

Close-Up of Enceladus Northern Hemisphere taken by Cassini

December 21 2010, By Jia-Rui C. Cook



This artist's concept shows NASA's Cassini spacecraft dipping close to the northern hemisphere of Saturn's moon Enceladus.

(PhysOrg.com) -- NASA's Cassini spacecraft made its close flyby of the northern hemisphere of Saturn's moon Enceladus yesterday, Monday, Dec. 20. The closest approach took place at 5:08 PM PST (8:08 EST) on Dec. 20, or 1:08 AM UTC on Dec. 21. The spacecraft zipped by at an altitude of about 48 kilometers (30 miles) above the icy moon's surface.

Cassini's fields and [particles](#) instruments had priority during this flyby. They tried to characterize the particles that may form a tenuous atmosphere around [Enceladus](#) and see if they may be similar to the faint oxygen- and carbon-dioxide atmosphere detected recently around Rhea, another Saturnian moon. The instruments they were particularly interested in, the Enceladus environment away from the jets emanating

from the south polar region.

A goal of the observations was to try to measure the rate of dust coming off the moon from the bombardment of micrometeoroids alone. These measurements will help scientists understand the rate of micrometeoroid bombardment in the Saturn system, which will help them get at the age of Saturn's main rings.

The composite infrared spectrometer and imaging cameras were also active, looking for additional hot spots on the moon and taking pictures of some regions at a higher resolution than is currently available.

This is the 13th flyby of Enceladus in Cassini's mission and takes a similar path to the last Enceladus [flyby](#).

More information: For more information about the Cassini-Huygens mission visit saturn.jpl.nasa.gov and www.nasa.gov/cassini .

Provided by JPL/NASA

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