

FIND SIRIUS, AND MESSIER 41 NEXT TO IT.

No matter where you are on Earth, this time of the year you can look for the sky's brightest star, Sirius. Sirius, also known as the "dog star", is in the constellation Canis Major, the Greater Dog. Sirius is easy to see, because it's so bright and because the three prominent Belt Stars in the constellation Orion (three stars in a short, straight row) always do point to it.

If your sky is dark enough, you may notice a faint fuzzy object near it. It's the lovely star cluster Messier 41 or M41. It lies about four degrees almost exactly south of Sirius. The fuzzy patch nuclei look like a comet in a small telescope. The confusion with a comet and this cluster is not a new one. In the late 1700s, the comet hunter **Charles Messier** gave this object the number 41 on his list of objects to avoid and remember that these objects, which look like comets, are really not comets.

Giovanni Batista Hodierna is said to have discovered M41 sometime before 1654, but it may have been known to individuals with particularly good vision throughout human history and was perhaps known to Aristotle about 325 BC. The cluster – whose true diameter in space covers about 25 light-years – contains about 100 stars including several red giants.

Messier 41, also known as NGC 2287, forms a triangle with Sirius and *Nu2 Canis Majoris* —all three can be seen in the same field in binoculars.

OBSERVATION DATA (J2000 EPOCH)

Constellation Canis Major

Right ascension 06h 46.0m

Declination $-20^{\circ} 46'$

Distance 2,300 ly

Apparent magnitude (V) 4.5

Apparent dimensions (V) 38 arcmin (an area about the size of the full moon)

PHYSICAL CHARACTERISTICS

Radius 12.5 ly

Estimated age 190 million yrs

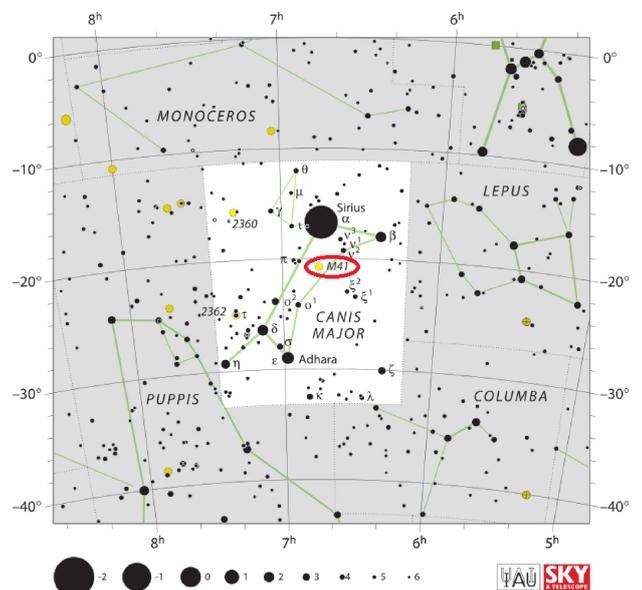
Other designations M41, NGC 2287

M41 contains about 100 stars including several red giants, the brightest being a spectral type K3 giant of apparent magnitude 6.3 near the cluster's centre, and a number of white dwarfs. Currently at a distance of 2300 light years, the cluster is estimated to be moving away from us at 23.3 km/s. The diameter of the cluster is between 25 and 26 light years. It is estimated to be 190 million years old, and cluster properties and dynamics suggest a total life expectancy of 500 million years for this cluster, before it will have disintegrated.

Walter Scott Houston describes the appearance of the cluster in small telescopes:

Many visual observers speak of seeing curved lines of stars in M41. Although they seem inconspicuous on photographs, the curves stand out strongly in my 10-inch reflecting telescope, and the bright red star near the centre of the cluster is prominent.

M41 is sometimes also called the Little Beehive, after the other famous Beehive star cluster (M44), also an open cluster, in the constellation Cancer.



Constellation Canis Major with the Open Cluster M41 highlighted in Red. Part of Orion in the top right corner

