

Messier 102 in Constellation Draco

NGC 5866 (also called the Spindle Galaxy or Messier 102) is a relatively bright lenticular or spiral galaxy in the constellation Draco. NGC 5866 was most likely discovered by **Pierre Méchain** or **Charles Messier** in 1781, and independently found by **William Herschel** in 1788.

Measured orbital velocities of its globular cluster system imply that dark matter makes up only $34 \pm 45\%$ of the mass within 5 effective radii; a notable paucity.

OBSERVATION DATA (J2000 EPOCH)

Constellation Draco

Right ascension 15h 06m 29.5s

Declination $+55^\circ 45' 48''$

Redshift 0.002518 ± 0.000017

Distance 50 ± 3 Mly (15.3 ± 0.7 Mpc)

Apparent magnitude (V) 10.7

Notable features - The galaxy is viewed edge on

Other designations - Spindle Galaxy, UGC 9723, PGC 53933

One of the most outstanding features of NGC 5866 is the extended dust disk, which is seen almost exactly edge-on. This dust disk is highly unusual for a lenticular galaxy. The dust in most lenticular galaxies is generally found only near the nucleus and generally follows the light profile of the galaxies' bulges. This dust disk may contain a ring-like structure, although the shape of this structure is difficult to determine given the edge-on orientation of the galaxy. It is also possible that the galaxy is a spiral galaxy that was misclassified as a lenticular galaxy because of its edge-on orientation, in which case the dust disk would not be too unusual.

NGC 5866 is one of the brightest galaxies in the NGC 5866 Group, a small galaxy group that also includes the spiral galaxies NGC 5879 and NGC 5907. This group may actually be a subclump at the northwest end of a large, elongated structure that comprises the M51 Group and the M101 Group, although most sources distinguish the three groups as separate entities.

Draco is a constellation in the far northern sky. Its name is Latin for dragon. It was one of the 48 constellations listed by the 2nd century astronomer **Ptolemy**, and remains one of the 88 modern constellations today. The north pole of the ecliptic is in Draco. Draco is circumpolar (that is, never setting), and can be seen all year from northern latitudes.

Thuban (α Draconis) was the northern pole star from 3942 BC, when it moved farther north than Theta Boötis, until 1793 BC. The Egyptian Pyramids were designed to have one side facing north, with an entrance passage geometrically aligned so that Thuban would be visible at night. Due to the effects of precession, it will again be the pole star around the year AD 21000. It is a blue-white giant star of magnitude 3.7, 309 light-years from Earth. The traditional name of Alpha Draconis, Thuban, means "head of the serpent".

One of deep-sky objects in Draco is the Cat's Eye Nebula (NGC 6543), a planetary nebula approximately 3,000 light-years away that was discovered by English astronomer William Herschel in 1786. It is 9th magnitude and was named for its appearance in the Hubble Space Telescope, though it appears as a fuzzy blue-green disk in an amateur telescope. AK, with EarthSky and Wikipedia Notes



NGC 5866, as observed by the Hubble Space Telescope

