



SHENANDOAH ASTRONOMICAL SOCIETY

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Trapezium in Orion Nebula



This false color mosaic was made by combining multiple HST images and was presented to the American Astronomical Society meeting in Toronto, Canada on January 14th, 1997. Photo Credit: John Bally, Dave Devine, and Ralph Sutherland

The photo above of an area in the Great Nebula in Orion is called the Trapezium. These four bright stars can be seen with a small telescope. I set up a 4 inch refractor on Christmas evening and looked at the nebula and surrounding area. The experts tell us that new stars are being formed there this minute. In other words, this area is a stellar nursery.

The Orion Nebula can be seen with the unaided eye so astronomers wonder why it was not discovered until after the telescope was invented. The credit for discovery is given to one Nicolas-Claude Fabri de Peiresc in 1610. It was independently discovered by other astronomers in the following years, including Christian

Huygens in 1656 (whose sketch was the first published in 1659). Charles Messier first noted the nebula in March 1769, and he also noted three of the stars in the Trapezium. The first detection of these three stars is now credited to Galileo in 1617, but he did not notice the surrounding nebula probably due to the small field of vision of his telescope.

Charles Messier published the first edition of his catalog of deep sky objects in 1774 and included the Orion Nebula as the 42nd object in his list. Spectroscopy by William Huggins showed the gaseous nature of the nebula in 1865. Henry Draper took the first photo of the Orion Nebula in 1880 which is credited with being the first instance of deep-sky astrophotography in history.

In 1931, Robert Trumpler noted that the fainter stars near the Trapezium formed a cluster, and he was the first to name them the Trapezium cluster.

In 1993, the Hubble Space Telescope first observed the Orion Nebula. Since then, the nebula has been a frequent target for HST studies. The images have been used to build a detailed 3-D model of the nebula.

Now is the time to look. I was lucky to find a clear evening that was not too cold for me on the 25th and observed for a little while. The nebula is very easy to find as long as you can find the constellation of Orion. Just a few degrees below the three stars that make up the belt, you can see the nebula and put your scope on it. Then enjoy a look to the southeast where you can find the bright star Sirius and the open cluster M41 only 4 degrees south of Sirius. That is really good. (James Adkins: reference [Wikipedia](#))

Astronomers and MythBusters

You did read it right. The MythBusters program on the Discovery Channel tests out myths or legends or ideas that people have believed or do believe that may be open to question. Surely many of them are. For example, one test was to see if a pickup truck will get better gas mileage with the tail gate up or left down. Nearly everyone will guess with the tail gate down since that seems to be more streamlined. But when the test was done, the best mileage was with the tail gate up. What did you think?

And then, believe it or not, there was the old saying like “you can’t polish poop” or in other words, “if you put lipstick on a pig, it is still a pig.” Well, the mythbuster guys, Adam and Jamie procured droppings from a bunch of zoo animals and proceeded to find a way to get round balls of this stuff at just the right level of hydration and they got a good shiny polish on them.

I could tell more but now I must get to the astronomy connection. Why did pirates use eye patches? The explanation had been that they wanted to keep their eyes dark adapted because of possible attacks. That way, they could move from a lighted cabin below deck to upper deck and be ready to defend the ship at night.

The MythBuster team took on this unusual challenge and set up a dark room in which there was an obstacle course. The men would go from bright light into the dark room and see how well they could navigate the course without too much trouble. Adam and Jamie would wear an eye patch over one eye for about twenty-five minutes to get that eye dark adapted and then enter the

dark room. When they entered and then switched the patch to the other eye, they had no trouble getting through the obstacles. But when they entered the room and did not switch the patch to the other eye, it was a disaster trying to get through the obstacles.

So how can we use this information? I suppose this mostly applies to an astronomer who moves his scope out into the yard at home to observe. He might want to go in from time to time for some coffee or a brief warm-up in the winter time and then continue. And now you know how to do it without losing your dark adaptation.

[Jim Adkins: ref. MythBusters]

Program for January 14 **7:00 PM at LFCC**

Member Alan Moeck will be bringing a presentation downloaded from the internet concerning Saturn probes. This of course will have a lot of images from the Cassini-Huygens mission. I assume there will also be explanations about the results in scientific terms. Information will include findings about Titan, Mimas, Enceladus, Dione and the other moons of Saturn. So this should be great.

2009 is designated the International Year of Astronomer celebrating the 400 years of telescopic observation. Galileo Galilei started it with his home-made telescope.
