

National Aeronautics and  
Space Administration



# Webb's look at the Birth and Death of Stars

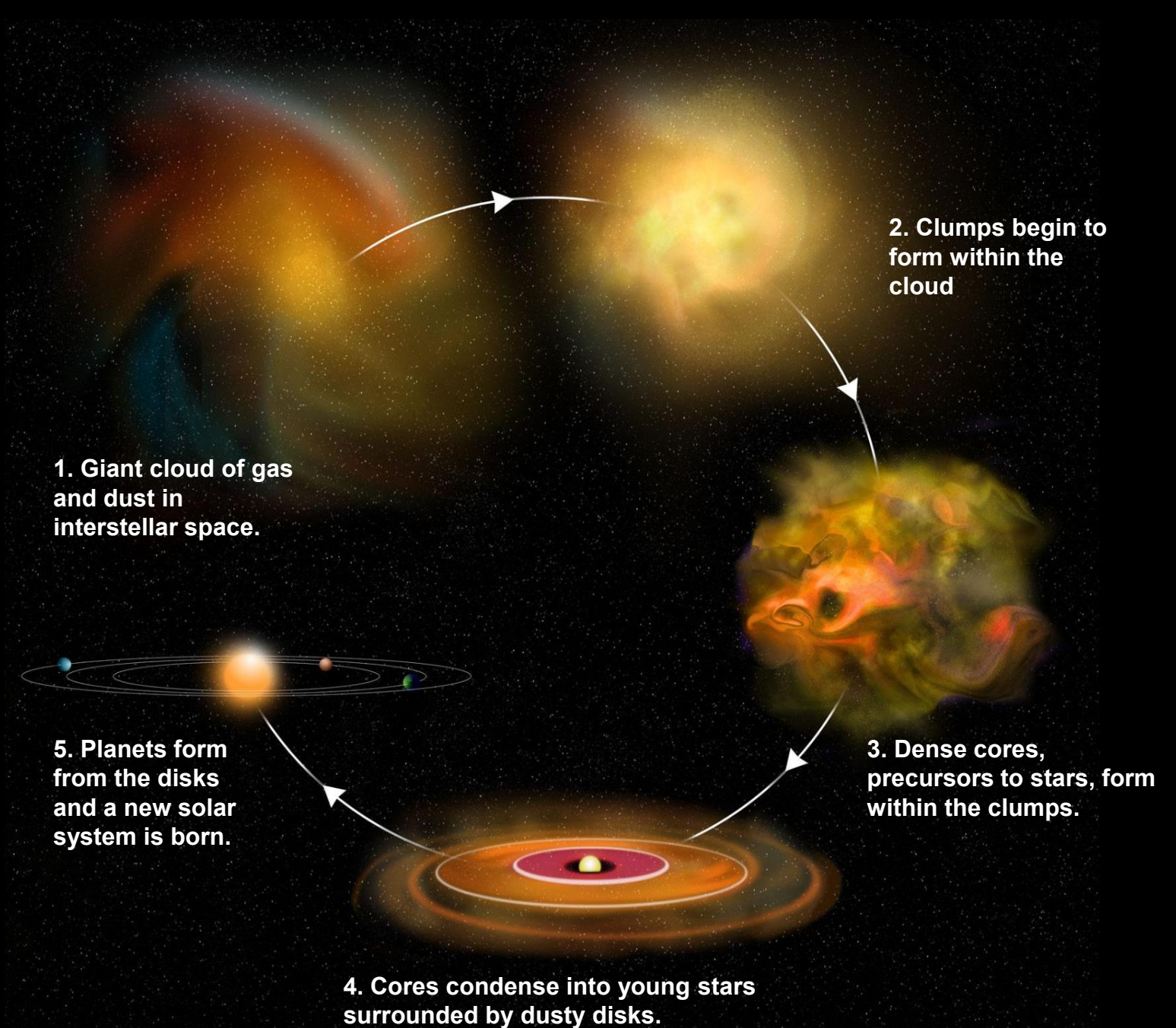
**Dr. Kelly Lepo**

Education and Outreach Scientist  
Space Telescope Science Institute

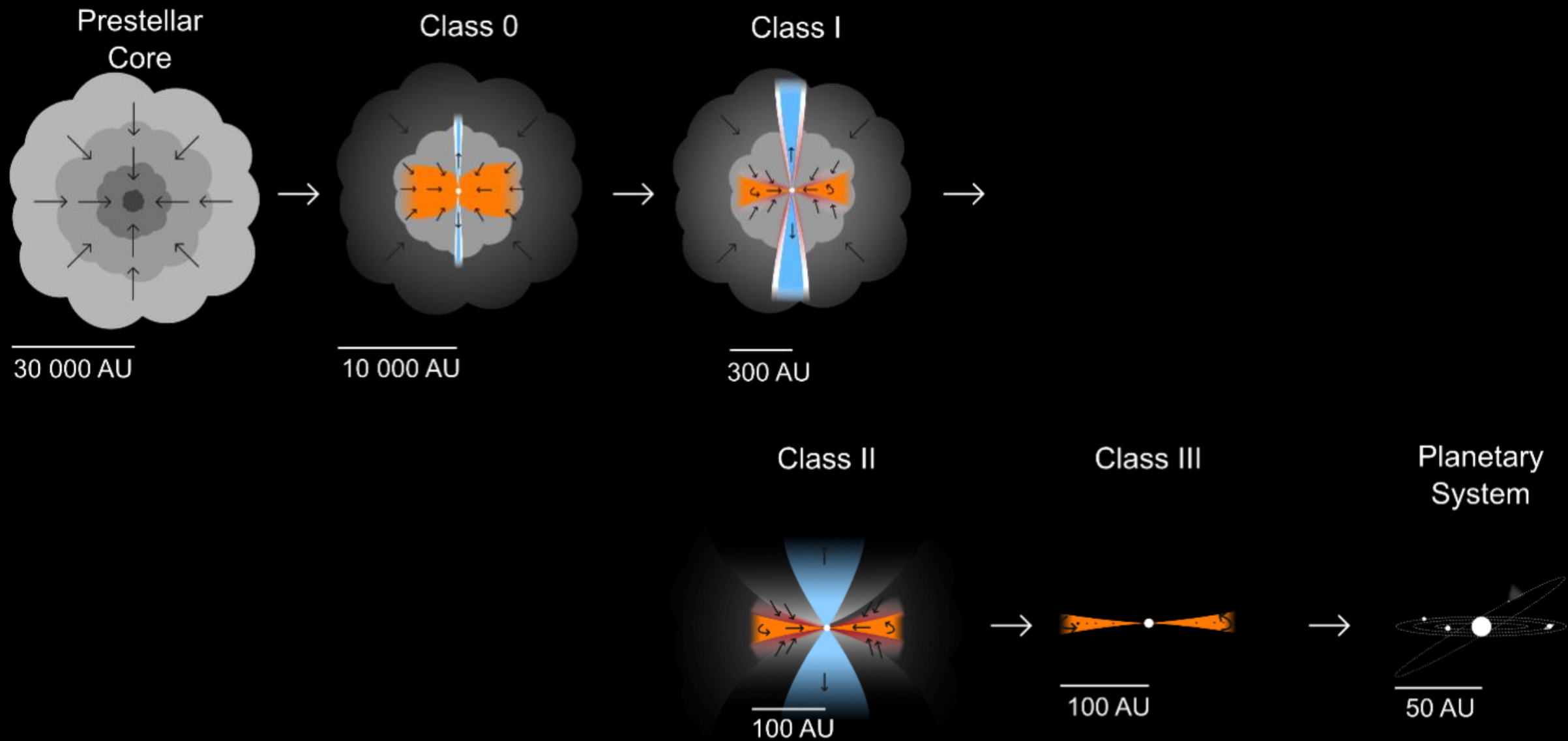


**Or Weird Star News**

# The Stages of Star Formation









# Herbig-Haro 46/47



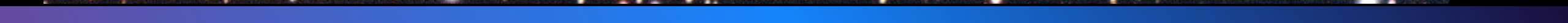
Visible Light  
ESO NTT



# Herbig-Haro 46/47

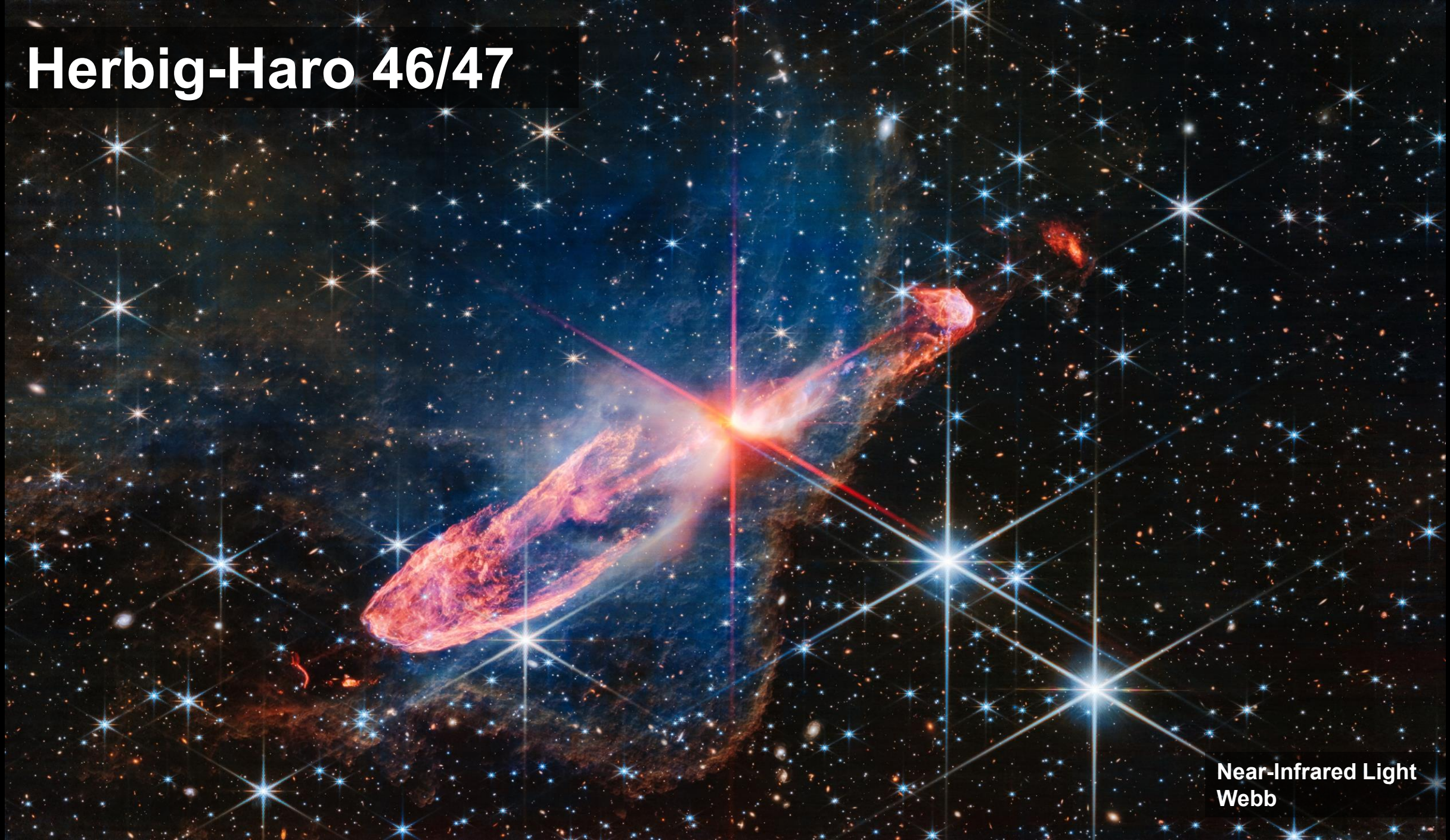
 Proto-stars

Visible Light  
ESO NTT





# Herbig-Haro 46/47



Near-Infrared Light  
Webb





Near-Infrared Light  
Webb 2023





**Near-Infrared Light**  
**Webb**

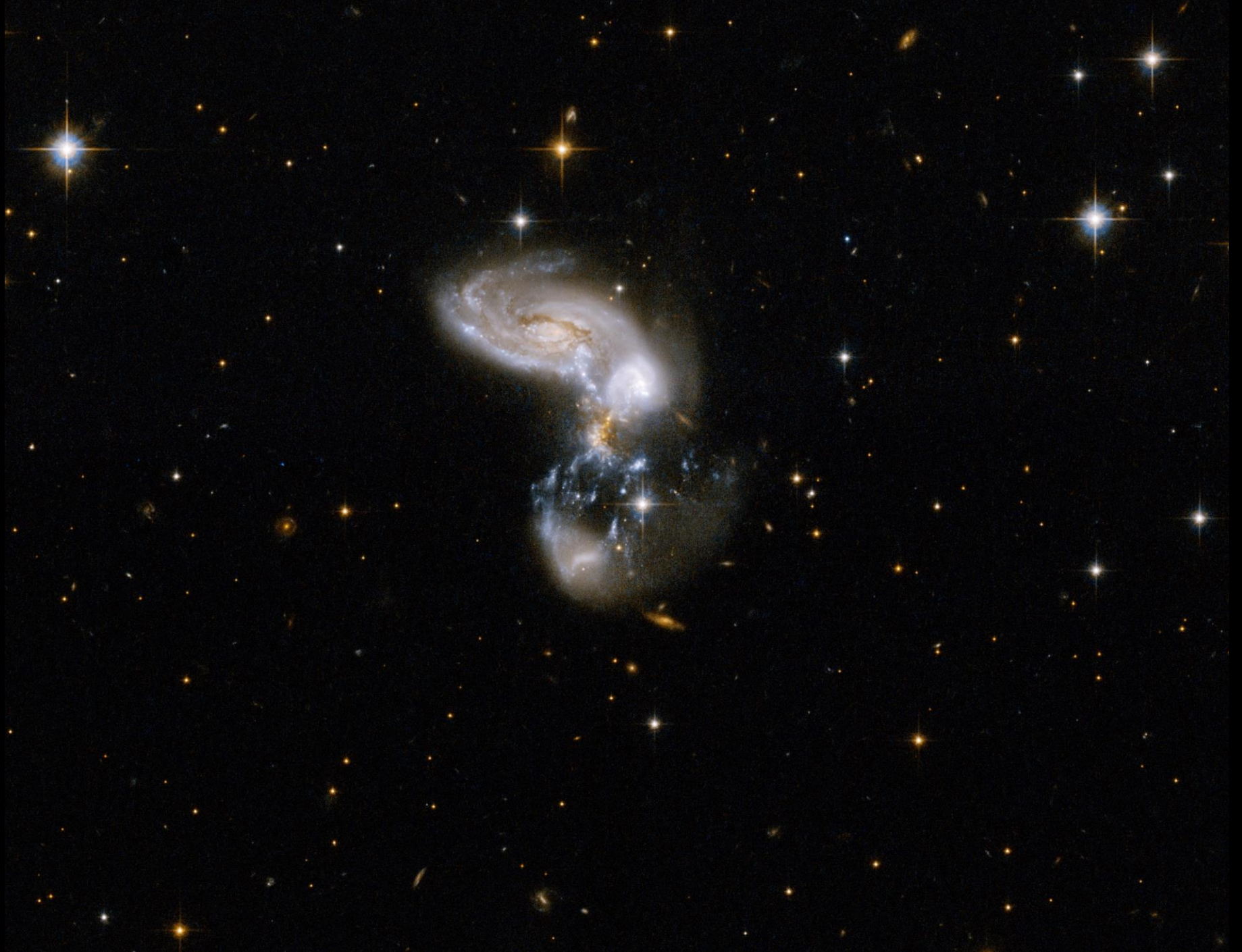




Near-Infrared Light  
Webb



# II Zw 96



Visible/Near-Infrared  
Hubble

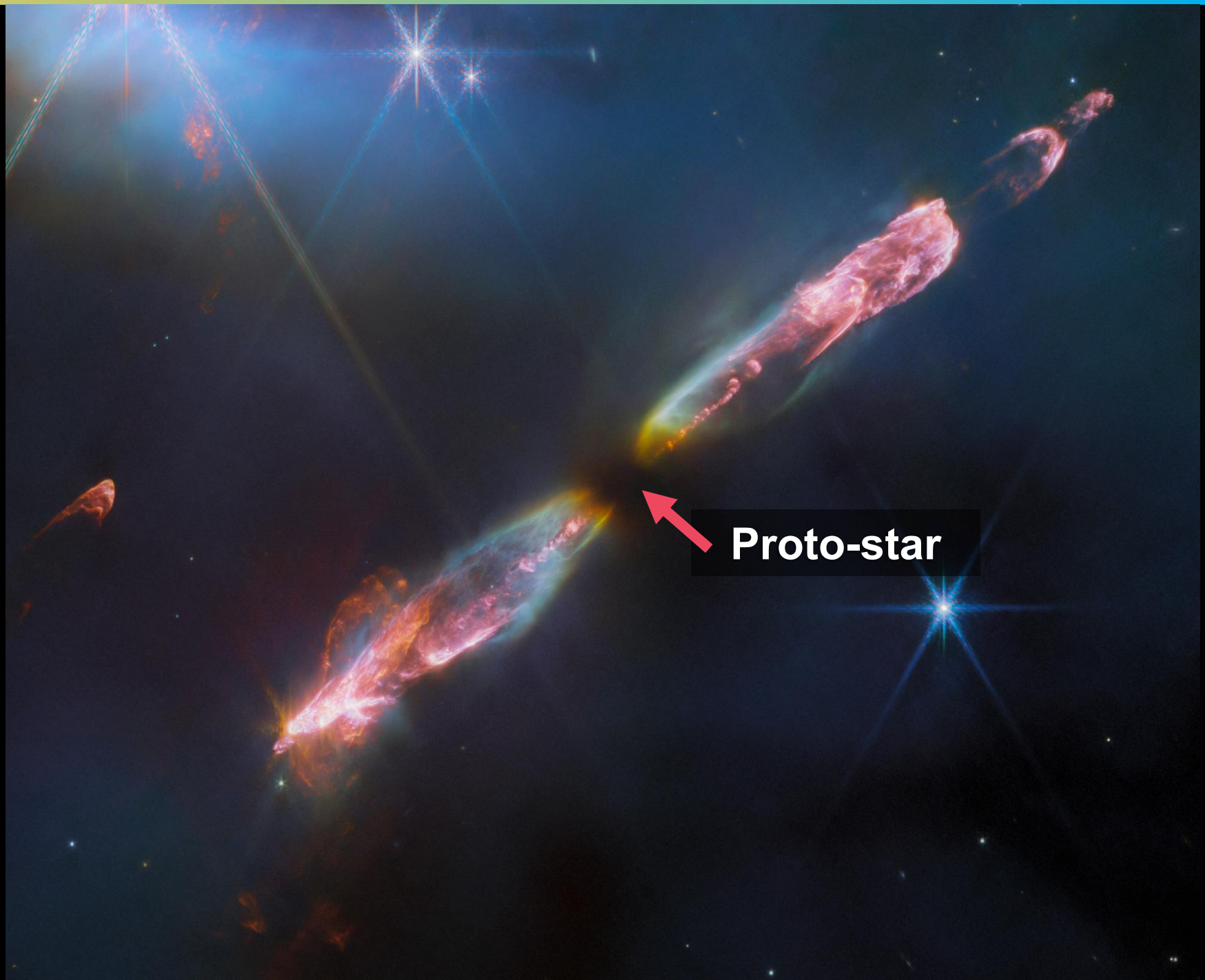


# Herbig-Haro 211





# Herbig-Haro 211





# Rho Ophiuchi Cloud Complex



Infrared Light  
Spitzer



# Rho Ophiuchi Cloud Complex



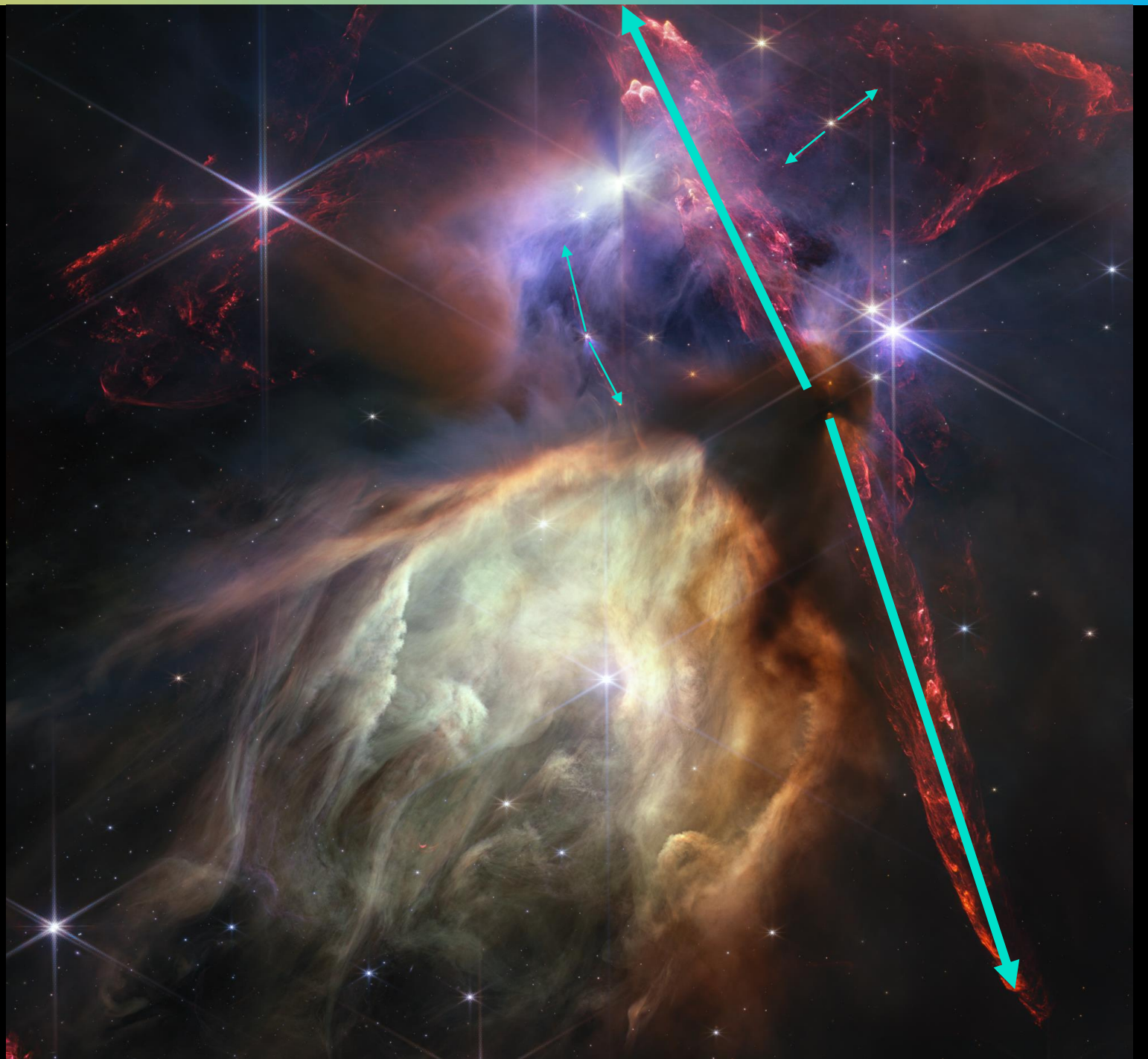


# Rho Ophiuchi Cloud Complex





# Rho Ophiuchi Cloud Complex



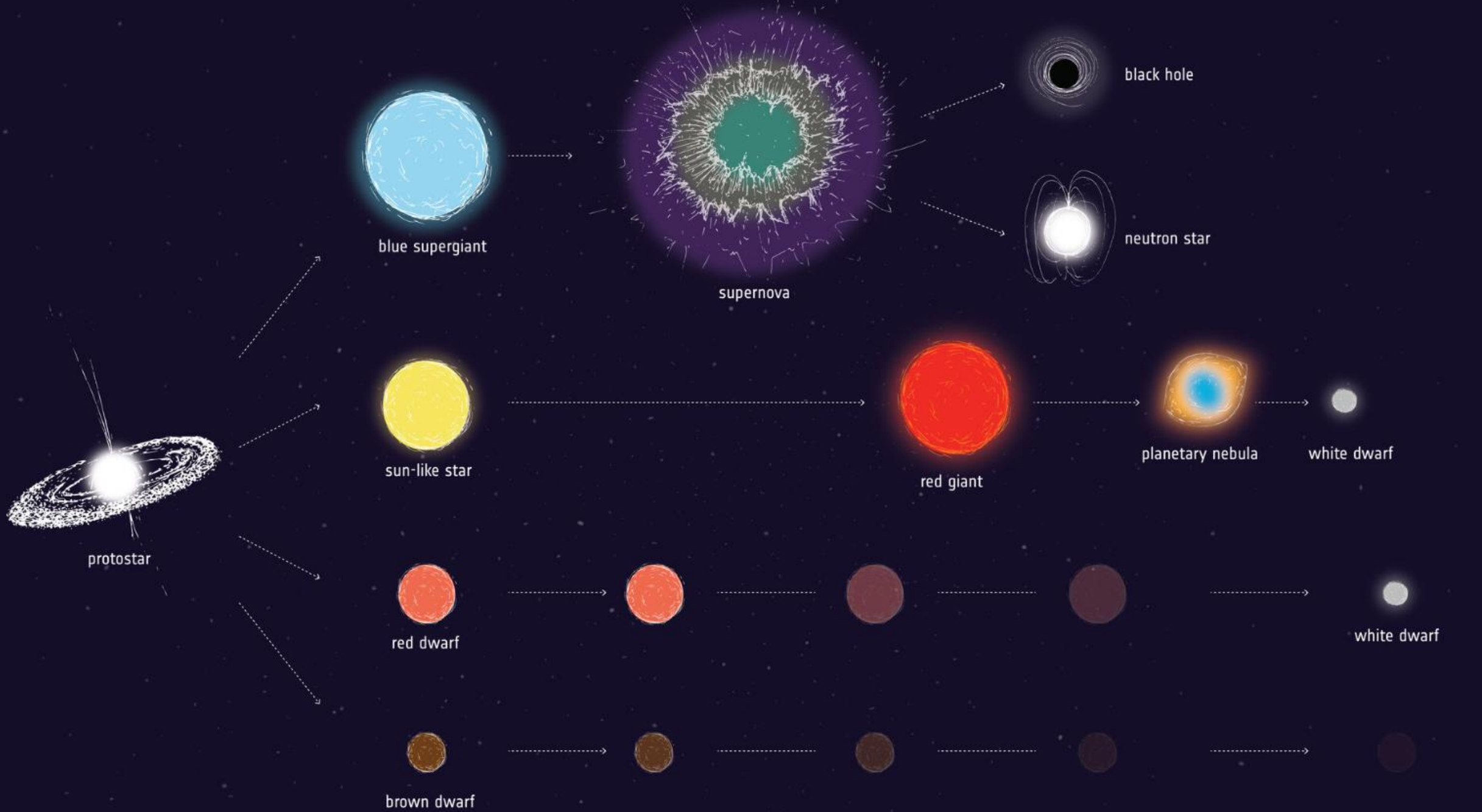


A vibrant astronomical image showing a star-forming region. The scene is dominated by a bright, glowing central area with a yellowish-white core. This core is surrounded by a complex structure of gas and dust, with prominent red and blue filaments and clouds. Two red arrows point from text labels to the central region. The background is dark, with several bright stars visible, some showing diffraction spikes. The overall color palette is rich, featuring deep blues, purples, and bright reds against the black of space.

**Planet-forming disk**

**Planet-forming disk**







**High Mass**  
Black hole/Neutron Star

**Low Mass**  
White Dwarf



O



B



A



F



G



K

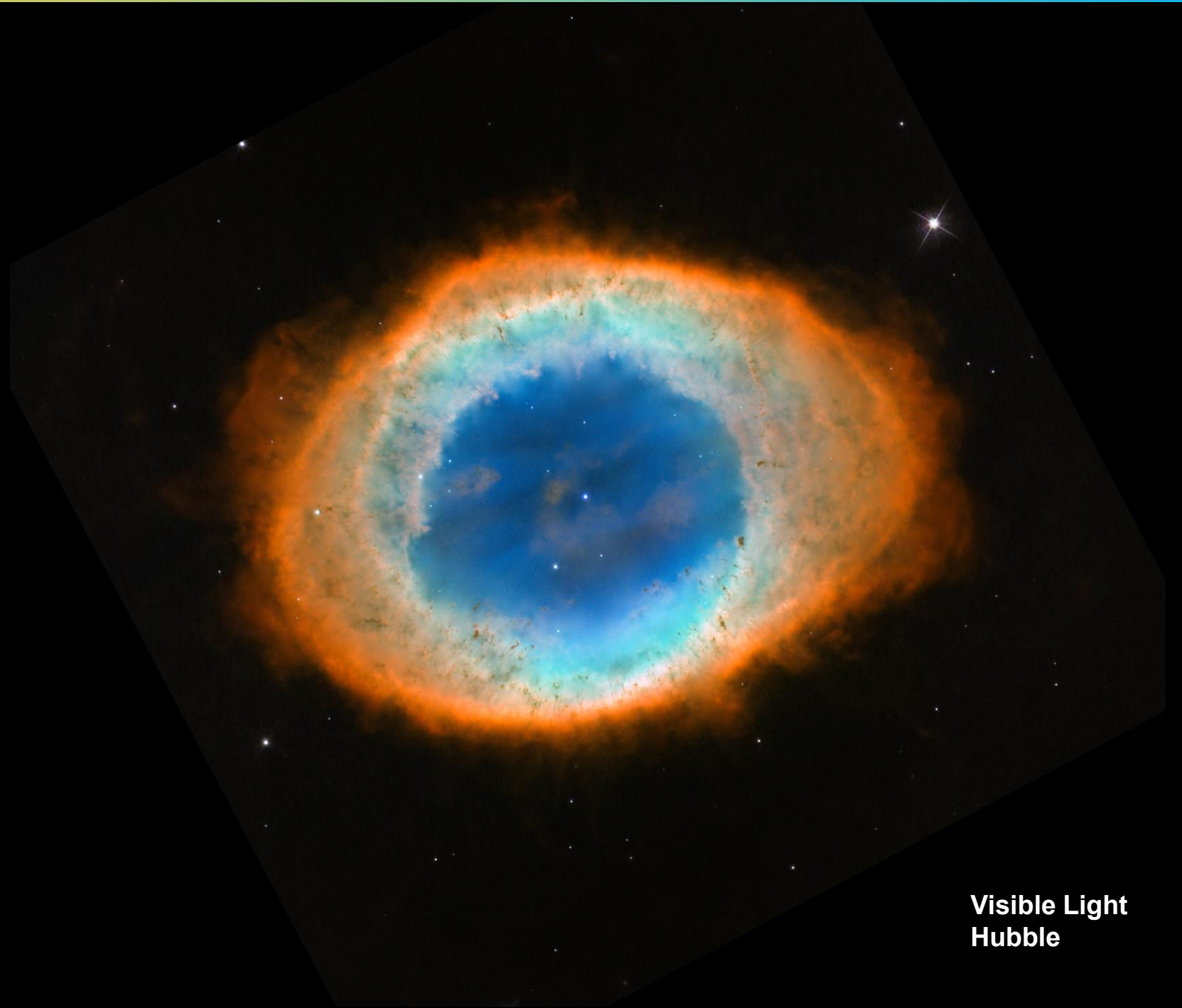


M





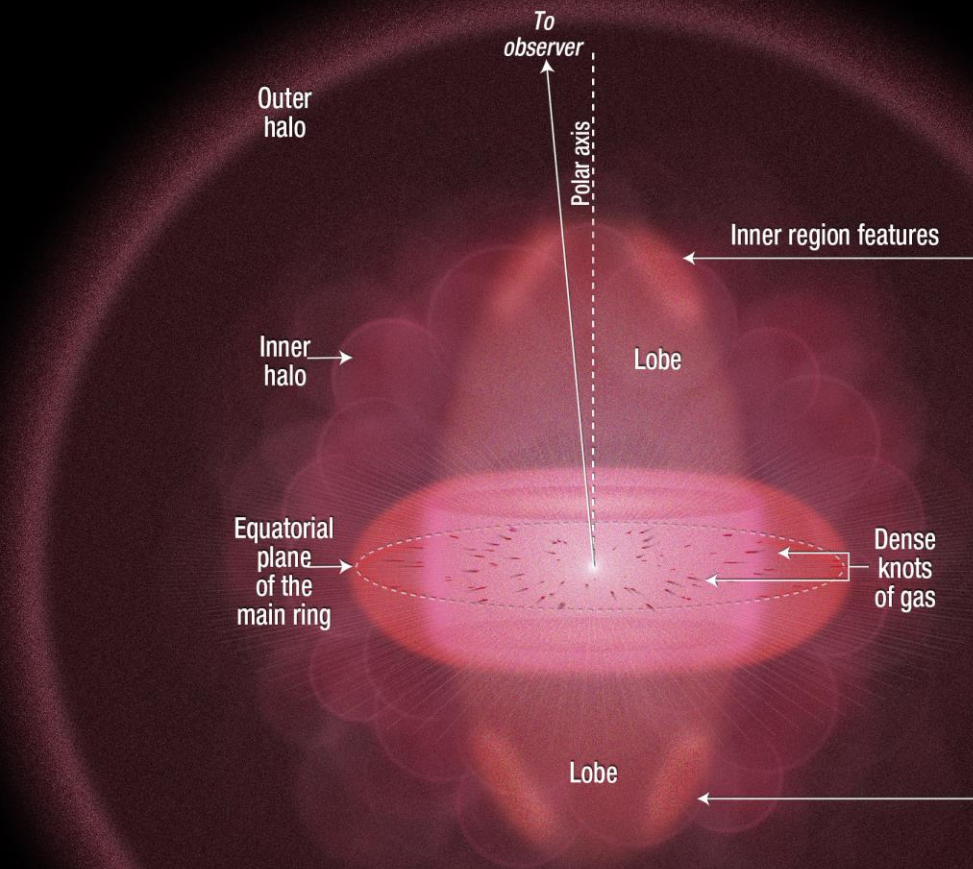
# Ring Nebula



Visible Light  
Hubble



# Structure of the Ring Nebula





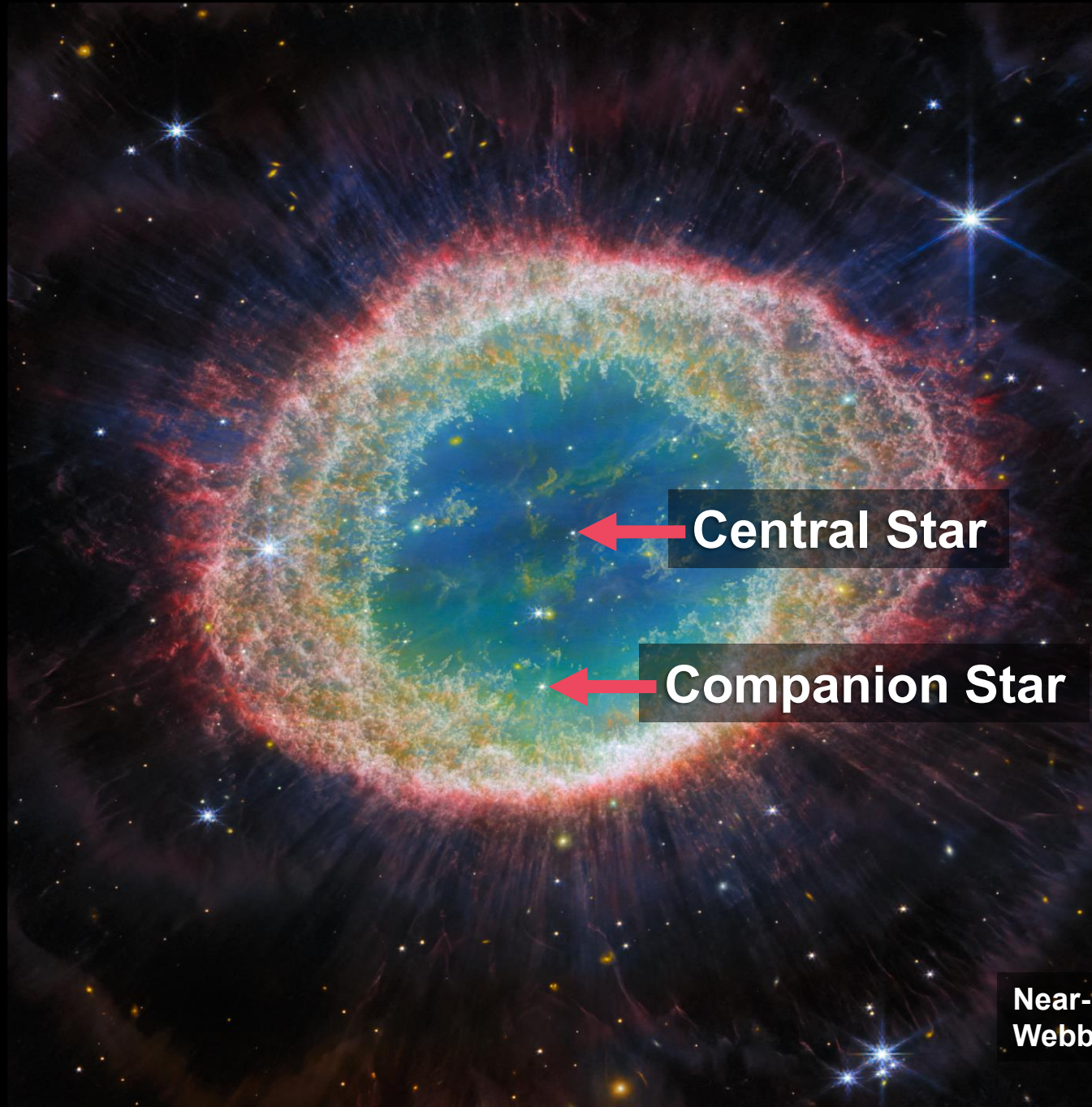
# Ring Nebula



Near-Infrared Light  
Webb



# Ring Nebula



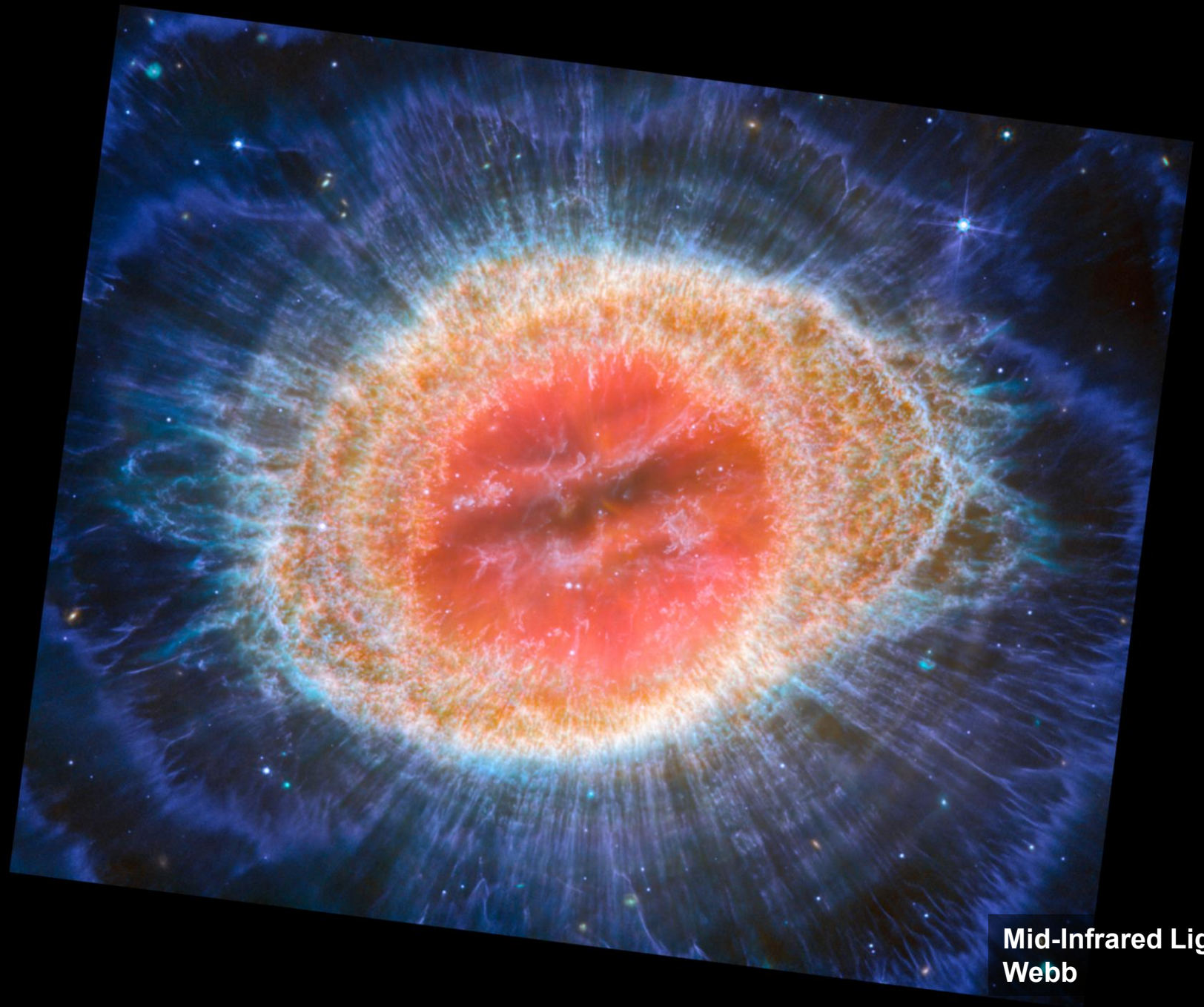
Central Star

Companion Star

Near-Infrared Light  
Webb



# Ring Nebula



Mid-Infrared Light  
Webb





Mid-Infrared Light  
Webb

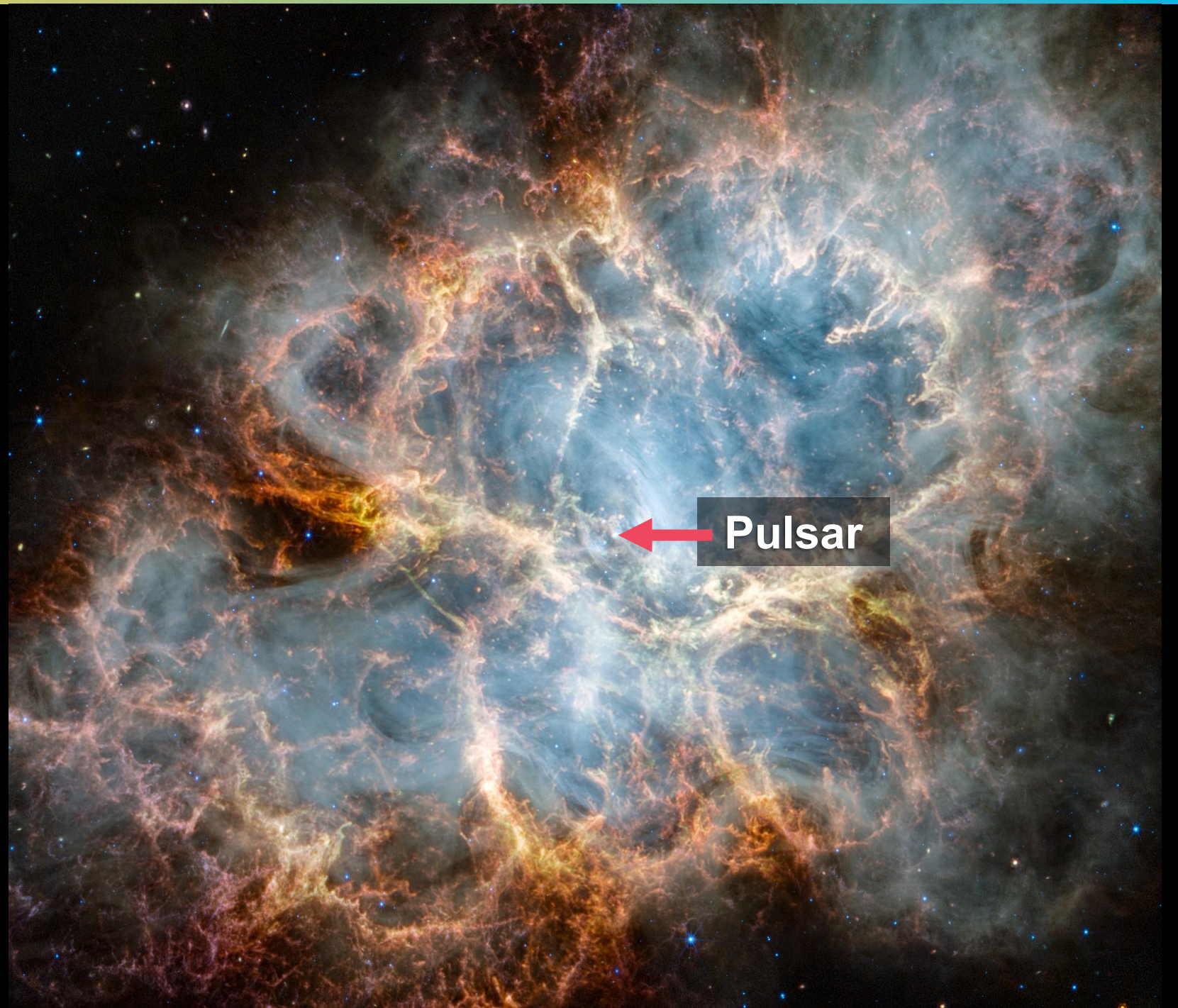


# Crab Supernova Remnant





# Crab Supernova Remnant





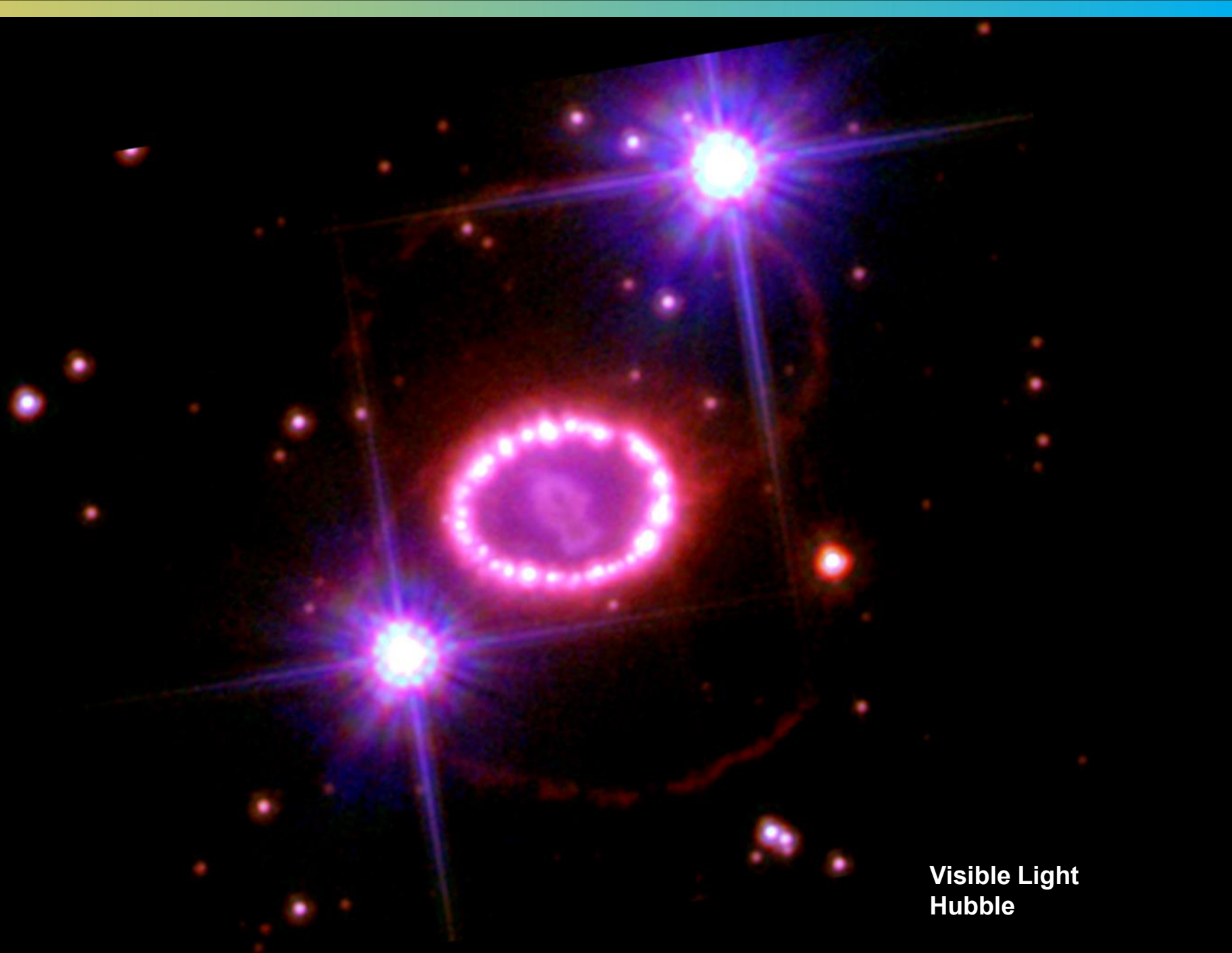
# Supernova 1987A



Visible Light  
Hubble



# Supernova 1987A



Visible Light  
Hubble



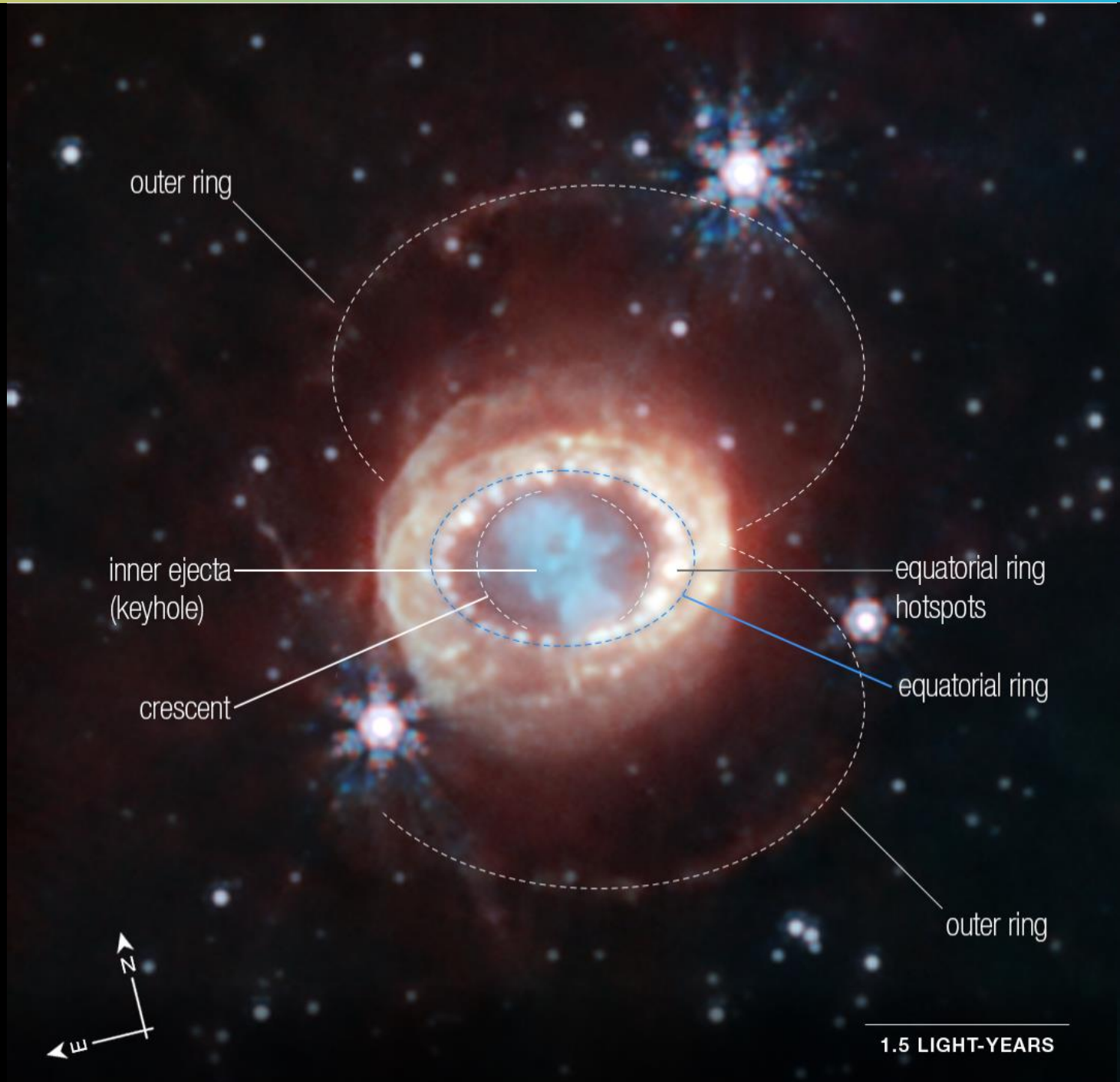
# Supernova 1987A



Near-Infrared Light  
Webb

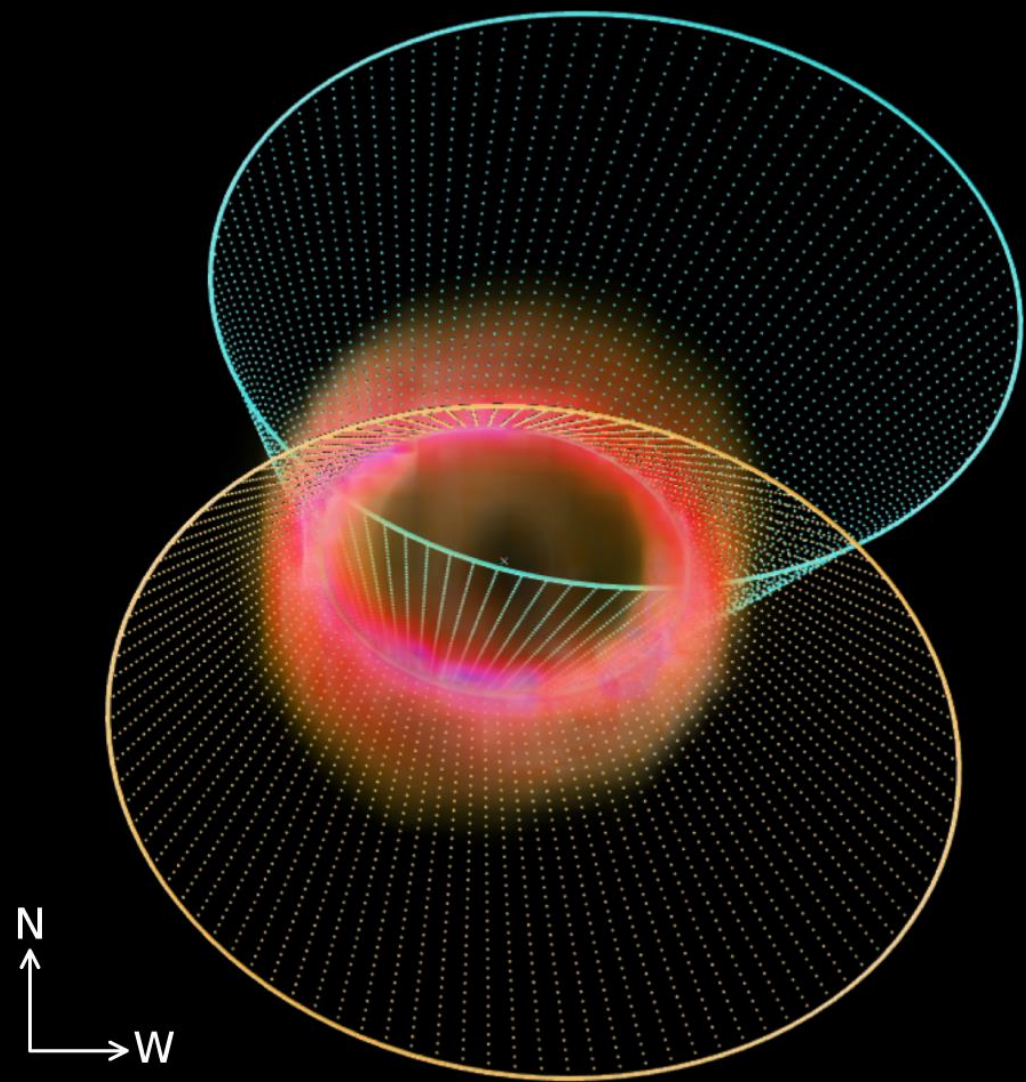
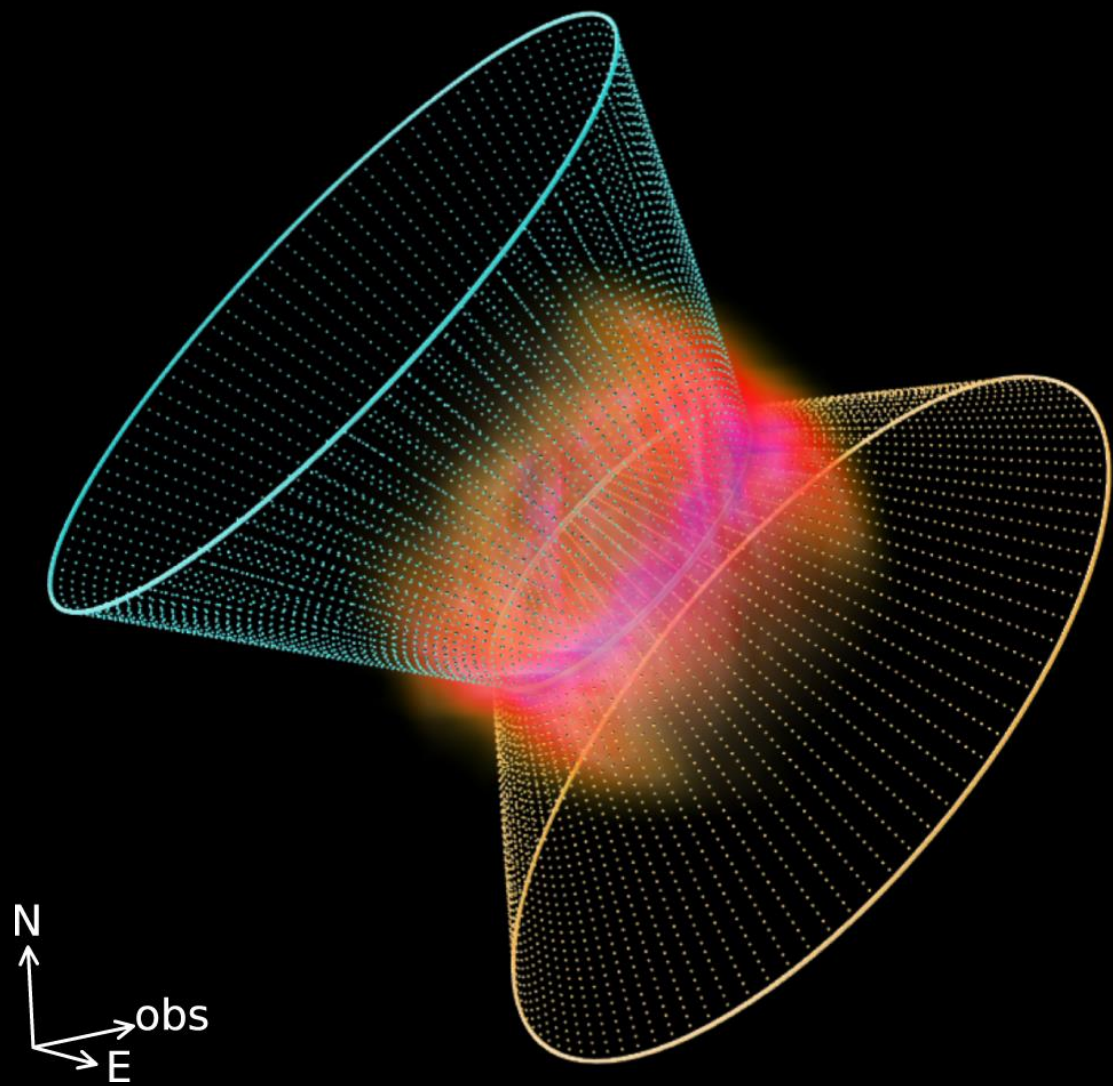


# Supernova 1987A





# Model





# Supernova 1987A



1994

Visible Light  
Hubble