South polar region of Titan, Saturn's largest moon

December 29 2011

Image Credit: NASA/JPL-Caltech/Space Science Institute

(PhysOrg.com) -- This view from NASA's Cassini spacecraft looks toward the south polar region of Saturn's largest moon, Titan, and shows a depression within the moon's orange and blue haze layers near the south pole.

The moon's high altitude haze layer appears blue here; whereas, the main atmospheric haze is orange. The difference in color could be due to particle size of the haze. The blue haze likely consists of smaller particles than the orange haze.

The depressed or attenuated layer appears in the transition area between the orange and blue hazes about a third of the way in from the left edge of the narrow-angle image. The moon's south pole is in the upper right of this image. This view suggests Titan's north polar vortex, or hood, is beginning to flip from north to south.

The southern pole of Titan is going into darkness as the sun advances towards the north with each passing day. The upper layer of Titan's hazes is still illuminated by sunlight.

Images taken using red, green and blue spectral filters were combined to create this natural color view. The images were obtained on Sept. 11, 2011 at a distance of approximately 83,000 miles (134,000 kilometers) from Titan. Image scale is 2,581 feet (787 meters) per pixel.

Provided by JPL/NASA

Citation: South polar region of Titan, Saturn's largest moon (2011, December 29) retrieved 28 April 2024 from https://phys.org/news/2011-12-south-polar-region-titan-saturn.html