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IAU 2006 General Assembly: Result of the IAU Resolution votes

24-August-2006, Prague: The first half of the Closing Ceremony of the 2006 International Astronomical Union (IAU) General Assembly has just concluded. The results of the Resolution votes are outlined here.

It is official: The 26th General Assembly for the International Astronomical Union was an astounding success! More than 2500 astronomers participated in six Symposia, 17 Joint Discussions, seven Special Sessions and four Special Sessions. New science results were vigorously discussed, new international collaborations were initiated, plans for future facilities put forward and much more.

In addition to all the exciting astronomy discussed at the General Assembly, six IAU Resolutions were also passed at the Closing Ceremony of the General Assembly:

1. Resolution 1 for GA-XXVI : "Precession Theory and Definition of the Ecliptic"
2. Resolution 2 for GA-XXVI: "Supplement to the IAU 2000 Resolutions on reference systems"
3. Resolution 3 for GA-XXVI: "Re-definition of Barycentric Dynamical Time, TDB"
4. Resolution 4 for GA-XXVI "Endorsement of the Washington Charter for Communicating Astronomy with the Public"
5. Resolution 5A: "Definition of 'planet' "
6. Resolution 6A: "Definition of Pluto-class objects"

The IAU members gathered at the 2006 General Assembly agreed that a "planet" is defined as a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighbourhood around its orbit.

This means that the Solar System consists of eight "planets" Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. A new distinct class of objects called "dwarf planets" was also decided. It was agreed that "planets" and "dwarf planets" are two distinct classes of objects. The first members of the "dwarf planet" category are Ceres, Pluto and 2003 UB₃₁₃ (temporary name). More "dwarf planets" are expected to be announced by the IAU in the coming months and years. Currently a dozen candidate "dwarf planets" are listed on IAU's "dwarf planet" watch list, which keeps changing as new objects are found and the physics of the existing candidates becomes better known.

The "dwarf planet" Pluto is recognised as an important proto-type of a new class of trans-Neptunian objects. The IAU will set up a process to name these objects.

Below are the planet definition Resolutions that were passed.

RESOLUTIONS

Resolution 5A is the principal definition for the IAU usage of “planet” and related terms.

Resolution 6A creates for IAU usage a new class of objects, for which Pluto is the proto type. The IAU will set up a process to name these objects.

IAU Resolution: Definition of a “Planet” in the Solar System

Contemporary observations are changing our understanding of planetary systems, and it is important that our nomenclature for objects reflect our current understanding. This applies, in particular, to the designation “planets”. The word “planet” originally described “wanderers” that were known only as moving lights in the sky. Recent discoveries lead us to create a new definition, which we can make using currently available scientific information.

RESOLUTION 5A

The IAU therefore resolves that planets and other bodies in our Solar System, except satellites, be defined into three distinct categories in the following way:

(1) A “planet”¹ is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighbourhood around its orbit.

(2) A “dwarf planet” is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape², (c) has not cleared the neighbourhood around its orbit, and
(d) is not a satellite.

(3) All other objects³, except satellites, orbiting the Sun shall be referred to collectively as “Small Solar-System Bodies”.

IAU Resolution: Pluto

RESOLUTION 6A

The IAU further resolves:

Pluto is a “dwarf planet” by the above definition and is recognized as the prototype of a new category of trans-Neptunian objects.

¹ The eight planets are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

² An IAU process will be established to assign borderline objects into either dwarf planet and other categories.

³ These currently include most of the Solar System asteroids, most Trans-Neptunian Objects (TNOs), comets, and other small bodies.