

MESSIER 7 OPEN CLUSTER

Messier 7 or M7, also designated NGC 6475 and sometimes known as the Ptolemy Cluster, is an open cluster of stars in the constellation of Scorpius. The cluster is easily detectable with the naked eye, close to the "stinger" of Scorpius. **It is the southernmost Messier object.**

HISTORY OF OBSERVATION:

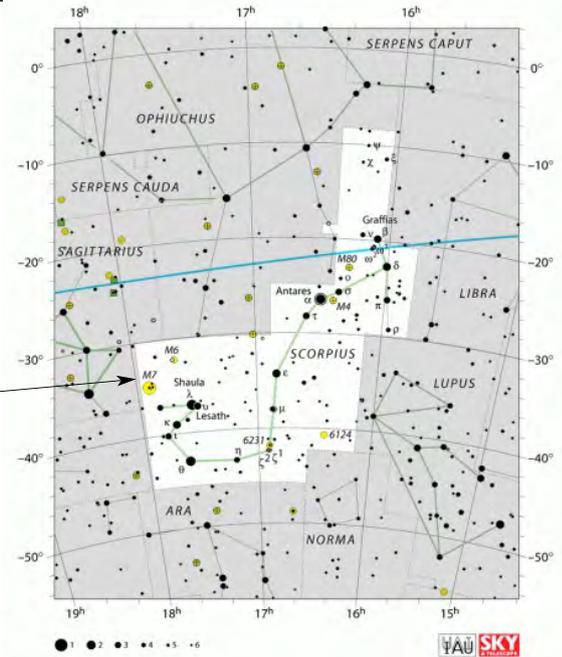
Discovery of this great open star cluster is most often credited to Ptolemy, who listed it in his 'Almagest' as Object Number 567 in 130 AD. From his notes he describes it as "A nebulous cluster following the sting of Scorpius." It was also independently recovered by **Ulegh Begh** and the Italian astronomer **Giovanni Batista Hodierna**, who observed it in 1654 and counted 30 stars there. **Edmond Halley** listed it as No. 29 in his catalogue of southern stars of 1678 and **John Herschel** described it as "a coarsely scattered clusters of stars".

However, today it best known by its catalogue number given by **Charles Messier** when he discovered it for himself on the night of May 23rd, 1764. He described it at the time:

"I have determined the position of another star cluster which has a diameter of 30 arc minutes. It appears to the unaided eye like a considerable nebulosity, but when examined with a refractor the nebulosity disappears, and one perceives a cluster of small stars, among which there is one which has more light. This cluster is between the bow of Sagittarius and the tail of Scorpius. Compared to the star Epsilon Sagittarii its position is right ascension $264^{\circ} 30' 24''$, and its declination $34^{\circ} 40' 34''$ South."

The name Ptolemy Cluster acknowledges **Claudius Ptolemaeus** (c. AD 100 – 170) a Greek writer, mathematician and astronomer) who first listed it in his astronomical treatise now known as the Almagest, as a nebula in 130 AD. Ptolemaeus (Ptolemy) lived in the city of Alexandria in the Roman province of Egypt, he wrote in Koine Greek and held Roman citizenship. He presented his astronomical models in convenient tables, which could be used to compute the future or past position of the planets. The Almagest also contains a star catalogue, which lists forty-eight constellations, but unlike the modern system they did not cover the whole sky, only the sky **Hipparchus** could see. The Almagest is the only surviving comprehensive ancient treatise on astronomy. It was originally entitled the 'Mathematical Treatise' [Mathematike Syntaxis] and then known as the 'Great Treatise' [E Megále Syntaxis]. **It was preserved during the Dark Ages, like most of the Classical Greek science, in Arabic manuscripts, from where it derived its now familiar name.**

Telescopic observations of the cluster reveal about 80 stars within a field of view of 1.3° across, and the brightest member star is of magnitude 5.6. At the cluster's estimated distance of 980 light years this corresponds to an actual diameter of 25 light years. The cluster has a mass of about 735 times the mass of the Sun and the age of the cluster is around 200 million years. The cluster contains a similar abundance of elements as the Sun. AK with EarthSky and Wikipedia Notes



Engraving of a crowned Ptolemy being guided by the muse Astronomy, from Margarita Philosophica by Gregor Reisch, 1508. The title 'King Ptolemy' is generally viewed as a mark of respect for Ptolemy's elevated standing in science