
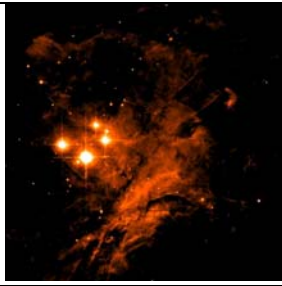

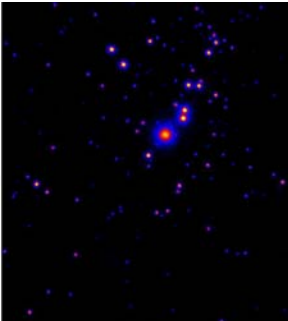


	True Color	False Color
Visible Light		
X-Ray Light		

	True Color	False Color
Visible Light	<p>Photons from the Orion Nebula were collected through 3 different colored filters and recorded onto a detector. The 3 filtered images were formatted in ds9 image processing software, and put together under a RGB frame to create a true color image. The color represents the energy of the Orion nebula.</p>	<p>An image of the Orion Nebula was taken and a “heat” color setting was applied to it. The different colors represent different amounts of light that are received by the detector from different parts of the Orion Nebula.</p>
X-Ray Light	<p>This photo is an RGB frame of different energy levels. Red represents the presence of low-energy X-ray photons (300 eV-1,600 eV), green represents the presence of medium-energy X-ray photons (1,600 eV-4,000 eV), and blue represents the presence of high-energy X-ray photons (4,000 eV-8,000 eV). The strength of the color represents the number of photons of that energy level that struck that pixel.</p>	<p>This is the picture of the Orion Nebulae under the “b” color setting. The color of the nebulae represents the number of photons collected or the flux.</p>

The cloud of gas only appears in the visible light images because it does not emit any X-Ray light. Also, stars that have high flux don't necessarily have to emit a high level of X-Ray light, so the appearance of the stars on the different images can be different.

MIT OpenCourseWare  
<http://ocw.mit.edu>

Chandra Astrophysics Institute  
Summer 2008

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.