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Columns

One Find, Two Astronomers: An Ethical Brawl



Institute of Astrophysics of Andalusia

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The Sierra Nevada Observatory in Spain.

By DENNIS OVERBYE

Published: September 13, 2005

Correction Appended

When a group of Spanish astronomers reported in July that they had discovered a spectacular addition to the solar system, a bright ball of ice almost as big as Pluto sailing the depths of space out beyond Neptune, Michael Brown of Caltech chalked it up to coincidence and bad luck. His own group had been tracking the object, now known as 2003 EL61, for months but had told no one.

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Stephanie Diani for The New York Times, top; Juan Palma/La Opinion Michael Brown, an astronomer at Caltech, top, said that he and his team were tracking an unknown object in the solar system. Jose Luis Ortiz, above, and his team members say they discovered the same object.

He sent the leader of the group, Jose-Luis Ortiz, of the Institute of Astrophysics of Andalusia, in Granada, a congratulatory e-mail message.

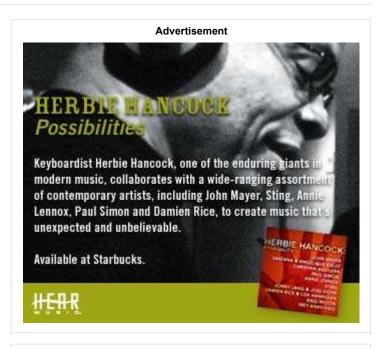
Now Dr. Brown has asked for an investigation of Dr. Ortiz's discovery, alleging a serious breach of scientific ethics. Archival records, he said, show that only a day before the discovery was reported, computers traced to Dr. Ortiz and his student Pablo Santos-Sanz visited a Web site containing data on where and when the Caltech group's telescope was pointed.

The information in these observing logs could have been used to help find the object on the Spanish images, taken more than two years ago, or simply to confirm that both groups discovered the same object. Depending on what the Spanish astronomers did, their failure to mention the Caltech observations could be considered scientific dishonesty or even fraud, Dr. Brown suggests.

In comments for his Web site

(www.gps.caltech.edu/~mbrown/planetlila), which includes a detailed timeline of the events surrounding the July announcement, he writes: "It is not clear from the timeline precisely what Ortiz and Santos-Sanz knew and how they used the records that they accessed. They were required by the standards of science, however, to acknowledge their use of our Web-based records."

In an e-mail message to Brian Marsden of the Harvard-Smithsonian Center for Astrophysics, who is director of International Astronomical Union's Minor Planet Center, the clearinghouse for such discoveries, Dr. Brown wrote on Aug. 15, "I request that Ortiz et al. be stripped of official discovery



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status and that the I.A.U. issue a statement condemning their actions."

Dr. Ortiz did not respond to numerous e-mail messages and telephone calls. Last week in an e-mail message to Dr. Brown, Dr. Ortiz neither admitted nor denied looking at the observing logs. Instead he criticized Dr. Brown's failure to report discoveries promptly to the Minor Planet Center, saying that his penchant for "hiding objects" had alienated other astronomers and harmed science.

"And remember," he said in the message, which Dr. Brown provided to The New York Times, "the only reason why we are now exchanging e-mail is because you did not report your object."

But Jose Carlos del Toro Iniesta, director of the Andalusian institute, said in an e-mail message that he intended to investigate Dr. Brown's allegations, adding, "I beg your understanding in separating clearly the institute as a whole from its individual members: the researchers' actions are their sole responsibility."

The spectacular allegation has flummoxed the International Astronomical Union. Saying that he and his colleagues had never been fooled before, Dr. Marsden admitted that the I.A.U. had no protocol for adjudicating such a dispute. Dr. Robert Kirshner, a Harvard astronomer and the president of the American Astronomical Association, said, "I don't think we have a method - other than public tantrums - to resolve these problems."

The imbroglio illustrates the ethical dangers and pitfalls of doing science in the Internet age, where a little clicking can bring you a shocking amount of information about what your colleagues and rivals are up to.

There is a long history of astronomers jealously guarding the coordinates of some celestial phenomenon while they try to figure out what it is, and of others trying to get in on the action. In 1930, when Pluto was discovered, the Lowell Observatory, home of the discoverer Clyde Tombaugh, withheld details of its location because they wanted to be the first to calculate its orbit.

Matthew Holman, a Harvard planetary astronomer, said that in the old days when the logbooks were real books sitting by the telescope, some astronomers would write down fictitious coordinates and objects to cover their tracks.

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Correction: Sept. 14, 2005, Wednesday:

An article in Science Times yesterday about a dispute between astronomers over credit for the discovery of 2003 EL61, a large icy object in the outer solar system, misstated the term for the identification number assigned by the Internet to every computer. The number, by which American astronomers were able to trace a Spanish group's visits to their Web site before the discovery was announced, is called an IP address (for "Internet protocol"), not IPP numbers.

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