Full wwPDB X-ray Structure Validation Report ⓘ

Jan 1, 2026 – 02:07 PM EST

PDB ID	:	9P0C / pdb_00009p0c
Title	:	Crystal structure of Ca2+-bound RTX domain block V of adenylate cyclase toxin from Bordetella pertussis
Authors	:	Gudinas, A.P.; Chang, M.P.; Fernandez, D.; Mai, D.J.
Deposited on	:	2025-06-06
Resolution	:	1.70 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:

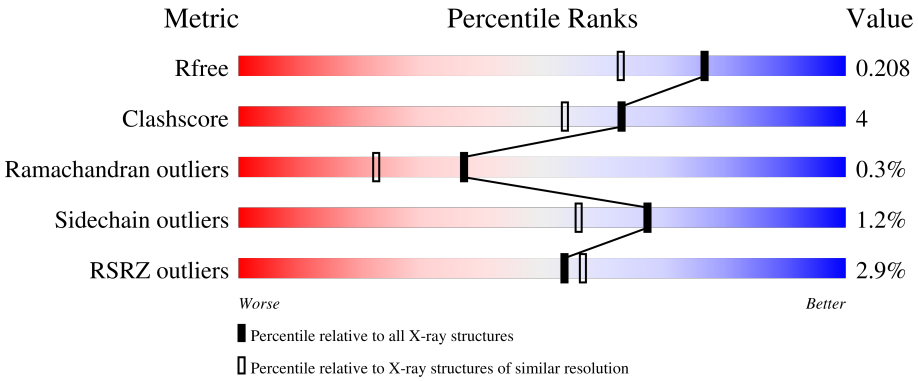
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.47

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 1.70 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	5161 (1.70-1.70)
Clashscore	180529	5671 (1.70-1.70)
Ramachandran outliers	177936	5594 (1.70-1.70)
Sidechain outliers	177891	5594 (1.70-1.70)
RSRZ outliers	164620	5159 (1.70-1.70)

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	179	2% 87% 9%
1	B	179	3% 85% 9% 6%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 2762 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 Hemolysin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	172	Total	C	N	O	S	0	0	0
			1281	780	230	269	2			
1	B	169	Total	C	N	O	S	0	0	0
			1262	770	227	263	2			

There are 54 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1510	MET	-	initiating methionine	UNP P0DKX7
A	1511	ARG	-	expression tag	UNP P0DKX7
A	1512	GLY	-	expression tag	UNP P0DKX7
A	1513	SER	-	expression tag	UNP P0DKX7
A	1514	HIS	-	expression tag	UNP P0DKX7
A	1515	HIS	-	expression tag	UNP P0DKX7
A	1516	HIS	-	expression tag	UNP P0DKX7
A	1517	HIS	-	expression tag	UNP P0DKX7
A	1518	HIS	-	expression tag	UNP P0DKX7
A	1519	HIS	-	expression tag	UNP P0DKX7
A	1520	GLY	-	cloning artifact	UNP P0DKX7
A	1521	SER	-	cloning artifact	UNP P0DKX7
A	1522	HIS	-	cloning artifact	UNP P0DKX7
A	1523	MET	-	cloning artifact	UNP P0DKX7
A	1524	GLU	-	cloning artifact	UNP P0DKX7
A	1525	LEU	-	cloning artifact	UNP P0DKX7
A	1526	GLY	-	cloning artifact	UNP P0DKX7
A	1527	ALA	-	cloning artifact	UNP P0DKX7
A	1528	SER	-	cloning artifact	UNP P0DKX7
A	1681	GLU	-	cloning artifact	UNP P0DKX7
A	1682	PHE	-	cloning artifact	UNP P0DKX7
A	1683	THR	-	cloning artifact	UNP P0DKX7
A	1684	SER	-	cloning artifact	UNP P0DKX7
A	1685	LEU	-	cloning artifact	UNP P0DKX7
A	1686	GLU	-	cloning artifact	UNP P0DKX7

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1687	LYS	-	cloning artifact	UNP P0DKX7
A	1688	ASN	-	cloning artifact	UNP P0DKX7
B	1510	MET	-	initiating methionine	UNP P0DKX7
B	1511	ARG	-	expression tag	UNP P0DKX7
B	1512	GLY	-	expression tag	UNP P0DKX7
B	1513	SER	-	expression tag	UNP P0DKX7
B	1514	HIS	-	expression tag	UNP P0DKX7
B	1515	HIS	-	expression tag	UNP P0DKX7
B	1516	HIS	-	expression tag	UNP P0DKX7
B	1517	HIS	-	expression tag	UNP P0DKX7
B	1518	HIS	-	expression tag	UNP P0DKX7
B	1519	HIS	-	expression tag	UNP P0DKX7
B	1520	GLY	-	cloning artifact	UNP P0DKX7
B	1521	SER	-	cloning artifact	UNP P0DKX7
B	1522	HIS	-	cloning artifact	UNP P0DKX7
B	1523	MET	-	cloning artifact	UNP P0DKX7
B	1524	GLU	-	cloning artifact	UNP P0DKX7
B	1525	LEU	-	cloning artifact	UNP P0DKX7
B	1526	GLY	-	cloning artifact	UNP P0DKX7
B	1527	ALA	-	cloning artifact	UNP P0DKX7
B	1528	SER	-	cloning artifact	UNP P0DKX7
B	1681	GLU	-	cloning artifact	UNP P0DKX7
B	1682	PHE	-	cloning artifact	UNP P0DKX7
B	1683	THR	-	cloning artifact	UNP P0DKX7
B	1684	SER	-	cloning artifact	UNP P0DKX7
B	1685	LEU	-	cloning artifact	UNP P0DKX7
B	1686	GLU	-	cloning artifact	UNP P0DKX7
B	1687	LYS	-	cloning artifact	UNP P0DKX7
B	1688	ASN	-	cloning artifact	UNP P0DKX7

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	8	Total Ca 8 8	0	0
2	B	8	Total Ca 8 8	0	0

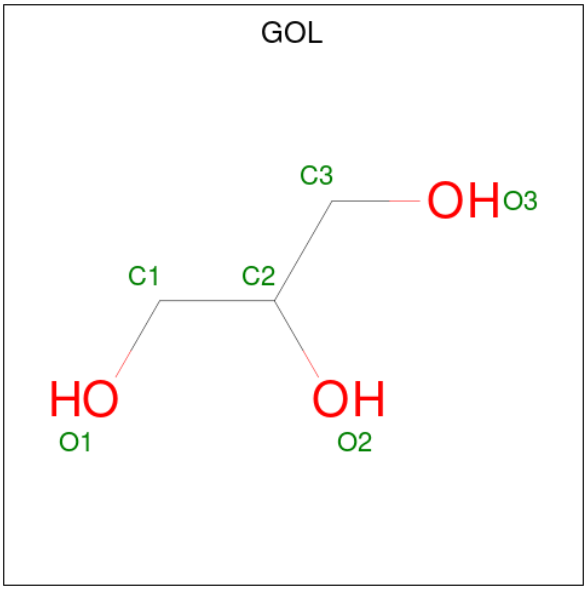
- Molecule 3 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total Zn 1 1	0	0
3	B	3	Total Zn 3 3	0	0

- Molecule 4 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total Cl 1 1	0	0

- Molecule 5 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total C O 6 3 3	0	0
5	B	1	Total C O 6 3 3	0	0

- Molecule 6 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	96	Total O 96 96	0	0
6	B	90	Total O 90 90	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: Hemolysin

Chain A:

• Molecule 1: Hemolysin

Chain B:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	37.72Å 66.76Å 59.07Å 90.00° 93.23° 90.00°	Depositor
Resolution (Å)	30.66 – 1.70 30.66 – 1.70	Depositor EDS
% Data completeness (in resolution range)	98.0 (30.66-1.70) 98.0 (30.66-1.70)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.92 (at 1.70Å)	Xtriage
Refinement program	REFMAC 5.8.0415	Depositor
R, R_{free}	0.171 , 0.208 0.171 , 0.208	Depositor DCC
R_{free} test set	1581 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	15.6	Xtriage
Anisotropy	0.693	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.39 , 38.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.52$, $< L^2 > = 0.35$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.97	EDS
Total number of atoms	2762	wwPDB-VP
Average B, all atoms (Å^2)	24.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 13.90% 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, CL, GOL, ZN

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	0.60	0/1306	0.98	1/1771 (0.1%)
1	B	0.62	0/1287	1.05	0/1745
All	All	0.61	0/2593	1.02	1/3516 (0.0%)

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	B	0	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1575	ASP	CB-CA-C	5.14	120.65	110.42

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	1632	ARG	Sidechain

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	1281	0	1148	9	0
1	B	1262	0	1131	11	0
2	A	8	0	0	0	0
2	B	8	0	0	0	0
3	A	1	0	0	0	0
3	B	3	0	0	0	0
4	A	1	0	0	0	0
5	B	12	0	16	0	0
6	A	96	0	0	3	0
6	B	90	0	0	1	0
All	All	2762	0	2295	19	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 4.

All (19) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1513:SER:OG	1:A:1525:LEU:HB3	1.91	0.70
1:A:1515:HIS:CE1	1:A:1523:MET:HG2	2.32	0.64
1:B:1525:LEU:HD11	6:B:1874:HOH:O	2.00	0.62
1:A:1559:GLY:HA2	6:A:1811:HOH:O	2.00	0.61
1:B:1680:ASP:HB3	1:B:1682:PHE:O	2.13	0.49
1:B:1678:TYR:HB3	1:B:1679:PRO:HD3	1.95	0.48
1:B:1680:ASP:O	1:B:1681:GLU:HB3	2.13	0.48
1:A:1614:ASN:HB3	1:B:1537:ILE:HB	1.98	0.45
1:A:1607:GLY:O	1:A:1654:GLU:HG2	2.16	0.45
1:A:1519:HIS:CD2	6:A:1849:HOH:O	2.70	0.44
1:B:1680:ASP:O	1:B:1681:GLU:CB	2.65	0.44
1:A:1680:ASP:HB2	6:A:1852:HOH:O	2.18	0.43
1:B:1592:PHE:O	1:B:1613:ILE:HA	2.19	0.43
1:B:1611:ILE:HG13	1:B:1653:VAL:HG11	1.99	0.43
1:A:1611:ILE:HG13	1:A:1653:VAL:HG11	2.00	0.42
1:B:1619:GLN:HG2	1:B:1619:GLN:O	2.19	0.42
1:B:1612:ARG:HD3	1:B:1657:HIS:HB2	2.02	0.41
1:B:1593:GLY:HA2	1:B:1614:ASN:OD1	2.21	0.41
1:A:1592:PHE:O	1:A:1613:ILE:HA	2.22	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	170/179 (95%)	162 (95%)	8 (5%)	0	100 100
1	B	167/179 (93%)	157 (94%)	9 (5%)	1 (1%)	22 10
All	All	337/358 (94%)	319 (95%)	17 (5%)	1 (0%)	37 23

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	1681	GLU

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	127/133 (96%)	124 (98%)	3 (2%)	44 27
1	B	124/133 (93%)	124 (100%)	0	100 100
All	All	251/266 (94%)	248 (99%)	3 (1%)	67 56

All (3) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1660	ASN
1	A	1680	ASP
1	A	1683	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such

sidechains are listed below:

Mol	Chain	Res	Type
1	A	1608	HIS
1	A	1625	GLN
1	A	1627	ASN
1	B	1585	GLN
1	B	1619	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 23 ligands modelled in this entry, 21 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
5	GOL	B	1713	-	5,5,5	0.12	0	5,5,5	0.23	0
5	GOL	B	1712	-	5,5,5	0.14	0	5,5,5	0.34	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	GOL	B	1713	-	-	0/4/4/4	-
5	GOL	B	1712	-	-	1/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	B	1712	GOL	O2-C2-C3-O3

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	172/179 (96%)	-0.01	4 (2%) 61 64	14, 21, 42, 67	0
1	B	169/179 (94%)	-0.03	6 (3%) 46 49	13, 20, 47, 75	0
All	All	341/358 (95%)	-0.02	10 (2%) 54 57	13, 20, 44, 75	0

All (10) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	1682	PHE	3.9
1	A	1513	SER	3.2
1	B	1681	GLU	3.1
1	B	1515	HIS	2.9
1	A	1684	SER	2.8
1	B	1680	ASP	2.6
1	A	1520	GLY	2.5
1	A	1660	ASN	2.3
1	B	1678	TYR	2.1
1	B	1679	PRO	2.0

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

There are no oligosaccharides in this entry.

6.4 Ligands (i)

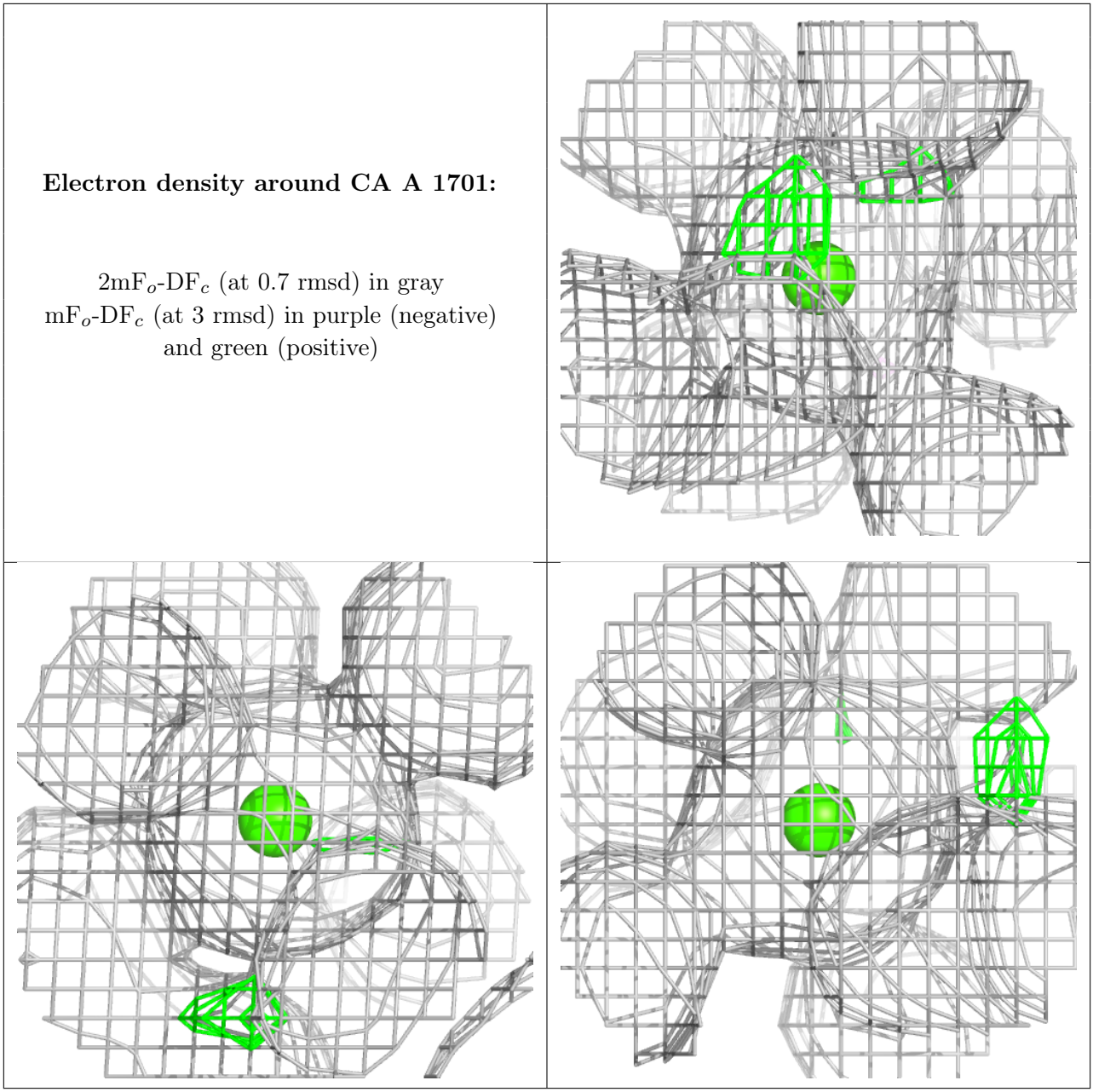
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' 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
5	GOL	B	1712	6/6	0.67	0.20	49,54,56,58	0
5	GOL	B	1713	6/6	0.81	0.16	36,37,39,41	0
4	CL	A	1710	1/1	0.87	0.15	60,60,60,60	0
3	ZN	A	1709	1/1	0.99	0.02	22,22,22,22	0
3	ZN	B	1709	1/1	0.99	0.02	21,21,21,21	0
2	CA	A	1701	1/1	0.99	0.03	17,17,17,17	0
2	CA	A	1702	1/1	0.99	0.02	16,16,16,16	0
2	CA	B	1708	1/1	0.99	0.02	18,18,18,18	0
2	CA	B	1701	1/1	1.00	0.02	16,16,16,16	0
2	CA	B	1702	1/1	1.00	0.01	14,14,14,14	0
2	CA	B	1703	1/1	1.00	0.01	15,15,15,15	0
2	CA	B	1704	1/1	1.00	0.02	16,16,16,16	0
2	CA	B	1705	1/1	1.00	0.01	15,15,15,15	0
2	CA	B	1706	1/1	1.00	0.03	14,14,14,14	0
2	CA	B	1707	1/1	1.00	0.01	14,14,14,14	0
2	CA	A	1703	1/1	1.00	0.01	16,16,16,16	0
2	CA	A	1704	1/1	1.00	0.01	15,15,15,15	0
2	CA	A	1705	1/1	1.00	0.02	15,15,15,15	0
3	ZN	B	1710	1/1	1.00	0.02	19,19,19,19	0
3	ZN	B	1711	1/1	1.00	0.01	20,20,20,20	0
2	CA	A	1706	1/1	1.00	0.02	17,17,17,17	0
2	CA	A	1707	1/1	1.00	0.01	16,16,16,16	0
2	CA	A	1708	1/1	1.00	0.02	21,21,21,21	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.

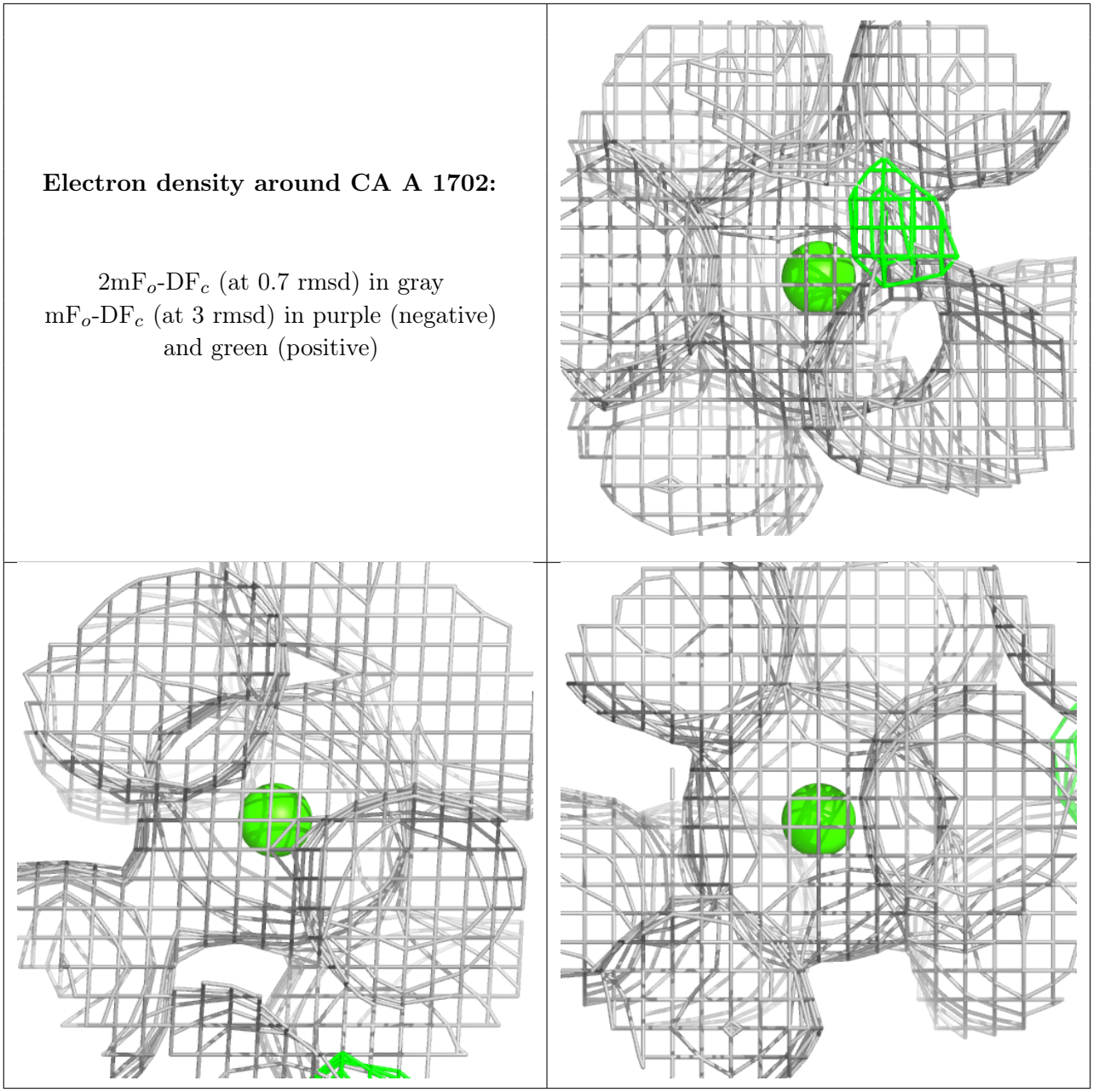
Electron density around CA A 1701:

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



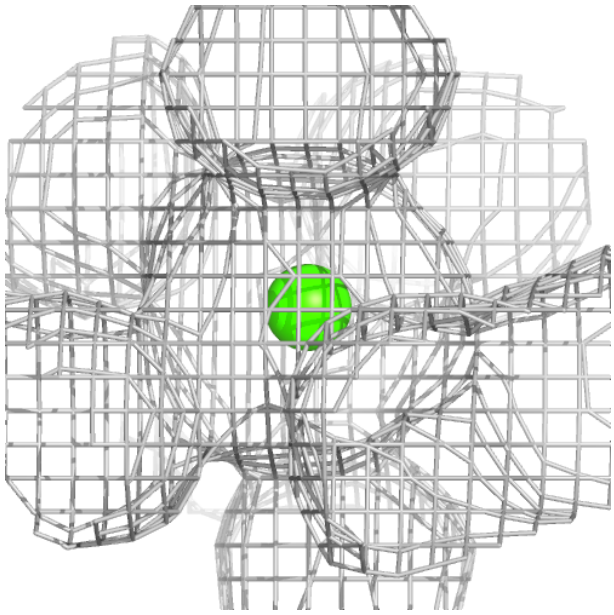
Electron density around CA A 1702:

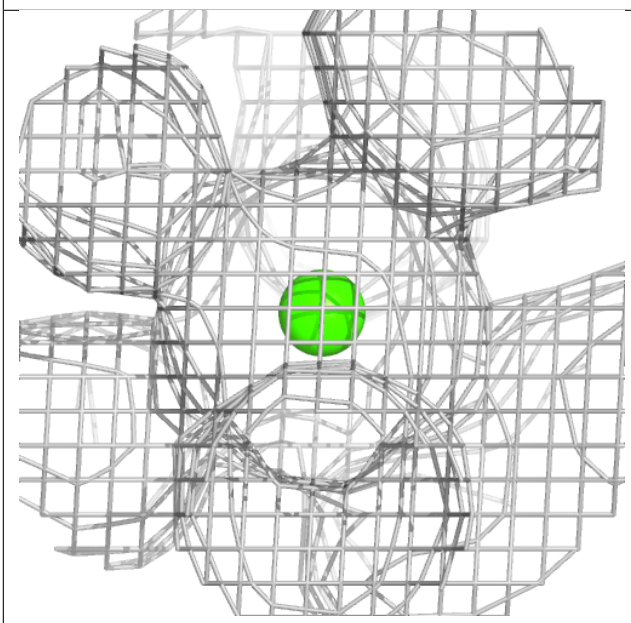
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

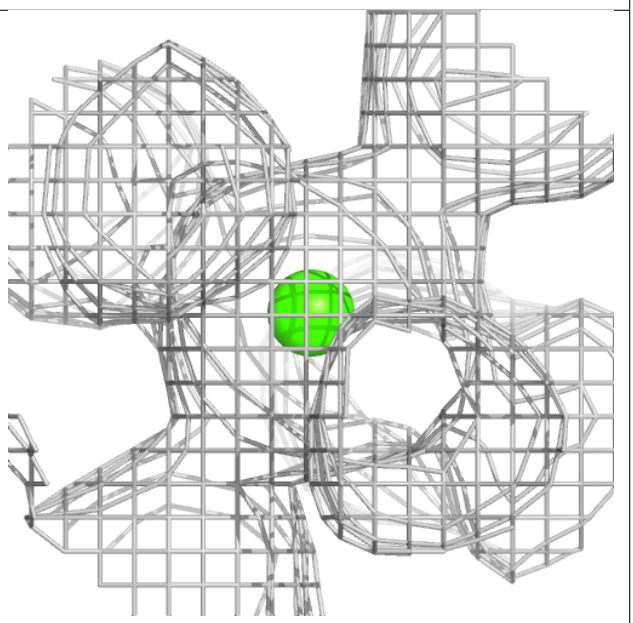


Electron density around CA B 1708:

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

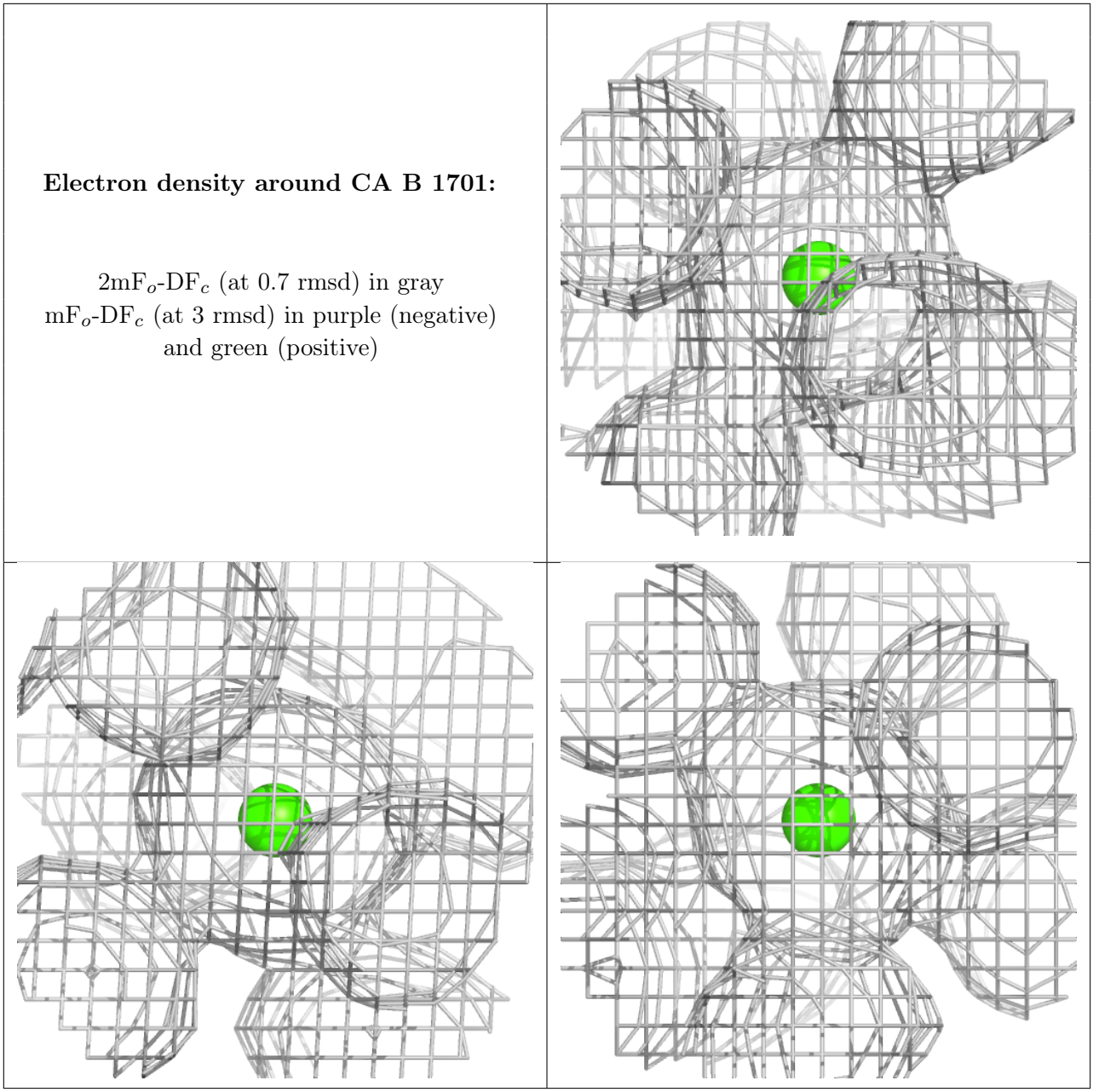






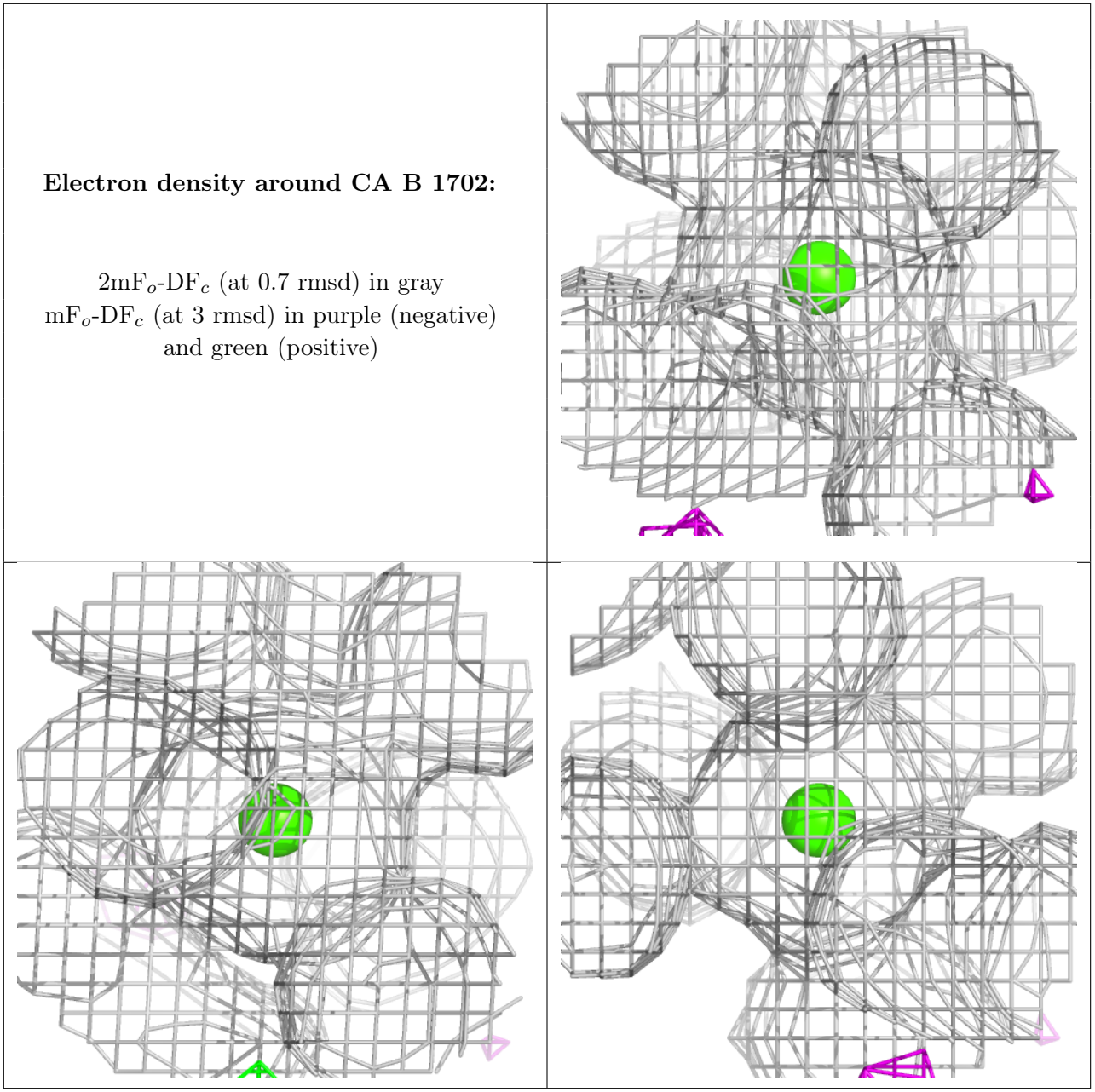
Electron density around CA B 1701:

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



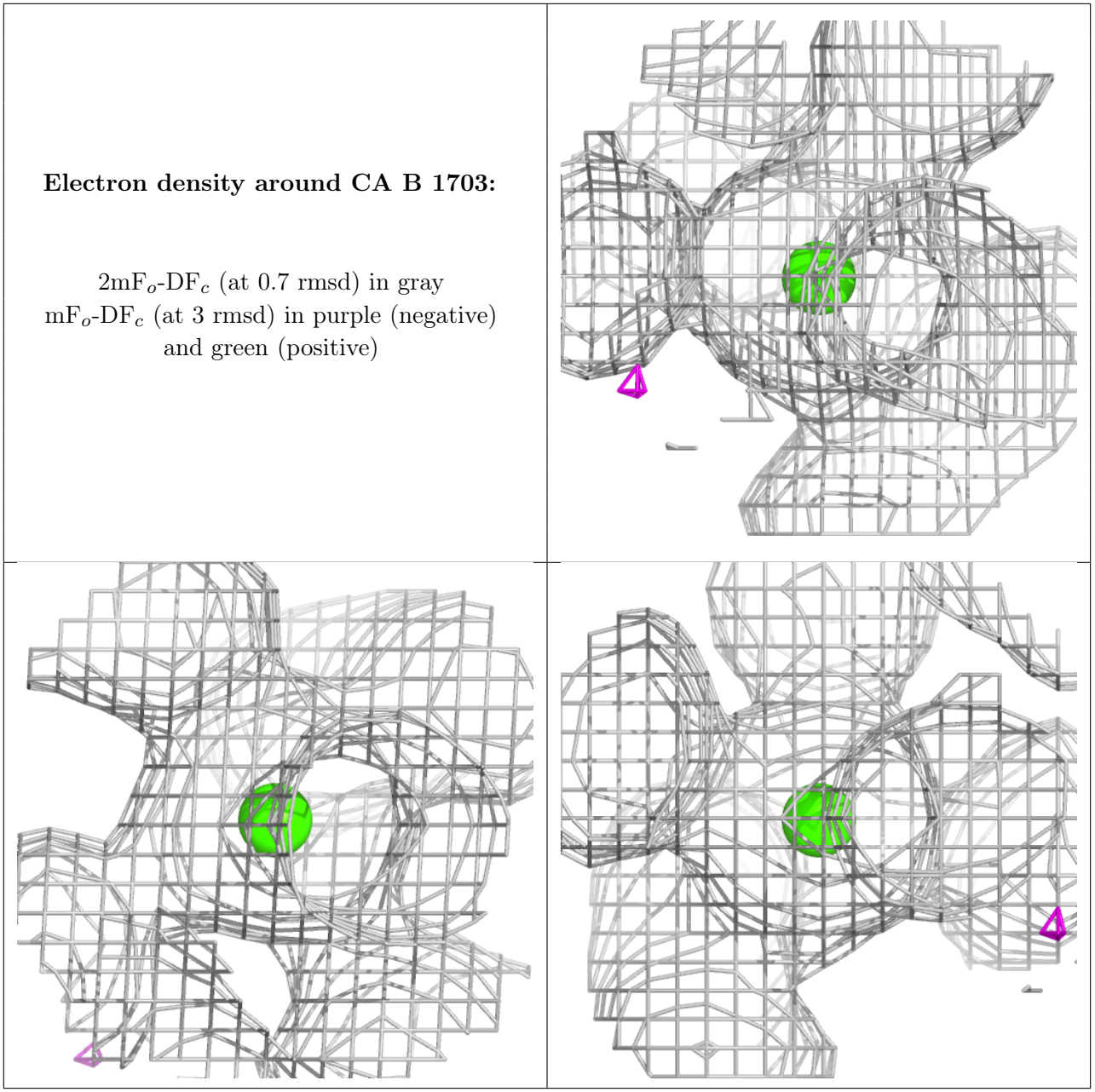
Electron density around CA B 1702:

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



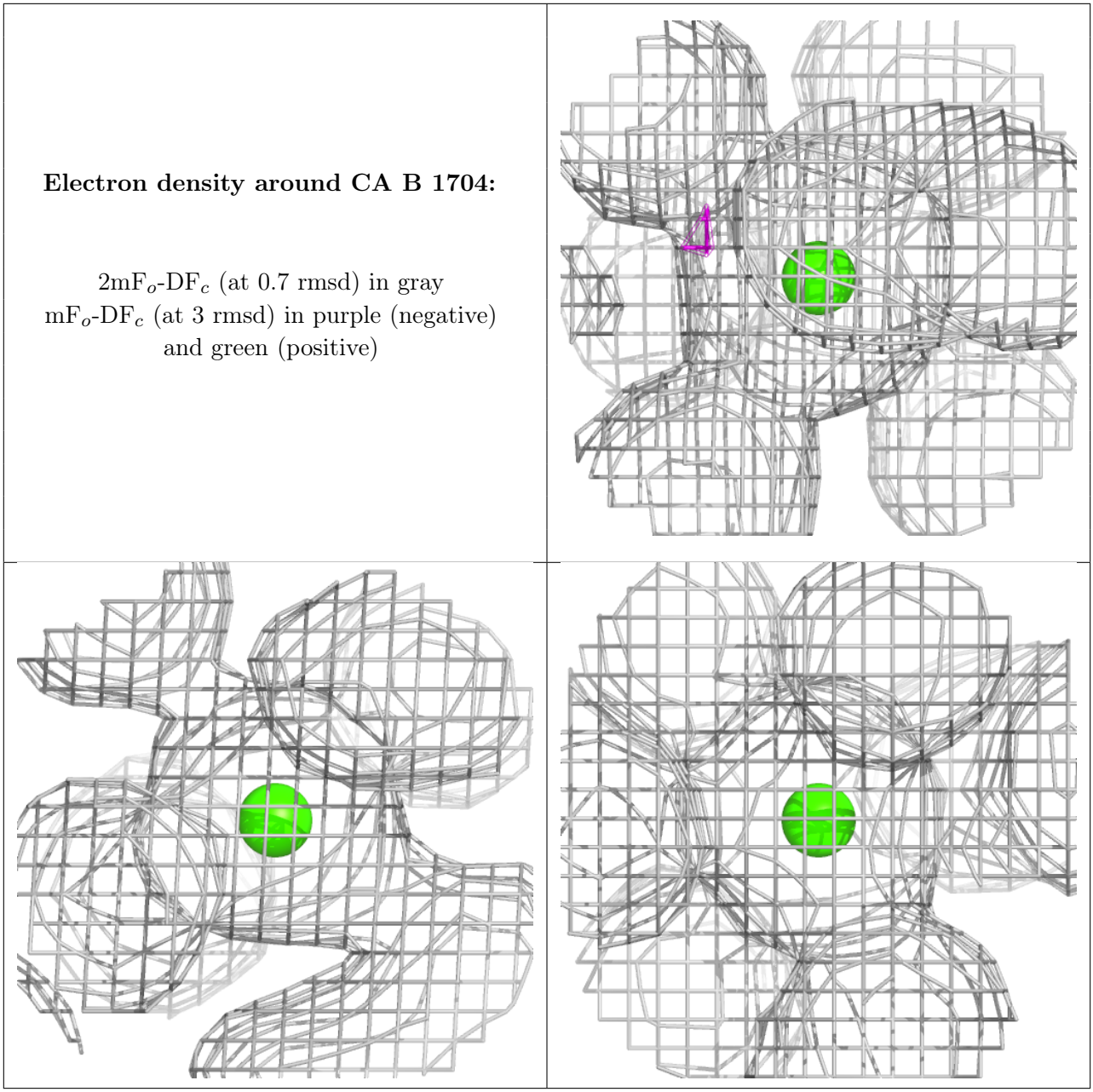
Electron density around CA B 1703:

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



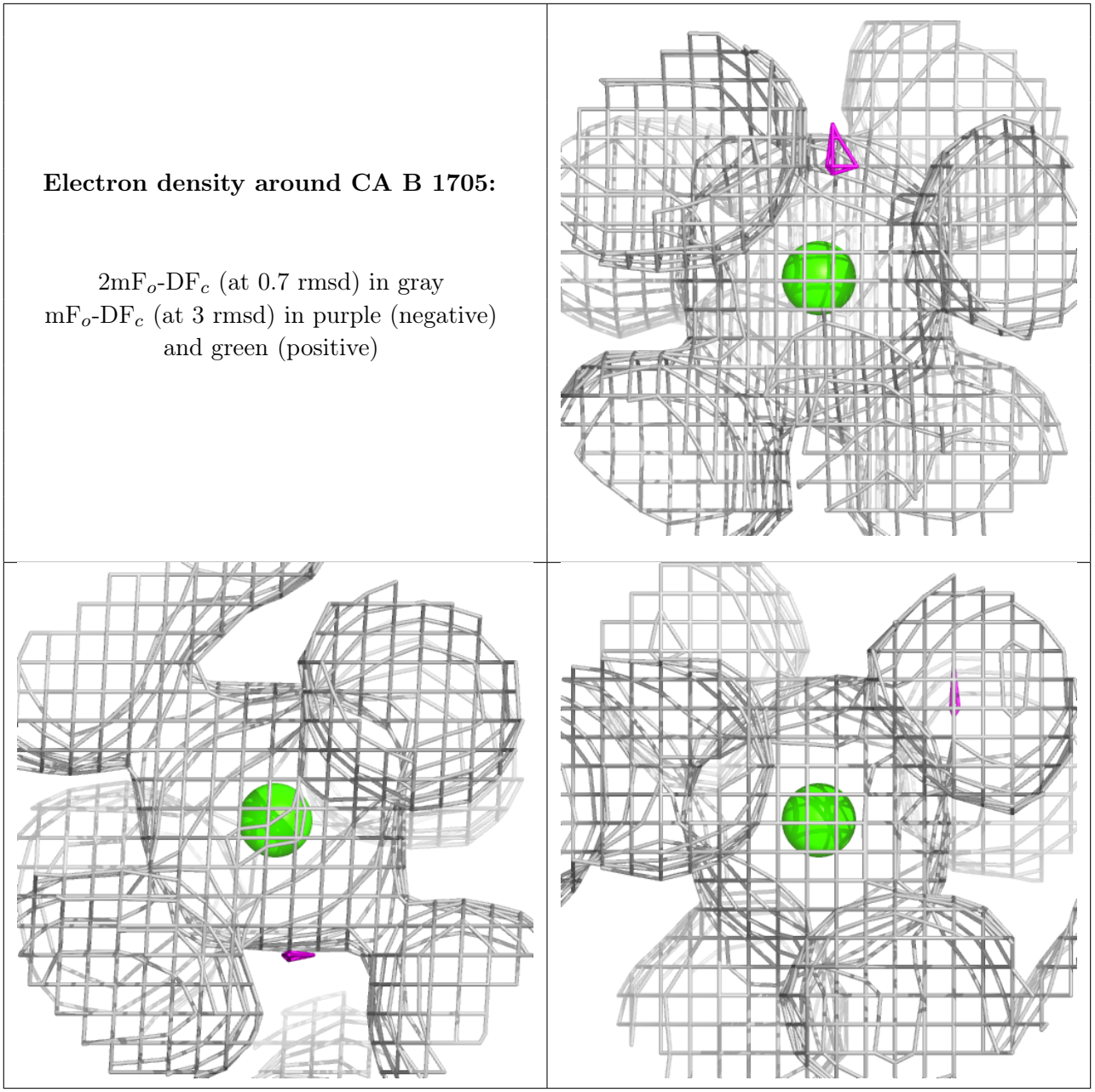
Electron density around CA B 1704:

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



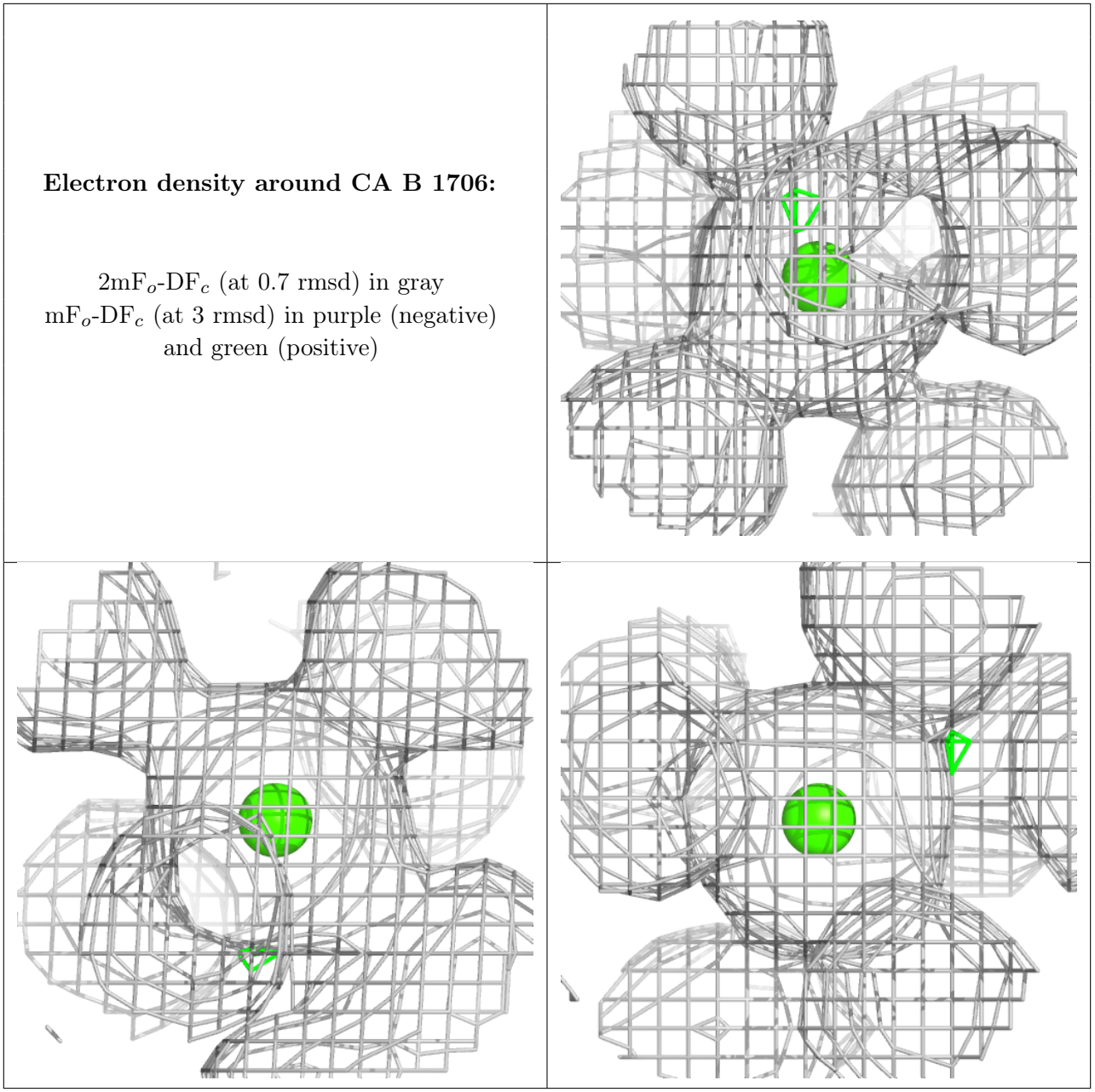
Electron density around CA B 1705:

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



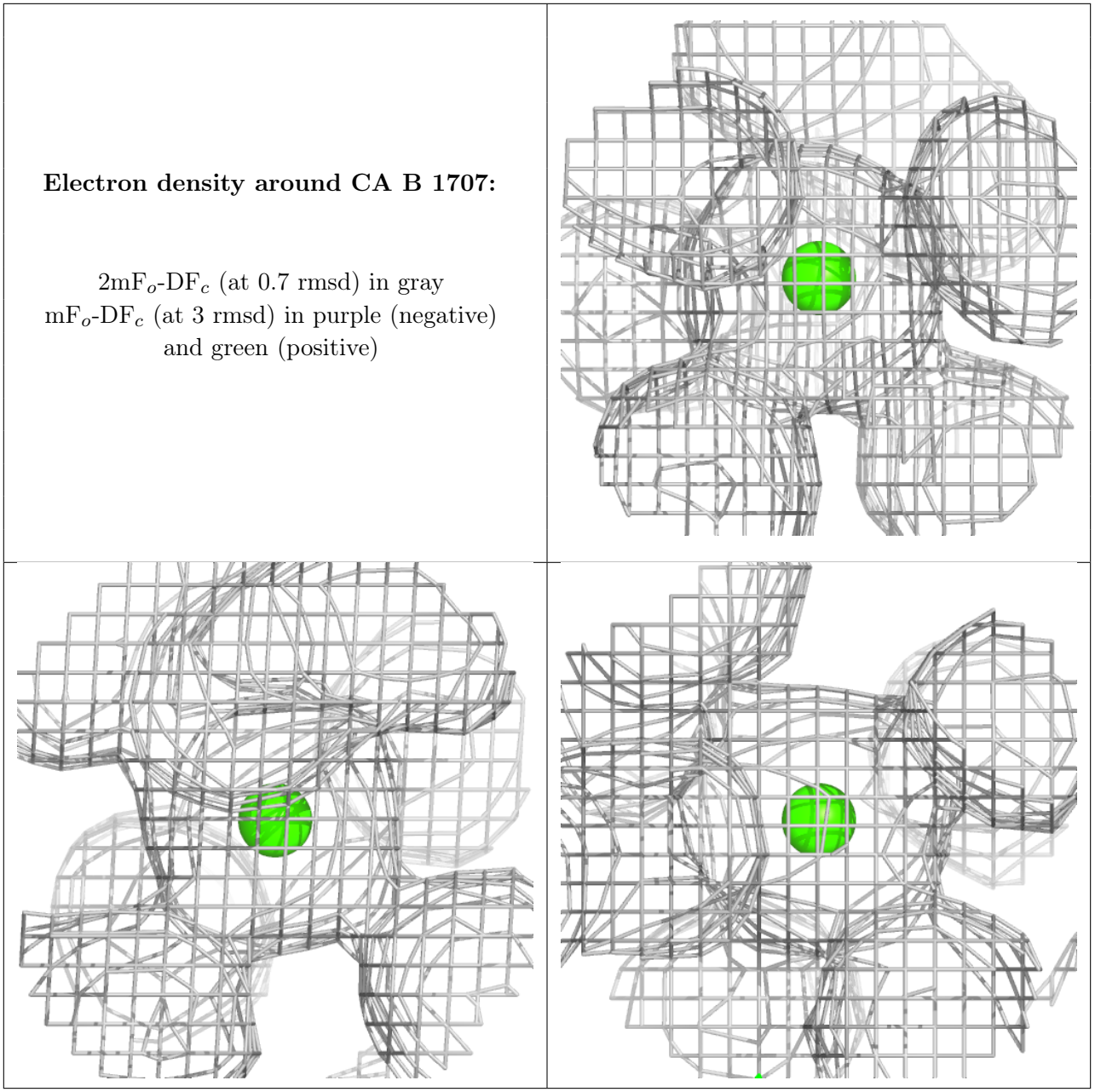
Electron density around CA B 1706:

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



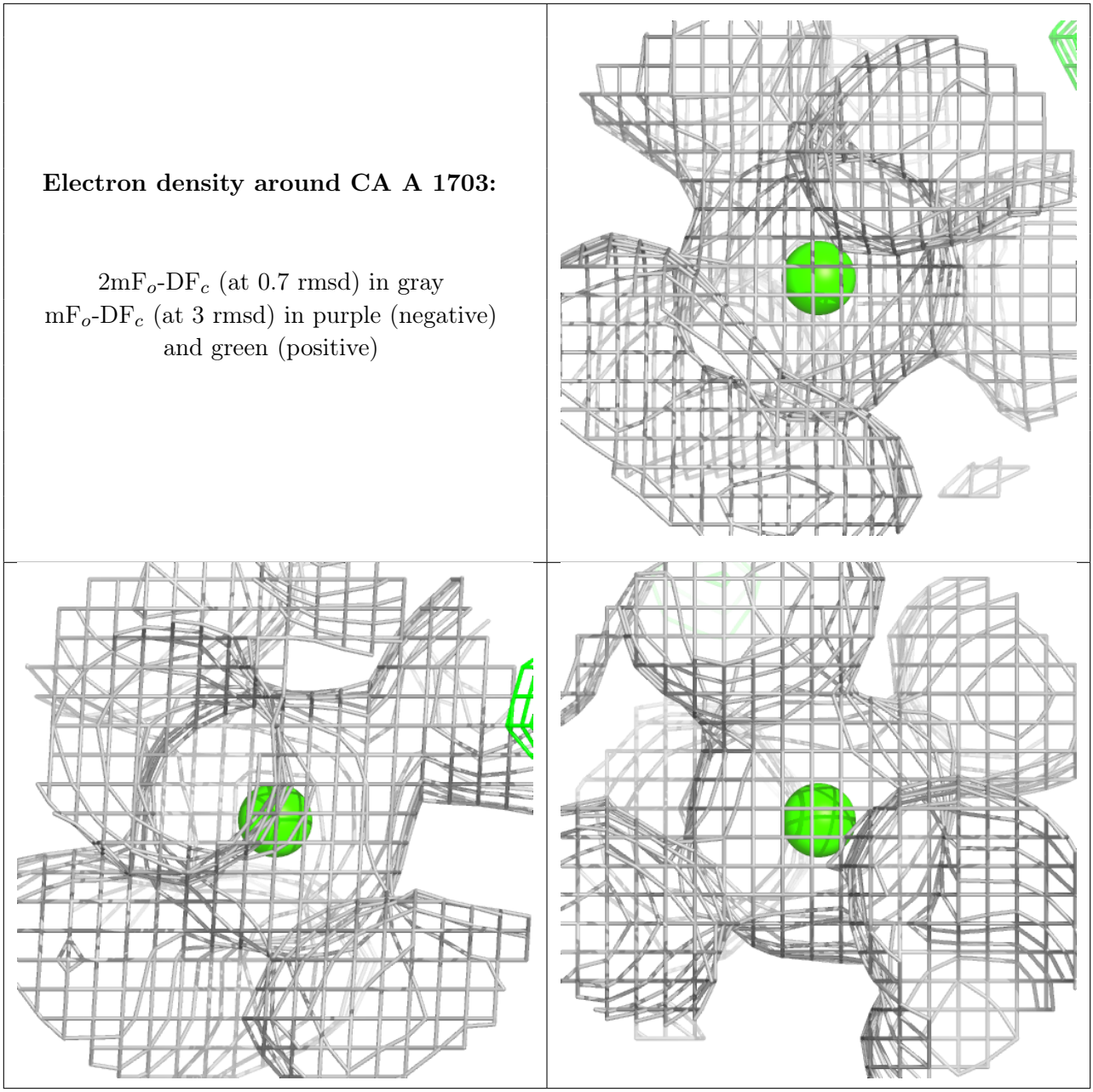
Electron density around CA B 1707:

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



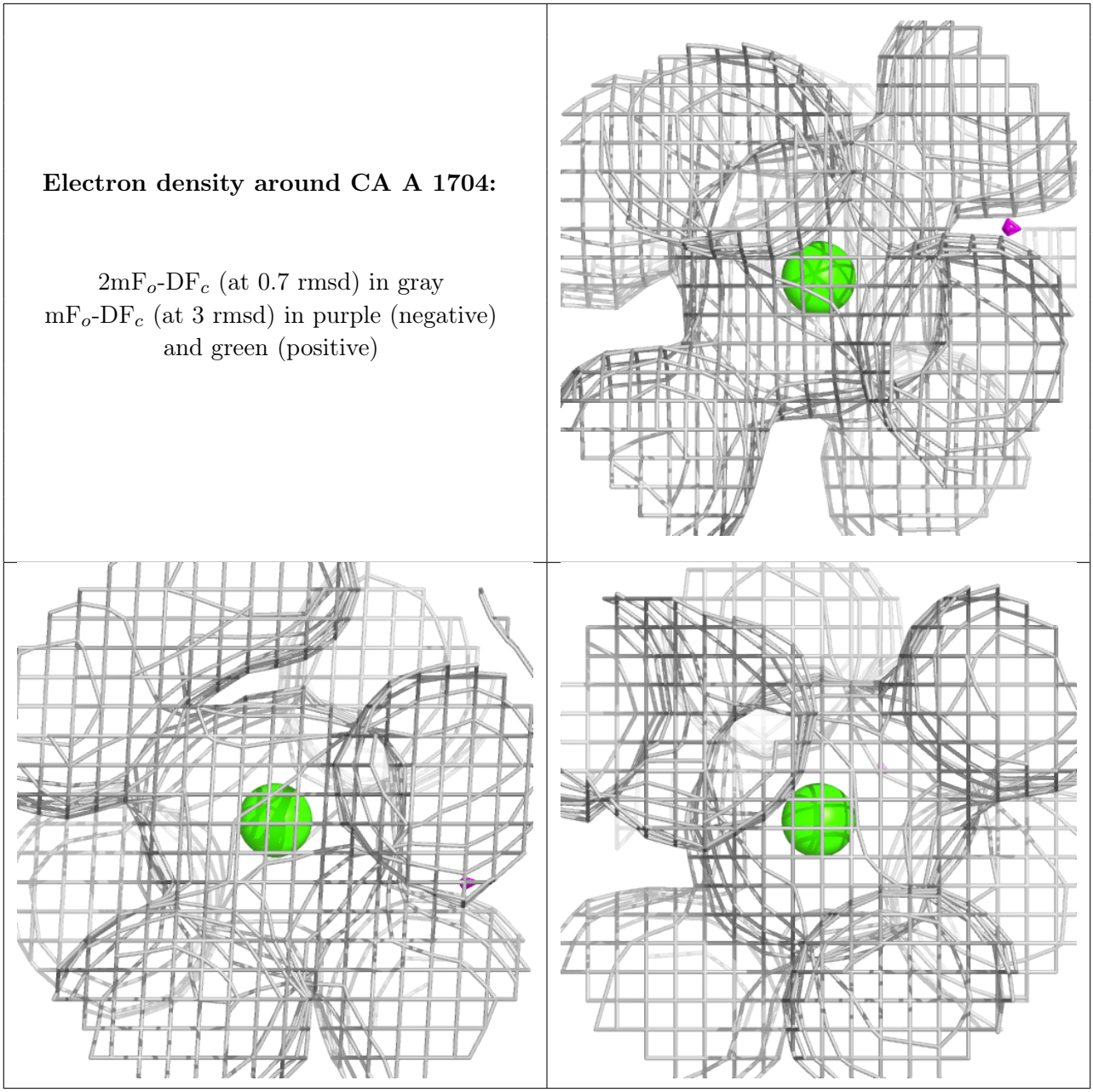
Electron density around CA A 1703:

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



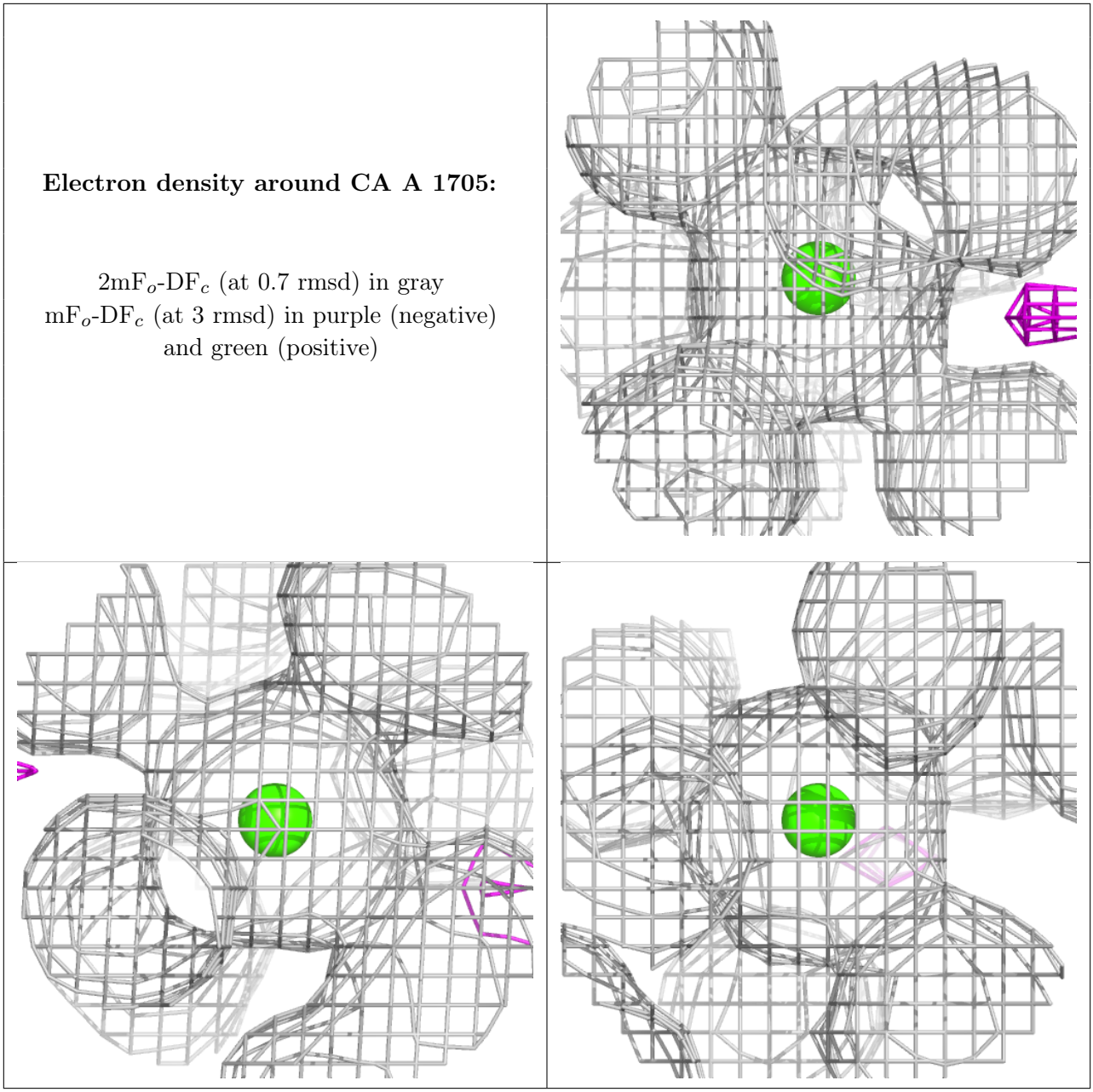
Electron density around CA A 1704:

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



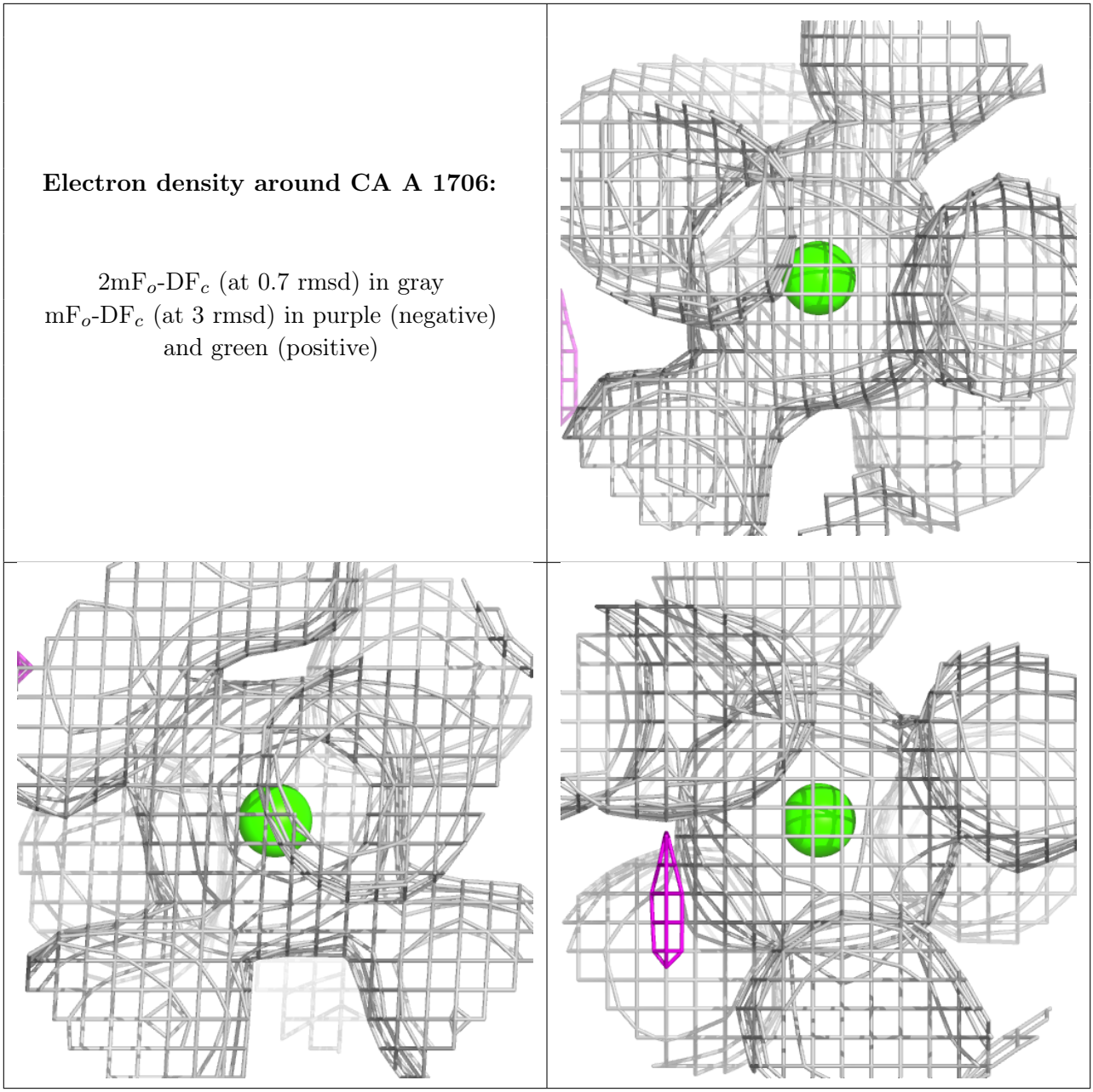
Electron density around CA A 1705:

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



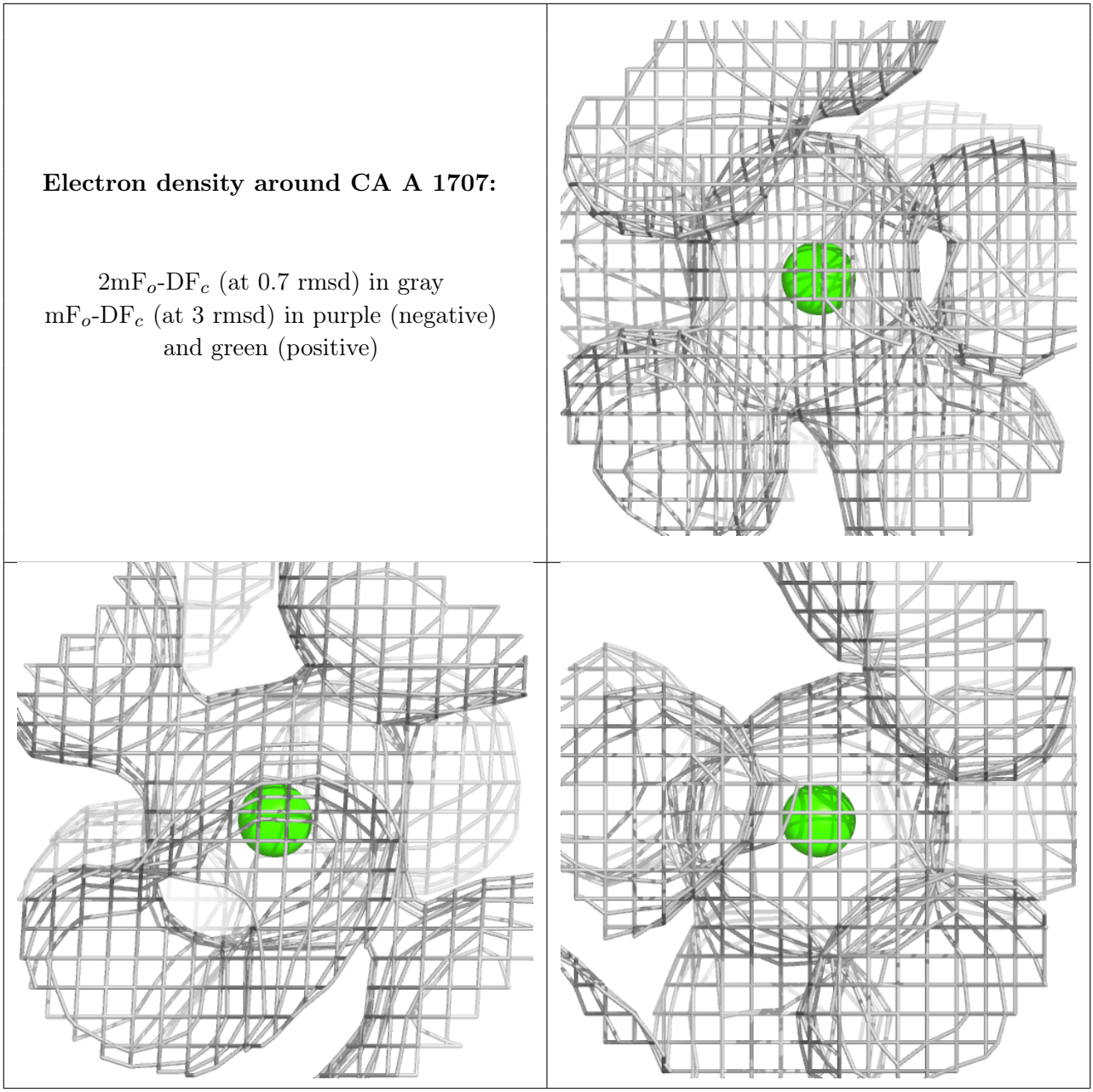
Electron density around CA A 1706:

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



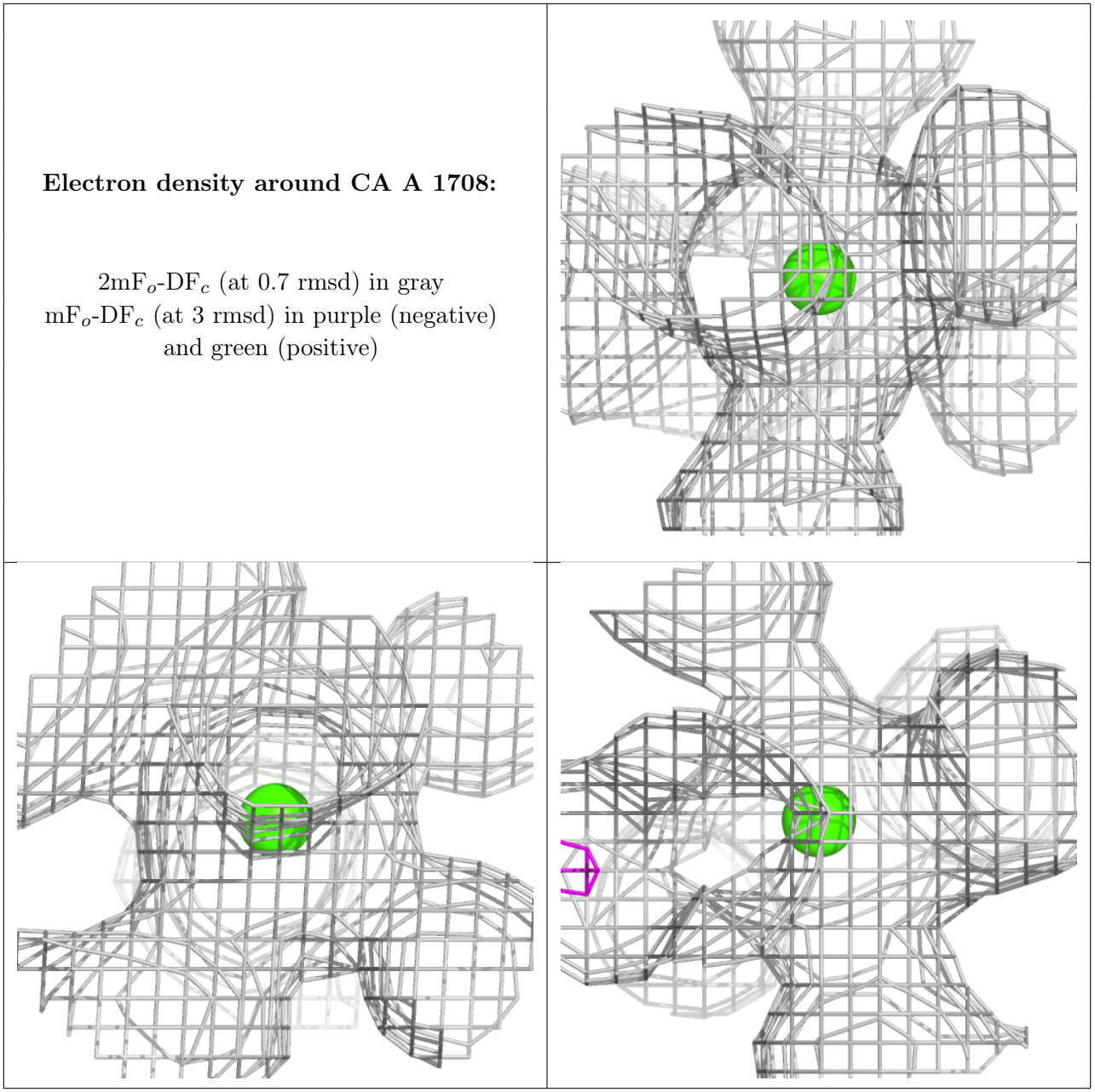
Electron density around CA A 1707:

$2mF_o$-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 1708:

$2mF_o$-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.