

Cassini to make closest pass yet over Enceladus South Pole

March 27 2012, By Jia-Rui C. Cook



Artist's concept of the Mar. 27, 2012, flyby of Saturn's moon Enceladus by NASA's Cassini spacecraft. Credit: NASA/JPL-Caltech

(PhysOrg.com) -- NASA's Cassini spacecraft is preparing to make its lowest pass yet over the south polar region of Saturn's moon Enceladus, where icy particles and water vapor spray out in glittering jets. The closest approach, at an altitude of about 46 miles (74 kilometers), will occur around 11:30 a.m. PDT (2:30 p.m. EDT) on March 27.

This flyby is primarily designed for Cassini's ion and neutral mass

spectrometer, which will attempt to "taste" particles from the jets. Scientists using this spectrometer will utilize the data to learn more about the composition, density and variability of the plume. The Cassini plasma spectrometer, which team members worked to return to service so it could gather high-priority measurements during this flyby, will also be analyzing Saturn's magnetic and plasma environment near Enceladus and sampling the plume material near closest approach.

In addition, the [composite infrared spectrometer](#) will also be looking for hot spots on Enceladus, and the imaging cameras will be snapping pictures.

A flyby in October 2015 will bring Cassini about 16 miles (25 kilometers) closer to the Enceladus surface near the south pole. Cassini's closest approach to any part of Enceladus occurred on Oct. 9, 2008, when it flew within about 16 miles (25 kilometers) of the surface at the equator.

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

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

Provided by JPL/NASA

Citation: Cassini to make closest pass yet over Enceladus South Pole (2012, March 27) retrieved

25 April 2024 from <https://phys.org/news/2012-03-cassini-closest-enceladus-south-pole.html>

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