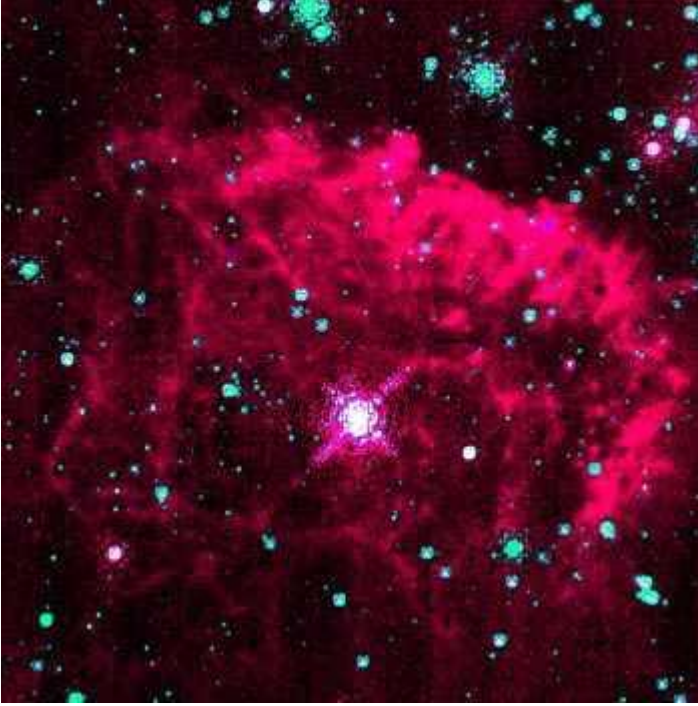


# *Pistol Star* *of the Pistol Nebula*



**Location: Galactic Center region**

**Distance from Earth: 25,000 light years on the western edge of Sagittarius**

**1 light year = 6 trillion miles or almost 10 trillion kilometers**

The following is an excerpt from

<http://tinyurl.com/3thv7g6>

Similar to Eta Carinae in brightness, the Pistol Star is one of the most luminous stars in the Local Group of galaxies surrounding the Milky Way (Figer et al, 1995).

With a diameter larger than Earth's orbit around the Sun, it radiates as much as more than 10 million times more light than Sol ( $L=$

$10^{6.3}$ ) and appears to have more than 150 Solar-masses, having been resolved as a single star down to a projected separation of 110 AUs (Figer et al, 1998). Indeed, the star may have started with as much as 200 to 250 Solar-masses but has been violently shedding much of its substance. With over 40 Solar-masses, extremely high luminosity, a variable spectra, and surrounding ejecta, it is classified as a Luminous Blue Variable like Eta Carinae, as an extremely large star that are now often regarded as the evolutionary link between main-sequence O stars and the more evolved, smaller but similarly explosive, Wolf-Rayet stars.

Despite being 25,000 ly away, the Pistol Star would be visible to the naked eye on Earth as a modest 4th magnitude object, if not for intervening dust being it and Sol. It may only be around 1.7 to 2.1 million years old but will explode in a supernovae within only another one to three million years (Figer et al, 1998; STScI press release; and fact sheet). A useful catalogue number for this star is the variable designation: V4647 Sgr.

I love the hot pink and aqua-green contrast that shows in the picture above. The photo was taken by the Hubble telescope using the 'Near Infrared Camera and Multi-Object Spectrometer' used for Infrared Astronomy. Images from this system display the near-infrared part of the light spectrum. The heat is displayed as the 'False Color'.