James Webb - Carina Nebula - Lithophane 110x110mm

Bubbleology

VIEW IN BROWSER

updated 15. 7. 2022 | published 15. 7. 2022

Summary

A Lithophane print depicting the Carina Nebula captured by the James Webb Telescope.

4.46 hrs	1 pcs	0.20 mm	0.40 mm	PLA	27 g	Prusa MK3/S/S+

Art & Design > Other Art & Designs

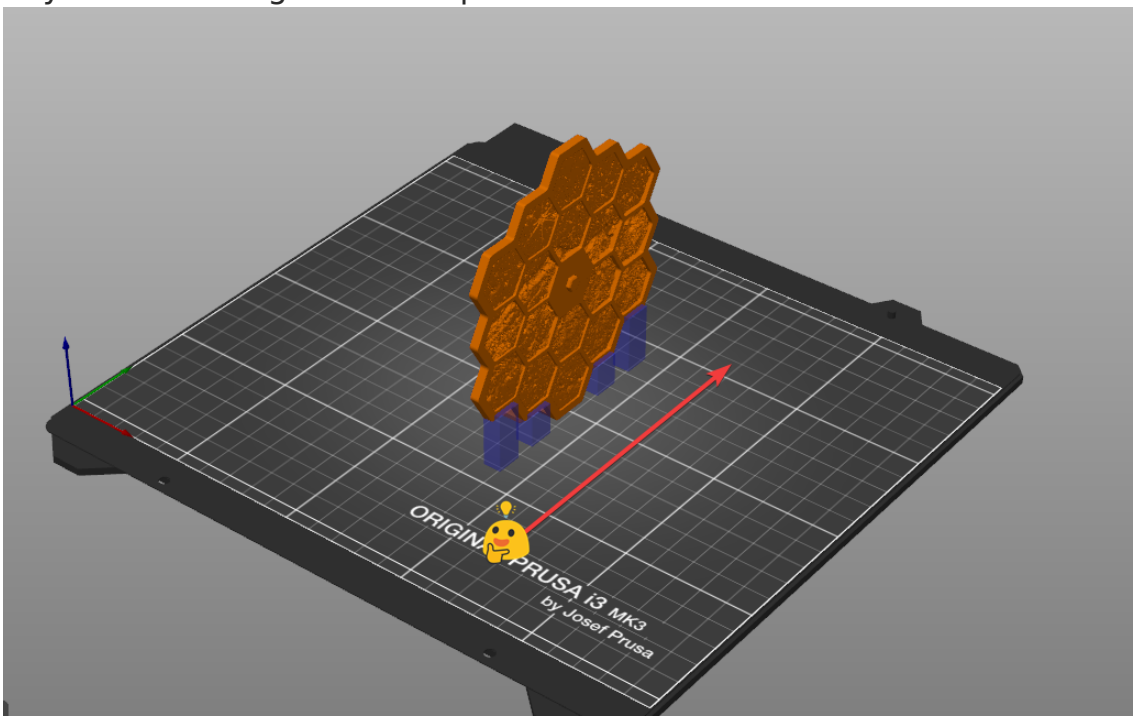
Tags: lithophane galaxy jameswebb jameswebblitophane carinanebula jameswebbtelescope

A Lithophane in the size of 110 x 110 mm depicting the **Carina Nebula** that was captured with the **James Webb Telescope**. The Image of the Carina Nebula is framed in a hexagon grid resembling the James Webb Telescope.

It consists of two parts and is a very easy and relatively fast print. It can be put on a desk with a light source behind to illuminate the Lithophane.

Instruction

1. Download the Lithophane and the Grid.
2. Load the Lithophane in your prefered slicer.
3. In your slicer: align the Lithophane model with the **Y-Axis**



   this ensures minimal movement of your printer head which moves along the X-Axis, causing less vibration and resulting in a cleaner print and faster print time.
4. In your slicer: add four modifier blocks for the supports and enable "**For support enforcer only**" (s. image above).
   optional: activate a brim in case you have doubts with your bed adhesion
5. Slice and print your Lithophane
6. Print the Grid seperately
7. Assemble the Lithophane and the Grid, depending on your printer some post-processing might be necessary to align them porperly. If everything fits you can glue the two parts together.

Specifications

The Lithophane has the following dimension

- Length: 108.6 mm
- Width: 100.1 mm
- Depth: 5.6 mm

and the base holding the Lithophane upright has a dimension of

- Length: 34 mm

- Width: 25 mm
- Thickness: 3 mm

Print Settings

- Infill: 15-20% Gyroid
- Perimeters: 2-3
- Layer height: 0.20mm (you can do 0.10 - 0.15 for more details if you want)
- Supports: on enforcer only

Inspiration

The Lithophane is directly inspired by the James Webb Telescope and its captured image of the Carina Nebula.
The Carina Nebula is a complex area of bright and dark nebulosity in the constellation Carina, located in the Carina–Sagittarius Arm of the Milky Way galaxy. The nebula is approximately 8,500 light-years from Earth (Source: Wiki).
Reference Image (Source: NASA)

Model files

carina_nebula_110x110mm.stl

To be printed seperately

hexagon_grid.stl

To be printed seperately to be put on top of the Lithophane

carina_nebula_110x110mm_example.3mf

An example on how to align the lithophane and use modifier blocks

Print files

carina_nebula_lithophane_110x110mm.gcode

PLA 0.40 mm 0.20 mm 4.46 hrs 27 g Prusa MK3/S/S+

License

This work is licensed under a
Creative Commons (4.0 International License)

Attribution—Noncommercial—Share Alike

✖ | Sharing without ATTRIBUTION
✔ | Remix Culture allowed
✖ | Commercial Use
✖ | Free Cultural Works
✖ | Meets Open Definition