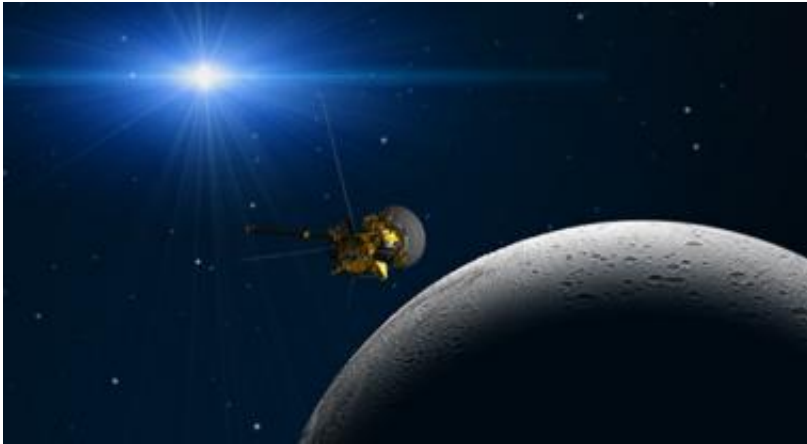


Cassini back to normal, ready for Enceladus

November 25 2010



This artist's concept shows a planned flyby of Saturn's moon Enceladus by NASA's Cassini spacecraft on Nov. 30, 2010. During the closest part of the flyby, Cassini's radio science subsystem will make gravity measurements. Image credit: NASA/JPL

(PhysOrg.com) -- NASA's Cassini spacecraft resumed normal operations today, Nov. 24. All science instruments have been turned back on, the spacecraft is properly configured and Cassini is in good health. Mission managers expect to get a full stream of data during next week's flyby of the Saturnian moon Enceladus.

Cassini went into [safe mode](#) on Nov. 2, when one bit flipped in the onboard command and data subsystem computer. The bit flip prevented the computer from registering an important instruction, and the [spacecraft](#), as programmed, went into the standby mode. Engineers have

traced the steps taken by the computer during that time and have determined that all spacecraft responses were proper, but still do not know why the bit flipped.

The [flyby](#) on Nov. 30 will bring Cassini to within about 48 kilometers (30 miles) of the surface of Enceladus. At 61 degrees north latitude, this encounter and its twin three weeks later at the same altitude and latitude, are the closest Cassini will come to the northern hemisphere surface of Enceladus during the extended Solstice mission. (Cassini's closest-ever approach to the surface occurred in October 2008, when it dipped to an altitude of 25 kilometers, or 16 miles.)

During the closest part of the Nov. 30 flyby, Cassini's radio science subsystem will make gravity measurements. The results will be compared with those from an earlier flyby of the Enceladus south pole to understand the moon's interior structure better. Cassini's fields and particles instruments will sample the charged particle environment around Enceladus. Other instruments will capture images in visible light and other parts of the light spectrum after Cassini makes its closest approach.

Provided by JPL/NASA

Citation: Cassini back to normal, ready for Enceladus (2010, November 25) retrieved 29 June 2024 from <https://phys.org/news/2010-11-cassini-ready-enceladus.html>

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