
Thursday, January 21, 1999 Published at 15:28 GMT



**Pluto will have 'dual citizenship'**

US postage stamp showing impression of Pluto

**By BBC News Online Science Editor Dr David Whitehouse**

Pluto's status as a planet seems safe following calls that it is not a true planet and should be downgraded.

The argument is that Pluto, discovered in 1930, is so small and out of place in its distant orbit around the Sun that it cannot be classified as a proper planet.

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Instead, it should be viewed as the largest member of a recently discovered swarm of objects orbiting the Sun in deep space.

But Gareth Williams at the Minor Planet Centre in Massachusetts, which has the responsibility for cataloguing the orbits of solar system objects, says that the idea is not to demote Pluto but to give it "dual citizenship".

Pluto, he says, should be a planet and the leading member of this new group of objects.

**New objects**

![[ image: Pluto and Charon; Artist's impression]]()Since the discovery of minor planet Ceres in 1801 astronomers have found thousands of minor planets orbiting the Sun, chiefly between the orbits of Mars and Jupiter but increasingly in other parts of the solar system.

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| Pluto and Charon; Artist's impression |

Since 1992 small objects, made of rock and ice up to a few hundred kilometres in size, have been found orbiting at a great distance from the Sun. These are the so-called Trans Neptunian Objects (TNOs).

At the current rate of asteroid discovery, number 10,000 will come any day now. This being the case, some astronomers say there is an obvious breakpoint that would allow the TNOs to be numbered.

As I understand it, the plan is to make Pluto asteroid number 10,000 and the first TNO, previously designated 1992 QB1 could be called Asteroid 10,001.

Reaching asteroid 10,000 does lend itself to ceremony, particularly as the Minor Planet Centre has traditionally arranged a celebration every 1000 asteroids. According to Brian Marsden, director of the Minor Planet Centre, this would be a wonderful ceremonial gesture.

**Odd planet**

This dual classification for Pluto underlies its remarkable nature. Many times in the past there have been calls for the reclassification of Pluto - now it seems more so than ever.

According to Johannes Andersen, general secretary of the International Astronomical Union, the body that names celestial objects, we need a better definition of a planet than an object that the ancients saw moving in the sky.

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| [ image: Our best map of the problem planet] |
| Our best map of the problem planet |

Astronomer Mark Kidger says that for some time now it has become obvious that the outer solar system needs to be tidied up. This is partly because there are a whole sub-class of TNOs with similar orbits which are called - Plutinos - little Plutos - which, it seems, are similar to their big brother in all but their size.

But of the known TNOs, Pluto is still about a factor of 100 more massive than any other, apart from its satellite Charon and Charon is, by far, the second largest known TNO.

**Stay with me**

It is likely that Pluto and Charon make up more than 50% of the mass of all the TNOs found to date.

Even so, Mark Kidger says the reasons for down-grading Pluto are fairly convincing. It is now known that the mass of Pluto is only about one fifth of the mass of the Moon and, as such, it is very hard to claim that Pluto really is a planet.

On the other hand there is the view that Pluto's mass is ten or more times the mass of Ceres, the largest asteroid.

Simply put, Pluto's claim to be a proper planet can be summed up by saying that it is spherical, and if it were orbiting the Sun near to the Earth there would be no doubt that it was a planet.

Members of the IAU have been expressing their opinions on Pluto's status. According to Johannes Andersen there have been several votes with no clear-cut result.

Whatever the outcome it seems clear that Pluto is a special type of object, which may well deserve a special status.