

### Offered Title: What's the M?

If you've ever attended a star party, you likely heard someone saying something like "there's M42 in Orion. See it? It's the middle "star" of his sword", or, "we're looking at M1 in Taurus". So, what's the M?

M is for Messier, Charles Messier.

Born in 1730, in Badonviller, France and the 10<sup>th</sup> of 12 children, Charles had a traumatic childhood. He broke his femur after falling out a second story window, lost five of his siblings, and around age 11 lost his father. His older brother Hyacinthe took over Charles's education and this is when he discovered a talent for observation and precise documentation. His interest in astronomy came at 14, when a great, six tailed comet appeared, and was further stimulated upon viewing a partial solar eclipse. As he continued his education astronomy became Charles's passion.

At age 21 Charles took a position in Paris working for the Royal Navy's astronomer Joseph Nicolas Delise. His first jobs were as a map copier and clerk, but eventually Charles became an observer, and documenting a solar transit by Mercury was his first project.

As with many astronomers of the day, Messier became very interested in comets and in 1757 began a search for the expected 1758 return of Halley's comet. Using coordinates calculated by his employer Delise, Charles searched in vain for the still distant comet. Turns out Delise's calculations were faulty and Messier could not find comet Halley using them, but Charles did manage to spot a more recently discovered comet.

During his searches for comet Halley, Messier made notes regarding other celestial phenomena he encountered. Charles noted one hazy patch in particular, a patch near the right horn of Taurus. It looked like a comet but after numerous observations Messier concluded it wasn't moving. After some research he realized it was a previously discovered nebula. This prompted Messier to think about how to prevent wasting time on nebulae while searching for comets. Messier would later make this nebula his first catalog entry of non-cometary objects for comet hunters to avoid. He named it M1.

Over ensuing years Charles Messier would discover 15 comets. He would also continue to scan the heavens and document in detail non-cometary objects...we now call them Messier objects. Eventually Charles Messier, along with his assistant Pierre Mechain, would observe, describe, and publish a catalog of 103 non-cometary objects. The catalog has been expanded to 110 by the discovery of additional observations that had not been published. This catalog is Messier's most widely known contribution to astronomy, his *Catalog of Nebulae and Star Clusters*.

Today Messier's catalog is used by astronomers everywhere, not to avoid, but to observe. His catalog includes some of the brightest and most beautiful celestial objects, and they're observable in smaller telescopes or binoculars!

### The Sky this Week

The Moon is occulting (hiding) bright star Aldebaran at moonrise on November 5<sup>th</sup>. Start watching for Aldebaran's reappearance.