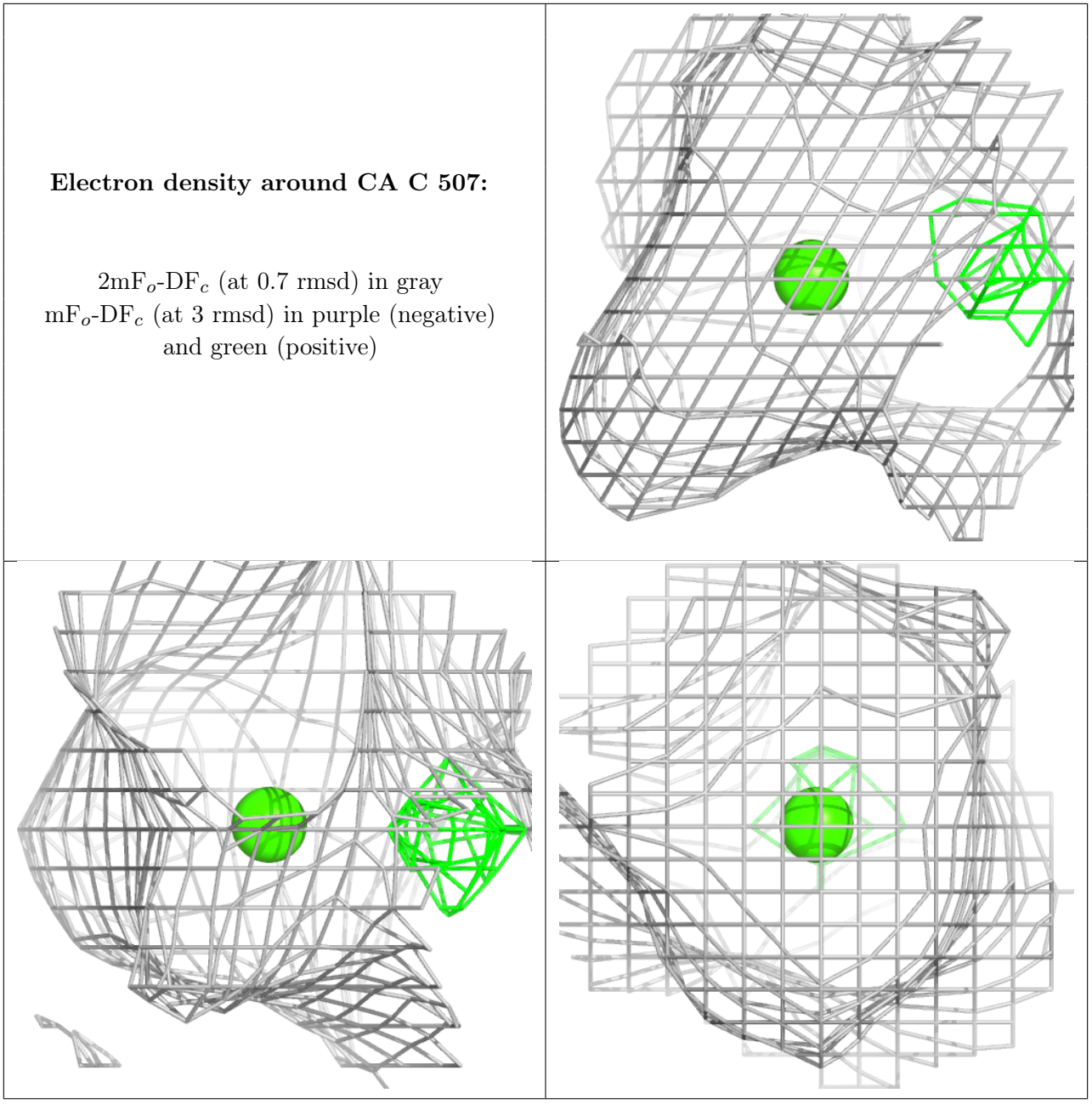
Electron density around CA A 501:

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



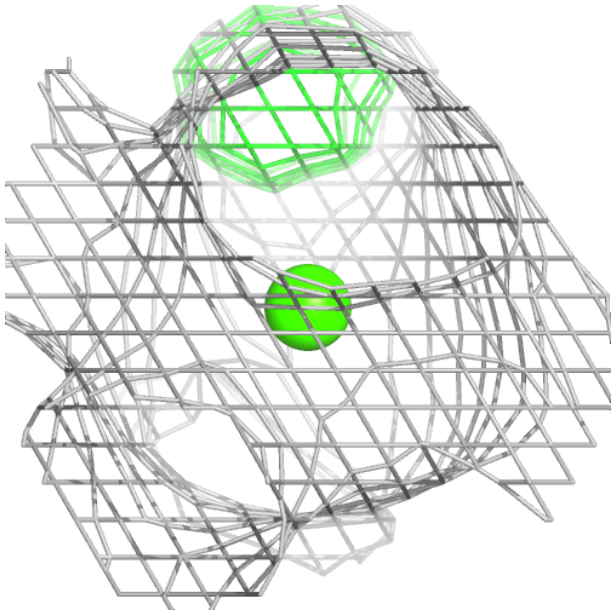
Electron density around CA C 507:

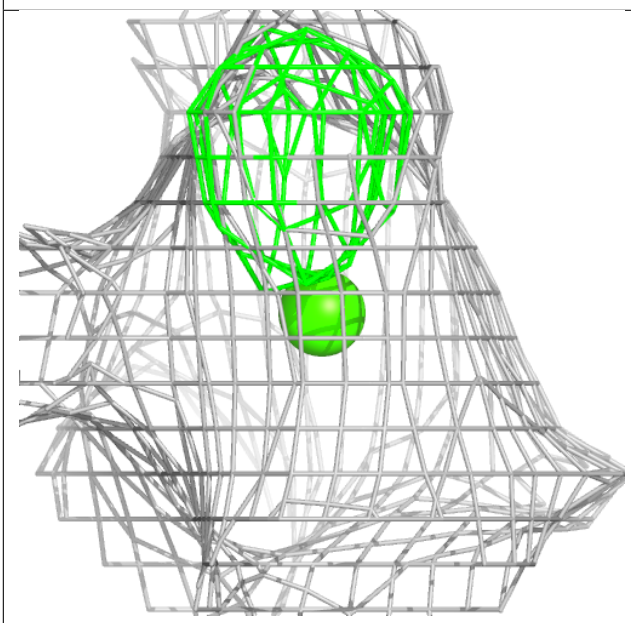
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

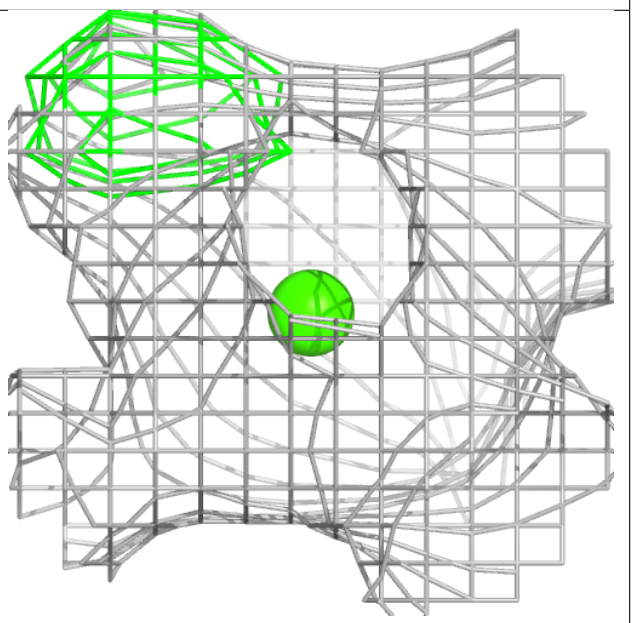


Electron density around CA C 508:

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

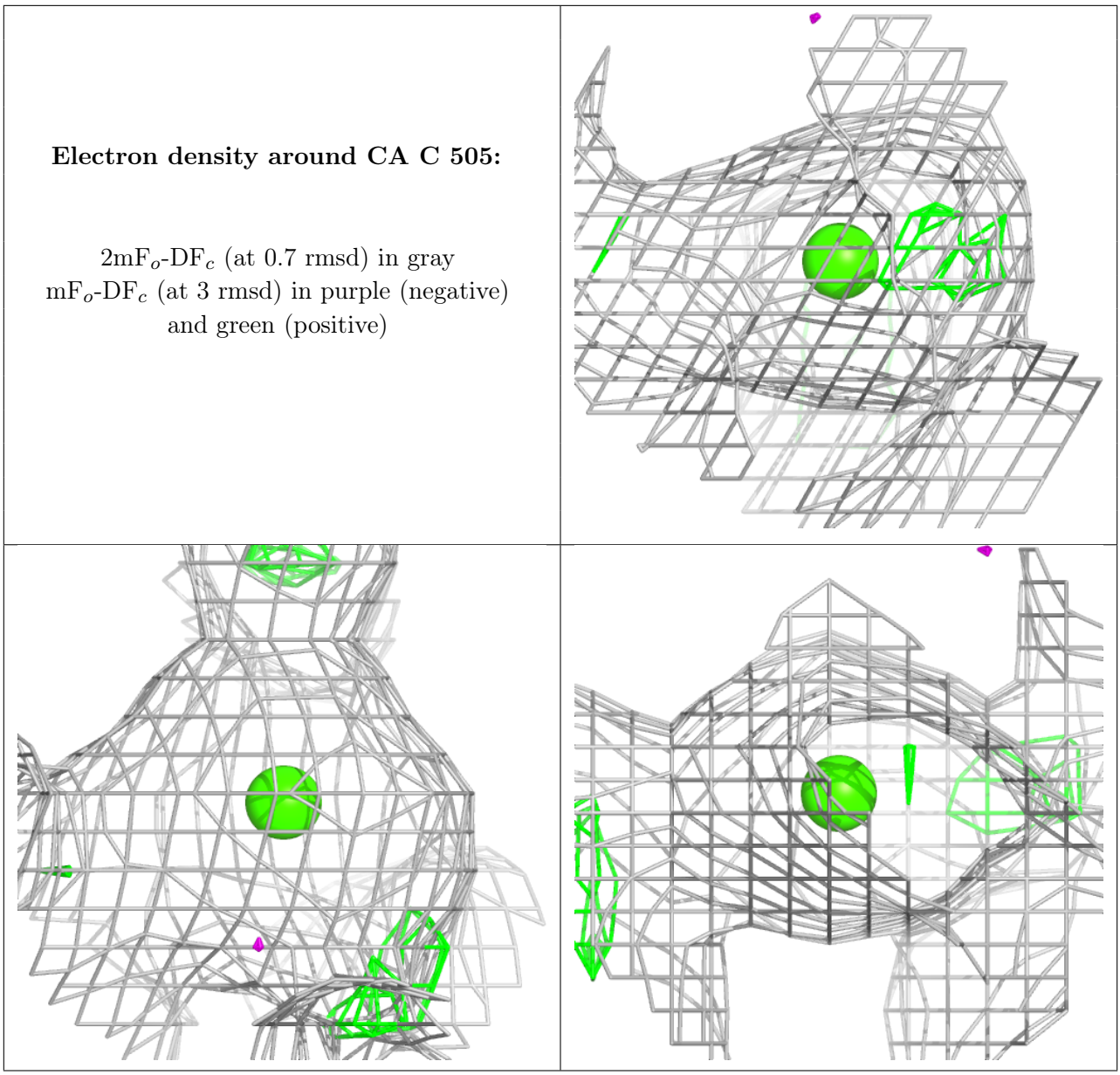






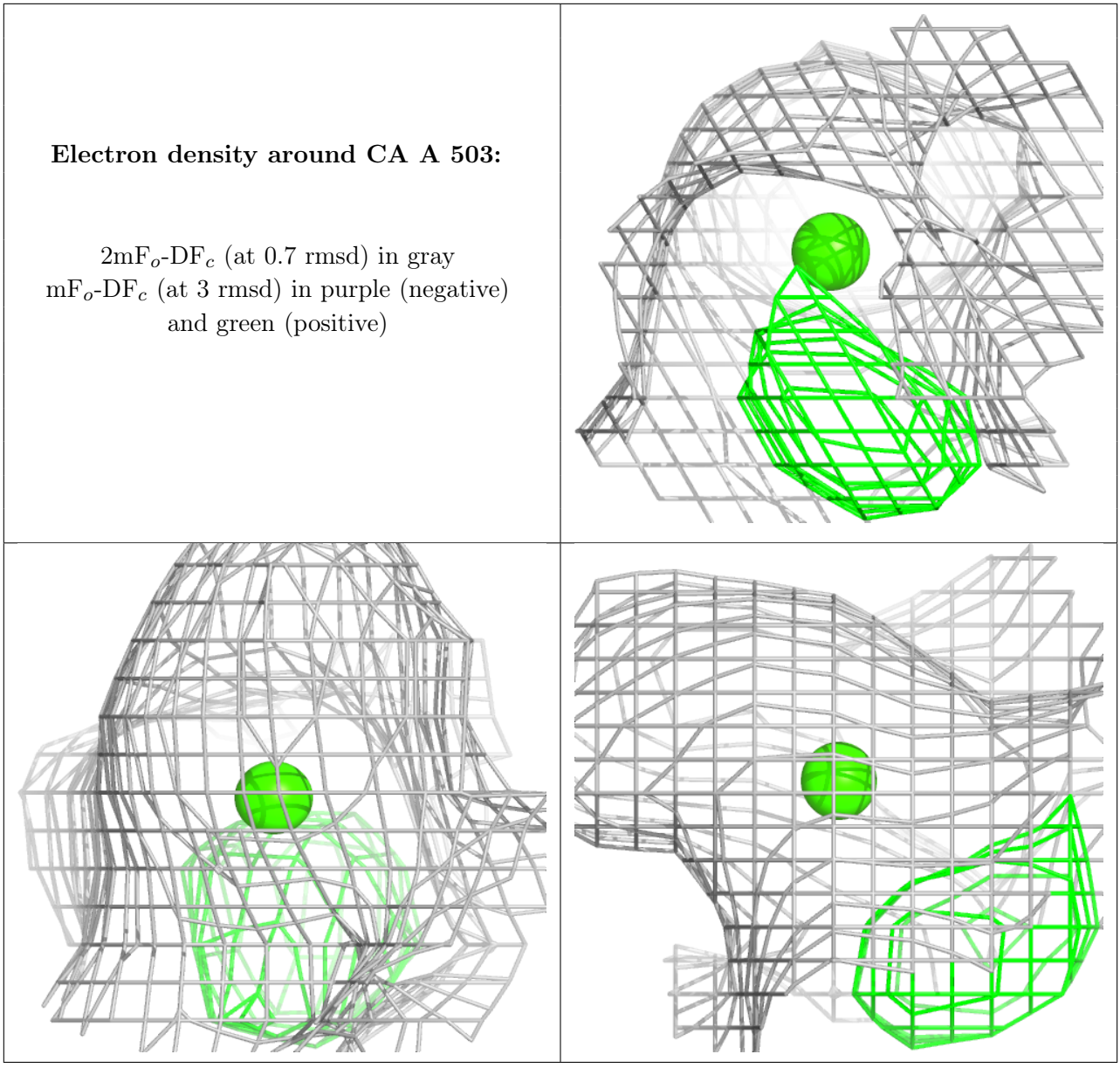
Electron density around CA C 505:

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



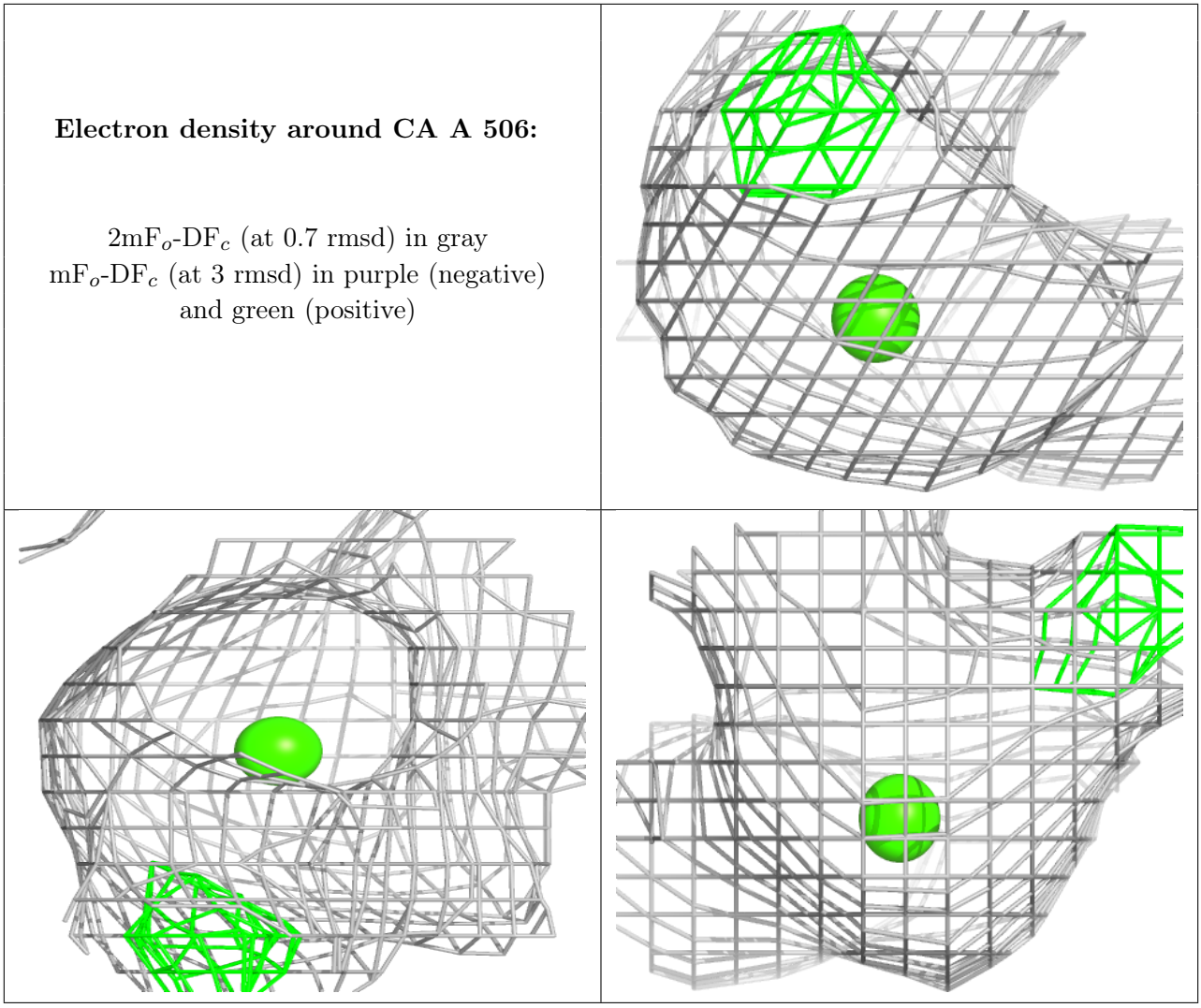
Electron density around CA A 503:

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



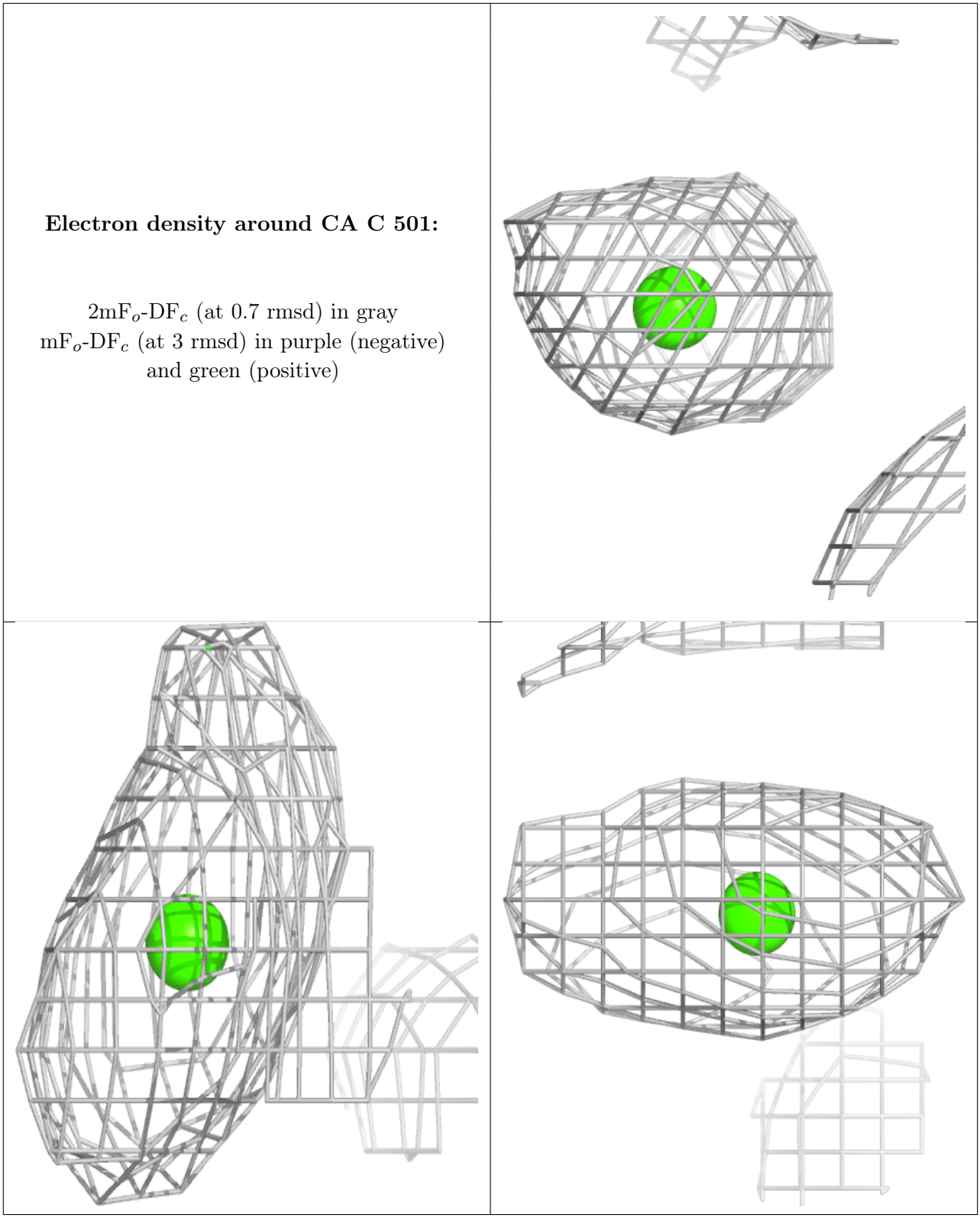
Electron density around CA A 506:

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



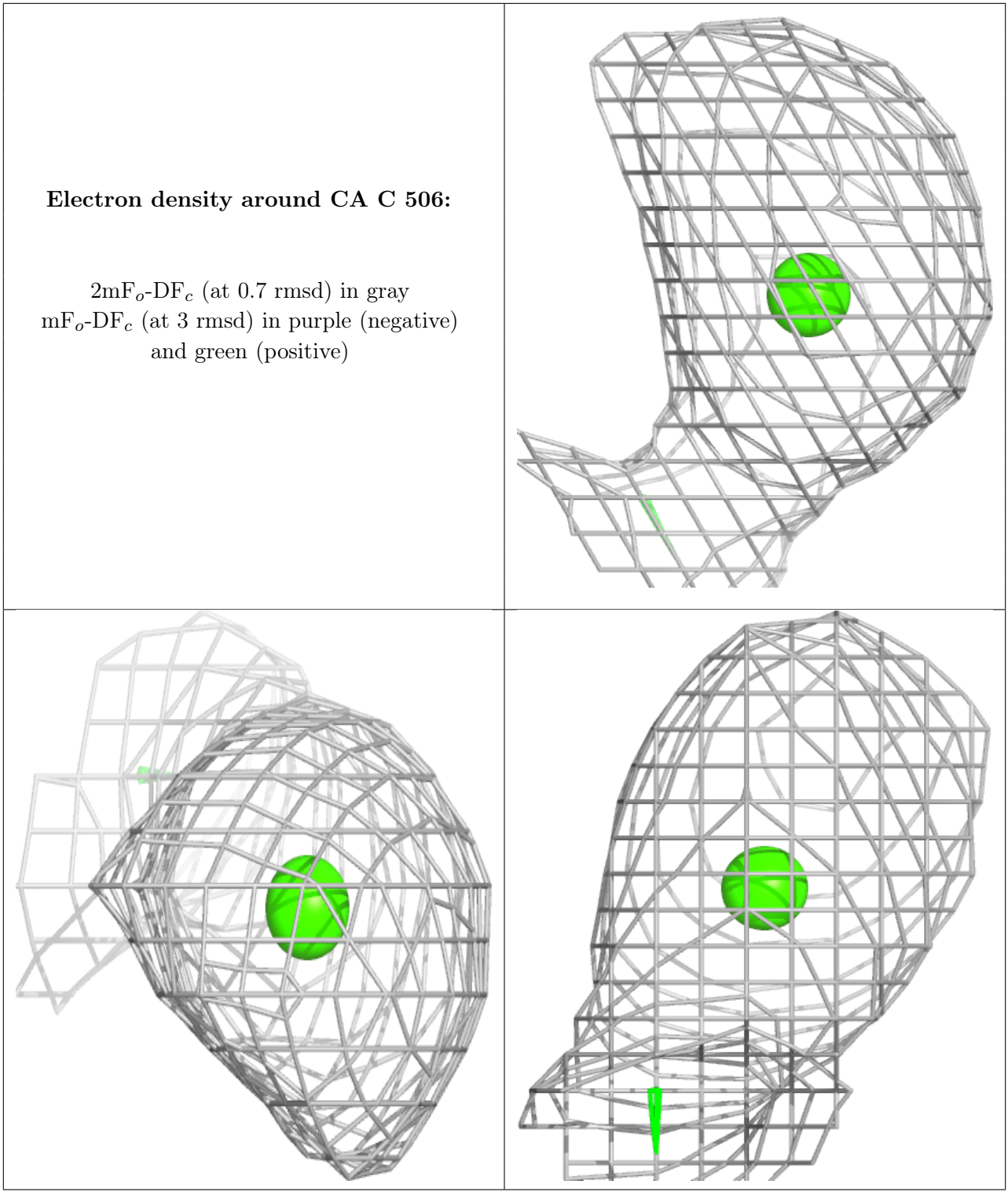
Electron density around CA C 501:

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



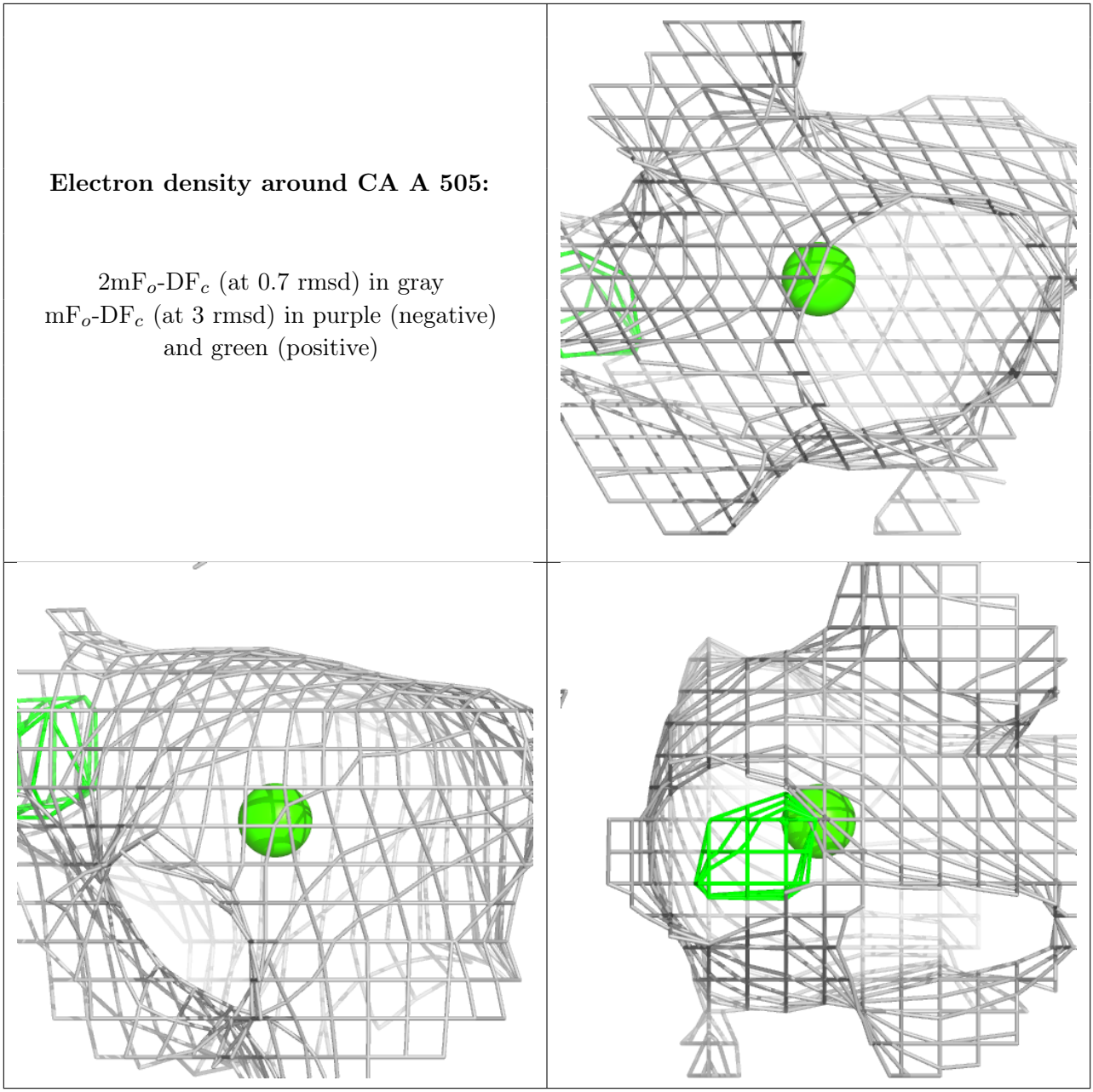
Electron density around CA C 506:

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



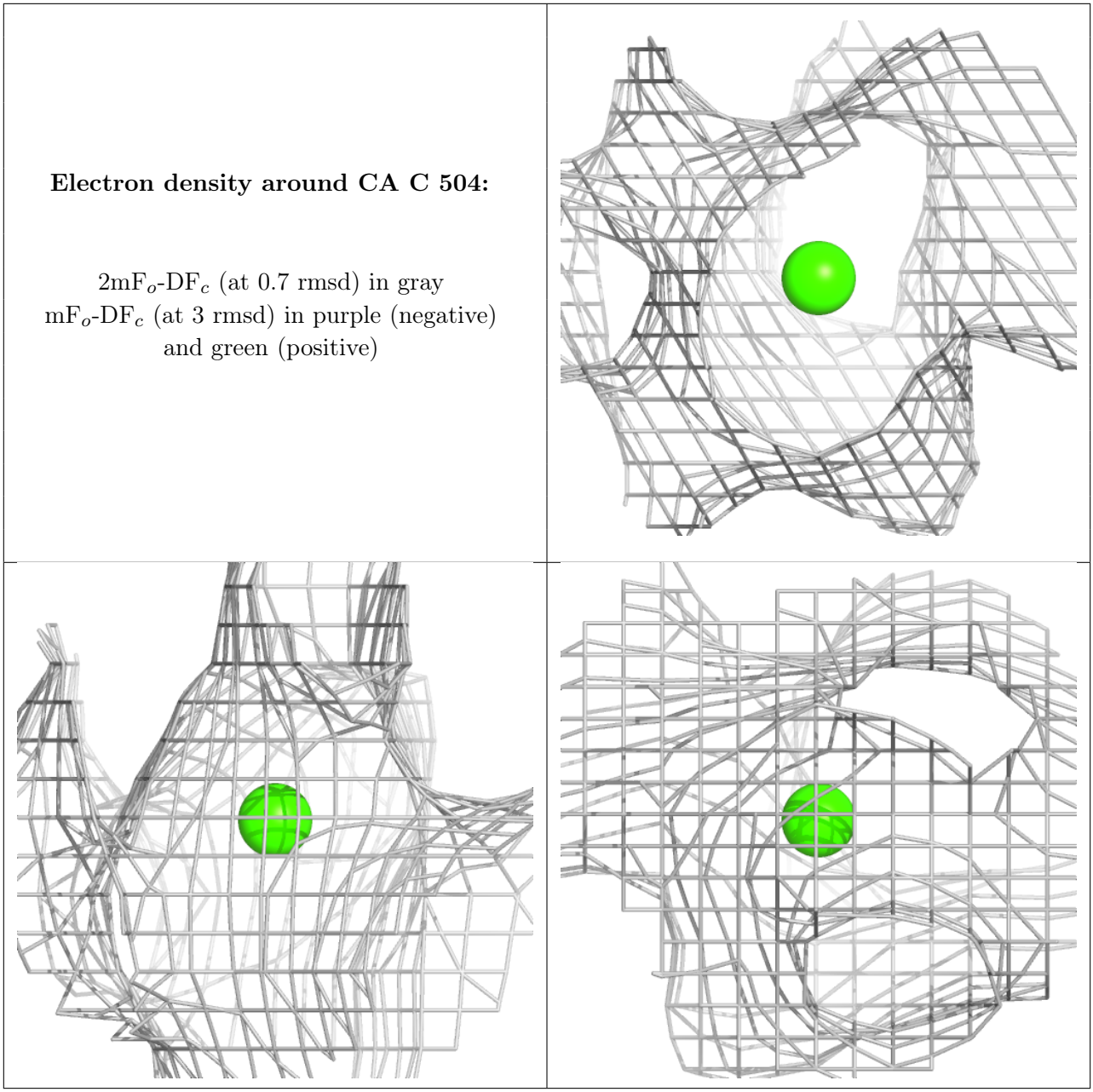
Electron density around CA A 505:

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



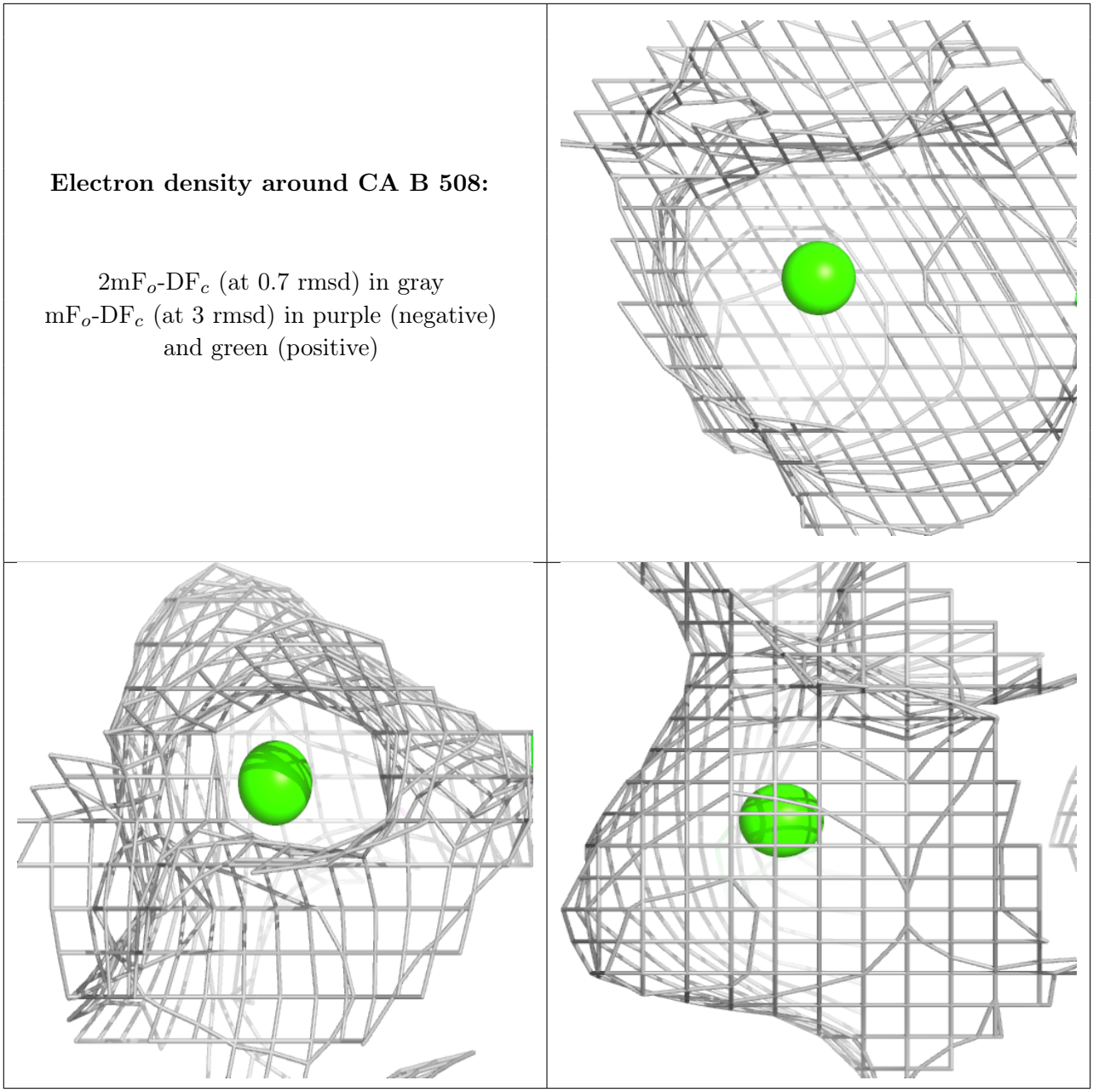
Electron density around CA C 504:

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



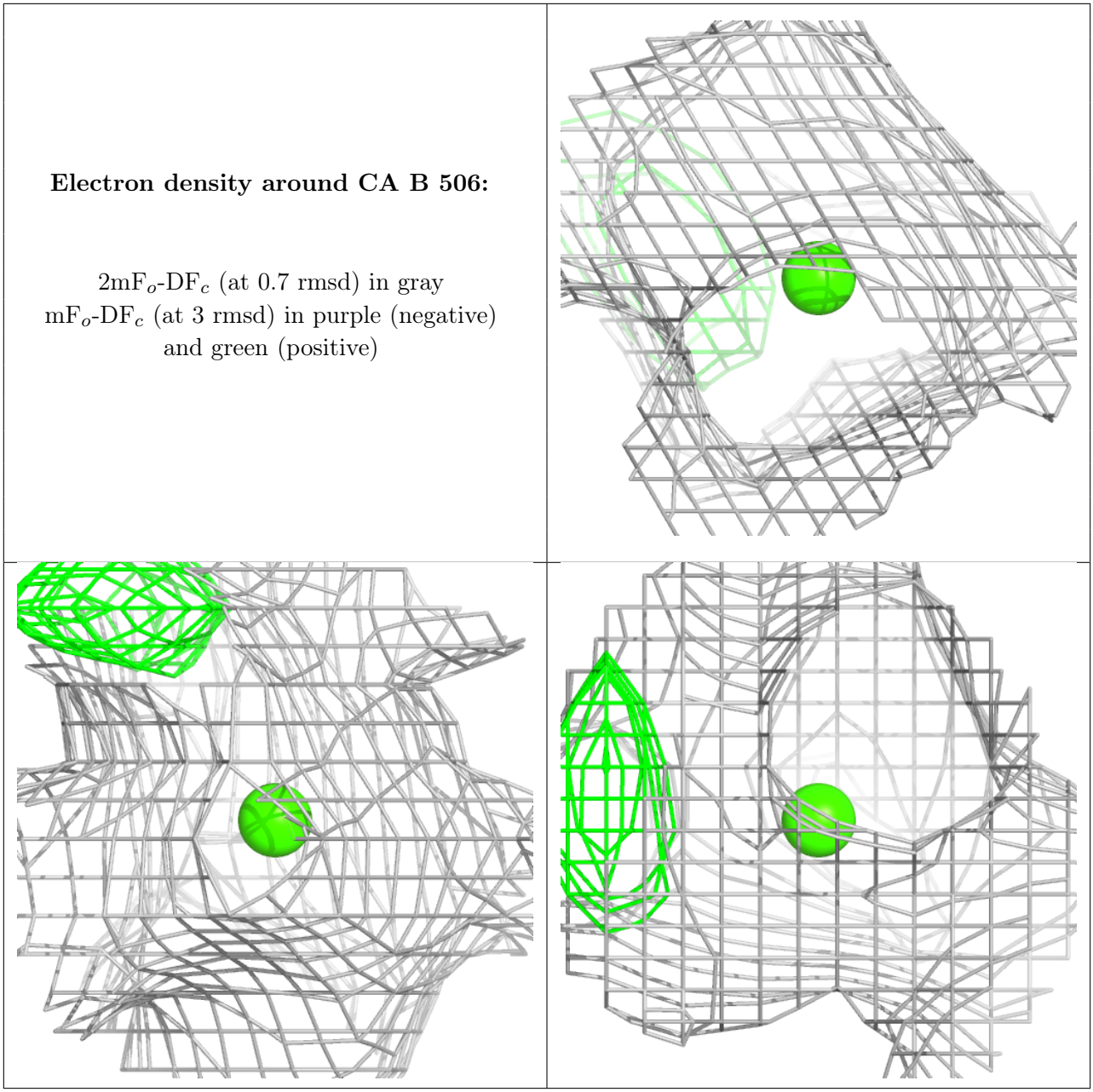
Electron density around CA B 508:

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



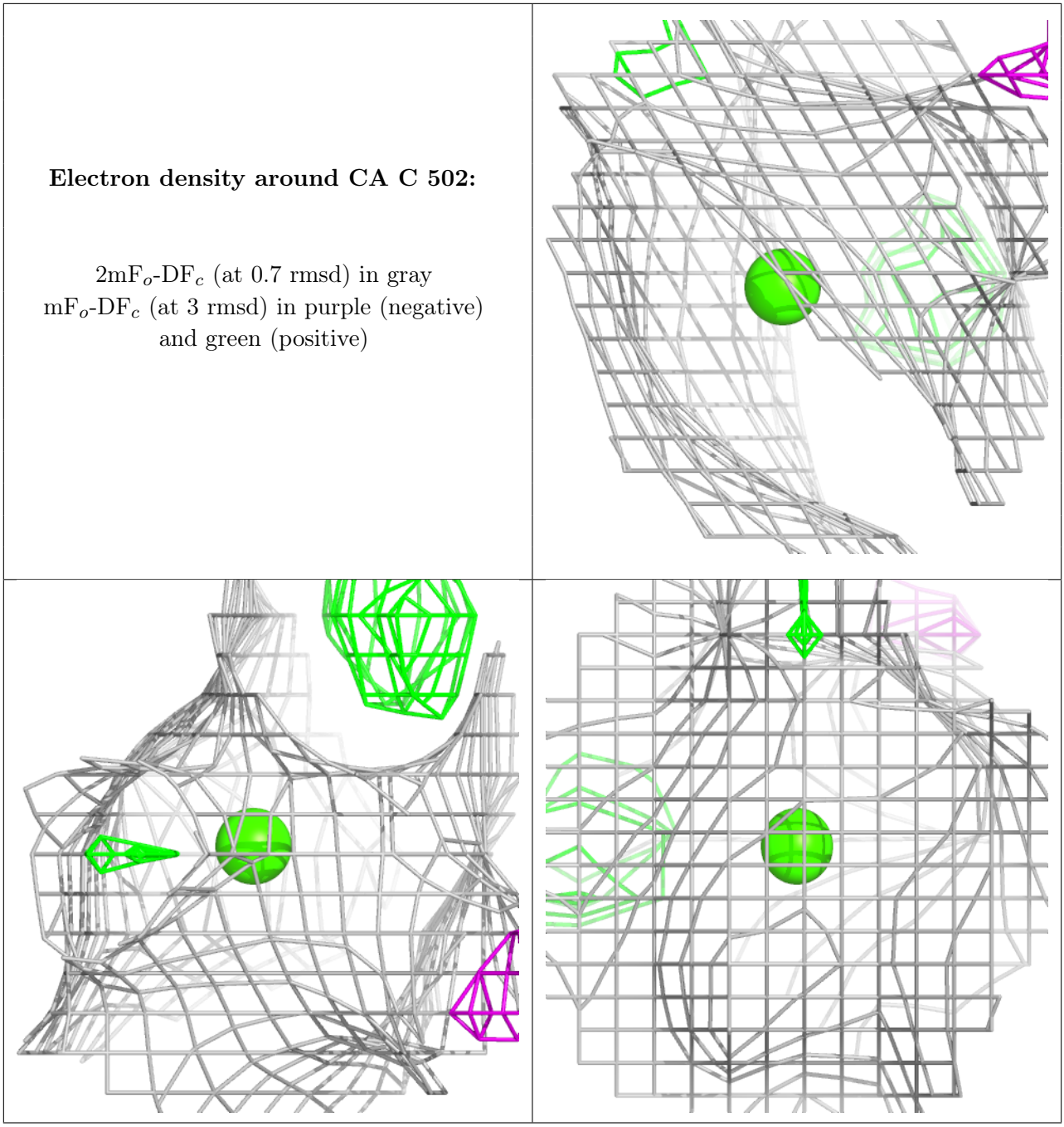
Electron density around CA B 506:

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



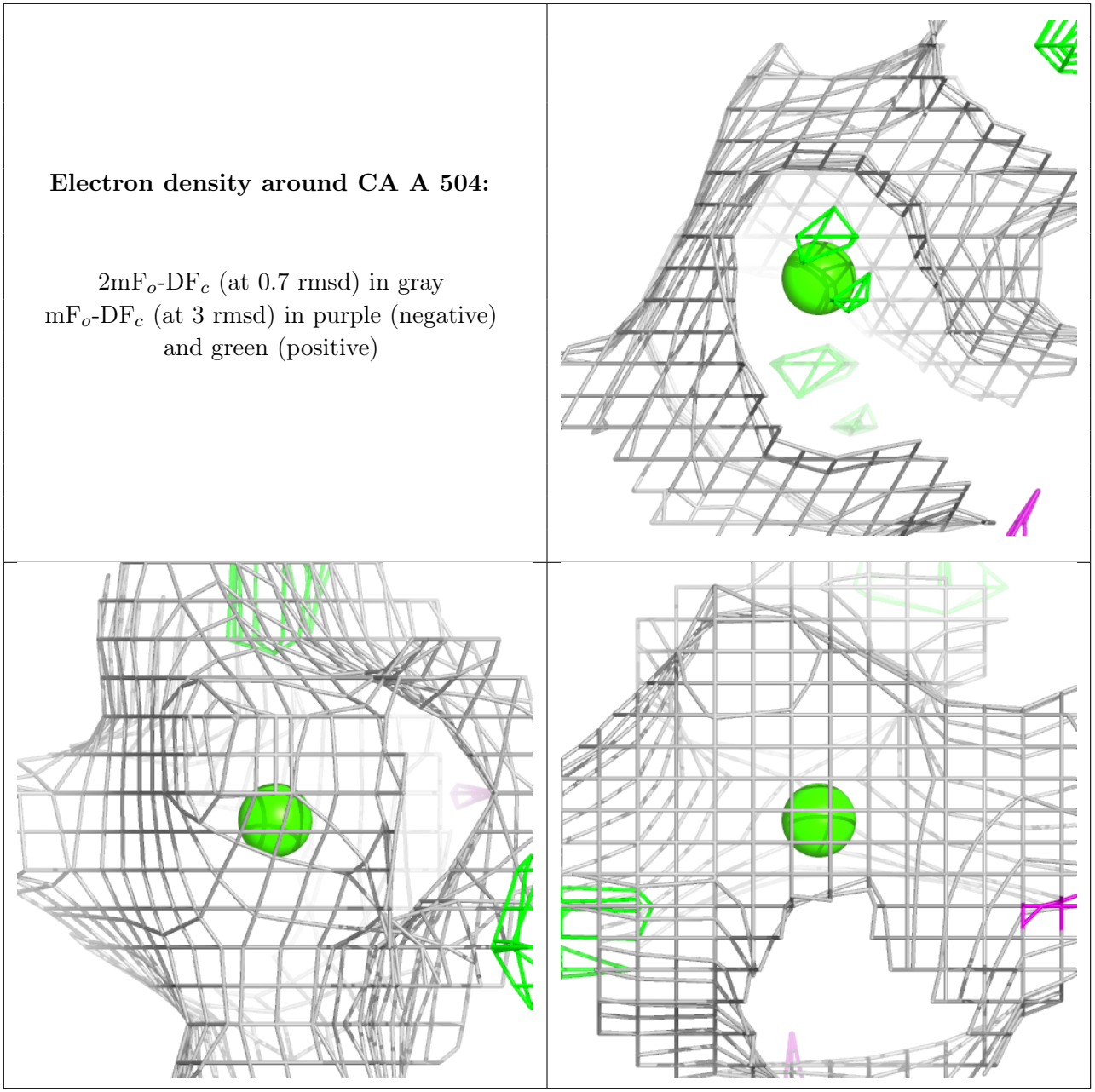
Electron density around CA C 502:

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



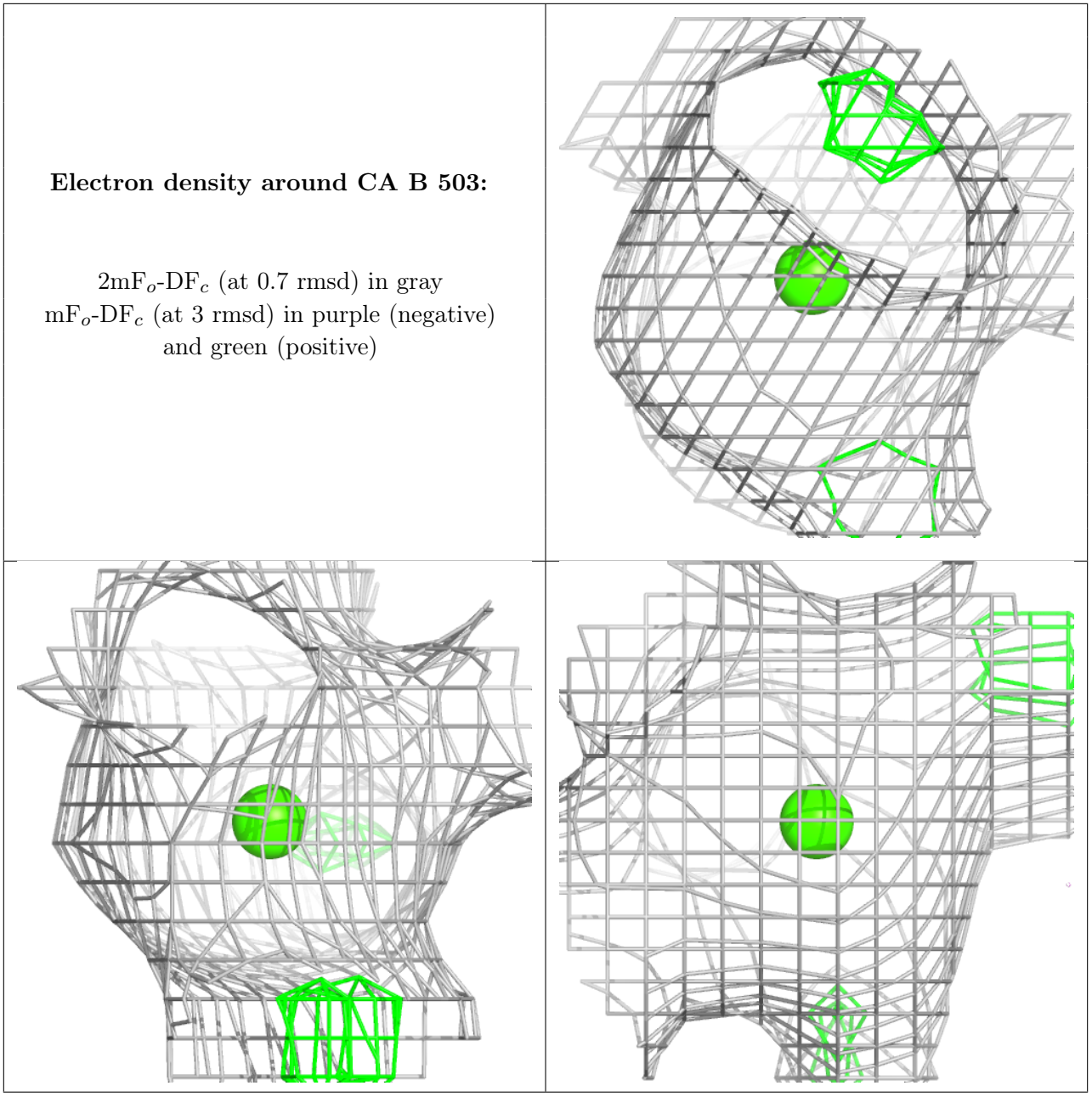
Electron density around CA A 504:

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



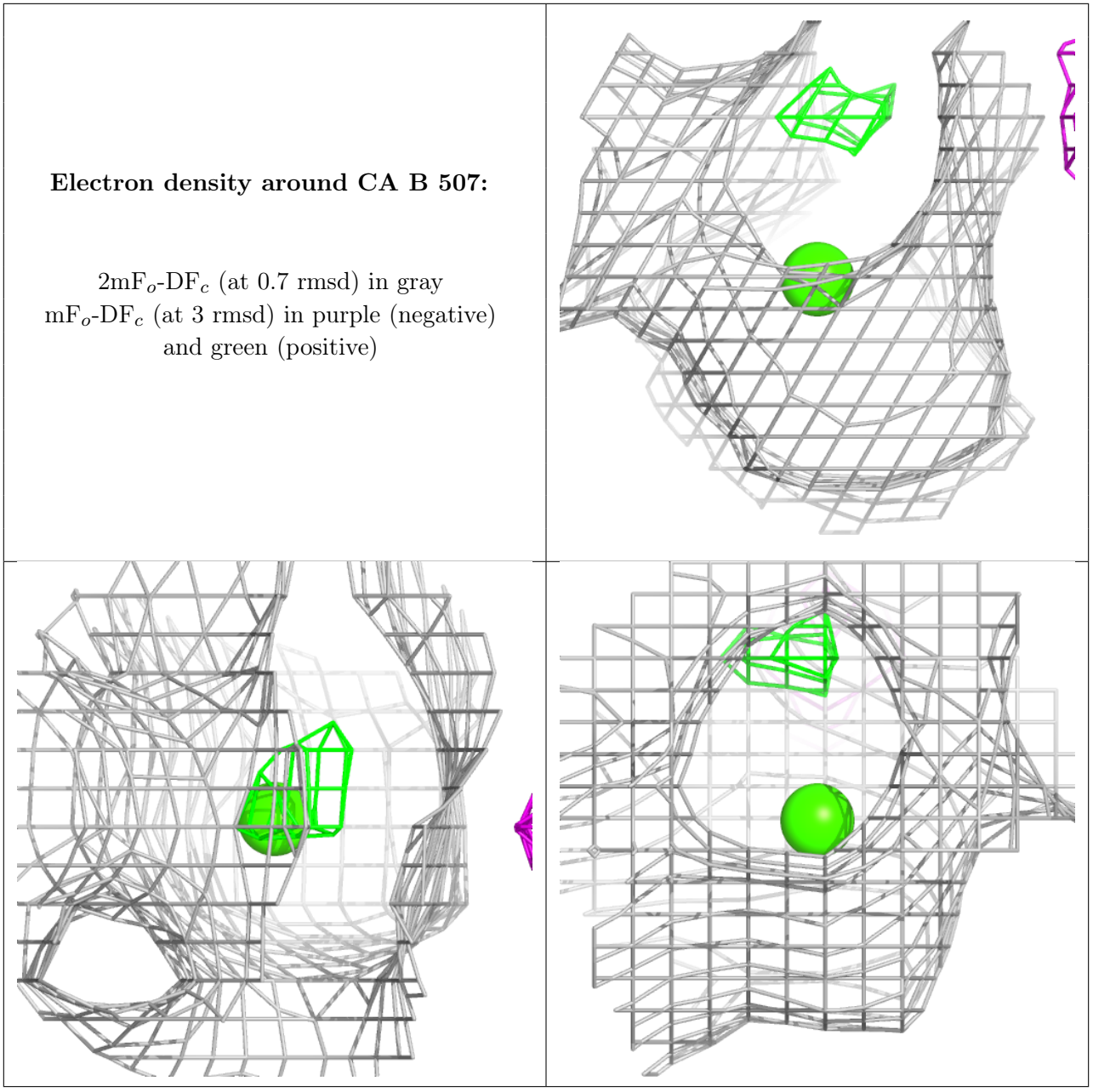
Electron density around CA B 503:

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



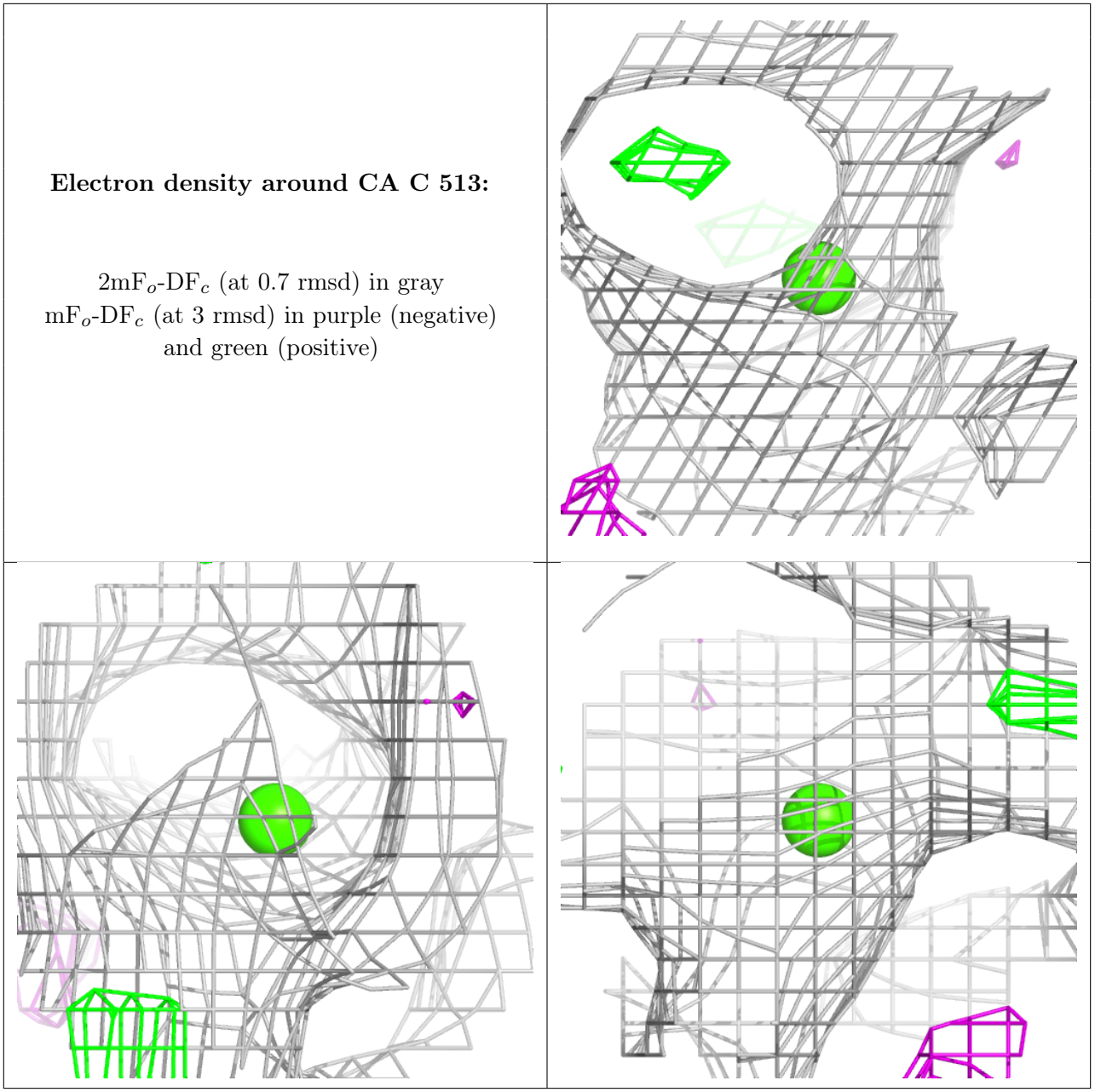
Electron density around CA B 507:

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



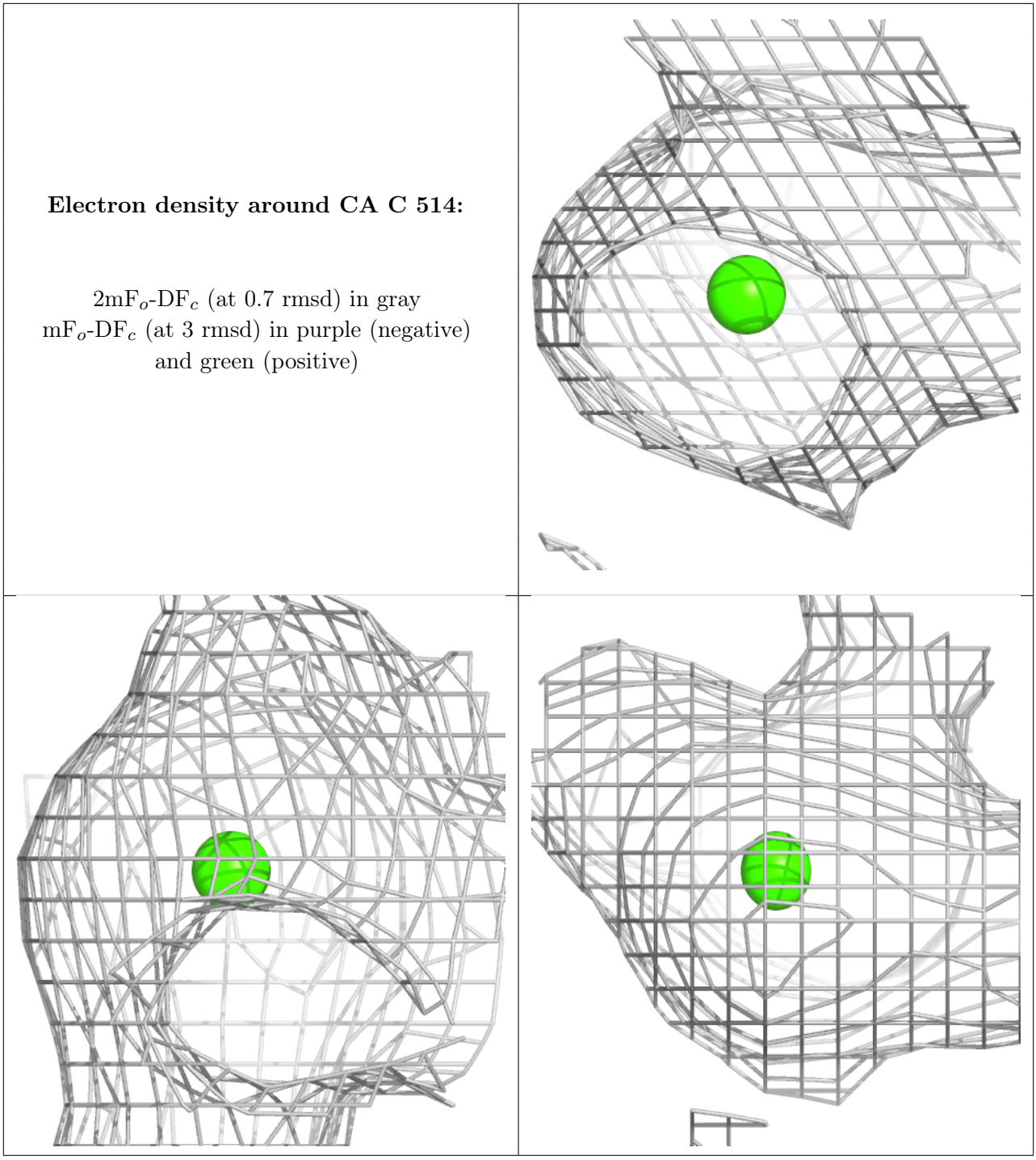
Electron density around CA C 513:

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



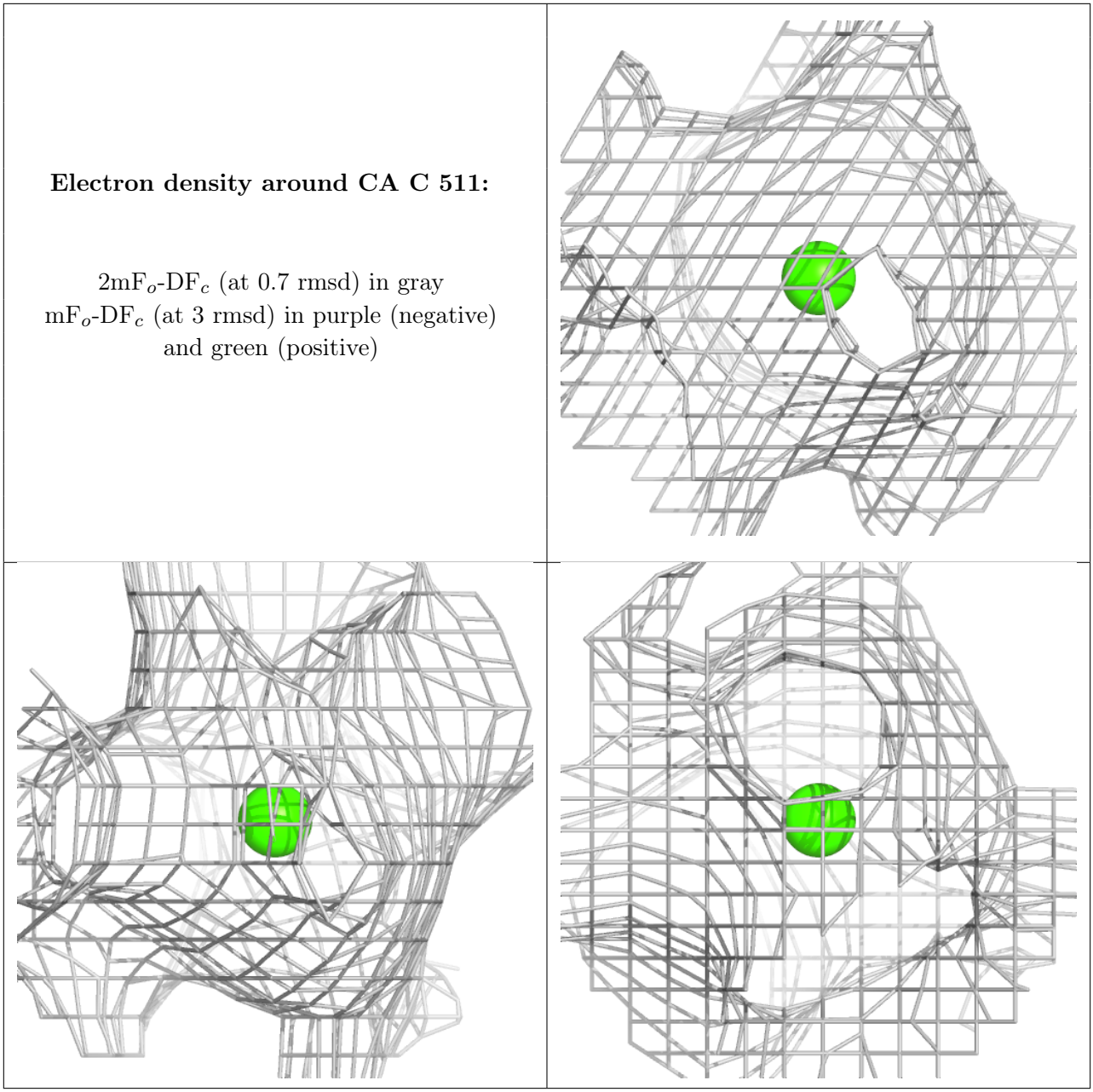
Electron density around CA C 514:

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



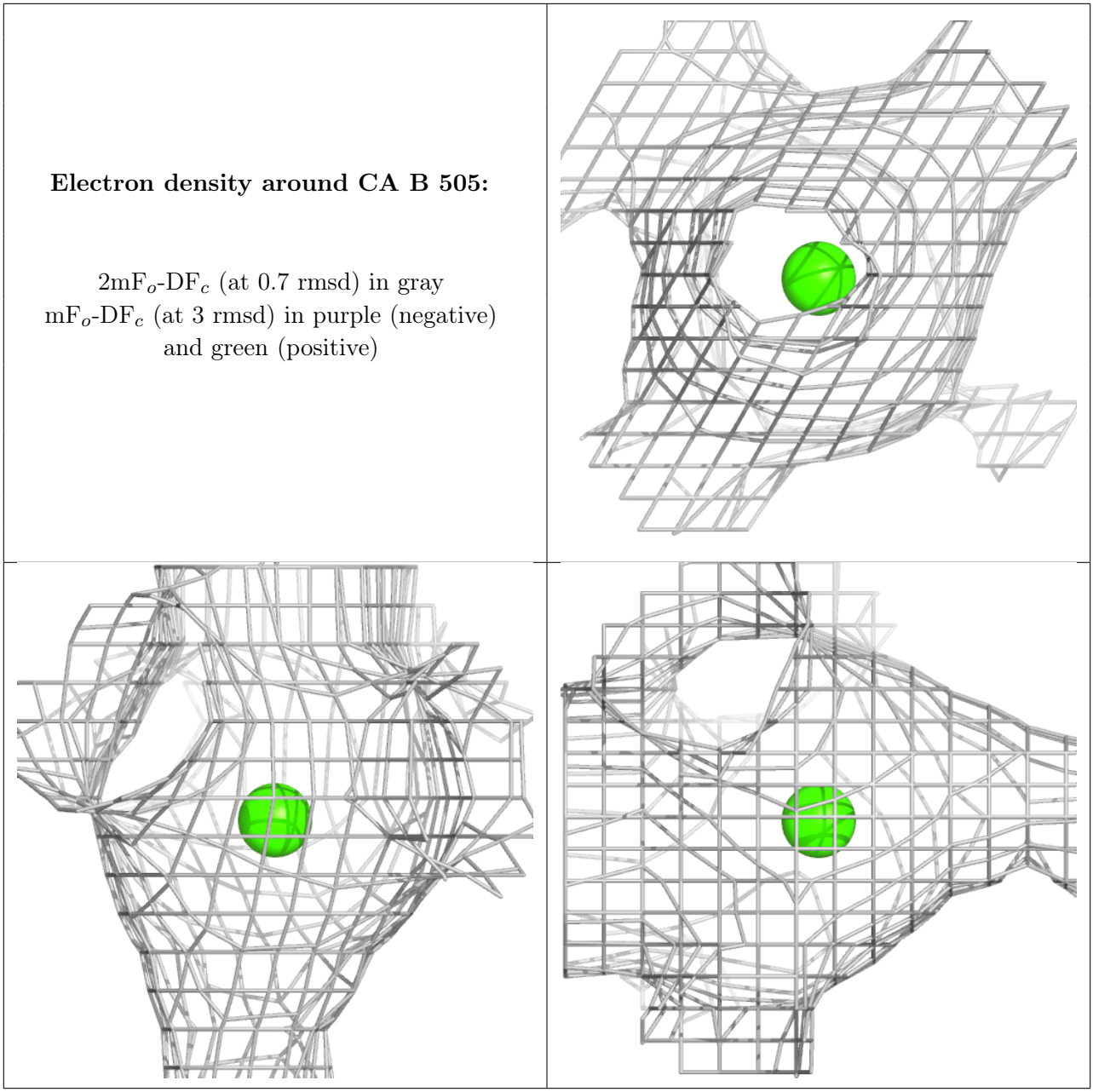
Electron density around CA C 511:

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



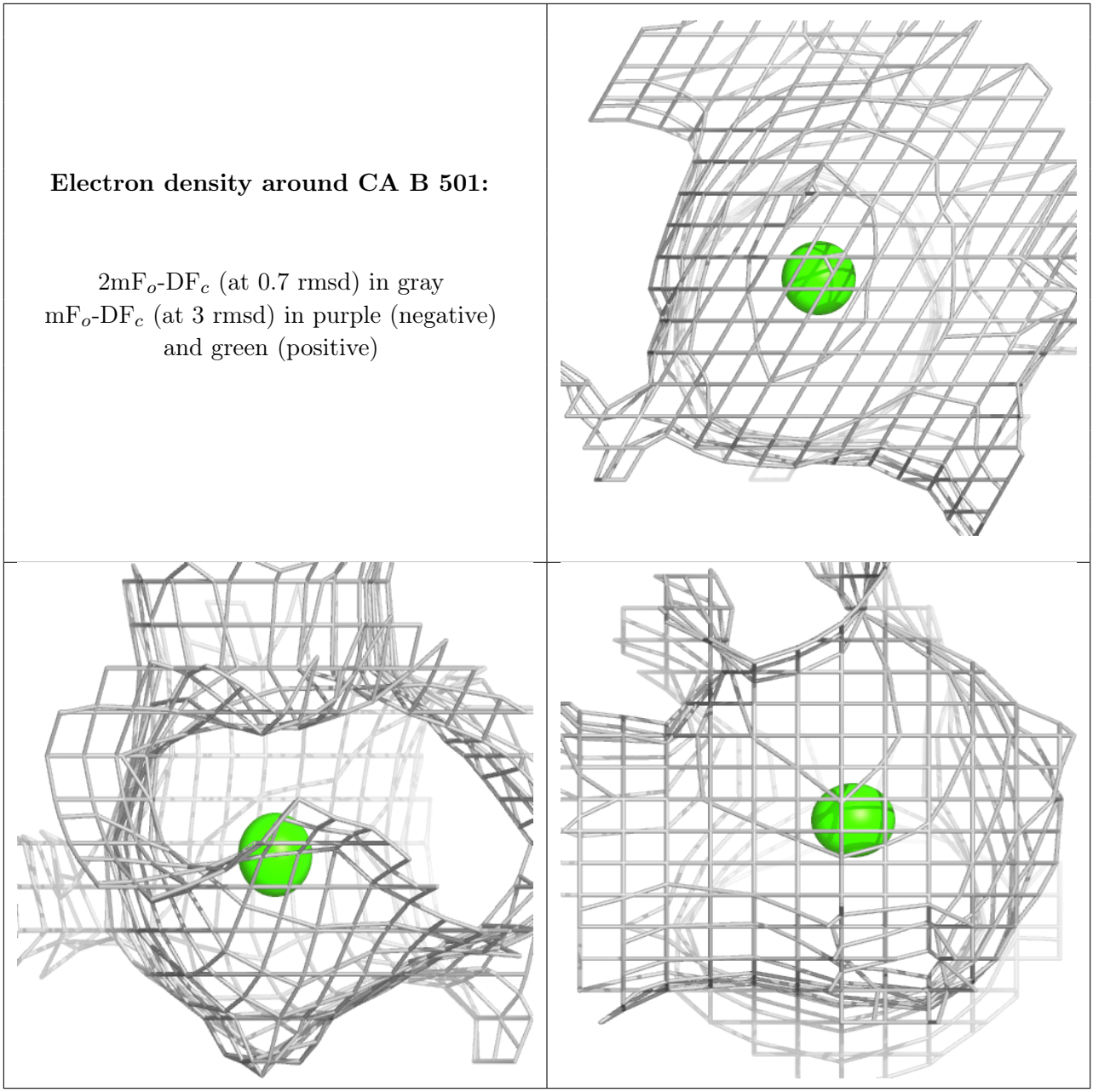
Electron density around CA B 505:

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



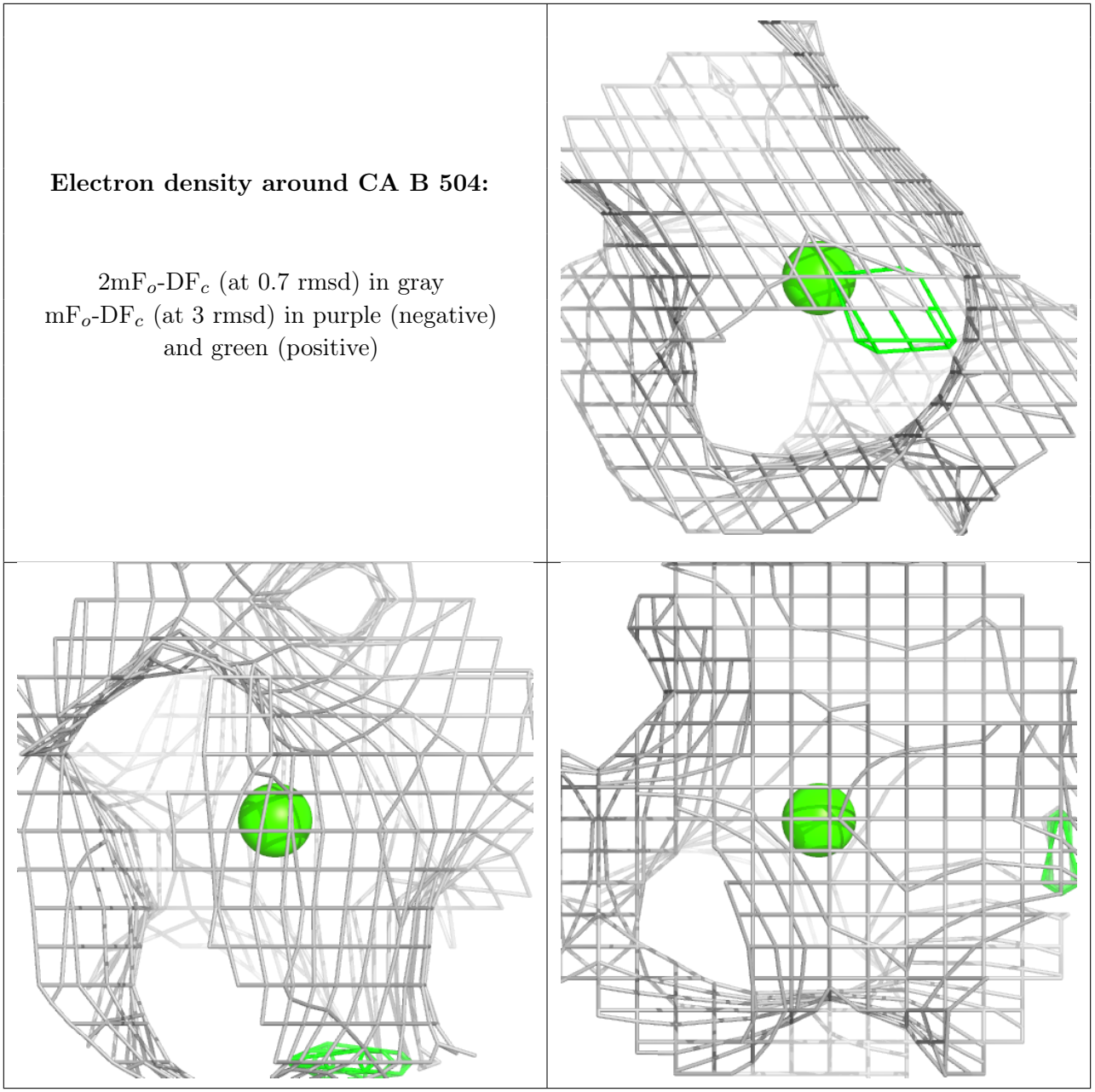
Electron density around CA B 501:

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



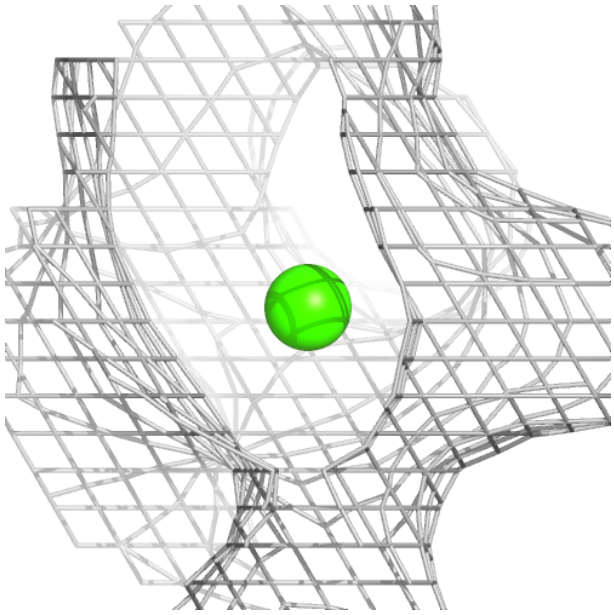
Electron density around CA B 504:

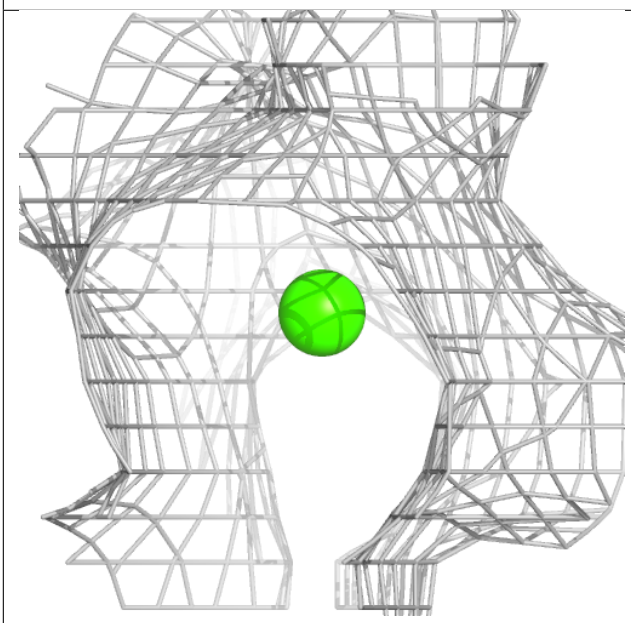
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

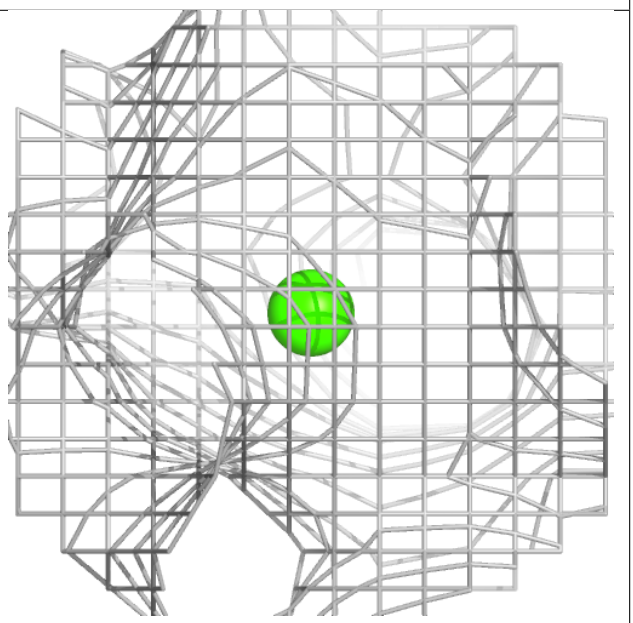


Electron density around CA B 502:

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

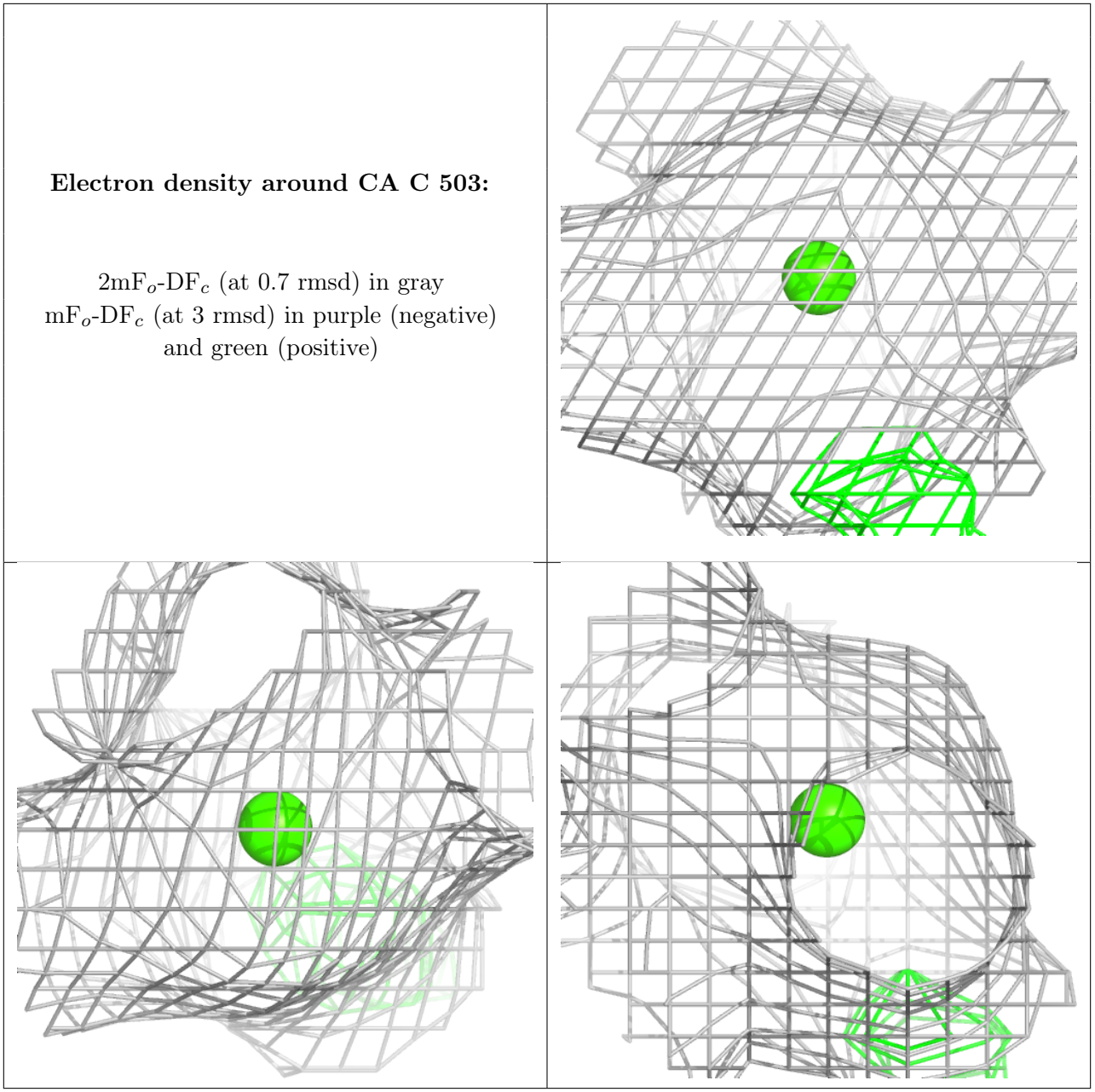






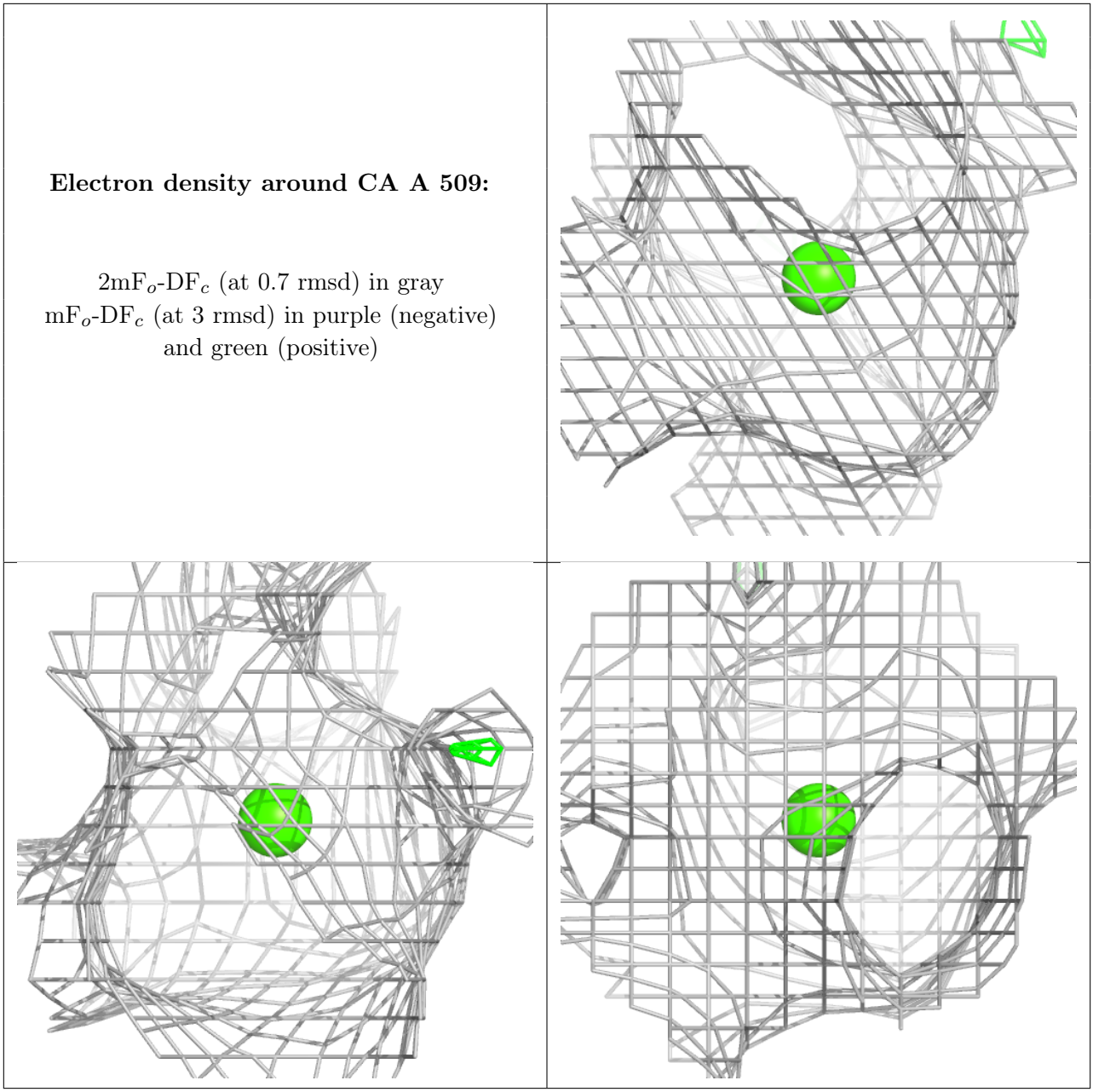
Electron density around CA C 503:

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



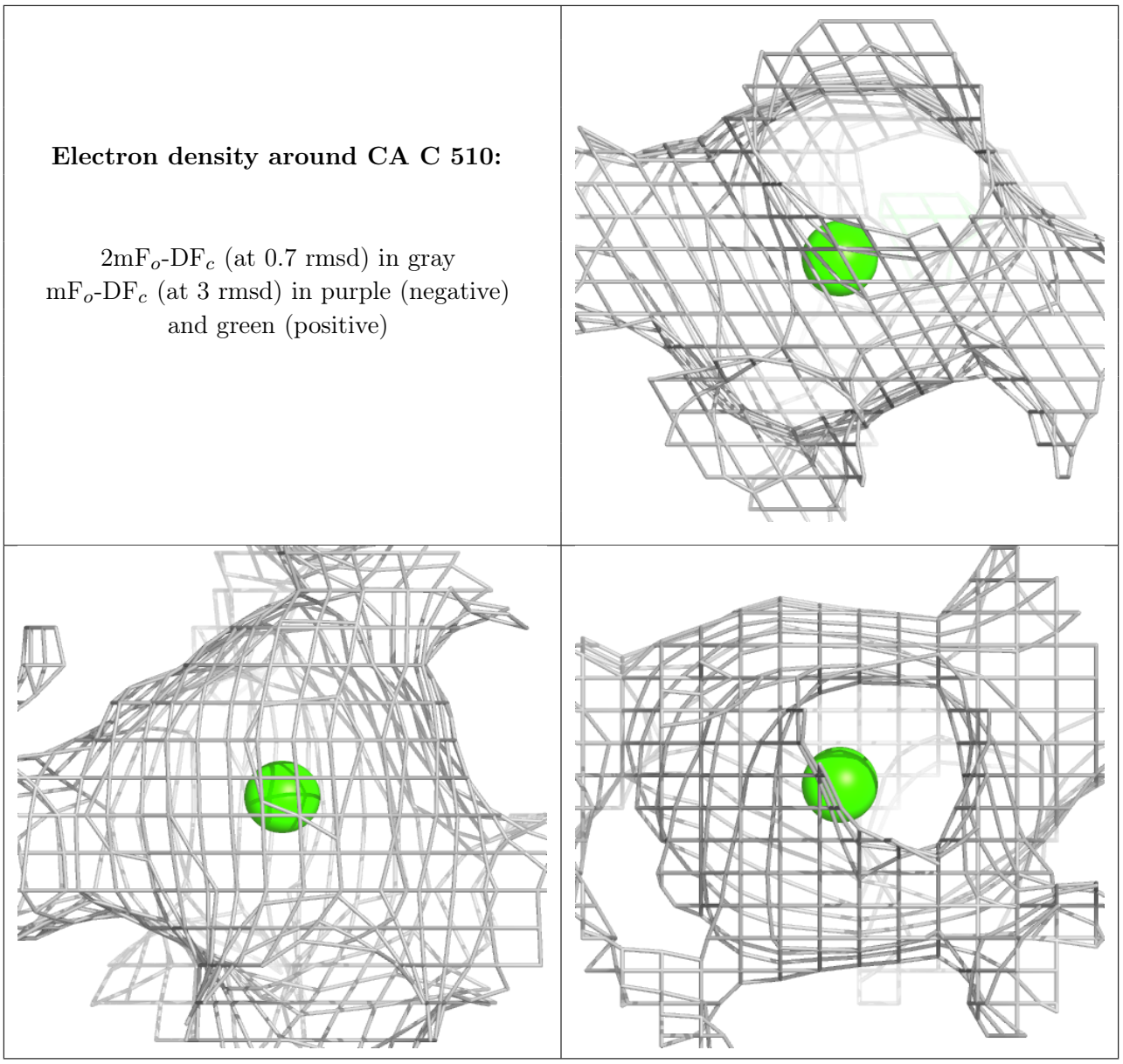
Electron density around CA A 509:

$2mF_o$-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 510:

$2mF_o$-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.