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Fourth dwarf planet named Makemake

17 July 2008, Paris: The International Astronomical Union (IAU) has given the name Makemake to the newest member of the family of dwarf planets – the object formerly known as 2005 FY₉ – after the Polynesian creator of humanity and the god of fertility.

Members of the International Astronomical Union's Committee on Small Body Nomenclature (CSBN) and the IAU Working Group for Planetary System Nomenclature (WGPSN) have decided to name the newest member of the plutoid family Makemake, and have classified it as the fourth dwarf planet in our Solar System and the third plutoid.

Makemake (pronounced MAH-keh MAH-keh) is one of the largest objects known in the outer Solar System and is just slightly smaller and dimmer than Pluto, its fellow plutoid. The dwarf planet is reddish in colour and astronomers believe the surface is covered by a layer of frozen methane.

Like other plutoids, Makemake is located in a region beyond Neptune that is populated with small Solar System bodies (often referred to as the transneptunian region). The object was discovered in 2005 by a team from the California Institute of Technology led by Mike Brown and was previously known as 2005 FY₉ (or unofficially "Easterbunny"). It has the IAU Minor Planet Center designation (136472). Once the orbit of a small Solar System body or candidate dwarf planet is well determined, its provisional designation (2005 FY₉ in the case of Makemake) is superseded by its permanent numerical designation (136472) in the case of Makemake.

The discoverer of a Solar System object has the privilege of suggesting a name to the IAU, which judges its suitability. Mike Brown says: *"We consider the naming of objects in the Solar System very carefully. Makemake's surface is covered with large amounts of almost pure methane ice, which is scientifically fascinating, but really not easily relatable to terrestrial mythology. Suddenly, it dawned on me: the island of Rapa Nui. Why hadn't I thought of this before? I wasn't familiar with the mythology of the island so I had to look it up, and I found Makemake, the chief god, the creator of humanity, and the god of fertility. I am partial to fertility gods. Eris, Makemake, and 2003 EL₆₁ were all discovered as my wife was 3-6 months pregnant with our daughter. I have the distinct memory of feeling this fertile abundance pouring out of the entire Universe. Makemake was part of that."* WGPSN and CSBN accepted the name Makemake during discussions conducted per email.

Makemake holds an important place in the Solar System because it, along with Eris and 2003 EL₆₁, was one of the objects whose discovery prompted the IAU to reconsider the definition of a planet and to create the new group of dwarf planets. Visually, it is the second brightest transneptunian object, following after Pluto, and is bright enough to be seen through a high-end amateur telescope (a peak magnitude of roughly 16.5). Mike Brown explains: *"The orbit is not particularly strange, but the object itself is big. Probably about 2/3 the size of Pluto."*

The other three dwarf planets are Ceres, Pluto and Eris. However, Ceres is not a member of the distinctive plutoid group because its orbit is smaller than Neptune's (Ceres is located in the asteroid belt between Mars and Jupiter).

The word Makemake is Polynesian in origin and is the name of the creator of humanity and the god of fertility in the mythology of the South Pacific island of Rapa Nui or the Easter Island. He was the chief god of the Tangata manu bird-man cult and was worshiped in the form of sea birds, which were his incarnation. His material symbol was a man with a bird's head.

Notes

The IAU is the international astronomical organisation that brings together almost 10,000 distinguished astronomers from all nations of the world. Its mission is to promote and safeguard the science of astronomy in all its aspects through international cooperation. The IAU also serves as the internationally recognised authority for assigning designations to celestial bodies and the surface features on them. Founded in 1919, the IAU is the world's largest professional body for astronomers.

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Links

Information about Pluto and the other dwarf planets:
http://www.iau.org/public_press/themes/pluto/

IAU website: <http://www.iau.org/>

Scientific paper estimating the size of Makemake: <http://arxiv.org/abs/astro-ph/0702538v1>