

Messier 76, Little Dumbbell Nebula in Perseus

The Little Dumbbell Nebula, also known as Messier 76, NGC 650/651, the Barbell Nebula, or the Cork Nebula, is a planetary nebula in the constellation Perseus. It was discovered by **Pierre Méchain** in 1780 and included in Charles Messier's catalogue of comet-like objects as number 76. It was first recognised as a planetary nebula in 1918 by the astronomer **Heber Doust Curtis**. However, there is some contention to this claim, as **Isaac Roberts** in 1891 did suggest that M76 might be similar to the Ring Nebula (M57), being instead as seen from the side view.

The structure is now classed as a bipolar planetary nebula. The total nebula shines at the apparent magnitude of +10.1 with its central star or planetary nebula nucleus at +15.9v magnitude. The UV-light from the PNN is expanding outer layers that form the present nebula, and has the surface temperature of about 88,400 K. The whole planetary nebula is approaching us at 19.1 km/s. Messier 34 is also in Perseus, at the border with Andromeda.

The Little Dumbbell Nebula derives its common name from its resemblance to the Dumbbell Nebula (M27) in Vulpecula. It was originally thought to consist of two separate emission nebulae and was thus given two catalogue numbers in the NGC 650 and 651. Some consider this object to be one of the faintest and hardest to see Messier objects .

Perseus is a constellation in the northern sky, being named after the Greek mythological hero Perseus. It is one of the 48 ancient constellations listed by the 2nd-century astronomer **Ptolemy**, and among the 88 modern constellations defined by the International Astronomical Union. It is located near several other constellations named after ancient Greek legends surrounding Perseus, including Andromeda to the west and Cassiopeia to the north. Perseus is also bordered by Aries and Taurus to the south, Auriga to the east, Camelopardalis to the north, and Triangulum to the west. Some star atlases during the early 19th century also depicted Perseus holding the disembodied head of Medusa.

MYTHOLOGY

In Greek mythology, Perseus was the son of Danaë, who was sent by **King Polydectes** to bring the head of Medusa the Gorgon — whose visage caused all who gazed upon her to turn to stone. Perseus slew Medusa in her sleep, and Pegasus and Chrysaor appeared from her body. Perseus continued to the realm of Cepheus whose daughter Andromeda was to be sacrificed to Cetus the sea monster. Perseus rescued Andromeda from the monster by killing it with his diamond sword. He turned **Polydectes** and his followers to stone with Medusa's head and appointed **Dictys** the fisherman king. Perseus and Andromeda married and had six children. In the sky, Perseus lies near constellations Andromeda, Cepheus, Cassiopeia (Andromeda's mother), Cetus, and Pegasus.



Colour composite image of the Little Dumbbell image, as taken at the Liverpool Telescope

