



wwPDB EM Validation Summary Report ⓘ

Oct 22, 2024 – 05:07 pm BST

EMDB ID : EMD-51423
Title : Tomogram of pyrenoid of *T. pseudonana* Shell4 knock-out
Authors : Demulder, M.; Engel, B.
Deposited on : 2024-08-25
Resolution : Not provided

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMTomogramValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

EMDB validation analysis : 0.0.1.dev113
Validation Pipeline (wwPDB-VP) : 2.39

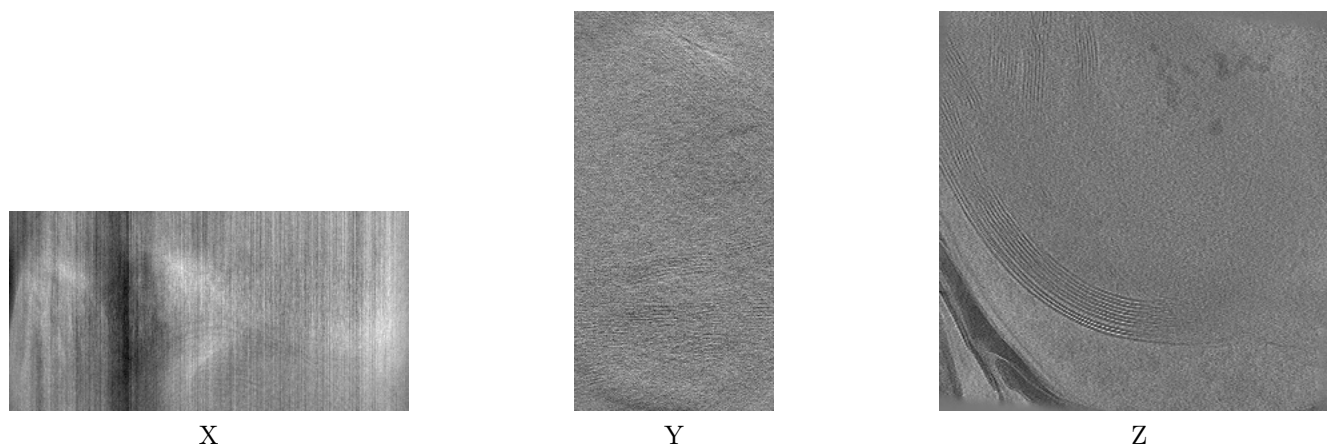
1 Experimental information

Property	Value	Source
EM reconstruction method	TOMOGRAPHY	Depositor
Imposed symmetry	Not Provided	
Number of tilted images used	60	Depositor
Resolution determination method	Not provided	
CTF correction method	Not provided	
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	2.0	Depositor
Minimum defocus (nm)	0.003	Depositor
Maximum defocus (nm)	0.003	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum voxel value	1.800	Depositor
Minimum voxel value	-1.882	Depositor
Average voxel value	0.030	Depositor
Voxel value standard deviation	0.235	Depositor
Recommended contour level	Not applicable	
Tomogram size (\AA)	9748.48, 9748.48, 4874.24	wwPDB
Tomogram dimensions	1024, 1024, 512	wwPDB
Tomogram angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Grid spacing (\AA)	9.52, 9.52, 9.52	Depositor

2 Tomogram visualisation [i](#)

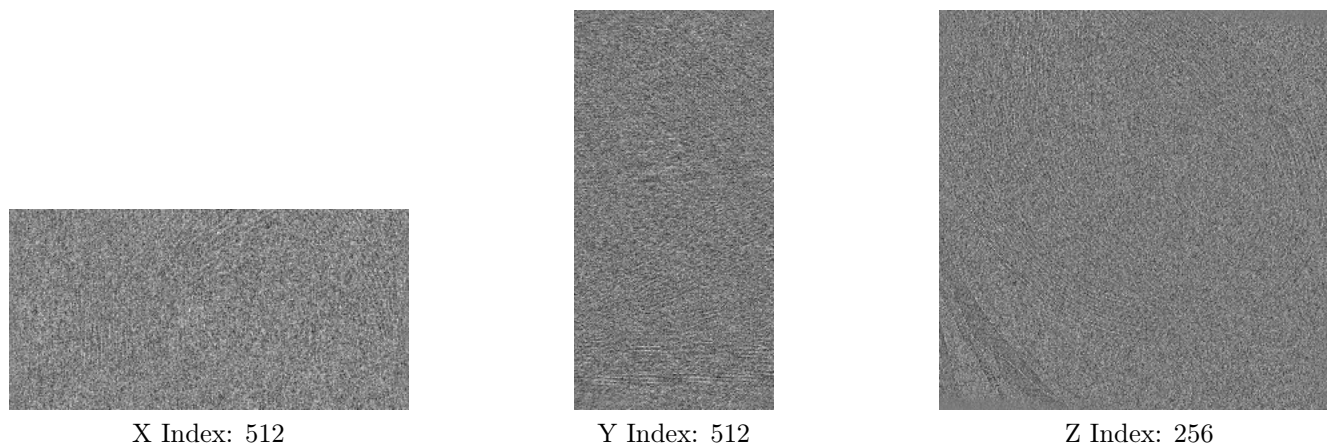
This section contains visualisations of the EMDB entry EMD-51423. These allow visual inspection of the internal detail of the tomogram and identification of artifacts.

2.1 Orthogonal projections [i](#)



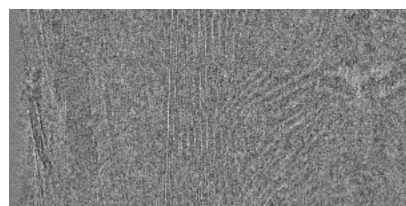
The images above show the tomogram projected in three orthogonal directions.

2.2 Central slices [i](#)

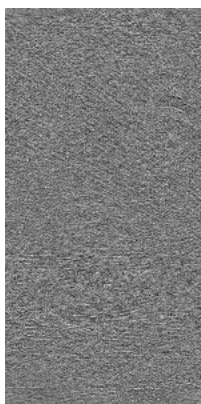


The images above show central slices of the tomogram in three orthogonal directions.

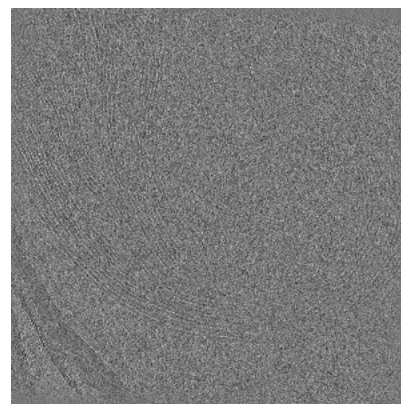
2.3 Largest variance slices [i](#)



X Index: 143



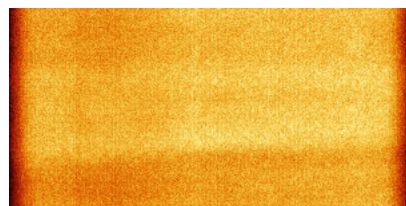
Y Index: 900



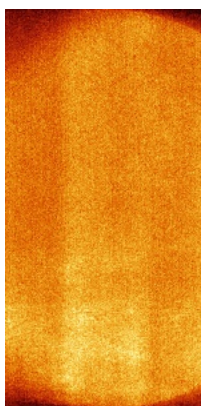
Z Index: 173

The images above show the largest variance slices of the tomogram in three orthogonal directions.

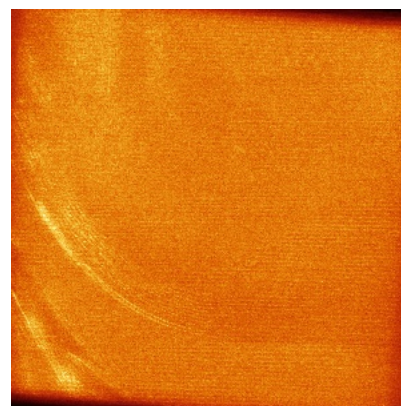
2.4 Orthogonal standard-deviation projections (False-color) [i](#)



X



Y



Z

The images above show the tomogram projected in three orthogonal directions.

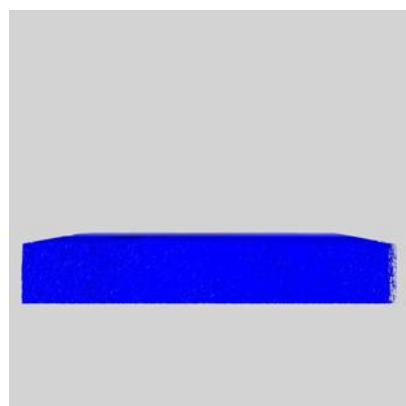
2.5 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

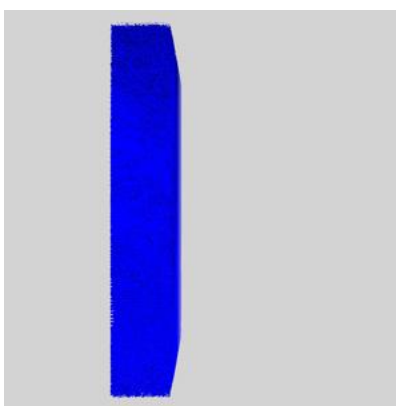
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

2.5.1 emd_51423_msk_1.map [i](#)



X



Y

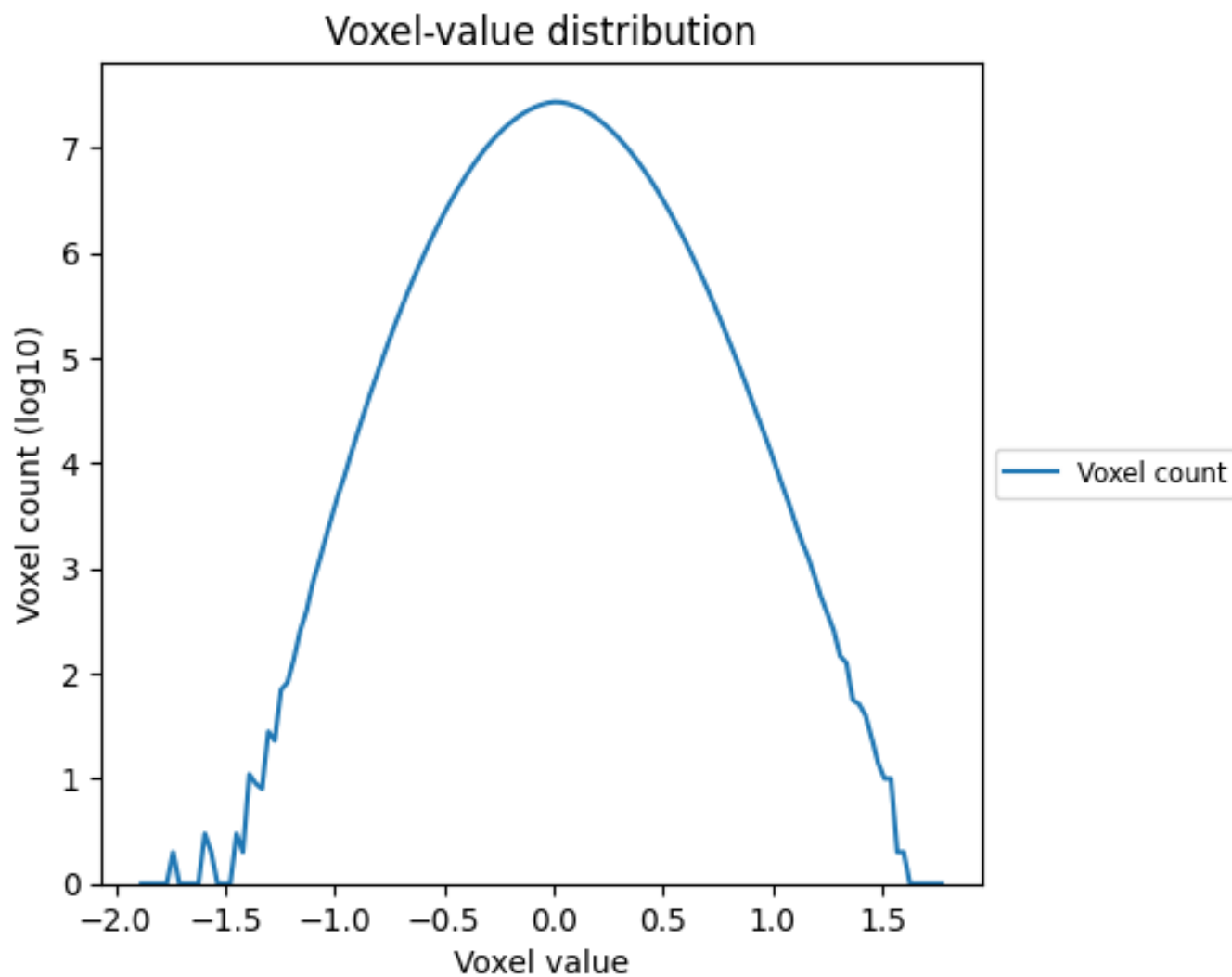


Z

3 Tomogram analysis [i](#)

This section contains the results of statistical analysis of the tomogram.

3.1 Voxel-value distribution [i](#)



The voxel-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic.