Cassini Measures Tug of Enceladus

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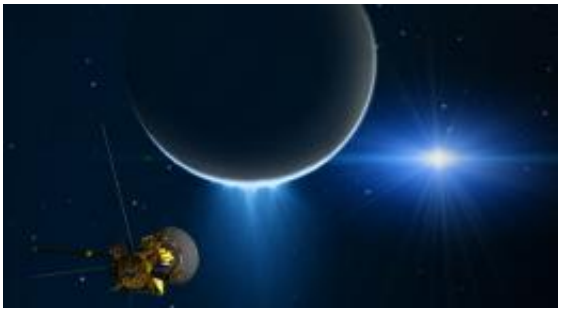

Artist's concept of Cassini's flyby of Saturn's moon Enceladus. Image credit: NASA/JPL

(PhysOrg.com) -- NASA's Cassini spacecraft will be gliding low over Saturn's moon Enceladus for a gravity experiment designed to probe the moon's interior composition.

The flyby, which will take Cassini through the water-rich plume flaring out from Enceladus's south polar region, will occur on April 27 Pacific time and April 28 UTC. At closest approach, Cassini will be flying about 100 kilometers (60 miles) above the moon's surface.

Cassini's scientists plan to use the radio science instrument to measure the gravitational pull of Enceladus against the steady radio link to NASA's Deep Space Network on Earth. Detecting any wiggle will help scientists understand what is under the famous "tiger stripe" fractures that spew water vapor and organic particles from the south polar region. Is it an ocean, a pond or a great salt lake?

The experiment will also help scientists find out if the sub-surface south polar region resembles a lava lamp. Scientists have hypothesized that a bubble of warmer ice periodically moves up to the crust and repaves it, explaining the quirky heat behavior and intriguing surface features.

Provided by JPL/NASA