# Pluto

Pluto is the largest known object in the Kuiper belt, the largest and second-most massive known dwarf planet in the Solar System and the ninth largest and tenth-most massive known object directly orbiting the Sun.

It is the largest known trans-Neptunian object by volume but is less massive than scattered-disc dwarf planet Eris. Like other Kuiper belt objects, Pluto is primarily made of rock and ice and is relatively small—about one-sixth the mass of the Moon and one-third its volume. It has a moderately eccentric and inclined orbit during which it ranges from 30 to 49 astronomical units (4.4—7.3 billion km) from the Sun. This means that Pluto periodically comes closer to the Sun than Neptune, though an orbital resonance with Neptune prevents them from colliding. In 2014, Pluto was 32.6 AU from the Sun. Light from the Sun takes about 5.5 hours to reach Pluto at its average distance (39.4 AU).

Pluto was discovered in 1930 and was originally considered the ninth planet from the Sun. After 1992, its status as a planet fell into question following the discovery of the Kuiper belt, a ring of objects beyond Neptune that includes Pluto among other large bodies. In 2005, Eris, which is 27% more massive than Pluto, was discovered, which led the International Astronomical Union (IAU) to define the term "planet" formally for the first time the following year. This definition excluded Pluto and reclassified it as a member of the new "dwarf planet" category (and specifically as a plutoid). Some astronomers believe Pluto should still be considered a planet.

Pluto has five known moons: Charon (the largest, with a diameter just over half that of Pluto), Styx, Nix, Kerberos, and Hydra. Pluto and Charon are sometimes considered a binary system because the barycenter of their orbits does not lie within either body. The IAU has not formalized a definition for binary dwarf planets, and Charon is officially classified as a moon of Pluto.

On 14 July 2015, the New Horizons probe flew by Pluto, the first spacecraft to do so. NASA plans for New Horizons to take detailed measurements and images of Pluto and its moons.

*source: Wikipedia*