

## **AFAN 110722**

Check this out - note the lines in italics/bold/underlined (mine) - seems like many astronomers still consider Pluto a planet too!!!

Matt Lauten

Astronomers using the Hubble Space Telescope have discovered a fourth moon orbiting Pluto.

Pluto - for the record - is still classified as a dwarf planet.

Astronomer Larry Wasserman of Lowell Observatory in Flagstaff, where Pluto was discovered in 1930, said his bottom line is: "You can call (Pluto) anything you want, but I call it interesting."

Interest in Pluto has actually accelerated since its demotion to dwarf, mainly because a NASA spacecraft named New Horizons is on its way to give the world its first close-up picture of the former planet in 2015.

Planetary scientist Alan Stern, who is principal investigator for that mission, said the most interesting thing about Pluto's moons is that they are "locked together in resonance" - traveling in circular orbits in the same orbital plane with the precision of a Swiss watch.

Every time the newest moon, unnamed at this point, makes a single orbit, the largest moon, Charon, discovered in 1978 from the U.S. Naval Observatory station in Flagstaff, makes five, he said.

The two other moons, Nix and Hydra, discovered by Hubble in 2005, orbit at a four-to-one and six-to-one ratio, respectively.

"It means the whole system is interlocked. There is no other place in the solar system where that happens," Stern said.

Stern never accepted the new definition of planet that demoted Pluto to dwarf just six months after New Horizons launched in January 2006. He said planetary scientists call Pluto a planet "in technical talks, in papers and in casual conversation."

The new moon announced Wednesday by NASA is Pluto's smallest yet, with an estimated diameter between 8 and 21 miles. Charon, by comparison, is about 648 miles in diameter, about half the size of Pluto itself.

"I find it remarkable that Hubble's cameras enabled us to see such a tiny object so clearly from a distance of more than 3 billion miles," said Mark Showalter of the SETI Institute in Mountain View, Calif. Showalter, who led the observing program, made the statement in a NASA news release.

New Horizons will also provide clues for another interesting phenomenon observed in preparation for its visit.

Lowell Observatory's Wasserman said scientists want to know why Pluto's atmosphere appears to be increasing in density as its orbit takes it farther from the sun, when the opposite should be expected as its gases solidify.

Wasserman is part of a team that observed Pluto on June 23 as it passed in front of a star, an event called an occultation.

It included the first deployment of a pair of high-speed cameras developed at Lowell called the High-speed Imaging Photometer for Occultations, or HIPO.

The Lowell team used the instrument aboard NASA's Stratospheric Observatory for Infrared Astronomy, or SOFIA, a modified 747SP aircraft that flies instruments to 45,000 feet, above the Earth's cloud cover and much of its water vapor. Data from that flight and ground observations should give a more precise measurement of Pluto's atmosphere, Wasserman said.

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