
Why Pluto Is A Dwarf Planet

Pluto has long been regarded as the ninth planet in the solar system since its discovery by Clyde Tombaugh in 1930. But since 2006 the planet has been downgraded in status to a dwarf planet. Textbooks had to be rewritten and there was general outrage and confusion about its new status. In this video, we will be looking at why Pluto was downgraded and if it really should have been. The problem of dwarf planets began in the 90s with the discovery of extreme trans-neptunian objects also known as eTnos. These are objects to orbit the Sun beyond Neptune and are located in a region known as the Kuiper belt. Larger objects such as Quaoar, Sedna and Haumea were being discovered one after another each only slightly smaller than Pluto. This created a problem for scientists as with every single large eTNO that was discovered, most were falling into the planet range of classification. It wasn't until Eris was discovered that scientists truly had to reconsider the criteria for a planet. Eris is practically the same size as Pluto differing by only fifty kilometers in diameter. If Pluto was a planet then why not Eris. In 2006, IAU or the International Astronomical Union proposed a new list of celestial objects known as the dwarf planets after endless debating.

The meeting occurred over eight days with four different proposals on the new definition of planets being considered. To understand why Pluto was downgraded, we must look at the characteristics finally decided upon by the IAU. The first is that a planet must be spherical or almost spherical so sorry asteroids, but most of you will not count. The second is that it must orbit the Sun and must not be a satellite such as a moon, which is pretty self-explanatory. A common misconception about why Pluto was downgraded is that it is too small to be a planet, but this is incorrect. There are no specifications for how big a planet can be. The real reason that Pluto is a dwarf planet is because of the other celestial bodies that obstruct its orbit. The final criteria for a planet is that it must clear its neighborhood around its orbit. But what does this mean? Pluto orbits extremely far out from the Sun finding its home in the Kuiper belt. Because of this however, many objects such as Eris crossed Pluto's orbit and can be affected by the dwarf planet's gravity. If an object has not cleared its orbit of other celestial bodies, then it cannot be classified as a planet. Because all five dwarf planets today find their place in either the Asteroid or Kuiper Belt, their orbits are always impeded by other asteroids, and they are not able to assert gravitational dominance because of their small size. Unfortunately, for this reason and this reason alone Pluto has been downgraded from an official planet to a dwarf planet. But should it really have been downgraded?

There are still disgruntled astronomers in the community of that think so. In the 2006 vote for the reclassification of Pluto, less than 5% of astronomers actually participated in the vote. This led to many alternative classifications for planets being proposed, although some are more outrageous than others. One such proposal in 2017 defined a planet as a round object in space that's smaller than a star, which is completely vague and pointless as it would cause the solar system to contain 110 planets. A different definition proposed by NASA engineer Alan Stern, who worked on the new horizons project to Pluto, proposed that all round celestial bodies of plutonium size including those within the Asteroid and Kuiper Belt should count as planets. While this seems like a more viable definition for a planet, it is unlikely that the IAU will revisit this topic to avoid further controversy. So I'll put it forward to you. Should Pluto be a planet or is the current definition of planet sufficient? Tell me your opinions down in the comment section. if

you enjoyed the video, be sure to check out some of my other ones and subscribe to the channel for weekly astronomy content. Until next time, goodbye.

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