



2006

Linda French

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WGLT

Recommended Citation

Kern, Willis (Interviewer), "Linda French" (2006). *Interviews for WGLT*. 9.
http://digitalcommons.iwu.edu/wgl_t_interviews/9

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Linda French, Illinois Wesleyan University, interviewed by Charlie Schlenker, WGLT
WGLT Interview Transcript
08/15/2006

The decision is in and Pluto CAN remain a planet. An Illinois Wesleyan University astronomer was among those who helped structure the panel making today's recommendation. WGLT's Willis Kern reports...

Willis Kern: IWU Associate Professor of Physics Linda French studies comets and asteroids but planets are her real specialty. As a member of a special committee of astronomers, she helped construct the seven-member panel which is coming out with its recommendations today. Among them, Pluto not only is a planet but it leads its own brand new planetary designation. French says the debate over Pluto's status has been hard-fought ever since facts emerged that seemed to question its planetary muster such as Pluto's path around the Sun isn't consistently on the same plane as the other planets.

Linda French: It's somewhat inclined to the plane of the rest of the solar system. If you just image a tabletop, most of the planets would sit right on that tabletop. Pluto goes up and then down a little bit about 17° and the new planet known as UB313—that's not its final name—it goes up and down a lot more, which may help to explain why it took so long to find it.

Willis Kern: So if these recommendations are adopted when this august body concludes its meetings in Europe, there will be in fact not only Pluto defined as a planet but three others—

Linda French: That's—

Willis Kern: That will be planets as well.

Linda French: That is correct, there will be twelve planets. Under the new guidelines, the largest asteroid, what we now call an asteroid Ceres, will be called a planet because it's spherical and it goes directly around the Sun, so it's far away from Pluto, it's between the orbits of Mars and Jupiter in the solar system but it will be given the status of a planet and here's the really unusual one—the moon of Pluto known as Charon is close enough to Pluto in mass that the two of them are actually going around each other and so one can make the case that each of them deserves to be called a planet, so under this guideline it would be a planet as well.

Willis Kern: So our new planets are the UB...

Linda French: 313.

Willis Kern: 313 that you referred to, which I think some people refer to as Xena.

Linda French: Xena.

Willis Kern: And then you have Ceres.

Linda French: Mhmm.

Willis Kern: And Charon.

Linda French: Yep.

Willis Kern: Is there a possibility there'll be more?

Linda French: As a matter of fact, yes, there is a waiting list of about twelve other possible candidates. These are ones that would need to have their shape measured to see whether they're round enough to be called planets but they—and also their size. It's very difficult to measure sizes for things that faint and that far away. We'll take some very delicate measurements with things like the Hubble Space Telescope and the new Spitzer Space Telescope, so we could, within a very short amount of time, be up to twenty-four planets.

Willis Kern: And then there's a possibility of even more after that.

Linda French: Absolutely.

Willis Kern: Is it, if you'll pardon the pun, the sky is the limit as far as the number of planets we're talking about?

Linda French: [laughs] Under these guidelines, yes, yeah.

Willis Kern: As the telescopes and our ability increases to be able to see farther out and more clear further out, there could be more planets.

Linda French: That's correct, the more sensitive our detectors and the larger the telescopes we build to get more light, we could find many more things out there that we know now there are thousands of objects out there at Pluto's distance and slightly beyond, so we could have many more planets than we ever dreamed of.

Willis Kern: And, according to these new guidelines, Pluto actually heads up a new category of planet known as the pluton, right.

Linda French: That's right.

Willis Kern: What is the significance of that?

Linda French: Well I think it's meant to honor Pluto for its status for so many years as being the only body in that category and beyond that, well, we've had two sort of major categories of planets—the terrestrial planets, the earth-like planets, Mercury, Venus, the Earth, and Mars, the Jovian planets, the big gas giants, Jupiter, Saturn, Uranus, Neptune—and then Pluto never fit in either category, so why not Pluto-like planets or plutons?

Willis Kern: Why is it so important for Pluto to be a planet? Because there is—there has been this debate for a long time—

Linda French: Yes.

Willis Kern: About—well Pluto should just not be a planet, we should have eight planets and then be done with it, and find categories for everything else—

Linda French: Mhmm.

Willis Kern: But these are eight planets. What's wrong with that?

Linda French: Well when this first came out, I was in Boston and I was doing a summer workshop at Harvard, in fact, and we had 24 absolutely dynamic science teachers from all over the country come in and one woman walked into the room the first day and she said, "Can you tell me what happened to Pluto? Did we lose Pluto?" and, you know, I—the thought to me of the whole country, the whole world, being confused and thinking Pluto had gotten lost made me realize that this is not just a strictly scientific question. It's a cultural question, it's a historical question. It is one that we should try to set some scientific guidelines for but I think the vast majority of the astronomers I know and the people in the planetary science community really wanted to see Pluto maintain its planetary status for that reason. I think we feel a little affectionate towards it as well.

Willis Kern: IWU astronomer Linda French calls the advisory panel's recommendations about Pluto and planetary status a good start but she says they won't likely be the final word. She expects the proposals to be adopted and says this entire two year exercise demonstrates that science is not an ordered body of knowledge similar to say the phonebook. She says, "Science is the way we learn about the world around us and sometimes categories have to be made up as we go along." I'm Willis Kern, WGLT News.