

Beat: Miscellaneous

NASA satellite detects previously unknown black hole in Milky Way

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USPA News - NASA on Friday announced that its Swift satellite recently detected the presence of a previously unknown stellar-mass black hole. A rising tide of high-energy X-rays from a source toward the center of the Milky Way galaxy produced by a rare X-ray nova signaled the black hole.

Neil Gehrels, the mission's principal investigator, at NASA's Goddard Space Flight Center in Greenbelt, Maryland said bright X-ray novae are so rare that they're essentially once-a-mission events and this is the first one Swift has seen. An X-ray nova is a short-lived X-ray source that appears suddenly, reaches its emission peak in a few days and then fades out over a period of months. The outburst arises when a torrent of stored gas suddenly rushes toward one of the most compact objects known, either a neutron star or a black hole. The rapidly brightening source, which was named Swift J1745-26 after the coordinates of its sky position, triggered Swift's Burst Alert Telescope twice on the morning of September 16, and once again the next day. According to NASA, the nova is located a few degrees from the center of the Milky Way galaxy toward the constellation Sagittarius. Its precise distance is still unknown, but they think the object resides about 20,000 to 30,000 light-years away in the galaxy's inner region. "The pattern we're seeing is observed in X-ray novae where the central object is a black hole," said Boris Sbarufatti, an astrophysicist at Brera Observatory in Milan, Italy, who currently is working with other Swift team members at Pennsylvania's Penn State in University Park. "Once the X-rays fade away, we hope to measure its mass and confirm its black hole status," Sbarufatti added. Swift, launched in November 2004, is managed by Goddard Space Flight Center. It is operated in collaboration with Penn State, the Los Alamos National Laboratory in New Mexico and Orbital Sciences Corp. in Dulles, Virginia, with international collaborators in the United Kingdom and Italy and including contributions from Germany and Japan.

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