

Hayden Planetarium Times

Isaac Asimov Memorial Debate 2009

Planets to Plutoids: Our New Solar System

Pluto: Down but
Maybe Not Out
Robert Roy Britt, Space.com,
August 31, 2006

It would not be like Pluto's demotion that you'd see on TV. Arguments over the newly approved definition for "planet" will likely continue at least until next year, and expressions of dissent remain that a final vote will be held in 2010.

What is a definitive vote on the definition could be altered enough to classify Pluto as a planet, assuming any of the proposed changes.

In a statement, noting the largest group of planetary scientists in the world voted to before the proposal for the definition, which was adopted last week by a vote of just a few hundred of astronomers at the International Astronomical Union (IAU) General Assembly meeting in Prague.

The definition that officially states that the eight worlds from Mercury to Neptune are planets and that Pluto and other small bodies are in the same solar system are not planets but will be referred to as dwarf planets.

The wording has been heavily criticized as being vague and arbitrary and failing to include planets in our solar system. One highly controversial aspect of the definition is that a planet must consist of a round shape by clearing out other objects in its lane. Earth and some of the giant planets have not cleared their paths, yet they are planets. The definition is not intended to be applied to other planets.

Named after the IAU's Planetary Science Division (DPS), the IAU's Planetary Science Division (DPS) of the American Astronomical Society (AAS) "recognizes the authority of the IAU to create a definition," says a statement on the IAU website. "The definition is not intended to be applied to other planets, which are not intended to be included in the definition."

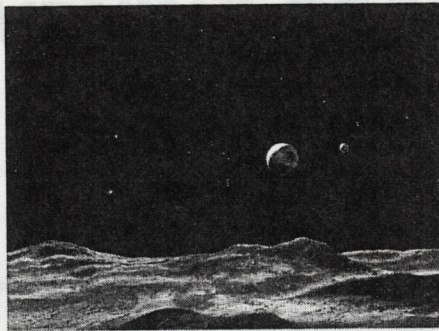
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"The definition of a planet is not primarily a matter of science," Morrison told SPACE.com. "This is a case of an intense, but not necessarily, including system of science without a clear definition. Now they have one. But it is not obvious to me that planetary scientists will adjust their terminology because of the IAU vote."

The IAU's final proposal was lambasted by many astronomers for being too vague and together of the last minute, and for not adhering to recommendations from previous committees. Morrison was on an IAU committee of astronomers that debated the membership of a definition proposal. The one that was adopted



Pluto Gets the Boot
as Planet Count
Drops
Stephen Battersburg, New Scientist, August 24, 2006

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Pluto Demoted, No
Longer a Planet
Francie Grace, CBS,
August 24, 2006

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Pluto's Not a Planet? Only in New York
Kenneth Chang, New York Times, January 22, 2001

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LeFrak Theater - American Museum of Natural History
Tuesday - March 10, 2009 - 7:30 PM

When the International Astronomical Union of 2006 reclassified Pluto as a dwarf planet, controversy followed over this most beloved object in the solar system. Recent discoveries of icy Kuiper belt objects and hot exoplanets have forced scientists to re-think previous classification schemes and their associated nomenclature.

For more information about this topic, we recommend the following articles:

<http://astro.berkeley.edu/~basri/defineplanet/index.html>

<http://www.ifa.hawaii.edu/faculty/jewitt/kb.html>

http://sciencenews.org/view/access/id/38812/title/ALAN_STERN

Full texts of the articles featured on the cover are available online at these sites:

Pluto: Down but Maybe Not Out

http://www.space.com/scienceastronomy/060831_planet_definition.html

Pluto Gets the Boot as the Planet Count Drops

<http://www.newscientist.com/article/dn9824>

Pluto Demoted, No Longer a Planet

<http://www.cbsnews.com/stories/2006/08/24/tech/main1931722.shtml>

Pluto's Not a Planet? Only in New York

<http://query.nytimes.com/gst/fullpage.html?res=9B0DE2D8133CF931A15752C0A9679C8B63>

THE EVENING PROGRAM

Welcome & Introduction of the Panelists

Opening Questions to Panelists

Directed Free Debate among Panelists

Questions from Audience

Adjourn

Book Sale/Book & Program Signing

Hall of Northwest Coast Indians

Program Note:

The Isaac Asimov debate is not a formal panel but is conceived as a free flowing, adversarial conversation such as what might occur in the coffee lounges of academia. Think of yourself not as a member of an audience but rather as an eavesdropper on the scientific process.

ABOUT THE PARTICIPANTS

Panelists

Gibor Basri

is on the faculty at UC Berkeley. He studies newly born stars and their disks, which are the sites for planet formation, and brown dwarfs: objects between stars and planets in mass. He is now involved in NASA's Kepler mission, which is a space-based transit search for terrestrial planets around other stars.

Jack Lissauer

is a research scientist who has been at NASA's Ames Research Center, California since 1996. Principally a theorist, he also searches for exosolar planetary systems, both from ground-based as well as space borne telescopes.

Sara Seager

is the Ellen Swallow Richards Associate Professor of Planetary Science and Associate Professor of Physics at MIT. She was part of a team that co-discovered the first detection of light emitted from an exoplanet and the first spectrum of an exoplanet.

Steven Soter

is a planetary scientist (PhD Cornell University) at AMNH, and a visiting professor in the Environmental Studies Program at New York University. He was co-author with Carl Sagan and Ann Druyan of the "Cosmos" television series.

Alan Stern

is a planetary scientist and an expert in the origin and evolution of our outer solar system. He is also a Principal Investigator on several NASA planetary exploration missions and the former head of all science missions at NASA Headquarters.

Mark V. Sykes

is director of the Planetary Science Institute in Tucson, AZ. His research interests include the origin and evolution of dust in the solar system. He is former president of the Division of Planetary Sciences of the American Astronomical Society.

Host & Moderator

Neil deGrasse Tyson

is an Astrophysicist with the American Museum of Natural History where he also serves as the Fredrick P. Rose Director of the Hayden Planetarium. Holder of nine honorary doctorates, Tyson is also host of the acclaimed PBS series NOVA Science Now and is author most recently of *The Pluto Files*.

The late Dr. Isaac Asimov,

one of the most prolific and influential authors of our time, was a dear friend and supporter of the American Museum of Natural History.

In his memory, the Hayden Planetarium is honored to host the annual Isaac Asimov Memorial Debate, generously endowed by relatives, friends, and admirers of Isaac Asimov and his work bringing the finest minds in the world to the Museum each year to debate pressing questions on the frontier of scientific discovery.

Proceeds from ticket sales of the Isaac Asimov Memorial Debates benefit the scientific and educational programs of the Hayden Planetarium.

- 2001 The Theory of Everything
- 2002 The Search For Life In the Universe
- 2003 The Big Bang
- 2004 The Dark Side
- 2005 The Enigma of Alien Solar Systems
- 2006 Universe: One or Many?
- 2007 The Pioneer Anomaly
- 2008 Mining The Sky



To add your name to the Hayden Planetarium's star-struck e-list for sky phenomena and Hayden events, send a blank e-mail to: star-struck-join@sts.amnh.org

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Department of Astrophysics Research.amnh.org/astrophysics 212-769-3650

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Flyer design:
Olivia Gulin

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American Museum of Natural History
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Hayden Planetarium Sky Reporter

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Hayden Planetarium Science Visualizations

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