

Pluto, the fallen planet

Posted by Jonas Martin & Nour Azzoug on December 26, 2018

On August 24, 2006, Pluto lost its status of 9th planet of the solar system and was downgraded to the status of dwarf planet. Nevertheless, scientists are starting to argue that Pluto should never have been demoted, the definition of a planet being sloppy.

Planet or dwarf planet?

According to the International Astronomical Union (IAU) - a group of experts responsible for handling « astronomical nomenclature » - a planet should be evolving around the Sun, be massive enough to be round-shaped, and most importantly, should have a dominant gravitational pull in their orbit around the Sun, known as « orbit cleaning ». Indeed, dwarf planets have objects still orbiting in their neighbourhood, as they are not « gravitationally dominant ».

Discovery

Pluto was first discovered by Clyde Tombaugh in 1930, and its status of 9th planet of the solar system began to be questioned during the 90's, when several similar objects were discovered in the Kuiper Belt, within Pluto orbits. In 2005, astronomer discovered Eris, an object very similar to Pluto, but a little smaller and a little further. They wanted to register it as the 10th planet of the solar system but the IAU decided instead to introduce the status of “dwarf planet”, and to demote Pluto and Eris to this status on August 24, 2006.



Pluto

Pluto is orbiting on average 5,9 billion kilometres away from the sun, on an elliptical orbit within the Kuiper Belt, a disc-shaped zone beyond the orbit of Neptune, populated with frozen objects left over by the formation of the solar system. It takes 248 years to Pluto to complete one turn around the sun, and a day on this dwarf planet lasts for about 153 hours. Pluto is a small frozen world, and its surface is composed of frozen nitrogen, methane and carbon monoxide.

Soon recovering its status?

Astronomers are calling for Pluto's status to be re-evaluated. They claim that there would be no planets in the solar system if the IAU's definition was taken literally. Philip Metzger, a planetary scientist at the University of Central Florida says that « There are 120 examples I found of scientists in the recent published literature violating the IAU definition, calling something a planet even though the IAU definition says it's not a planet ». In fact, pulling Pluto from the ranks of planets has always been a controversial decision. For now, Pluto remains a dwarf planet, but it seems clear that people will be debating for a long time to come.