Cassini cameras spot powerful new lightning storm on Saturn

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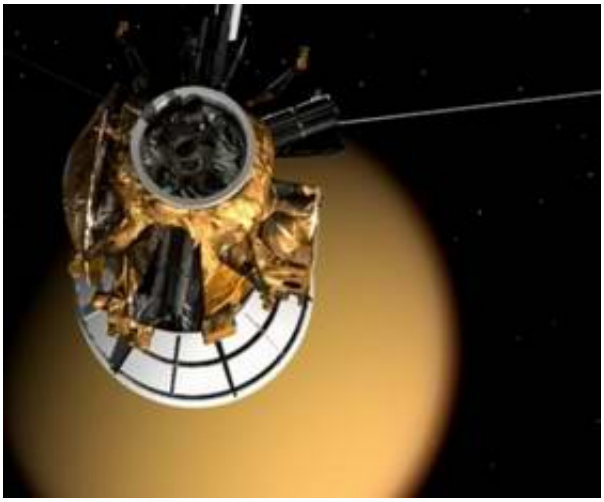

Following the recent detection of Saturnian radio bursts by NASA's Cassini spacecraft that indicated a rare and powerful atmospheric storm, Cassini imaging scientists have spotted the storm in an unlikely fashion: they looked for it in the dark.

When lightning-generated radio noise from the storm was detected by Cassini on January 23, the spacecraft was at a place in its orbit where it was unable to image the sunlit side of Saturn. Instead, imaging scientists searched for the southern hemisphere storm in images of the planet's night side. Fortunately, the small amount of sunlight reflecting off

Saturn's rings and illuminating the night side is enough to make features in the atmosphere visible.

The storm is located on the side of Saturn that faces the spacecraft when the radio emissions are detected; Cassini does not observe the radio emissions for half a Saturnian day when the storm is on the planet's other side.

The latitude of the new storm matches that of the "Dragon storm," which was a powerful emitter of radio noise and was imaged by Cassini in 2004. It lies in a region of the southern hemisphere referred to as "storm alley" by scientists because of the high level of storm activity observed there by Cassini. The storm's north-south dimension is about 3,500 kilometers (2,175 miles).

"It's really the only large storm on the whole planet," says Andrew Ingersoll, a member of the Cassini imaging team. "It's in the right place and it appeared at the right time to match the radio emissions, so it has to be the right storm," he said.

Cassini's investigation of the storm has also been aided by the efforts of Earth-based amateur astronomers, who were able view Saturn's dayside with their telescopes when Cassini could not. The amateurs' images of Saturn provided the first visual confirmation of the storm, now revealed in detail by the new views from Cassini.

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory (JPL), a division of the California Institute of Technology in Pasadena, manages the Cassini-Huygens mission for NASA's Science Mission Directorate, Washington. The Cassini orbiter and its two onboard cameras were designed, developed and assembled at JPL. The imaging team consists of scientists from the U.S., England,

France, and Germany. The imaging operations center and team leader (Dr. C. Porco) are based at the Space Science Institute in Boulder, Colo.

Images showing the storm can be found at http://ciclops.org and http://saturn.jpl.nasa.gov