



## Full wwPDB EM Validation Report ⓘ

Aug 22, 2023 – 10:02 AM EDT

EMDB ID : EMD-28679  
Title : Single-Molecule 3D Image of 16 Helix RNA Origami Satellite by Individual Particle Electron Tomography (No. 11)  
Authors : Liu, J.; Ren, G.  
Deposited on : 2022-10-26  
Resolution : 23.00 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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.dev50  
Validation Pipeline (wwPDB-VP) : 2.35

# 1 Experimental information

Property	Value	Source
EM reconstruction method	TOMOGRAPHY	Depositor
Imposed symmetry	Not Provided	
Number of tilted images used	11	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Not provided	
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	6.2	Depositor
Minimum defocus (nm)	2.0	Depositor
Maximum defocus (nm)	3.0	Depositor
Magnification	42000.0	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum voxel value	3.123	Depositor
Minimum voxel value	-0.536	Depositor
Average voxel value	0.029	Depositor
Voxel value standard deviation	0.173	Depositor
Recommended contour level	Not applicable	
Tomogram size ( $\text{\AA}$ )	537.6, 537.6, 537.6	wwPDB
Tomogram dimensions	256, 256, 256	wwPDB
Tomogram angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Grid spacing ( $\text{\AA}$ )	2.1, 2.1, 2.1	Depositor

## 2 Tomogram visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-28679. These allow visual inspection of the internal detail of the tomogram and identification of artifacts.

### 2.1 Orthogonal projections [i](#)



X



Y



Z

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

### 2.2 Central slices [i](#)



X Index: 128



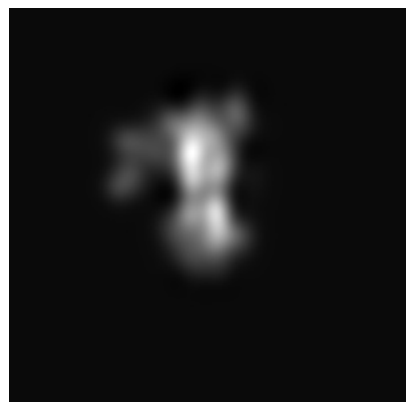
Y Index: 128



Z Index: 128

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

## 2.3 Largest variance slices [i](#)



X Index: 121



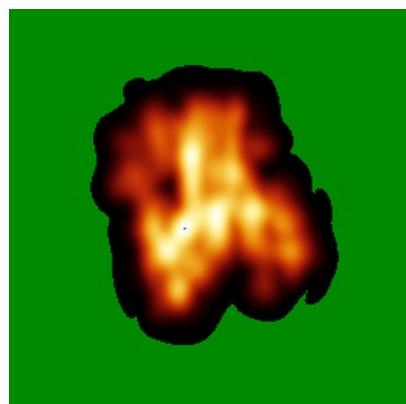
Y Index: 116



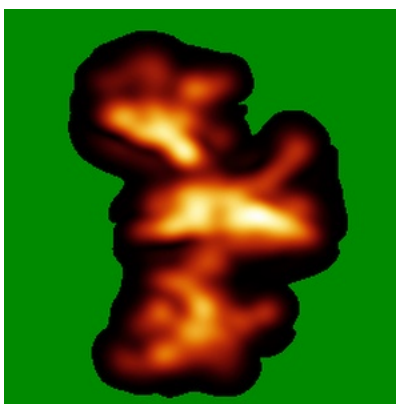
Z Index: 120

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

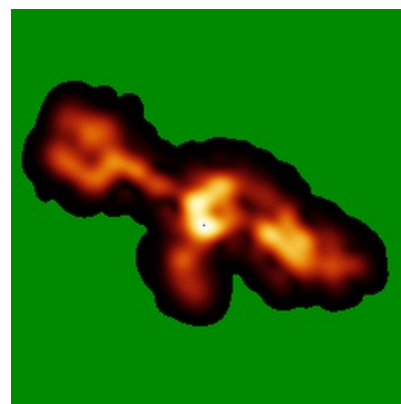
## 2.4 Orthogonal standard-deviation projections (False-color) [i](#)



X



Y



Z

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

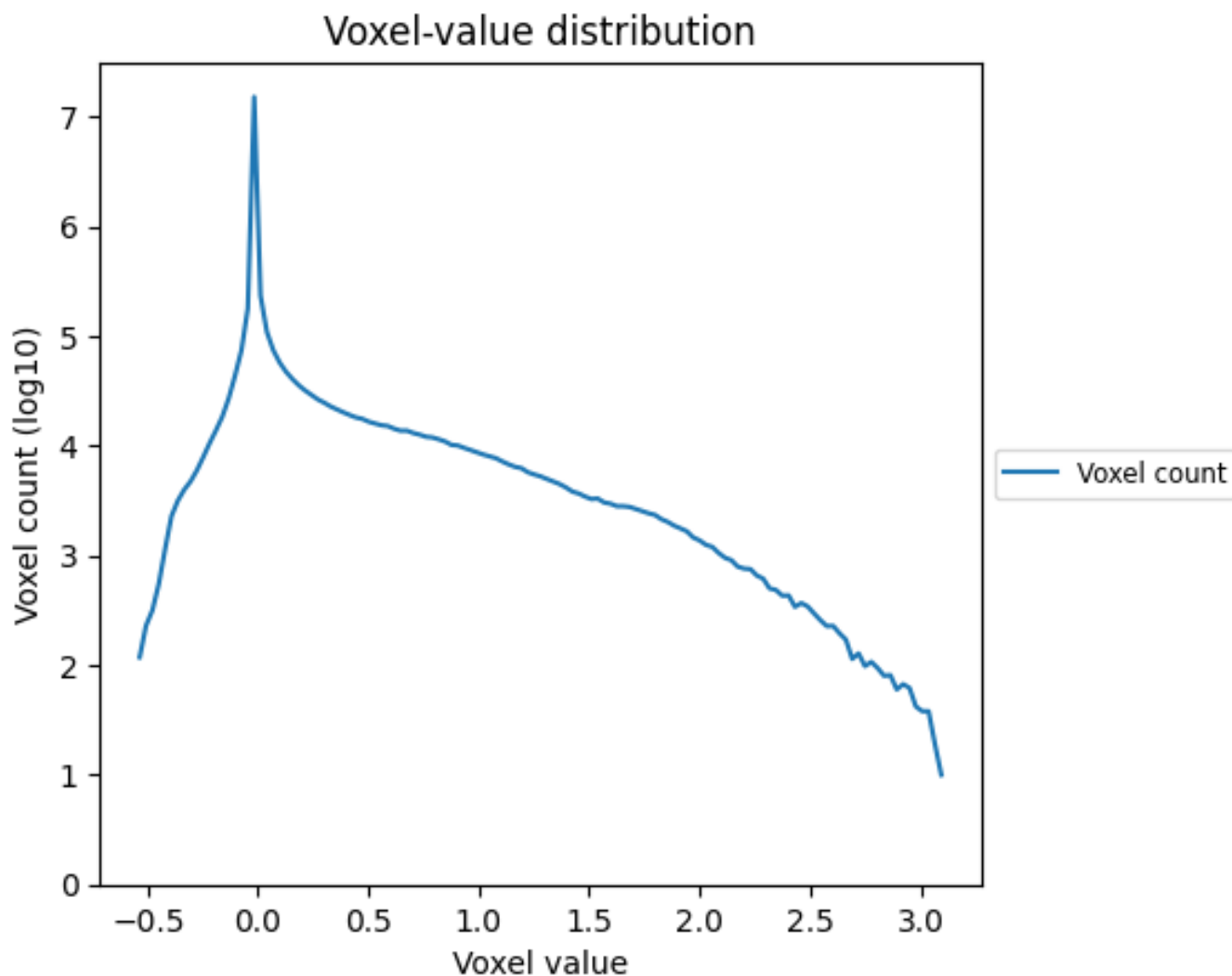
## 2.5 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

### 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.