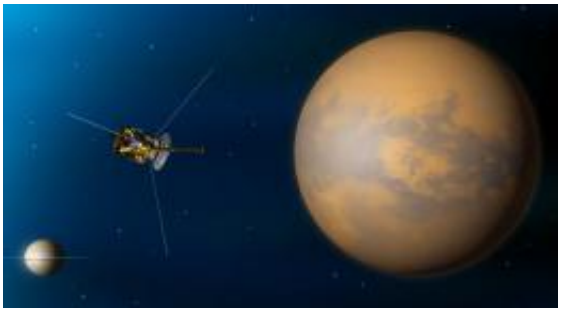
Cassini gazes at veiled Titan

September 23 2010



Artist's concept of Cassini's Sept. 24, 2010, flyby of Saturn's moon Titan. Image credit: NASA/JPL-Caltech

(PhysOrg.com) -- NASA's Cassini spacecraft will swing high over Saturn's moon Titan on Friday, Sept. 24, taking a long, sustained look at the hazy moon. At closest approach, Cassini will fly within 8,175 kilometers (5,080 miles) above the hazy moon's surface. This flyby is the first in a series of high-altitude Titan flybys for Cassini over the next year and a half.

Cassini's composite infrared spectrometer instrument will be probing Titan's stratosphere to learn more about its vertical structure as the seasons change. Equinox, when the sun shone directly over the equator, occurred in August 2009, and the northern hemisphere is now in spring.

Another instrument, the visual and infrared mapping spectrometer, will be mapping an equatorial region known as Belet at a resolution of 5 kilometers (3 miles) per pixel. This mosaic will complement the mosaics

that were obtained in earlier Titan flybys in January and April. This spectrometer will also look for clouds at northern mid-latitudes and near the poles.

Cassin's visible-light imaging cameras will also be taking images of Titan's trailing hemisphere, or the side that faces backward as Titan orbits around Saturn. If Titan cooperates and has a cloudy day, scientists plan to analyze the images for cloud patterns.

Provided by JPL/NASA