wwPDB X-ray Structure Validation Summary Report (i)

Mar 18, 2024 – 01:19 PM JST

PDB ID	:	6IUE
Title	:	DNA helical wire containing Hg(II)
Authors	:	Ono, A.; Kanazawa, H.; Ito, H.; Goto, M.; Nakamura, K.; Saneyoshi, H.; Kondo, J.
Deposited on	:	2018-11-28
Resolution	:	1.90 Å(reported)

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

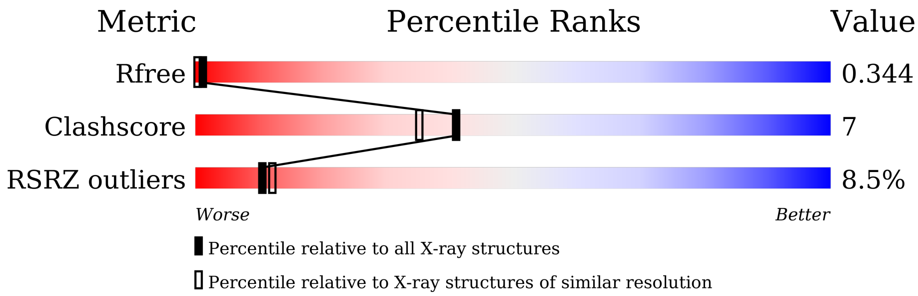
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 1.90 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	6207 (1.90-1.90)
Clashscore	141614	6847 (1.90-1.90)
RSRZ outliers	127900	6082 (1.90-1.90)

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	5	60% 40%
1	B	5	60% 40%
1	C	5	80% 20%
1	D	5	100%
1	E	5	100%
1	F	5	80% 20%
1	G	5	40% / 20% 80%
1	H	5	20% / 100%

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Mol	Chain	Length	Quality of chain
1	I	5	100%
1	J	5	100%
1	K	5	40% / 40% 60%
1	L	5	20% / 40% 40% 20%
1	M	5	60% 40%
1	N	5	60% 40%
1	O	5	100%
1	P	5	100%
1	Q	5	80% 20%
1	R	5	100%
1	T	5	20% / 80% 20%
1	U	5	60% 40%
1	V	5	100%
1	W	5	100%
1	X	5	40% / 100%
1	Y	5	20% / 40% 60%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 2445 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 DNA chain called DNA (5'-D(*TP*TP*TP*GP*C)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	M	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	B	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	N	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	C	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	O	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	D	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	P	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	E	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	Q	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	F	4	Total 79	C 40	N 11	O 25	P 3	0	0	0
1	R	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	G	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	T	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	H	5	Total 98	C 49	N 14	O 31	P 4	0	0	0
1	U	5	Total 98	C 49	N 14	O 31	P 4	0	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
1	I	5	Total C N O P 98 49 14 31 4	0	0	0
1	V	5	Total C N O P 98 49 14 31 4	0	0	0
1	J	5	Total C N O P 98 49 14 31 4	0	0	0
1	W	5	Total C N O P 98 49 14 31 4	0	0	0
1	K	5	Total C N O P 98 49 14 31 4	0	0	0
1	X	5	Total C N O P 98 49 14 31 4	0	0	0
1	L	4	Total C N O P 79 40 11 25 3	0	0	0
1	Y	5	Total C N O P 98 49 14 31 4	0	0	0

- Molecule 2 is MERCURY (II) ION (three-letter code: HG) (formula: Hg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	3	Total Hg 3 3	0	0
2	M	1	Total Hg 1 1	0	0
2	B	3	Total Hg 3 3	0	0
2	N	1	Total Hg 1 1	0	0
2	C	2	Total Hg 2 2	0	0
2	O	2	Total Hg 2 2	0	0
2	D	4	Total Hg 4 4	0	0
2	E	3	Total Hg 3 3	0	0
2	Q	1	Total Hg 1 1	0	0
2	F	3	Total Hg 3 3	0	0
2	R	1	Total Hg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	G	2	Total Hg 2 2	0	0
2	T	2	Total Hg 2 2	0	0
2	H	1	Total Hg 1 1	0	0
2	U	3	Total Hg 3 3	0	0
2	I	4	Total Hg 4 4	0	0
2	J	3	Total Hg 3 3	0	0
2	W	1	Total Hg 1 1	0	0
2	K	3	Total Hg 3 3	0	0
2	X	1	Total Hg 1 1	0	0
2	L	3	Total Hg 3 3	0	0
2	Y	1	Total Hg 1 1	0	0

- Molecule 3 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total O 1 1	0	0
3	M	7	Total O 7 7	0	0
3	B	3	Total O 3 3	0	0
3	N	3	Total O 3 3	0	0
3	C	4	Total O 4 4	0	0
3	O	6	Total O 6 6	0	0
3	D	3	Total O 3 3	0	0
3	P	6	Total O 6 6	0	0

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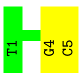
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	E	6	Total O 6 6	0	0
3	Q	2	Total O 2 2	0	0
3	F	2	Total O 2 2	0	0
3	R	4	Total O 4 4	0	0
3	T	4	Total O 4 4	0	0
3	H	2	Total O 2 2	0	0
3	U	4	Total O 4 4	0	0
3	I	2	Total O 2 2	0	0
3	V	3	Total O 3 3	0	0
3	J	4	Total O 4 4	0	0
3	W	5	Total O 5 5	0	0
3	X	5	Total O 5 5	0	0
3	L	4	Total O 4 4	0	0
3	Y	3	Total O 3 3	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.

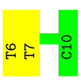
- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain A:

- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain M:

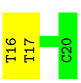



- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain B:

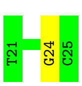

- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain N:

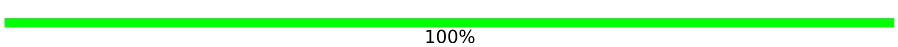



- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain C:

- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain O:


There are no outlier residues recorded for this chain.

- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain D:

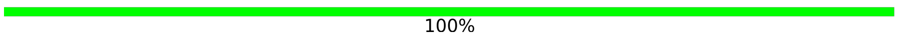

There are no outlier residues recorded for this chain.

- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain P:


There are no outlier residues recorded for this chain.

- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain E:


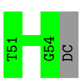
There are no outlier residues recorded for this chain.

- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

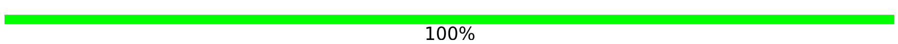
Chain Q:


- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain F:

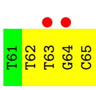
- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain R:


There are no outlier residues recorded for this chain.

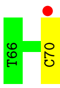
- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain G:

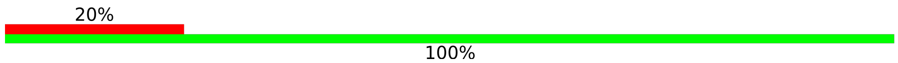
- Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

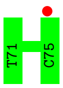
Chain T:

• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

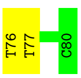
Chain H:





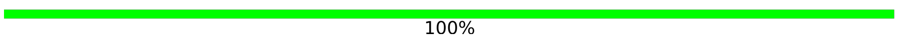
• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain U:



• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

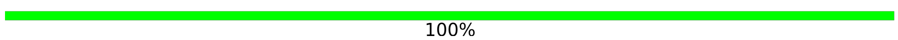
Chain I:



There are no outlier residues recorded for this chain.

• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

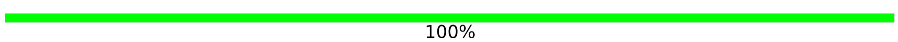
Chain V:



There are no outlier residues recorded for this chain.

• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

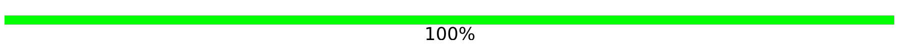
Chain J:



There are no outlier residues recorded for this chain.

• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

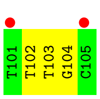
Chain W:



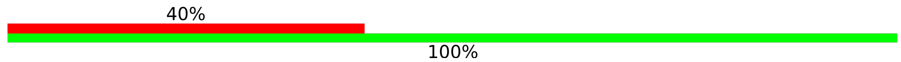
There are no outlier residues recorded for this chain.

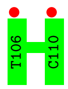
• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain K:



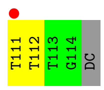
• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain X: 



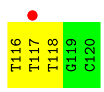
• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain L: 



• Molecule 1: DNA (5'-D(*TP*TP*TP*GP*C)-3')

Chain Y: 



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	59.93Å 28.21Å 88.84Å 90.00° 94.97° 90.00°	Depositor
Resolution (Å)	47.62 – 1.90 47.62 – 1.90	Depositor EDS
% Data completeness (in resolution range)	90.9 (47.62-1.90) 96.8 (47.62-1.90)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	7.86 (at 1.90Å)	Xtriage
Refinement program	PHENIX 1.8.3_1479	Depositor
R, R_{free}	0.294 , 0.346 0.294 , 0.344	Depositor DCC
R_{free} test set	2189 reflections (9.44%)	wwPDB-VP
Wilson B-factor (Å^2)	8.9	Xtriage
Anisotropy	0.660	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.19 , 11.7	EDS
L-test for twinning[2]	$< \|L\| >$ = 0.47, $< L^2 >$ = 0.30	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	2445	wwPDB-VP
Average B, all atoms (Å^2)	13.0	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 88.65 % 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 4.5467e-08. 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 (i)

5.1 Standard geometry (i)

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

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	1.20	0/108	1.16	0/165
1	B	1.14	0/108	1.08	0/165
1	C	1.19	0/108	1.22	0/165
1	D	1.31	0/108	1.10	0/165
1	E	1.03	0/108	1.08	0/165
1	F	1.18	0/87	1.16	0/133
1	G	1.25	0/108	1.42	0/165
1	H	0.96	0/108	1.10	0/165
1	I	1.12	0/108	1.11	0/165
1	J	1.15	0/108	1.27	0/165
1	K	0.86	0/108	1.18	0/165
1	L	1.00	0/87	1.06	0/133
1	M	1.25	0/108	1.16	0/165
1	N	1.13	0/108	1.16	0/165
1	O	1.12	0/108	1.19	0/165
1	P	1.17	0/108	1.04	0/165
1	Q	1.08	0/108	1.14	0/165
1	R	1.25	0/108	1.26	0/165
1	T	0.94	0/108	1.20	0/165
1	U	1.24	0/108	1.03	0/165
1	V	1.14	0/108	1.20	0/165
1	W	1.12	0/108	1.21	0/165
1	X	0.82	0/108	1.14	0/165
1	Y	1.30	0/108	1.20	0/165
All	All	1.13	0/2550	1.17	0/3896

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 (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	98	0	56	3	0
1	B	98	0	56	1	0
1	C	98	0	56	1	0
1	D	98	0	56	0	0
1	E	98	0	56	0	0
1	F	79	0	45	0	0
1	G	98	0	57	4	0
1	H	98	0	56	0	0
1	I	98	0	56	0	0
1	J	98	0	56	0	0
1	K	98	0	56	2	0
1	L	79	0	45	6	0
1	M	98	0	56	1	0
1	N	98	0	56	4	0
1	O	98	0	56	0	0
1	P	98	0	56	0	0
1	Q	98	0	56	1	0
1	R	98	0	56	0	0
1	T	98	0	57	2	0
1	U	98	0	56	1	0
1	V	98	0	57	0	0
1	W	98	0	56	0	0
1	X	98	0	56	0	0
1	Y	98	0	57	4	0
2	A	3	0	0	0	0
2	B	3	0	0	0	0
2	C	2	0	0	0	0
2	D	4	0	0	0	0
2	E	3	0	0	0	0
2	F	3	0	0	0	0
2	G	2	0	0	0	0
2	H	1	0	0	0	0
2	I	4	0	0	0	0
2	J	3	0	0	0	0
2	K	3	0	0	0	0
2	L	3	0	0	0	0
2	M	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	N	1	0	0	0	0
2	O	2	0	0	0	0
2	Q	1	0	0	0	0
2	R	1	0	0	0	0
2	T	2	0	0	0	0
2	U	3	0	0	0	0
2	W	1	0	0	0	0
2	X	1	0	0	0	0
2	Y	1	0	0	0	0
3	A	1	0	0	0	0
3	B	3	0	0	0	0
3	C	4	0	0	0	0
3	D	3	0	0	0	0
3	E	6	0	0	0	0
3	F	2	0	0	0	0
3	H	2	0	0	0	0
3	I	2	0	0	0	0
3	J	4	0	0	0	0
3	L	4	0	0	0	0
3	M	7	0	0	0	0
3	N	3	0	0	0	0
3	O	6	0	0	0	0
3	P	6	0	0	0	0
3	Q	2	0	0	0	0
3	R	4	0	0	0	0
3	T	4	0	0	3	0
3	U	4	0	0	0	0
3	V	3	0	0	0	0
3	W	5	0	0	0	0
3	X	5	0	0	0	0
3	Y	3	0	0	0	0
All	All	2445	0	1326	26	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 7.

The worst 5 of 26 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:N:17:DT:H5”	1:N:17:DT:H6	1.41	0.83
3:T:202:HOH:O	1:L:111:DT:C7	2.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:63:DT:H1'	1:G:64:DG:H5'	1.81	0.63
1:N:17:DT:H5"	1:N:17:DT:C6	2.32	0.53
1:A:4:DG:C5	1:A:5:DC:N4	2.78	0.50

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

There are no protein molecules in this entry.

5.3.2 Protein sidechains (i)

There are no protein molecules in this entry.

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 48 ligands modelled in this entry, 48 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 (i)

6.1 Protein, DNA and RNA chains (i)

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	5/5 (100%)	0.40	0	100	100	9, 10, 14, 20	0
1	B	5/5 (100%)	0.25	0	100	100	9, 9, 11, 13	0
1	C	5/5 (100%)	0.39	0	100	100	7, 7, 13, 14	0
1	D	5/5 (100%)	0.11	0	100	100	4, 6, 7, 9	0
1	E	5/5 (100%)	0.46	0	100	100	9, 10, 13, 14	0
1	F	4/5 (80%)	0.01	0	100	100	7, 8, 9, 12	0
1	G	5/5 (100%)	1.80	2 (40%)	0	0	11, 18, 22, 22	0
1	H	5/5 (100%)	1.05	1 (20%)	1	1	12, 12, 13, 27	0
1	I	5/5 (100%)	0.09	0	100	100	8, 9, 12, 13	0
1	J	5/5 (100%)	0.22	0	100	100	9, 9, 11, 14	0
1	K	5/5 (100%)	1.75	2 (40%)	0	0	27, 27, 30, 33	0
1	L	4/5 (80%)	1.71	1 (25%)	0	0	12, 12, 14, 22	0
1	M	5/5 (100%)	0.32	0	100	100	10, 10, 15, 17	0
1	N	5/5 (100%)	0.46	0	100	100	10, 11, 15, 16	0
1	O	5/5 (100%)	0.08	0	100	100	7, 7, 8, 10	0
1	P	5/5 (100%)	0.29	0	100	100	9, 9, 9, 10	0
1	Q	5/5 (100%)	0.43	0	100	100	9, 10, 11, 13	0
1	R	5/5 (100%)	0.49	0	100	100	7, 8, 15, 19	0
1	T	5/5 (100%)	1.24	1 (20%)	1	1	13, 16, 20, 20	0
1	U	5/5 (100%)	0.75	0	100	100	10, 11, 12, 15	0
1	V	5/5 (100%)	0.28	0	100	100	8, 9, 12, 17	0
1	W	5/5 (100%)	0.19	0	100	100	7, 8, 13, 17	0
1	X	5/5 (100%)	1.73	2 (40%)	0	0	24, 26, 29, 29	0
1	Y	5/5 (100%)	1.74	1 (20%)	1	1	13, 16, 19, 21	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
All	All	118/120 (98%)	0.67	10 (8%)	10	12	4, 12, 27, 33	0

The worst 5 of 10 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	L	111	DT	5.0
1	H	75	DC	3.1
1	X	106	DT	3.1
1	X	110	DC	2.8
1	Y	117	DT	2.7

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

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, 95th 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	HG	T	101	1/1	0.71	0.09	49,49,49,49	0
2	HG	K	201	1/1	0.78	0.19	95,95,95,95	0
2	HG	K	203	1/1	0.80	0.13	93,93,93,93	0
2	HG	K	202	1/1	0.86	0.11	75,75,75,75	0
2	HG	G	101	1/1	0.92	0.09	55,55,55,55	0
2	HG	X	201	1/1	0.95	0.07	70,70,70,70	0
2	HG	T	102	1/1	0.98	0.07	30,30,30,30	0
2	HG	I	101	1/1	0.98	0.09	59,59,59,59	0
2	HG	L	201	1/1	0.98	0.03	35,35,35,35	0
2	HG	Y	201	1/1	0.98	0.06	29,29,29,29	0
2	HG	A	301	1/1	0.99	0.10	23,23,23,23	0
2	HG	G	102	1/1	0.99	0.06	23,23,23,23	0
2	HG	A	302	1/1	0.99	0.05	16,16,16,16	0

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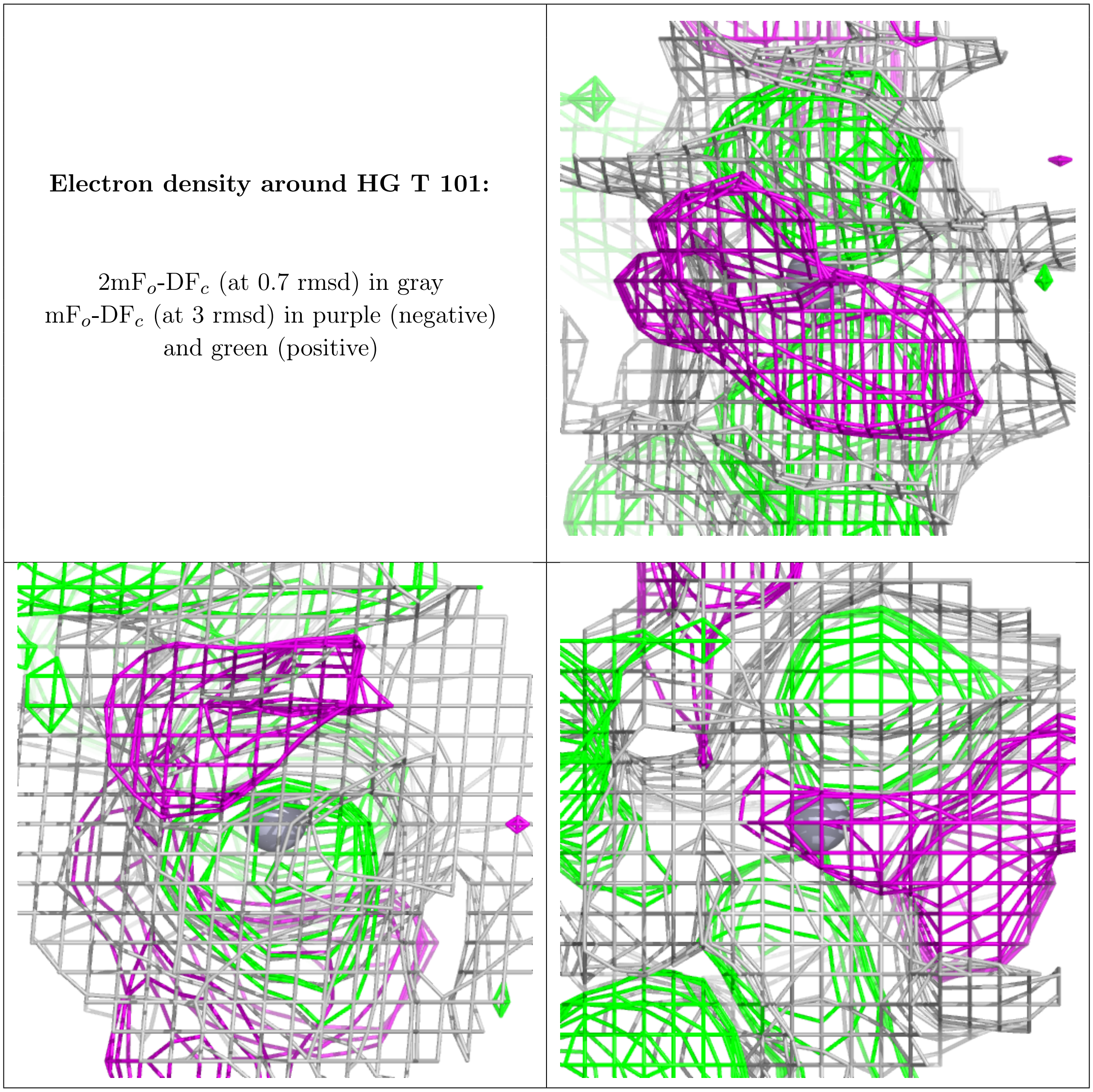
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	HG	B	102	1/1	0.99	0.06	15,15,15,15	0
2	HG	H	101	1/1	0.99	0.05	31,31,31,31	0
2	HG	U	101	1/1	0.99	0.07	35,35,35,35	0
2	HG	U	102	1/1	0.99	0.04	19,19,19,19	0
2	HG	U	103	1/1	0.99	0.04	20,20,20,20	0
2	HG	B	103	1/1	0.99	0.14	60,60,60,60	0
2	HG	I	103	1/1	0.99	0.05	14,14,14,14	0
2	HG	I	104	1/1	0.99	0.13	20,20,20,20	0
2	HG	J	102	1/1	0.99	0.04	17,17,17,17	0
2	HG	J	103	1/1	0.99	0.11	22,22,22,22	0
2	HG	N	101	1/1	0.99	0.11	23,23,23,23	0
2	HG	C	101	1/1	0.99	0.04	13,13,13,13	0
2	HG	C	102	1/1	0.99	0.03	35,35,35,35	0
2	HG	D	101	1/1	0.99	0.10	17,17,17,17	0
2	HG	E	102	1/1	0.99	0.06	14,14,14,14	0
2	HG	L	202	1/1	0.99	0.05	22,22,22,22	0
2	HG	L	203	1/1	0.99	0.08	30,30,30,30	0
2	HG	F	102	1/1	0.99	0.04	14,14,14,14	0
2	HG	A	303	1/1	1.00	0.06	13,13,13,13	0
2	HG	E	103	1/1	1.00	0.06	14,14,14,14	0
2	HG	I	102	1/1	1.00	0.05	14,14,14,14	0
2	HG	Q	101	1/1	1.00	0.09	19,19,19,19	0
2	HG	F	101	1/1	1.00	0.06	13,13,13,13	0
2	HG	J	101	1/1	1.00	0.05	13,13,13,13	0
2	HG	M	101	1/1	1.00	0.11	18,18,18,18	0
2	HG	F	103	1/1	1.00	0.10	18,18,18,18	0
2	HG	W	201	1/1	1.00	0.10	16,16,16,16	0
2	HG	R	101	1/1	1.00	0.12	22,22,22,22	0
2	HG	O	101	1/1	1.00	0.10	16,16,16,16	0
2	HG	O	102	1/1	1.00	0.03	12,12,12,12	0
2	HG	B	101	1/1	1.00	0.06	16,16,16,16	0
2	HG	D	102	1/1	1.00	0.04	13,13,13,13	0
2	HG	D	103	1/1	1.00	0.04	12,12,12,12	0
2	HG	D	104	1/1	1.00	0.07	15,15,15,15	0
2	HG	E	101	1/1	1.00	0.10	17,17,17,17	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.

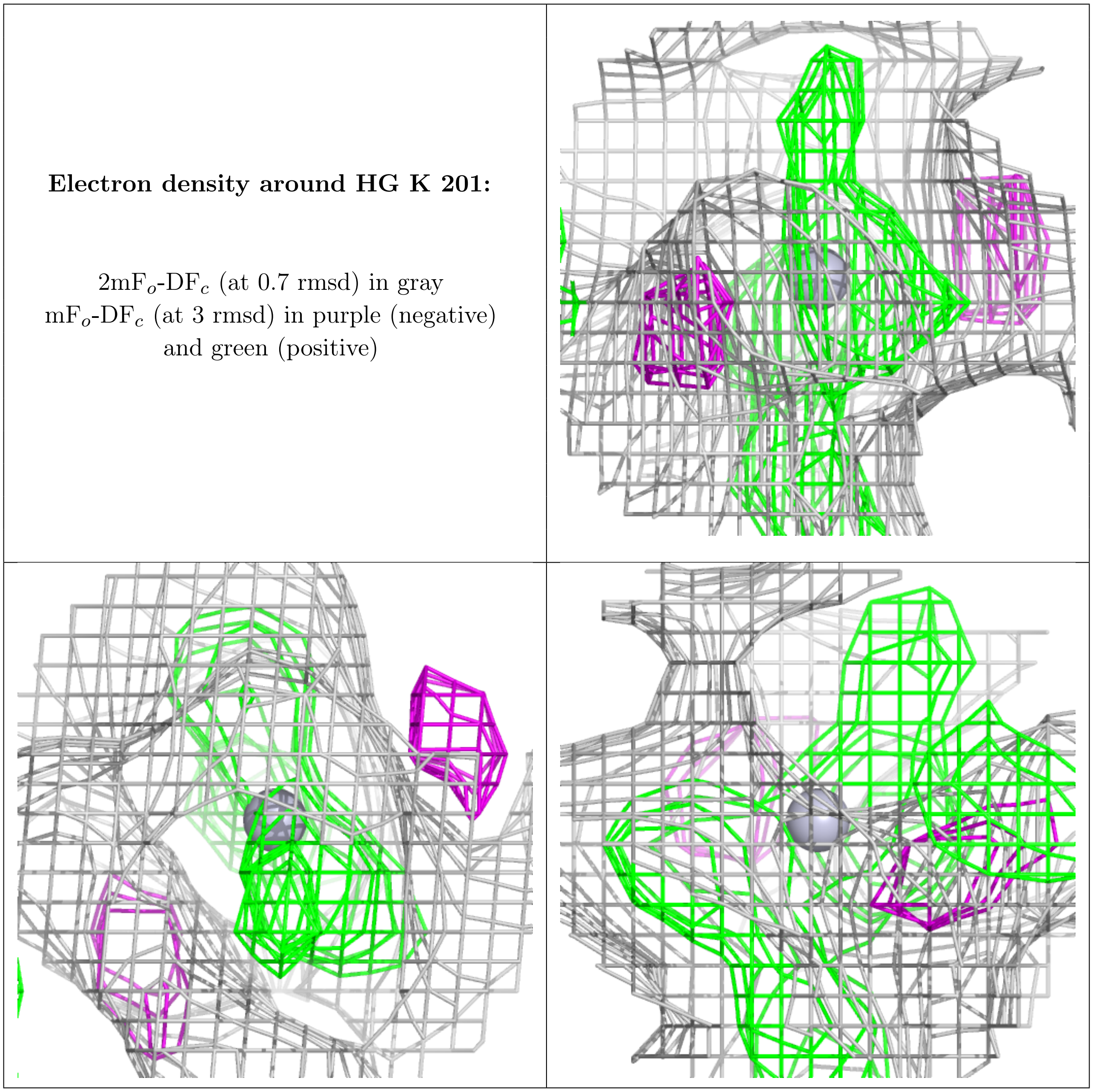
Electron density around HG T 101:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)



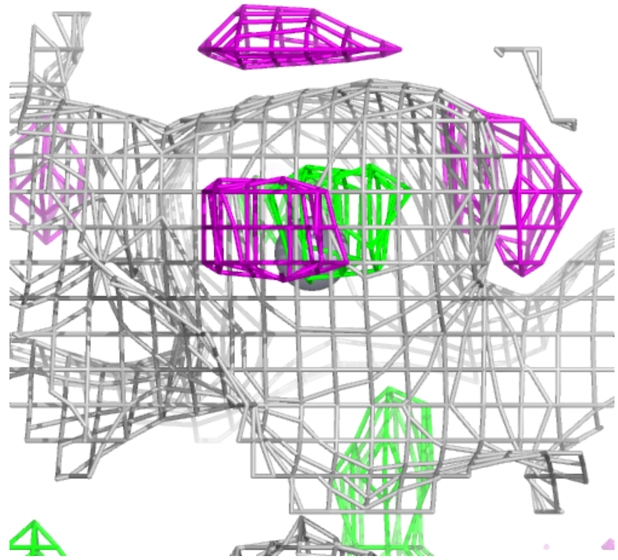
Electron density around HG K 201:

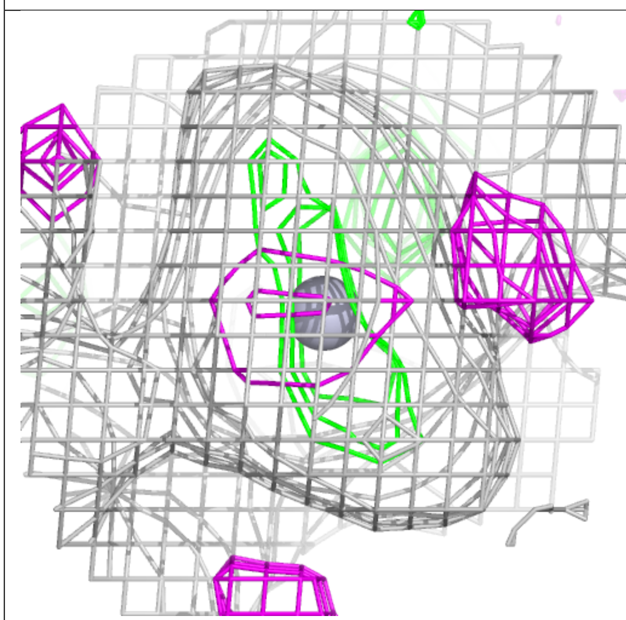
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

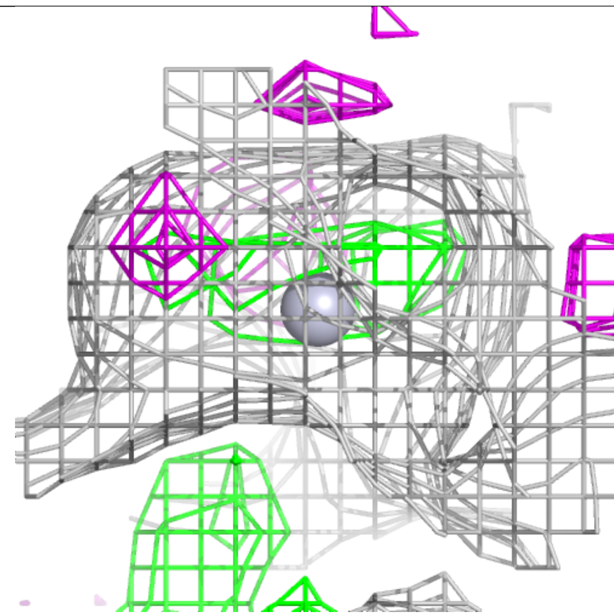


Electron density around HG K 203:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

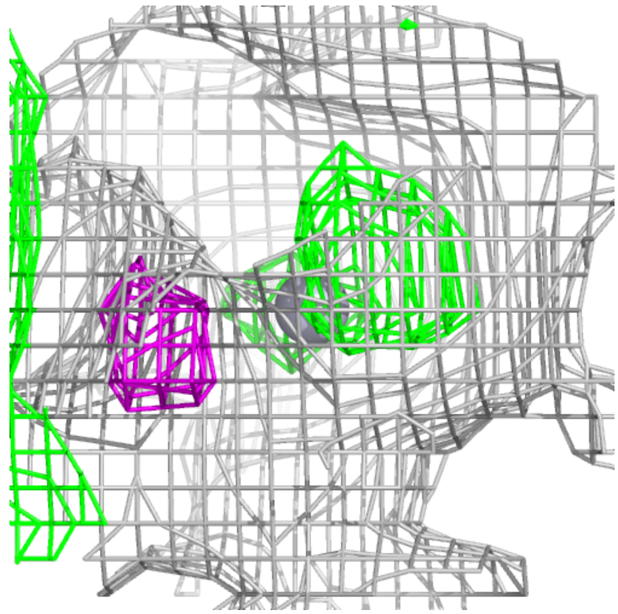


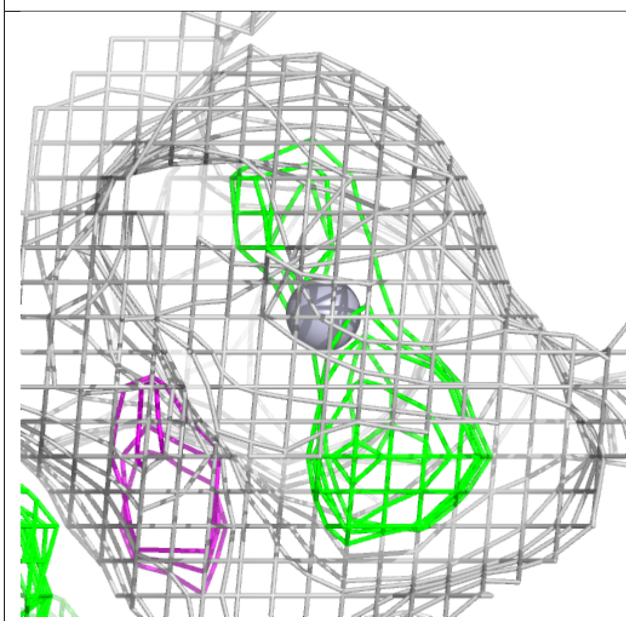


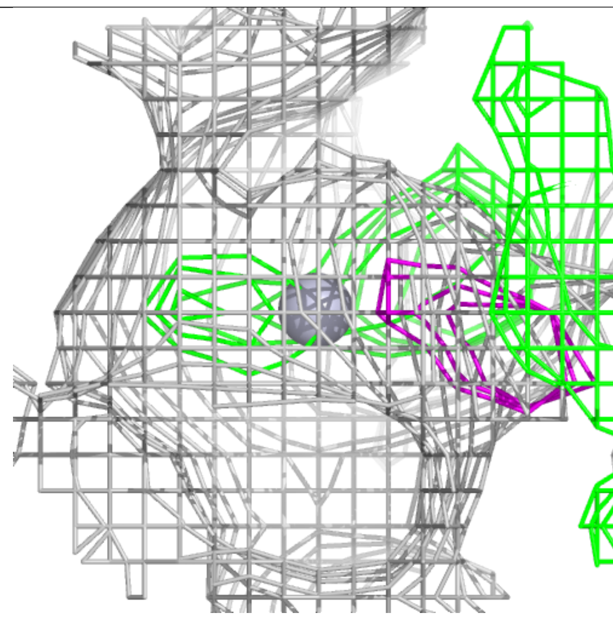


Electron density around HG K 202:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

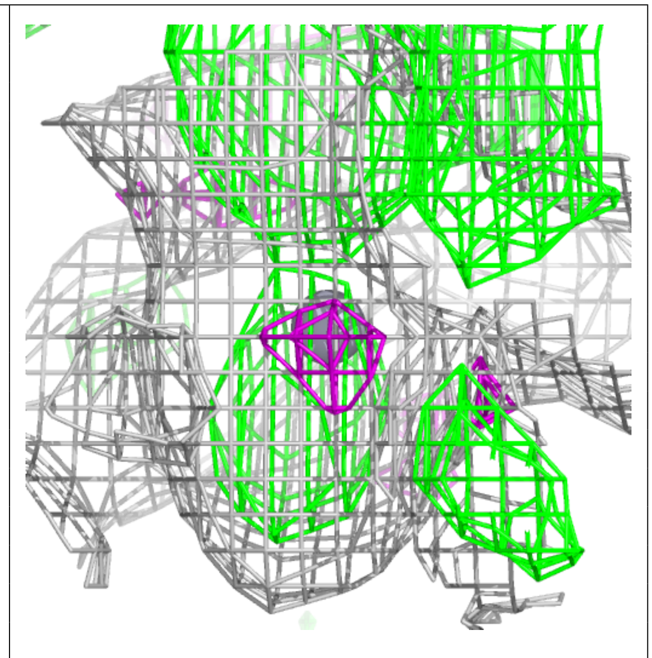


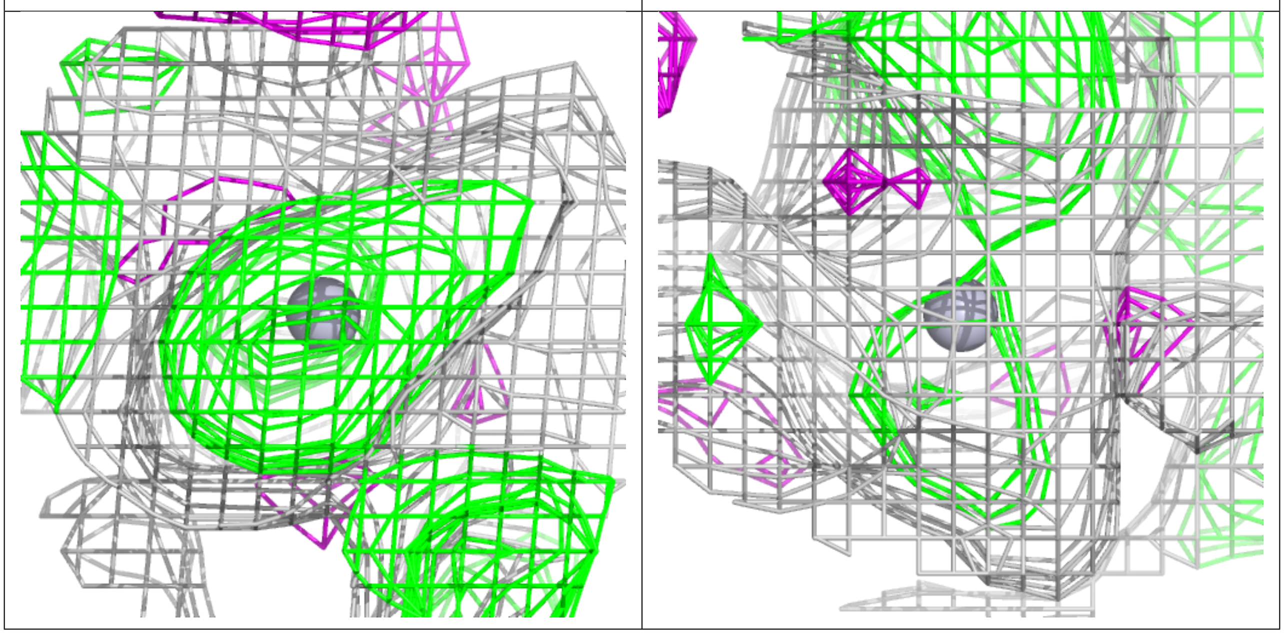




Electron density around HG G 101:

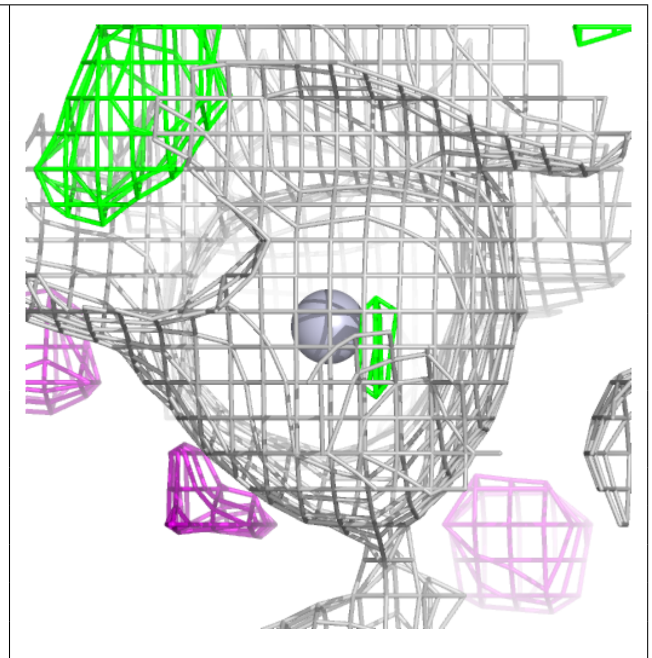
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

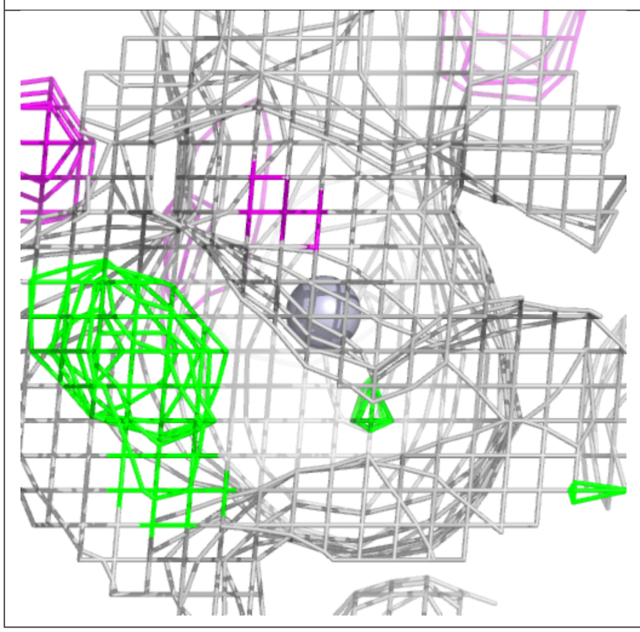


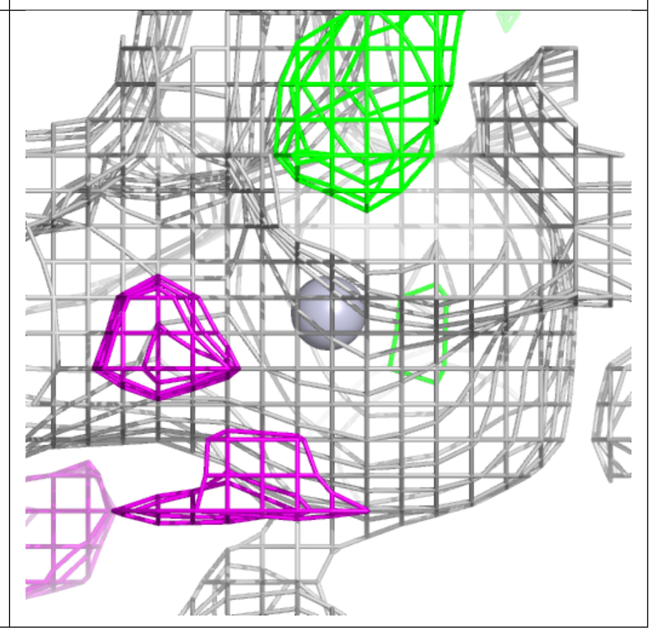


Electron density around HG X 201:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

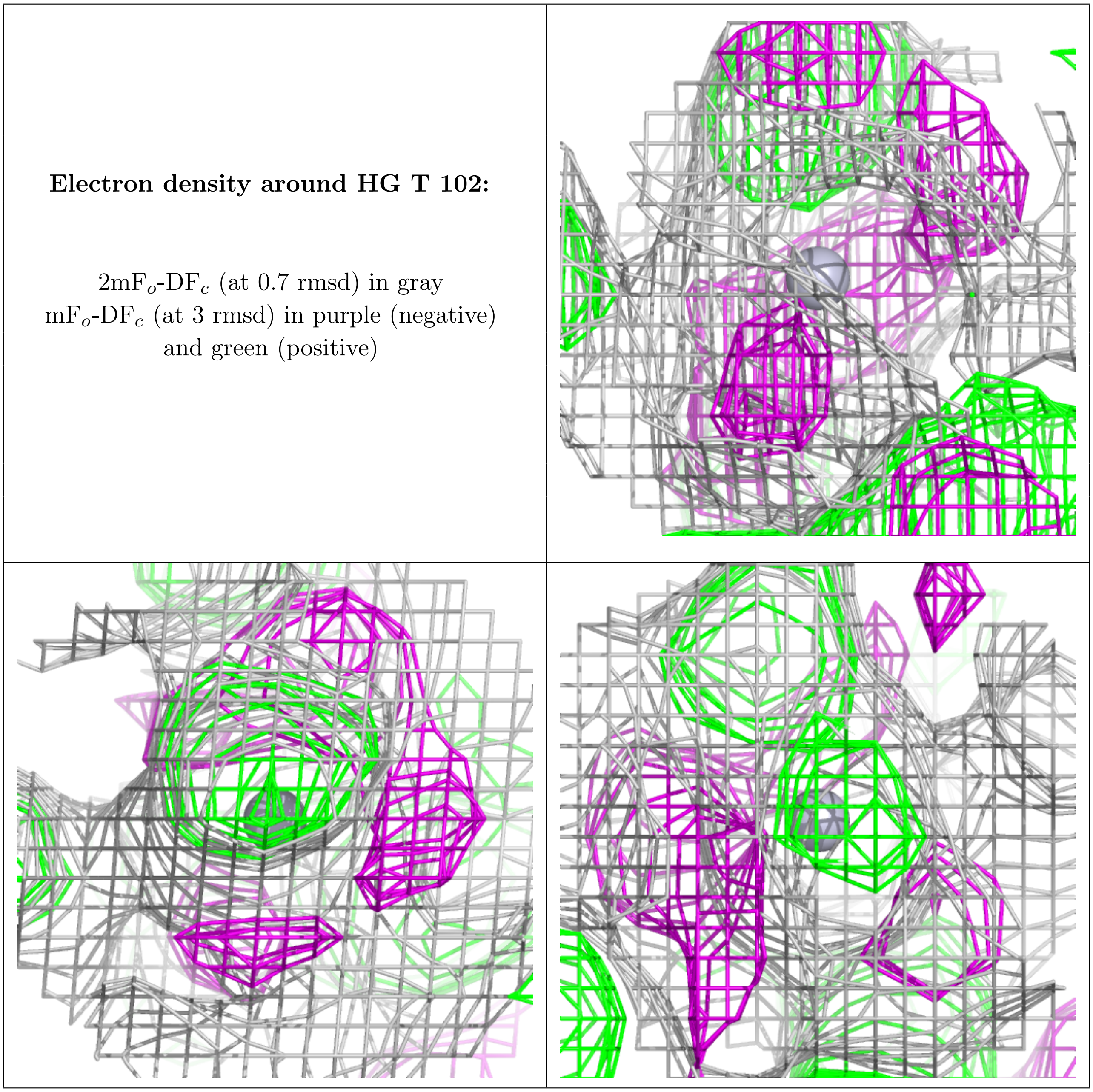






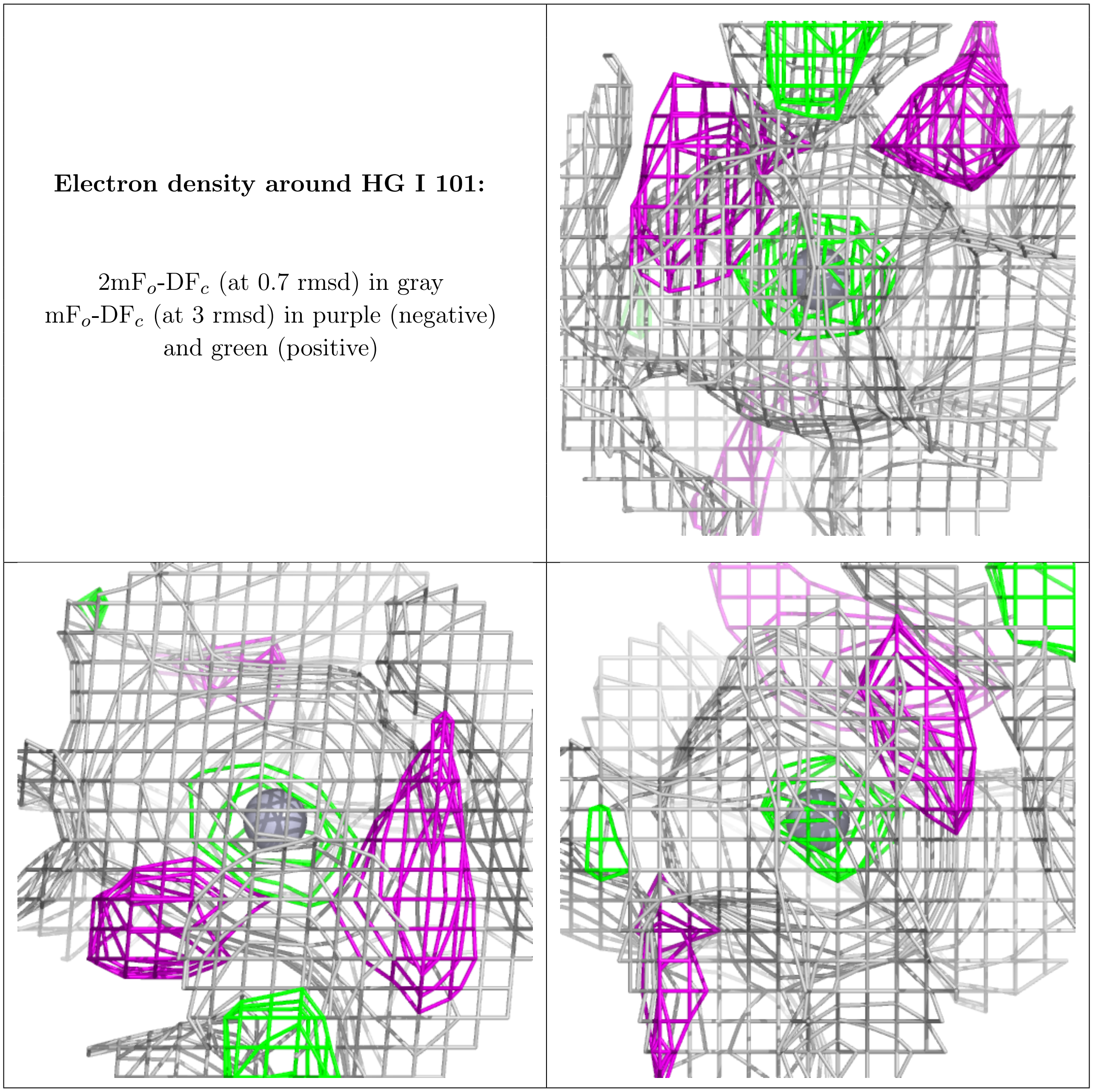
Electron density around HG T 102:

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



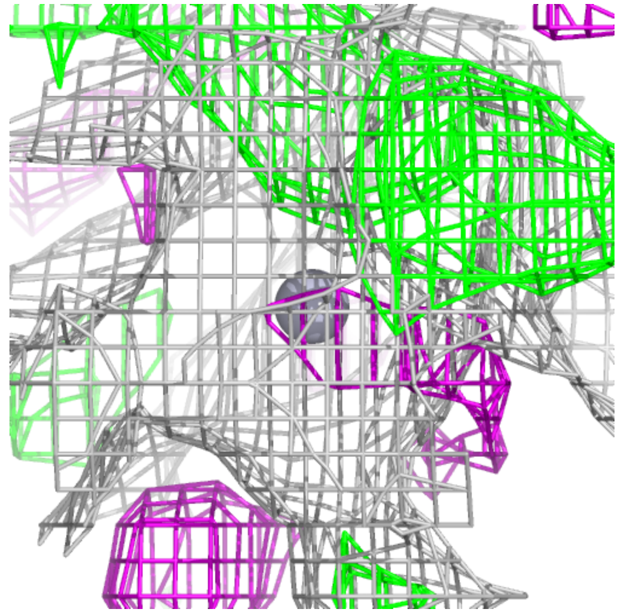
Electron density around HG I 101:

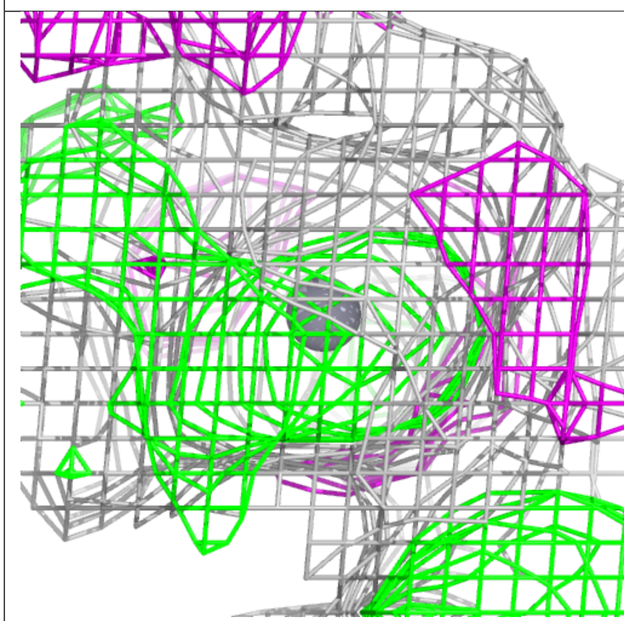
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

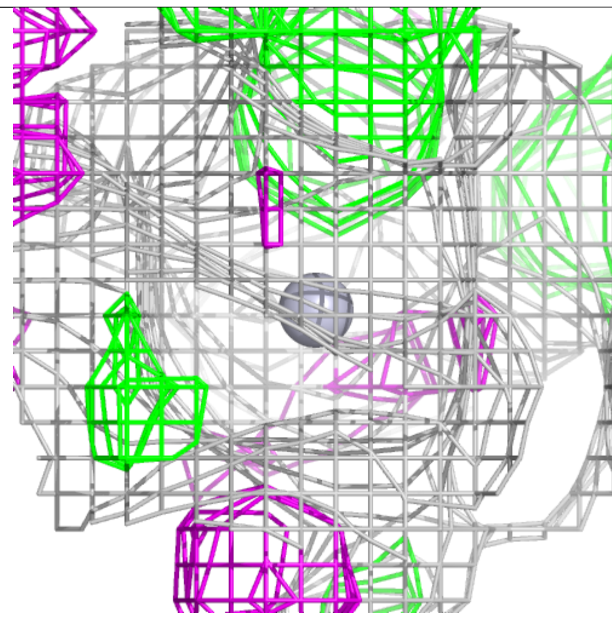


Electron density around HG L 201:

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

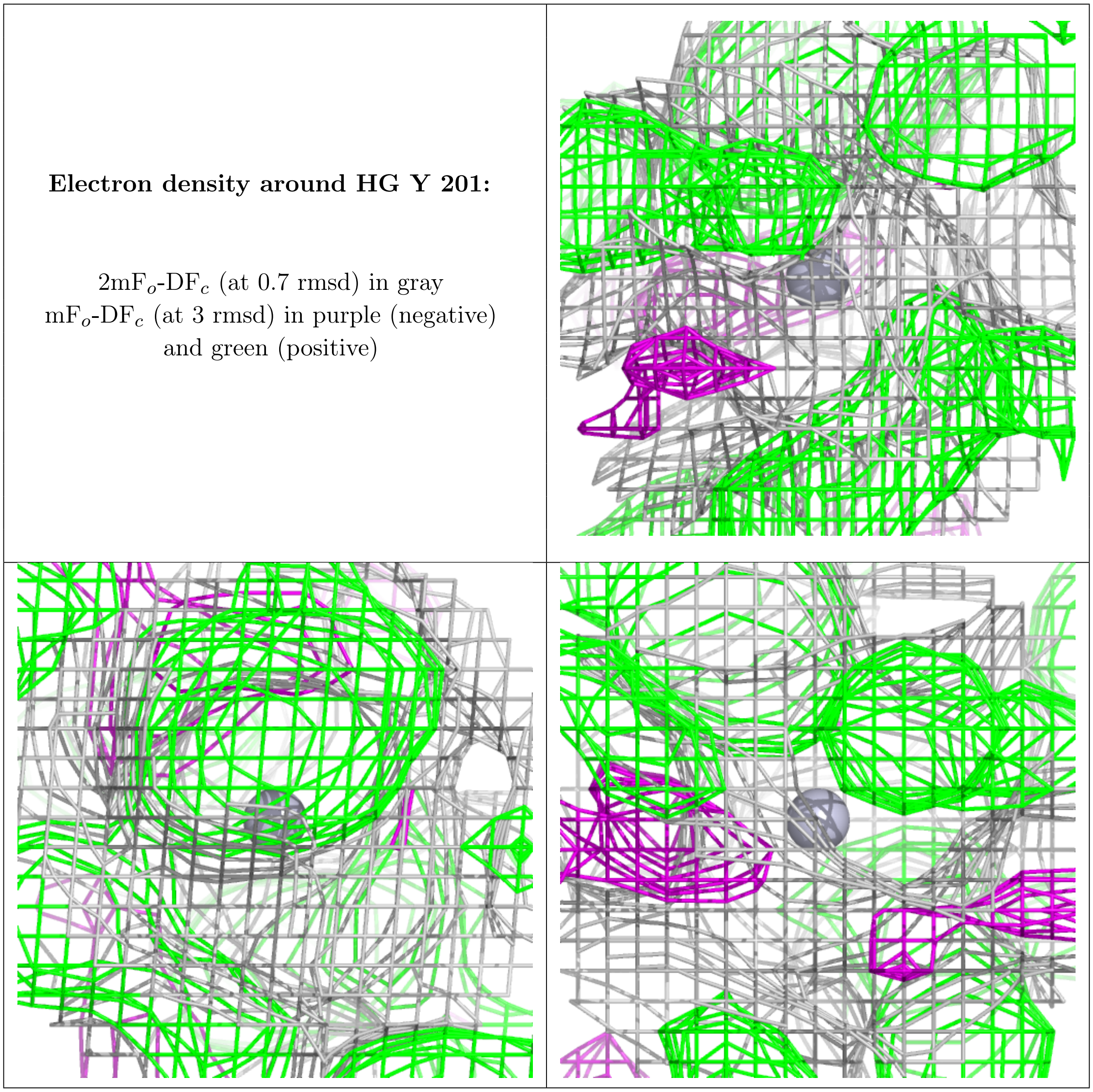






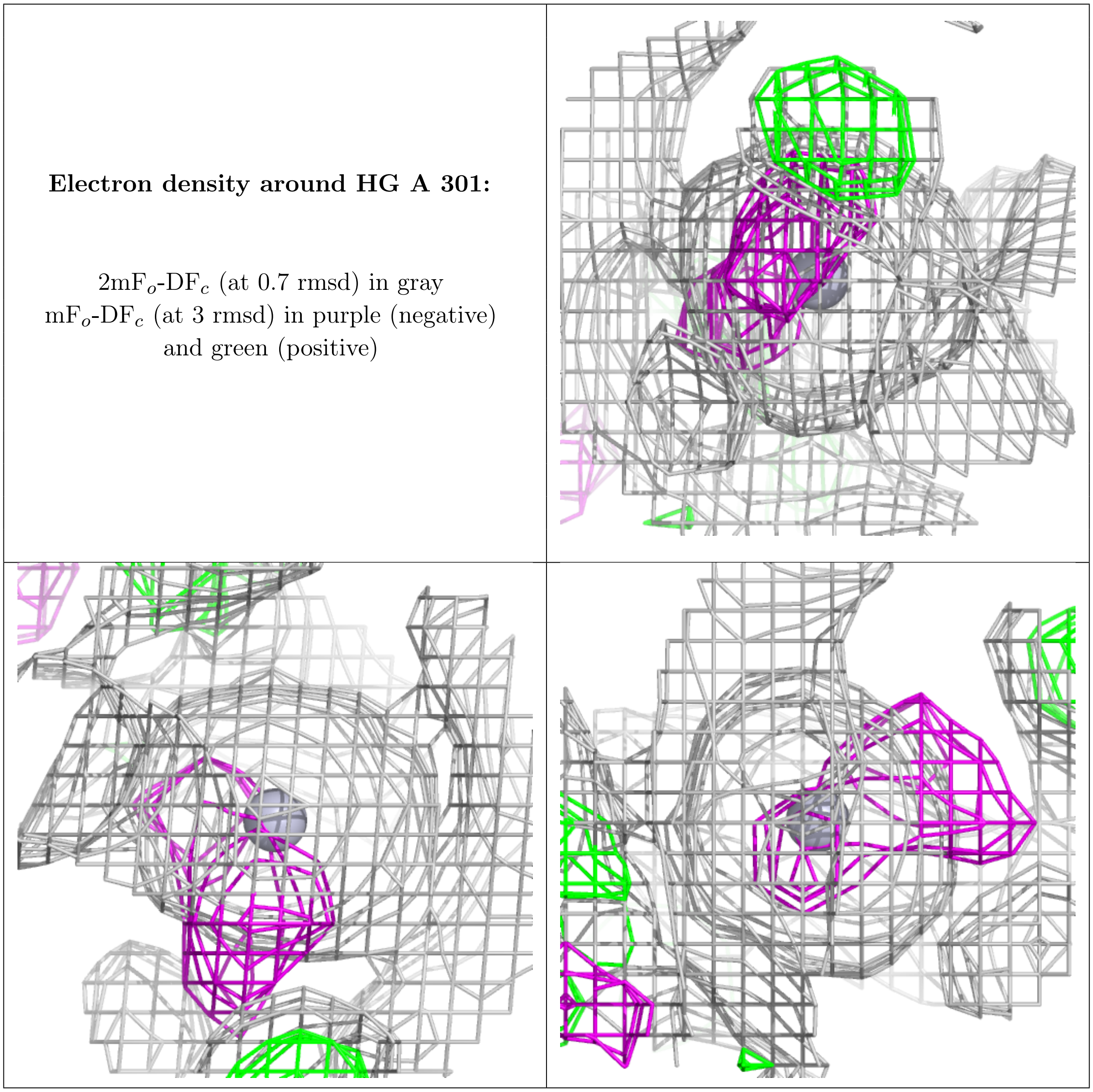
Electron density around HG Y 201:

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



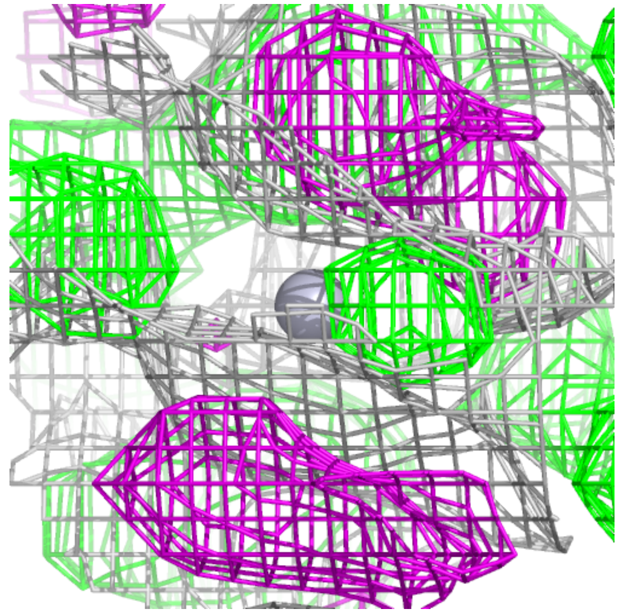
Electron density around HG A 301:

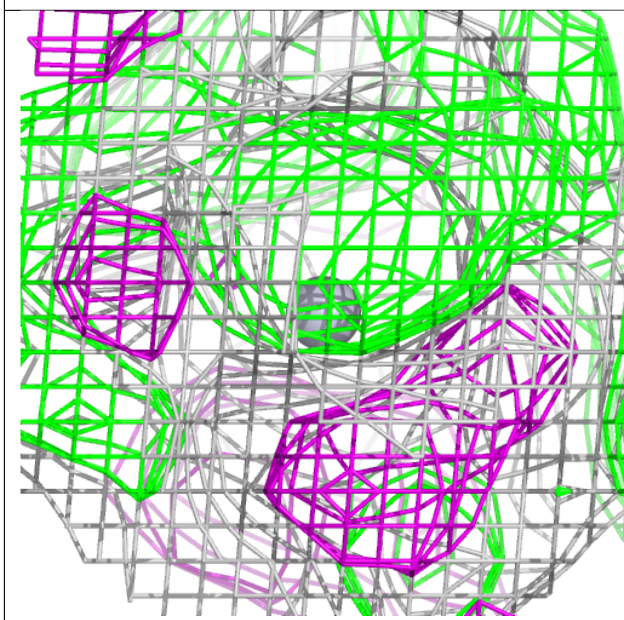
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

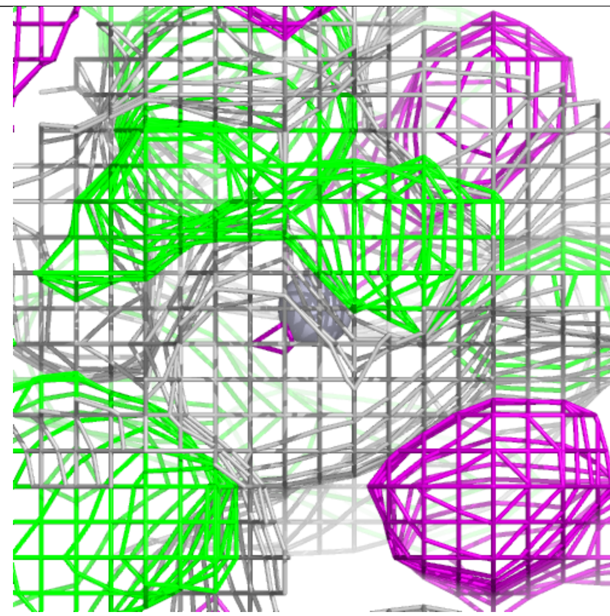


Electron density around HG G 102:

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

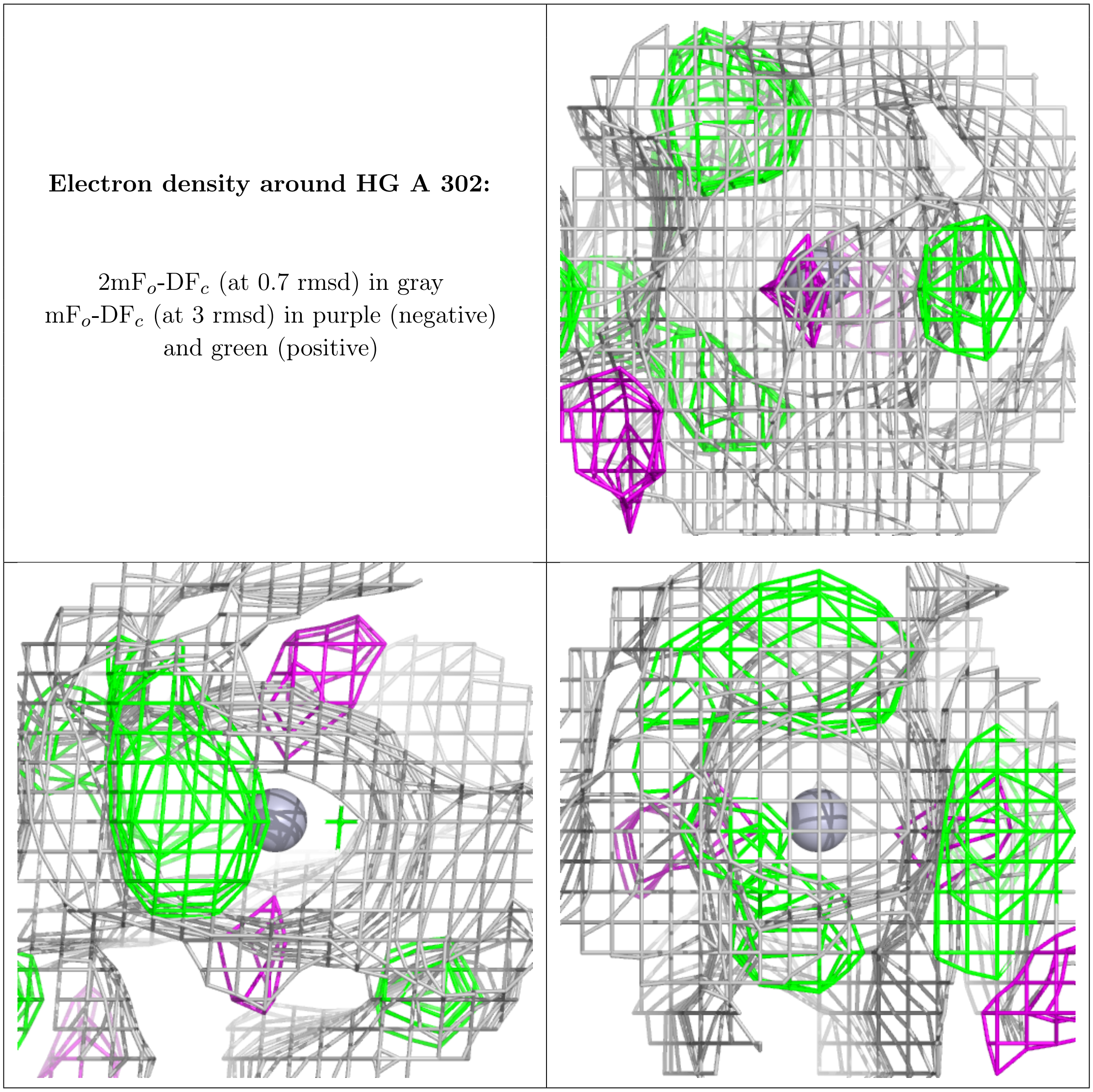


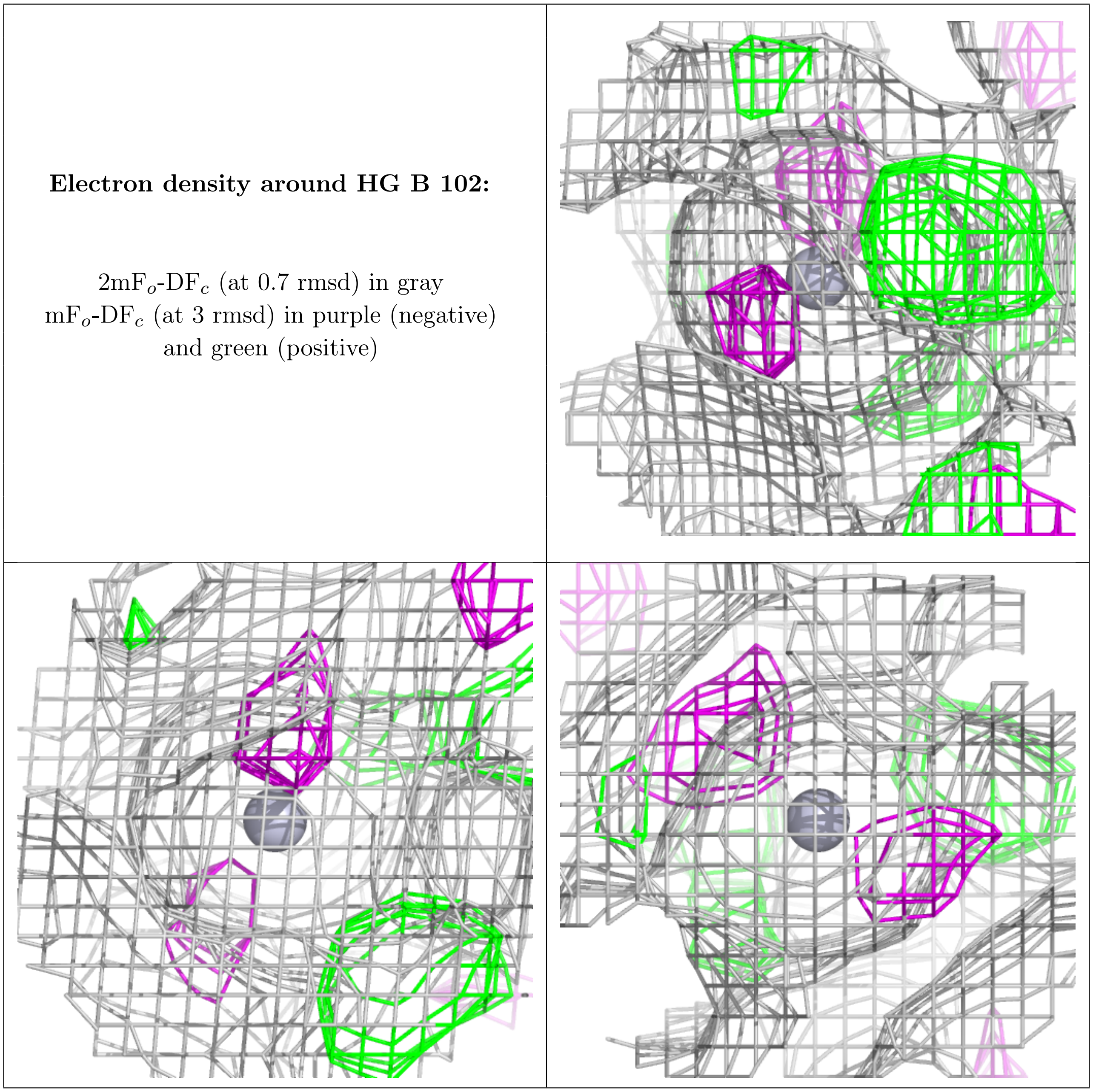




Electron density around HG A 302:

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



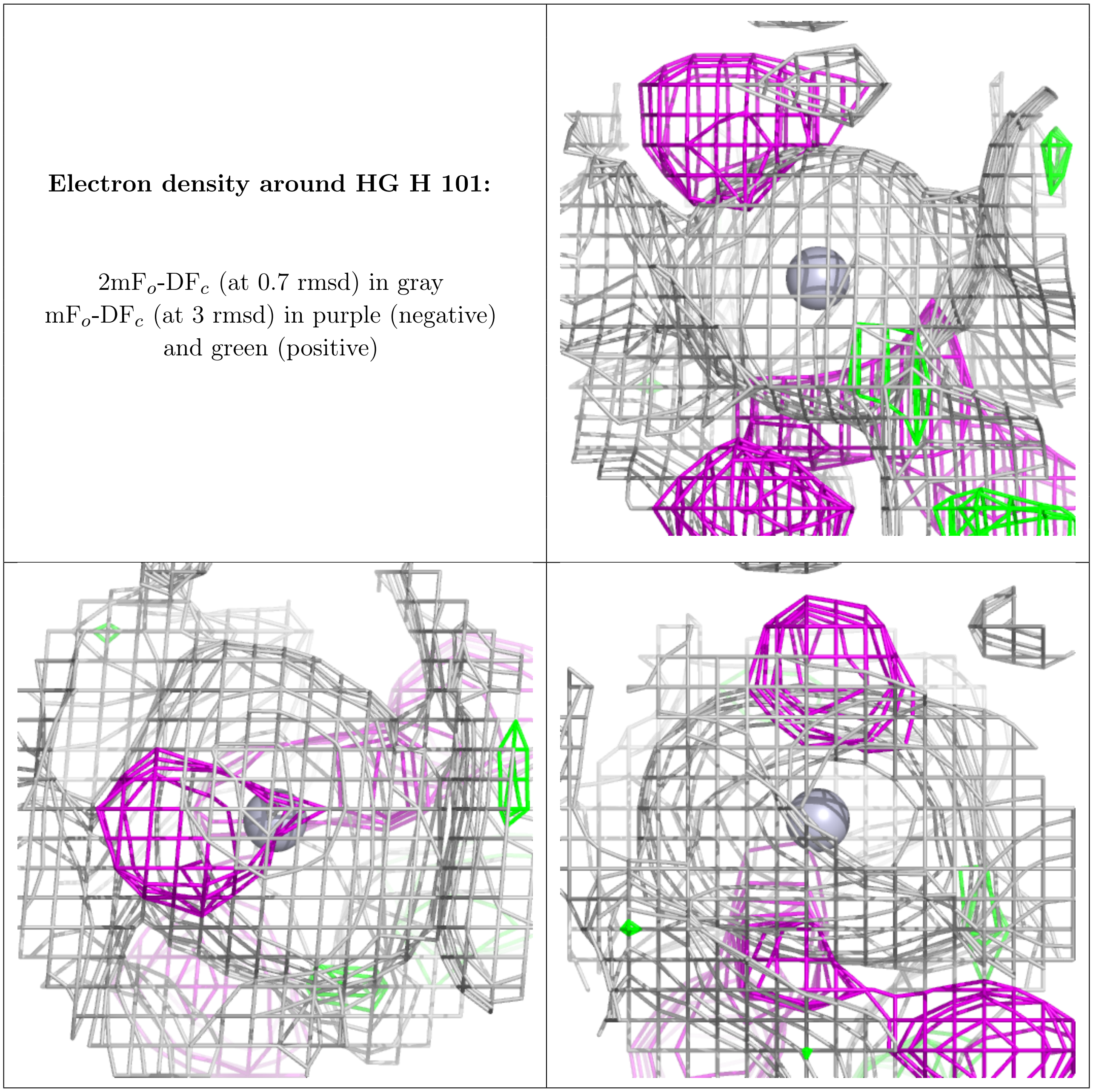


Electron density around HG B 102:

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

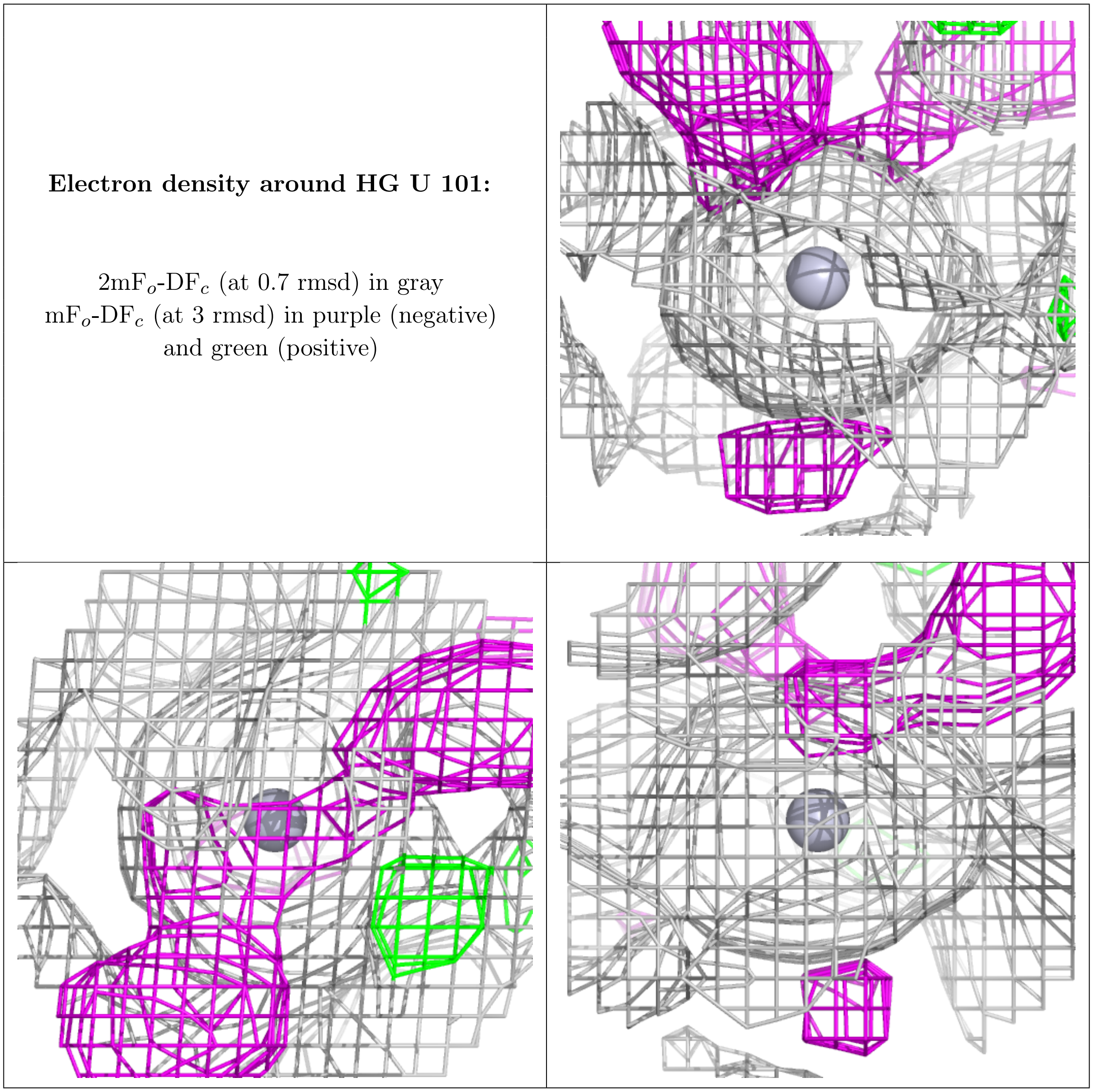
Electron density around HG H 101:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)



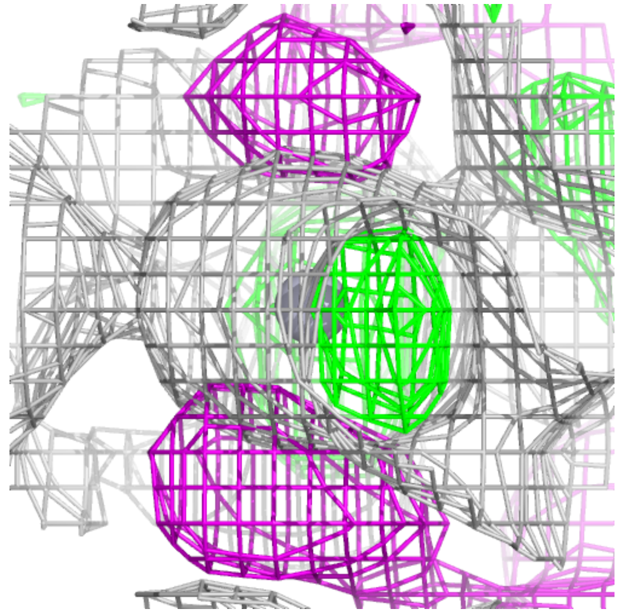
Electron density around HG U 101:

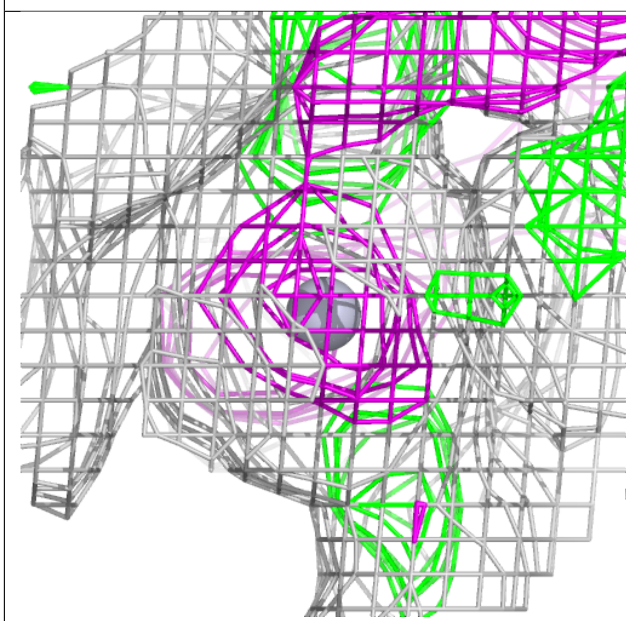
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

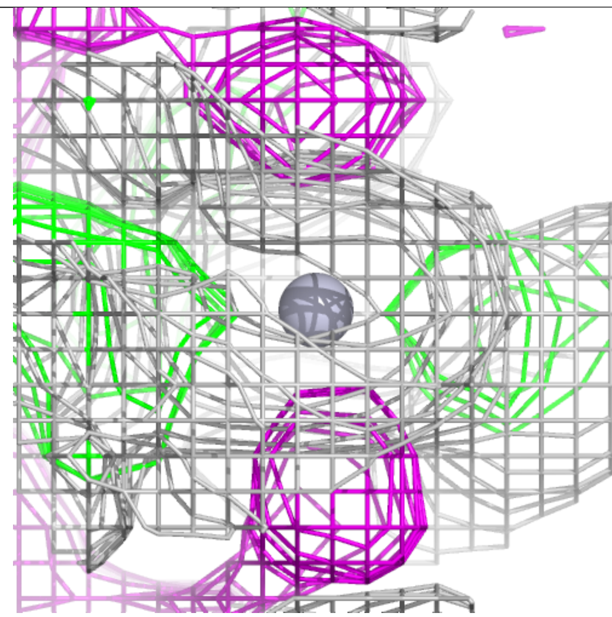


Electron density around HG U 102:

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

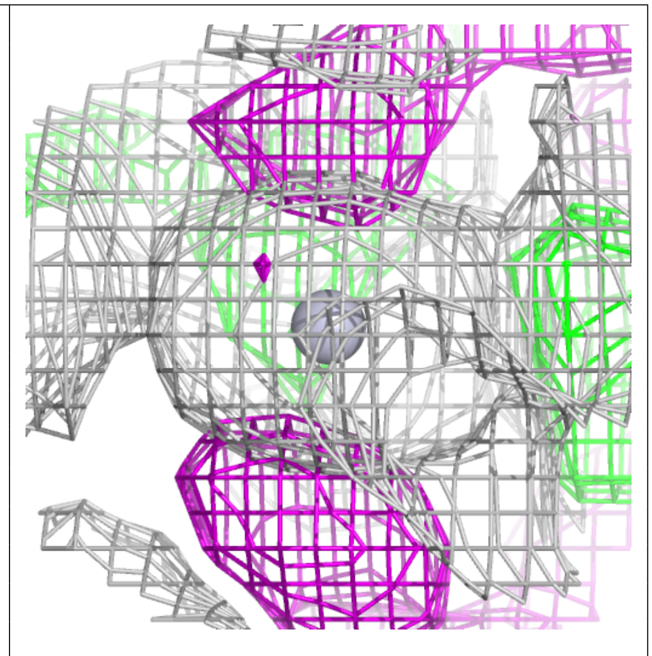


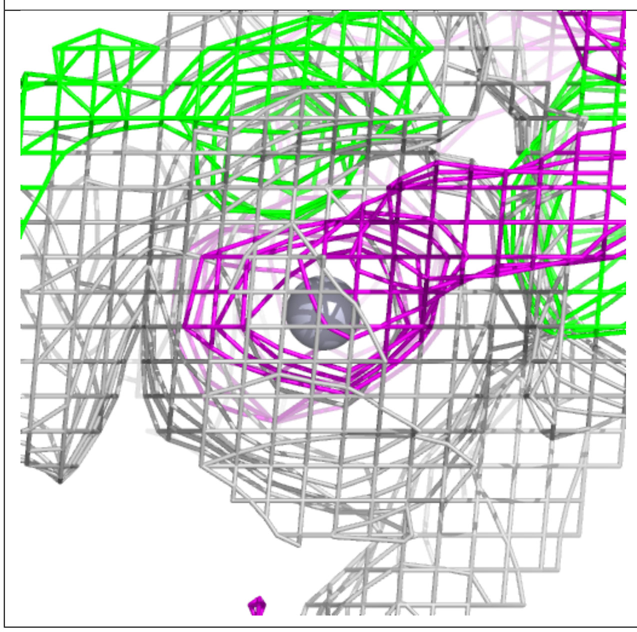


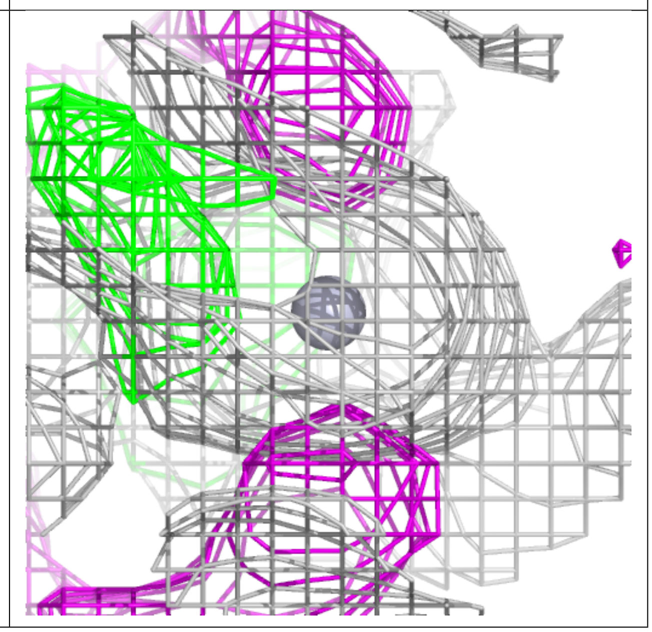


Electron density around HG U 103:

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

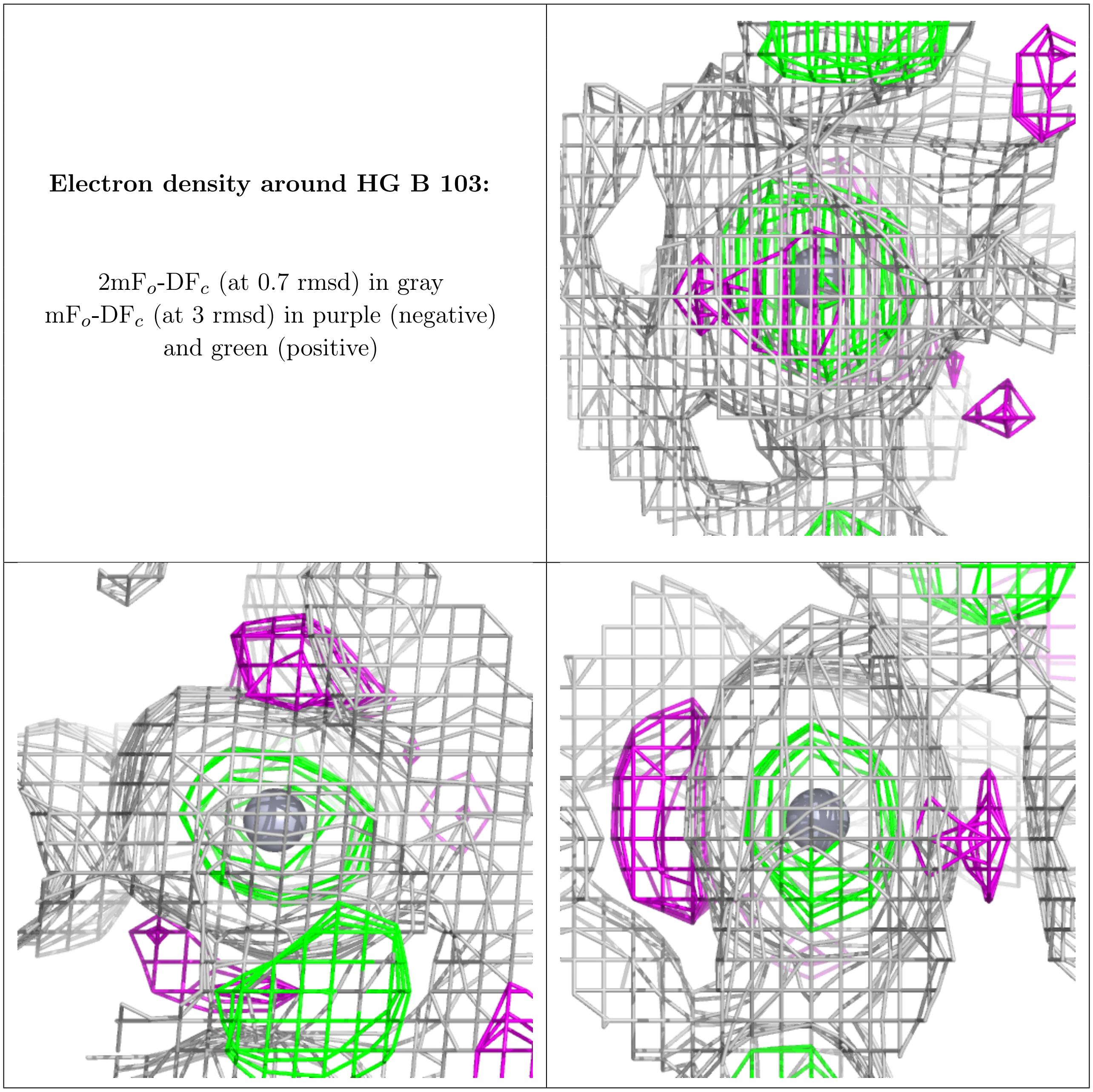






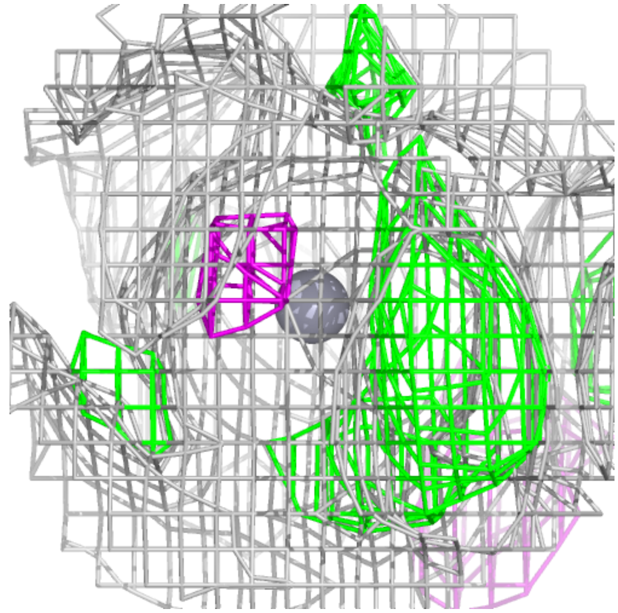
Electron density around HG B 103:

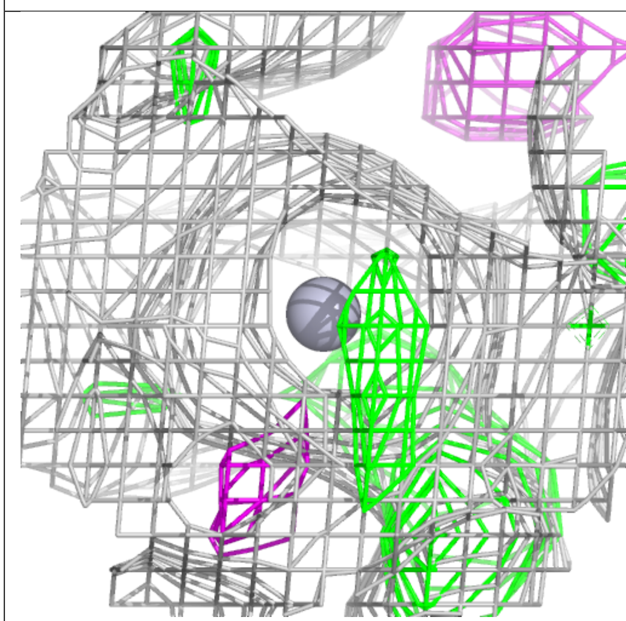
2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

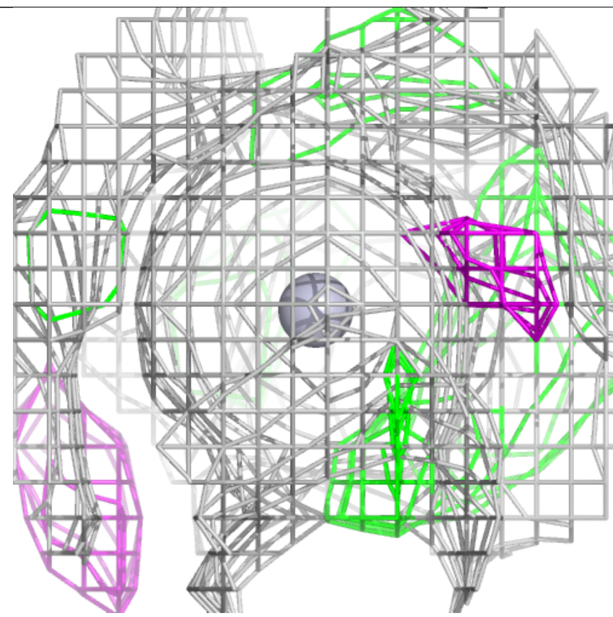


Electron density around HG I 103:

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

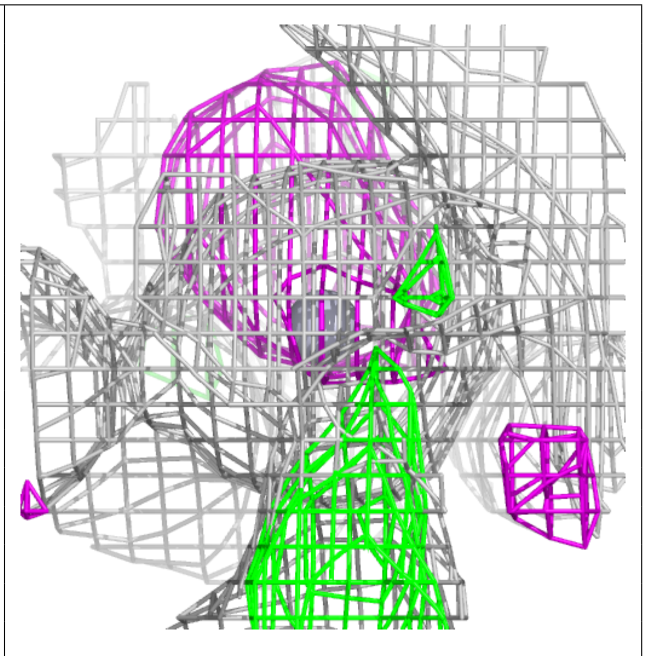


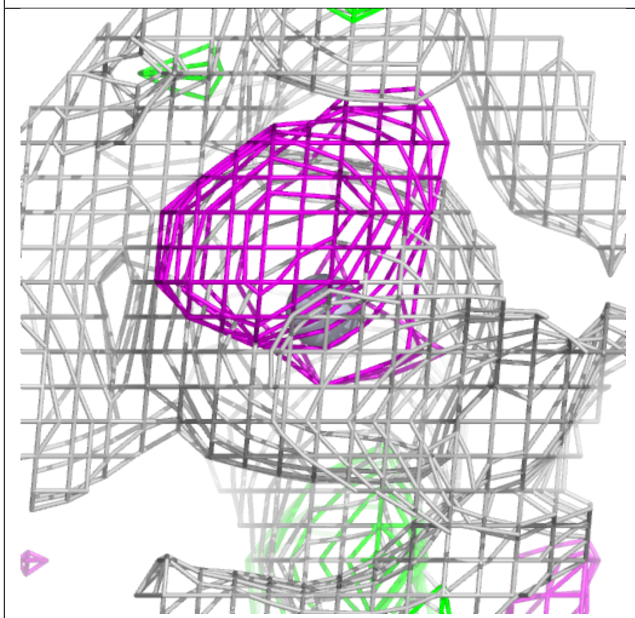


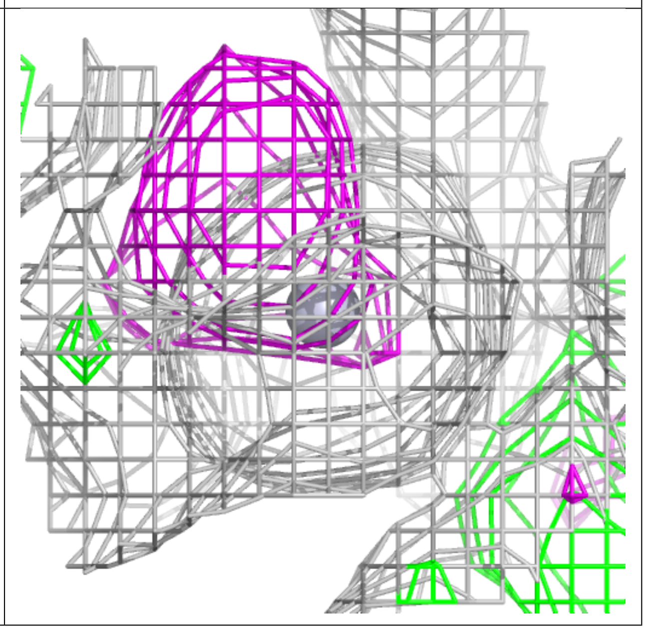


Electron density around HG I 104:

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

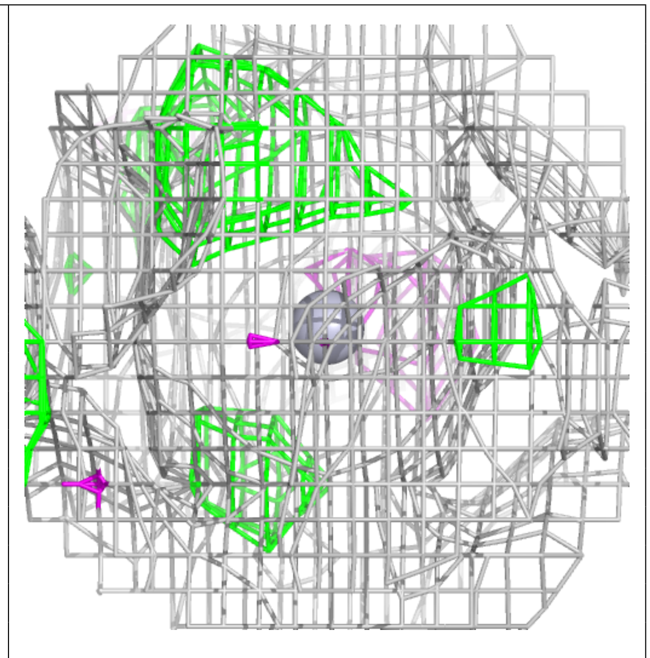


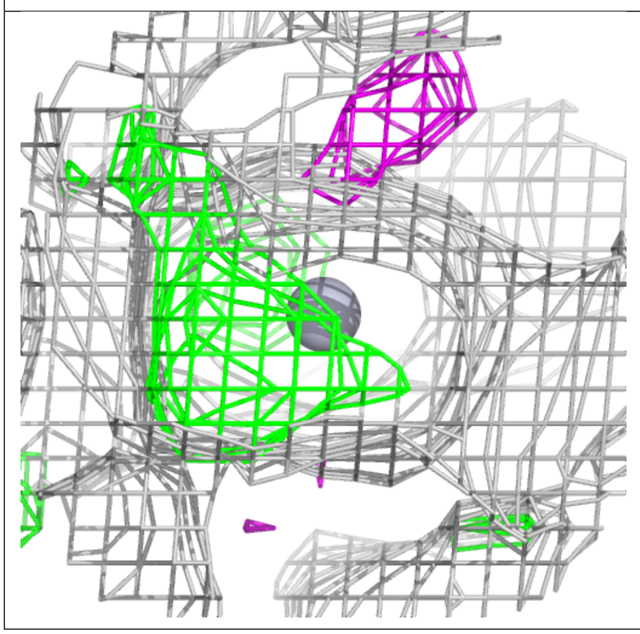


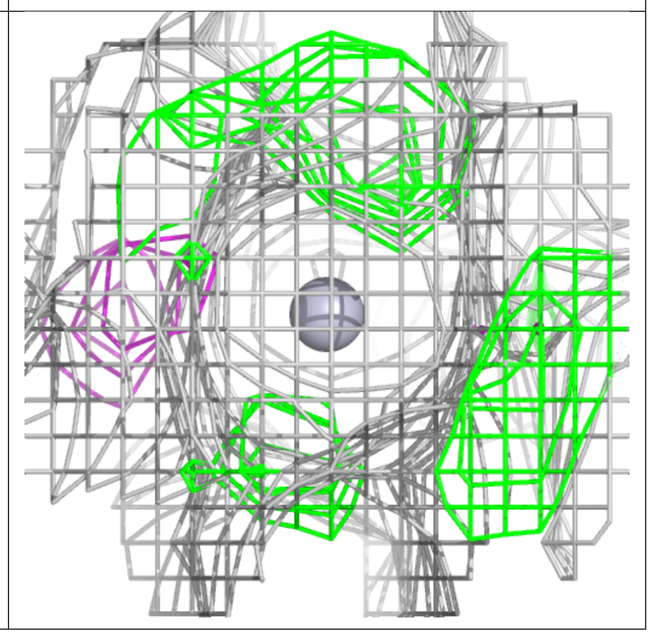


Electron density around HG J 102:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

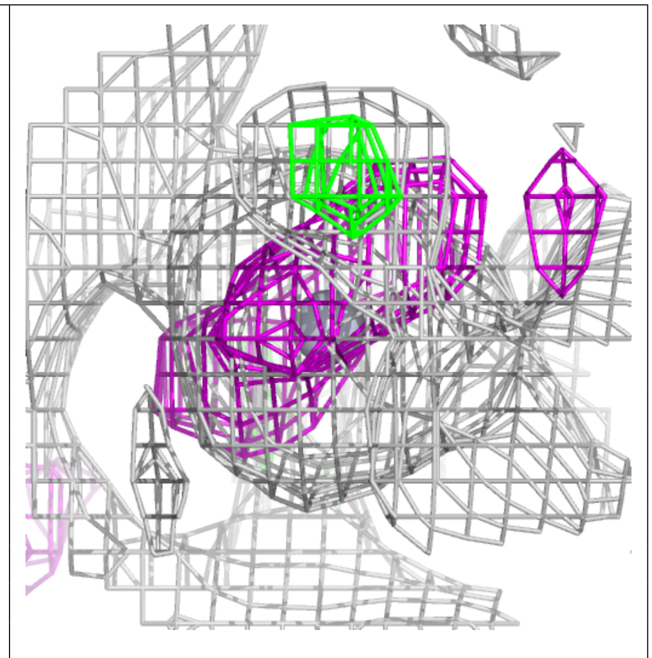


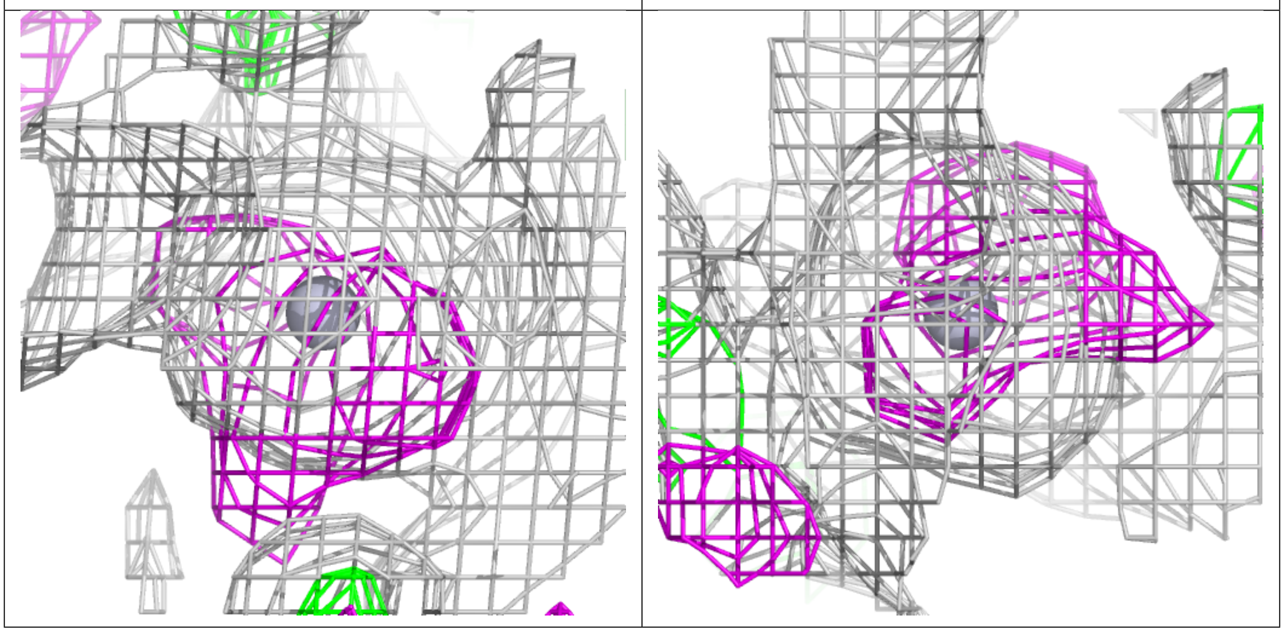




Electron density around HG J 103:

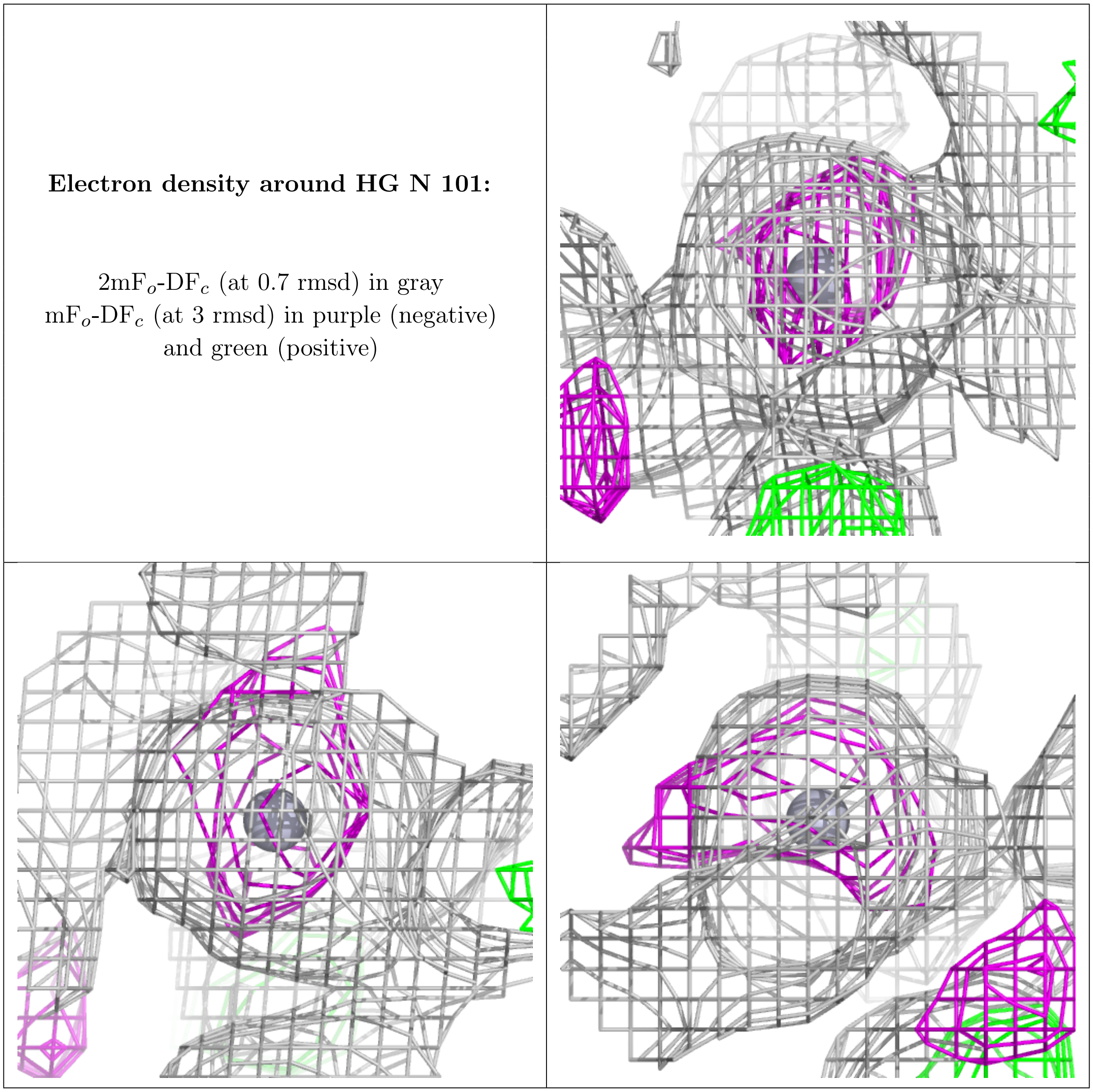
2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)





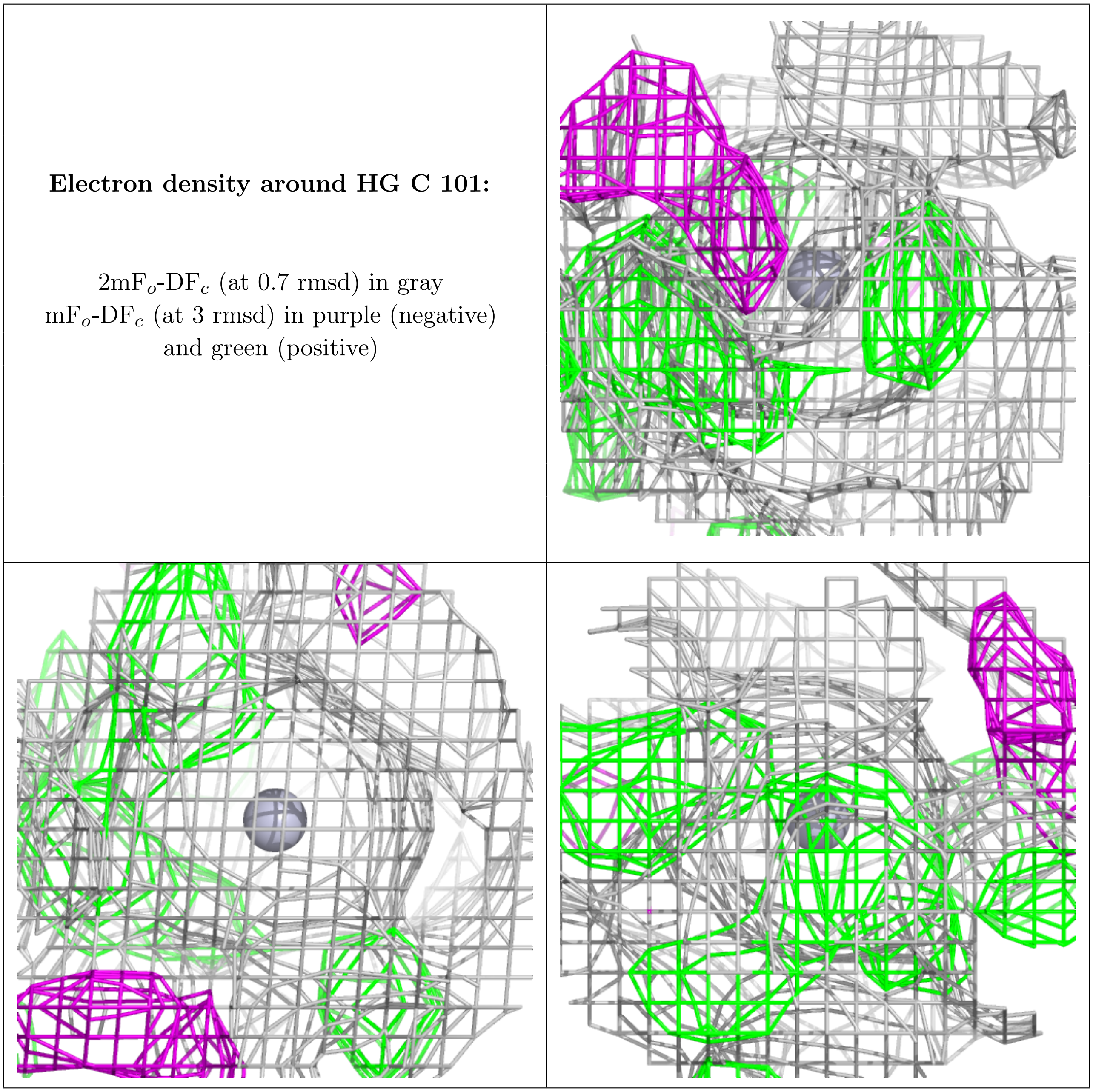
Electron density around HG N 101:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)



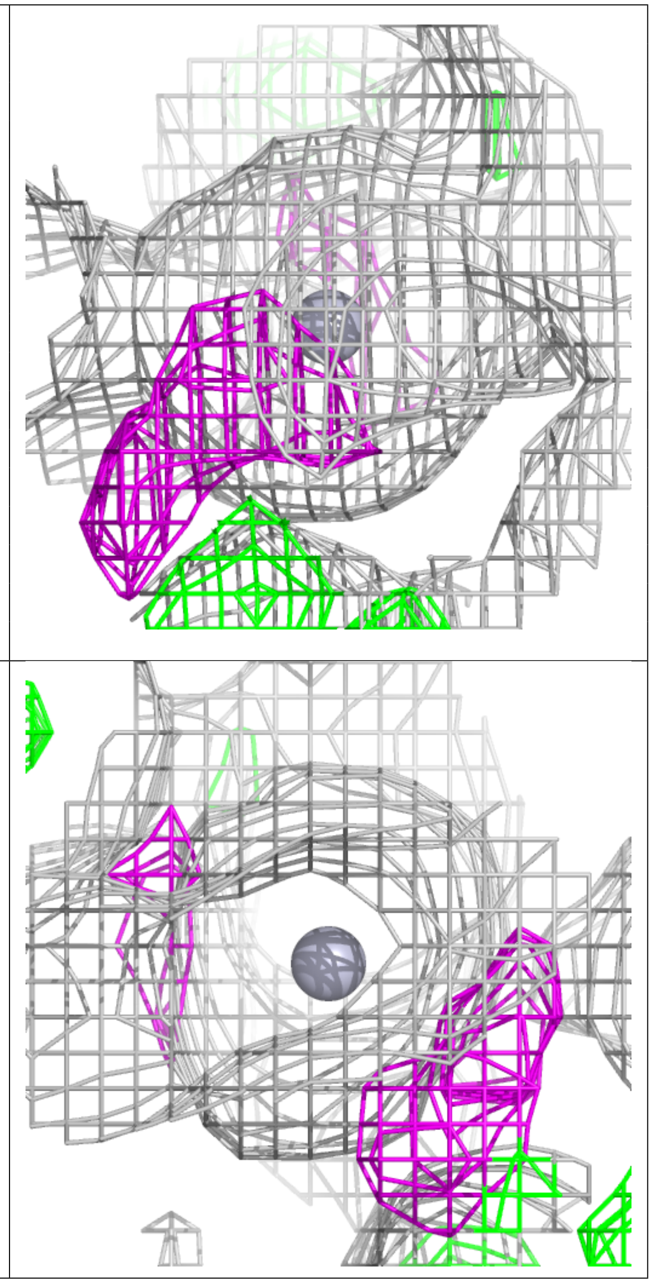
Electron density around HG C 101:

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



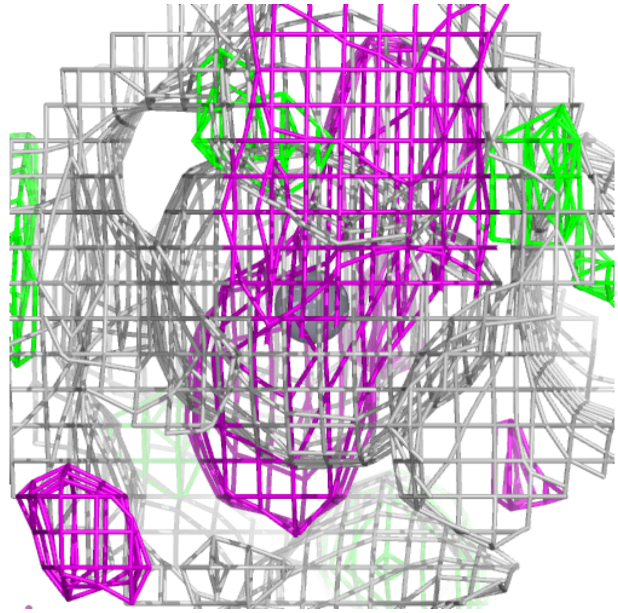
Electron density around HG C 102:

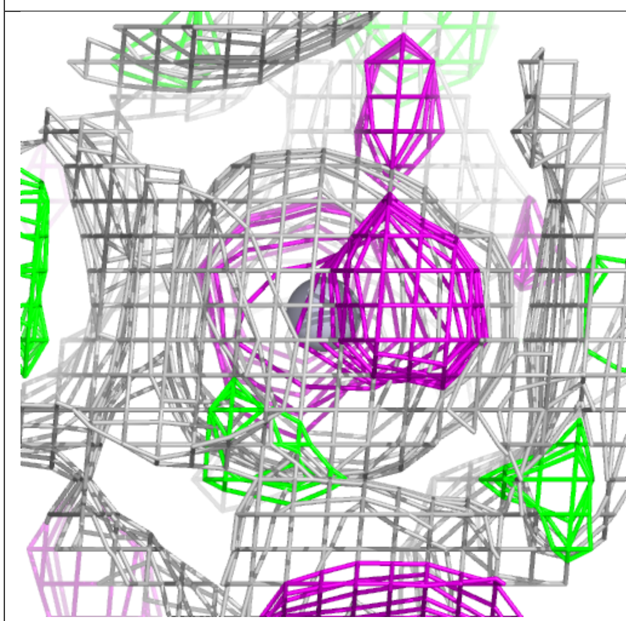
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

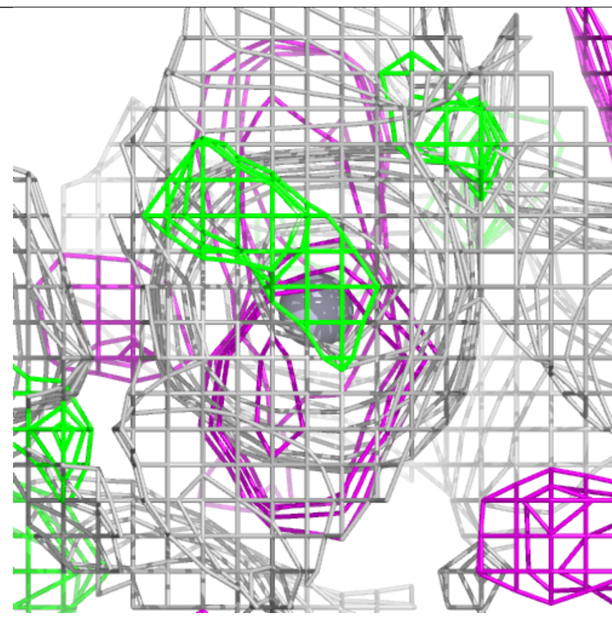


Electron density around HG D 101:

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

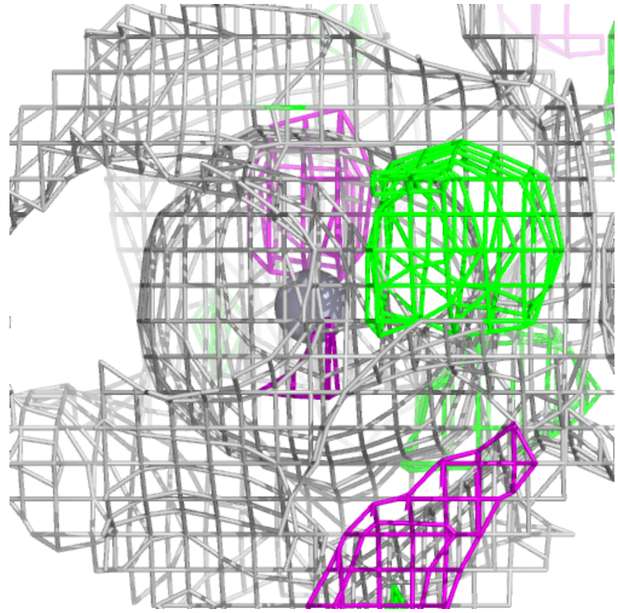


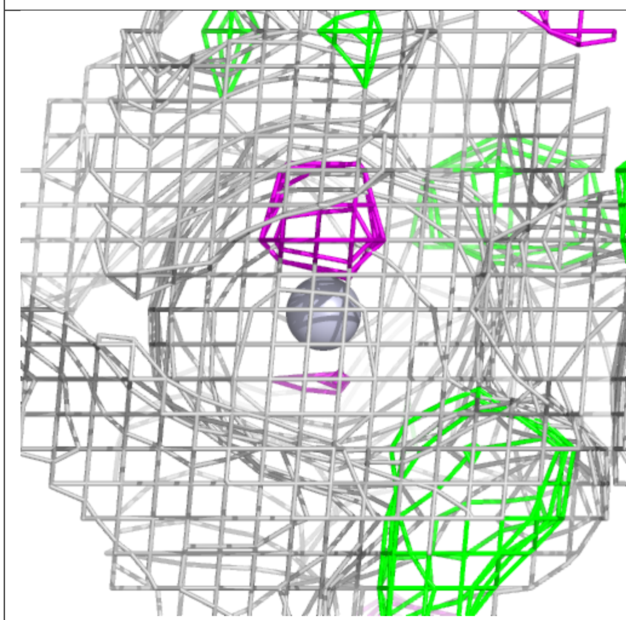


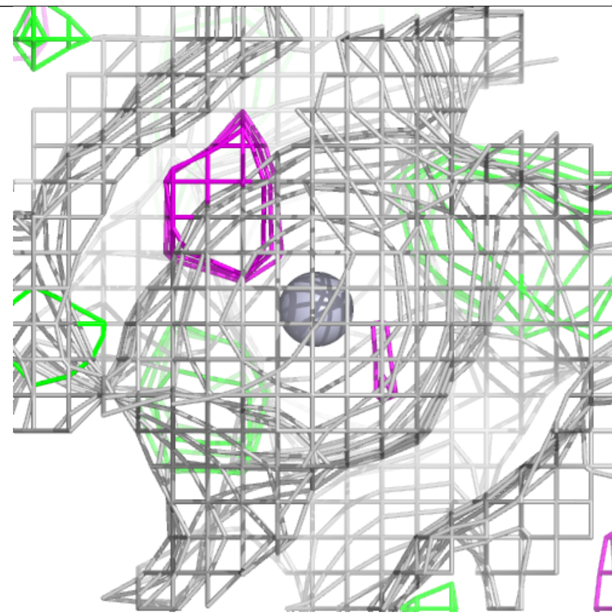


Electron density around HG E 102:

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

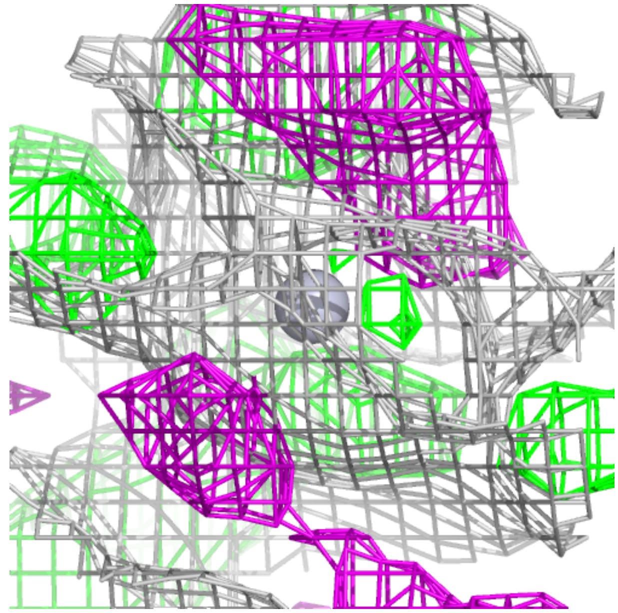


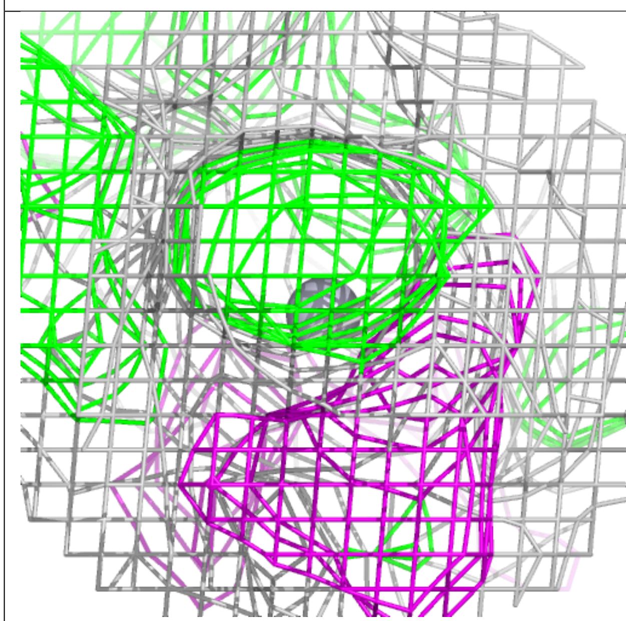


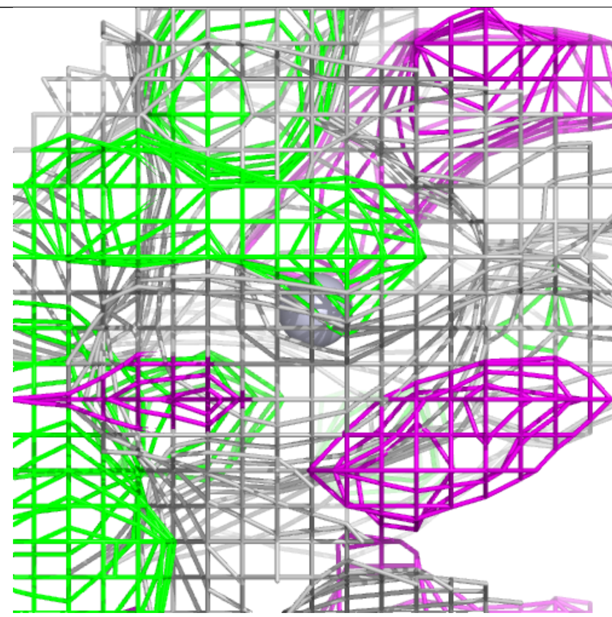


Electron density around HG L 202:

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

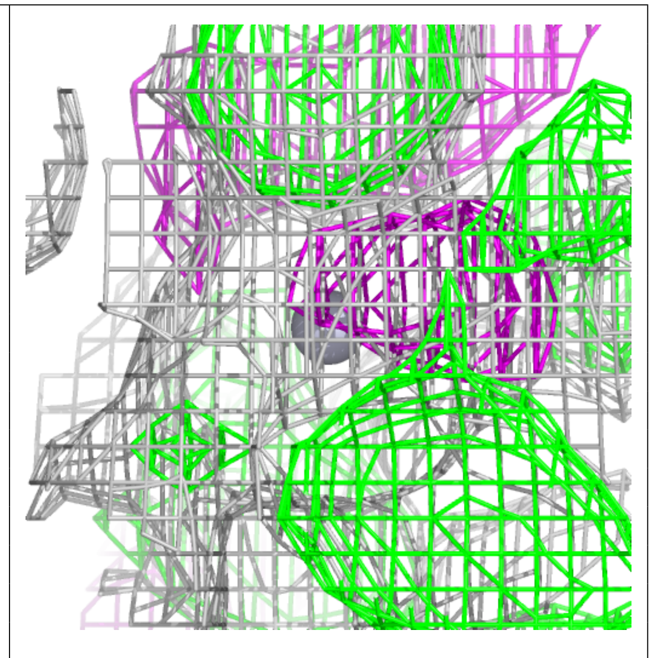


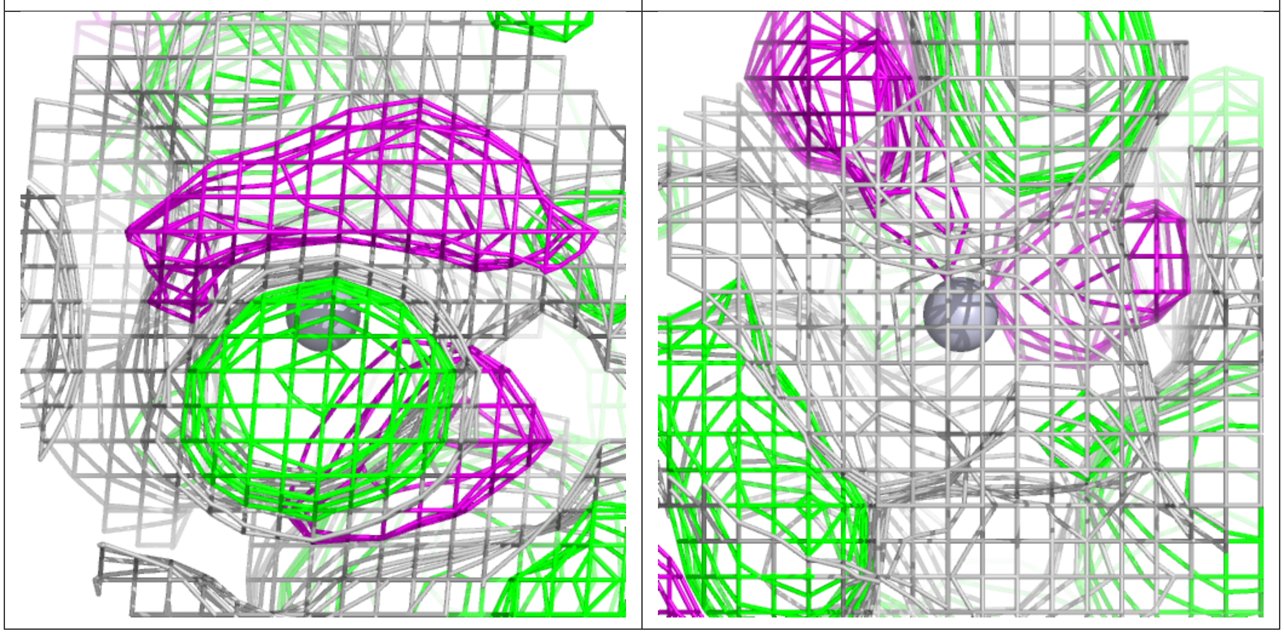




Electron density around HG L 203:

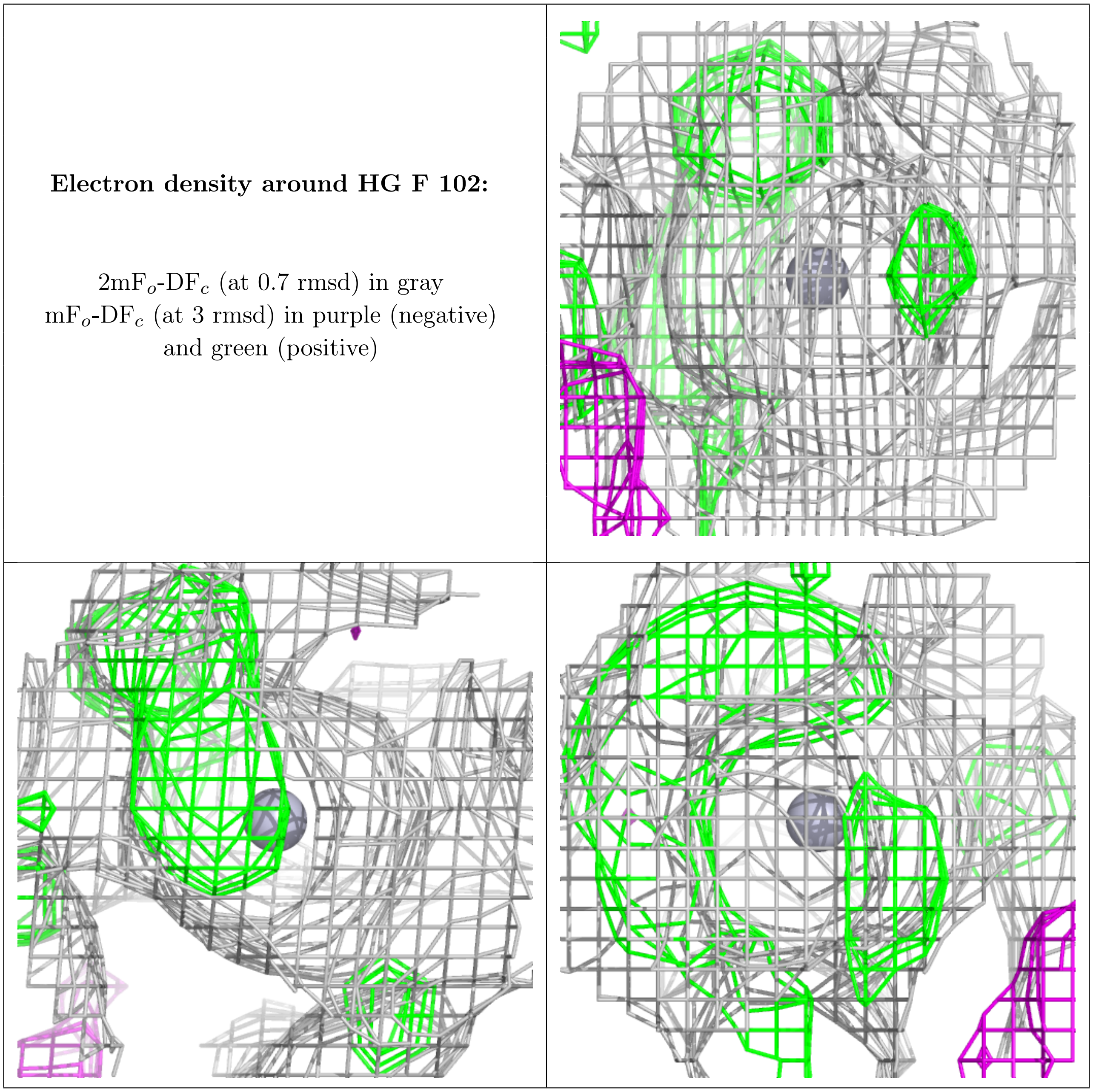
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





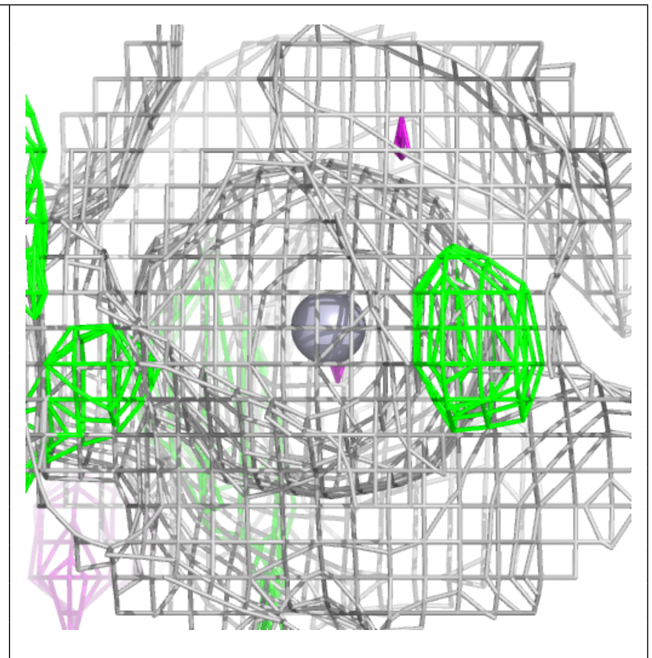
Electron density around HG F 102:

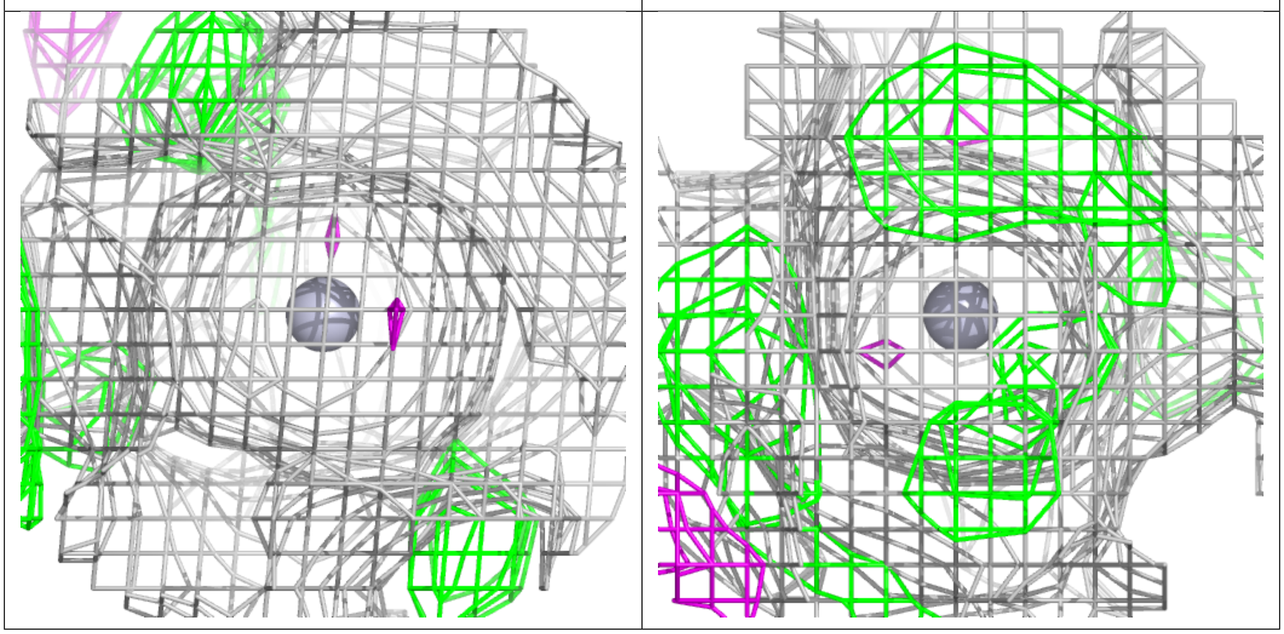
2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around HG A 303:

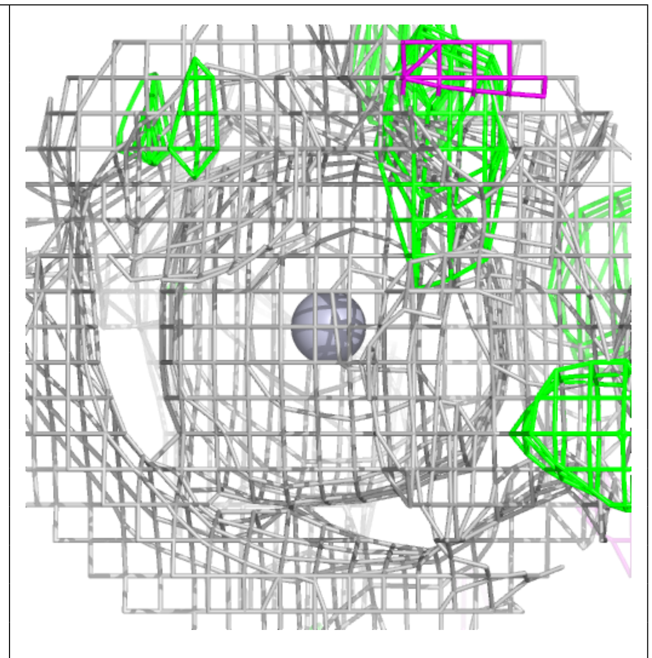
2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

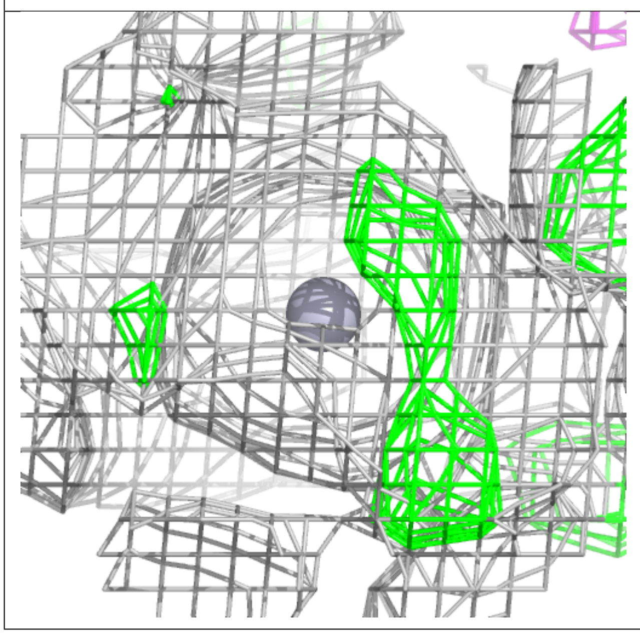


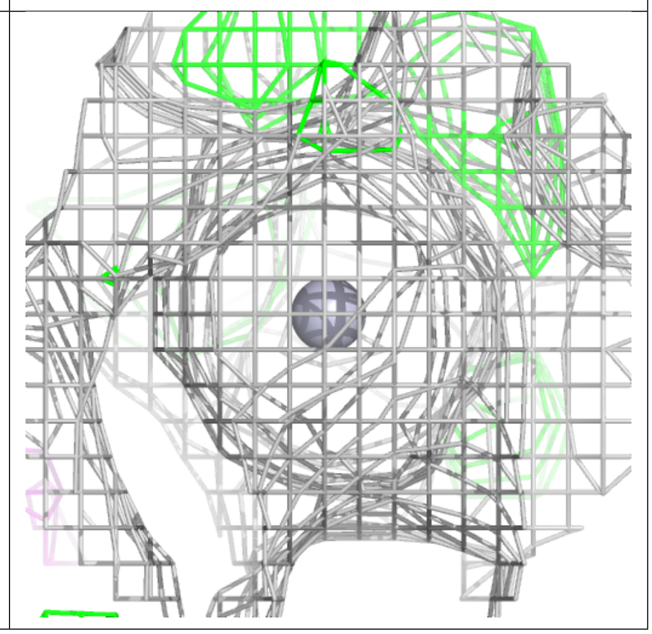


Electron density around HG E 103:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

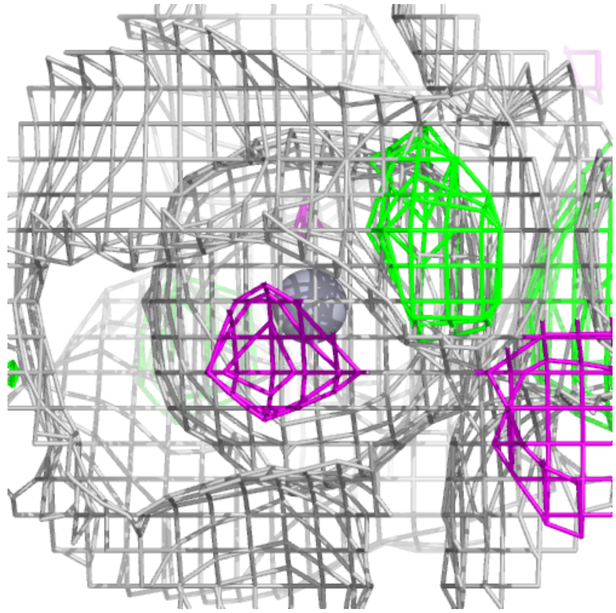


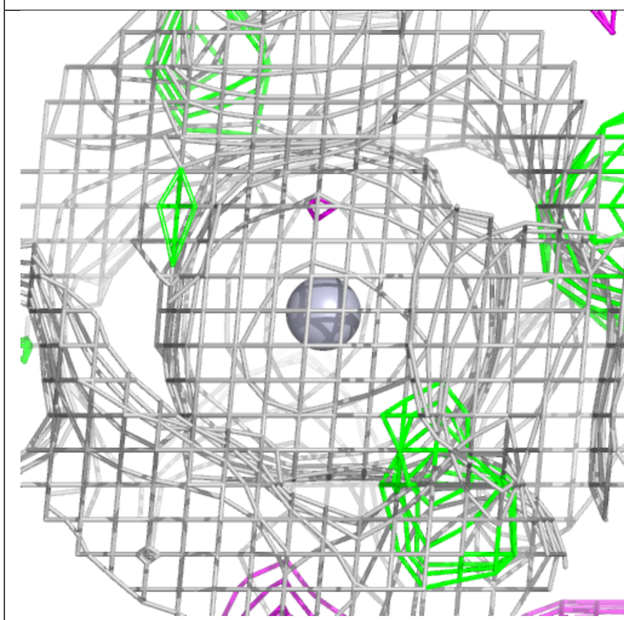


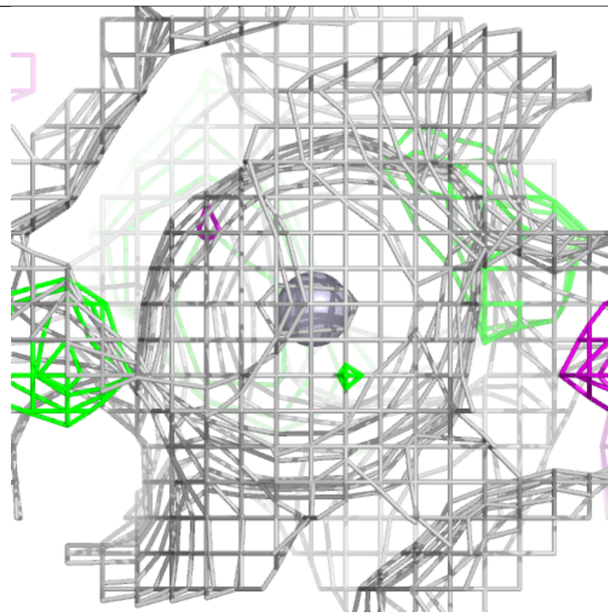


Electron density around HG I 102:

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

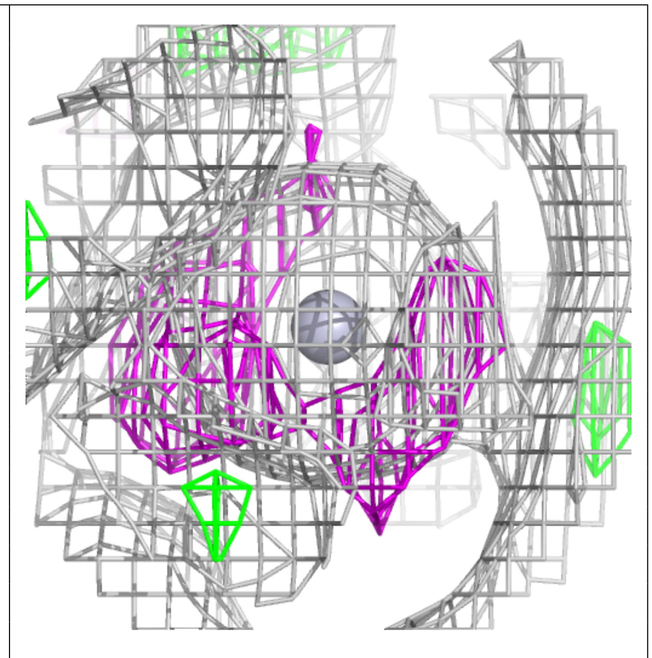


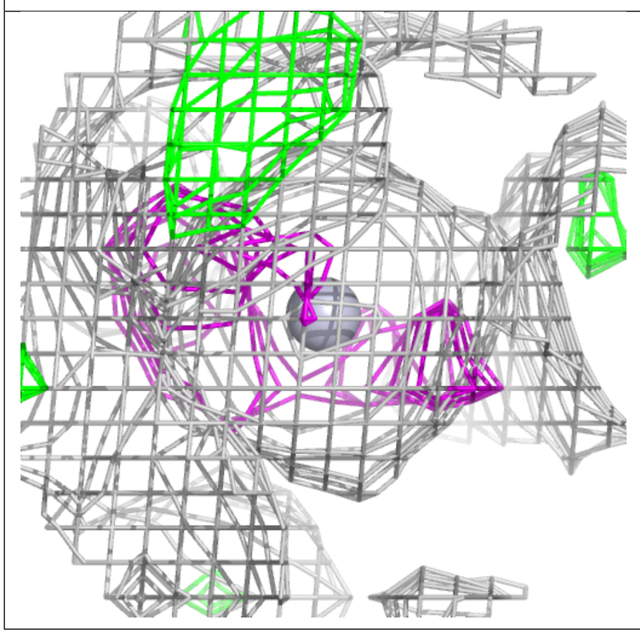


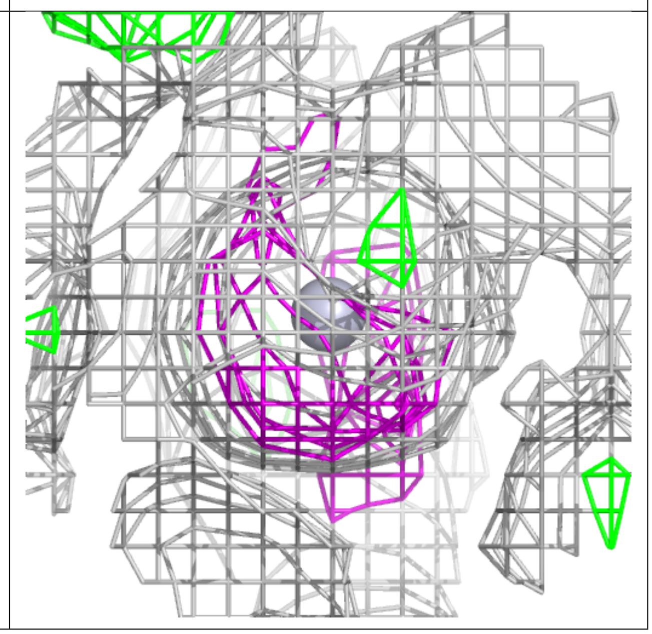


Electron density around HG Q 101:

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

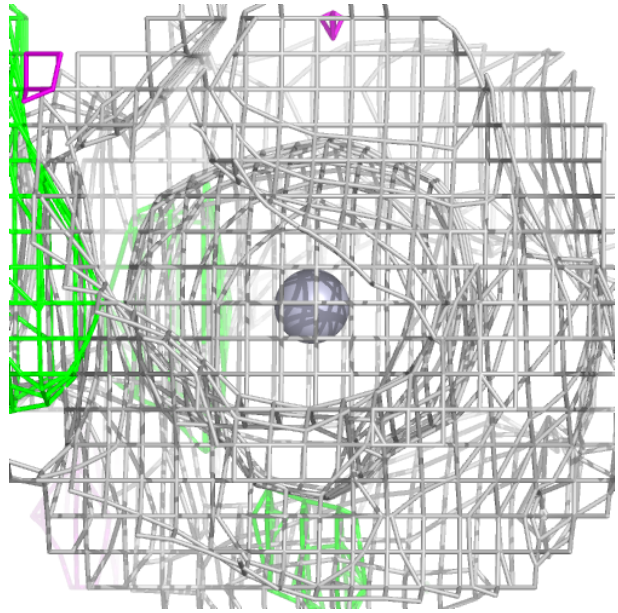


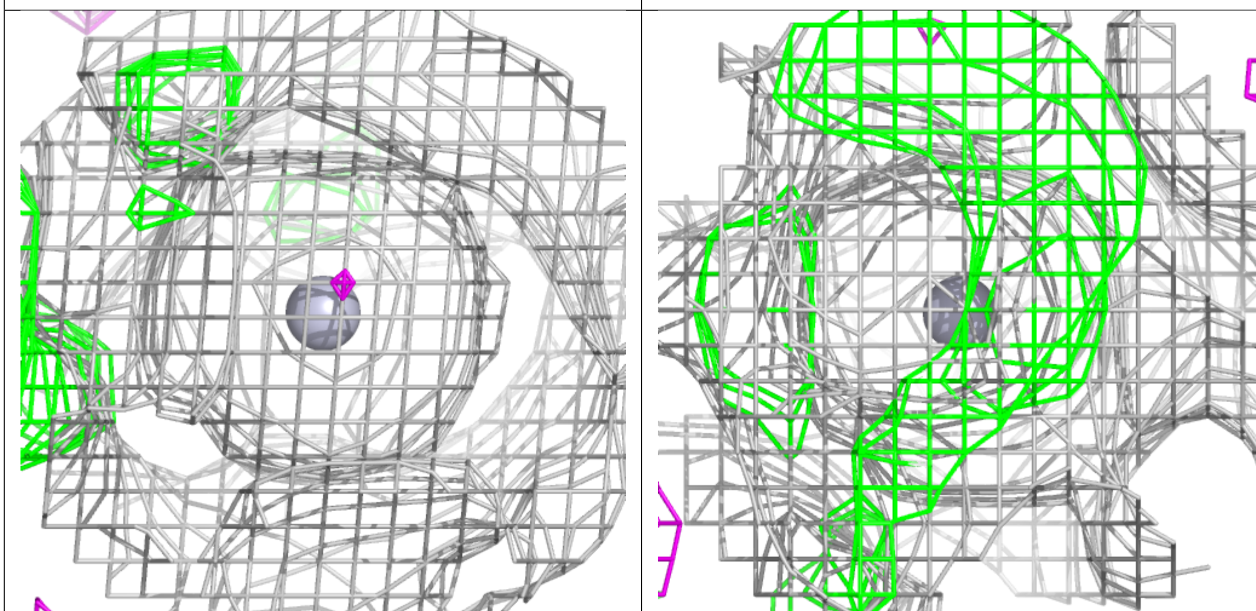




Electron density around HG F 101:

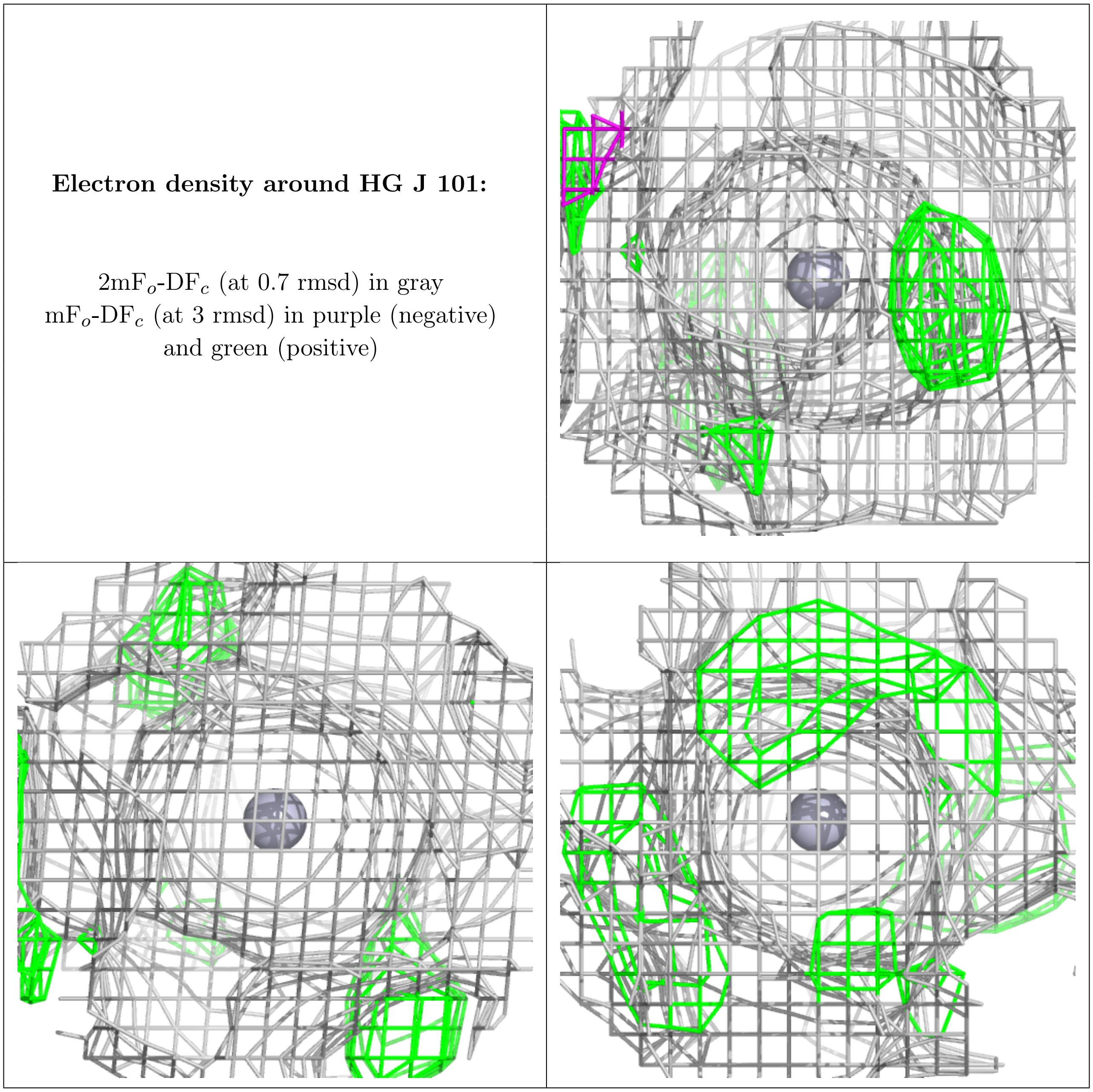
2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)





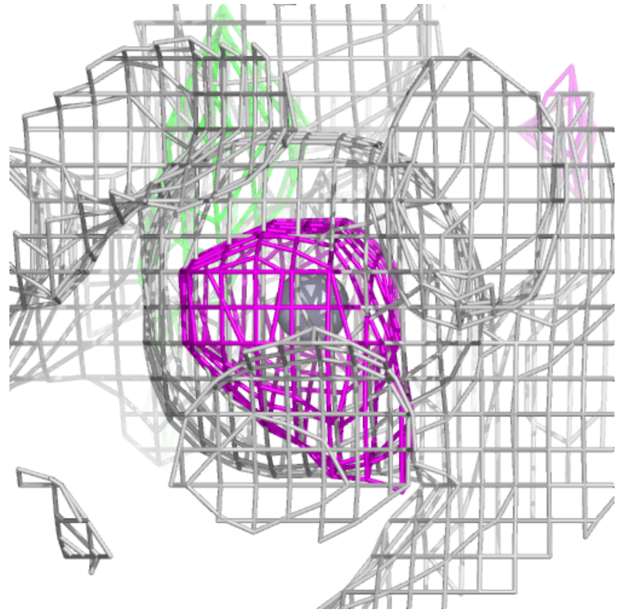
Electron density around HG J 101:

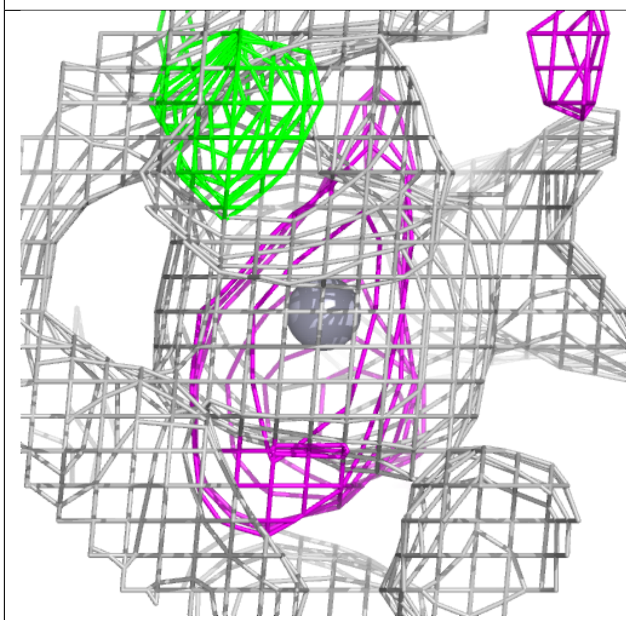
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

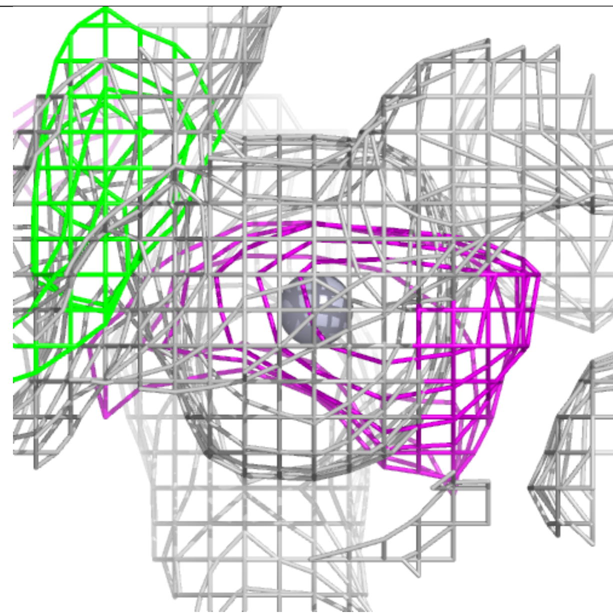


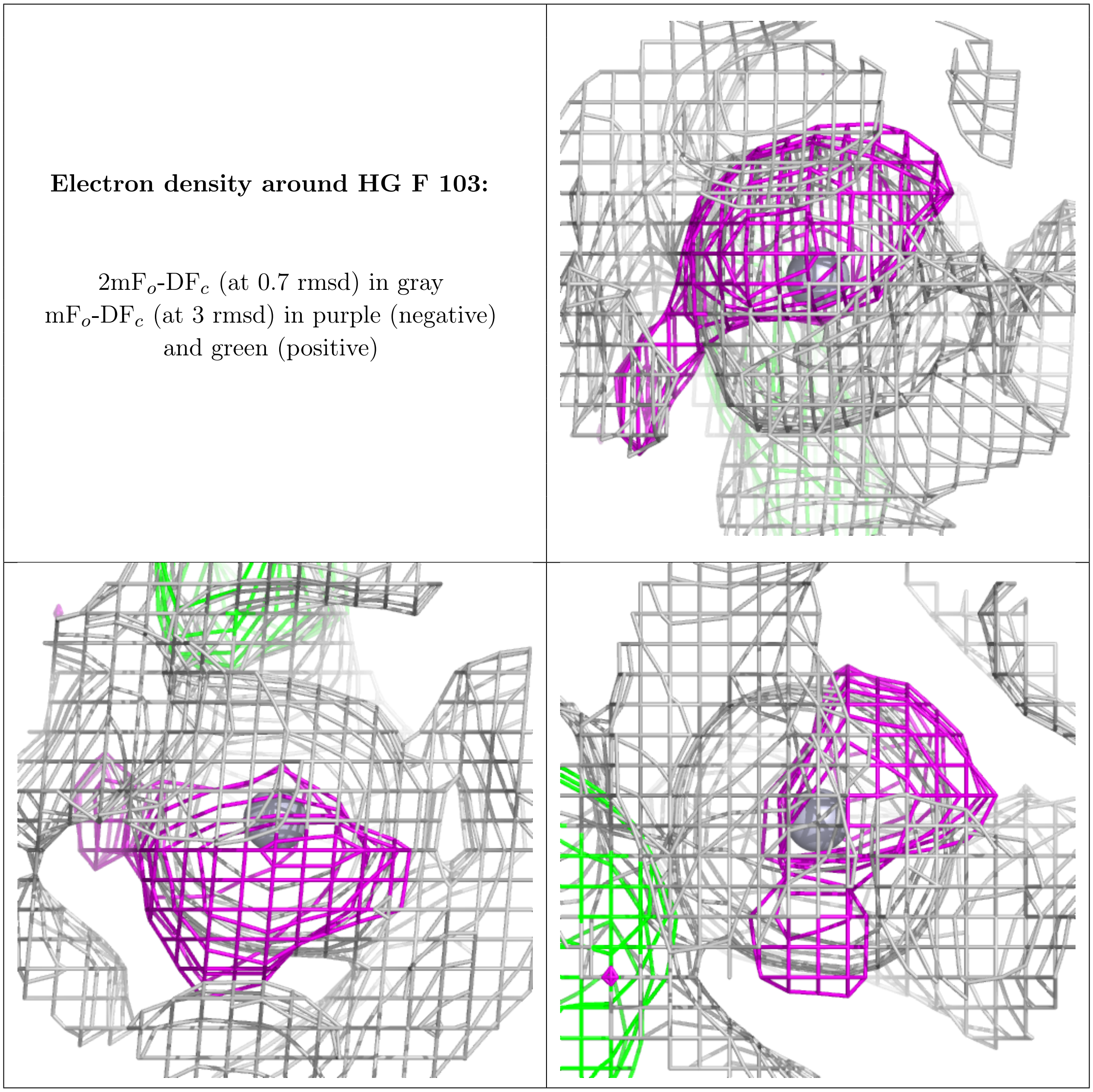
Electron density around HG M 101:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)







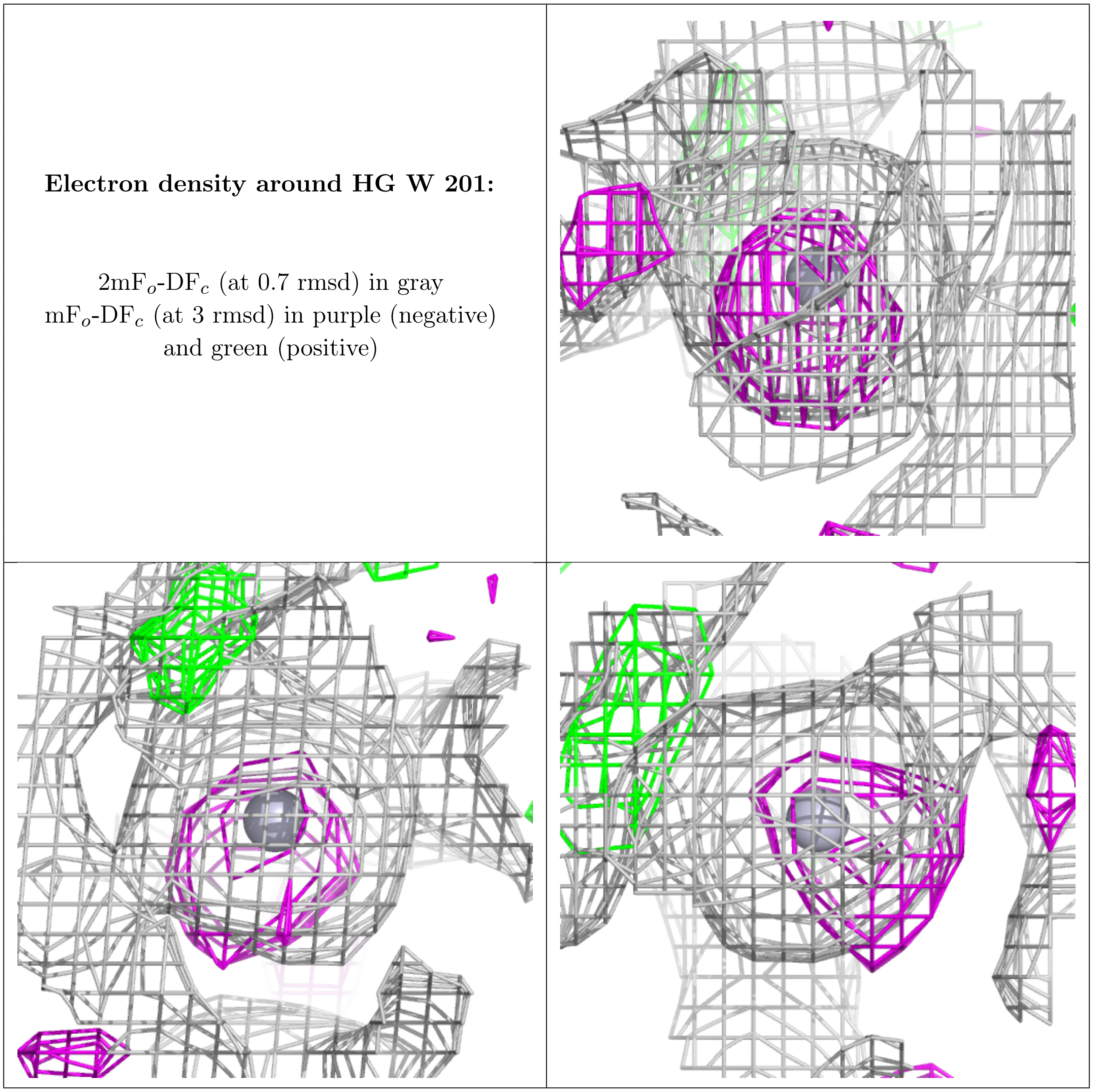


Electron density around HG F 103:

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

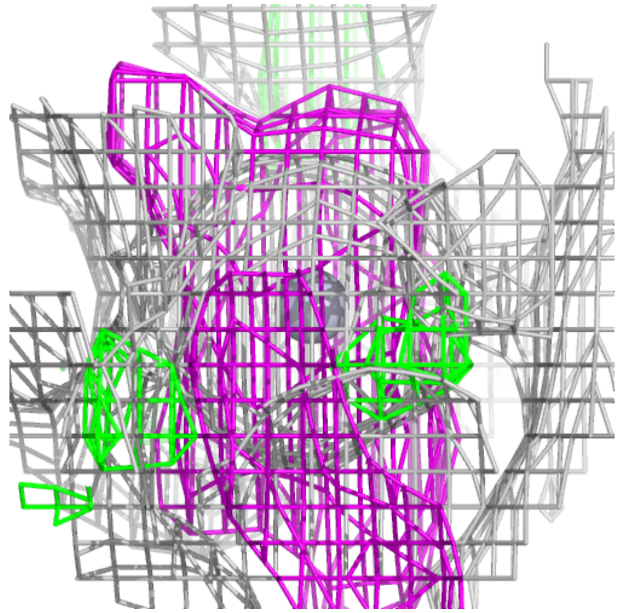
Electron density around HG W 201:

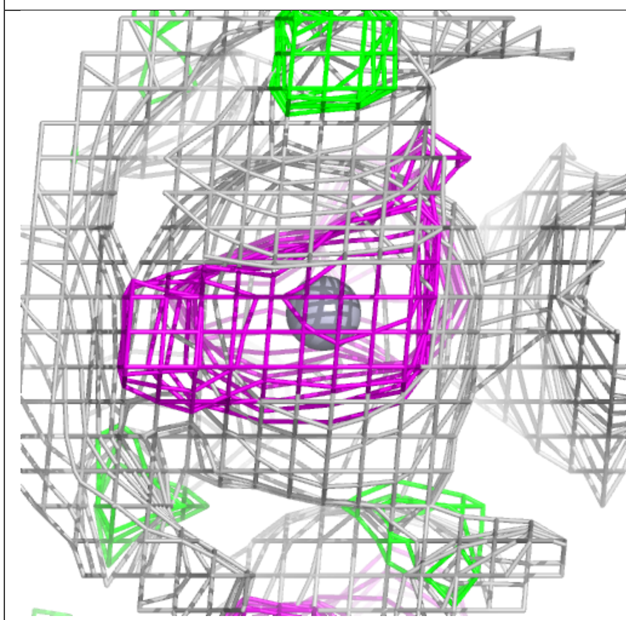
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

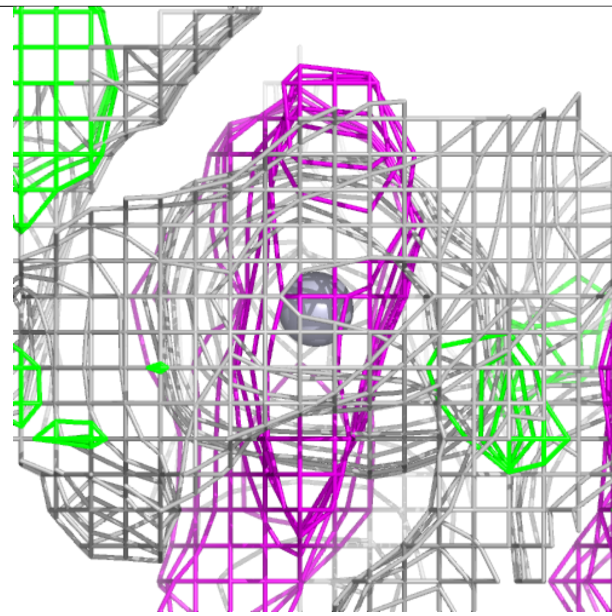


Electron density around HG R 101:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

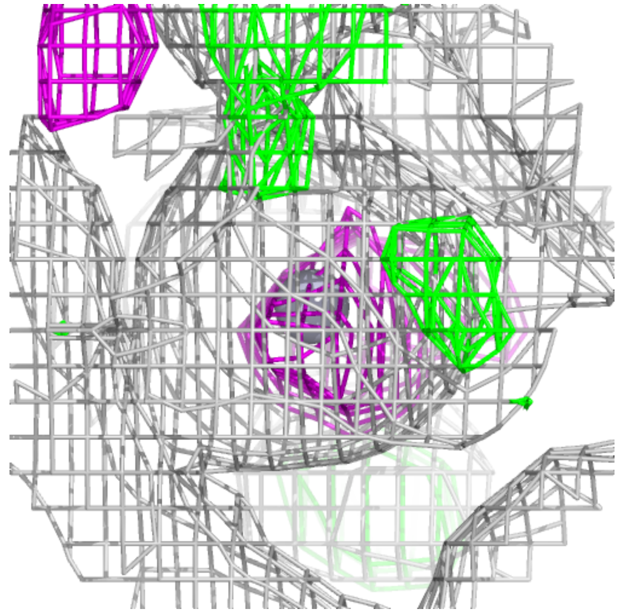


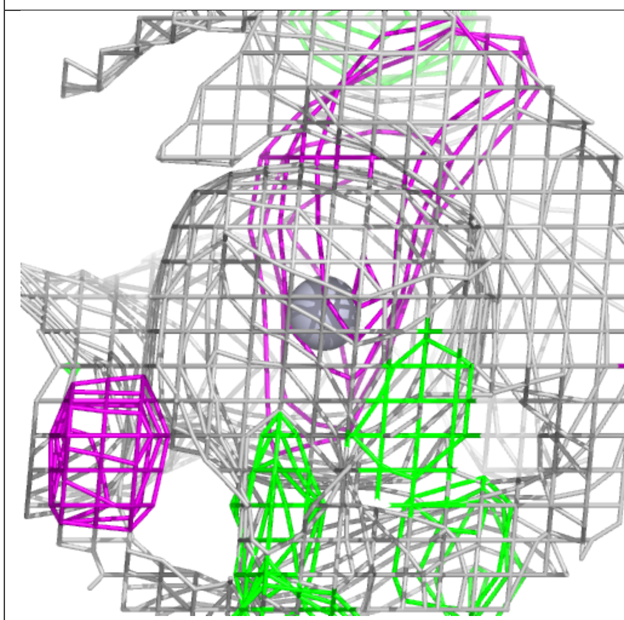


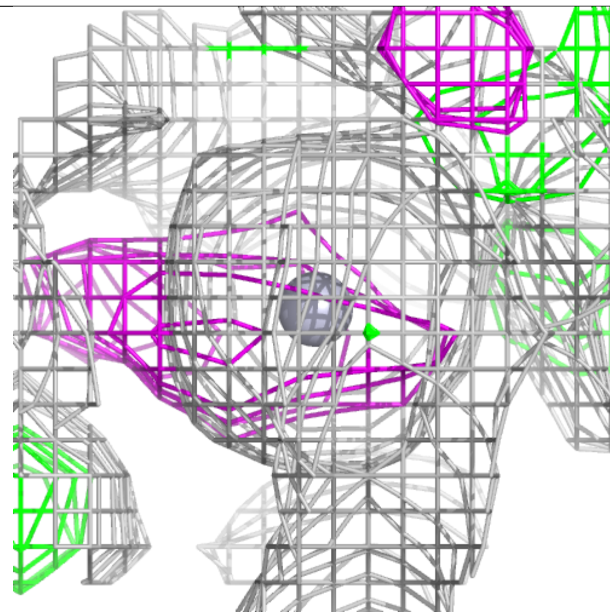


Electron density around HG O 101:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)

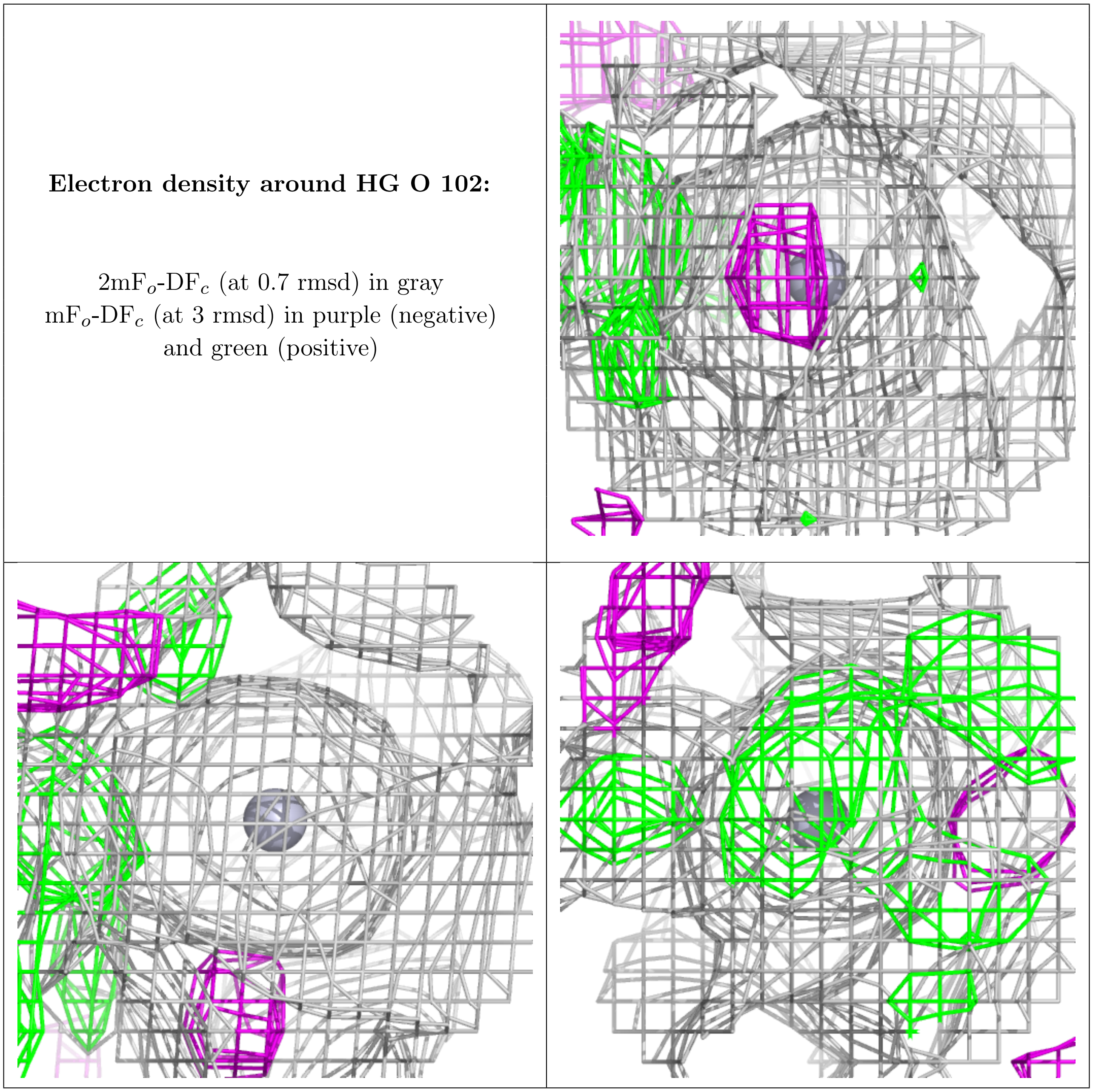






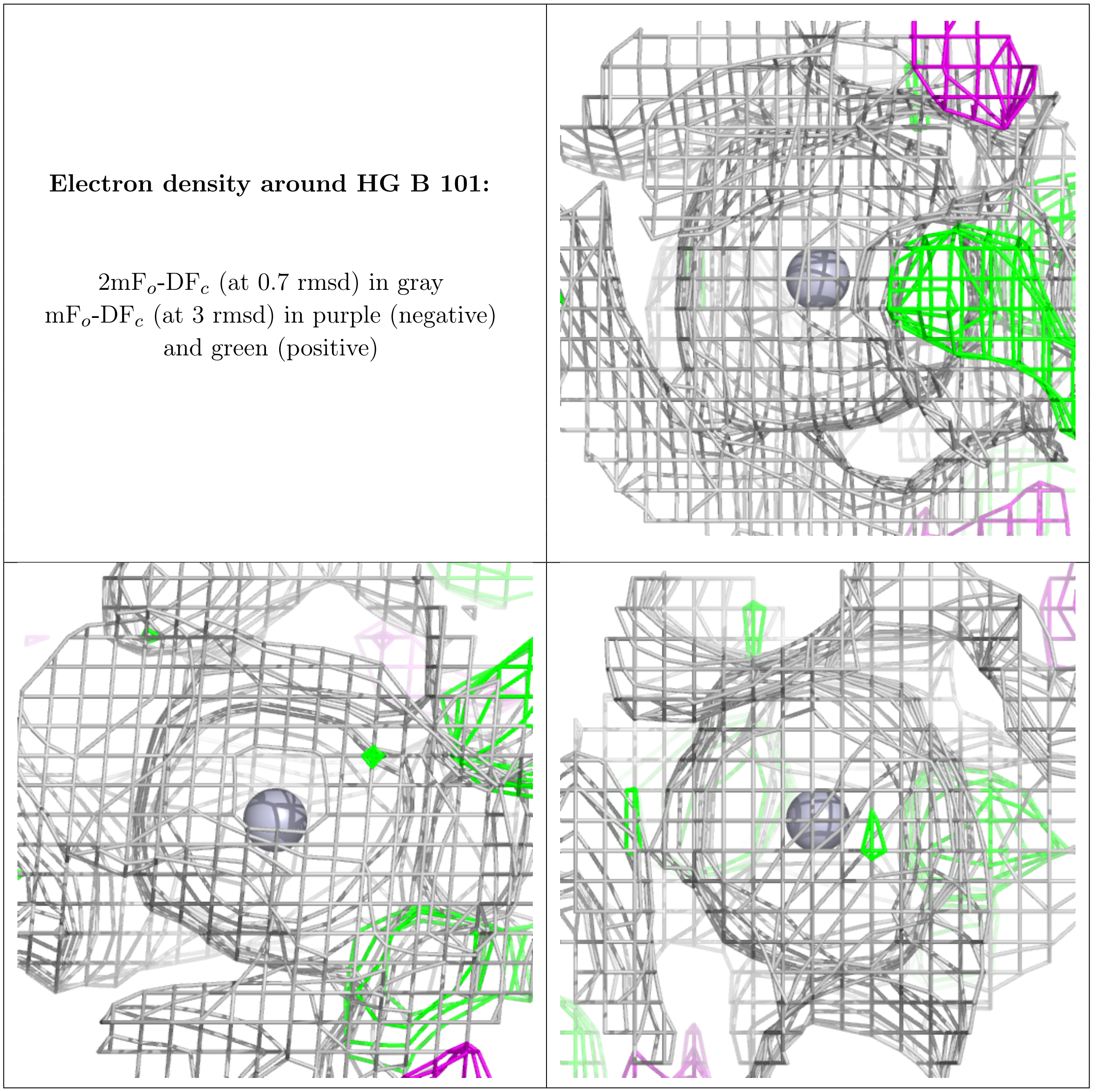
Electron density around HG O 102:

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



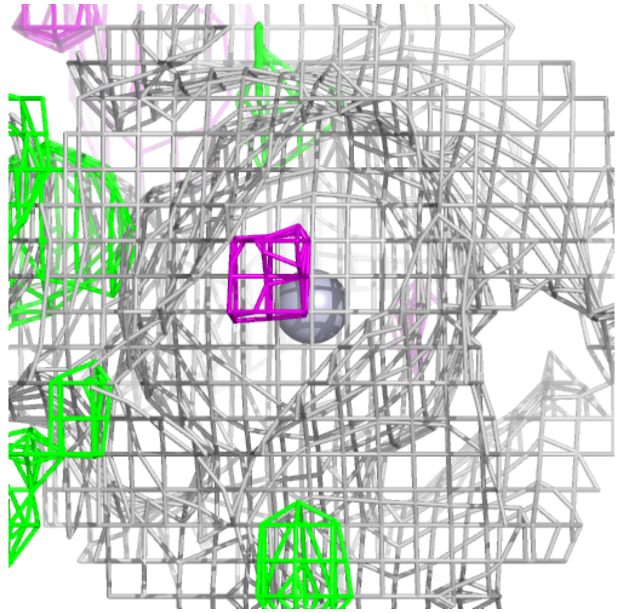
Electron density around HG B 101:

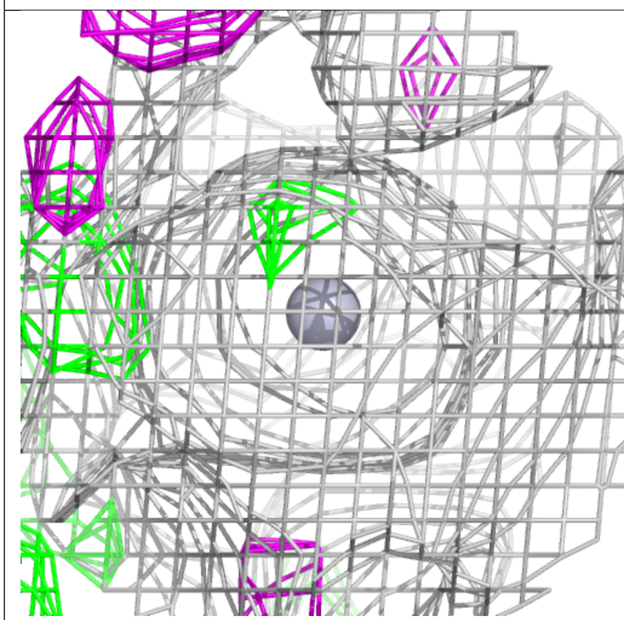
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

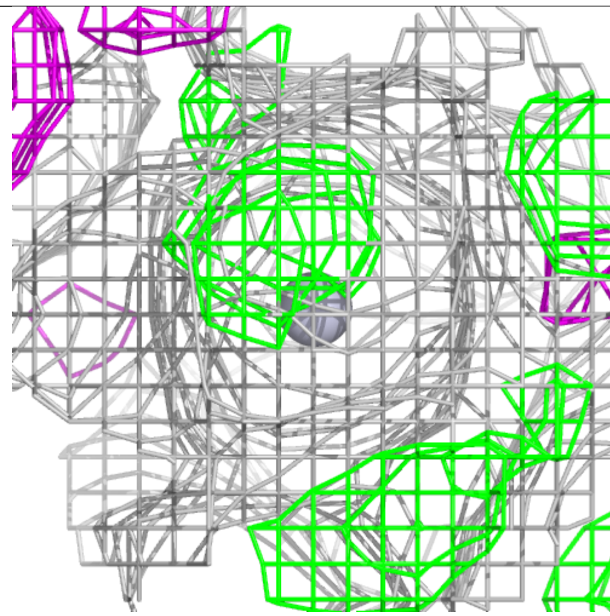


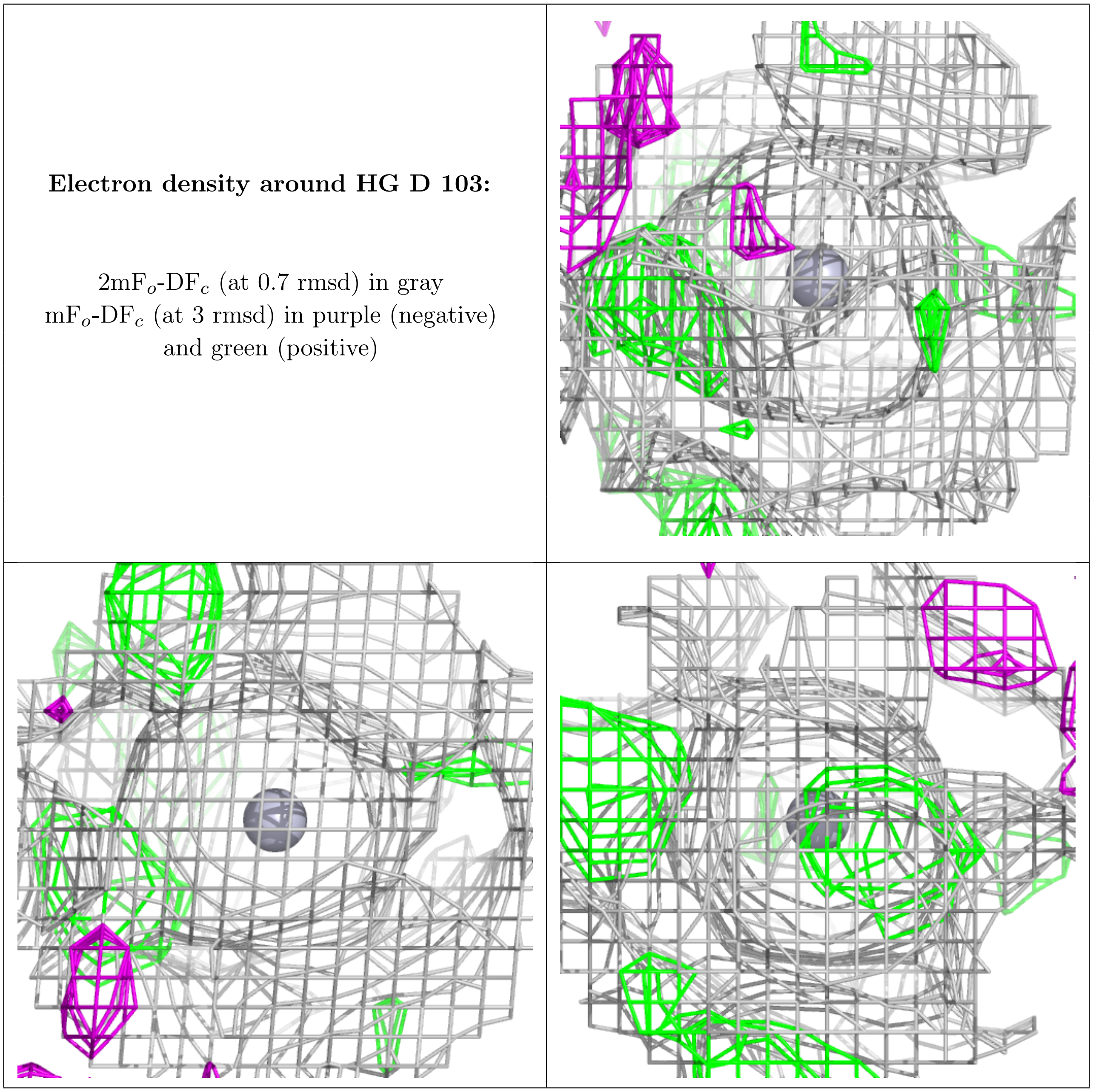
Electron density around HG D 102:

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







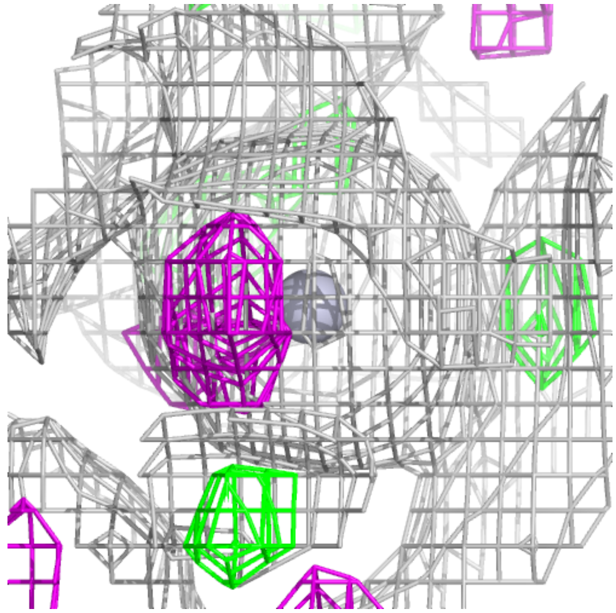


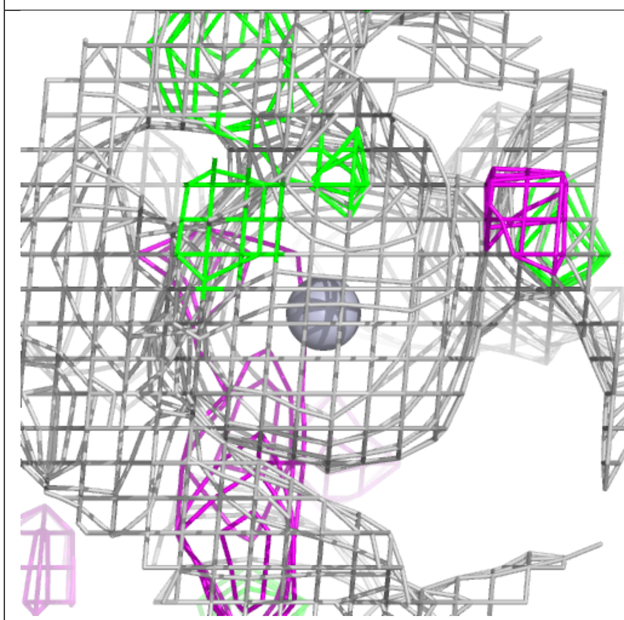
Electron density around HG D 103:

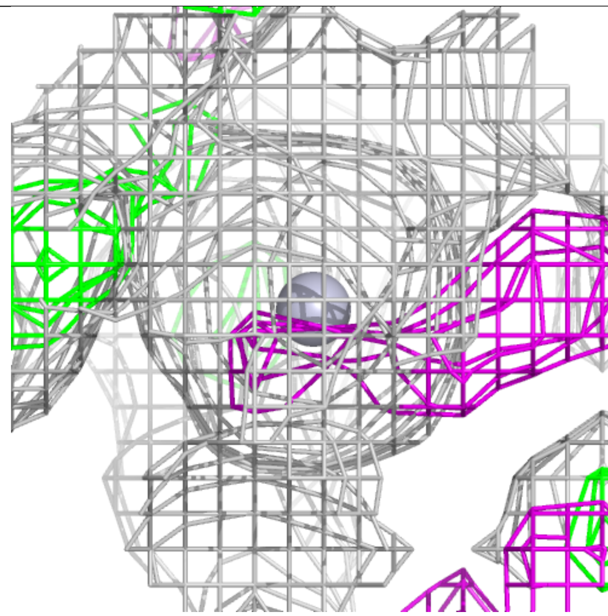
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

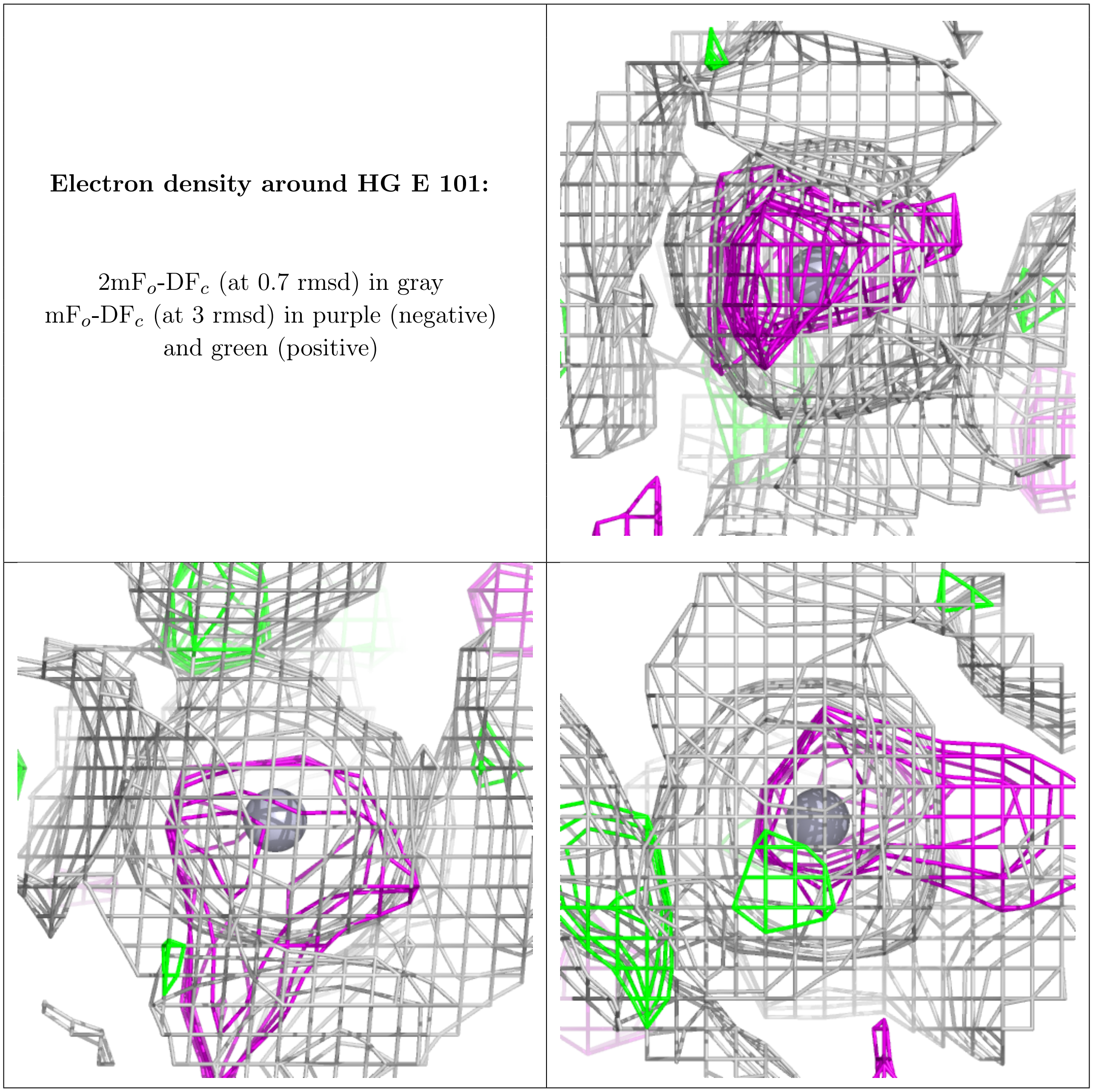
Electron density around HG D 104:

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 (i)

There are no such residues in this entry.