



Space Research Journal

ISSN 1819-3382



Academic
Journals Inc.

www.academicjournals.com

Cassini Returns Images of Bright Jets at Saturn's Moon Enceladus

NASA's Cassini spacecraft successfully dipped near the surface of Saturn's moon Enceladus on Nov. 30. Though Cassini's closest approach took it to within about 48 kilometers (30 miles) of the moon's northern hemisphere, the spacecraft also captured shadowy images of the tortured south polar terrain and the brilliant jets that spray out from it.

Many of the raw images feature darkened terrain because winter has descended upon the southern hemisphere of Enceladus. But sunlight behind the moon backlights the jets of water vapor and icy particles. In some images, the jets line up in rows, forming curtains of spray.

The new raw images can be seen at: <http://saturn.jpl.nasa.gov/photos/raw/>.

The Enceladus flyby was the 12th of Cassini's mission, with the spacecraft swooping down around 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 Enceladus occurred in October 2008, when the spacecraft dipped to an altitude of 25 kilometers, or 16 miles.)

Among the observations Cassini made during this Enceladus flyby, the radio science subsystem collected gravity measurements to understand the moon's interior structure,

and the fields and particles instruments sampled the charged particle environment around the moon.

About two days before the Enceladus flyby, Cassini also passed the sponge-like moon Hyperion, beaming back intriguing images of the craters on its surface. The flyby, at 72,000 kilometers (45,000 miles) in altitude, was one of the closest approaches to Hyperion that Cassini has made.

Scientists are still working to analyze the data and images collected during the flybys.

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory manages the project for NASA's Science Mission Directorate in Washington. The Cassini orbiter was designed, developed and assembled at JPL. The imaging operations center is based at the Space Science Institute in Boulder, Colo.

More Cassini information is available, at <http://www.nasa.gov/cassini> and <http://saturn.jpl.nasa.gov>.