

## Our Solar System



Jupiter, Saturn, Uranus, and Neptune are huge compared to the other planets and do not have rocky surfaces (but some of them may have solid cores). Jupiter and Saturn are known as "gas giants", and the more distant Uranus and Neptune are called "ice giants". This is because the first two are dominated by gas and the last two have more ice. All four contain mostly hydrogen and helium.

The problem for Pluto, besides its small size and strange orbit, is that it shares its space with lots of other objects in the Kuiper Belt\*, and the status of Pluto (as a planet or not) remains controversial.

\* Beyond the gas giant Neptune is a region of space filled with icy bodies. It is known as the "Kuiper Belt", and contains trillions of objects, all remnants of the early solar system. Some astronomers suggest that some comets come from here.

Astronomers are hunting for another planet in our solar system, after evidence of its existence was unveiled on January 20<sup>th</sup>, 2016. "Planet Nine," a gigantic icy planet, is believed to be ten times larger than the Earth, 20 times farther from the sun than Neptune, and 5,000 times the mass of Pluto. It is dark, so very difficult to see. "There are now five different lines of observational evidence pointing to the existence of Planet Nine," said Konstantin Batygin, a planetary astrophysicist at Caltech in Pasadena.

It is expected that Planet Nine will eventually destroy our solar system by colliding with the other planets and sending them into deep space or the Sun. This event will take place when the Sun begins to die, in about seven billion years.

Ceres, a round object in the Asteroid Belt between Mars and Jupiter, was considered to be a planet when it was discovered in 1801, but later it was classified as an asteroid. Some astronomers still consider Ceres to be the 10th planet of our solar system. It is expected that more planets will be discovered in the future, but their classification will probably remain controversial.