

Zodiac constellations 7: Aquarius



Although large, the 10th ranked constellation by size is not a prominent constellation. The water-bearer (Latin 'water-carrier' or 'cup-carrier') is visualised as a youth, or sometimes an older man, pouring water from a jar. From the jar, some stars form the water, streaming towards constellation Piscis Austrinus. It is located in the so-called 'Sea region' or 'Water region' of the sky, so named for the profusion of constellations with watery associations e.g., Cetus (whale), Pisces (fish), Eridanus (river)

It is one of oldest zodiac constellations. In the Babylonian star catalogue, it represents the god Ea, who was commonly depicted as holding an overflowing vase. Images appeared in cylinder seals dating to 2,000 BCE. In ancient Egypt, Aquarius was associated with the annual flooding of the Nile. Aquarius is associated with two Greek myths. In one, it is associated with Prometheus who built a ship with his wife, Pyrrha, to survive an imminent flood. They sailed for 8 days before grounding on Mount Parnassus. The other describes Aquarius as a beautiful shepherd boy, Ganymede, who attracted Zeus. Zeus sent down his eagle or became an eagle to carry him to Mount Olympus where he became a waiter to the gods. The eagle was represented by the nearby constellation of Aquila.

The Sun passes through Aquarius from Late-February to mid-March. In the Early Bronze Age it contained the winter solstice, but this has moved to Sagittarius as a result of precession of the equinoxes

Several Aquarian stars are known to have planetary systems. Gliese 876, one of nearest stars to Earth (15ly) was the first red dwarf found to have planets. TRAPPIST-1 with its seven rocky planets, which were found in 2017, is also in Aquarius.

Notable features include:

- Saturn nebula (NGC 7009): a planetary nebula. Although generally visible through binoculars, a telescope shows faint extensions similar to Saturn's rings.



- Helix nebula (NGC 7293): one of the largest planetary nebula by apparent size. Visible through binoculars, at a distance of 300ly, it is considered to be closest planetary nebula to Earth.

- Three Messier objects: M2: a globular cluster, M72: a globular cluster and M73: an open cluster.
- Eta Aquarid meteor shower radiates from the area of the jar from late-April to mid-May, peaking in early May annually. Especially prominent in the southern hemisphere, it has an average of 35 meteors /hr at its peak. It is produced by debris from Halley's comet. The very fast meteors often leave persistent trains. Its first recorded discovery was in China in 401 CE.

Sources: Ridpath, I (Ed) 2012 Oxford dictionary of astronomy Oxford, OUP, Ridpath, I (Ed) 2006 Astronomy London, Dorling Kindersley, en.wikipedia.org