

PEGASUS, THE FLYING HORSE

Pegasus is a constellation in the northern sky, named after the winged horse Pegasus in Greek mythology. It was one of the 48 constellations listed by the 2nd-century astronomer **Ptolemy**, and remains one of the 88 modern constellations. It is one of the largest constellations in the sky.

The constellation is known for the Great Square of Pegasus, a familiar asterism in the northern sky, as well as for a number of bright stars and deep sky objects, among them Messier 15 (NGC 7078, Cumulo de Pegaso), Stephan's Quintet of galaxies, the Einstein Cross (a gravitationally lensed quasar), and the unbarred spiral galaxy NGC 7742.

With an apparent magnitude varying between 2.37 and 2.45, the brightest star in Pegasus is the orange supergiant Epsilon Pegasi, also known as Enif, which marks the horse's muzzle. Alpha (Markab), Beta (Scheat), and Gamma (Algenib), together with Alpha Andromedae (Alpheratz or Sirrah) form the large asterism known as the Square of Pegasus. Twelve star systems have been found to have exoplanets.

FACTS, LOCATION & MAP

Pegasus is the seventh largest constellation in the sky, occupying an area of 1121 square degrees. It is located in the fourth quadrant of the northern hemisphere (NQ4) and can be seen between +90° and -60°.

The neighbouring constellations are Andromeda, Aquarius, Cygnus, Delphinus, Equuleus, Lacerta, Pisces and Vulpecula.

Pegasus contains a Messier object – Messier 15 (NGC 7078, Cumulo de Pegaso) – and has nine stars with confirmed planets.

The brightest star in the constellation is Enif, Epsilon Pegasi, with an apparent visual magnitude of 2.399.

There is one meteor shower associated with Pegasus; the July Pegasids. Pegasus belongs to the Perseus family of constellations: Andromeda, Auriga, Cassiopeia, Cepheus, Cetus, Lacerta, Perseus, and Triangulum.

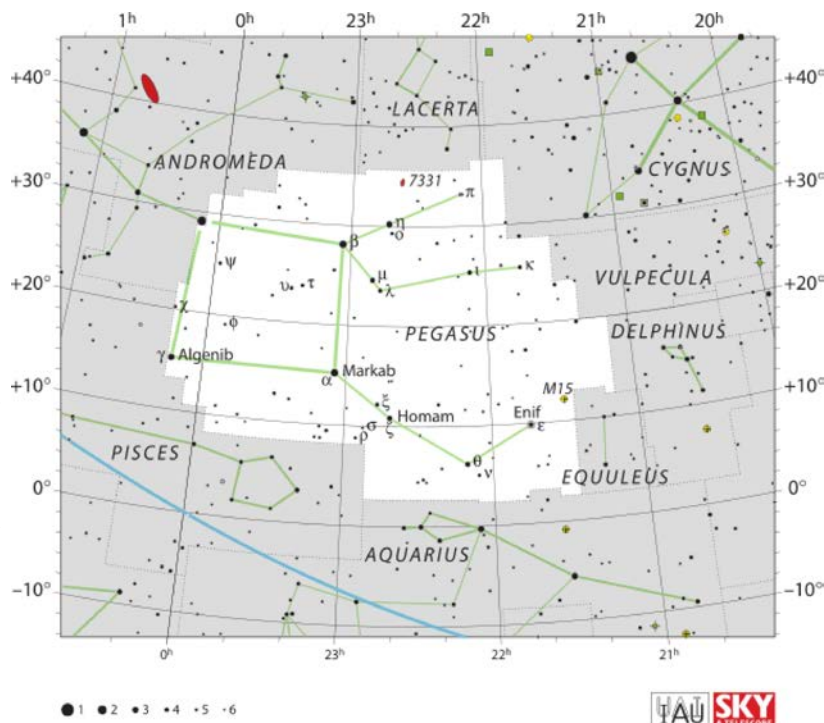
Twelve star systems in it have been found to have exoplanets. 51 Pegasi was the first Sun-like star discovered to have an exoplanet companion; 51 Pegasi b (unofficially named Bellerophon) is a hot Jupiter close to its sun, completing an orbit every four days.

HISTORY

Pegasus, in Greek mythology, was a winged horse with magical powers. One myth regarding his powers says that his hooves dug out a spring, Hippocrene, which blessed those who drank its water with the ability to write poetry. Pegasus was the one who delivered Medusa's head to Polydectes, after which he travelled to Mount Olympus in order to be the bearer of thunder and lightning for Zeus. Eventually, he became the horse to Bellerophon, who was asked to kill the Chimera and succeeded with the help of Athena and Pegasus. Despite this success, after the death of his children, Bellerophon asked Pegasus to take him to Mount Olympus. Though Pegasus agreed, he plummeted back to Earth after Zeus either threw a thunderbolt at him or made Pegasus buck him off. In ancient Persia, Pegasus was depicted by **al-Sufi** as a complete horse facing east, unlike most other uranographers, who had depicted Pegasus as half of a horse, rising out of the ocean.

CHARACTERISTICS

The three-letter abbreviation for the constellation, as adopted by the IAU in 1922, is 'Peg'. The official constellation boundaries, as set by **Eugène Delporte** in 1930, are defined as a polygon of 35 segments. In the equatorial coordinate system, the right ascension coordinates of these borders lie between 21h 12.6m and 00h. Its position in the Northern Celestial Hemisphere means that the whole constellation is visible to observers north of 53°S. 14.6m, while the declination coordinates are between 2.33° and 36.61°.



King Iobates of Lycia sent Bellerophon on Pegasus on a mission to kill the Chimaera, a fire-breathing monster that was devastating Lycia. It had the front of a lion, the tail of a snake and a middle like a goat.

The horses appear upside-down in relation to the constellations around them.

Pegasus is dominated by an asterism in the shape of a rough square, although one of the stars, Delta Pegasi, or Sirrah, is now officially considered to be part of Andromeda, and is more usually called "Alpheratz". Traditionally, the body of the horse consists of a quadrilateral formed by the stars α Peg, β Peg, γ Peg, and δ Peg. The front legs of the winged horse are formed by two crooked lines of stars, one leading from γ Peg to δ Peg and the other from μ Peg to ν Pegasi. Another crooked line of stars from α Peg via γ Peg to ϵ Peg forms the neck and head; ϵ is the snout.

DEEP-SKY OBJECTS

M15 (NGC 7078) is a globular cluster of magnitude 6.4, 34,000 light-years from Earth. It is a Shapley class IV cluster, which means that it is fairly rich and concentrated towards its centre. M15 was discovered in 1746 by

Jean-Dominique Maraldi.

NGC 7331 is a spiral galaxy located in Pegasus, 38 million light-years distant with a redshift of 0.0027. It was discovered by musician-astronomer **William Herschel** in 1784 and was later one of the first nebulous objects to be described as "spiral" by **William Parsons**. Another of Pegasus's galaxies is NGC 7742, a Type 2 Seyfert galaxy. Located at a distance of 77 million light-years with a redshift of 0.00555, it is an active galaxy with a supermassive black hole at its core. Its characteristic emission lines are produced by gas moving at high speeds around the central black hole.

Pegasus is also noted for its more unusual galaxies and exotic objects. Einstein's Cross is a quasar that has been lensed by a foreground galaxy. The elliptical galaxy is 400 million light-years away with a redshift of 0.0394, but the quasar is 8 billion light-years away.

Stephan's Quintet is another unique object located in Pegasus. It is a cluster of five galaxies at a distance of 300 million light-years and a redshift of 0.0215. First discovered by **Édouard Stephan**, a Frenchman, in 1877, the Quintet is unique for its interacting galaxies. Two of the galaxies in the middle of the group have clearly begun to collide, sparking massive bursts of star formation and drawing off long "tails" of stars. Astronomers have predicted that all five galaxies may eventually merge into one large elliptical galaxy.

NGC 7479 shows tightly wound arms of the spiral galaxy create an inverted 'S', as they spin in an anticlockwise direction.

MYTHOLOGY

Pegasus is a late addition to the story of Perseus, who initially flew on his own with the sandals loaned him by Hermes. It is best known for its association with the Greek hero Bellerophon. The manner of the horse's birth was unusual, to say the least. Its mother was Medusa, the Gorgon, who in her youth was famed for her beauty, particularly her flowing hair. Many suitors approached her, but the one who took her virginity was Poseidon, who is both god of the sea and god of horses. Unfortunately, the seduction happened in the temple of Athene. Outraged by having her temple defiled, the goddess Athene changed Medusa into a snake-haired monster whose gaze could turn men to stone. The monster was later killed by Perseus riding Pegasus, before returning to save Andromeda from the great whale Cetus.

AK and Wikipedia



Pegasus with the foal Equuleus next to it, as depicted in Urania's Mirror, a set of constellation cards published in London c.1825.

