Full wwPDB X-ray Structure Validation Report (i)

Nov 20, 2023 – 06:28 PM JST

PDB ID	:	7D6N
Title	:	Crystal structure of tick-borne encephalitis virus RNA-dependent RNA polymerase
Authors	:	Yang, J.; Jing, X.; Gong, P.
Deposited on	:	2020-10-01
Resolution	:	3.17 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 ⓘ

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

The reported resolution of this entry is 3.17 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.
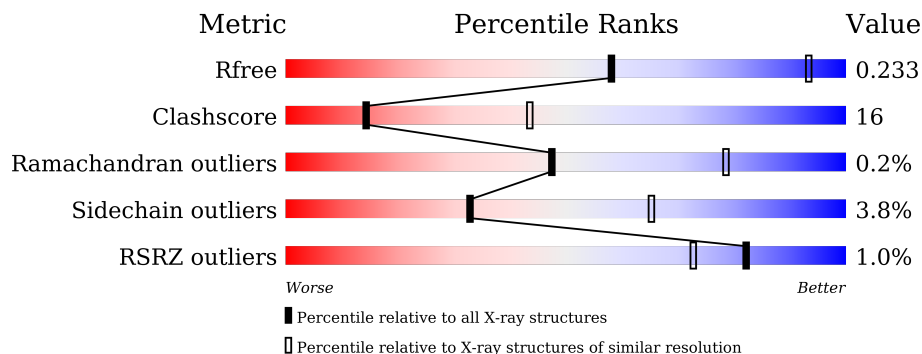
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1665 (3.20-3.12)
Clashscore	141614	1804 (3.20-3.12)
Ramachandran outliers	138981	1770 (3.20-3.12)
Sidechain outliers	138945	1769 (3.20-3.12)
RSRZ outliers	127900	1616 (3.20-3.12)

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	638	64% 26% • 8%
1	B	638	66% 23% • 8%
1	C	638	62% 28% • 8%
1	D	638	65% 25% • 8%
1	E	638	64% 27% • 8%
1	F	638	64% 25% • 9%

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Mol	Chain	Length	Quality of chain
1	G	638	61% 28% 8%
1	H	638	% 64% 27% 8%
1	I	638	% 62% 28% 8%
1	J	638	% 66% 24% 9%

2 Entry composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 45346 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 Tick-borne encephalitis virus RNA-dependent RNA polymerase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	588	Total 4569	C 2887	N 810	O 839	S 33	0	0	0
1	B	584	Total 4571	C 2882	N 817	O 839	S 33	0	0	0
1	E	588	Total 4519	C 2850	N 799	O 836	S 34	0	0	0
1	D	589	Total 4549	C 2868	N 803	O 844	S 34	0	1	0
1	C	586	Total 4514	C 2852	N 795	O 834	S 33	0	0	0
1	F	583	Total 4544	C 2870	N 808	O 834	S 32	0	0	0
1	G	584	Total 4560	C 2873	N 815	O 839	S 33	0	0	0
1	J	582	Total 4441	C 2811	N 771	O 826	S 33	0	0	0
1	I	586	Total 4535	C 2860	N 802	O 839	S 34	0	0	0
1	H	588	Total 4514	C 2853	N 786	O 841	S 34	0	0	0

There are 110 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	264	MET	-	initiating methionine	UNP K4P8A2
A	892	GLY	-	expression tag	UNP K4P8A2
A	893	SER	-	expression tag	UNP K4P8A2
A	894	SER	-	expression tag	UNP K4P8A2
A	895	SER	-	expression tag	UNP K4P8A2
A	896	HIS	-	expression tag	UNP K4P8A2
A	897	HIS	-	expression tag	UNP K4P8A2
A	898	HIS	-	expression tag	UNP K4P8A2
A	899	HIS	-	expression tag	UNP K4P8A2

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Chain	Residue	Modelled	Actual	Comment	Reference
A	900	HIS	-	expression tag	UNP K4P8A2
A	901	HIS	-	expression tag	UNP K4P8A2
B	264	MET	-	initiating methionine	UNP K4P8A2
B	892	GLY	-	expression tag	UNP K4P8A2
B	893	SER	-	expression tag	UNP K4P8A2
B	894	SER	-	expression tag	UNP K4P8A2
B	895	SER	-	expression tag	UNP K4P8A2
B	896	HIS	-	expression tag	UNP K4P8A2
B	897	HIS	-	expression tag	UNP K4P8A2
B	898	HIS	-	expression tag	UNP K4P8A2
B	899	HIS	-	expression tag	UNP K4P8A2
B	900	HIS	-	expression tag	UNP K4P8A2
B	901	HIS	-	expression tag	UNP K4P8A2
E	264	MET	-	initiating methionine	UNP K4P8A2
E	892	GLY	-	expression tag	UNP K4P8A2
E	893	SER	-	expression tag	UNP K4P8A2
E	894	SER	-	expression tag	UNP K4P8A2
E	895	SER	-	expression tag	UNP K4P8A2
E	896	HIS	-	expression tag	UNP K4P8A2
E	897	HIS	-	expression tag	UNP K4P8A2
E	898	HIS	-	expression tag	UNP K4P8A2
E	899	HIS	-	expression tag	UNP K4P8A2
E	900	HIS	-	expression tag	UNP K4P8A2
E	901	HIS	-	expression tag	UNP K4P8A2
D	264	MET	-	initiating methionine	UNP K4P8A2
D	892	GLY	-	expression tag	UNP K4P8A2
D	893	SER	-	expression tag	UNP K4P8A2
D	894	SER	-	expression tag	UNP K4P8A2
D	895	SER	-	expression tag	UNP K4P8A2
D	896	HIS	-	expression tag	UNP K4P8A2
D	897	HIS	-	expression tag	UNP K4P8A2
D	898	HIS	-	expression tag	UNP K4P8A2
D	899	HIS	-	expression tag	UNP K4P8A2
D	900	HIS	-	expression tag	UNP K4P8A2
D	901	HIS	-	expression tag	UNP K4P8A2
C	264	MET	-	initiating methionine	UNP K4P8A2
C	892	GLY	-	expression tag	UNP K4P8A2
C	893	SER	-	expression tag	UNP K4P8A2
C	894	SER	-	expression tag	UNP K4P8A2
C	895	SER	-	expression tag	UNP K4P8A2
C	896	HIS	-	expression tag	UNP K4P8A2
C	897	HIS	-	expression tag	UNP K4P8A2

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Chain	Residue	Modelled	Actual	Comment	Reference
C	898	HIS	-	expression tag	UNP K4P8A2
C	899	HIS	-	expression tag	UNP K4P8A2
C	900	HIS	-	expression tag	UNP K4P8A2
C	901	HIS	-	expression tag	UNP K4P8A2
F	264	MET	-	initiating methionine	UNP K4P8A2
F	892	GLY	-	expression tag	UNP K4P8A2
F	893	SER	-	expression tag	UNP K4P8A2
F	894	SER	-	expression tag	UNP K4P8A2
F	895	SER	-	expression tag	UNP K4P8A2
F	896	HIS	-	expression tag	UNP K4P8A2
F	897	HIS	-	expression tag	UNP K4P8A2
F	898	HIS	-	expression tag	UNP K4P8A2
F	899	HIS	-	expression tag	UNP K4P8A2
F	900	HIS	-	expression tag	UNP K4P8A2
F	901	HIS	-	expression tag	UNP K4P8A2
G	264	MET	-	initiating methionine	UNP K4P8A2
G	892	GLY	-	expression tag	UNP K4P8A2
G	893	SER	-	expression tag	UNP K4P8A2
G	894	SER	-	expression tag	UNP K4P8A2
G	895	SER	-	expression tag	UNP K4P8A2
G	896	HIS	-	expression tag	UNP K4P8A2
G	897	HIS	-	expression tag	UNP K4P8A2
G	898	HIS	-	expression tag	UNP K4P8A2
G	899	HIS	-	expression tag	UNP K4P8A2
G	900	HIS	-	expression tag	UNP K4P8A2
G	901	HIS	-	expression tag	UNP K4P8A2
J	264	MET	-	initiating methionine	UNP K4P8A2
J	892	GLY	-	expression tag	UNP K4P8A2
J	893	SER	-	expression tag	UNP K4P8A2
J	894	SER	-	expression tag	UNP K4P8A2
J	895	SER	-	expression tag	UNP K4P8A2
J	896	HIS	-	expression tag	UNP K4P8A2
J	897	HIS	-	expression tag	UNP K4P8A2
J	898	HIS	-	expression tag	UNP K4P8A2
J	899	HIS	-	expression tag	UNP K4P8A2
J	900	HIS	-	expression tag	UNP K4P8A2
J	901	HIS	-	expression tag	UNP K4P8A2
I	264	MET	-	initiating methionine	UNP K4P8A2
I	892	GLY	-	expression tag	UNP K4P8A2
I	893	SER	-	expression tag	UNP K4P8A2
I	894	SER	-	expression tag	UNP K4P8A2
I	895	SER	-	expression tag	UNP K4P8A2

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Chain	Residue	Modelled	Actual	Comment	Reference
I	896	HIS	-	expression tag	UNP K4P8A2
I	897	HIS	-	expression tag	UNP K4P8A2
I	898	HIS	-	expression tag	UNP K4P8A2
I	899	HIS	-	expression tag	UNP K4P8A2
I	900	HIS	-	expression tag	UNP K4P8A2
I	901	HIS	-	expression tag	UNP K4P8A2
H	264	MET	-	initiating methionine	UNP K4P8A2
H	892	GLY	-	expression tag	UNP K4P8A2
H	893	SER	-	expression tag	UNP K4P8A2
H	894	SER	-	expression tag	UNP K4P8A2
H	895	SER	-	expression tag	UNP K4P8A2
H	896	HIS	-	expression tag	UNP K4P8A2
H	897	HIS	-	expression tag	UNP K4P8A2
H	898	HIS	-	expression tag	UNP K4P8A2
H	899	HIS	-	expression tag	UNP K4P8A2
H	900	HIS	-	expression tag	UNP K4P8A2
H	901	HIS	-	expression tag	UNP K4P8A2

- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	2	Total 2	Zn 2	0	0
2	B	2	Total 2	Zn 2	0	0
2	E	2	Total 2	Zn 2	0	0
2	D	2	Total 2	Zn 2	0	0
2	C	2	Total 2	Zn 2	0	0
2	F	2	Total 2	Zn 2	0	0
2	G	2	Total 2	Zn 2	0	0
2	J	2	Total 2	Zn 2	0	0
2	I	2	Total 2	Zn 2	0	0
2	H	2	Total 2	Zn 2	0	0

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

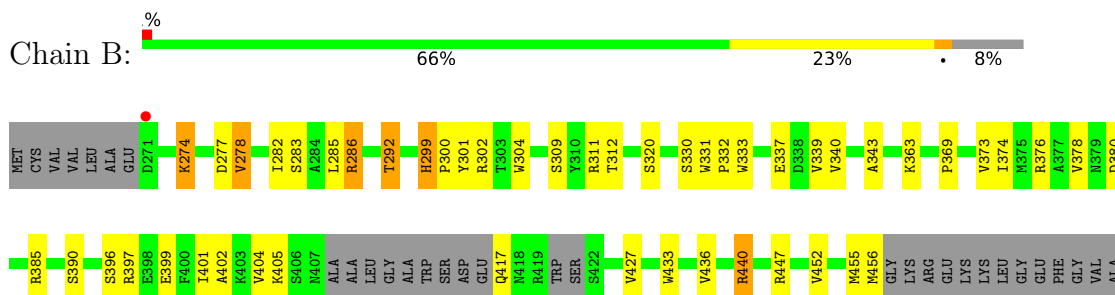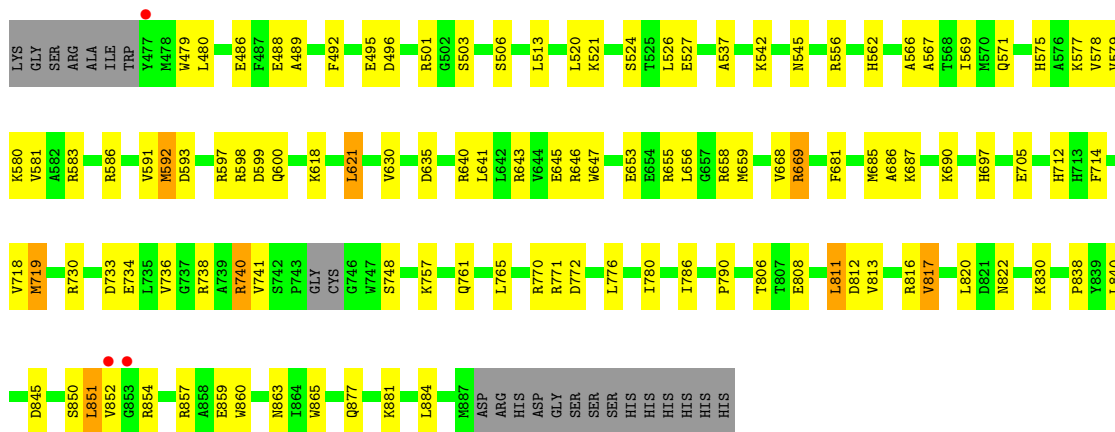| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total 1	Mg 1	0	0
3	B	1	Total 1	Mg 1	0	0
3	E	1	Total 1	Mg 1	0	0
3	D	1	Total 1	Mg 1	0	0
3	C	1	Total 1	Mg 1	0	0
3	F	1	Total 1	Mg 1	0	0
3	G	1	Total 1	Mg 1	0	0
3	J	1	Total 1	Mg 1	0	0
3	I	1	Total 1	Mg 1	0	0
3	H	1	Total 1	Mg 1	0	0

3 Residue-property plots ⓘ

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.
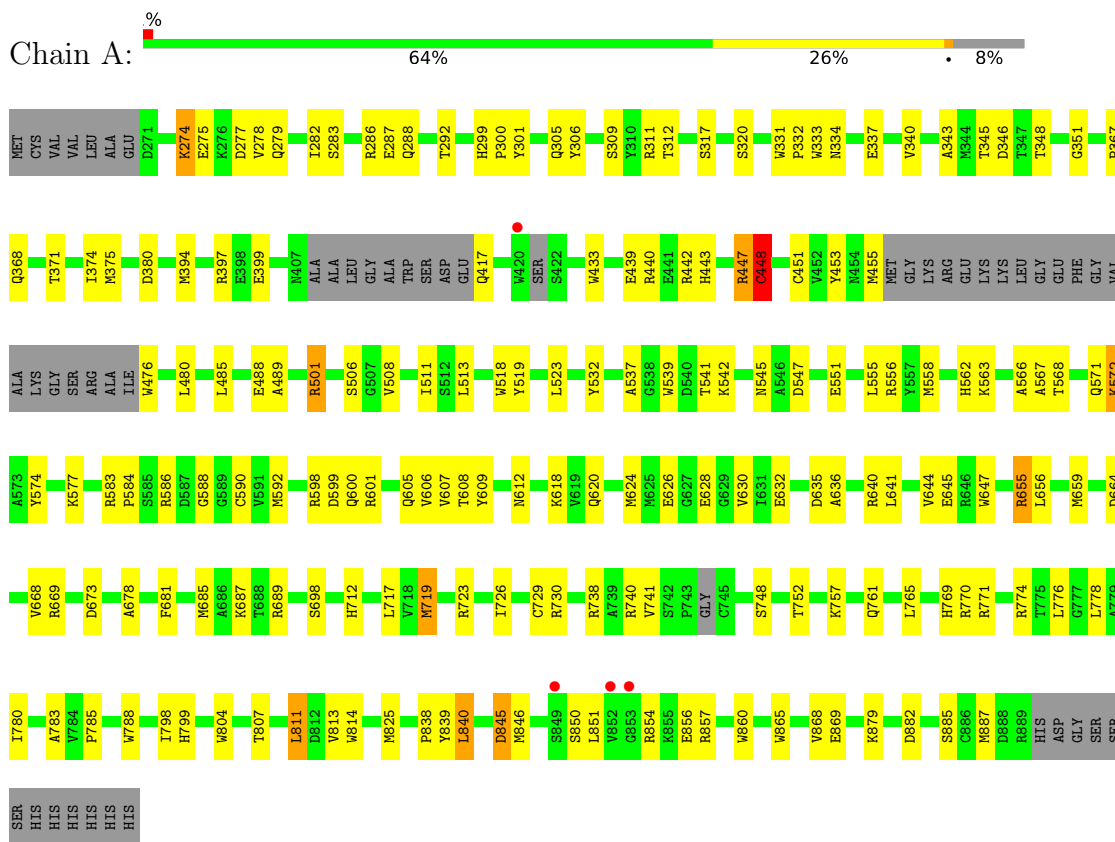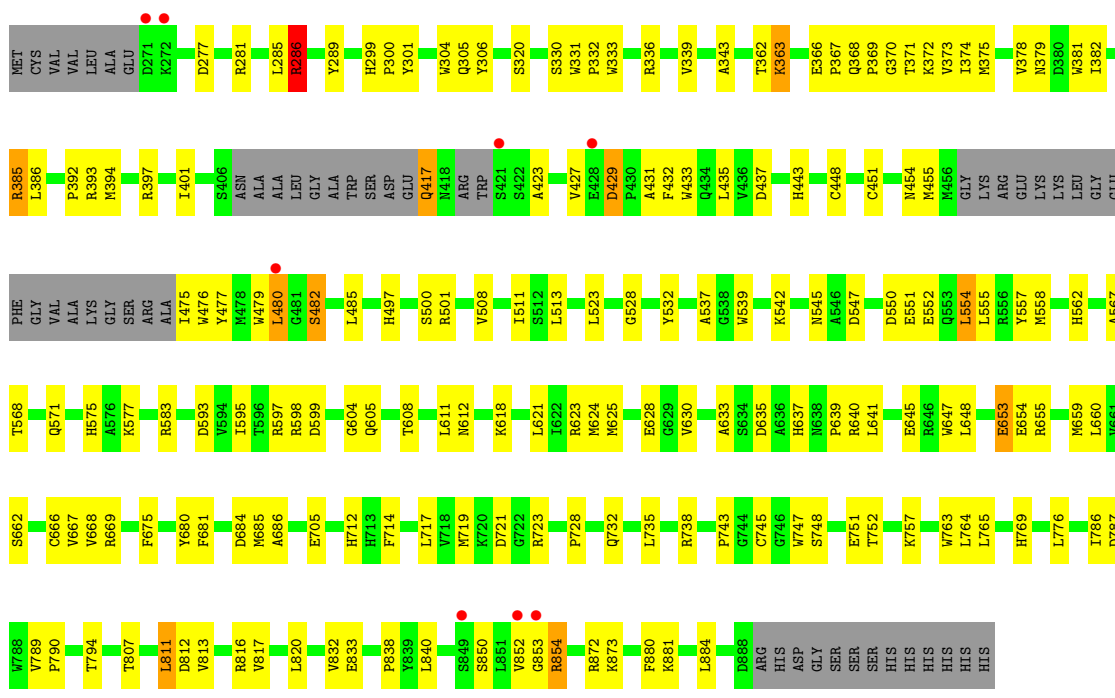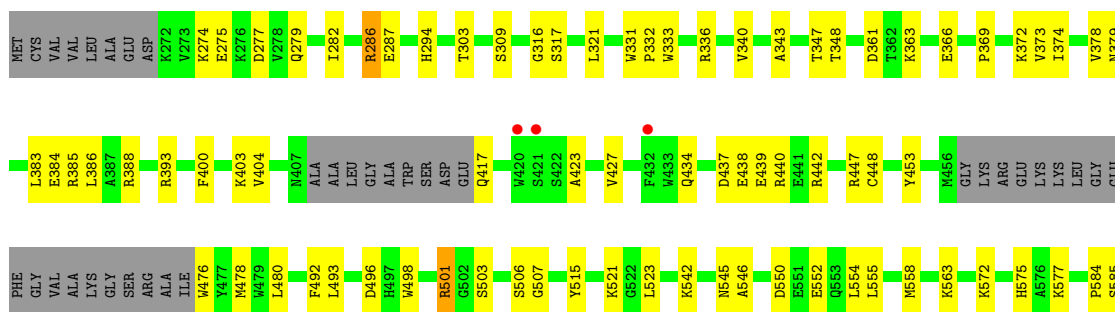
• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

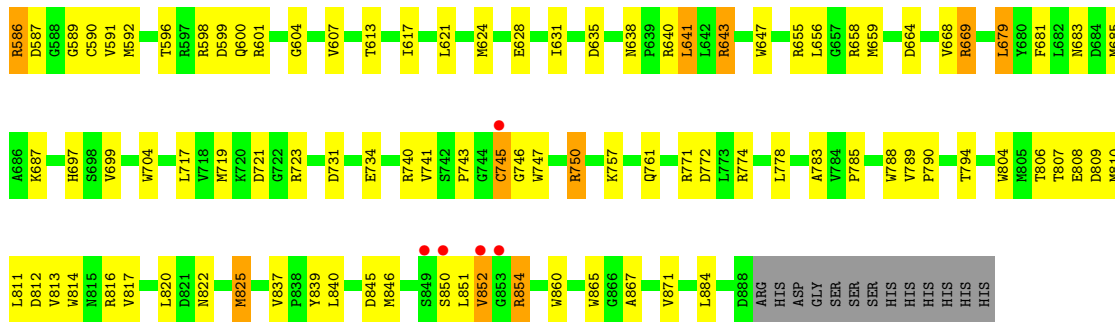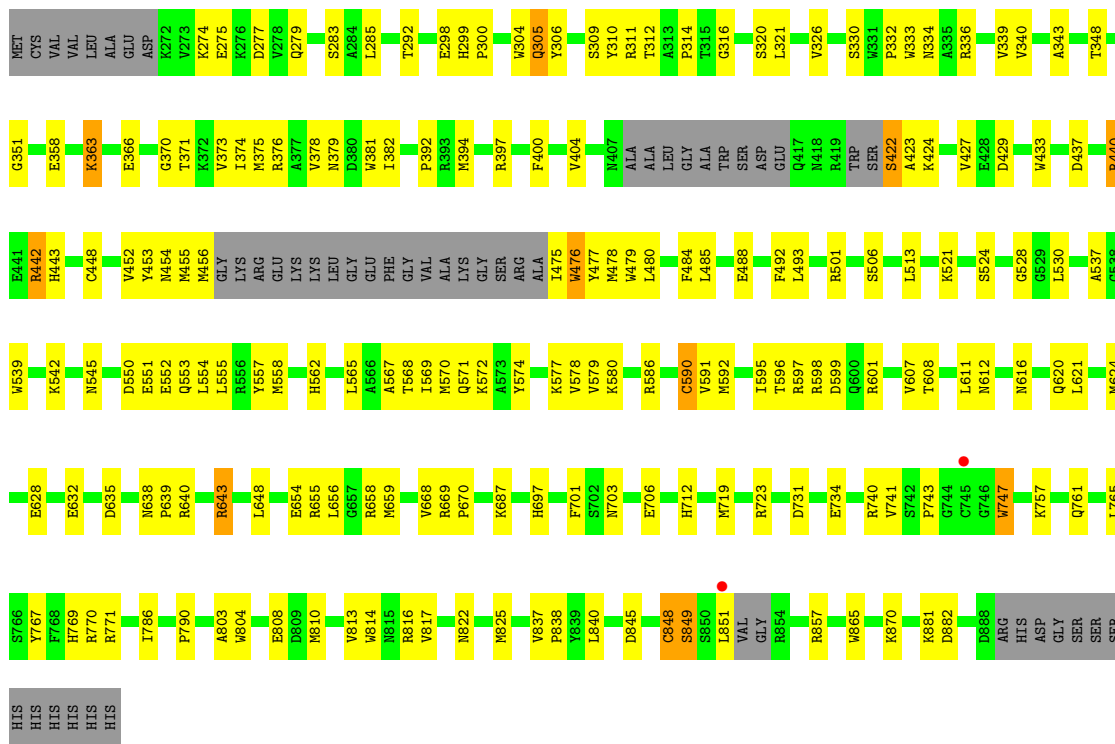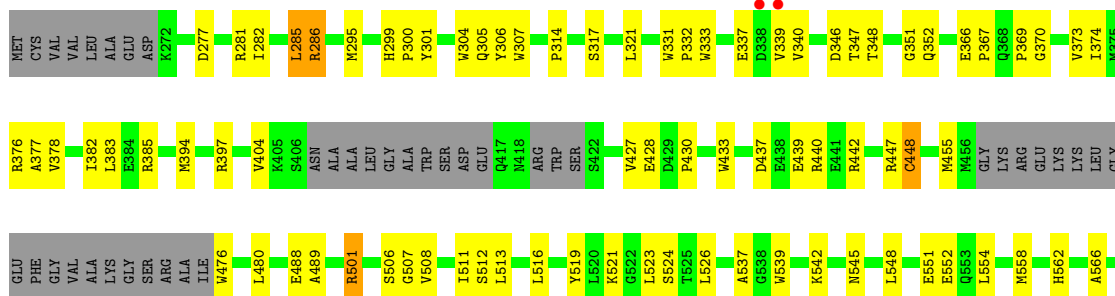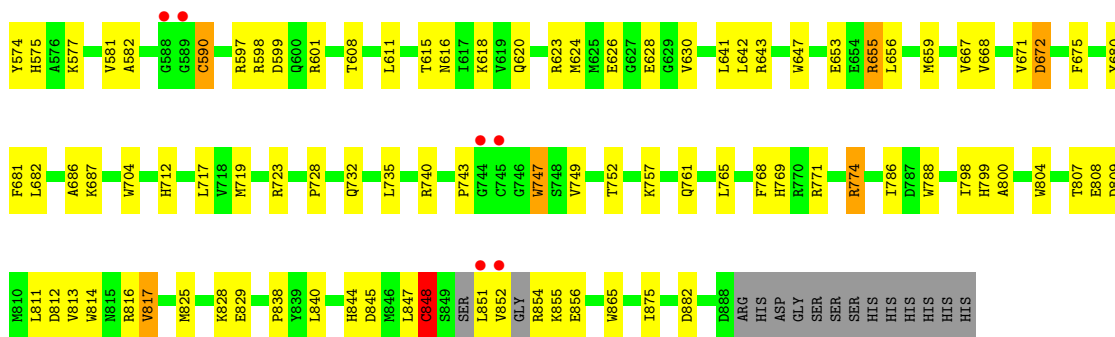• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

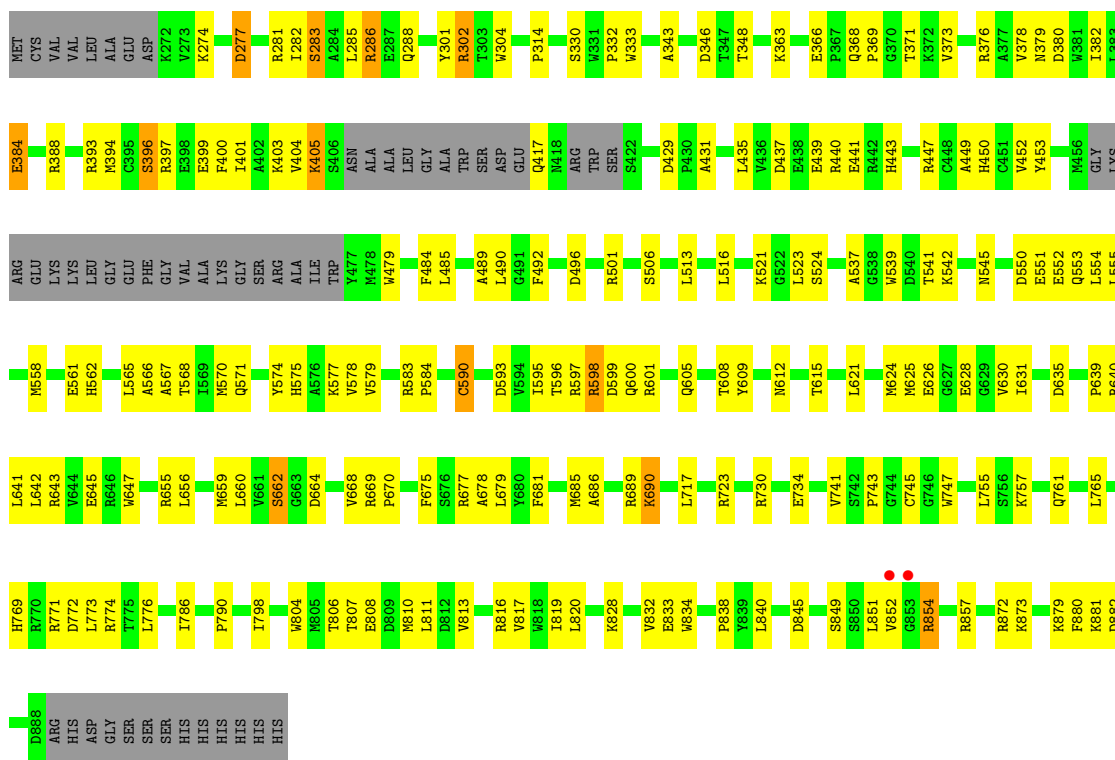LYS GLY SER ARG ALA ILE TRP Y477 M478 W479 L480 E486 F487 E488 A489 F492 E495 D496 R501 G502 S503 S506 L513 L520 K521 S524 T525 L526 E527 A537 K542 N545 R556 H562 A566 A567 T568 I569 M570 Q571 H575 A576 K577 V578 V579

K580 V581 A582 R583 R586 V591 M592 D593 R597 R598 D599 Q600 K618 L621 V630 D635 R640 L641 L642 V644 E645 R646 W647 E653 E654 R655 L656 G657 R658 M659 V668 R669 F681 M685 A686 K687 K690 H697 E705 H712 H713 F714

V718 M719 R730 D733 E734 L735 V736 G737 R738 A739 R740 V741 S742 P743 GLY CYS G746 W747 S748 K757 Q761 L765 R770 R771 D772 L776 I780 I786 P790 T806 T807 E808 L811 D812 V813 R816 V817 L820 D821 N822 K830 P838 Y839 L840

D845 S850 L851 V852 G853 R854 R857 A858 E859 W860 N863 I864 W865 Q877 K881 L884 M887 ASP ARG HIS ASP GLY SER SER HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

Chain E:
%
64%   27%   •   8%

MET CYS VAL VAL LEU ALA GLU D271 K272 D277 R281 L285 R286 Y289 H299 P300 Y301 W304 Q305 Y306 S320 S330 W331 P332 Y333 R336 V339 A343 T362 K363 E366 P367 Q368 P369 G370 T371 K372 V373 I374 M375 V378 N379 D380 W381 I382

R385 L386 P392 R393 M394 R397 I401 S406 ASN ALA ALA LEU GLY ALA TRP SER ASP GLU Q417 N418 ARG TRP S421 S422 A423 V427 E428 D429 P430 A431 F432 W433 Q434 L435 V436 D437 H443 C448 C451 N454 M455 M456 GLY LYS ARG GLU LYS LYS LEU GLY GLU

PHE GLY VAL ALA LYS GLY SER ARG ALA I475 W476 Y477 M478 W479 L480 G481 S482 L485 H497 S500 R501 V508 I511 S512 L513 L523 G528 Y532 A537 G538 W539 K542 N545 A546 D547 D550 E551 E552 Q553 L554 L555 R556 Y557 M558 H562 A567

T568 Q571 H575 A576 K577 R583 D593 V594 I595 T596 R597 R598 D599 G604 Q605 T608 L611 N612 K618 L621 I622 R623 M624 M625 E628 G629 V630 A633 S634 D635 A636 H637 N638 P639 R640 L641 E645 R646 W647 L648 E653 E654 R655 M659 L660 V661

S662 C666 V667 V668 R669 F675 Y680 F681 D684 M685 A686 E705 H712 H713 F714 L717 V718 M719 K720 D721 G722 R723 P728 Q732 L735 R738 P743 G744 C745 G746 W747 S748 E751 T752 K757 W763 L764 L765 H769 L776 I786 D787

W788 V789 P790 T794 T807 L811 D812 V813 R816 V817 L820 V832 E833 P838 Y839 L840 S849 S850 L851 V852 G853 R854 R872 K873 F880 K881 L884 D888 ARG HIS ASP GLY SER SER HIS HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

Chain D:
%
65%   25%   •   8%

MET CYS VAL VAL LEU ALA GLU ASP K272 V273 K274 E275 K276 D277 V278 Q279 I282 R286 E287 H294 T303 S309 G316 S317 L321 W331 P332 W333 R336 V340 A343 T347 T348 D361 T362 K363 E366 P369 K372 V373 I374 V378 N379

L383 E384 R385 L386 A387 R388 R393 F400 K403 V404 N407 ALA ALA LEU GLY ALA TRP SER ASP GLU Q417 W420 S421 S422 A423 V427 F432 W433 Q434 D437 E438 E439 R440 E441 R442 R447 C448 Y453 M456 GLY LYS ARG GLU LYS LYS LEU GLY GLU

PHE GLY VAL ALA LYS GLY SER ARG ALA ILE W476 Y477 M478 W479 L480 F492 L493 D496 H497 W498 R501 G502 S503 S506 G507 Y515 K521 G522 L523 K542 N545 A546 D550 E551 E552 Q553 L554 L555 M558 K563 K572 H575 A576 K577 P584 S585

R586 D587 G588 G589 C590 V591 M592 T596 R597 R598 D599 Q600 R601 G604 V607 T613 I617 L621 M624 E628 I631 D635 N638 P639 R640 L641 L642 R643 W647 R655 L656 G657 R658 M659 D664 V668 R669 L679 Y680 F681 L682 N683 D684 M685

A686 K687 H697 S698 V699 W704 L717 V718 M719 K720 D721 G722 R723 D731 E734 R740 V741 S742 P743 G744 C745 G746 W747 R750 K757 Q761 R771 D772 R774 L778 A783 V784 P785 W788 V789 P790 T794 W804 M805 T806 T807 E808 D809 M810

L811 D812 V813 W814 N815 R816 V817 L820 D821 N822 M825 V837 P838 Y839 L840 D845 M846 S849 S850 L851 V852 G853 R854 W860 W865 G866 A867 V871 L884 D888 ARG HIS ASP GLY SER SER HIS HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

Chain C: 62% 28% • 8%

MET CYS VAL VAL LEU ALA GLU ASP K272 V273 K274 E275 D277 V278 Q279 S283 A284 L285 T292 E298 H299 P300 W304 Q305 Y306 S309 Y310 R311 T312 A313 P314 T315 G316 S320 L321 V326 S330 W331 P332 W333 N334 A335 R336 V339 V340 A343 T348

G351 E358 K363 E366 G370 T371 K372 V373 I374 M375 R376 A377 V378 N379 D380 W381 I382 P392 R393 M394 R397 F400 V404 N407 ALA ALA LEU GLY ALA TRP SER ASP GLU Q417 N418 R419 TRP SER S422 A423 K424 V427 E428 D429 W433 D437 R440

E441 R442 H443 C448 V452 Y453 N454 M455 M456 GLY LYS ARG GLU LYS LYS LEU GLY GLU PHE GLY VAL ALA LYS GLY SER ARG ALA I475 W476 Y477 M478 W479 L480 F484 L485 E488 F492 L493 R501 S506 L513 K521 S524 G528 G529 L530 A537 G538

W539 K542 N545 D550 E551 E552 Q553 L554 L555 R556 Y557 M558 H562 L565 A566 A567 T568 I569 M570 Q571 K572 A573 Y574 K577 V578 V579 K580 R586 C590 V591 M592 I595 T596 R597 R598 D599 Q600 R601 V607 T608 L611 N612 N616 Q620 L621 M624

E628 E632 D635 N638 P639 R640 R643 L648 E654 R655 L656 G657 R658 M659 V668 R669 P670 K687 H697 F701 S702 N703 E706 H712 M719 R723 D731 E734 R740 V741 S742 P743 G744 C745 G746 W747 K757 Q761 L765

S766 Y767 F768 H769 R770 R771 I786 P790 A803 W804 E808 D809 M810 V813 W814 N815 R816 V817 N822 M825 V837 P838 Y839 L840 D845 C848 S849 S850 L851 VAL GLY R854 R857 W865 K870 K881 D882 D888 ARG HIS ASP GLY SER SER

HIS HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

Chain F: .% 64% 25% • 9%

MET CYS VAL VAL LEU ALA GLU ASP K272 D277 R281 I282 L285 R286 M295 H299 P300 Y301 W304 Q305 Y306 W307 P314 S317 L321 W331 P332 W333 E337 D338 V339 V340 D346 T347 T348 G351 Q352 E366 P367 Q368 P369 G370 V373 I374 M375

R376 A377 V378 I382 L383 E384 R385 M394 R397 V404 K405 S406 ASN ALA ALA LEU GLY ALA TRP SER ASP GLU Q417 N418 ARG TRP SER S422 V427 E428 D429 P430 W433 D437 E438 E439 R440 E441 R442 R447 C448 M455 M456 GLY LYS ARG GLU LYS LYS LEU GLY

GLU PHE GLY VAL ALA LYS GLY SER ARG ALA ILE W476 L480 E488 A489 R501 S506 G507 V508 I511 S512 L513 L516 Y519 L520 K521 G522 S523 S524 T525 L526 A537 G538 W539 K542 N545 L548 E551 E552 Q553 L554 M558 H562 A566

Y574 H575 A576 K577 V581 A582 G588 G589 C590 R597 R598 D599 Q600 R601 T608 L611 T615 N616 I617 K618 V619 Q620 R623 M624 M625 E626 G627 E628 G629 V630 L641 L642 R643 W647 E653 E654 R655 L656 M659 V667 V668 V671 D672 F675 Y680

F681 L682 A686 K687 W704 H712 L717 V718 M719 R723 P728 Q732 L735 R740 P743 G744 C745 G746 W747 S748 V749 T752 K757 Q761 L765 F768 H769 R770 R771 R774 I786 D787 W788 I798 H799 A800 W804 T807 E808 D809

M810 L811 D812 V813 W814 N815 R816 V817 M825 K828 E829 P838 Y839 L840 H844 D845 M846 L847 C848 S849 SER L851 V852 GLY R854 K855 E856 W865 I875 D882 D888 ARG HIS ASP GLY SER SER HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

Chain G: 61% 28% • 8%

MET CYS VAL VAL LEU ALA GLU ASP K272 V273 K274 D277 R281 I282 S283 A284 L285 R286 E287 Q288 Y301 R302 T303 W304 P314 S330 W331 P332 W333 A343 D346 T347 T348 K363 E366 P367 Q368 P369 G370 T371 K372 V373 R376 A377 V378 N379 D380 W381 I382 L383

E384 R388 R393 M394 C395 S396 R397 E398 E399 F400 I401 A402 V404 K405 S406 ASN ALA ALA LEU GLY ALA TRP SER ASP GLU Q417 N418 ARG TRP SER S422 D429 P430 A431 L435 V436 D437 E438 E439 R440 E441 R442 H443 R447 C448 A449 H450 C451 V452 Y453 M456 GLY LYS

ARG GLU LYS LYS LEU GLY GLU PHE GLY VAL ALA LYS GLY SER ARG ALA ALA ILE TRP Y477 M478 W479 F484 L485 A489 L490 G491 F492 D496 R501 S506 L513 L516 K521 G522 L523 S524 A537 G538 W539 D540 T541 K542 N545 D550 E551 E552 Q553 L554 L555

M558 E561 H562 L565 A566 A567 T568 I569 M570 Q571 Y574 H575 A576 K577 V578 V579 R583 P584 C590 D593 V594 I595 T596 R597 R598 D599 Q600 R601 Q605 T608 Y609 N612 T615 L621 M624 M625 E626 G627 E628 G629 V630 I631 D635 P639 R640

L641 L642 R643 V644 E645 R646 W647 R655 L656 M659 L660 V661 S662 G663 D664 V668 R669 P670 F675 S676 R677 A678 L679 Y680 F681 M685 A686 R689 K690 L717 R723 R730 E734 V741 S742 P743 G744 C745 G746 W747 L755 S756 K757 Q761 L765

H769 R770 R771 D772 L773 R774 T775 L776 I786 P790 I798 W804 M805 T806 T807 E808 D809 M810 L811 D812 V813 R816 V817 W818 I819 L820 K828 V832 E833 W834 P838 Y839 L840 D845 S849 S850 L851 V852 G853 R854 R857 R872 K873 K879 F880 K881 D882

D888 ARG HIS ASP GLY SER SER HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

Chain J: % 66% 24% • 9%

MET CYS VAL VAL LEU ALA GLU ASP K272 V273 K274 D277 V278 Q279 E280 R281 I282 L285 G290 W293 H294 H299 P300 T303 W304 Q305 Y306 W307 G308 G309 S317 S320 L321 I322 S330 W331 P332 R336 E337 D338 V339 V340 R341 M342 A343 F356 V360

K363 Q368 P369 G370 V373 I374 L383 L386 R393 M394 I401 V404 K405 S406 ASN ALA ALA LEU GLY ALA TRP SER ASP GLU GLN ASN ARG TRP SER S422 V427 D437 E438 E439 R442 H443 C448 A449 H450 C451 V452 M456 GLY LYS ARG GLU LYS LYS

LEU GLY GLU PHE GLY VAL ALA LYS GLY SER ARG ALA ILE TRP Y477 L480 G491 S482 L485 L490 W498 R501 G507 V508 L513 L516 A537 G538 W539 K542 N545 A546 D547 L548 E549 D550 E551 E552 Q553 L554 H562 A567 M570 Q571 Y574

H575 A576 K577 R583 P584 S585 R586 D587 G588 V591 I595 T596 R597 R598 D599 Q600 R601 N612 T613 L614 T615 N616 I617 K618 V619 Q620 M624 M625 E626 G627 G628 I631 D635 A636 P639 R640 L641 L642 R643 E654 R655 R658 M659 S662 G663 D664 V668 R669

R677 A678 L679 Y680 F681 M685 A686 K687 T688 R689 K690 E696 H712 M719 R723 P728 L735 V736 G737 P743 C744 C745 G746 W747 S748 E751 K757 Q761 R770 I786 P790 W804 E808 D809 M810 L811 R816 L820 M825

P838 Y839 L840 D845 C848 S849 S850 L851 V852 G853 R854 K855 V871 I875 K879 F880 K881 S885 C886 M887 D888 ARG HIS ASP GLY SER SER HIS HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

%

Chain I:　62%　28%　• 8%

MET CYS VAL VAL LEU ALA GLU ASP K272 V273 K274 D277 V278 Q279 I282 R286 H299 P300 Y301 W304 Q305 Y306 W307 G308 T312 G316 S317 S320 W331 P332 W333 R336 V339 A343 D346 T347 T348 K363 E366 P367 Q368 P369 G370 T371 K372

V373 I374 M375 R376 I382 R385 L386 M394 C395 S396 E399 K403 S406 ASN ALA ALA LEU GLY ALA TRP SER ASP GLU Q417 N418 R419 TRP SER S422 A426 D429 Q434 E438 E439 R440 E441 R442 H443 L444 A445 G446 R447 C448 A449 V452 M456 GLY LYS

ARG GLU LYS LYS LEU GLY GLU PHE GLY VAL ALA LYS GLY SER ARG ALA ILE W476 Y477 M478 W479 L480 R483 F484 L485 E488 A489 L490 G491 F492 L493 N494 E495 D496 H497 S500 R501 S506 L513 N514 Y515 L516 K521 G522 L523 G528 K542 V543 T544 N545 L548

L554 M558 E561 H562 K563 Q564 L565 A566 A567 T568 I569 M570 Q571 K572 K577 V578 V579 M592 D593 V594 I595 T596 R597 R598 D599 Q600 R601 G604 Q605 V606 V607 L611 I617 K618 L621 I622 R623 M624 M625 E628 G629 V630 I631 H637 N638 P639 R640 L641 L642

R643 V644 W647 E653 E654 R655 L656 G657 R658 M659 R669 P670 V671 F675 F681 M685 A686 K687 H697 W704 S711 H712 L717 D721 G722 R723 C729 R730 D731 Q732 D733 E734 C745 G746 W747 E751 T752 A753 C754 L755 S756 K757 Q761 S766

Y767 F768 H769 R770 R771 D772 L773 R774 T775 L776 I780 V784 P785 I786 D787 G792 R793 T794 W804 M810 V813 R816 V817 W818 P823 F824 M825 K828 W834 P838 Y839 L840 D845 M846 L847 C848 S849 S850 L851 V852 G853 R854 K855 E856 W860 A867

K870 V871 K881 L884 M887 D888 ARG HIS ASP GLY SER SER HIS HIS HIS HIS HIS HIS

• Molecule 1: Tick-borne encephalitis virus RNA-dependent RNA polymerase

%

Chain H:　64%　27%　• 8%

MET CYS VAL VAL LEU ALA GLU ASP K272 V273 K274 D277 V278 Q279 E280 R281 I282 S283 A284 L285 T292 H299 P300 Y301 R302 T303 W304 Q305 Y306 W307 G308 S309 Y310 R311 T312 A313 P314 S330 W331 P332 E337 D338 V339 V340 R341 D361 T362 K363 T371 K372 V373 I374 M375

N379 D380 R385 M394 R397 I401 A402 K403 V404 K405 S406 N407 ALA ALA LEU GLY ALA TRP SER ASP GLU Q417 N418 R419 TRP SER S422 A423 V427 L435 E439 R440 E441 R442 H443 L444 G446 V452 M456 GLY LYS ARG GLU LYS LYS LEU GLY GLU PHE

GLY VAL ALA LYS GLY SER ARG ALA I475 W476 Y477 M478 S482 E486 F487 E488 L493 N494 E495 D496 H497 W498 A499 S500 R501 G502 S503 L513 N514 Y515 L516 L520 K521 S524 E527 G528 G529 L530 F531 A537 G538 W539 K542 D550 E551 L554 M558

H562 L565 T568 K572 A573 Y574 K577 V578 R583 P584 S585 G589 C590 V591 M592 D593 V594 I595 T596 R597 R598 D599 Q600 R601 G604 Q605 V606 V607 T608 L611 N612 T613 N616 Q620 L621 I622 R623 M624 M625 E626 G627 E628 G629 V630 I631 D635 P639 R640

L641 L642 R643 V644 E645 R646 W647 L648 E653 E654 R655 R658 M659 L660 V661 D664 D665 C666 R669 D672 D673 R674 L679 Y680 F681 L682 M685 W695 F701 W704 L717 V718 V727 Q732 R738 P743 G744 W747 K757 Q761 L765

S766 H769 D772 L773 R774 I786 P790 A800 W804 E808 D809 M810 L811 D812 V813 R816 V817 W818 P838 Y839 L840 D845 M846 S850 L851 V852 G853 R854 R857 W860 N863 R872 Q877 E878 K879 F880 K881 L884 D888 ARG HIS ASP

GLY SER SER SER HIS HIS HIS HIS HIS HIS

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	175.99Å 235.18Å 327.43Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.99 – 3.17 49.99 – 3.17	Depositor EDS
% Data completeness (in resolution range)	98.0 (49.99-3.17) 98.0 (49.99-3.17)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$<I/\sigma(I)>$ [1]	2.15 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.12_2829_000	Depositor
R, R_{free}	0.195 , 0.233 0.195 , 0.233	Depositor DCC
R_{free} test set	11329 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å^2)	78.0	Xtriage
Anisotropy	0.044	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 60.6	EDS
L-test for twinning[2]	$<|L|> = 0.49, <L^2> = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	45346	wwPDB-VP
Average B, all atoms (Å^2)	65.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.63% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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: MG, 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	0.61	4/4680 (0.1%)	0.77	4/6356 (0.1%)
1	B	0.61	2/4679 (0.0%)	0.81	6/6345 (0.1%)
1	C	0.55	2/4623 (0.0%)	0.73	2/6286 (0.0%)
1	D	0.56	1/4659 (0.0%)	0.77	4/6334 (0.1%)
1	E	0.57	0/4628	0.77	4/6292 (0.1%)
1	F	0.57	2/4653 (0.0%)	0.75	3/6318 (0.0%)
1	G	0.54	2/4668 (0.0%)	0.73	4/6334 (0.1%)
1	H	0.52	0/4622	0.71	5/6284 (0.1%)
1	I	0.51	0/4644	0.73	2/6307 (0.0%)
1	J	0.52	0/4551	0.73	7/6196 (0.1%)
All	All	0.56	13/46407 (0.0%)	0.75	41/63052 (0.1%)

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	848	CYS	CB-SG	7.84	1.95	1.82
1	A	448	CYS	CB-SG	-7.48	1.69	1.82
1	C	848	CYS	CB-SG	6.95	1.94	1.82
1	A	287	GLU	CG-CD	6.58	1.61	1.51
1	C	476	TRP	CB-CG	6.03	1.61	1.50
1	B	817	VAL	CB-CG1	-5.82	1.40	1.52
1	D	854	ARG	CZ-NH1	5.57	1.40	1.33
1	B	278	VAL	CB-CG1	5.54	1.64	1.52
1	A	399	GLU	CG-CD	5.36	1.59	1.51
1	G	302	ARG	CZ-NH2	5.18	1.39	1.33
1	G	302	ARG	CZ-NH1	5.13	1.39	1.33
1	A	287	GLU	CB-CG	5.12	1.61	1.52
1	F	817	VAL	CB-CG1	-5.11	1.42	1.52

All (41) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	278	VAL	CG1-CB-CG2	8.95	125.22	110.90
1	J	851	LEU	CB-CG-CD1	8.38	125.24	111.00
1	I	599	ASP	CB-CG-OD1	-8.15	110.97	118.30
1	G	404	VAL	CG1-CB-CG2	7.58	123.02	110.90
1	C	285	LEU	CA-CB-CG	7.25	131.97	115.30
1	H	513	LEU	CA-CB-CG	7.25	131.97	115.30
1	H	601	ARG	NE-CZ-NH2	-6.89	116.86	120.30
1	D	852	VAL	CG1-CB-CG2	6.67	121.58	110.90
1	F	513	LEU	CA-CB-CG	6.57	130.41	115.30
1	D	852	VAL	CA-CB-CG2	6.50	120.65	110.90
1	J	852	VAL	CA-CB-CG1	6.50	120.65	110.90
1	G	513	LEU	CA-CB-CG	6.45	130.12	115.30
1	A	448	CYS	CA-CB-SG	6.41	125.54	114.00
1	J	641	LEU	CA-CB-CG	6.37	129.95	115.30
1	G	404	VAL	CA-CB-CG2	6.25	120.27	110.90
1	B	274	LYS	CD-CE-NZ	6.15	125.84	111.70
1	H	851	LEU	CA-CB-CG	5.98	129.06	115.30
1	J	852	VAL	CG1-CB-CG2	5.81	120.20	110.90
1	E	286	ARG	NE-CZ-NH1	5.80	123.20	120.30
1	A	840	LEU	CB-CG-CD2	5.72	120.73	111.00
1	G	882	ASP	CB-CG-OD1	5.69	123.42	118.30
1	E	554	LEU	CA-CB-CG	5.65	128.30	115.30
1	D	641	LEU	CB-CG-CD2	-5.59	101.49	111.00
1	A	719	MET	CG-SD-CE	-5.53	91.35	100.20
1	J	852	VAL	CA-CB-CG2	5.50	119.15	110.90
1	B	376	ARG	NE-CZ-NH1	-5.50	117.55	120.30
1	E	385	ARG	NE-CZ-NH1	-5.48	117.56	120.30
1	F	672	ASP	CB-CG-OD1	5.48	123.23	118.30
1	B	646	ARG	NE-CZ-NH1	-5.47	117.56	120.30
1	H	285	LEU	CA-CB-CG	5.45	127.83	115.30
1	F	847	LEU	CA-CB-CG	5.41	127.75	115.30
1	B	621	LEU	CB-CG-CD2	-5.37	101.87	111.00
1	J	631	ILE	CG1-CB-CG2	-5.35	99.63	111.40
1	E	669	ARG	NE-CZ-NH1	-5.34	117.63	120.30
1	J	820	LEU	CB-CG-CD2	-5.29	102.01	111.00
1	B	292	THR	CA-CB-CG2	-5.13	105.22	112.40
1	D	453	TYR	CB-CG-CD2	-5.12	117.93	121.00
1	A	840	LEU	CA-CB-CG	5.09	127.01	115.30
1	I	599	ASP	CB-CG-OD2	5.05	122.85	118.30
1	H	851	LEU	CB-CG-CD2	-5.04	102.43	111.00
1	C	848	CYS	CA-CB-SG	5.01	123.03	114.00

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	4569	0	4275	136	0
1	B	4571	0	4324	129	0
1	C	4514	0	4191	131	0
1	D	4549	0	4233	128	0
1	E	4519	0	4188	147	0
1	F	4544	0	4260	124	0
1	G	4560	0	4301	166	0
1	H	4514	0	4194	145	0
1	I	4535	0	4234	147	0
1	J	4441	0	4101	120	0
2	A	2	0	0	0	0
2	B	2	0	0	0	0
2	C	2	0	0	0	0
2	D	2	0	0	0	0
2	E	2	0	0	0	0
2	F	2	0	0	0	0
2	G	2	0	0	0	0
2	H	2	0	0	0	0
2	I	2	0	0	0	0
2	J	2	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
3	G	1	0	0	0	0
3	H	1	0	0	0	0
3	I	1	0	0	0	0
3	J	1	0	0	0	0
All	All	45346	0	42301	1359	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 16.

All (1359) 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:D:279:GLN:HG2	1:D:572:LYS:HE2	1.35	1.07
1:G:417:GLN:HG3	1:G:479:TRP:HZ3	1.16	1.05
1:G:561:GLU:O	1:G:565:LEU:HD12	1.54	1.04
1:H:394:MET:HG3	1:H:562:HIS:HD2	1.23	1.02
1:H:274:LYS:HE2	1:H:363:LYS:HE2	1.47	0.97
1:I:274:LYS:HE3	1:I:598:ARG:HB2	1.46	0.96
1:E:286:ARG:NE	1:E:286:ARG:O	1.98	0.96
1:G:400:PHE:HD2	1:G:484:PHE:HD1	1.12	0.95
1:B:274:LYS:HE3	1:B:363:LYS:HE2	1.51	0.92
1:F:286:ARG:O	1:F:286:ARG:NH1	2.02	0.92
1:G:417:GLN:HG3	1:G:479:TRP:CZ3	2.03	0.92
1:B:343:ALA:HA	1:B:741:VAL:HG21	1.50	0.91
1:E:417:GLN:HB2	1:E:479:TRP:HE3	1.33	0.91
1:H:379:ASN:HD22	1:H:550:ASP:HB3	1.36	0.90
1:C:552:GLU:HA	1:C:570:MET:HE1	1.54	0.89
1:A:274:LYS:HE3	1:A:598:ARG:HB2	1.54	0.89
1:D:274:LYS:HE2	1:D:545:ASN:ND2	1.88	0.88
1:A:279:GLN:HB3	1:A:572:LYS:HE3	1.55	0.87
1:C:555:LEU:HD23	1:C:558:MET:HE3	1.56	0.87
1:B:292:THR:HG21	1:B:311:ARG:HG3	1.54	0.87
1:F:743:PRO:HD2	1:F:747:TRP:HZ3	1.40	0.86
1:I:317:SER:H	1:I:347:THR:HG23	1.40	0.86
1:E:769:HIS:ND1	1:E:840:LEU:HD13	1.90	0.86
1:I:794:THR:HG21	1:I:804:TRP:HE1	1.40	0.85
1:I:854:ARG:HH22	1:I:856:GLU:HB3	1.40	0.84
1:F:723:ARG:HD2	1:F:825:MET:HE1	1.60	0.84
1:H:394:MET:HG3	1:H:562:HIS:CD2	2.12	0.84
1:I:274:LYS:HD2	1:I:545:ASN:HD21	1.42	0.84
1:J:640:ARG:HH11	1:J:643:ARG:NH1	1.77	0.83
1:E:417:GLN:HB2	1:E:479:TRP:CE3	2.13	0.83
1:A:274:LYS:HD2	1:A:545:ASN:HD21	1.41	0.82
1:D:286:ARG:O	1:D:286:ARG:NH1	2.11	0.82
1:B:765:LEU:HD11	1:B:817:VAL:HG11	1.60	0.82
1:G:624:MET:HE1	1:G:655:ARG:HB3	1.60	0.82
1:F:346:ASP:OD2	1:F:348:THR:HG22	1.79	0.81
1:J:640:ARG:HH11	1:J:643:ARG:HH11	1.28	0.81
1:E:769:HIS:HB2	1:E:840:LEU:HD13	1.62	0.80
1:G:558:MET:SD	1:G:562:HIS:NE2	2.53	0.80
1:I:370:GLY:HA2	1:I:639:PRO:HG3	1.63	0.80
1:G:555:LEU:HA	1:G:558:MET:HE2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:337:GLU:HA	1:H:340:VAL:HG12	1.63	0.80
1:G:852:VAL:HA	1:G:857:ARG:HD3	1.62	0.79
1:C:309:SER:HB3	1:C:591:VAL:CG2	2.13	0.79
1:G:282:ILE:HG12	1:G:449:ALA:HB2	1.62	0.79
1:I:747:TRP:HE3	1:I:751:GLU:HB3	1.46	0.79
1:G:405:LYS:HA	1:G:405:LYS:HE3	1.65	0.79
1:F:642:LEU:HD12	1:F:642:LEU:H	1.47	0.79
1:C:484:PHE:HD2	1:C:485:LEU:HD23	1.48	0.79
1:F:506:SER:HB3	1:F:656:LEU:O	1.83	0.79
1:F:317:SER:H	1:F:347:THR:HG23	1.47	0.78
1:I:363:LYS:HE2	1:I:599:ASP:OD2	1.82	0.78
1:B:506:SER:HB3	1:B:656:LEU:O	1.84	0.77
1:I:506:SER:HB3	1:I:656:LEU:O	1.86	0.76
1:J:394:MET:HG2	1:J:562:HIS:CD2	2.21	0.76
1:B:757:LYS:HD3	1:B:790:PRO:HG3	1.67	0.76
1:I:394:MET:HG3	1:I:562:HIS:ND1	2.01	0.76
1:H:851:LEU:HD23	1:H:857:ARG:CB	2.16	0.75
1:B:401:ILE:HG12	1:B:427:VAL:HG13	1.66	0.75
1:H:379:ASN:ND2	1:H:550:ASP:HB3	2.02	0.75
1:B:277:ASP:OD2	1:B:277:ASP:N	2.17	0.75
1:B:640:ARG:HH21	1:B:643:ARG:NH1	1.85	0.75
1:C:373:VAL:HG11	1:C:639:PRO:HG3	1.69	0.75
1:A:348:THR:HG23	1:A:351:GLY:H	1.51	0.74
1:D:274:LYS:HE3	1:D:363:LYS:HE2	1.68	0.74
1:J:394:MET:HG2	1:J:562:HIS:HD2	1.51	0.74
1:B:771:ARG:HD2	1:B:852:VAL:HG11	1.69	0.74
1:C:492:PHE:HZ	1:C:554:LEU:HD21	1.51	0.74
1:G:452:VAL:HG23	1:G:578:VAL:HG12	1.69	0.73
1:H:521:LYS:HG3	1:H:704:TRP:CZ2	2.23	0.73
1:H:765:LEU:HD21	1:H:817:VAL:HG11	1.68	0.73
1:C:452:VAL:HG13	1:C:578:VAL:HG12	1.69	0.73
1:G:400:PHE:CD2	1:G:484:PHE:HD1	2.03	0.73
1:A:567:ALA:O	1:A:571:GLN:HG2	1.89	0.73
1:B:850:SER:HB3	1:B:852:VAL:HG23	1.69	0.73
1:A:333:TRP:CZ2	1:A:851:LEU:HD22	2.24	0.73
1:D:679:LEU:O	1:D:683:ASN:ND2	2.22	0.73
1:E:385:ARG:NH1	1:E:653:GLU:OE1	2.21	0.72
1:J:537:ALA:O	1:J:542:LYS:HE2	1.88	0.72
1:H:761:GLN:NE2	1:H:804:TRP:O	2.22	0.72
1:E:769:HIS:HB2	1:E:840:LEU:CD1	2.19	0.72
1:G:561:GLU:C	1:G:565:LEU:HD12	2.08	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:382:ILE:O	1:E:386:LEU:HD12	1.90	0.72
1:H:808:GLU:OE1	1:H:816:ARG:NH2	2.23	0.71
1:A:555:LEU:HA	1:A:558:MET:HE3	1.71	0.71
1:I:366:GLU:OE2	1:I:545:ASN:HB2	1.90	0.71
1:E:379:ASN:ND2	1:E:550:ASP:HB3	2.06	0.71
1:C:334:ASN:OD1	1:C:740:ARG:NH2	2.23	0.71
1:A:275:GLU:HG3	1:A:305:GLN:NE2	2.05	0.70
1:A:719:MET:HE1	1:A:814:TRP:HH2	1.54	0.70
1:E:769:HIS:ND1	1:E:840:LEU:CD1	2.53	0.70
1:E:381:TRP:CD2	1:E:648:LEU:HD22	2.25	0.70
1:H:277:ASP:OD1	1:H:277:ASP:N	2.23	0.70
1:E:628:GLU:CD	1:E:655:ARG:HH21	1.94	0.70
1:D:343:ALA:HB2	1:D:741:VAL:HG22	1.72	0.70
1:C:443:HIS:CG	1:C:568:THR:HG21	2.27	0.70
1:G:609:TYR:OH	1:G:662:SER:HB2	1.91	0.70
1:I:277:ASP:N	1:I:277:ASP:OD2	2.24	0.70
1:D:373:VAL:HG12	1:D:641:LEU:HD11	1.74	0.70
1:G:274:LYS:HD2	1:G:598:ARG:HD3	1.72	0.70
1:B:417:GLN:HG2	1:B:479:TRP:CZ3	2.27	0.70
1:H:631:ILE:HG13	1:H:681:PHE:HE1	1.57	0.70
1:G:449:ALA:O	1:G:450:HIS:ND1	2.25	0.70
1:B:274:LYS:HD2	1:B:598:ARG:HD3	1.72	0.70
1:A:723:ARG:HD2	1:A:825:MET:HE1	1.73	0.69
1:J:624:MET:HE1	1:J:655:ARG:HB3	1.74	0.69
1:G:314:PRO:HB3	1:G:590:CYS:HB2	1.74	0.69
1:C:628:GLU:OE2	1:C:655:ARG:NH1	2.26	0.69
1:G:376:ARG:HD2	1:G:553:GLN:OE1	1.93	0.69
1:E:539:TRP:NE1	1:E:612:ASN:OD1	2.25	0.69
1:C:484:PHE:CD2	1:C:485:LEU:HD23	2.28	0.69
1:F:551:GLU:OE2	1:F:615:THR:HG21	1.93	0.69
1:D:542:LYS:O	1:D:687:LYS:NZ	2.26	0.68
1:G:542:LYS:HD2	1:G:686:ALA:O	1.93	0.68
1:J:549:GLU:HA	1:J:552:GLU:HG3	1.74	0.68
1:C:309:SER:HB3	1:C:591:VAL:HG22	1.74	0.68
1:A:274:LYS:HD2	1:A:545:ASN:ND2	2.09	0.68
1:A:448:CYS:SG	1:A:451:CYS:HB2	2.33	0.68
1:B:320:SER:HB2	1:B:343:ALA:HB1	1.75	0.68
1:G:717:LEU:HD11	1:G:840:LEU:HD23	1.76	0.68
1:H:397:ARG:O	1:H:401:ILE:HD12	1.92	0.68
1:C:731:ASP:HB3	1:C:734:GLU:HB2	1.74	0.68
1:I:745:CYS:SG	1:I:746:GLY:N	2.67	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:555:LEU:HD23	1:E:558:MET:CE	2.24	0.68
1:E:630:VAL:HG21	1:E:647:TRP:CD1	2.28	0.68
1:G:439:GLU:HG3	1:G:450:HIS:HB2	1.74	0.68
1:A:343:ALA:HB2	1:A:741:VAL:HG22	1.75	0.68
1:E:394:MET:HG3	1:E:562:HIS:HD2	1.58	0.67
1:F:548:LEU:O	1:F:552:GLU:HG3	1.94	0.67
1:G:489:ALA:HB1	1:G:566:ALA:HB2	1.76	0.67
1:D:294:HIS:HE1	1:D:591:VAL:HG21	1.59	0.67
1:B:401:ILE:HG12	1:B:427:VAL:CG1	2.24	0.67
1:E:635:ASP:HB2	1:E:639:PRO:HA	1.77	0.67
1:D:277:ASP:OD1	1:D:277:ASP:N	2.26	0.67
1:I:490:LEU:HD11	1:I:570:MET:HG2	1.77	0.67
1:A:513:LEU:HD11	1:A:712:HIS:CE1	2.29	0.67
1:D:294:HIS:CE1	1:D:591:VAL:HG21	2.28	0.67
1:C:537:ALA:O	1:C:542:LYS:HE3	1.94	0.67
1:I:521:LYS:HG3	1:I:704:TRP:CE2	2.30	0.67
1:A:628:GLU:OE2	1:A:655:ARG:NH1	2.27	0.67
1:D:681:PHE:O	1:D:685:MET:HG3	1.94	0.67
1:E:813:VAL:O	1:E:817:VAL:HG12	1.95	0.67
1:H:568:THR:HG23	1:H:572:LYS:HG3	1.76	0.67
1:E:769:HIS:CG	1:E:840:LEU:HD13	2.29	0.67
1:G:506:SER:HB3	1:G:656:LEU:O	1.95	0.67
1:I:316:GLY:O	1:H:527:GLU:HG3	1.95	0.67
1:F:537:ALA:O	1:F:542:LYS:NZ	2.26	0.66
1:G:577:LYS:NZ	1:G:599:ASP:O	2.27	0.66
1:A:439:GLU:OE2	1:A:442:ARG:HD2	1.95	0.66
1:D:274:LYS:HE2	1:D:545:ASN:HD22	1.59	0.66
1:G:400:PHE:HE2	1:G:484:PHE:HB2	1.59	0.66
1:A:277:ASP:OD1	1:A:277:ASP:N	2.28	0.66
1:D:717:LEU:HD11	1:D:840:LEU:HD23	1.75	0.66
1:C:552:GLU:HA	1:C:570:MET:CE	2.25	0.66
1:C:761:GLN:NE2	1:C:804:TRP:O	2.29	0.66
1:D:577:LYS:NZ	1:D:600:GLN:O	2.29	0.66
1:B:309:SER:HB3	1:B:591:VAL:HG21	1.77	0.66
1:D:369:PRO:O	1:D:373:VAL:HG23	1.95	0.66
1:H:401:ILE:HG23	1:H:427:VAL:HG21	1.78	0.66
1:H:444:LEU:HG	1:H:565:LEU:HD21	1.78	0.66
1:H:539:TRP:NE1	1:H:612:ASN:OD1	2.24	0.66
1:H:631:ILE:HG13	1:H:681:PHE:CE1	2.31	0.66
1:C:601:ARG:HD2	1:C:608:THR:HG23	1.79	0.65
1:F:743:PRO:HD2	1:F:747:TRP:CZ3	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:583:ARG:NH2	1:H:593:ASP:OD2	2.29	0.65
1:G:765:LEU:HD11	1:G:817:VAL:HG11	1.77	0.65
1:E:641:LEU:HD23	1:E:645:GLU:HG3	1.78	0.65
1:G:561:GLU:HB2	1:G:565:LEU:HD11	1.78	0.65
1:G:369:PRO:O	1:G:373:VAL:HG23	1.97	0.65
1:I:747:TRP:CE3	1:I:751:GLU:HB3	2.30	0.65
1:B:640:ARG:HH21	1:B:643:ARG:HH11	1.45	0.64
1:G:400:PHE:HD2	1:G:484:PHE:CD1	2.04	0.64
1:J:624:MET:CE	1:J:655:ARG:HB3	2.28	0.64
1:J:854:ARG:HD3	1:J:855:LYS:N	2.12	0.64
1:E:513:LEU:CD2	1:E:728:PRO:HB3	2.28	0.64
1:E:542:LYS:HD2	1:E:686:ALA:O	1.97	0.64
1:D:279:GLN:HG2	1:D:572:LYS:CE	2.21	0.64
1:C:703:ASN:HB3	1:C:706:GLU:HG3	1.78	0.64
1:F:282:ILE:HD11	1:F:447:ARG:HH11	1.62	0.64
1:G:539:TRP:NE1	1:G:612:ASN:OD1	2.29	0.64
1:A:346:ASP:OD2	1:A:348:THR:HG22	1.96	0.64
1:A:443:HIS:CD2	1:A:448:CYS:HB3	2.32	0.64
1:B:770:ARG:HD3	1:B:840:LEU:HD12	1.79	0.64
1:D:794:THR:HG21	1:D:804:TRP:HE1	1.62	0.64
1:G:626:GLU:HG2	1:G:678:ALA:HB1	1.80	0.64
1:F:719:MET:HE1	1:F:814:TRP:HH2	1.62	0.64
1:J:808:GLU:OE1	1:J:816:ARG:NH2	2.27	0.64
1:A:333:TRP:CH2	1:A:851:LEU:HD22	2.33	0.64
1:A:555:LEU:HD23	1:A:558:MET:HE1	1.80	0.64
1:B:513:LEU:HD11	1:B:712:HIS:CE1	2.33	0.64
1:C:371:THR:O	1:C:375:MET:HG3	1.97	0.64
1:E:362:THR:O	1:E:597:ARG:NH2	2.31	0.64
1:G:808:GLU:OE1	1:G:816:ARG:NH2	2.29	0.64
1:I:771:ARG:NH2	1:I:845:ASP:OD1	2.30	0.64
1:C:635:ASP:OD1	1:C:640:ARG:HG3	1.98	0.64
1:J:628:GLU:OE1	1:J:655:ARG:NH2	2.31	0.64
1:G:277:ASP:OD2	1:G:277:ASP:N	2.30	0.64
1:F:601:ARG:HD2	1:F:608:THR:HG23	1.78	0.63
1:J:654:GLU:OE1	1:J:658:ARG:NH1	2.30	0.63
1:J:748:SER:HB3	1:J:751:GLU:HG3	1.79	0.63
1:G:393:ARG:HD2	1:G:394:MET:O	1.98	0.63
1:J:539:TRP:NE1	1:J:612:ASN:OD1	2.31	0.63
1:I:630:VAL:HG21	1:I:647:TRP:CD1	2.32	0.63
1:G:730:ARG:NE	1:G:734:GLU:OE1	2.31	0.63
1:G:624:MET:CE	1:G:655:ARG:HB3	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:635:ASP:OD1	1:H:640:ARG:HG3	1.98	0.63
1:B:635:ASP:OD2	1:B:640:ARG:HD3	1.98	0.63
1:E:769:HIS:CB	1:E:840:LEU:HD13	2.28	0.63
1:D:846:MET:HA	1:D:850:SER:CB	2.28	0.63
1:F:348:THR:HG23	1:F:351:GLY:H	1.63	0.63
1:E:721:ASP:OD1	1:E:723:ARG:NE	2.27	0.63
1:H:641:LEU:HD21	1:H:645:GLU:OE1	1.98	0.63
1:B:286:ARG:O	1:B:286:ARG:HG2	1.98	0.63
1:E:551:GLU:HG2	1:E:611:LEU:HD22	1.81	0.63
1:B:630:VAL:HG21	1:B:647:TRP:CD1	2.34	0.62
1:C:373:VAL:CG1	1:C:639:PRO:HG3	2.27	0.62
1:C:808:GLU:OE1	1:C:816:ARG:NH2	2.27	0.62
1:G:628:GLU:OE2	1:G:655:ARG:NH1	2.32	0.62
1:D:771:ARG:HG3	1:D:845:ASP:OD2	1.99	0.62
1:E:816:ARG:HA	1:E:820:LEU:HB2	1.81	0.62
1:H:385:ARG:NH1	1:H:653:GLU:OE2	2.32	0.62
1:B:312:THR:HG21	1:B:592:MET:HG3	1.80	0.62
1:C:440:ARG:HH11	1:C:488:GLU:CD	2.02	0.62
1:A:748:SER:O	1:A:752:THR:HG22	1.99	0.62
1:A:865:TRP:HH2	1:A:882:ASP:OD1	1.82	0.62
1:H:757:LYS:HD3	1:H:790:PRO:HG3	1.82	0.62
1:A:539:TRP:NE1	1:A:612:ASN:OD1	2.32	0.62
1:A:599:ASP:O	1:A:600:GLN:HB2	2.00	0.61
1:E:786:ILE:HD11	1:E:881:LYS:CB	2.30	0.61
1:D:366:GLU:OE2	1:D:545:ASN:HB2	2.00	0.61
1:I:274:LYS:HD2	1:I:545:ASN:ND2	2.13	0.61
1:D:745:CYS:SG	1:D:746:GLY:N	2.73	0.61
1:F:542:LYS:O	1:F:687:LYS:NZ	2.32	0.61
1:I:647:TRP:CZ2	1:I:655:ARG:HG2	2.34	0.61
1:A:506:SER:HB3	1:A:656:LEU:O	2.00	0.61
1:J:277:ASP:OD2	1:J:277:ASP:N	2.31	0.61
1:I:854:ARG:NH2	1:I:856:GLU:HB3	2.13	0.61
1:D:822:ASN:HB3	1:D:825:MET:HB2	1.81	0.61
1:F:717:LEU:HD23	1:F:838:PRO:HG2	1.82	0.61
1:G:490:LEU:HD11	1:G:570:MET:HG2	1.82	0.61
1:E:633:ALA:HA	1:E:681:PHE:HE2	1.65	0.61
1:G:400:PHE:CE2	1:G:484:PHE:HB2	2.36	0.61
1:G:786:ILE:HD11	1:G:881:LYS:CB	2.31	0.61
1:E:363:LYS:HE2	1:E:599:ASP:OD2	2.01	0.61
1:B:845:ASP:O	1:B:850:SER:HB2	2.00	0.61
1:C:309:SER:HB3	1:C:591:VAL:HG21	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:394:MET:HG3	1:E:562:HIS:CD2	2.36	0.61
1:D:740:ARG:O	1:D:740:ARG:HG2	2.00	0.61
1:G:545:ASN:OD1	1:G:575:HIS:NE2	2.32	0.61
1:H:303:THR:HB	1:H:361:ASP:OD1	2.01	0.61
1:A:312:THR:HG21	1:A:592:MET:HG2	1.83	0.60
1:J:401:ILE:O	1:J:404:VAL:HG12	2.02	0.60
1:H:717:LEU:HD11	1:H:840:LEU:HD23	1.83	0.60
1:E:659:MET:CG	1:E:668:VAL:HG23	2.31	0.60
1:F:723:ARG:HD2	1:F:825:MET:CE	2.31	0.60
1:J:406:SER:OG	1:J:406:SER:O	2.18	0.60
1:I:640:ARG:HE	1:I:643:ARG:HD2	1.66	0.60
1:D:647:TRP:CZ2	1:D:655:ARG:HG2	2.36	0.60
1:C:376:ARG:NH2	1:C:553:GLN:OE1	2.34	0.60
1:H:292:THR:HG21	1:H:311:ARG:CB	2.31	0.60
1:E:765:LEU:HD11	1:E:817:VAL:HG11	1.83	0.60
1:B:417:GLN:HG2	1:B:479:TRP:CE3	2.36	0.60
1:G:417:GLN:HA	1:G:479:TRP:CZ3	2.36	0.60
1:I:304:TRP:CE3	1:I:595:ILE:HD12	2.37	0.60
1:E:537:ALA:O	1:E:542:LYS:HE2	2.02	0.60
1:C:400:PHE:O	1:C:404:VAL:HG12	2.01	0.60
1:H:274:LYS:HD2	1:H:274:LYS:O	2.02	0.60
1:E:333:TRP:HB3	1:E:339:VAL:HG11	1.84	0.59
1:E:623:ARG:HD3	1:E:675:PHE:CZ	2.37	0.59
1:G:577:LYS:NZ	1:G:600:GLN:O	2.31	0.59
1:I:371:THR:O	1:I:375:MET:HG3	2.02	0.59
1:H:493:LEU:HD21	1:H:554:LEU:HD21	1.84	0.59
1:J:443:HIS:CE1	1:J:485:LEU:HD13	2.38	0.59
1:H:813:VAL:O	1:H:817:VAL:HG12	2.03	0.59
1:D:506:SER:HB3	1:D:656:LEU:O	2.03	0.59
1:D:631:ILE:HG13	1:D:681:PHE:CE1	2.38	0.59
1:F:282:ILE:CD1	1:F:447:ARG:HH11	2.15	0.59
1:H:628:GLU:OE2	1:H:655:ARG:NH1	2.33	0.59
1:J:274:LYS:NZ	1:J:545:ASN:OD1	2.35	0.59
1:B:771:ARG:HG3	1:B:845:ASP:OD2	2.03	0.59
1:C:848:CYS:O	1:C:849:SER:HB2	2.02	0.59
1:G:761:GLN:NE2	1:G:804:TRP:O	2.32	0.59
1:J:274:LYS:HZ1	1:J:363:LYS:HE2	1.68	0.59
1:J:854:ARG:HD3	1:J:855:LYS:H	1.68	0.59
1:B:580:LYS:HB3	1:B:592:MET:HE3	1.84	0.59
1:G:561:GLU:C	1:G:565:LEU:CD1	2.71	0.59
1:E:393:ARG:HD2	1:E:394:MET:O	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:748:SER:O	1:E:752:THR:HG23	2.03	0.58
1:C:659:MET:HG2	1:C:668:VAL:HG22	1.84	0.58
1:F:277:ASP:OD1	1:F:277:ASP:N	2.33	0.58
1:G:757:LYS:HE2	1:G:790:PRO:HD3	1.85	0.58
1:J:383:LEU:HD22	1:J:554:LEU:HD12	1.85	0.58
1:H:305:GLN:HB2	1:H:596:THR:OG1	2.03	0.58
1:H:394:MET:CG	1:H:562:HIS:HD2	2.05	0.58
1:A:723:ARG:HD2	1:A:825:MET:CE	2.33	0.58
1:C:654:GLU:OE2	1:C:658:ARG:NH1	2.34	0.58
1:J:583:ARG:HG2	1:J:584:PRO:HD2	1.85	0.58
1:J:624:MET:O	1:J:628:GLU:HG3	2.03	0.58
1:B:440:ARG:NH1	1:B:488:GLU:OE1	2.27	0.58
1:C:456:MET:N	1:C:475:ILE:O	2.36	0.58
1:J:635:ASP:O	1:J:639:PRO:HB3	2.03	0.58
1:A:440:ARG:NH1	1:A:488:GLU:OE2	2.36	0.58
1:A:659:MET:HE2	1:A:668:VAL:HG22	1.84	0.58
1:B:859:GLU:O	1:B:863:ASN:ND2	2.36	0.58
1:E:320:SER:CB	1:E:343:ALA:HB1	2.33	0.58
1:E:832:VAL:HG23	1:E:833:GLU:HG2	1.86	0.58
1:D:439:GLU:HA	1:D:442:ARG:HG3	1.84	0.58
1:C:640:ARG:HD2	1:C:643:ARG:HD3	1.84	0.58
1:A:626:GLU:HG2	1:A:678:ALA:HB1	1.85	0.58
1:D:385:ARG:NH2	1:D:503:SER:O	2.37	0.58
1:B:397:ARG:HG3	1:B:397:ARG:HH11	1.69	0.58
1:I:599:ASP:HB3	1:I:600:GLN:HG3	1.86	0.58
1:H:371:THR:O	1:H:375:MET:HG3	2.04	0.58
1:H:717:LEU:HD23	1:H:838:PRO:HG2	1.85	0.58
1:A:511:ILE:HD13	1:A:519:TYR:CE2	2.39	0.58
1:E:555:LEU:HA	1:E:558:MET:HE2	1.86	0.58
1:B:292:THR:CG2	1:B:311:ARG:HG3	2.29	0.58
1:E:732:GLN:OE1	1:E:850:SER:HA	2.04	0.58
1:D:640:ARG:HE	1:D:643:ARG:HD2	1.69	0.58
1:I:854:ARG:HB3	1:I:854:ARG:CZ	2.33	0.58
1:A:558:MET:HB3	1:A:562:HIS:HD2	1.68	0.57
1:B:320:SER:CB	1:B:343:ALA:HB1	2.33	0.57
1:E:385:ARG:HH12	1:E:653:GLU:CD	2.07	0.57
1:D:316:GLY:HA3	1:D:348:THR:HA	1.86	0.57
1:I:786:ILE:HD11	1:I:881:LYS:HB2	1.85	0.57
1:G:396:SER:OG	1:G:399:GLU:N	2.32	0.57
1:I:567:ALA:O	1:I:571:GLN:HB2	2.03	0.57
1:B:635:ASP:OD1	1:B:640:ARG:NH1	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:358:GLU:OE1	1:C:358:GLU:O	2.21	0.57
1:F:397:ARG:HG2	1:F:433:TRP:CZ3	2.39	0.57
1:B:333:TRP:CZ2	1:B:851:LEU:HD21	2.39	0.57
1:H:405:LYS:HE3	1:H:405:LYS:HA	1.87	0.57
1:H:625:MET:HE3	1:H:631:ILE:HD13	1.87	0.57
1:E:513:LEU:O	1:E:513:LEU:HD23	2.03	0.57
1:D:374:ILE:O	1:D:378:VAL:HG23	2.04	0.57
1:J:299:HIS:HD2	1:J:306:TYR:CD2	2.22	0.57
1:J:363:LYS:HA	1:J:597:ARG:HH22	1.68	0.57
1:I:641:LEU:O	1:I:644:VAL:N	2.36	0.57
1:D:506:SER:HB2	1:D:659:MET:HG3	1.86	0.57
1:G:761:GLN:HB2	1:G:804:TRP:HB2	1.87	0.57
1:E:305:GLN:O	1:E:595:ILE:HA	2.04	0.57
1:E:508:VAL:CG2	1:E:662:SER:HB2	2.35	0.57
1:J:574:TYR:O	1:J:577:LYS:NZ	2.38	0.57
1:I:658:ARG:HD3	1:I:669:ARG:O	2.04	0.57
1:A:394:MET:HE3	1:A:562:HIS:HB2	1.87	0.57
1:C:443:HIS:CD2	1:C:568:THR:HG21	2.39	0.57
1:H:531:PHE:HB2	1:H:701:PHE:O	2.04	0.57
1:E:371:THR:O	1:E:375:MET:HG3	2.05	0.57
1:E:717:LEU:HD23	1:E:838:PRO:HG2	1.87	0.57
1:D:640:ARG:HE	1:D:643:ARG:CD	2.18	0.57
1:C:275:GLU:HG2	1:C:305:GLN:NE2	2.20	0.57
1:E:378:VAL:O	1:E:382:ILE:HG13	2.04	0.56
1:E:513:LEU:HD11	1:E:712:HIS:CE1	2.40	0.56
1:D:585:SER:H	1:D:590:CYS:HA	1.71	0.56
1:I:623:ARG:HD3	1:I:675:PHE:CZ	2.40	0.56
1:B:771:ARG:HG3	1:B:771:ARG:HH21	1.69	0.56
1:E:451:CYS:SG	1:E:482:SER:OG	2.64	0.56
1:I:681:PHE:O	1:I:685:MET:HG3	2.05	0.56
1:H:279:GLN:HG2	1:H:572:LYS:HD3	1.87	0.56
1:F:455:MET:HA	1:F:476:TRP:HA	1.88	0.56
1:J:626:GLU:HG2	1:J:678:ALA:HB1	1.87	0.56
1:A:865:TRP:HD1	1:A:869:GLU:HG3	1.70	0.56
1:C:292:THR:HG21	1:C:311:ARG:CB	2.35	0.56
1:C:366:GLU:OE2	1:C:545:ASN:HB2	2.05	0.56
1:F:404:VAL:HG11	1:F:427:VAL:HG11	1.86	0.56
1:A:757:LYS:HE2	1:A:788:TRP:O	2.06	0.56
1:B:309:SER:HB3	1:B:591:VAL:CG2	2.35	0.56
1:D:757:LYS:HD3	1:D:790:PRO:HG3	1.88	0.56
1:F:314:PRO:HG3	1:F:590:CYS:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:366:GLU:OE2	1:G:545:ASN:HB2	2.06	0.56
1:G:537:ALA:O	1:G:542:LYS:NZ	2.39	0.56
1:I:514:ASN:OD1	1:I:766:SER:HB3	2.06	0.56
1:F:385:ARG:NE	1:F:653:GLU:OE2	2.37	0.56
1:G:635:ASP:HB3	1:G:639:PRO:HA	1.88	0.56
1:J:585:SER:HB2	1:J:591:VAL:HG23	1.86	0.56
1:J:274:LYS:HE3	1:J:598:ARG:CB	2.36	0.55
1:B:813:VAL:O	1:B:817:VAL:HG12	2.06	0.55
1:D:282:ILE:HG23	1:D:448:CYS:O	2.06	0.55
1:J:374:ILE:HG21	1:J:631:ILE:HD11	1.87	0.55
1:J:770:ARG:NH2	1:J:848:CYS:O	2.37	0.55
1:H:521:LYS:HG3	1:H:704:TRP:CE2	2.40	0.55
1:C:723:ARG:HD2	1:C:825:MET:SD	2.46	0.55
1:G:583:ARG:HG3	1:G:584:PRO:HD2	1.88	0.55
1:J:681:PHE:O	1:J:685:MET:HG3	2.05	0.55
1:I:279:GLN:N	1:I:279:GLN:OE1	2.38	0.55
1:H:647:TRP:CE3	1:H:648:LEU:HD23	2.42	0.55
1:A:719:MET:HE1	1:A:814:TRP:CH2	2.40	0.55
1:E:381:TRP:CG	1:E:648:LEU:HD22	2.42	0.55
1:E:624:MET:CE	1:E:655:ARG:HB3	2.36	0.55
1:C:813:VAL:O	1:C:817:VAL:HG12	2.07	0.55
1:G:380:ASP:O	1:G:384:GLU:HB2	2.06	0.55
1:G:635:ASP:OD1	1:G:640:ARG:HD3	2.06	0.55
1:D:794:THR:HG21	1:D:804:TRP:NE1	2.21	0.55
1:J:513:LEU:HD22	1:J:728:PRO:HB3	1.89	0.55
1:J:850:SER:O	1:J:852:VAL:N	2.39	0.55
1:I:493:LEU:HD21	1:I:554:LEU:HD21	1.88	0.55
1:G:851:LEU:HB3	1:G:857:ARG:HB2	1.88	0.55
1:J:337:GLU:HA	1:J:340:VAL:HG22	1.88	0.55
1:H:281:ARG:O	1:H:285:LEU:HB2	2.07	0.55
1:A:601:ARG:HD2	1:A:608:THR:HG23	1.89	0.55
1:D:384:GLU:OE2	1:D:388:ARG:NH2	2.39	0.55
1:A:635:ASP:OD2	1:A:640:ARG:HD3	2.06	0.54
1:B:851:LEU:HD23	1:B:851:LEU:H	1.72	0.54
1:G:343:ALA:HB2	1:G:741:VAL:HG12	1.89	0.54
1:I:810:MET:HA	1:I:813:VAL:HG12	1.89	0.54
1:A:583:ARG:HG3	1:A:584:PRO:HD2	1.89	0.54
1:C:279:GLN:N	1:C:279:GLN:OE1	2.39	0.54
1:H:628:GLU:OE1	1:H:655:ARG:NH1	2.40	0.54
1:B:681:PHE:O	1:B:685:MET:HG3	2.08	0.54
1:F:717:LEU:HD11	1:F:840:LEU:HD23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:322:ILE:HD12	1:J:322:ILE:O	2.07	0.54
1:H:497:HIS:HB3	1:H:500:SER:HB3	1.90	0.54
1:H:622:ILE:HG21	1:H:685:MET:HE1	1.89	0.54
1:F:369:PRO:O	1:F:373:VAL:HG23	2.08	0.54
1:F:611:LEU:O	1:F:615:THR:HG23	2.07	0.54
1:G:417:GLN:CG	1:G:479:TRP:CZ3	2.85	0.54
1:I:731:ASP:HB3	1:I:734:GLU:HB2	1.89	0.54
1:B:586:ARG:HG3	1:B:586:ARG:HH11	1.72	0.54
1:E:369:PRO:O	1:E:373:VAL:HG23	2.08	0.54
1:E:552:GLU:OE2	1:E:575:HIS:ND1	2.40	0.54
1:E:555:LEU:HD23	1:E:558:MET:HE3	1.90	0.54
1:G:669:ARG:HG3	1:G:669:ARG:HH11	1.73	0.54
1:I:492:PHE:HZ	1:I:554:LEU:HD23	1.72	0.54
1:H:521:LYS:O	1:H:524:SER:OG	2.25	0.54
1:A:489:ALA:HB1	1:A:566:ALA:HA	1.90	0.54
1:B:545:ASN:ND2	1:B:575:HIS:NE2	2.56	0.54
1:J:664:ASP:OD1	1:J:664:ASP:N	2.37	0.54
1:I:403:LYS:NZ	1:I:495:GLU:OE1	2.41	0.54
1:I:521:LYS:HG3	1:I:704:TRP:CZ2	2.42	0.54
1:H:647:TRP:HE3	1:H:648:LEU:HD23	1.73	0.54
1:C:332:PRO:HG2	1:C:333:TRP:CE3	2.43	0.54
1:C:453:TYR:HB2	1:C:579:VAL:HG13	1.90	0.54
1:G:283:SER:HA	1:G:449:ALA:HA	1.90	0.54
1:G:689:ARG:HG3	1:G:689:ARG:HH11	1.73	0.54
1:H:337:GLU:O	1:H:341:ARG:HG2	2.08	0.54
1:A:719:MET:CE	1:A:814:TRP:HH2	2.19	0.54
1:B:282:ILE:CD1	1:B:447:ARG:HH11	2.21	0.54
1:B:300:PRO:HD2	1:B:301:TYR:CE2	2.43	0.54
1:B:385:ARG:NH2	1:B:503:SER:O	2.41	0.54
1:E:300:PRO:HD2	1:E:301:TYR:CE2	2.43	0.54
1:C:379:ASN:ND2	1:C:550:ASP:O	2.41	0.54
1:I:497:HIS:HB3	1:I:500:SER:HB3	1.89	0.54
1:A:783:ALA:HB2	1:A:868:VAL:HG13	1.90	0.53
1:E:300:PRO:HD2	1:E:301:TYR:CD2	2.43	0.53
1:E:476:TRP:CB	1:E:604:GLY:H	2.20	0.53
1:F:844:HIS:O	1:F:848:CYS:HB2	2.08	0.53
1:G:537:ALA:HB2	1:G:690:LYS:HB3	1.88	0.53
1:I:770:ARG:HG3	1:I:770:ARG:HH11	1.73	0.53
1:C:530:LEU:O	1:C:670:PRO:HD2	2.08	0.53
1:G:641:LEU:O	1:G:641:LEU:HD23	2.08	0.53
1:H:300:PRO:HD2	1:H:301:TYR:CE2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:478:MET:HG2	1:H:482:SER:HB2	1.90	0.53
1:E:555:LEU:HA	1:E:558:MET:CE	2.38	0.53
1:C:506:SER:HB3	1:C:656:LEU:O	2.08	0.53
1:C:567:ALA:O	1:C:571:GLN:HB2	2.08	0.53
1:J:290:GLY:HA2	1:J:293:TRP:HB2	1.90	0.53
1:I:444:LEU:HD11	1:I:561:GLU:HG2	1.90	0.53
1:H:616:ASN:HD22	1:H:661:VAL:HG13	1.74	0.53
1:E:668:VAL:HG11	1:E:675:PHE:CZ	2.42	0.53
1:C:274:LYS:NZ	1:C:599:ASP:H	2.06	0.53
1:G:552:GLU:OE2	1:G:575:HIS:ND1	2.42	0.53
1:J:513:LEU:HD11	1:J:712:HIS:CE1	2.42	0.53
1:J:631:ILE:HG21	1:J:681:PHE:CE2	2.43	0.53
1:E:721:ASP:OD1	1:E:723:ARG:HG3	2.08	0.53
1:J:369:PRO:O	1:J:373:VAL:HG23	2.08	0.53
1:I:647:TRP:CH2	1:I:655:ARG:HG2	2.43	0.53
1:I:823:PRO:HG2	1:I:824:PHE:CE2	2.43	0.53
1:E:769:HIS:CG	1:E:840:LEU:CD1	2.92	0.53
1:D:809:ASP:HB3	1:D:812:ASP:OD2	2.08	0.53
1:G:771:ARG:HG3	1:G:845:ASP:OD2	2.08	0.53
1:I:717:LEU:HD23	1:I:838:PRO:HG2	1.91	0.53
1:E:394:MET:CG	1:E:562:HIS:CD2	2.92	0.53
1:G:346:ASP:OD1	1:G:348:THR:OG1	2.26	0.53
1:G:743:PRO:HG3	1:G:755:LEU:HD22	1.91	0.53
1:G:333:TRP:CZ2	1:G:851:LEU:HD22	2.44	0.53
1:I:607:VAL:HG23	1:I:611:LEU:HD12	1.91	0.53
1:B:331:TRP:CZ2	1:B:860:TRP:HA	2.44	0.53
1:B:333:TRP:O	1:B:339:VAL:HG21	2.09	0.53
1:E:374:ILE:HD12	1:E:681:PHE:HE1	1.74	0.53
1:D:577:LYS:NZ	1:D:599:ASP:O	2.41	0.53
1:F:333:TRP:HD1	1:F:339:VAL:HG21	1.74	0.53
1:G:552:GLU:HA	1:G:570:MET:CE	2.39	0.53
1:H:314:PRO:HB3	1:H:590:CYS:HB2	1.91	0.53
1:E:719:MET:HE3	1:E:838:PRO:HD3	1.91	0.52
1:G:378:VAL:O	1:G:382:ILE:HG13	2.09	0.52
1:G:574:TYR:O	1:G:577:LYS:HE3	2.09	0.52
1:J:281:ARG:O	1:J:285:LEU:HB2	2.09	0.52
1:E:567:ALA:O	1:E:571:GLN:HB2	2.09	0.52
1:E:625:MET:HG3	1:E:630:VAL:HB	1.90	0.52
1:J:309:SER:HB3	1:J:591:VAL:CG1	2.39	0.52
1:H:476:TRP:O	1:H:604:GLY:HA3	2.09	0.52
1:A:825:MET:HE3	1:A:825:MET:HA	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:658:ARG:HD3	1:D:669:ARG:O	2.10	0.52
1:F:577:LYS:HE2	1:F:599:ASP:O	2.10	0.52
1:E:277:ASP:N	1:E:277:ASP:OD1	2.40	0.52
1:C:771:ARG:HG3	1:C:845:ASP:OD2	2.10	0.52
1:G:521:LYS:O	1:G:524:SER:OG	2.22	0.52
1:J:299:HIS:CD2	1:J:306:TYR:CD2	2.97	0.52
1:D:274:LYS:HE2	1:D:545:ASN:HD21	1.69	0.52
1:F:771:ARG:HG3	1:F:845:ASP:OD2	2.10	0.52
1:I:439:GLU:HG2	1:I:442:ARG:NH1	2.24	0.52
1:E:743:PRO:HG2	1:E:747:TRP:CE2	2.44	0.52
1:C:770:ARG:HD3	1:C:840:LEU:HD12	1.92	0.52
1:G:541:THR:HA	1:G:600:GLN:HG2	1.90	0.52
1:H:299:HIS:CD2	1:H:306:TYR:CD2	2.98	0.52
1:B:337:GLU:HA	1:B:340:VAL:HG12	1.90	0.52
1:D:373:VAL:CG1	1:D:641:LEU:HD11	2.38	0.52
1:C:314:PRO:HB3	1:C:590:CYS:HB2	1.90	0.52
1:C:343:ALA:HB2	1:C:741:VAL:HG22	1.92	0.52
1:I:443:HIS:CD2	1:I:568:THR:HG21	2.45	0.52
1:I:506:SER:HB2	1:I:659:MET:HG3	1.91	0.52
1:B:501:ARG:NH2	1:B:506:SER:HA	2.25	0.52
1:E:332:PRO:HG2	1:E:333:TRP:CZ3	2.44	0.52
1:G:628:GLU:OE1	1:G:655:ARG:NH1	2.43	0.52
1:J:279:GLN:OE1	1:J:279:GLN:N	2.43	0.52
1:D:731:ASP:HB3	1:D:734:GLU:HB2	1.90	0.52
1:C:348:THR:O	1:C:351:GLY:N	2.43	0.52
1:C:433:TRP:O	1:C:437:ASP:HB2	2.10	0.52
1:F:332:PRO:HD2	1:F:333:TRP:CE3	2.45	0.52
1:F:628:GLU:OE2	1:F:655:ARG:NH1	2.42	0.52
1:J:501:ARG:HD2	1:J:507:GLY:O	2.10	0.52
1:I:312:THR:HG21	1:I:592:MET:HG2	1.92	0.52
1:A:717:LEU:HD11	1:A:840:LEU:HD13	1.92	0.52
1:I:444:LEU:O	1:I:564:GLN:HG2	2.09	0.52
1:B:417:GLN:HA	1:B:479:TRP:CE3	2.46	0.51
1:E:370:GLY:O	1:E:374:ILE:HG13	2.10	0.51
1:F:300:PRO:HD2	1:F:301:TYR:CD1	2.44	0.51
1:F:521:LYS:HD2	1:F:704:TRP:CZ2	2.44	0.51
1:G:681:PHE:O	1:G:685:MET:HG3	2.10	0.51
1:B:405:LYS:HE3	1:B:405:LYS:HA	1.92	0.51
1:B:776:LEU:O	1:B:780:ILE:HG13	2.10	0.51
1:D:719:MET:HE1	1:D:814:TRP:HH2	1.75	0.51
1:C:422:SER:OG	1:C:423:ALA:N	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:757:LYS:HG2	1:C:790:PRO:HG3	1.93	0.51
1:I:304:TRP:CD2	1:I:595:ILE:HD12	2.44	0.51
1:I:440:ARG:HD3	1:I:485:LEU:HD22	1.92	0.51
1:D:743:PRO:HG2	1:D:747:TRP:CD2	2.46	0.51
1:F:813:VAL:O	1:F:817:VAL:HG12	2.10	0.51
1:J:631:ILE:CG2	1:J:681:PHE:CE2	2.93	0.51
1:H:644:VAL:O	1:H:648:LEU:HG	2.11	0.51
1:A:769:HIS:ND1	1:A:840:LEU:HD22	2.25	0.51
1:J:577:LYS:O	1:J:596:THR:HA	2.10	0.51
1:I:439:GLU:HA	1:I:442:ARG:NH1	2.25	0.51
1:E:621:LEU:HD12	1:E:624:MET:HE2	1.93	0.51
1:C:501:ARG:HH21	1:C:501:ARG:HG3	1.76	0.51
1:G:641:LEU:HD23	1:G:645:GLU:HG3	1.92	0.51
1:J:303:THR:OG1	1:J:597:ARG:NH1	2.44	0.51
1:I:776:LEU:O	1:I:780:ILE:HG12	2.11	0.51
1:H:529:GLY:O	1:H:669:ARG:NH1	2.33	0.51
1:H:800:ALA:HB1	1:H:804:TRP:HH2	1.75	0.51
1:A:624:MET:O	1:A:628:GLU:HG3	2.10	0.51
1:A:770:ARG:HD3	1:A:840:LEU:HD23	1.93	0.51
1:C:578:VAL:HG22	1:C:596:THR:HG22	1.93	0.51
1:F:282:ILE:CD1	1:F:447:ARG:HE	2.24	0.51
1:I:501:ARG:NH2	1:I:501:ARG:HG3	2.26	0.51
1:I:606:VAL:HG12	1:I:607:VAL:HG13	1.93	0.51
1:I:617:ILE:O	1:I:621:LEU:HB2	2.10	0.51
1:E:628:GLU:OE1	1:E:655:ARG:NH2	2.41	0.51
1:D:865:TRP:HZ3	1:D:884:LEU:HB2	1.76	0.51
1:G:807:THR:O	1:G:807:THR:HG22	2.11	0.51
1:J:677:ARG:C	1:J:679:LEU:HD12	2.31	0.51
1:I:825:MET:O	1:I:828:LYS:HE2	2.11	0.51
1:B:527:GLU:OE2	1:C:316:GLY:N	2.43	0.51
1:B:640:ARG:HB3	1:B:643:ARG:HG3	1.93	0.51
1:E:379:ASN:HD22	1:E:550:ASP:HB3	1.76	0.51
1:E:558:MET:SD	1:E:562:HIS:ND1	2.83	0.51
1:G:397:ARG:O	1:G:401:ILE:HG12	2.11	0.51
1:G:403:LYS:O	1:G:405:LYS:N	2.44	0.51
1:J:542:LYS:O	1:J:687:LYS:NZ	2.42	0.51
1:H:577:LYS:HE2	1:H:599:ASP:O	2.10	0.51
1:D:750:ARG:HG3	1:D:788:TRP:CH2	2.45	0.51
1:C:452:VAL:CG1	1:C:578:VAL:HG12	2.40	0.51
1:C:501:ARG:HH22	1:C:506:SER:HA	1.76	0.51
1:J:689:ARG:NH2	1:J:696:GLU:O	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:771:ARG:HG3	1:A:845:ASP:OD2	2.11	0.51
1:E:757:LYS:HD3	1:E:790:PRO:HG3	1.93	0.51
1:D:274:LYS:HB3	1:D:274:LYS:HZ2	1.76	0.51
1:J:743:PRO:HG2	1:J:747:TRP:CZ2	2.46	0.51
1:B:567:ALA:O	1:B:571:GLN:HG2	2.11	0.50
1:E:299:HIS:CD2	1:E:306:TYR:CD2	2.98	0.50
1:D:393:ARG:HH11	1:D:393:ARG:HG3	1.75	0.50
1:G:506:SER:HB2	1:G:659:MET:HG3	1.92	0.50
1:G:717:LEU:HD23	1:G:838:PRO:HG2	1.93	0.50
1:J:786:ILE:HD11	1:J:881:LYS:CB	2.41	0.50
1:I:301:TYR:OH	1:I:593:ASP:OD2	2.27	0.50
1:I:452:VAL:HG13	1:I:578:VAL:HG12	1.93	0.50
1:H:452:VAL:HG13	1:H:578:VAL:HB	1.92	0.50
1:H:672:ASP:OD1	1:H:674:ARG:HB2	2.10	0.50
1:E:401:ILE:HD11	1:E:433:TRP:HZ2	1.76	0.50
1:D:332:PRO:HD2	1:D:333:TRP:CE3	2.45	0.50
1:C:299:HIS:CD2	1:C:306:TYR:CD2	3.00	0.50
1:C:851:LEU:HB3	1:C:857:ARG:CB	2.42	0.50
1:F:628:GLU:OE1	1:F:655:ARG:NH1	2.44	0.50
1:G:772:ASP:OD1	1:G:857:ARG:NE	2.44	0.50
1:I:501:ARG:HG3	1:I:501:ARG:HH21	1.76	0.50
1:A:300:PRO:HD2	1:A:301:TYR:CD2	2.46	0.50
1:B:736:VAL:O	1:B:740:ARG:HG3	2.11	0.50
1:D:723:ARG:HB3	1:D:825:MET:CE	2.41	0.50
1:C:607:VAL:HG23	1:C:611:LEU:HG	1.93	0.50
1:C:658:ARG:HD3	1:C:669:ARG:O	2.10	0.50
1:J:274:LYS:NZ	1:J:363:LYS:HE2	2.26	0.50
1:I:373:VAL:CG1	1:I:641:LEU:HD11	2.41	0.50
1:D:383:LEU:HD13	1:D:554:LEU:HD12	1.92	0.50
1:C:442:ARG:NH2	1:C:442:ARG:HG3	2.25	0.50
1:J:394:MET:CG	1:J:562:HIS:HD2	2.22	0.50
1:J:809:ASP:HB3	1:J:812:ASP:OD2	2.10	0.50
1:E:513:LEU:CD2	1:E:728:PRO:CB	2.89	0.50
1:D:659:MET:HE2	1:D:668:VAL:HG22	1.93	0.50
1:D:664:ASP:OD1	1:D:664:ASP:N	2.40	0.50
1:C:638:ASN:OD1	1:C:638:ASN:N	2.45	0.50
1:I:558:MET:SD	1:I:562:HIS:CD2	3.05	0.50
1:I:753:ALA:HB1	1:I:784:VAL:HG13	1.93	0.50
1:B:865:TRP:HZ3	1:B:884:LEU:HB2	1.76	0.50
1:G:506:SER:CB	1:G:659:MET:HG3	2.41	0.50
1:H:341:ARG:NH1	1:H:341:ARG:HA	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:492:PHE:O	1:G:496:ASP:HB2	2.12	0.50
1:J:368:GLN:OE1	1:J:636:ALA:HB1	2.12	0.50
1:J:761:GLN:NE2	1:J:804:TRP:O	2.45	0.50
1:A:439:GLU:HA	1:A:442:ARG:HH11	1.75	0.50
1:B:718:VAL:O	1:C:870:LYS:HE2	2.12	0.50
1:F:282:ILE:HG23	1:F:448:CYS:O	2.12	0.50
1:F:854:ARG:HG3	1:F:856:GLU:H	1.77	0.50
1:A:608:THR:HG22	1:A:612:ASN:ND2	2.26	0.50
1:A:334:ASN:OD1	1:A:740:ARG:NH2	2.45	0.49
1:B:299:HIS:C	1:B:299:HIS:CD2	2.86	0.49
1:B:816:ARG:HA	1:B:820:LEU:HB2	1.94	0.49
1:E:705:GLU:HG2	1:E:714:PHE:O	2.11	0.49
1:F:440:ARG:NH1	1:F:488:GLU:OE1	2.45	0.49
1:A:719:MET:HG2	1:A:838:PRO:HD3	1.93	0.49
1:B:647:TRP:CZ2	1:B:655:ARG:HG2	2.47	0.49
1:G:440:ARG:O	1:G:443:HIS:HB2	2.11	0.49
1:H:292:THR:HG21	1:H:311:ARG:H	1.77	0.49
1:A:374:ILE:HG23	1:A:644:VAL:HG11	1.94	0.49
1:E:330:SER:O	1:E:333:TRP:HE3	1.95	0.49
1:E:659:MET:HG3	1:E:668:VAL:HG23	1.92	0.49
1:E:681:PHE:O	1:E:685:MET:HG3	2.12	0.49
1:C:363:LYS:HE2	1:C:599:ASP:OD2	2.11	0.49
1:F:511:ILE:HD13	1:F:519:TYR:CE2	2.47	0.49
1:F:680:TYR:O	1:F:681:PHE:HB2	2.12	0.49
1:G:832:VAL:HG23	1:G:833:GLU:HG2	1.94	0.49
1:I:286:ARG:H	1:I:286:ARG:HD3	1.78	0.49
1:I:823:PRO:HG2	1:I:824:PHE:CD2	2.47	0.49
1:H:379:ASN:ND2	1:H:550:ASP:O	2.44	0.49
1:A:397:ARG:HG2	1:A:433:TRP:CZ3	2.48	0.49
1:A:443:HIS:CD2	1:A:448:CYS:CB	2.96	0.49
1:A:508:VAL:HG23	1:A:799:HIS:HE1	1.78	0.49
1:G:523:LEU:O	1:G:669:ARG:NH1	2.46	0.49
1:I:367:PRO:HG2	1:I:372:LYS:HG3	1.95	0.49
1:I:446:GLY:O	1:I:572:LYS:HE2	2.12	0.49
1:I:757:LYS:O	1:I:761:GLN:HG3	2.12	0.49
1:H:772:ASP:OD2	1:H:851:LEU:HB3	2.12	0.49
1:A:274:LYS:HE2	1:A:274:LYS:O	2.13	0.49
1:B:433:TRP:HA	1:B:436:VAL:HB	1.95	0.49
1:B:521:LYS:O	1:B:524:SER:OG	2.31	0.49
1:C:304:TRP:CE2	1:C:597:ARG:HD2	2.48	0.49
1:F:659:MET:HE3	1:F:668:VAL:HG13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:770:ARG:HG3	1:I:770:ARG:NH1	2.27	0.49
1:E:455:MET:HE2	1:E:475:ILE:HA	1.95	0.49
1:E:653:GLU:O	1:E:653:GLU:HG3	2.12	0.49
1:D:850:SER:O	1:D:851:LEU:HB2	2.12	0.49
1:F:623:ARG:HD3	1:F:675:PHE:CZ	2.47	0.49
1:D:294:HIS:HE1	1:D:591:VAL:CG2	2.25	0.49
1:G:761:GLN:CB	1:G:804:TRP:HB2	2.43	0.49
1:E:366:GLU:OE2	1:E:545:ASN:HB2	2.13	0.49
1:D:867:ALA:O	1:D:871:VAL:HG12	2.12	0.49
1:F:397:ARG:HG2	1:F:433:TRP:CH2	2.48	0.49
1:F:539:TRP:CH2	1:F:616:ASN:HB2	2.48	0.49
1:F:624:MET:CE	1:F:655:ARG:HB3	2.43	0.49
1:H:732:GLN:NE2	1:H:772:ASP:HB2	2.28	0.49
1:A:288:GLN:HG3	1:A:288:GLN:O	2.12	0.49
1:A:368:GLN:OE1	1:A:636:ALA:HB1	2.12	0.49
1:B:300:PRO:HD2	1:B:301:TYR:CD2	2.48	0.49
1:G:679:LEU:HD23	1:G:689:ARG:CZ	2.42	0.49
1:J:320:SER:HB2	1:J:343:ALA:HB1	1.94	0.49
1:J:551:GLU:CD	1:J:601:ARG:HH22	2.17	0.49
1:H:558:MET:SD	1:H:562:HIS:CE1	3.06	0.49
1:A:274:LYS:HE3	1:A:598:ARG:CB	2.34	0.48
1:A:282:ILE:CD1	1:A:447:ARG:HE	2.26	0.48
1:B:537:ALA:HB2	1:B:690:LYS:HB3	1.95	0.48
1:B:599:ASP:O	1:B:600:GLN:HB2	2.14	0.48
1:C:397:ARG:HG2	1:C:484:PHE:CZ	2.48	0.48
1:F:825:MET:O	1:F:828:LYS:HE2	2.12	0.48
1:I:426:ALA:O	1:I:429:ASP:HB3	2.13	0.48
1:H:681:PHE:O	1:H:685:MET:HB2	2.13	0.48
1:B:770:ARG:NH1	1:B:770:ARG:HG3	2.28	0.48
1:B:817:VAL:O	1:B:822:ASN:HB2	2.13	0.48
1:F:501:ARG:HD2	1:F:507:GLY:O	2.12	0.48
1:G:578:VAL:HG22	1:G:596:THR:HG22	1.95	0.48
1:J:545:ASN:ND2	1:J:575:HIS:NE2	2.61	0.48
1:H:403:LYS:HE3	1:H:495:GLU:OE2	2.14	0.48
1:H:439:GLU:HA	1:H:442:ARG:HB2	1.94	0.48
1:E:508:VAL:O	1:E:511:ILE:HG12	2.14	0.48
1:E:659:MET:HG2	1:E:668:VAL:HG23	1.95	0.48
1:C:304:TRP:HZ3	1:C:579:VAL:HG21	1.77	0.48
1:C:379:ASN:ND2	1:C:550:ASP:HB3	2.28	0.48
1:G:769:HIS:HB2	1:G:840:LEU:HG	1.94	0.48
1:H:851:LEU:CD2	1:H:857:ARG:CB	2.89	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:765:LEU:HD21	1:A:813:VAL:HG23	1.96	0.48
1:I:542:LYS:HD3	1:I:686:ALA:O	2.13	0.48
1:B:417:GLN:HG2	1:B:479:TRP:HZ3	1.78	0.48
1:D:400:PHE:O	1:D:404:VAL:HG13	2.13	0.48
1:C:786:ILE:HD11	1:C:881:LYS:CB	2.43	0.48
1:J:567:ALA:O	1:J:571:GLN:HB2	2.12	0.48
1:B:330:SER:C	1:B:332:PRO:HD2	2.33	0.48
1:E:455:MET:CE	1:E:475:ILE:HA	2.43	0.48
1:D:865:TRP:CE3	1:D:884:LEU:HD12	2.49	0.48
1:I:545:ASN:HA	1:I:548:LEU:HD12	1.95	0.48
1:H:616:ASN:O	1:H:620:GLN:HG2	2.14	0.48
1:A:337:GLU:O	1:A:340:VAL:HG22	2.13	0.48
1:B:332:PRO:HG2	1:B:333:TRP:CE3	2.49	0.48
1:C:336:ARG:O	1:C:340:VAL:HG12	2.13	0.48
1:G:630:VAL:HG12	1:G:631:ILE:HG23	1.96	0.48
1:I:370:GLY:HA2	1:I:639:PRO:CG	2.40	0.48
1:B:385:ARG:HD2	1:B:653:GLU:OE1	2.14	0.48
1:E:513:LEU:HD22	1:E:728:PRO:CB	2.44	0.48
1:E:812:ASP:OD2	1:G:879:LYS:HE3	2.14	0.48
1:D:635:ASP:OD1	1:D:640:ARG:HG3	2.13	0.48
1:I:332:PRO:HD2	1:I:333:TRP:CE3	2.49	0.48
1:H:623:ARG:HD2	1:H:682:LEU:HD13	1.96	0.48
1:A:879:LYS:HE2	1:F:812:ASP:OD1	2.13	0.48
1:B:489:ALA:HB1	1:B:566:ALA:HA	1.94	0.48
1:E:423:ALA:O	1:E:427:VAL:HG22	2.14	0.48
1:E:738:ARG:HH12	1:E:794:THR:C	2.16	0.48
1:D:772:ASP:OD2	1:D:850:SER:O	2.32	0.48
1:C:521:LYS:O	1:C:524:SER:OG	2.30	0.48
1:G:552:GLU:HA	1:G:570:MET:HE1	1.95	0.48
1:G:664:ASP:OD1	1:G:664:ASP:N	2.47	0.48
1:I:434:GLN:O	1:I:438:GLU:HG3	2.14	0.48
1:H:305:GLN:O	1:H:595:ILE:HA	2.14	0.48
1:H:312:THR:HG21	1:H:592:MET:HG2	1.96	0.48
1:H:601:ARG:HD3	1:H:608:THR:HG23	1.95	0.48
1:B:786:ILE:HD11	1:B:881:LYS:CB	2.44	0.48
1:D:521:LYS:HD2	1:D:704:TRP:CZ2	2.49	0.48
1:D:785:PRO:HB2	1:D:788:TRP:CG	2.49	0.48
1:D:811:LEU:O	1:D:811:LEU:HD23	2.13	0.48
1:C:312:THR:HG21	1:C:592:MET:HG2	1.95	0.48
1:F:333:TRP:CH2	1:F:851:LEU:HD22	2.48	0.48
1:G:643:ARG:HG2	1:G:643:ARG:NH2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:332:PRO:HG3	1:I:860:TRP:HB2	1.95	0.48
1:H:558:MET:SD	1:H:562:HIS:ND1	2.87	0.48
1:A:292:THR:HB	1:A:311:ARG:H	1.79	0.47
1:B:401:ILE:O	1:B:404:VAL:HG22	2.13	0.47
1:G:429:ASP:OD2	1:G:431:ALA:N	2.45	0.47
1:G:677:ARG:O	1:G:679:LEU:HD12	2.14	0.47
1:I:395:CYS:HB3	1:I:399:GLU:OE1	2.14	0.47
1:B:641:LEU:O	1:B:645:GLU:HG3	2.14	0.47
1:E:577:LYS:NZ	1:E:598:ARG:O	2.47	0.47
1:E:738:ARG:NH1	1:E:794:THR:O	2.47	0.47
1:D:816:ARG:HA	1:D:820:LEU:HB2	1.96	0.47
1:F:377:ALA:HB2	1:F:641:LEU:HD11	1.97	0.47
1:F:723:ARG:NH1	1:F:829:GLU:HG3	2.29	0.47
1:G:304:TRP:CE2	1:G:597:ARG:HD2	2.49	0.47
1:G:609:TYR:CE1	1:G:798:ILE:HG21	2.49	0.47
1:A:588:GLY:HA2	1:E:628:GLU:OE1	2.15	0.47
1:C:493:LEU:HD21	1:C:554:LEU:HD11	1.97	0.47
1:C:632:GLU:HG3	1:C:640:ARG:HH12	1.79	0.47
1:F:643:ARG:HG3	1:F:643:ARG:HH11	1.79	0.47
1:G:405:LYS:HE3	1:G:405:LYS:CA	2.39	0.47
1:A:275:GLU:OE2	1:A:275:GLU:N	2.47	0.47
1:D:586:ARG:HG2	1:D:586:ARG:HH11	1.79	0.47
1:D:771:ARG:HA	1:D:839:TYR:HE1	1.79	0.47
1:C:513:LEU:HD11	1:C:712:HIS:CE1	2.49	0.47
1:F:337:GLU:HA	1:F:340:VAL:HG22	1.95	0.47
1:G:286:ARG:O	1:G:286:ARG:HG2	2.14	0.47
1:I:625:MET:HE2	1:I:647:TRP:CE3	2.50	0.47
1:I:732:GLN:HE22	1:I:772:ASP:HB2	1.79	0.47
1:E:331:TRP:N	1:E:332:PRO:HD2	2.29	0.47
1:D:317:SER:H	1:D:347:THR:HG23	1.78	0.47
1:D:439:GLU:O	1:D:439:GLU:HG3	2.13	0.47
1:D:723:ARG:HB3	1:D:825:MET:HE3	1.97	0.47
1:C:542:LYS:O	1:C:687:LYS:NZ	2.47	0.47
1:J:513:LEU:CD2	1:J:728:PRO:HB3	2.44	0.47
1:I:373:VAL:HG11	1:I:641:LEU:HD11	1.95	0.47
1:I:640:ARG:O	1:I:643:ARG:HB2	2.13	0.47
1:H:765:LEU:HD23	1:H:765:LEU:O	2.15	0.47
1:A:620:GLN:O	1:A:624:MET:HG3	2.15	0.47
1:D:274:LYS:HB3	1:D:274:LYS:NZ	2.29	0.47
1:D:434:GLN:O	1:D:438:GLU:HG3	2.15	0.47
1:J:342:MET:HG3	1:J:737:GLY:HA3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:640:ARG:O	1:J:643:ARG:HG3	2.15	0.47
1:H:486:GLU:OE2	1:H:574:TYR:OH	2.23	0.47
1:D:624:MET:O	1:D:628:GLU:HG3	2.15	0.47
1:D:761:GLN:CD	1:D:810:MET:HE3	2.35	0.47
1:C:501:ARG:HG3	1:C:501:ARG:NH2	2.29	0.47
1:F:332:PRO:HD2	1:F:333:TRP:HE3	1.80	0.47
1:F:723:ARG:HB3	1:F:825:MET:HE1	1.95	0.47
1:G:659:MET:HE3	1:G:668:VAL:HG13	1.95	0.47
1:I:854:ARG:NH2	1:I:854:ARG:HB3	2.30	0.47
1:H:743:PRO:HG2	1:H:747:TRP:CE2	2.50	0.47
1:D:282:ILE:CD1	1:D:447:ARG:HH21	2.28	0.47
1:D:336:ARG:O	1:D:340:VAL:HG22	2.15	0.47
1:C:333:TRP:HD1	1:C:339:VAL:HG11	1.80	0.47
1:F:378:VAL:O	1:F:382:ILE:HG12	2.15	0.47
1:H:385:ARG:NH2	1:H:503:SER:O	2.47	0.47
1:A:309:SER:HA	1:A:592:MET:O	2.15	0.47
1:B:374:ILE:O	1:B:378:VAL:HG23	2.14	0.47
1:E:551:GLU:O	1:E:554:LEU:HB2	2.14	0.47
1:D:808:GLU:OE1	1:D:816:ARG:NH2	2.41	0.47
1:C:370:GLY:O	1:C:374:ILE:HG13	2.15	0.47
1:C:555:LEU:HA	1:C:558:MET:HE2	1.97	0.47
1:A:574:TYR:O	1:A:577:LYS:NZ	2.44	0.47
1:G:330:SER:O	1:G:333:TRP:HE3	1.98	0.47
1:J:659:MET:HG2	1:J:668:VAL:HB	1.97	0.47
1:J:770:ARG:HD2	1:J:770:ARG:HA	1.74	0.47
1:I:336:ARG:HB2	1:I:339:VAL:HB	1.96	0.47
1:E:558:MET:SD	1:E:562:HIS:CE1	3.08	0.46
1:D:558:MET:O	1:D:563:LYS:HE3	2.15	0.46
1:C:378:VAL:O	1:C:382:ILE:HG12	2.15	0.46
1:J:309:SER:HB3	1:J:591:VAL:HG13	1.97	0.46
1:I:440:ARG:HD3	1:I:485:LEU:CD2	2.45	0.46
1:I:513:LEU:HD11	1:I:712:HIS:CE1	2.50	0.46
1:H:601:ARG:CD	1:H:608:THR:HG23	2.44	0.46
1:A:609:TYR:CZ	1:A:798:ILE:HD11	2.50	0.46
1:A:641:LEU:O	1:A:645:GLU:HG3	2.15	0.46
1:B:583:ARG:NH1	1:B:593:ASP:OD1	2.48	0.46
1:B:772:ASP:OD2	1:B:851:LEU:HD23	2.15	0.46
1:F:439:GLU:HA	1:F:442:ARG:HB2	1.98	0.46
1:F:809:ASP:HB3	1:F:812:ASP:HB2	1.96	0.46
1:I:729:CYS:SG	1:I:730:ARG:N	2.88	0.46
1:A:558:MET:HB3	1:A:562:HIS:CD2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:767:TYR:HA	1:C:769:HIS:CE1	2.51	0.46
1:G:379:ASN:ND2	1:G:550:ASP:HB3	2.30	0.46
1:G:443:HIS:CD2	1:G:568:THR:HG21	2.50	0.46
1:G:630:VAL:HG21	1:G:647:TRP:CD1	2.51	0.46
1:G:773:LEU:HD23	1:G:773:LEU:HA	1.72	0.46
1:J:613:THR:O	1:J:617:ILE:HG13	2.16	0.46
1:H:309:SER:HB3	1:H:591:VAL:CG2	2.46	0.46
1:C:381:TRP:CG	1:C:648:LEU:HD22	2.51	0.46
1:G:384:GLU:O	1:G:388:ARG:HG3	2.14	0.46
1:I:320:SER:OG	1:I:343:ALA:HB1	2.15	0.46
1:I:480:LEU:HD23	1:I:480:LEU:HA	1.76	0.46
1:H:273:VAL:O	1:H:274:LYS:HG3	2.15	0.46
1:E:435:LEU:HD23	1:E:435:LEU:HA	1.79	0.46
1:F:295:MET:HE3	1:F:295:MET:HB3	1.86	0.46
1:I:282:ILE:HG23	1:I:448:CYS:O	2.15	0.46
1:I:478:MET:HB2	1:I:483:ARG:HD2	1.97	0.46
1:H:630:VAL:HG21	1:H:647:TRP:CD1	2.51	0.46
1:B:455:MET:HB3	1:B:581:VAL:HG23	1.98	0.46
1:G:376:ARG:HH11	1:G:553:GLN:CD	2.19	0.46
1:G:453:TYR:HB2	1:G:579:VAL:HG12	1.98	0.46
1:I:630:VAL:O	1:I:643:ARG:HD3	2.16	0.46
1:H:640:ARG:HB2	1:H:643:ARG:HD3	1.96	0.46
1:A:523:LEU:HD23	1:A:523:LEU:HA	1.58	0.46
1:B:339:VAL:HG12	1:B:733:ASP:O	2.15	0.46
1:F:624:MET:HE1	1:F:655:ARG:HB3	1.96	0.46
1:F:740:ARG:HG2	1:F:740:ARG:O	2.16	0.46
1:H:627:GLY:O	1:H:674:ARG:HD2	2.16	0.46
1:B:820:LEU:HD21	1:B:830:LYS:HE3	1.97	0.46
1:E:281:ARG:O	1:E:285:LEU:HB2	2.16	0.46
1:E:397:ARG:O	1:E:401:ILE:HG12	2.15	0.46
1:E:787:ASP:OD2	1:E:787:ASP:N	2.45	0.46
1:J:631:ILE:HG22	1:J:681:PHE:HE2	1.81	0.46
1:J:640:ARG:HB2	1:J:643:ARG:HG3	1.98	0.46
1:A:300:PRO:HD2	1:A:301:TYR:CE2	2.51	0.46
1:A:807:THR:HG22	1:A:807:THR:O	2.16	0.46
1:A:879:LYS:HE2	1:F:812:ASP:CG	2.36	0.46
1:C:621:LEU:HA	1:C:624:MET:HE2	1.98	0.46
1:C:865:TRP:HZ2	1:C:882:ASP:CG	2.19	0.46
1:F:376:ARG:O	1:F:376:ARG:HG3	2.16	0.46
1:F:620:GLN:O	1:F:624:MET:HG3	2.16	0.46
1:H:872:ARG:HG2	1:H:880:PHE:CD1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:511:ILE:HD13	1:A:519:TYR:CZ	2.51	0.45
1:A:601:ARG:HH11	1:A:601:ARG:HG3	1.80	0.45
1:A:606:VAL:HG12	1:A:607:VAL:HG13	1.98	0.45
1:A:854:ARG:NH1	1:A:856:GLU:OE1	2.48	0.45
1:E:497:HIS:HB3	1:E:500:SER:HB2	1.97	0.45
1:D:386:LEU:HD13	1:D:498:TRP:CE3	2.51	0.45
1:C:274:LYS:HZ1	1:C:598:ARG:H	1.63	0.45
1:C:275:GLU:HG2	1:C:305:GLN:HE21	1.80	0.45
1:F:304:TRP:CE2	1:F:597:ARG:HD2	2.51	0.45
1:J:516:LEU:HD23	1:J:516:LEU:HA	1.75	0.45
1:J:885:SER:O	1:J:887:MET:HE2	2.16	0.45
1:I:331:TRP:CZ2	1:I:860:TRP:HA	2.51	0.45
1:I:786:ILE:CD1	1:I:881:LYS:HD2	2.46	0.45
1:H:279:GLN:HG3	1:H:572:LYS:HE3	1.98	0.45
1:H:486:GLU:OE2	1:H:606:VAL:N	2.48	0.45
1:H:635:ASP:HB3	1:H:639:PRO:HA	1.98	0.45
1:H:654:GLU:OE2	1:H:658:ARG:NH1	2.49	0.45
1:D:501:ARG:HD2	1:D:507:GLY:O	2.17	0.45
1:C:400:PHE:CE1	1:C:484:PHE:HA	2.50	0.45
1:C:814:TRP:CZ2	1:C:837:VAL:HG13	2.51	0.45
1:G:501:ARG:NH2	1:G:660:LEU:HD23	2.31	0.45
1:G:567:ALA:O	1:G:571:GLN:HG2	2.16	0.45
1:G:643:ARG:HG2	1:G:643:ARG:HH21	1.80	0.45
1:J:442:ARG:HE	1:J:442:ARG:HB2	1.55	0.45
1:J:450:HIS:O	1:J:452:VAL:HG23	2.16	0.45
1:I:655:ARG:NH1	1:I:671:VAL:HG21	2.31	0.45
1:B:402:ALA:O	1:B:405:LYS:HG2	2.16	0.45
1:F:735:LEU:HD23	1:F:735:LEU:HA	1.71	0.45
1:J:588:GLY:HA2	1:I:628:GLU:OE1	2.15	0.45
1:H:628:GLU:CD	1:H:655:ARG:NH1	2.69	0.45
1:A:332:PRO:HD2	1:A:333:TRP:CE3	2.52	0.45
1:A:518:TRP:CE2	1:A:726:ILE:HD12	2.51	0.45
1:C:309:SER:HA	1:C:592:MET:O	2.17	0.45
1:C:810:MET:HA	1:C:813:VAL:HG12	1.97	0.45
1:F:765:LEU:HA	1:F:765:LEU:HD23	1.55	0.45
1:G:304:TRP:CE3	1:G:595:ILE:HG13	2.51	0.45
1:B:274:LYS:NZ	1:B:274:LYS:HB3	2.31	0.45
1:B:705:GLU:HG2	1:B:714:PHE:O	2.17	0.45
1:C:310:TYR:OH	1:C:580:LYS:HE3	2.17	0.45
1:G:301:TYR:OH	1:G:593:ASP:OD2	2.34	0.45
1:G:798:ILE:HG12	1:G:798:ILE:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:872:ARG:HD3	1:G:880:PHE:CD2	2.52	0.45
1:J:757:LYS:HG2	1:J:790:PRO:HG3	1.99	0.45
1:J:871:VAL:O	1:J:875:ILE:HG13	2.17	0.45
1:I:382:ILE:HG22	1:I:386:LEU:HD12	1.97	0.45
1:H:279:GLN:CG	1:H:572:LYS:HD3	2.45	0.45
1:A:689:ARG:NH1	1:A:698:SER:OG	2.47	0.45
1:A:811:LEU:HD23	1:A:811:LEU:HA	1.80	0.45
1:B:369:PRO:O	1:B:373:VAL:HG23	2.16	0.45
1:E:660:LEU:HB2	1:E:667:VAL:HB	1.98	0.45
1:C:719:MET:HE3	1:C:838:PRO:HD3	1.99	0.45
1:F:366:GLU:HB3	1:F:367:PRO:HD2	1.99	0.45
1:F:521:LYS:O	1:F:524:SER:OG	2.31	0.45
1:G:501:ARG:NH2	1:G:506:SER:HA	2.32	0.45
1:G:806:THR:OG1	1:G:807:THR:N	2.49	0.45
1:A:367:PRO:HB2	1:A:371:THR:HG21	1.99	0.45
1:B:492:PHE:O	1:B:496:ASP:HB2	2.16	0.45
1:B:741:VAL:O	1:B:741:VAL:HG13	2.17	0.45
1:C:574:TYR:O	1:C:577:LYS:NZ	2.45	0.45
1:F:428:GLU:O	1:F:430:PRO:HD3	2.16	0.45
1:F:749:VAL:HA	1:F:752:THR:HG22	1.99	0.45
1:F:808:GLU:OE1	1:F:816:ARG:NH2	2.49	0.45
1:J:356:PHE:HA	1:J:360:VAL:HG22	1.98	0.45
1:H:422:SER:OG	1:H:423:ALA:N	2.50	0.45
1:H:811:LEU:HD23	1:H:811:LEU:O	2.17	0.45
1:A:317:SER:HA	1:E:528:GLY:O	2.17	0.45
1:A:541:THR:HA	1:A:600:GLN:HG2	1.99	0.45
1:E:304:TRP:CE3	1:E:597:ARG:HB2	2.52	0.45
1:D:810:MET:HA	1:D:813:VAL:HG12	1.98	0.45
1:F:394:MET:HE2	1:F:394:MET:HB2	1.80	0.45
1:F:786:ILE:O	1:F:807:THR:HG21	2.17	0.45
1:I:299:HIS:CD2	1:I:306:TYR:CD2	3.04	0.45
1:E:397:ARG:HD3	1:E:433:TRP:CZ3	2.52	0.45
1:D:552:GLU:O	1:D:555:LEU:HG	2.17	0.45
1:F:551:GLU:OE2	1:F:601:ARG:NH1	2.40	0.45
1:G:555:LEU:HD23	1:G:558:MET:HE2	1.97	0.45
1:G:625:MET:HE3	1:G:631:ILE:HD13	1.99	0.45
1:I:637:HIS:O	1:I:639:PRO:HD3	2.17	0.45
1:H:435:LEU:HD23	1:H:435:LEU:HA	1.84	0.45
1:H:601:ARG:NH1	1:H:601:ARG:HG3	2.31	0.45
1:H:786:ILE:HD11	1:H:881:LYS:CB	2.47	0.45
1:C:274:LYS:HE2	1:C:274:LYS:HB3	1.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:299:HIS:HD2	1:J:306:TYR:HD2	1.63	0.45
1:J:305:GLN:O	1:J:595:ILE:HA	2.17	0.45
1:J:393:ARG:O	1:J:562:HIS:NE2	2.49	0.45
1:I:452:VAL:HG13	1:I:578:VAL:O	2.17	0.45
1:H:379:ASN:HD22	1:H:550:ASP:CB	2.18	0.45
1:A:630:VAL:HG21	1:A:647:TRP:CD1	2.52	0.44
1:F:723:ARG:CD	1:F:825:MET:HE1	2.39	0.44
1:G:437:ASP:O	1:G:441:GLU:HG2	2.17	0.44
1:G:854:ARG:HH21	1:G:854:ARG:HG3	1.82	0.44
1:J:274:LYS:HE2	1:J:274:LYS:HB3	1.80	0.44
1:A:885:SER:C	1:A:887:MET:H	2.20	0.44
1:C:770:ARG:NH1	1:C:770:ARG:HG3	2.31	0.44
1:F:628:GLU:CD	1:F:655:ARG:NH1	2.70	0.44
1:G:516:LEU:HD23	1:G:516:LEU:HA	1.73	0.44
1:G:628:GLU:CD	1:G:655:ARG:NH1	2.71	0.44
1:I:543:VAL:HG11	1:I:601:ARG:HB2	1.99	0.44
1:I:565:LEU:HD23	1:I:565:LEU:HA	1.70	0.44
1:I:747:TRP:HE3	1:I:751:GLU:CB	2.21	0.44
1:I:761:GLN:NE2	1:I:804:TRP:O	2.50	0.44
1:H:872:ARG:HG2	1:H:880:PHE:CE1	2.53	0.44
1:A:558:MET:O	1:A:563:LYS:HD2	2.17	0.44
1:E:872:ARG:HG2	1:E:880:PHE:CE1	2.52	0.44
1:C:320:SER:O	1:C:321:LEU:HD13	2.18	0.44
1:G:332:PRO:HG2	1:G:333:TRP:CZ3	2.52	0.44
1:G:670:PRO:HB3	1:G:675:PHE:CD1	2.52	0.44
1:J:282:ILE:HG23	1:J:448:CYS:O	2.17	0.44
1:H:664:ASP:OD1	1:H:664:ASP:N	2.50	0.44
1:H:810:MET:HE1	1:H:813:VAL:HG11	1.99	0.44
1:H:854:ARG:HD2	1:H:854:ARG:HA	1.67	0.44
1:B:851:LEU:HG	1:B:857:ARG:CB	2.47	0.44
1:E:485:LEU:HD23	1:E:485:LEU:HA	1.78	0.44
1:E:748:SER:OG	1:E:751:GLU:HG3	2.18	0.44
1:C:274:LYS:HD2	1:C:545:ASN:OD1	2.18	0.44
1:C:539:TRP:NE1	1:C:612:ASN:OD1	2.50	0.44
1:F:717:LEU:HD23	1:F:838:PRO:CG	2.45	0.44
1:F:761:GLN:NE2	1:F:804:TRP:O	2.51	0.44
1:G:669:ARG:HD2	1:G:669:ARG:HA	1.73	0.44
1:A:443:HIS:ND1	1:A:485:LEU:HD13	2.33	0.44
1:A:601:ARG:HG3	1:A:601:ARG:NH1	2.31	0.44
1:A:647:TRP:CZ2	1:A:655:ARG:HG3	2.53	0.44
1:E:443:HIS:CD2	1:E:568:THR:HG21	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:583:ARG:HH21	1:E:593:ASP:CG	2.19	0.44
1:C:305:GLN:O	1:C:595:ILE:HA	2.17	0.44
1:G:769:HIS:CD2	1:G:769:HIS:H	2.35	0.44
1:J:490:LEU:HD11	1:J:570:MET:HG2	2.00	0.44
1:J:597:ARG:HG3	1:J:598:ARG:N	2.32	0.44
1:I:333:TRP:HA	1:I:336:ARG:HG2	1.99	0.44
1:A:343:ALA:HA	1:A:345:THR:HG23	1.99	0.44
1:B:286:ARG:H	1:B:286:ARG:HD3	1.83	0.44
1:E:479:TRP:CD1	1:E:482:SER:HB2	2.53	0.44
1:D:850:SER:CB	1:D:852:VAL:HG13	2.48	0.44
1:F:300:PRO:HD2	1:F:301:TYR:CE1	2.53	0.44
1:F:626:GLU:OE1	1:F:680:TYR:O	2.36	0.44
1:F:811:LEU:HD23	1:F:811:LEU:HA	1.68	0.44
1:J:631:ILE:HG21	1:J:631:ILE:HD13	1.62	0.44
1:A:501:ARG:NH2	1:A:506:SER:HA	2.33	0.44
1:A:609:TYR:CE2	1:A:798:ILE:HD11	2.52	0.44
1:D:778:LEU:HD23	1:D:778:LEU:HA	1.69	0.44
1:C:277:ASP:OD1	1:C:277:ASP:N	2.50	0.44
1:F:659:MET:HA	1:F:667:VAL:O	2.18	0.44
1:G:551:GLU:OE2	1:G:615:THR:OG1	2.30	0.44
1:G:562:HIS:C	1:G:562:HIS:CD2	2.91	0.44
1:J:735:LEU:HD23	1:J:735:LEU:HA	1.76	0.44
1:H:583:ARG:NH2	1:H:593:ASP:CG	2.71	0.44
1:H:727:VAL:HB	1:H:769:HIS:CD2	2.53	0.44
1:H:863:ASN:N	1:H:863:ASN:OD1	2.50	0.44
1:B:286:ARG:O	1:B:286:ARG:CG	2.65	0.44
1:B:396:SER:OG	1:B:399:GLU:HB2	2.18	0.44
1:F:321:LEU:HD13	1:F:321:LEU:HA	1.79	0.44
1:G:286:ARG:O	1:G:286:ARG:CG	2.65	0.44
1:G:368:GLN:O	1:G:371:THR:HB	2.18	0.44
1:G:599:ASP:O	1:G:600:GLN:HB2	2.18	0.44
1:J:317:SER:HA	1:I:528:GLY:O	2.17	0.44
1:J:719:MET:CE	1:J:838:PRO:HD3	2.48	0.44
1:E:448:CYS:SG	1:E:451:CYS:HB2	2.58	0.44
1:D:806:THR:OG1	1:D:808:GLU:N	2.48	0.44
1:F:333:TRP:CD1	1:F:339:VAL:HG21	2.53	0.44
1:F:768:PHE:O	1:F:774:ARG:NH1	2.48	0.44
1:I:628:GLU:OE1	1:I:655:ARG:NH1	2.32	0.44
1:I:787:ASP:OD1	1:I:787:ASP:N	2.51	0.44
1:H:514:ASN:OD1	1:H:766:SER:OG	2.29	0.44
1:A:601:ARG:CD	1:A:608:THR:HG23	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:865:TRP:CD1	1:A:869:GLU:HG3	2.51	0.43
1:B:283:SER:C	1:B:285:LEU:H	2.21	0.43
1:D:379:ASN:ND2	1:D:550:ASP:O	2.51	0.43
1:D:771:ARG:HA	1:D:839:TYR:CE1	2.53	0.43
1:C:424:LYS:O	1:C:427:VAL:HG22	2.18	0.43
1:C:568:THR:O	1:C:572:LYS:HB2	2.17	0.43
1:J:304:TRP:CZ2	1:J:597:ARG:HD3	2.53	0.43
1:J:370:GLY:O	1:J:374:ILE:HG13	2.18	0.43
1:I:755:LEU:HD12	1:I:792:GLY:HA3	1.99	0.43
1:H:274:LYS:NZ	1:H:599:ASP:H	2.16	0.43
1:A:380:ASP:OD1	1:A:556:ARG:NH2	2.51	0.43
1:A:547:ASP:O	1:A:551:GLU:HG3	2.19	0.43
1:A:771:ARG:HA	1:A:839:TYR:HE1	1.83	0.43
1:E:680:TYR:HD1	1:E:681:PHE:CD2	2.35	0.43
1:D:274:LYS:C	1:D:275:GLU:HG3	2.38	0.43
1:D:317:SER:HA	1:C:528:GLY:O	2.18	0.43
1:D:808:GLU:CD	1:D:816:ARG:HH22	2.21	0.43
1:C:554:LEU:O	1:C:558:MET:HE2	2.18	0.43
1:C:757:LYS:O	1:C:761:GLN:HG3	2.18	0.43
1:F:523:LEU:O	1:F:526:LEU:HB2	2.18	0.43
1:F:798:ILE:HG22	1:F:798:ILE:O	2.18	0.43
1:G:281:ARG:O	1:G:285:LEU:HG	2.18	0.43
1:J:336:ARG:C	1:J:338:ASP:H	2.22	0.43
1:I:440:ARG:CZ	1:I:488:GLU:OE1	2.66	0.43
1:I:625:MET:CE	1:I:647:TRP:CE3	3.01	0.43
1:H:303:THR:HG22	1:H:597:ARG:NH1	2.33	0.43
1:A:664:ASP:OD1	1:A:664:ASP:N	2.44	0.43
1:A:865:TRP:HH2	1:A:882:ASP:CG	2.22	0.43
1:B:542:LYS:O	1:B:687:LYS:HE3	2.18	0.43
1:D:757:LYS:O	1:D:761:GLN:HG3	2.18	0.43
1:F:788:TRP:CH2	1:F:875:ILE:HG23	2.53	0.43
1:G:484:PHE:CD2	1:G:485:LEU:HD23	2.54	0.43
1:G:492:PHE:HZ	1:G:554:LEU:HD22	1.82	0.43
1:H:331:TRP:CZ2	1:H:860:TRP:HA	2.54	0.43
1:H:373:VAL:HG11	1:H:639:PRO:HG3	2.00	0.43
1:H:440:ARG:NH2	1:H:488:GLU:OE1	2.51	0.43
1:A:506:SER:CB	1:A:659:MET:HG3	2.48	0.43
1:A:513:LEU:HD23	1:A:513:LEU:HA	1.78	0.43
1:B:405:LYS:HA	1:B:405:LYS:CE	2.49	0.43
1:D:331:TRP:CZ2	1:D:860:TRP:HA	2.54	0.43
1:F:865:TRP:HZ2	1:F:882:ASP:OD1	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:621:LEU:HD12	1:G:624:MET:CE	2.49	0.43
1:J:305:GLN:HB3	1:J:307:TRP:HE1	1.83	0.43
1:H:330:SER:C	1:H:332:PRO:HD2	2.38	0.43
1:E:764:LEU:HD23	1:E:764:LEU:HA	1.65	0.43
1:C:551:GLU:OE1	1:C:611:LEU:HD13	2.18	0.43
1:I:870:LYS:NZ	1:H:718:VAL:O	2.50	0.43
1:H:456:MET:N	1:H:475:ILE:O	2.29	0.43
1:E:660:LEU:O	1:E:666:CYS:HA	2.18	0.43
1:F:771:ARG:HG3	1:F:771:ARG:HH21	1.83	0.43
1:J:404:VAL:HG11	1:J:427:VAL:HG11	2.01	0.43
1:J:585:SER:OG	1:J:587:ASP:OD1	2.30	0.43
1:I:374:ILE:HD13	1:I:631:ILE:HD12	2.00	0.43
1:E:423:ALA:HB1	1:E:480:LEU:HD11	2.00	0.43
1:E:508:VAL:HG23	1:E:662:SER:HB2	2.01	0.43
1:E:884:LEU:HD23	1:E:884:LEU:HA	1.81	0.43
1:D:321:LEU:HD12	1:D:321:LEU:HA	1.69	0.43
1:D:585:SER:OG	1:D:587:ASP:OD1	2.31	0.43
1:D:613:THR:O	1:D:617:ILE:HG13	2.19	0.43
1:D:761:GLN:CD	1:D:810:MET:CE	2.87	0.43
1:C:558:MET:SD	1:C:562:HIS:CE1	3.12	0.43
1:C:822:ASN:HB3	1:C:825:MET:HB3	2.01	0.43
1:F:769:HIS:CD2	1:F:769:HIS:H	2.37	0.43
1:G:810:MET:HA	1:G:813:VAL:HG12	2.00	0.43
1:J:840:LEU:HD12	1:J:840:LEU:HA	1.77	0.43
1:H:551:GLU:HG2	1:H:611:LEU:HD22	2.01	0.43
1:B:380:ASP:CG	1:B:556:ARG:HH22	2.22	0.43
1:B:526:LEU:O	1:B:669:ARG:NH2	2.49	0.43
1:E:374:ILE:O	1:E:378:VAL:HG23	2.18	0.43
1:E:624:MET:HE1	1:E:655:ARG:HB3	2.01	0.43
1:D:552:GLU:OE2	1:D:575:HIS:ND1	2.51	0.43
1:D:783:ALA:HB1	1:D:871:VAL:HG13	2.00	0.43
1:C:743:PRO:HD2	1:C:747:TRP:CZ3	2.53	0.43
1:J:547:ASP:OD1	1:J:687:LYS:NZ	2.49	0.43
1:J:811:LEU:HD23	1:J:811:LEU:HA	1.68	0.43
1:H:565:LEU:HD23	1:H:565:LEU:HA	1.80	0.43
1:A:331:TRP:CZ2	1:A:860:TRP:HA	2.53	0.43
1:A:681:PHE:O	1:A:685:MET:HG3	2.19	0.43
1:B:520:LEU:HD23	1:B:520:LEU:HA	1.80	0.43
1:F:630:VAL:HG21	1:F:647:TRP:CD1	2.54	0.43
1:F:641:LEU:HA	1:F:641:LEU:HD12	1.69	0.43
1:F:671:VAL:O	1:F:672:ASP:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:435:LEU:HD13	1:G:435:LEU:HA	1.88	0.43
1:G:565:LEU:HD12	1:G:565:LEU:H	1.84	0.43
1:J:508:VAL:CG2	1:J:662:SER:HB2	2.49	0.43
1:J:620:GLN:O	1:J:624:MET:HG3	2.19	0.43
1:H:279:GLN:OE1	1:H:279:GLN:N	2.49	0.43
1:H:660:LEU:O	1:H:666:CYS:HA	2.18	0.43
1:A:320:SER:HB3	1:A:343:ALA:O	2.18	0.42
1:F:601:ARG:NH2	1:F:601:ARG:HG3	2.34	0.42
1:G:552:GLU:HG3	1:G:570:MET:HE2	2.00	0.42
1:G:723:ARG:HH12	1:G:819:ILE:HD13	1.84	0.42
1:H:446:GLY:O	1:H:572:LYS:HE2	2.19	0.42
1:A:480:LEU:HA	1:A:480:LEU:HD23	1.76	0.42
1:A:765:LEU:HD23	1:A:765:LEU:HA	1.62	0.42
1:A:770:ARG:CD	1:A:840:LEU:HD23	2.49	0.42
1:B:440:ARG:O	1:B:440:ARG:HG2	2.19	0.42
1:E:747:TRP:HB3	1:E:752:THR:HG22	2.01	0.42
1:E:789:VAL:HA	1:E:807:THR:CG2	2.48	0.42
1:D:303:THR:OG1	1:D:361:ASP:OD1	2.37	0.42
1:D:585:SER:OG	1:D:589:GLY:O	2.37	0.42
1:D:640:ARG:HH21	1:D:643:ARG:HE	1.66	0.42
1:D:854:ARG:HA	1:D:854:ARG:HD2	1.85	0.42
1:C:555:LEU:HA	1:C:558:MET:CE	2.48	0.42
1:F:542:LYS:HD2	1:F:686:ALA:O	2.19	0.42
1:F:574:TYR:O	1:F:577:LYS:NZ	2.52	0.42
1:G:659:MET:CE	1:G:668:VAL:HG13	2.49	0.42
1:J:305:GLN:HB3	1:J:307:TRP:NE1	2.33	0.42
1:J:723:ARG:HD2	1:J:825:MET:SD	2.59	0.42
1:H:583:ARG:NH2	1:H:593:ASP:OD1	2.49	0.42
1:B:592:MET:HE3	1:B:592:MET:HB3	1.57	0.42
1:C:298:GLU:HB2	1:C:586:ARG:NH2	2.33	0.42
1:F:620:GLN:HB3	1:F:659:MET:HE1	2.02	0.42
1:G:811:LEU:HG	1:G:834:TRP:CE2	2.55	0.42
1:J:548:LEU:O	1:J:551:GLU:HB2	2.19	0.42
1:B:659:MET:HE2	1:B:668:VAL:HG22	2.00	0.42
1:C:616:ASN:O	1:C:620:GLN:HG2	2.18	0.42
1:F:348:THR:HG23	1:F:351:GLY:N	2.33	0.42
1:F:800:ALA:HB1	1:F:804:TRP:HH2	1.84	0.42
1:G:537:ALA:HB2	1:G:690:LYS:CB	2.50	0.42
1:G:552:GLU:O	1:G:555:LEU:HG	2.19	0.42
1:I:442:ARG:HD2	1:I:449:ALA:HB2	2.00	0.42
1:H:304:TRP:CZ2	1:H:597:ARG:HD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:577:LYS:HE2	1:C:598:ARG:O	2.19	0.42
1:F:508:VAL:HG23	1:F:799:HIS:HE1	1.85	0.42
1:F:854:ARG:HE	1:F:855:LYS:H	1.67	0.42
1:I:774:ARG:NH2	1:I:834:TRP:O	2.53	0.42
1:H:514:ASN:HB3	1:H:818:TRP:CH2	2.55	0.42
1:A:455:MET:HA	1:A:476:TRP:HA	2.02	0.42
1:A:485:LEU:HD23	1:A:485:LEU:HA	1.80	0.42
1:A:771:ARG:HG3	1:A:771:ARG:HH21	1.84	0.42
1:E:367:PRO:O	1:E:372:LYS:HE2	2.20	0.42
1:C:501:ARG:NH2	1:C:506:SER:HA	2.34	0.42
1:G:776:LEU:HD12	1:G:776:LEU:HA	1.83	0.42
1:J:658:ARG:HD3	1:J:669:ARG:O	2.19	0.42
1:I:286:ARG:HD3	1:I:286:ARG:O	2.19	0.42
1:I:396:SER:HG	1:I:399:GLU:H	1.63	0.42
1:I:656:LEU:HD23	1:I:656:LEU:HA	1.89	0.42
1:H:679:LEU:HD11	1:H:695:TRP:HA	2.01	0.42
1:H:800:ALA:HB1	1:H:804:TRP:CH2	2.53	0.42
1:B:770:ARG:HG3	1:B:770:ARG:HH11	1.85	0.42
1:B:811:LEU:HD23	1:B:811:LEU:HA	1.79	0.42
1:J:583:ARG:CG	1:J:584:PRO:HD2	2.50	0.42
1:H:303:THR:CG2	1:H:597:ARG:HH12	2.33	0.42
1:A:542:LYS:O	1:A:687:LYS:NZ	2.53	0.42
1:B:808:GLU:OE1	1:B:816:ARG:NH2	2.50	0.42
1:E:432:PHE:O	1:E:435:LEU:HB2	2.20	0.42
1:D:492:PHE:HZ	1:D:554:LEU:HD23	1.84	0.42
1:D:586:ARG:HG2	1:D:586:ARG:NH1	2.32	0.42
1:F:299:HIS:CD2	1:F:306:TYR:CD2	3.07	0.42
1:G:669:ARG:HG3	1:G:669:ARG:NH1	2.33	0.42
1:J:677:ARG:O	1:J:679:LEU:HD12	2.20	0.42
1:I:558:MET:HG2	1:I:562:HIS:CD2	2.55	0.42
1:E:605:GLN:HB2	1:E:608:THR:OG1	2.20	0.42
1:C:455:MET:HE2	1:C:476:TRP:CE2	2.55	0.42
1:C:551:GLU:OE2	1:C:601:ARG:NH2	2.51	0.42
1:J:615:THR:O	1:J:618:LYS:HB3	2.20	0.42
1:I:274:LYS:CE	1:I:598:ARG:HB2	2.33	0.42
1:I:274:LYS:NZ	1:I:599:ASP:HB2	2.34	0.42
1:I:731:ASP:OD1	1:I:849:SER:OG	2.28	0.42
1:I:770:ARG:HD3	1:I:840:LEU:HD22	2.02	0.42
1:B:577:LYS:NZ	1:B:599:ASP:O	2.41	0.42
1:E:480:LEU:HD23	1:E:480:LEU:HA	1.87	0.42
1:D:480:LEU:HA	1:D:480:LEU:HD23	1.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:840:LEU:HD23	1:D:840:LEU:HA	1.86	0.42
1:C:770:ARG:HA	1:C:770:ARG:HD2	1.75	0.42
1:G:601:ARG:HG2	1:G:608:THR:HG23	2.02	0.42
1:J:719:MET:HB3	1:J:719:MET:HE2	1.88	0.42
1:I:376:ARG:O	1:I:376:ARG:HG3	2.19	0.42
1:A:729:CYS:SG	1:A:730:ARG:N	2.93	0.41
1:B:808:GLU:CD	1:B:816:ARG:HH22	2.23	0.41
1:C:392:PRO:HG2	1:C:557:TYR:O	2.20	0.41
1:F:545:ASN:ND2	1:F:575:HIS:NE2	2.68	0.41
1:G:558:MET:SD	1:G:562:HIS:CD2	3.13	0.41
1:G:570:MET:HE2	1:G:570:MET:HB3	1.62	0.41
1:I:599:ASP:OD1	1:I:600:GLN:N	2.48	0.41
1:A:299:HIS:CD2	1:A:306:TYR:CD2	3.08	0.41
1:A:628:GLU:CD	1:A:655:ARG:NH1	2.74	0.41
1:A:778:LEU:HD12	1:A:887:MET:CE	2.50	0.41
1:B:621:LEU:HD12	1:B:621:LEU:HA	1.73	0.41
1:B:854:ARG:HE	1:B:854:ARG:HB3	1.55	0.41
1:D:493:LEU:HD12	1:D:607:VAL:HG11	2.02	0.41
1:D:584:PRO:HA	1:D:590:CYS:CB	2.50	0.41
1:C:442:ARG:HG3	1:C:442:ARG:HH21	1.84	0.41
1:F:348:THR:O	1:F:352:GLN:HG2	2.20	0.41
1:I:624:MET:O	1:I:628:GLU:HG3	2.19	0.41
1:I:867:ALA:O	1:I:871:VAL:HG12	2.20	0.41
1:A:532:TYR:OH	1:A:673:ASP:HB3	2.19	0.41
1:B:304:TRP:HZ3	1:B:579:VAL:HG11	1.85	0.41
1:B:812:ASP:CG	1:J:879:LYS:HZ1	2.24	0.41
1:E:763:TRP:HZ3	1:E:776:LEU:HG	1.85	0.41
1:E:769:HIS:HB2	1:E:840:LEU:HD12	2.01	0.41
1:F:489:ALA:HB1	1:F:566:ALA:HA	2.03	0.41
1:I:577:LYS:O	1:I:596:THR:HA	2.20	0.41
1:H:597:ARG:HD2	1:H:597:ARG:HH11	1.71	0.41
1:A:632:GLU:HG2	1:A:640:ARG:HH22	1.85	0.41
1:B:401:ILE:HD11	1:B:433:TRP:CZ2	2.55	0.41
1:E:769:HIS:CB	1:E:840:LEU:CD1	2.91	0.41
1:E:811:LEU:HD23	1:E:811:LEU:HA	1.63	0.41
1:D:393:ARG:HG3	1:D:393:ARG:NH1	2.36	0.41
1:D:476:TRP:CB	1:D:604:GLY:H	2.32	0.41
1:D:814:TRP:CZ2	1:D:837:VAL:HG13	2.56	0.41
1:C:669:ARG:HG2	1:C:669:ARG:HH11	1.86	0.41
1:C:719:MET:HE3	1:C:719:MET:HB3	1.77	0.41
1:F:331:TRP:N	1:F:332:PRO:CD	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:286:ARG:C	1:G:288:GLN:H	2.23	0.41
1:J:293:TRP:HZ2	1:J:307:TRP:O	2.02	0.41
1:J:330:SER:C	1:J:332:PRO:HD2	2.41	0.41
1:H:331:TRP:N	1:H:332:PRO:HD2	2.35	0.41
1:H:537:ALA:O	1:H:542:LYS:HE2	2.20	0.41
1:H:608:THR:O	1:H:612:ASN:HB2	2.20	0.41
1:D:515:TYR:OH	1:D:817:VAL:O	2.25	0.41
1:D:640:ARG:HH21	1:D:643:ARG:NE	2.18	0.41
1:D:789:VAL:HA	1:D:807:THR:CG2	2.51	0.41
1:G:453:TYR:OH	1:G:605:GLN:NE2	2.46	0.41
1:G:816:ARG:HA	1:G:820:LEU:HB2	2.02	0.41
1:I:346:ASP:OD1	1:I:348:THR:OG1	2.36	0.41
1:H:516:LEU:HD23	1:H:516:LEU:HA	1.83	0.41
1:A:443:HIS:CD2	1:A:568:THR:HG21	2.55	0.41
1:A:851:LEU:HB3	1:A:857:ARG:CB	2.50	0.41
1:B:304:TRP:CE3	1:B:597:ARG:HB2	2.55	0.41
1:B:542:LYS:HD3	1:B:686:ALA:O	2.20	0.41
1:B:806:THR:HG21	1:B:813:VAL:HG11	2.02	0.41
1:E:368:GLN:HG3	1:E:684:ASP:OD2	2.20	0.41
1:D:492:PHE:O	1:D:496:ASP:HB2	2.19	0.41
1:D:577:LYS:O	1:D:596:THR:HA	2.20	0.41
1:G:659:MET:HE3	1:G:659:MET:HB3	1.92	0.41
1:J:386:LEU:HD13	1:J:498:TRP:CE3	2.56	0.41
1:I:369:PRO:O	1:I:373:VAL:HG23	2.21	0.41
1:H:877:GLN:C	1:H:878:GLU:HG2	2.41	0.41
1:A:367:PRO:HB2	1:A:371:THR:CG2	2.51	0.41
1:A:785:PRO:HD2	1:A:788:TRP:CE3	2.56	0.41
1:B:506:SER:CB	1:B:659:MET:HG3	2.51	0.41
1:B:640:ARG:NH2	1:B:643:ARG:NH1	2.62	0.41
1:D:286:ARG:O	1:D:286:ARG:HD2	2.20	0.41
1:D:617:ILE:O	1:D:621:LEU:HB2	2.20	0.41
1:D:813:VAL:O	1:D:817:VAL:HG13	2.21	0.41
1:C:659:MET:HE2	1:C:659:MET:HB2	1.88	0.41
1:F:798:ILE:HD12	1:F:798:ILE:N	2.36	0.41
1:G:274:LYS:HD2	1:G:545:ASN:ND2	2.35	0.41
1:J:394:MET:HE2	1:J:562:HIS:HB2	2.02	0.41
1:I:385:ARG:HH12	1:I:653:GLU:CD	2.24	0.41
1:I:476:TRP:O	1:I:604:GLY:HA3	2.20	0.41
1:H:401:ILE:O	1:H:404:VAL:HG22	2.20	0.41
1:H:440:ARG:HH21	1:H:440:ARG:HD2	1.71	0.41
1:H:884:LEU:HD23	1:H:884:LEU:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:304:TRP:CZ3	1:B:579:VAL:HG11	2.56	0.41
1:B:480:LEU:HD23	1:B:480:LEU:HA	1.80	0.41
1:B:537:ALA:HB2	1:B:690:LYS:CB	2.51	0.41
1:E:392:PRO:HG2	1:E:557:TYR:HB2	2.03	0.41
1:E:717:LEU:HD12	1:E:717:LEU:HA	1.93	0.41
1:F:305:GLN:HB3	1:F:307:TRP:HE1	1.85	0.41
1:F:771:ARG:HD2	1:F:852:VAL:HG21	2.03	0.41
1:G:417:GLN:HA	1:G:479:TRP:CE3	2.55	0.41
1:I:768:PHE:O	1:I:774:ARG:HD2	2.21	0.41
1:H:303:THR:HG22	1:H:597:ARG:HH12	1.86	0.41
1:A:537:ALA:HB3	1:A:542:LYS:NZ	2.35	0.41
1:B:658:ARG:HD3	1:B:669:ARG:O	2.20	0.41
1:E:523:LEU:HD23	1:E:523:LEU:HA	1.88	0.41
1:C:394:MET:CB	1:C:562:HIS:HD2	2.34	0.41
1:C:554:LEU:O	1:C:554:LEU:HD23	2.21	0.41
1:C:565:LEU:O	1:C:569:ILE:HG13	2.21	0.41
1:F:521:LYS:HD2	1:F:704:TRP:CE2	2.56	0.41
1:F:757:LYS:HE2	1:F:788:TRP:O	2.21	0.41
1:G:523:LEU:HD23	1:G:523:LEU:HA	1.76	0.41
1:G:743:PRO:HG2	1:G:747:TRP:CE2	2.56	0.41
1:G:820:LEU:O	1:G:828:LYS:HE3	2.21	0.41
1:J:577:LYS:HE2	1:J:599:ASP:O	2.20	0.41
1:I:300:PRO:HD2	1:I:301:TYR:CE2	2.56	0.41
1:I:301:TYR:CE2	1:I:593:ASP:OD2	2.74	0.41
1:I:523:LEU:HD23	1:I:523:LEU:HA	1.78	0.41
1:I:542:LYS:O	1:I:687:LYS:NZ	2.52	0.41
1:I:775:THR:HA	1:I:887:MET:HE2	2.01	0.41
1:H:401:ILE:HD12	1:H:401:ILE:H	1.86	0.41
1:H:585:SER:OG	1:H:589:GLY:O	2.30	0.41
1:A:846:MET:HA	1:A:850:SER:HB3	2.03	0.41
1:E:429:ASP:OD2	1:E:431:ALA:HB3	2.21	0.41
1:E:735:LEU:HD23	1:E:735:LEU:HA	1.88	0.41
1:F:370:GLY:O	1:F:374:ILE:HG13	2.19	0.41
1:G:562:HIS:HA	1:G:565:LEU:HD13	2.01	0.41
1:G:798:ILE:O	1:G:798:ILE:CG1	2.69	0.41
1:I:817:VAL:HG23	1:I:818:TRP:CD1	2.56	0.41
1:A:277:ASP:HB2	1:A:278:VAL:HG13	2.03	0.40
1:A:375:MET:HE3	1:A:375:MET:HB3	1.92	0.40
1:B:397:ARG:HG3	1:B:397:ARG:NH1	2.35	0.40
1:B:452:VAL:HG23	1:B:578:VAL:O	2.21	0.40
1:B:495:GLU:H	1:B:495:GLU:HG2	1.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:757:LYS:O	1:B:761:GLN:HG3	2.21	0.40
1:E:320:SER:HB2	1:E:343:ALA:HB1	2.02	0.40
1:E:497:HIS:O	1:E:500:SER:HB3	2.20	0.40
1:E:624:MET:HE3	1:E:655:ARG:HB3	2.03	0.40
1:E:789:VAL:HG23	1:E:807:THR:HG23	2.02	0.40
1:F:516:LEU:HD23	1:F:516:LEU:HA	1.81	0.40
1:I:816:ARG:HH11	1:I:816:ARG:HD3	1.75	0.40
1:H:514:ASN:HB3	1:H:818:TRP:CZ2	2.56	0.40
1:H:774:ARG:HD2	1:H:839:TYR:OH	2.21	0.40
1:A:761:GLN:NE2	1:A:804:TRP:O	2.53	0.40
1:B:719:MET:HE2	1:B:838:PRO:HD3	2.03	0.40
1:D:423:ALA:O	1:D:427:VAL:HG13	2.20	0.40
1:D:523:LEU:HD23	1:D:523:LEU:HA	1.68	0.40
1:G:642:LEU:HD13	1:G:642:LEU:HA	1.79	0.40
1:J:480:LEU:HA	1:J:480:LEU:HD22	1.88	0.40
1:I:304:TRP:HZ3	1:I:579:VAL:HG21	1.85	0.40
1:I:721:ASP:OD1	1:I:723:ARG:NE	2.38	0.40
1:H:394:MET:CE	1:H:565:LEU:HD12	2.52	0.40
1:A:776:LEU:O	1:A:780:ILE:HG13	2.22	0.40
1:B:283:SER:O	1:B:285:LEU:N	2.55	0.40
1:B:486:GLU:HG2	1:B:569:ILE:HD12	2.04	0.40
1:B:575:HIS:CD2	1:B:575:HIS:O	2.75	0.40
1:B:658:ARG:HD3	1:B:658:ARG:HH21	1.74	0.40
1:D:372:LYS:HE2	1:D:546:ALA:HB2	2.03	0.40
1:C:326:VAL:O	1:C:330:SER:OG	2.32	0.40
1:C:765:LEU:HD11	1:C:803:ALA:HB3	2.04	0.40
1:F:383:LEU:HD22	1:F:554:LEU:HD13	2.03	0.40
1:F:682:LEU:HD12	1:F:682:LEU:HA	1.93	0.40
1:F:712:HIS:CD2	1:F:728:PRO:HB2	2.56	0.40
1:G:774:ARG:NH2	1:G:834:TRP:O	2.54	0.40
1:I:732:GLN:HG3	1:I:770:ARG:NH2	2.36	0.40
1:H:568:THR:O	1:H:572:LYS:HB2	2.22	0.40
1:A:453:TYR:OH	1:A:605:GLN:NE2	2.50	0.40
1:A:778:LEU:HD23	1:A:778:LEU:HA	1.82	0.40
1:E:532:TYR:HB2	1:E:668:VAL:HG12	2.03	0.40
1:E:575:HIS:O	1:E:575:HIS:CD2	2.74	0.40
1:E:873:LYS:HD3	1:D:721:ASP:HA	2.03	0.40
1:D:403:LYS:HE2	1:D:403:LYS:HB2	1.93	0.40
1:D:621:LEU:HA	1:D:621:LEU:HD12	1.83	0.40
1:F:281:ARG:O	1:F:285:LEU:HB2	2.20	0.40
1:H:499:ALA:HB1	1:H:613:THR:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:520:LEU:HD23	1:H:520:LEU:HA	1.86	0.40
1:B:730:ARG:NE	1:B:734:GLU:OE1	2.45	0.40
1:D:309:SER:HA	1:D:592:MET:O	2.22	0.40
1:F:581:VAL:HG12	1:F:582:ALA:N	2.37	0.40
1:G:810:MET:HE1	1:G:813:VAL:HG11	2.03	0.40
1:J:293:TRP:CD1	1:J:294:HIS:N	2.90	0.40
1:I:711:SER:O	1:I:730:ARG:HG3	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	578/638 (91%)	535 (93%)	43 (7%)	0	100	100
1	B	574/638 (90%)	525 (92%)	48 (8%)	1 (0%)	47	78
1	C	576/638 (90%)	515 (89%)	59 (10%)	2 (0%)	41	73
1	D	584/638 (92%)	529 (91%)	55 (9%)	0	100	100
1	E	580/638 (91%)	524 (90%)	52 (9%)	4 (1%)	22	59
1	F	571/638 (90%)	518 (91%)	53 (9%)	0	100	100
1	G	576/638 (90%)	525 (91%)	49 (8%)	2 (0%)	41	73
1	H	580/638 (91%)	539 (93%)	41 (7%)	0	100	100
1	I	578/638 (91%)	516 (89%)	61 (11%)	1 (0%)	47	78
1	J	576/638 (90%)	528 (92%)	46 (8%)	2 (0%)	41	73
All	All	5773/6380 (90%)	5254 (91%)	507 (9%)	12 (0%)	47	78

All (12) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	852	VAL
1	E	854	ARG
1	J	851	LEU
1	B	278	VAL
1	G	849	SER
1	I	600	GLN
1	E	477	TYR
1	E	853	GLY
1	J	300	PRO
1	C	849	SER
1	G	277	ASP
1	C	300	PRO

5.3.2 Protein sidechains ⓘ

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	458/543 (84%)	441 (96%)	17 (4%)	34	66
1	B	465/543 (86%)	447 (96%)	18 (4%)	32	64
1	C	450/543 (83%)	432 (96%)	18 (4%)	31	64
1	D	456/543 (84%)	435 (95%)	21 (5%)	27	60
1	E	449/543 (83%)	429 (96%)	20 (4%)	27	61
1	F	457/543 (84%)	440 (96%)	17 (4%)	34	66
1	G	462/543 (85%)	447 (97%)	15 (3%)	39	70
1	H	451/543 (83%)	439 (97%)	12 (3%)	44	73
1	I	455/543 (84%)	439 (96%)	16 (4%)	36	67
1	J	440/543 (81%)	422 (96%)	18 (4%)	30	63
All	All	4543/5430 (84%)	4371 (96%)	172 (4%)	33	65

All (172) residues with a non-rotameric sidechain are listed below:

| Mol	Chain	Res	Type
1	A	274	LYS
1	A	283	SER

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Mol	Chain	Res	Type
1	A	286	ARG
1	A	417	GLN
1	A	447	ARG
1	A	448	CYS
1	A	501	ARG
1	A	572	LYS
1	A	586	ARG
1	A	590	CYS
1	A	618	LYS
1	A	655	ARG
1	A	669	ARG
1	A	738	ARG
1	A	774	ARG
1	A	811	LEU
1	A	845	ASP
1	B	286	ARG
1	B	299	HIS
1	B	302	ARG
1	B	390	SER
1	B	440	ARG
1	B	456	MET
1	B	562	HIS
1	B	592	MET
1	B	618	LYS
1	B	669	ARG
1	B	697	HIS
1	B	719	MET
1	B	738	ARG
1	B	740	ARG
1	B	748	SER
1	B	811	LEU
1	B	851	LEU
1	B	877	GLN
1	E	286	ARG
1	E	289	TYR
1	E	336	ARG
1	E	363	LYS
1	E	417	GLN
1	E	429	ASP
1	E	437	ASP
1	E	454	ASN
1	E	480	LEU

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Mol	Chain	Res	Type
1	E	482	SER
1	E	501	ARG
1	E	547	ASP
1	E	618	LYS
1	E	637	HIS
1	E	640	ARG
1	E	653	GLU
1	E	654	GLU
1	E	745	CYS
1	E	811	LEU
1	E	854	ARG
1	D	286	ARG
1	D	287	GLU
1	D	417	GLN
1	D	437	ASP
1	D	440	ARG
1	D	478	MET
1	D	501	ARG
1	D	586	ARG
1	D	598	ARG
1	D	601	ARG
1	D	638	ASN
1	D	643	ARG
1	D	669	ARG
1	D	679	LEU
1	D	697	HIS
1	D	699[A]	VAL
1	D	699[B]	VAL
1	D	745	CYS
1	D	750	ARG
1	D	774	ARG
1	D	825	MET
1	C	283	SER
1	C	305	GLN
1	C	363	LYS
1	C	422	SER
1	C	429	ASP
1	C	440	ARG
1	C	442	ARG
1	C	448	CYS
1	C	454	ASN
1	C	477	TYR

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Mol	Chain	Res	Type
1	C	478	MET
1	C	479	TRP
1	C	480	LEU
1	C	590	CYS
1	C	643	ARG
1	C	697	HIS
1	C	701	PHE
1	C	747	TRP
1	F	285	LEU
1	F	286	ARG
1	F	437	ASP
1	F	448	CYS
1	F	480	LEU
1	F	501	ARG
1	F	512	SER
1	F	558	MET
1	F	562	HIS
1	F	590	CYS
1	F	598	ARG
1	F	618	LYS
1	F	655	ARG
1	F	732	GLN
1	F	747	TRP
1	F	774	ARG
1	F	848	CYS
1	G	283	SER
1	G	286	ARG
1	G	302	ARG
1	G	363	LYS
1	G	384	GLU
1	G	396	SER
1	G	405	LYS
1	G	447	ARG
1	G	590	CYS
1	G	598	ARG
1	G	662	SER
1	G	690	LYS
1	G	745	CYS
1	G	854	ARG
1	G	873	LYS
1	J	299	HIS
1	J	406	SER

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Mol	Chain	Res	Type
1	J	437	ASP
1	J	439	GLU
1	J	482	SER
1	J	501	ARG
1	J	583	ARG
1	J	597	ARG
1	J	625	MET
1	J	640	ARG
1	J	655	ARG
1	J	658	ARG
1	J	669	ARG
1	J	690	LYS
1	J	845	ASP
1	J	852	VAL
1	J	887	MET
1	J	888	ASP
1	I	286	ARG
1	I	363	LYS
1	I	376	ARG
1	I	396	SER
1	I	440	ARG
1	I	456	MET
1	I	480	LEU
1	I	483	ARG
1	I	495	GLU
1	I	516	LEU
1	I	618	LYS
1	I	697	HIS
1	I	745	CYS
1	I	771	ARG
1	I	854	ARG
1	I	884	LEU
1	H	274	LYS
1	H	283	SER
1	H	380	ASP
1	H	422	SER
1	H	501	ARG
1	H	590	CYS
1	H	655	ARG
1	H	669	ARG
1	H	679	LEU
1	H	738	ARG

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Mol	Chain	Res	Type
1	H	845	ASP
1	H	863	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	305	GLN
1	A	379	ASN
1	A	571	GLN
1	A	605	GLN
1	B	379	ASN
1	E	379	ASN
1	F	379	ASN
1	F	761	GLN
1	G	379	ASN
1	G	605	GLN
1	J	299	HIS
1	J	379	ASN
1	H	379	ASN
1	H	545	ASN
1	H	616	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 30 ligands modelled in this entry, 30 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th 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(Å²)	Q<0.9
1	A	588/638 (92%)	-0.29	4 (0%)	87	81	31, 52, 95, 118	0
1	B	584/638 (91%)	-0.33	4 (0%)	87	81	32, 51, 97, 114	0
1	C	586/638 (91%)	-0.26	2 (0%)	94	92	43, 66, 103, 125	0
1	D	589/638 (92%)	-0.27	8 (1%)	75	63	40, 57, 101, 128	0
1	E	588/638 (92%)	-0.26	8 (1%)	75	63	36, 60, 102, 125	0
1	F	583/638 (91%)	-0.23	8 (1%)	75	63	34, 59, 107, 128	0
1	G	584/638 (91%)	-0.27	2 (0%)	94	92	39, 68, 102, 115	0
1	H	588/638 (92%)	-0.15	9 (1%)	73	61	47, 71, 112, 128	0
1	I	586/638 (91%)	-0.20	9 (1%)	73	61	44, 67, 110, 132	0
1	J	582/638 (91%)	-0.20	7 (1%)	79	68	40, 73, 107, 125	0
All	All	5858/6380 (91%)	-0.25	61 (1%)	82	73	31, 63, 104, 132	0

All (61) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	852	VAL	5.1
1	E	852	VAL	4.5
1	D	852	VAL	4.4
1	E	853	GLY	4.1
1	G	853	GLY	3.8
1	I	850	SER	3.7
1	D	849	SER	3.6
1	E	271	ASP	3.6
1	F	852	VAL	3.6
1	F	851	LEU	3.4
1	A	853	GLY	3.3
1	D	420	TRP	3.2
1	I	849	SER	3.2

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Mol	Chain	Res	Type	RSRZ
1	J	744	GLY	3.2
1	F	745	CYS	3.1
1	G	852	VAL	3.0
1	J	745	CYS	3.0
1	I	852	VAL	3.0
1	F	588	GLY	3.0
1	D	850	SER	2.8
1	A	852	VAL	2.8
1	E	428	GLU	2.7
1	H	331	TRP	2.7
1	E	421	SER	2.7
1	B	852	VAL	2.7
1	I	853	GLY	2.7
1	H	308	GLY	2.6
1	B	853	GLY	2.6
1	J	850	SER	2.6
1	B	271	ASP	2.5
1	H	853	GLY	2.5
1	F	339	VAL	2.5
1	D	421	SER	2.4
1	H	850	SER	2.4
1	E	480	LEU	2.4
1	I	848	CYS	2.4
1	D	745	CYS	2.3
1	C	745	CYS	2.3
1	D	853	GLY	2.3
1	J	853	GLY	2.3
1	I	846	MET	2.2
1	D	432	PHE	2.2
1	J	852	VAL	2.2
1	J	343	ALA	2.2
1	A	420	TRP	2.2
1	E	272	LYS	2.2
1	I	851	LEU	2.2
1	F	589	GLY	2.2
1	H	851	LEU	2.2
1	I	308	GLY	2.2
1	I	477	TYR	2.2
1	H	744	GLY	2.2
1	C	851	LEU	2.1
1	J	480	LEU	2.1
1	F	338	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
1	E	849	SER	2.1
1	A	849	SER	2.1
1	H	846	MET	2.1
1	B	477	TYR	2.0
1	F	744	GLY	2.0
1	H	339	VAL	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 monosaccharides in this entry.

6.4 Ligands ⓘ

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
3	MG	D	1003	1/1	0.93	0.27	52,52,52,52	0
3	MG	F	1003	1/1	0.93	0.27	47,47,47,47	0
2	ZN	H	1001	1/1	0.94	0.08	91,91,91,91	1
3	MG	I	1003	1/1	0.94	0.37	73,73,73,73	0
2	ZN	C	1001	1/1	0.95	0.12	80,80,80,80	1
3	MG	B	1003	1/1	0.95	0.24	45,45,45,45	0
3	MG	G	1003	1/1	0.95	0.25	66,66,66,66	0
3	MG	J	1003	1/1	0.95	0.28	75,75,75,75	0
3	MG	E	1003	1/1	0.95	0.31	58,58,58,58	0
3	MG	A	1003	1/1	0.96	0.38	51,51,51,51	0
2	ZN	G	1001	1/1	0.97	0.11	93,93,93,93	1
3	MG	C	1003	1/1	0.97	0.31	61,61,61,61	0
2	ZN	J	1001	1/1	0.97	0.09	84,84,84,84	1
3	MG	H	1003	1/1	0.97	0.23	76,76,76,76	0
2	ZN	F	1001	1/1	0.98	0.09	73,73,73,73	1
2	ZN	A	1002	1/1	0.98	0.13	50,50,50,50	0
2	ZN	B	1001	1/1	0.98	0.09	94,94,94,94	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	ZN	A	1001	1/1	0.98	0.11	68,68,68,68	1
2	ZN	H	1002	1/1	0.98	0.10	66,66,66,66	1
2	ZN	C	1002	1/1	0.99	0.07	69,69,69,69	1
2	ZN	E	1001	1/1	0.99	0.09	91,91,91,91	1
2	ZN	F	1002	1/1	0.99	0.09	65,65,65,65	1
2	ZN	E	1002	1/1	0.99	0.10	69,69,69,69	0
2	ZN	G	1002	1/1	0.99	0.12	69,69,69,69	0
2	ZN	D	1001	1/1	0.99	0.08	79,79,79,79	1
2	ZN	J	1002	1/1	0.99	0.12	67,67,67,67	0
2	ZN	I	1001	1/1	0.99	0.09	87,87,87,87	1
2	ZN	D	1002	1/1	0.99	0.14	57,57,57,57	1
2	ZN	B	1002	1/1	0.99	0.10	58,58,58,58	1
2	ZN	I	1002	1/1	1.00	0.10	55,55,55,55	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.
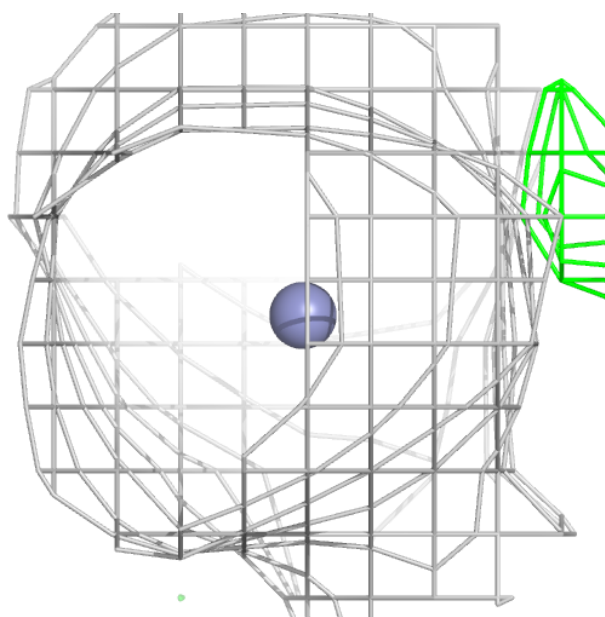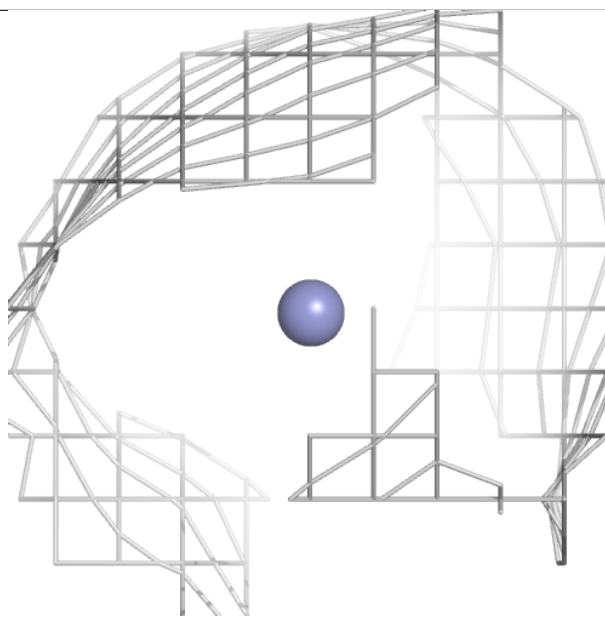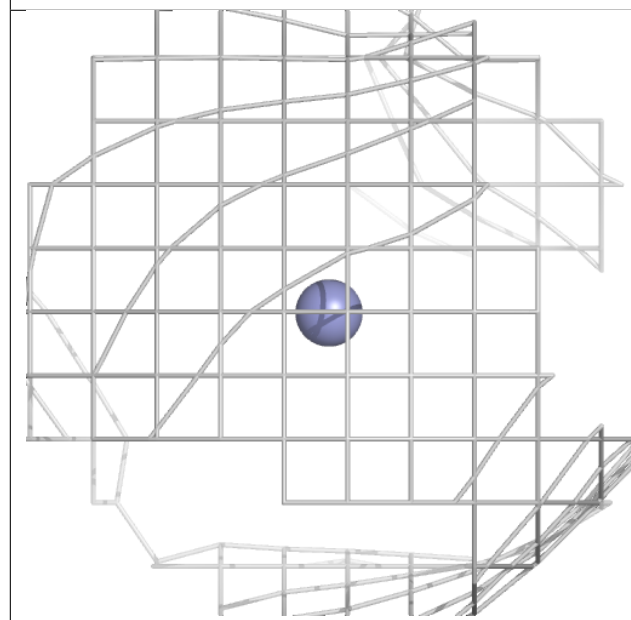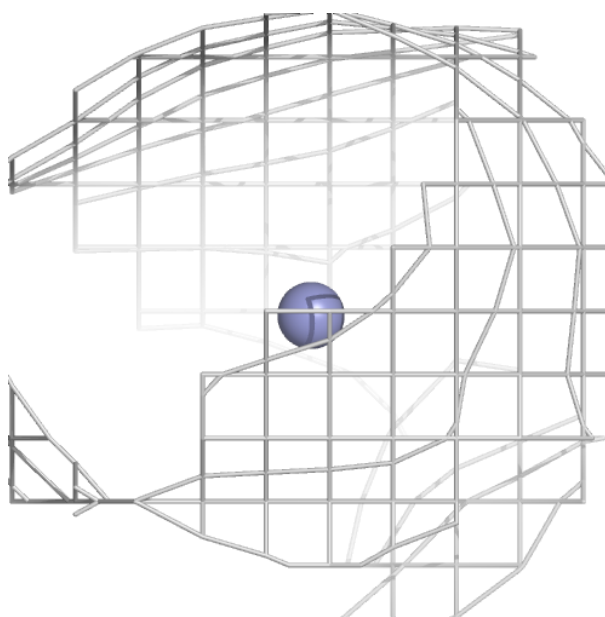
Electron density around MG D 1003:

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

Electron density around MG F 1003:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
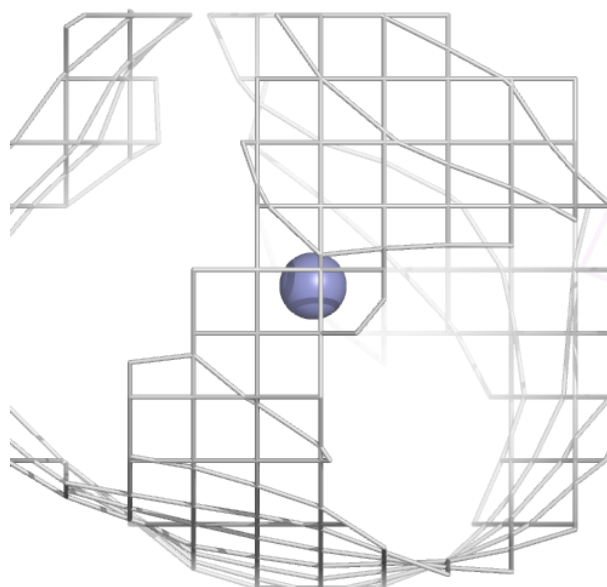mF_o-DF_c (at 3 rmsd) in purple (negative)
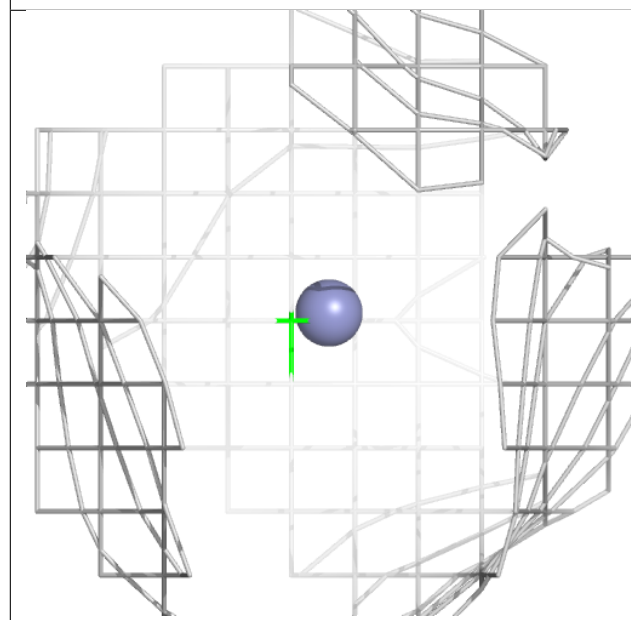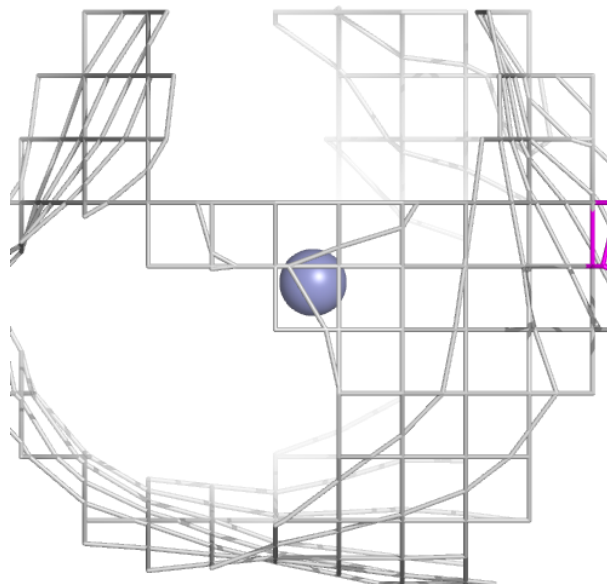and green (positive)
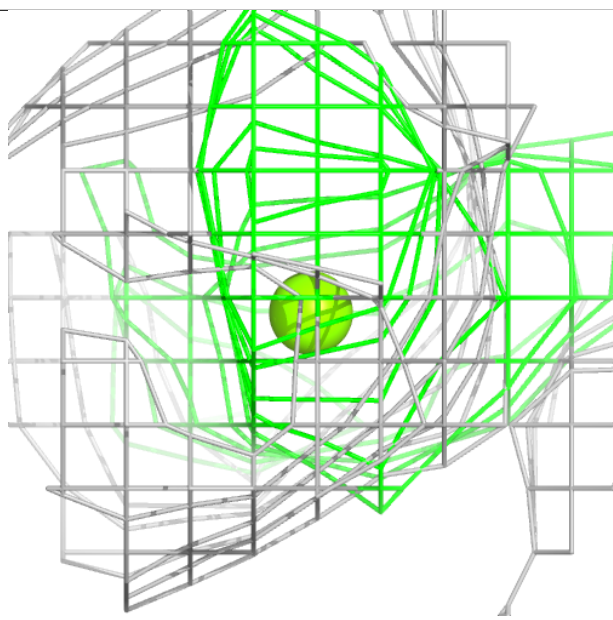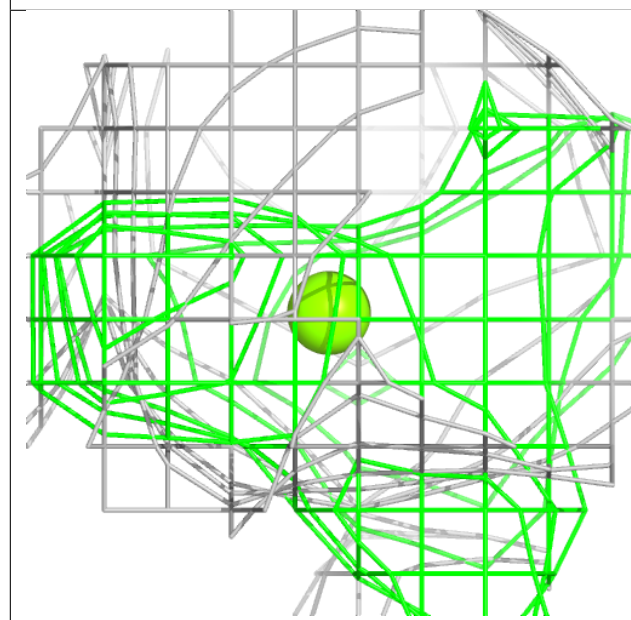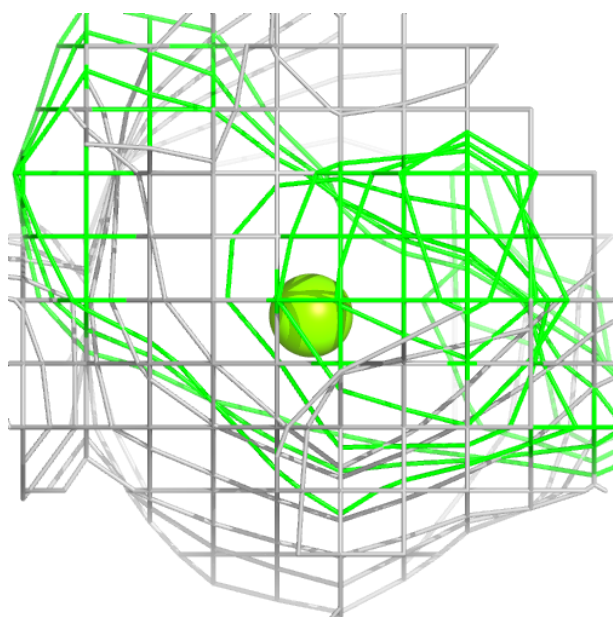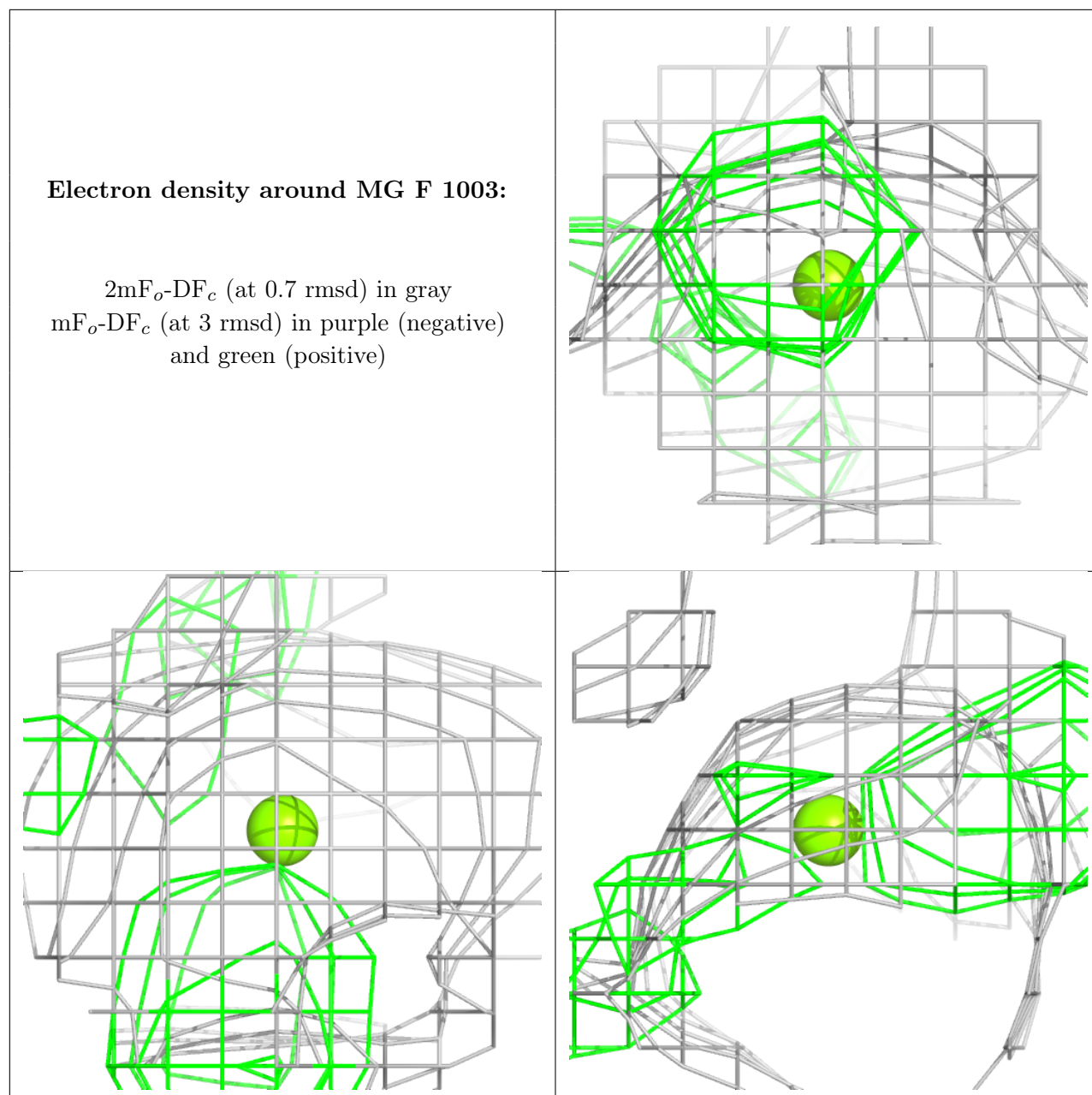
Electron density around ZN H 1001:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
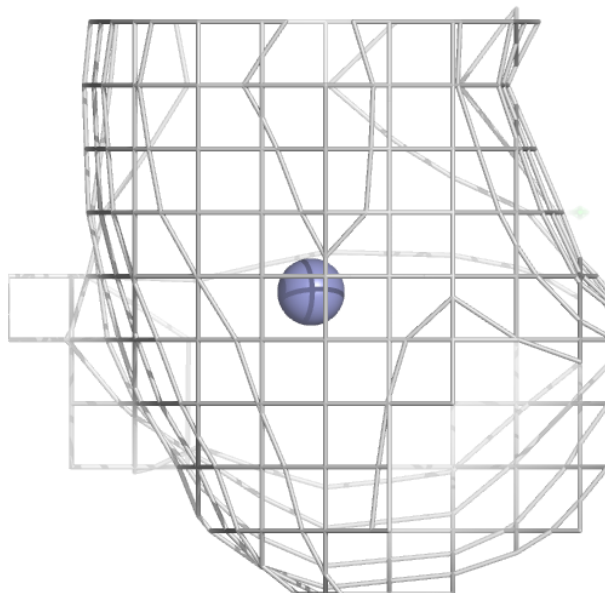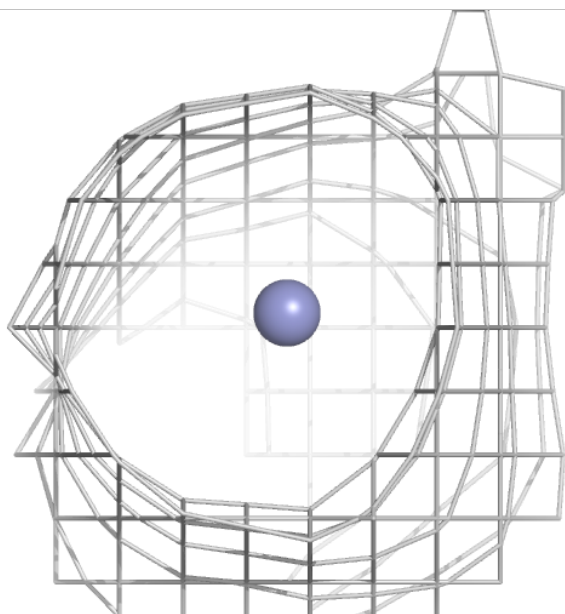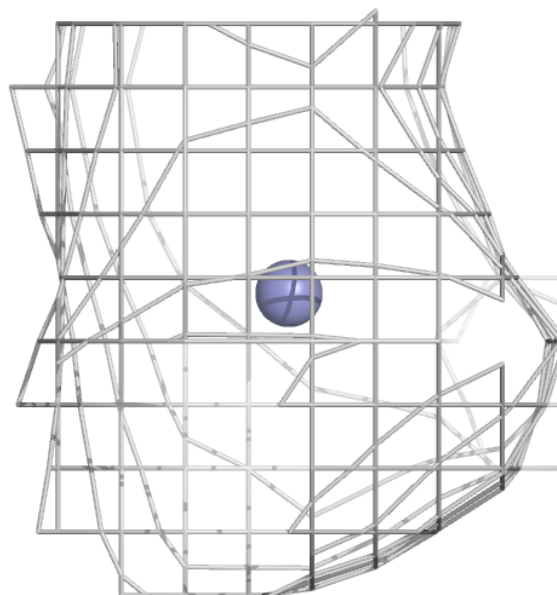
Electron density around MG I 1003:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
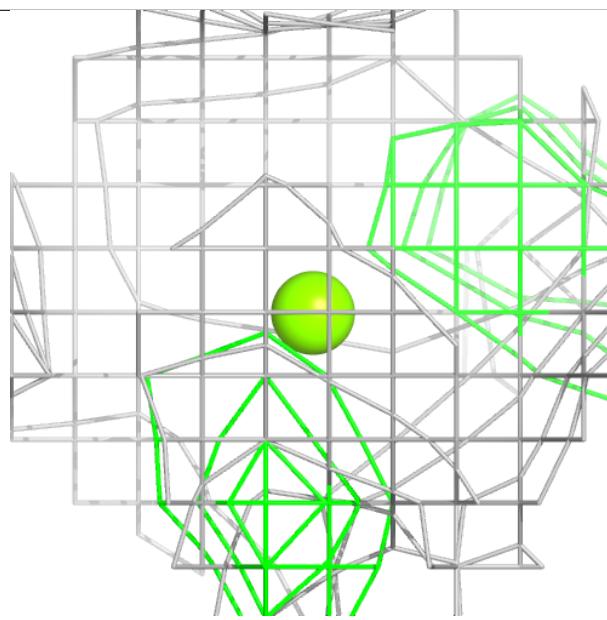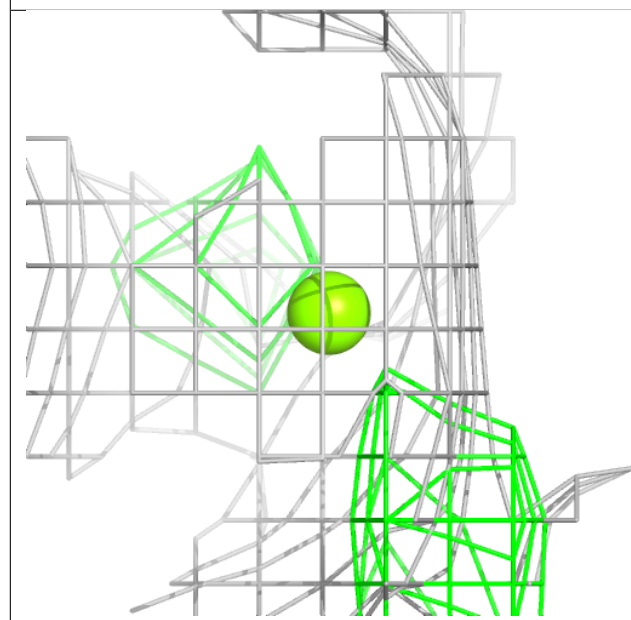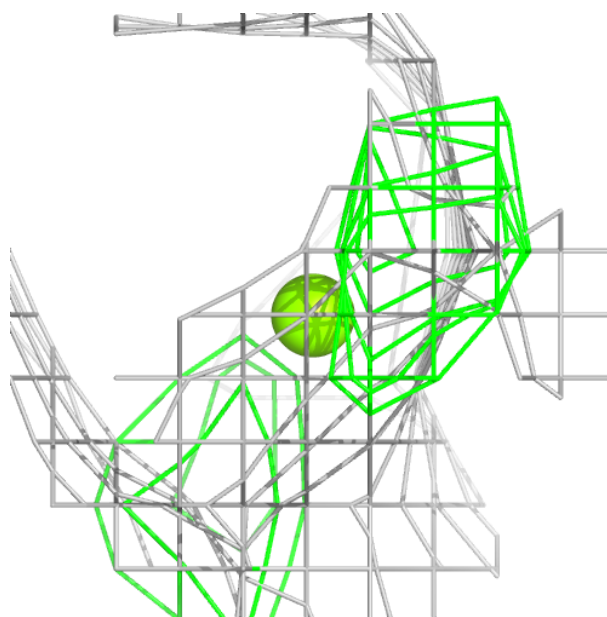
Electron density around ZN C 1001:

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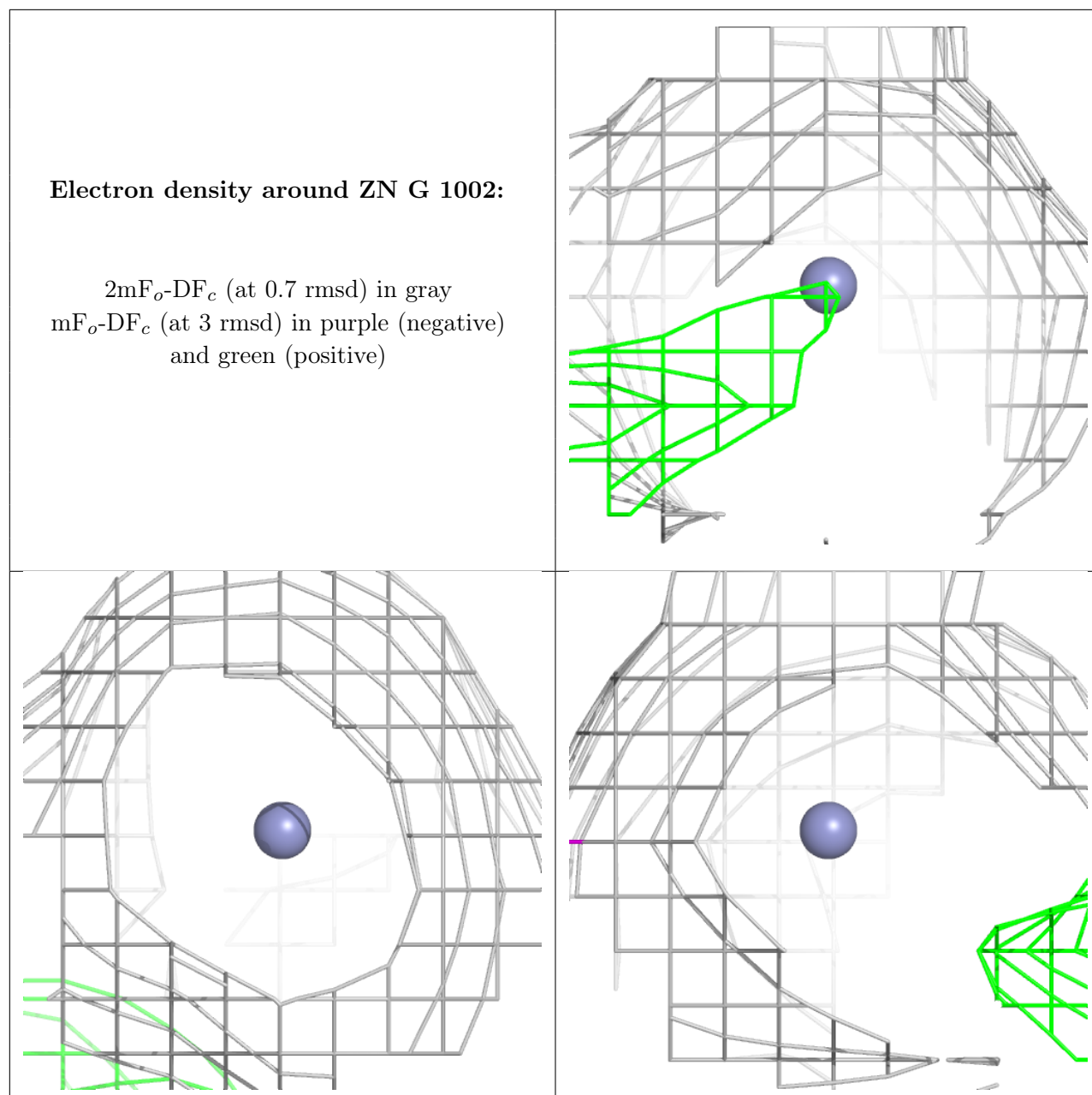and green (positive)

Electron density around MG B 1003:

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

Electron density around MG G 1003:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
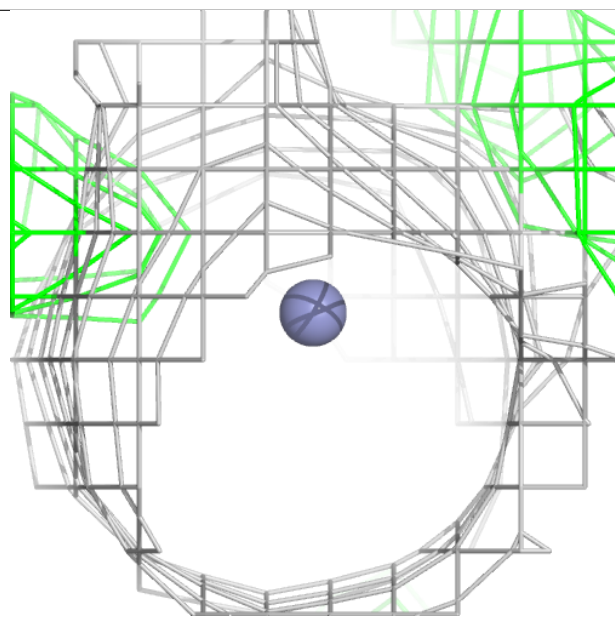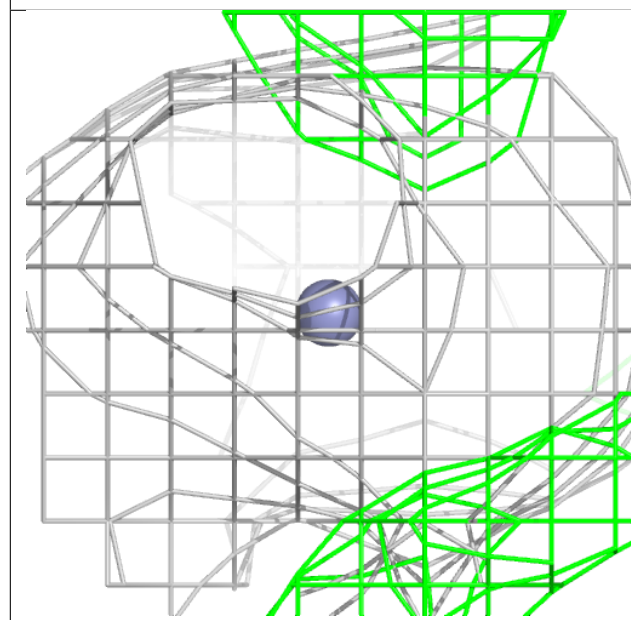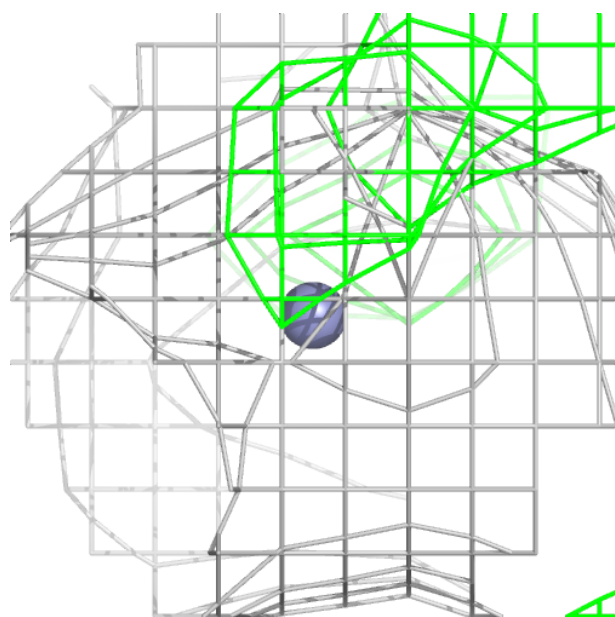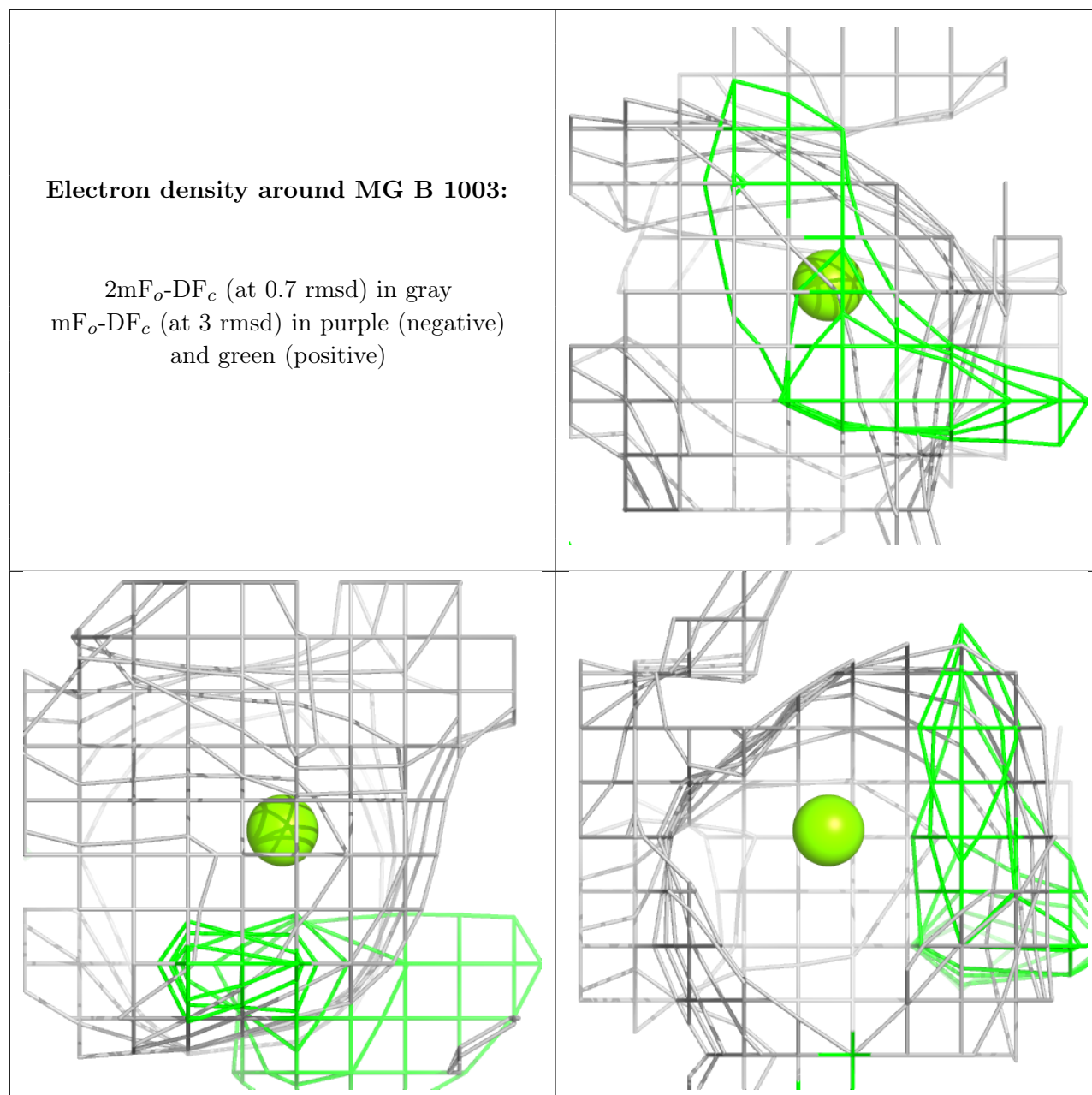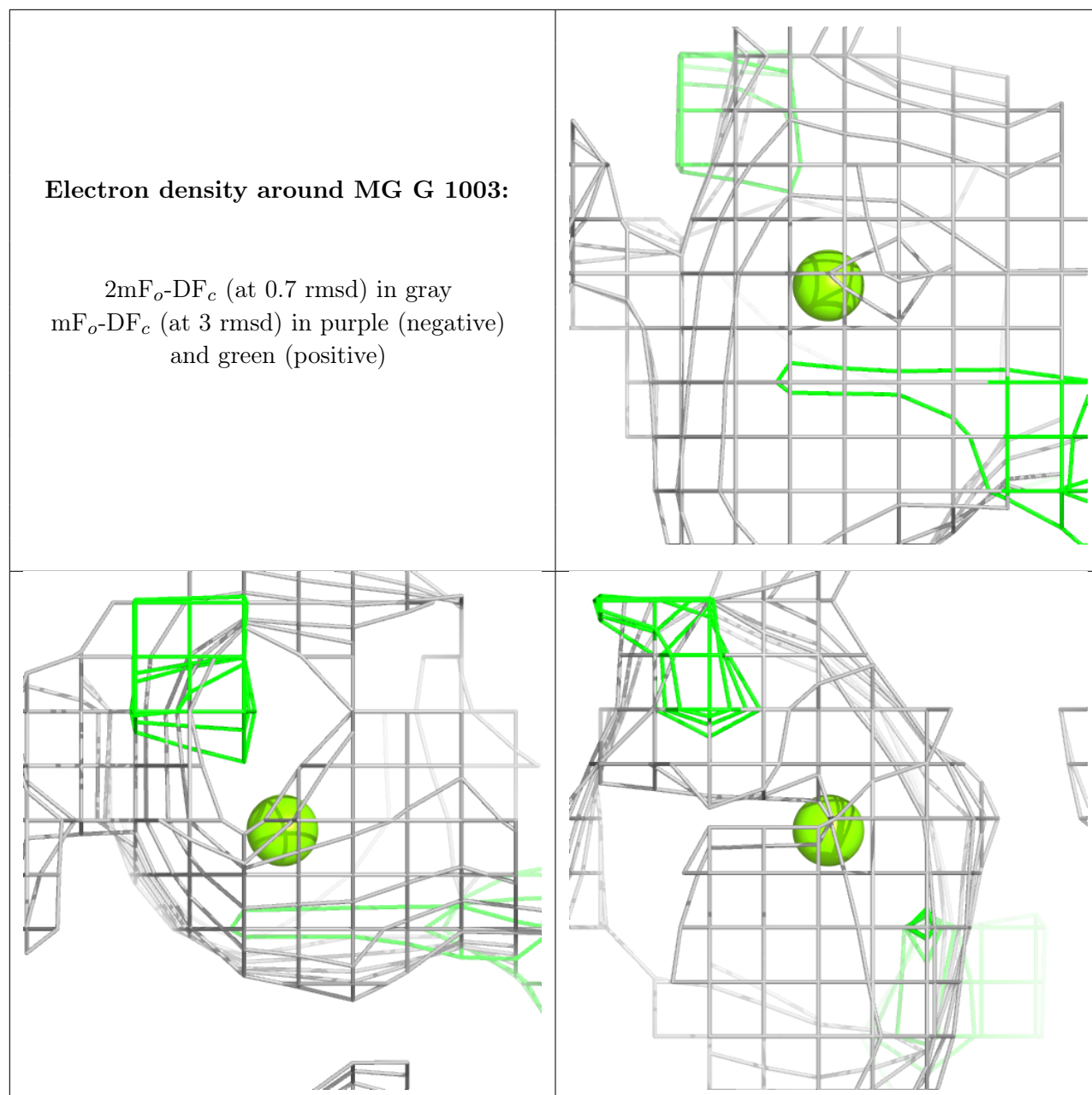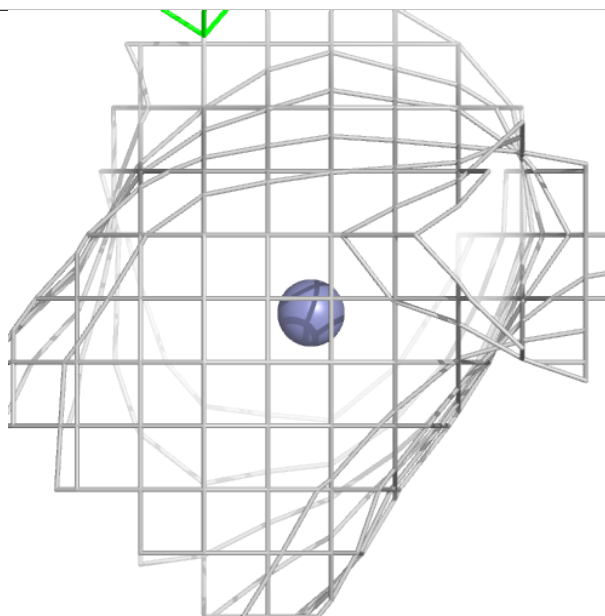
Electron density around MG J 1003:

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

Electron density around MG E 1003:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
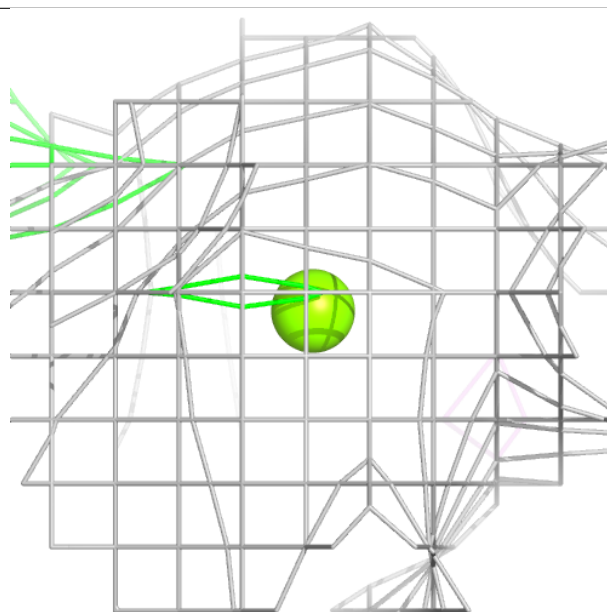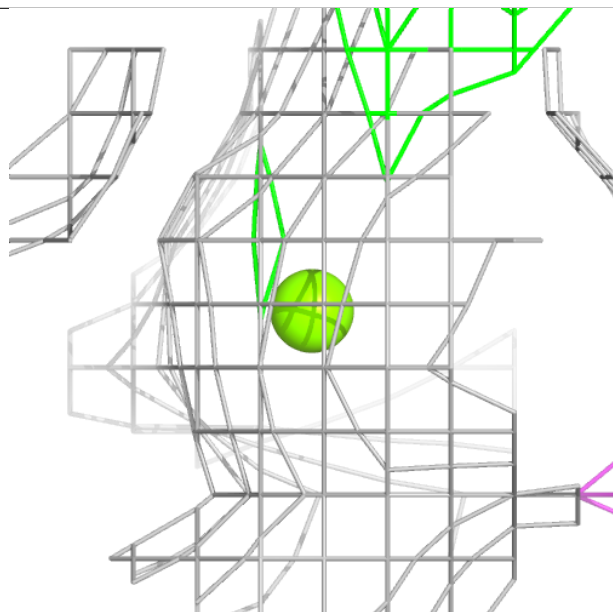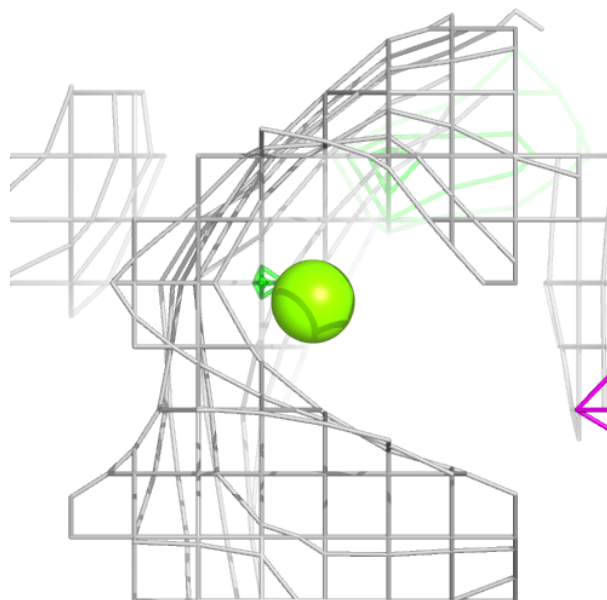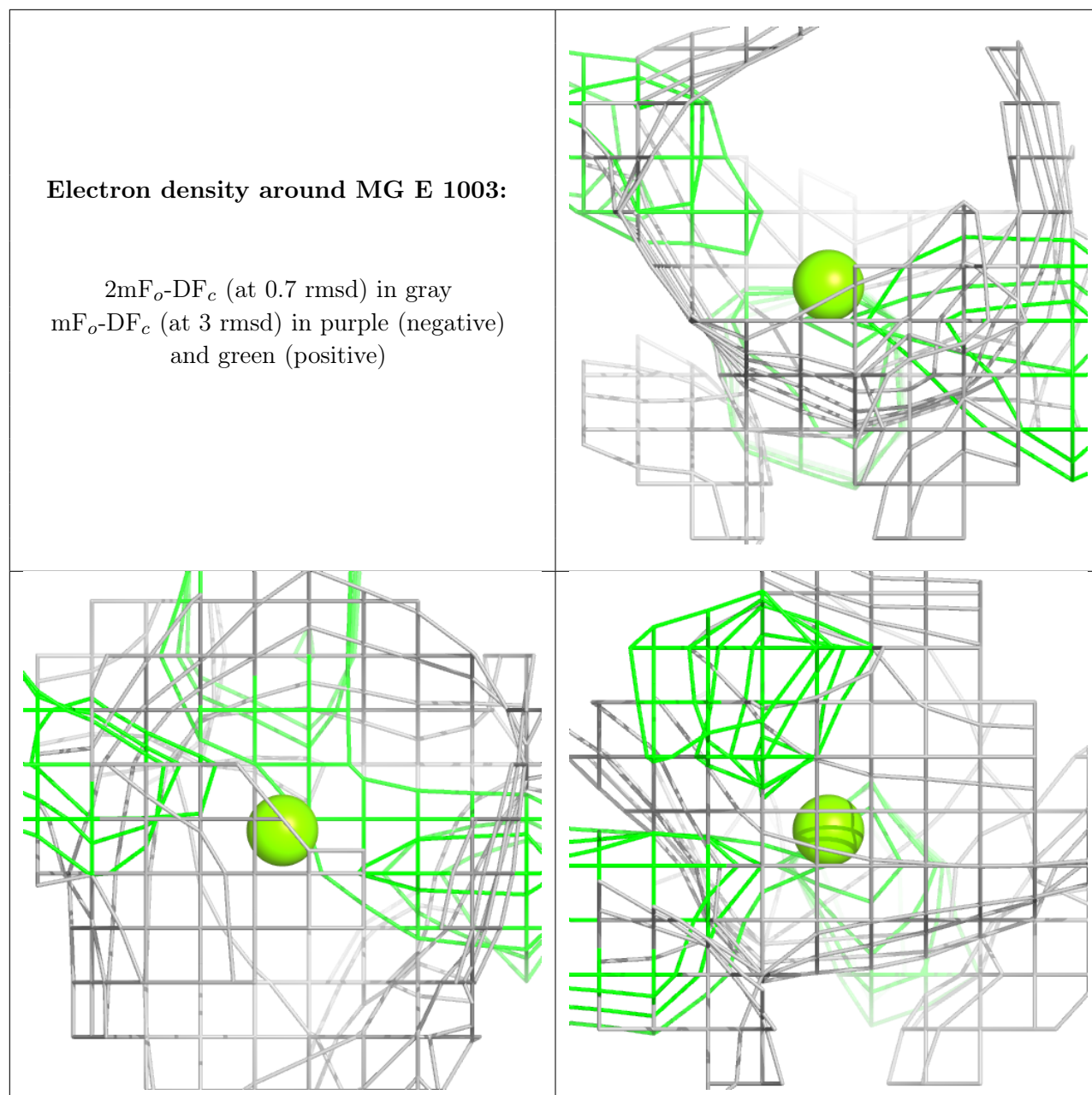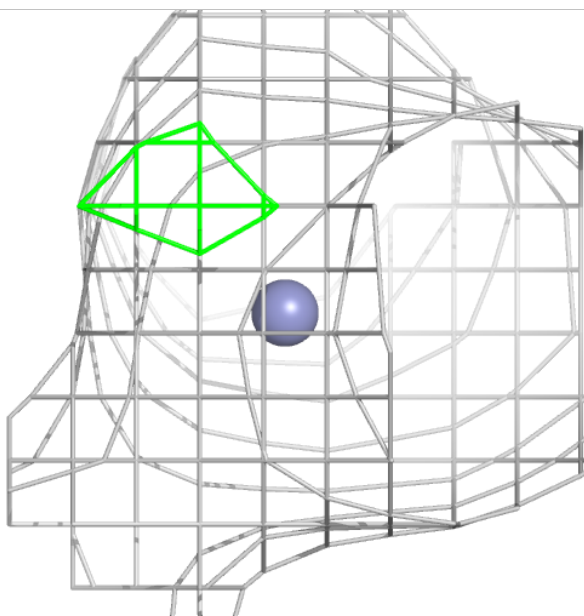
Electron density around MG A 1003:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
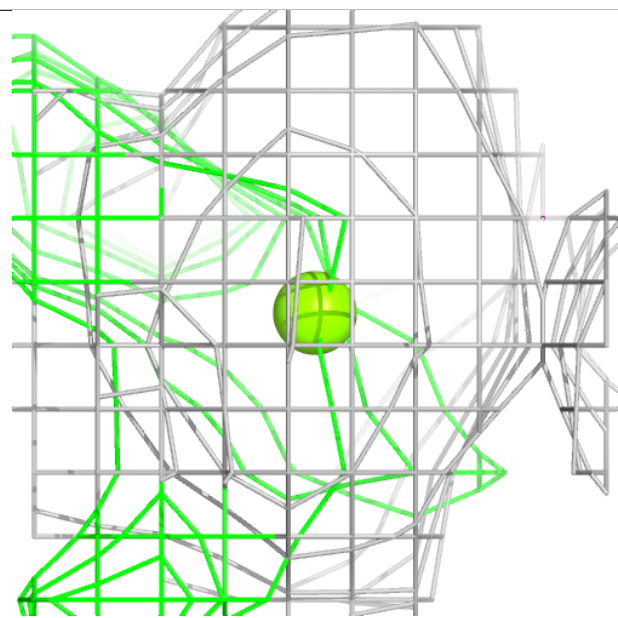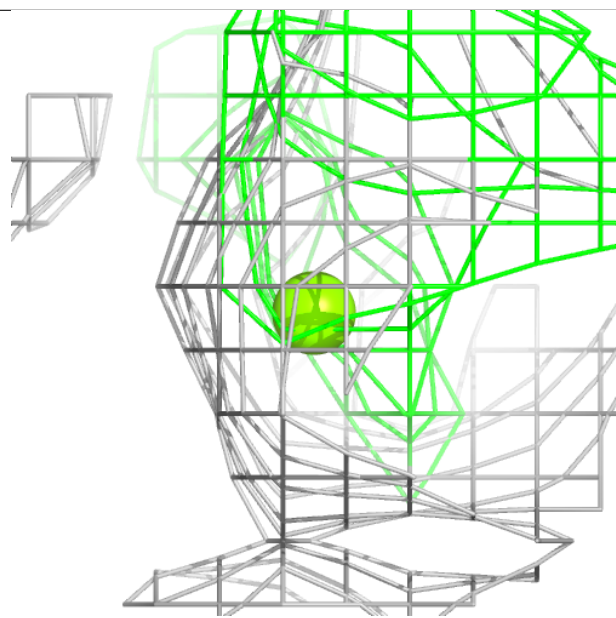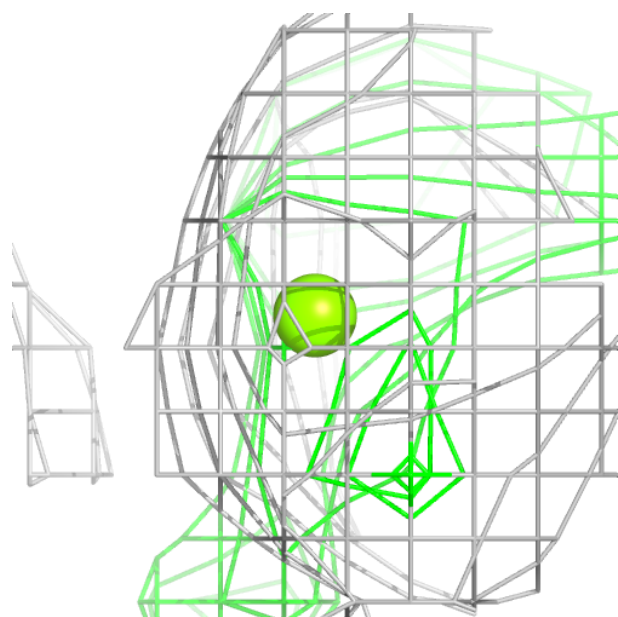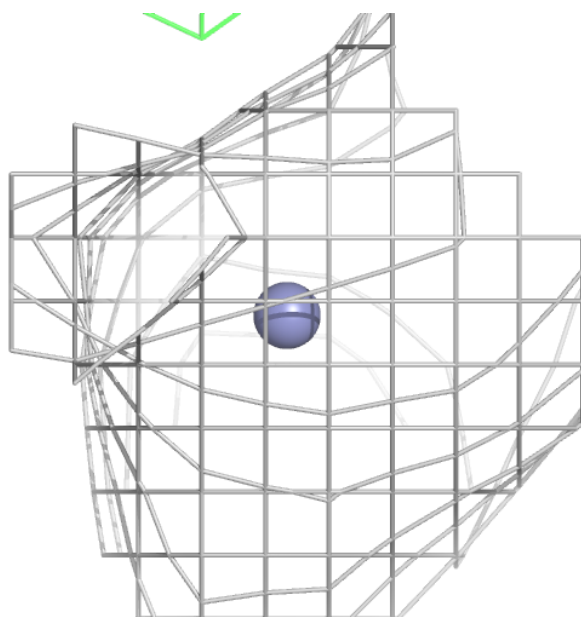
Electron density around ZN G 1001:

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 MG C 1003:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
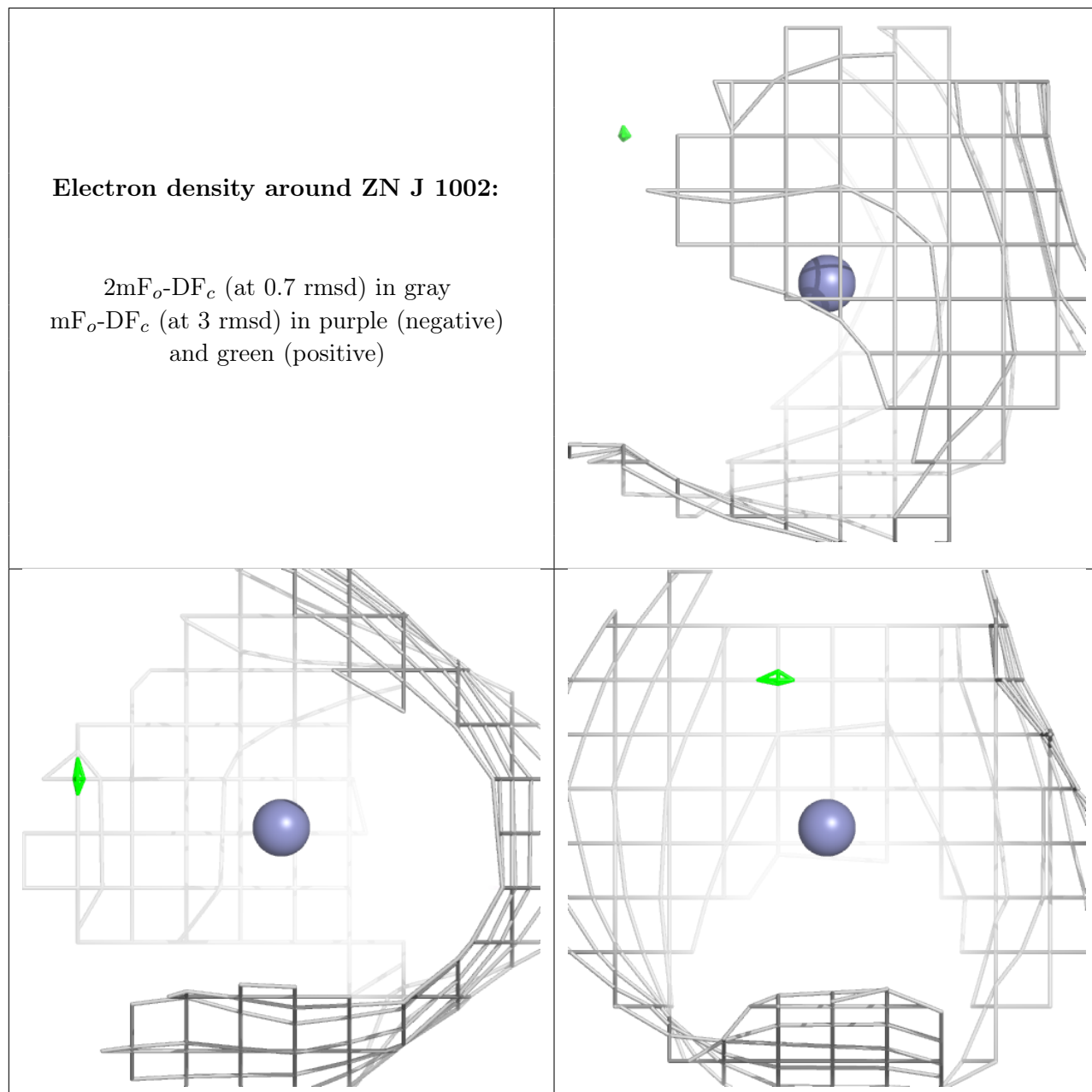and green (positive)
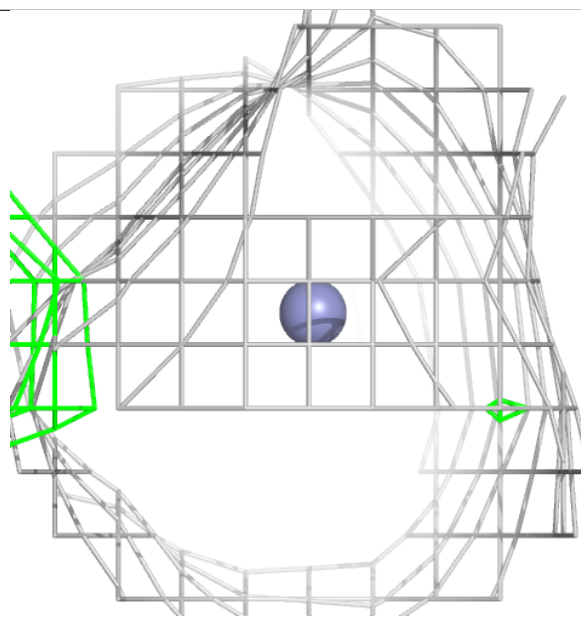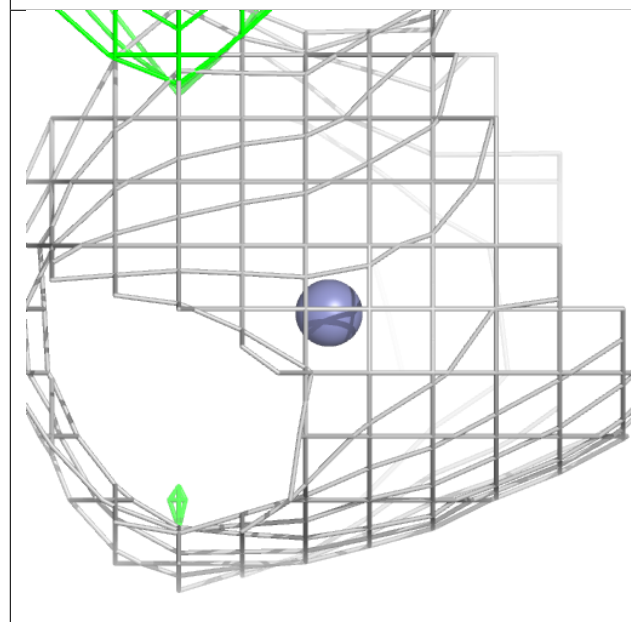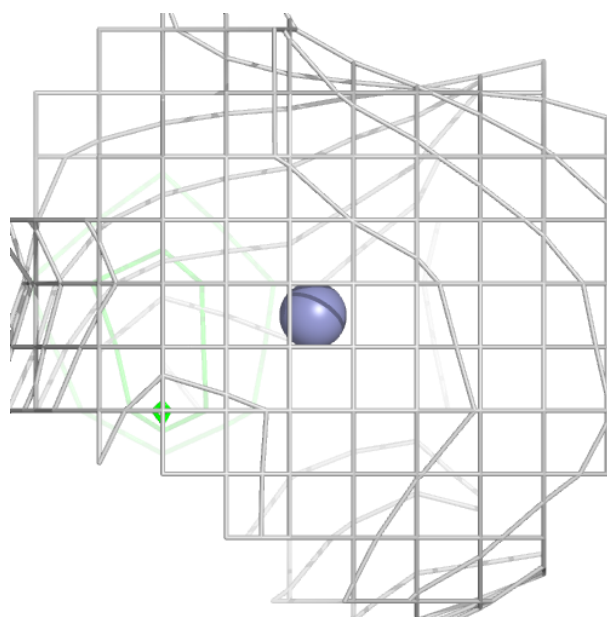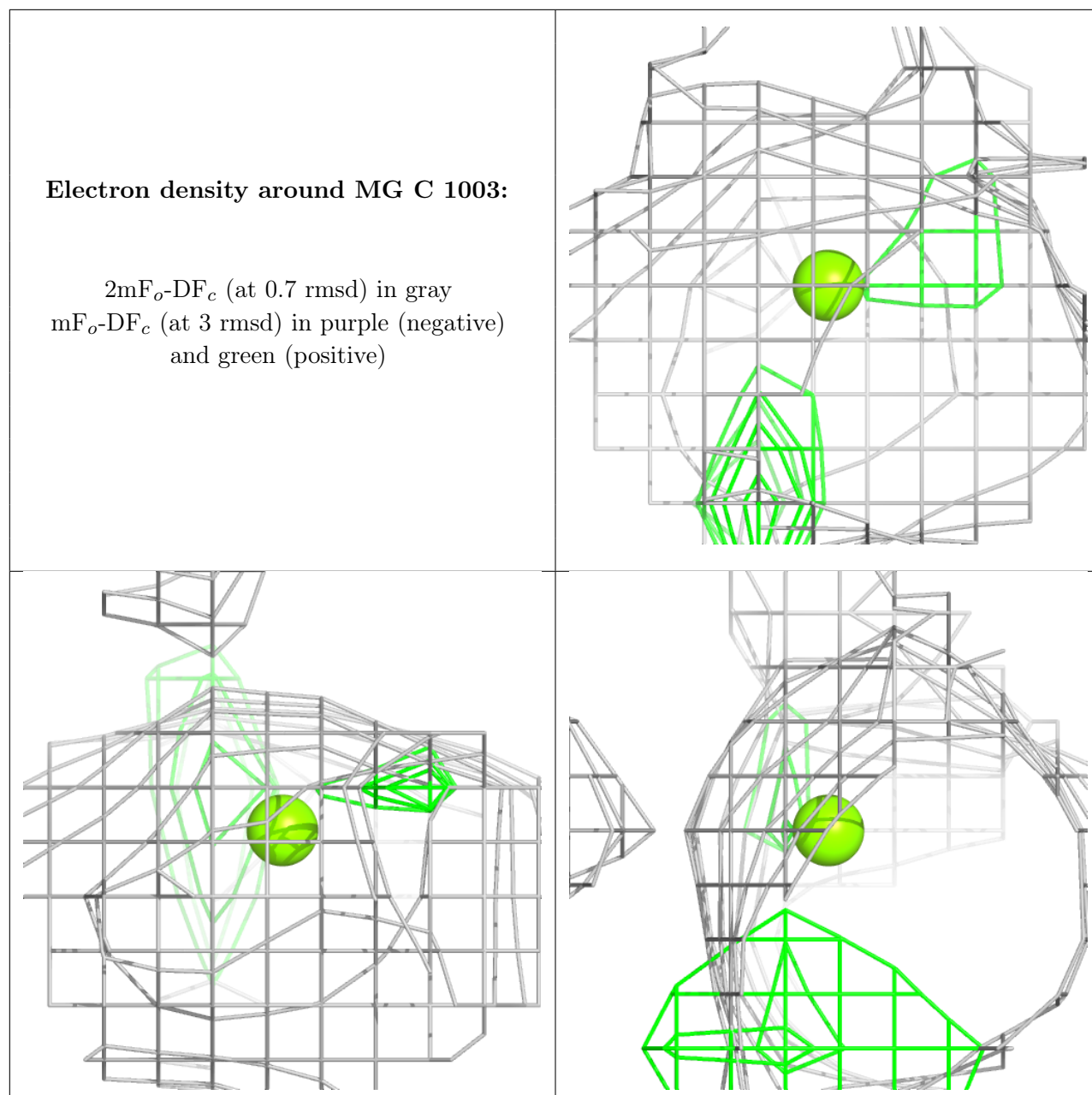
Electron density around ZN J 1001:

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 MG H 1003:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
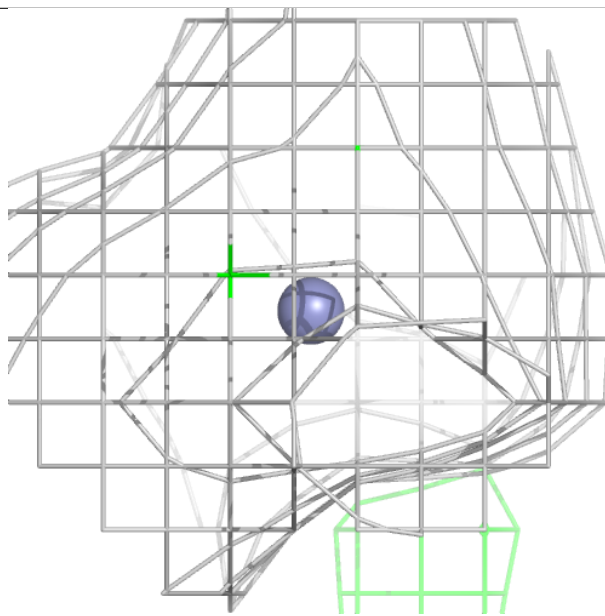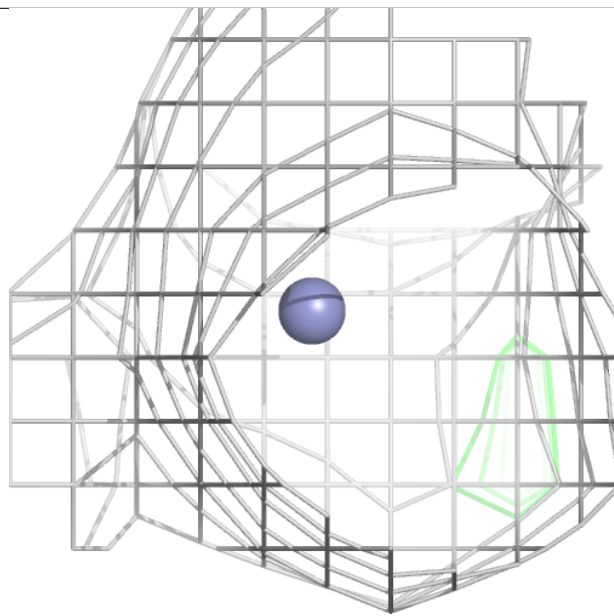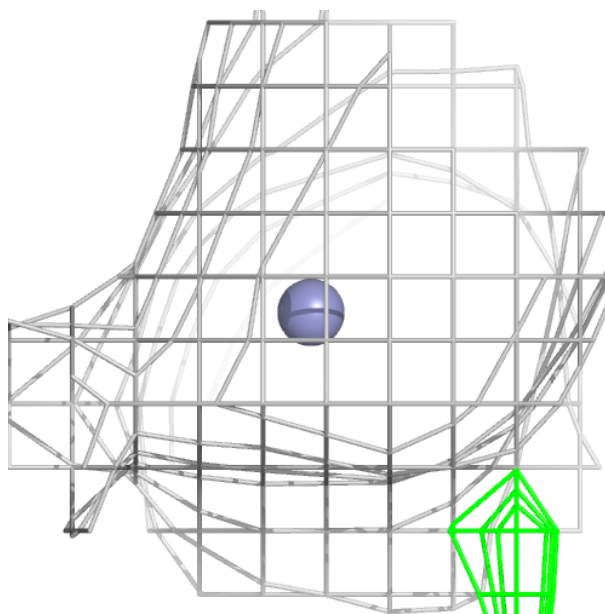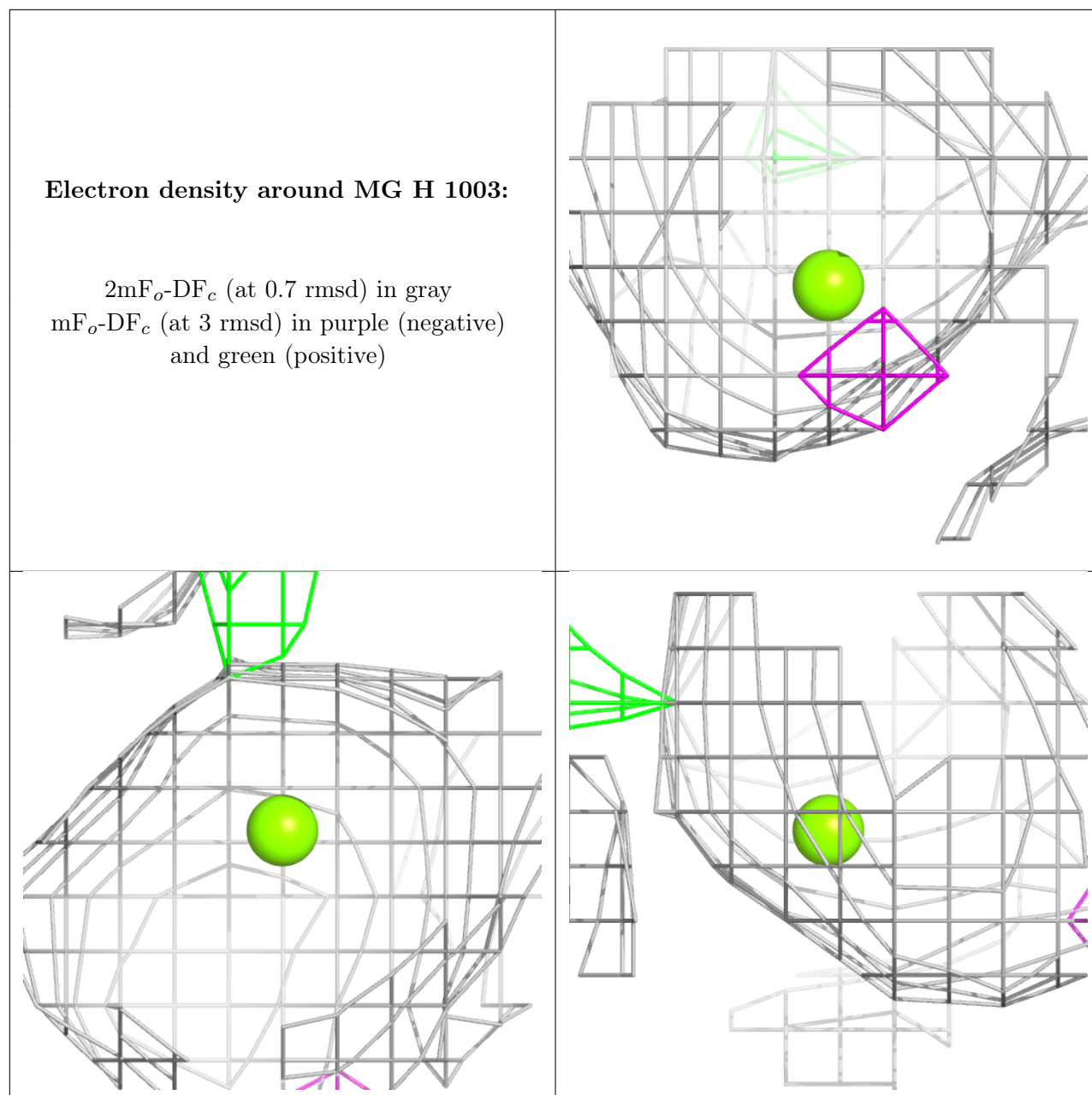
Electron density around ZN F 1001:

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

Electron density around ZN A 1002:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
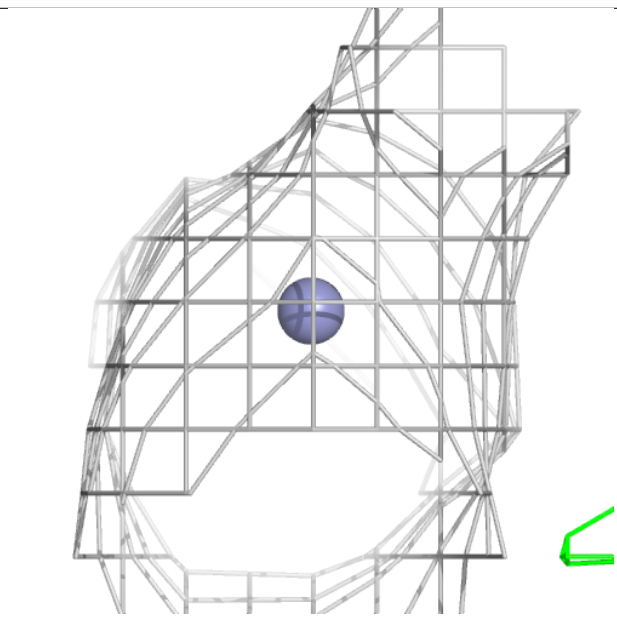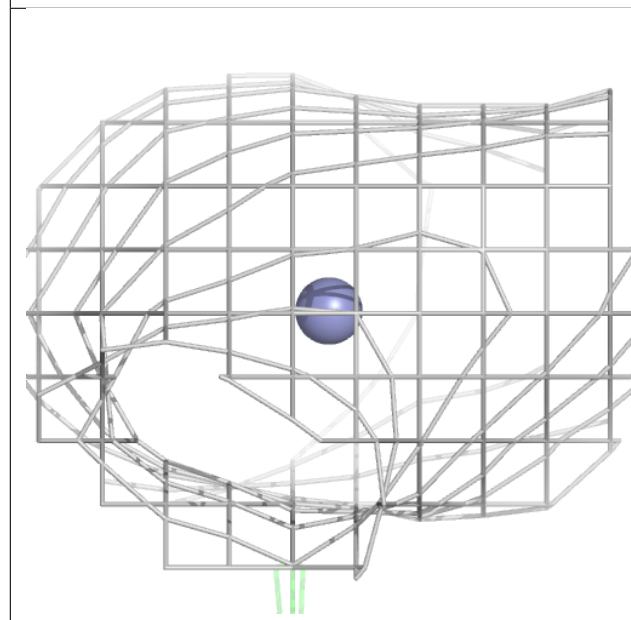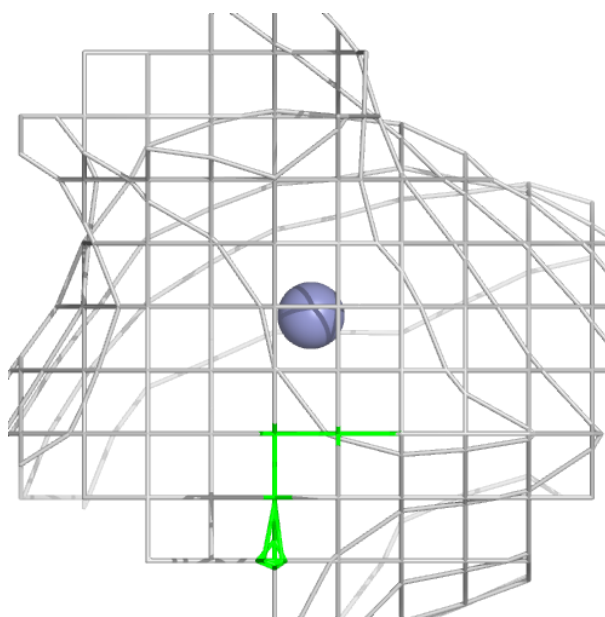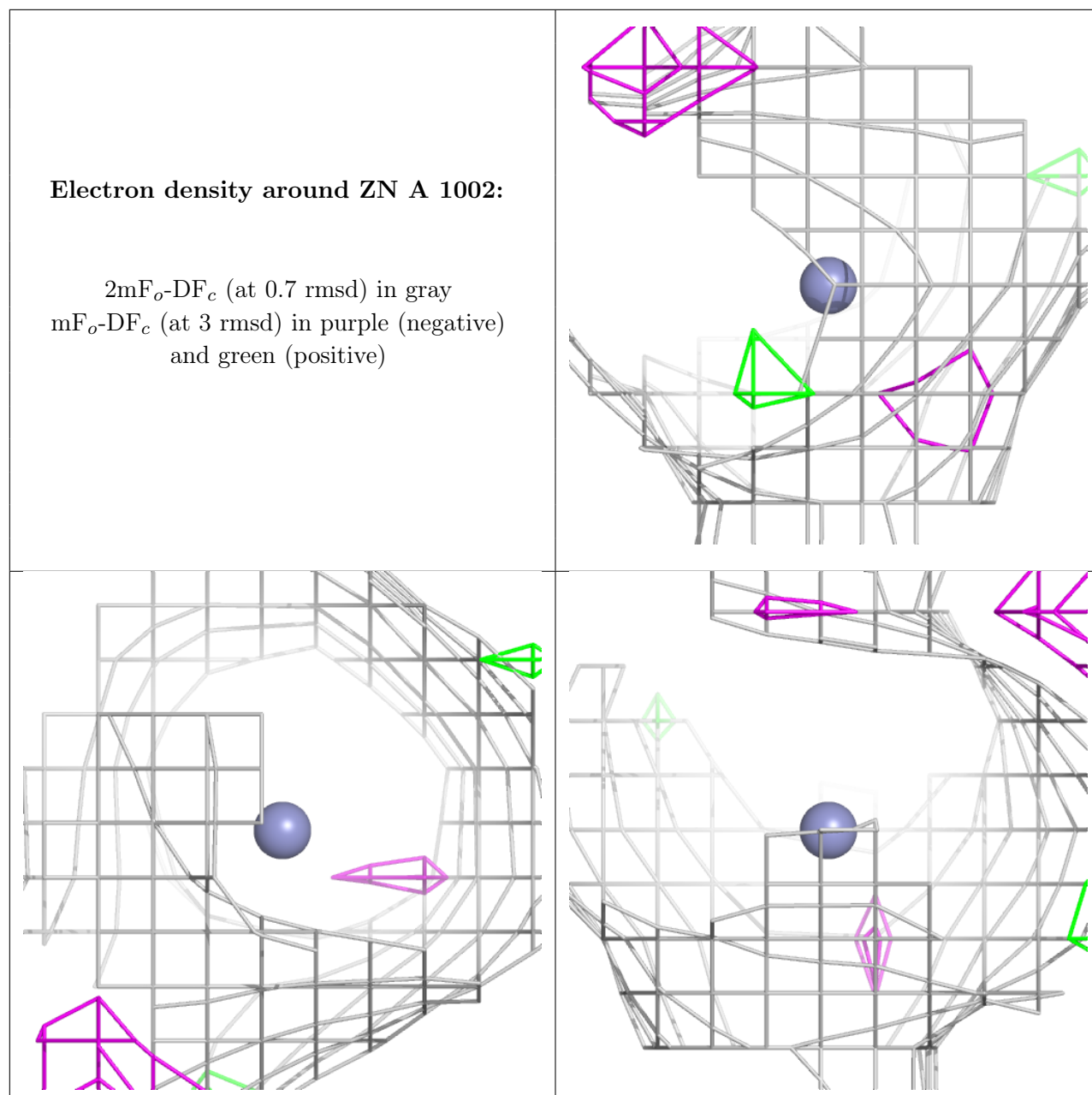
Electron density around ZN B 1001:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
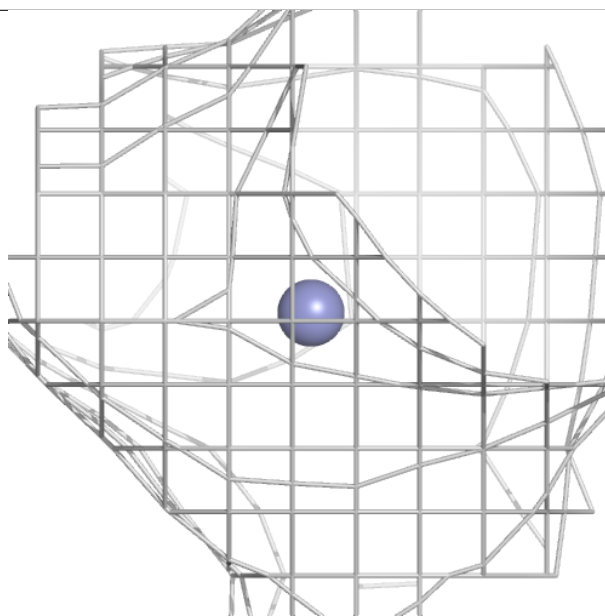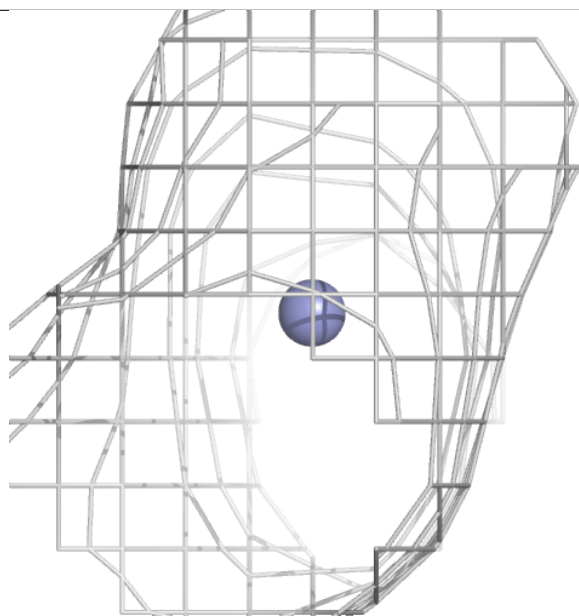and green (positive)
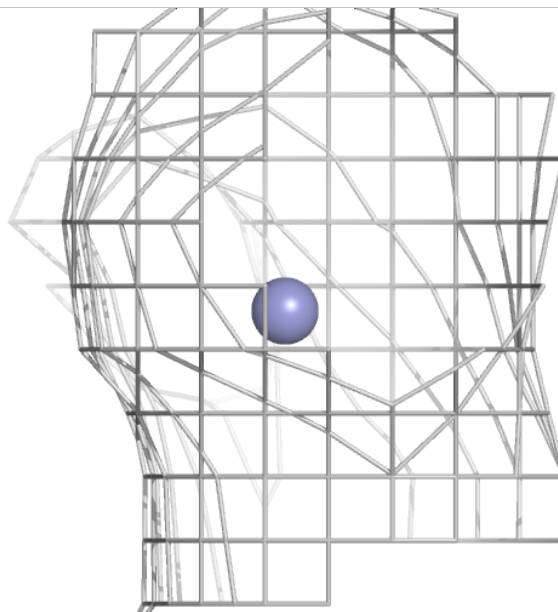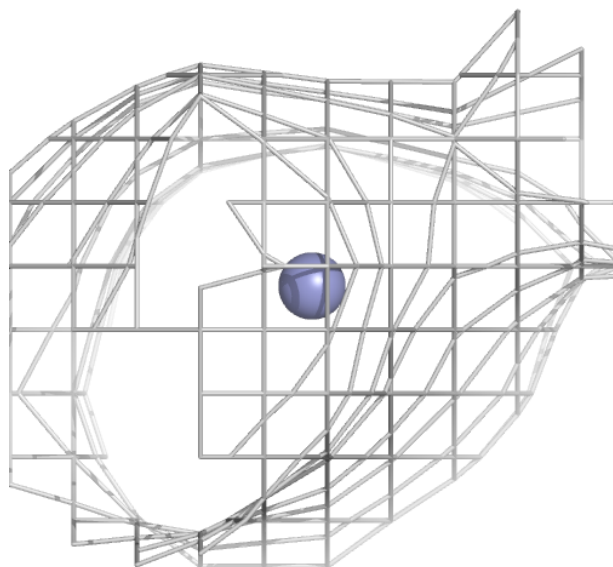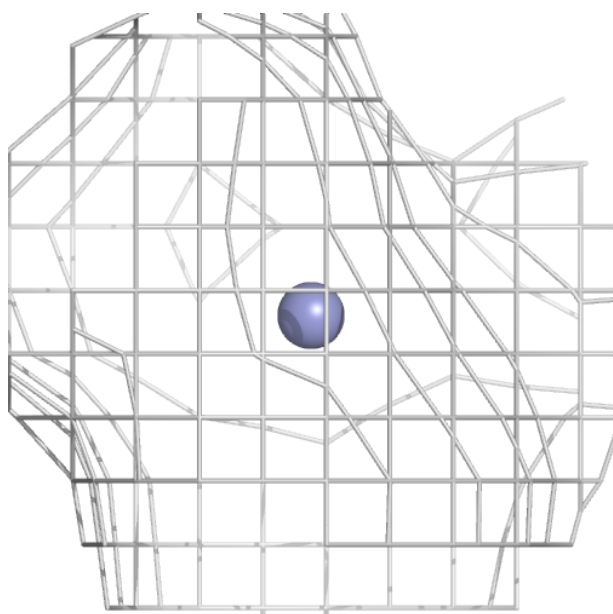
Electron density around ZN A 1001:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
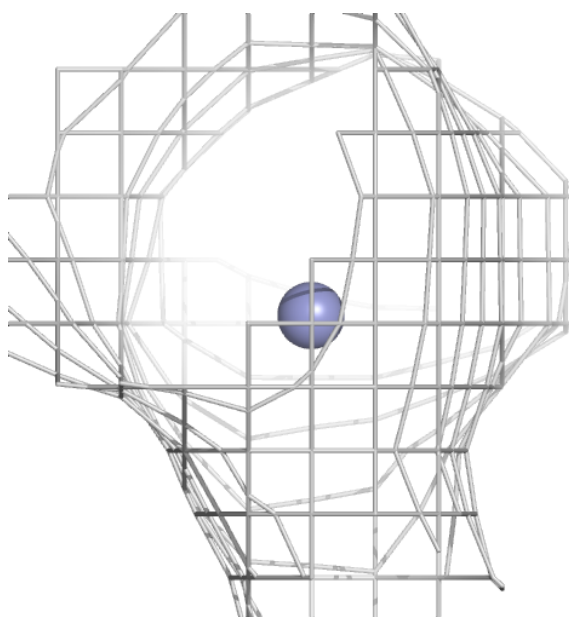and green (positive)
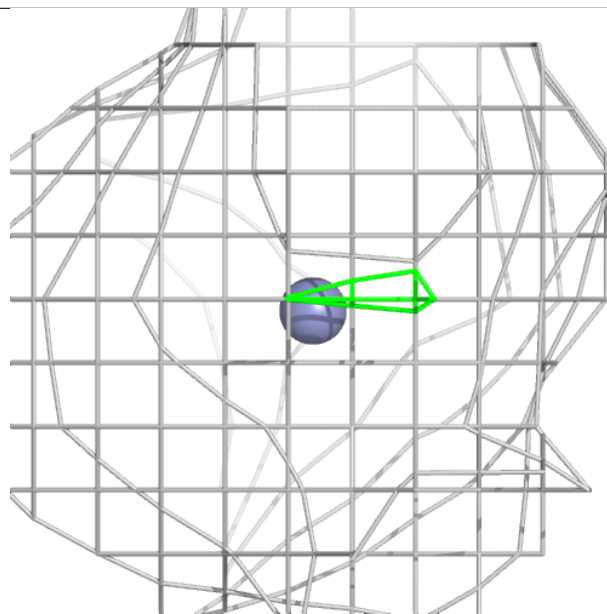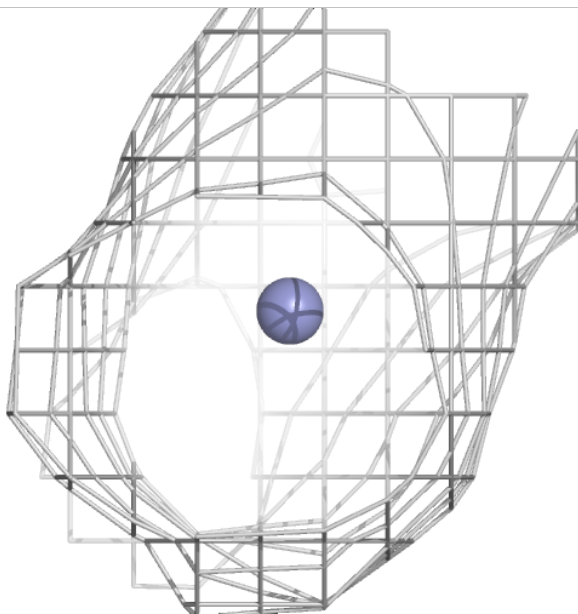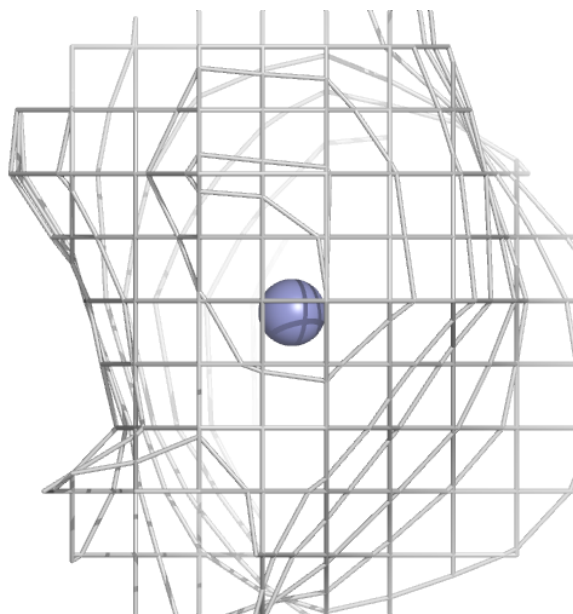
Electron density around ZN H 1002:

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

Electron density around ZN C 1002:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
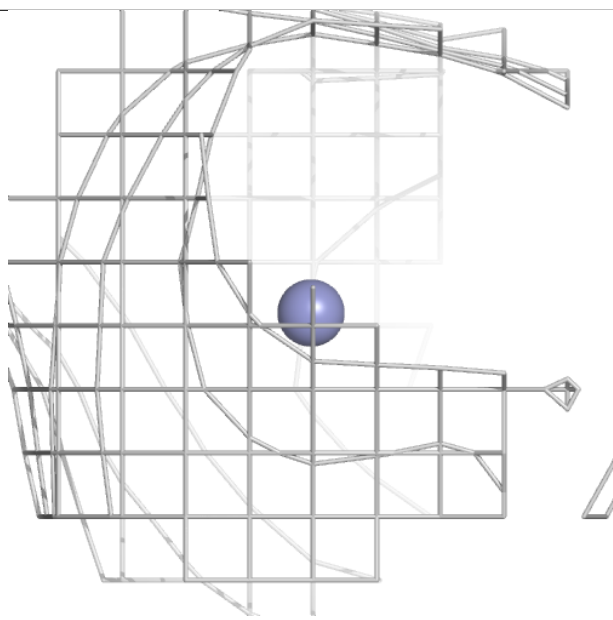and green (positive)
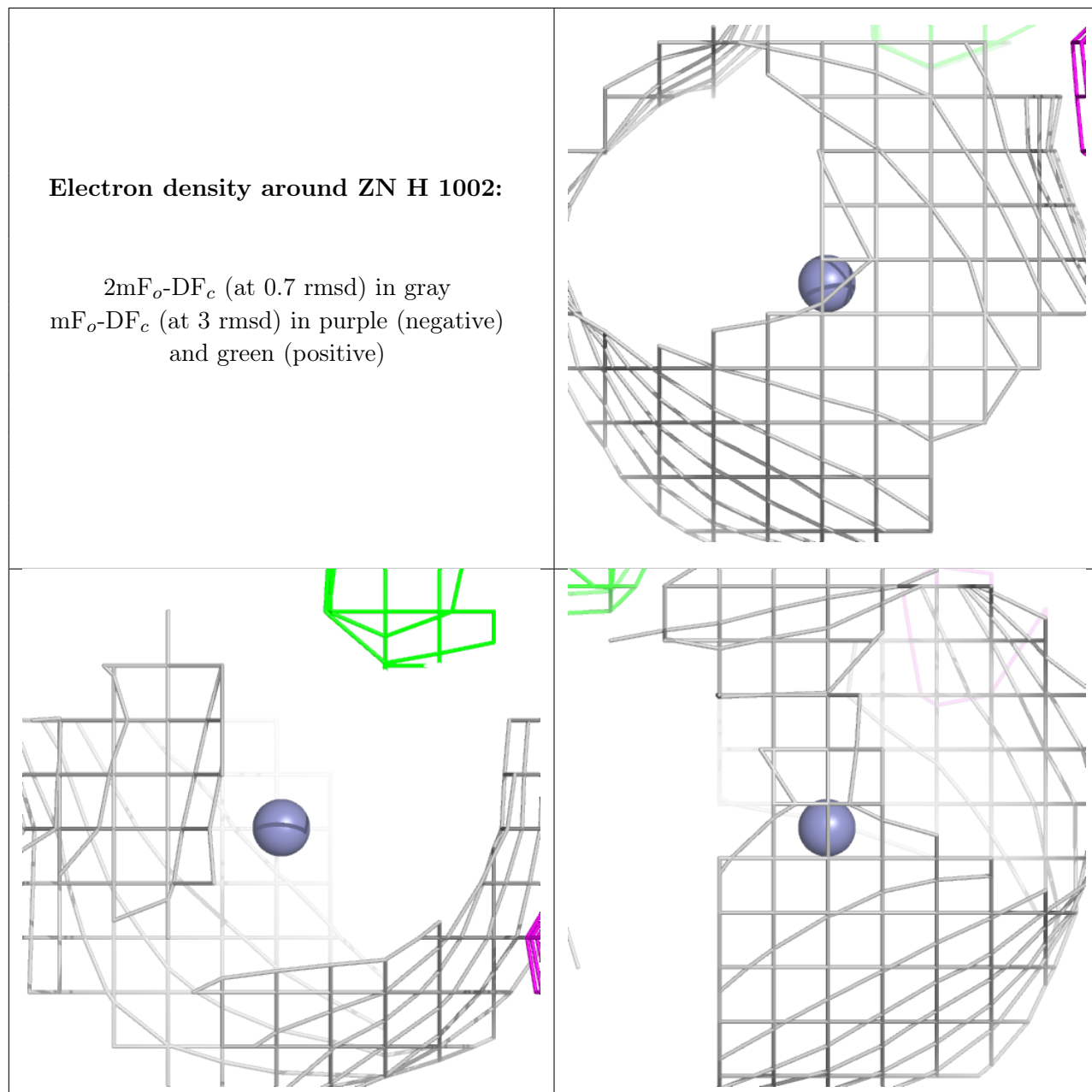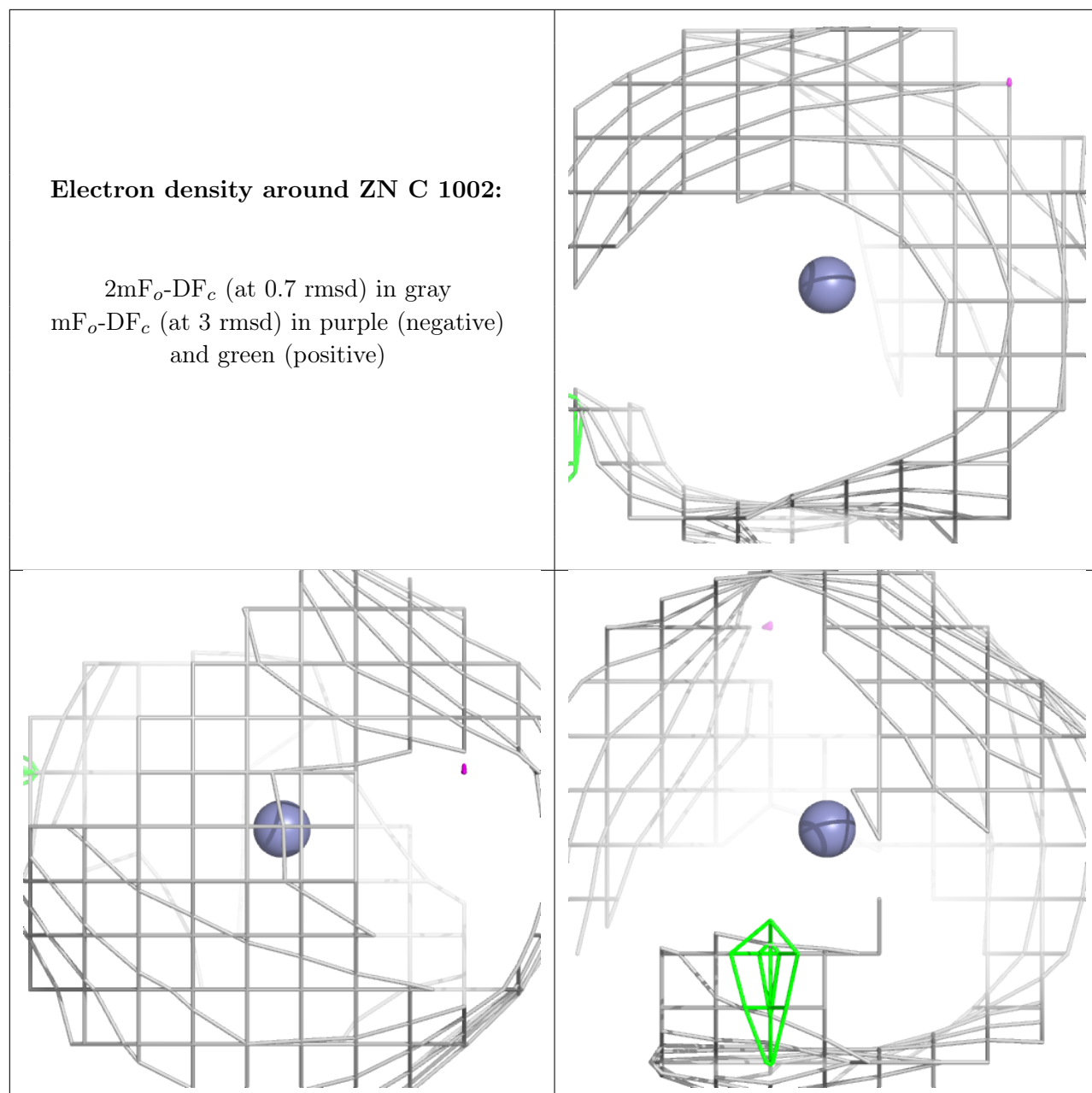
Electron density around ZN E 1001:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)
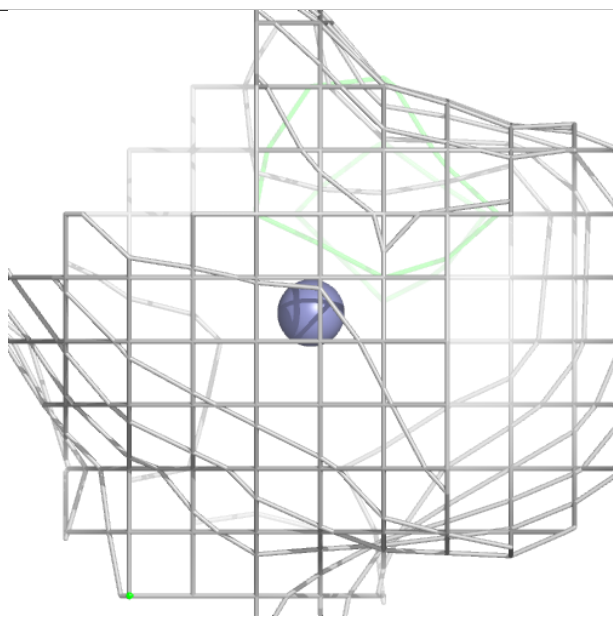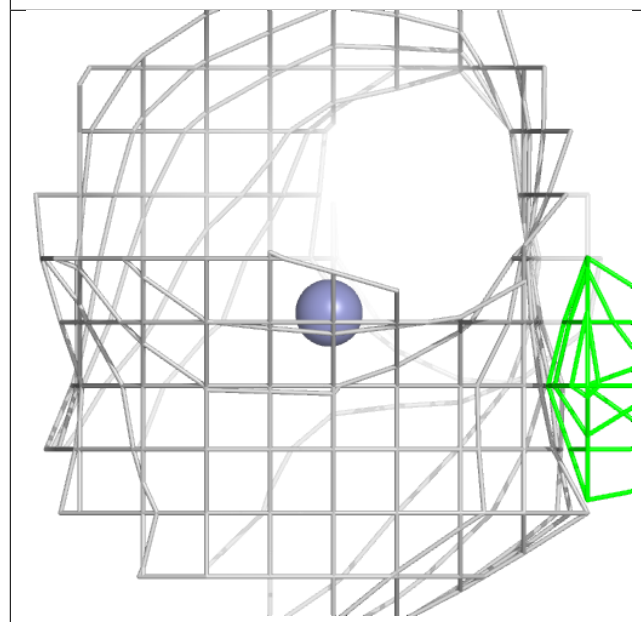
Electron density around ZN F 1002:

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

Electron density around ZN E 1002:

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

Electron density around ZN G 1002:

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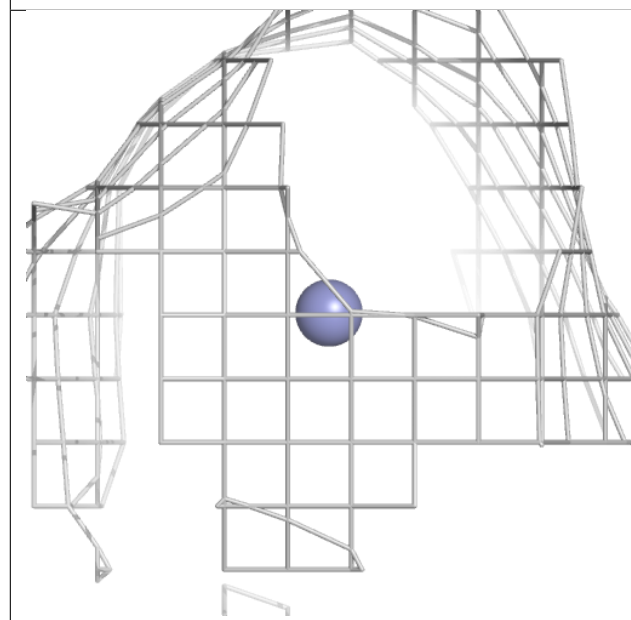$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
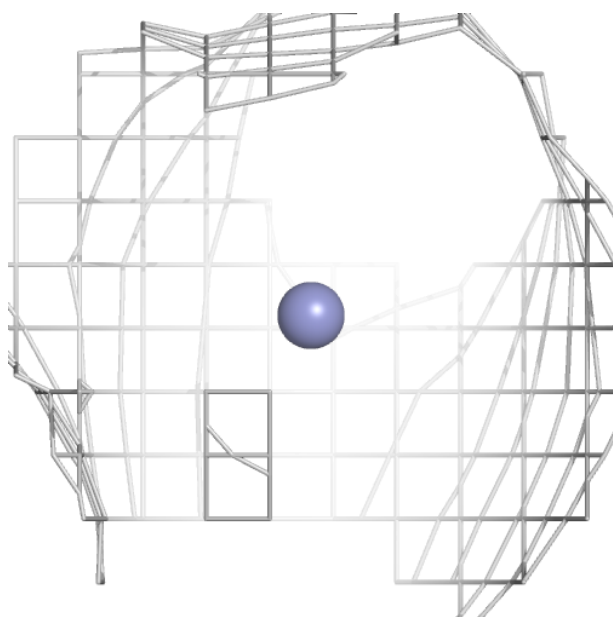and green (positive)

Electron density around ZN D 1001:

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

Electron density around ZN J 1002:

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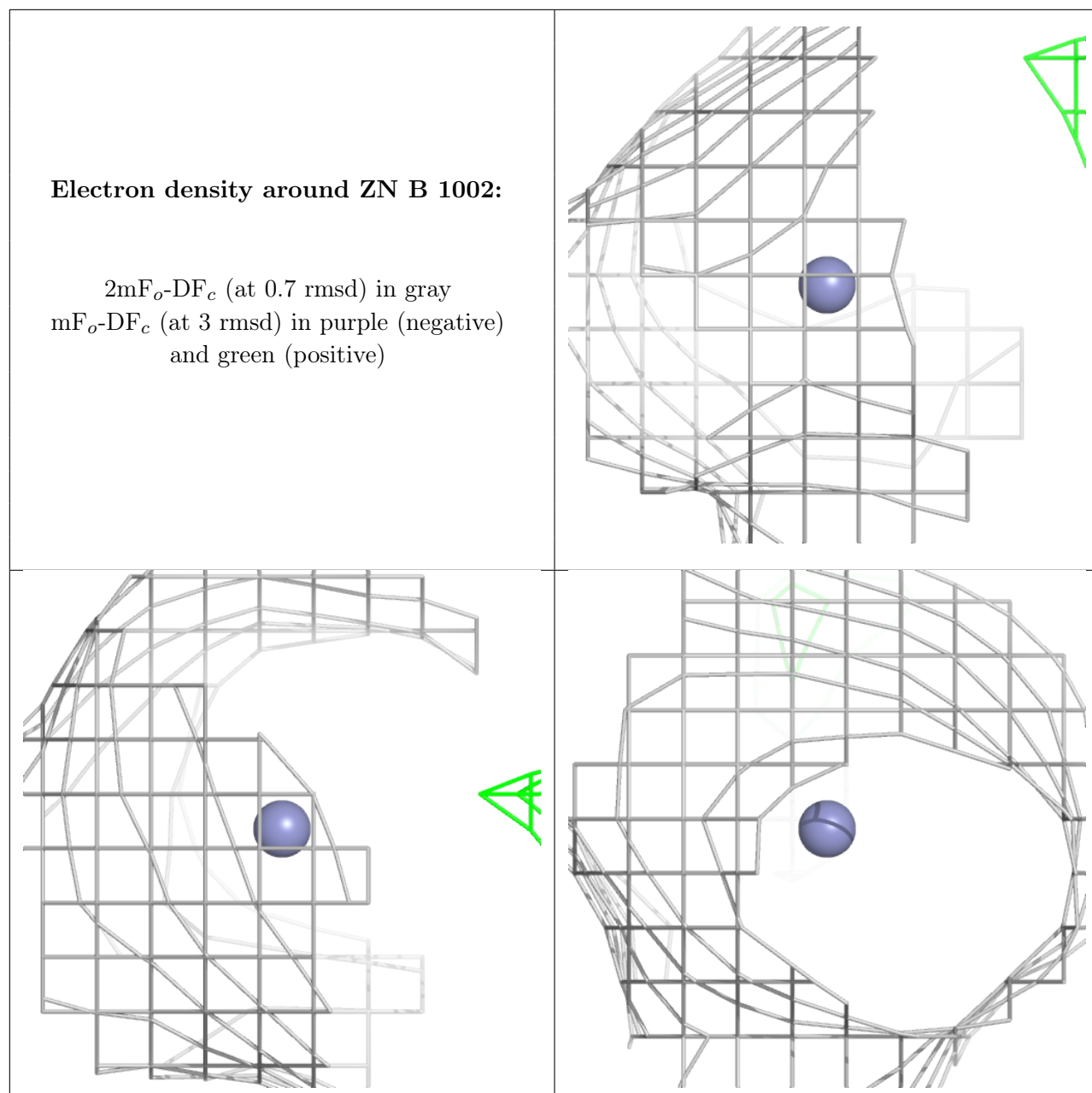and green (positive)

Electron density around ZN I 1001:

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

Electron density around ZN D 1002:

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

Electron density around ZN B 1002:

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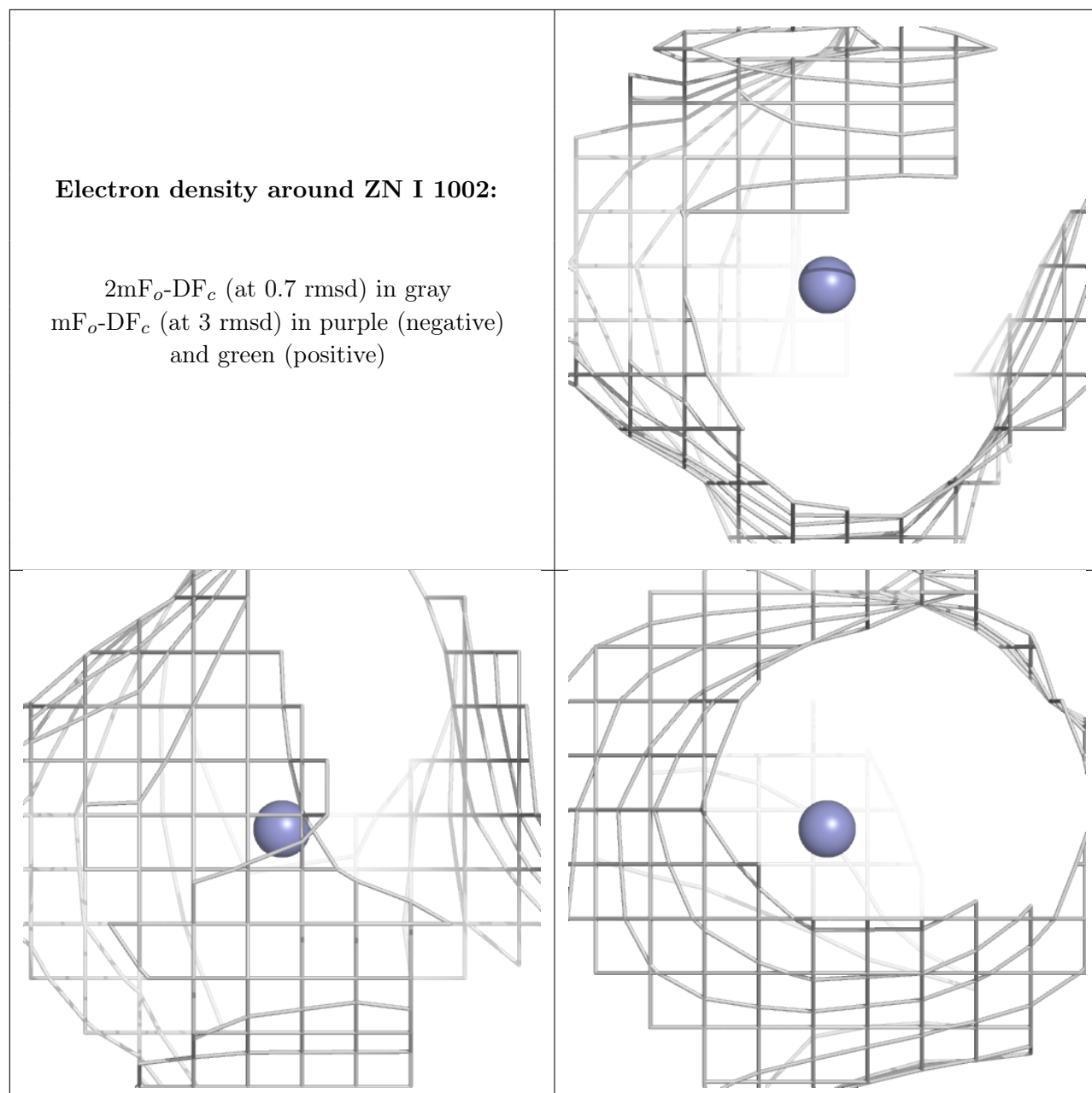$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around ZN I 1002:

$2mF_o$-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.