

Hands-on Experience

Manipulating astronomical images
and catalogues

Günther Hasinger
Deutsches Zentrum für Astrophysik

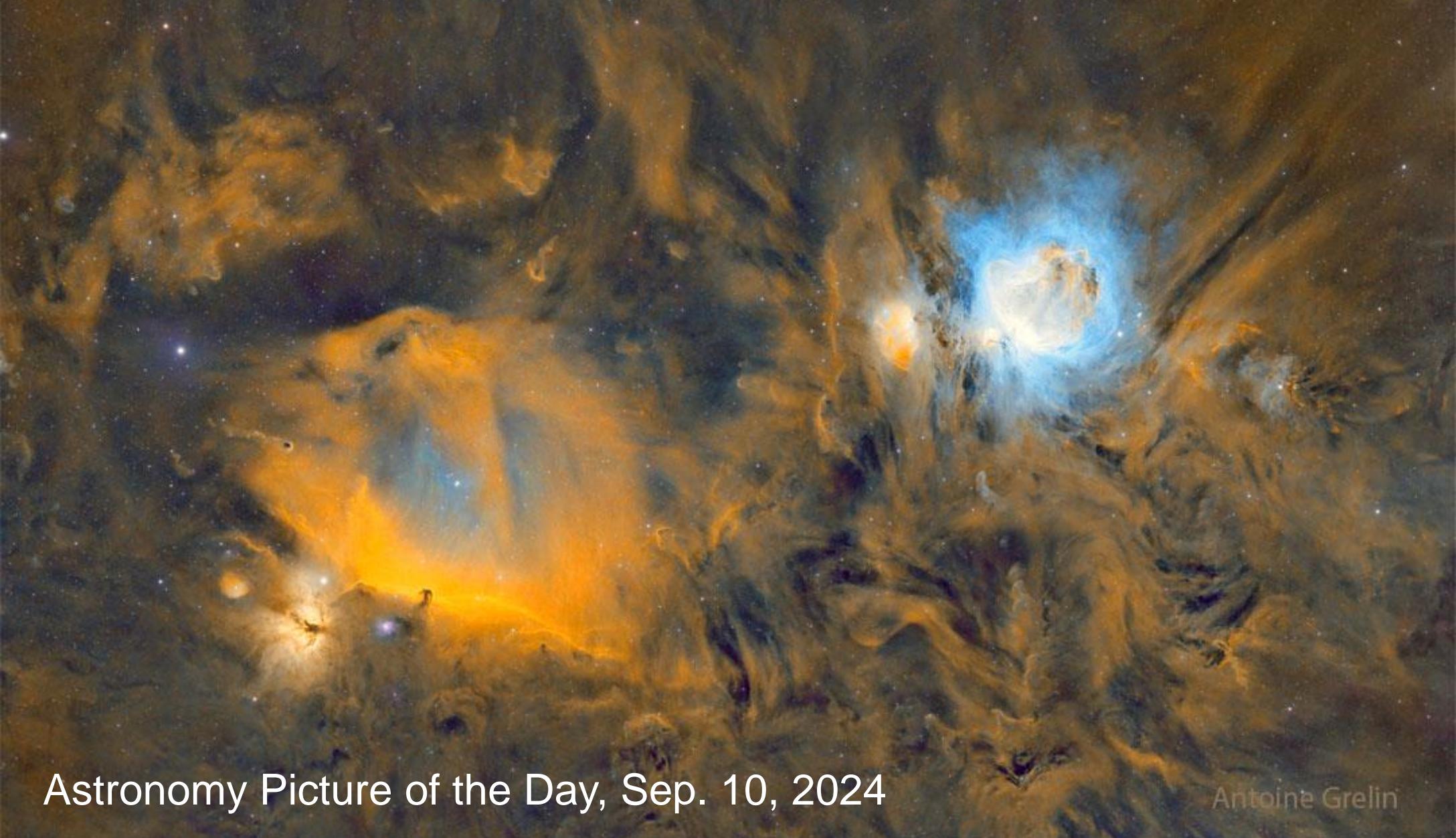
NPA Summer School
HZDR, September 11, 2024







Horsehead and Orion Nebula

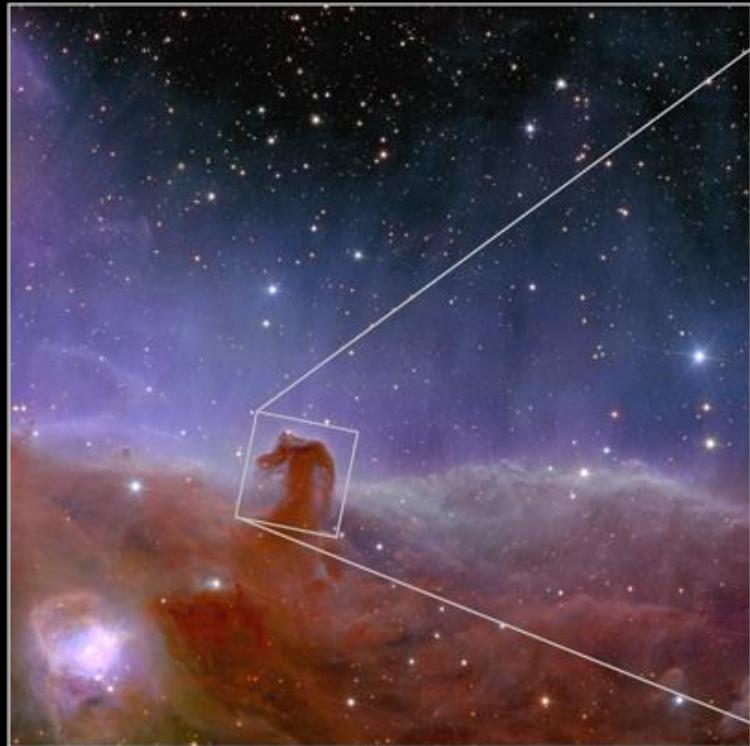


Astronomy Picture of the Day, Sep. 10, 2024

Antoine Grelin

Three images of the Horsehead Nebula

Euclid



Euclid (Visible-Infrared)

Hubble



Hubble (Infrared)

JWST



Webb (Infrared)

NASA, ESA, CSA, Karl Misselt (University of Arizona), Alain Aberget (IAS, CNRS), Mahdi Zamani The Euclid Consortium, Hubble Heritage Project (STScI, AURA)

Now let's start: sky.esa.int

The screenshot shows a user interface for a astronomical visualization tool. At the top, there are navigation and search bars. The top left displays coordinates J2000 (18 20 58.225 -13 53 10.07) and a FoV of 2.0° X 58'. The top center shows "DSS2 color". On the right, there are buttons for "Sci. Mode" (on), "En" (dropdown), "Feedback", and user icons. A search bar with placeholder "Search..." and a help icon is also present.

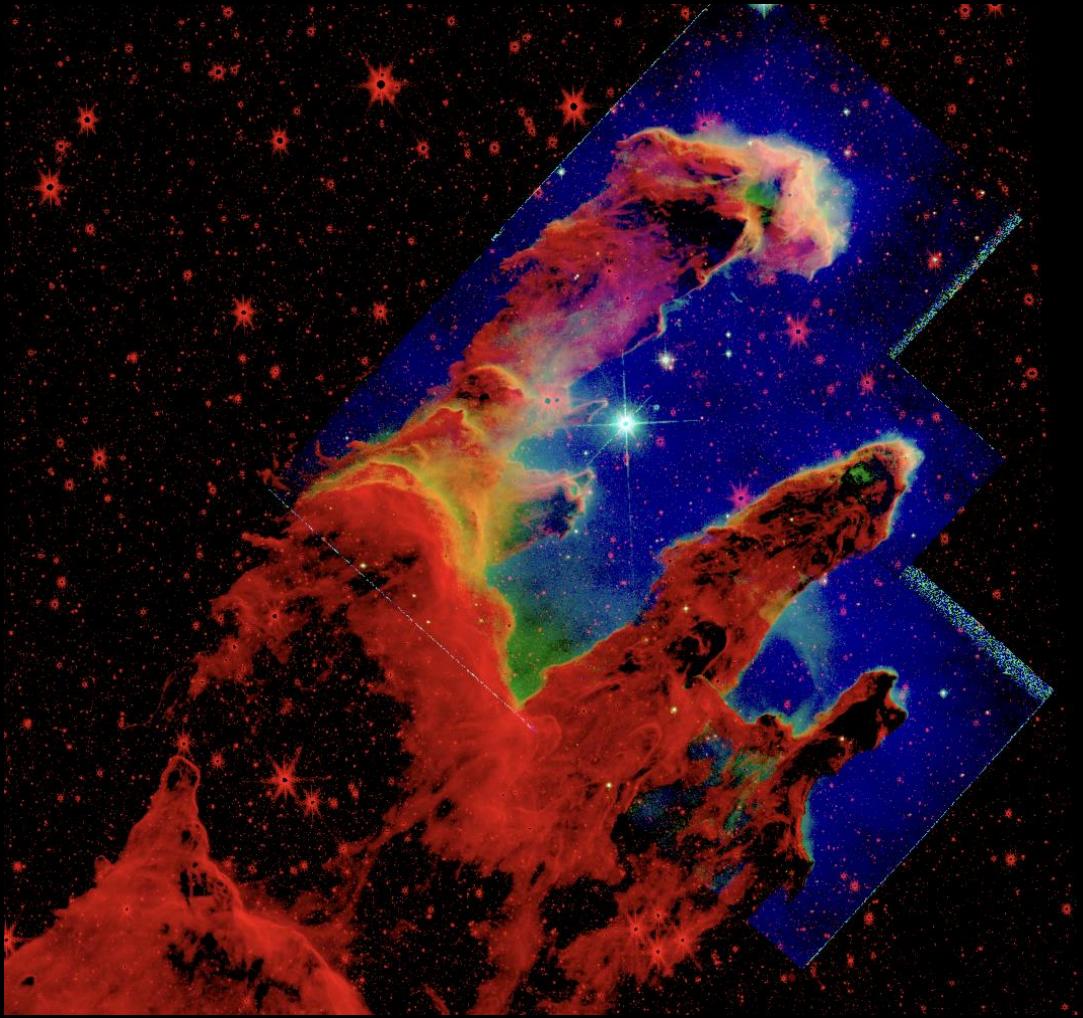
On the left side, there is a toolbar with several icons: a stack of three squares, a spiral galaxy, an elliptical galaxy, a vertical bar with a horizontal line, a circular arrow, a spiral galaxy with a central cross, a graduation cap, and a telescope. Below these are three blue buttons labeled 1759, 657, and 275, each with a small icon above it.

The main area is a star map showing a dense cluster of stars and a large, luminous nebula. In the center of the nebula, there is a small, square inset image showing a detailed view of a star-forming region with a purple crosshair overlay.

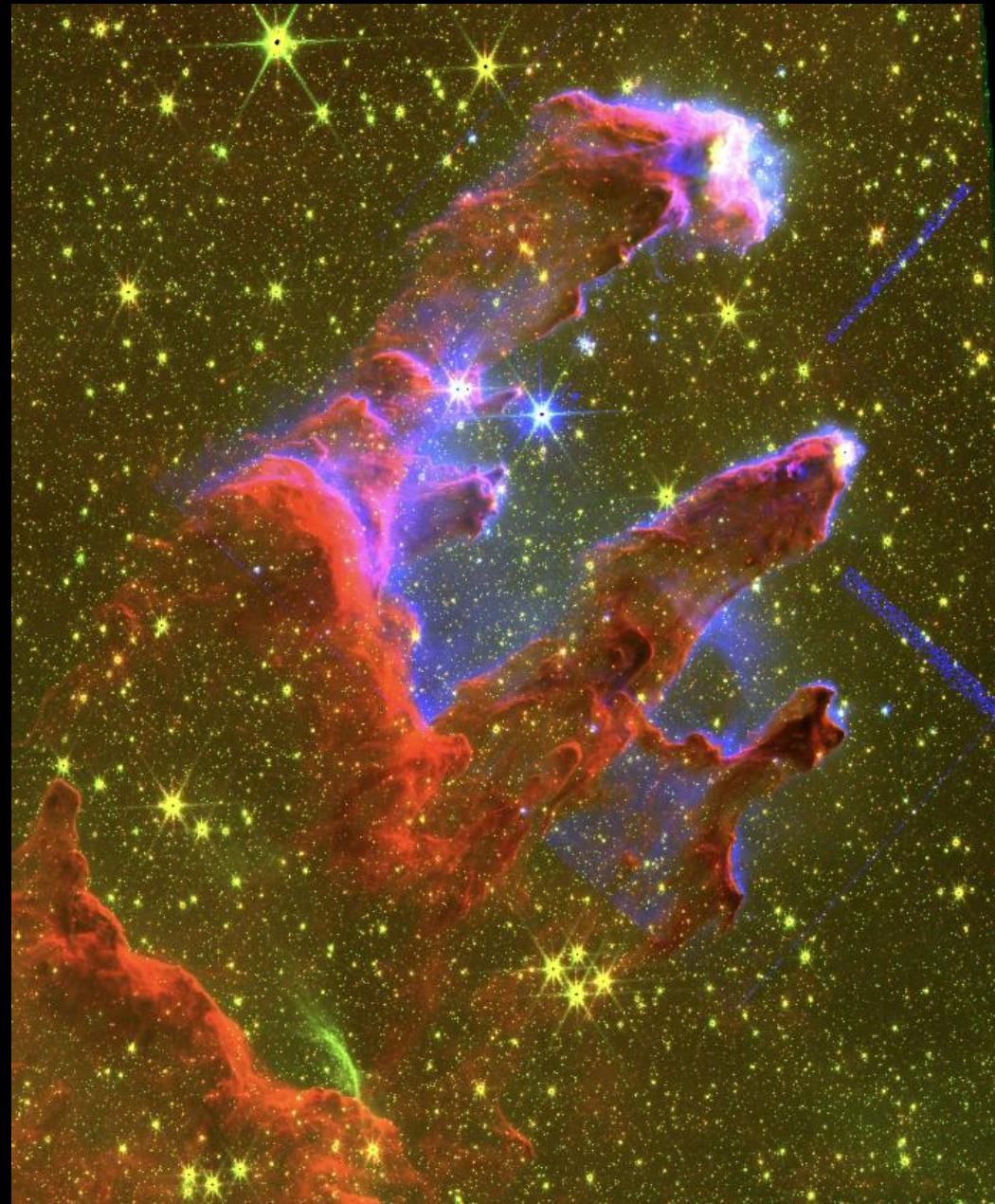
At the bottom, there is a slider labeled "Image Opacity" with a white circle on a black track. The bottom right corner features the "esa ALADIN" logo.

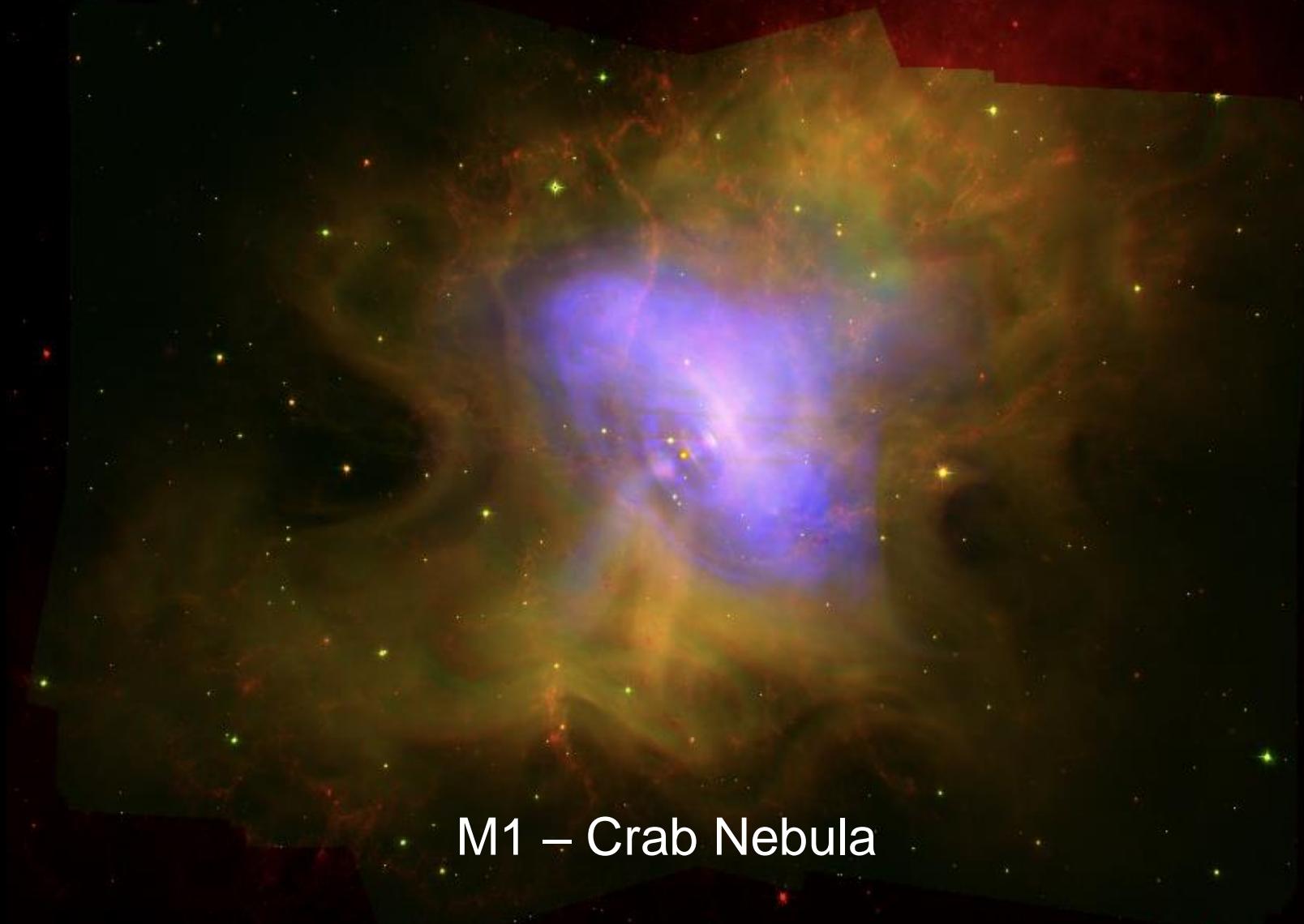
SAOImageDS9 & TopCAT



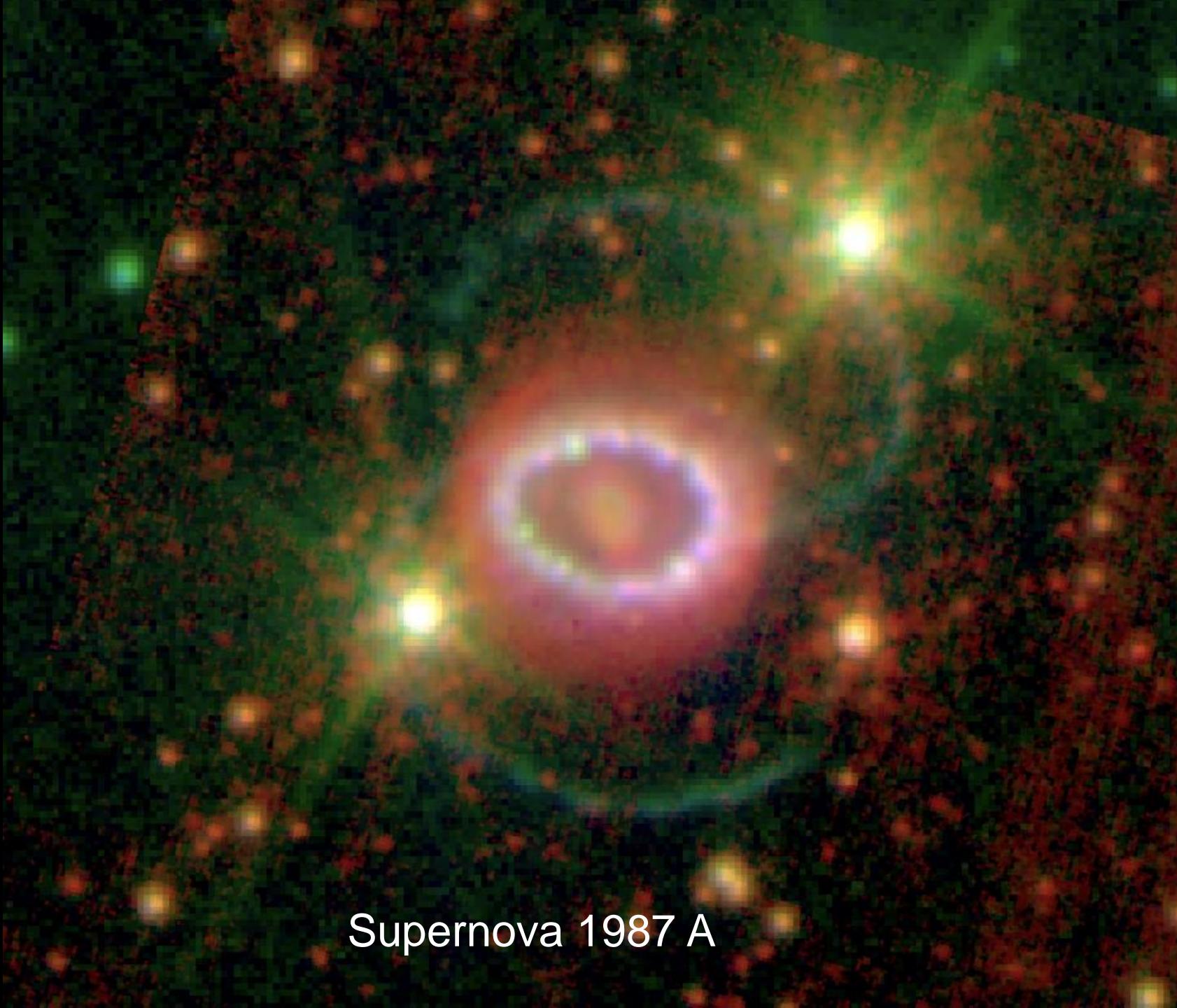


M16 – Pillars of Creation



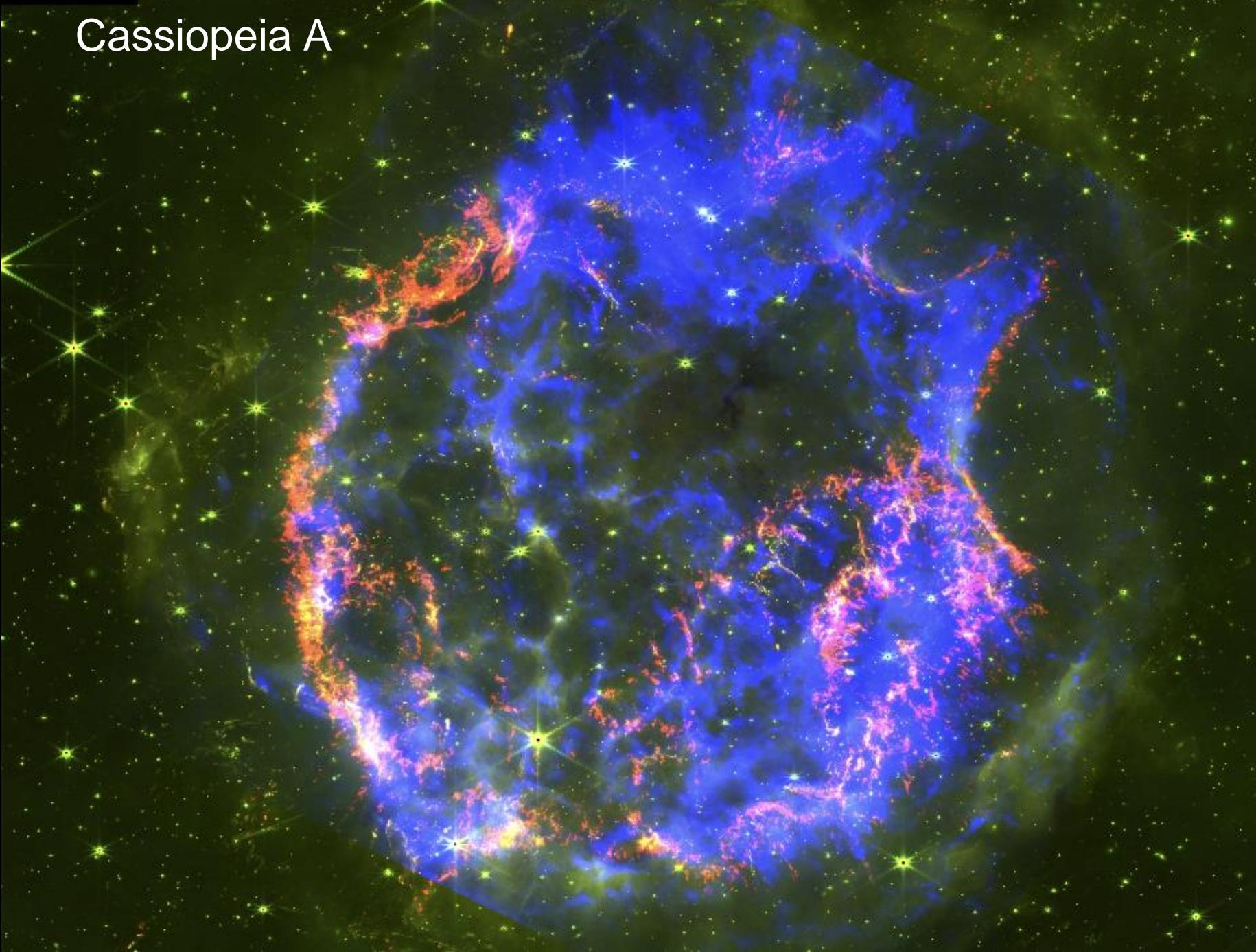


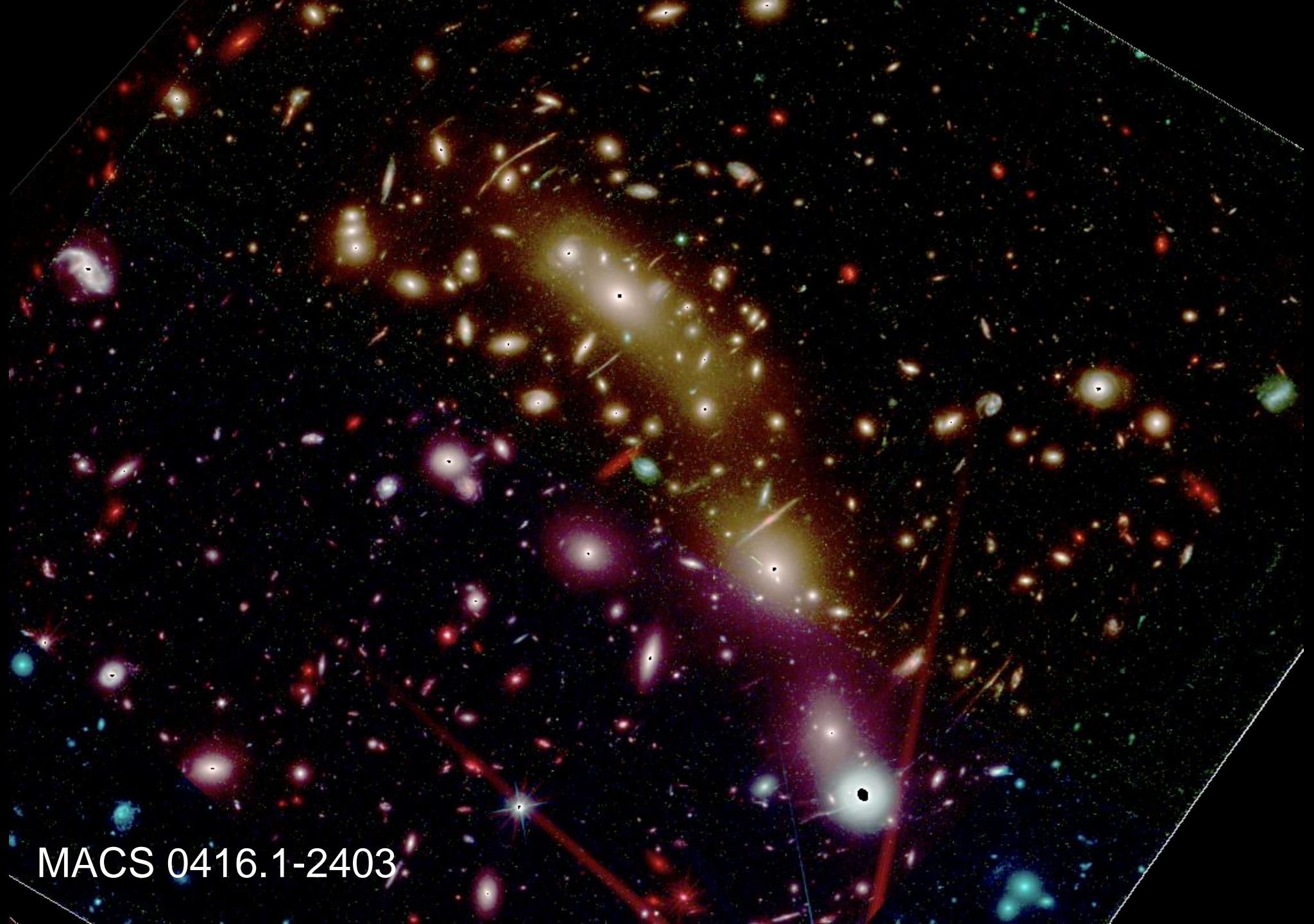
M1 – Crab Nebula



Supernova 1987 A

Cassiopeia A





MACS 0416.1-2403



Many thanks for
your attention!