

The Rosette Nebula

The Rosette Nebula (also known as Caldwell 49) is an H II (atomic Hydrogen that is ionized) region located near one end of a giant molecular cloud in the Monoceros region of the Milky Way Galaxy (near Orion). The cluster and nebula lie at a distance of about 5,000 light-years from Earth and measure roughly 130 light years in diameter. The radiation from the young stars near the center excites the atoms in the nebula, causing them to emit radiation, which is the red color that predominates the gas in the region. The mass of the nebula is estimated to be around 10,000 solar masses.

This image is a combination of 14 hours of imaging time through an Ha/OIII filter and one hour of imaging for the RGB stars (167 x 300 sec Ha; 60x50 sec RGB). All images taken from my deck over three nights, February, 2024. The scope used is an Askar 103 APO (4 inch refractor, configured for F4). Feel free to zoom in on different parts of the image to see the details of the gas clouds.

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