Image: Darkness descending on Saturn

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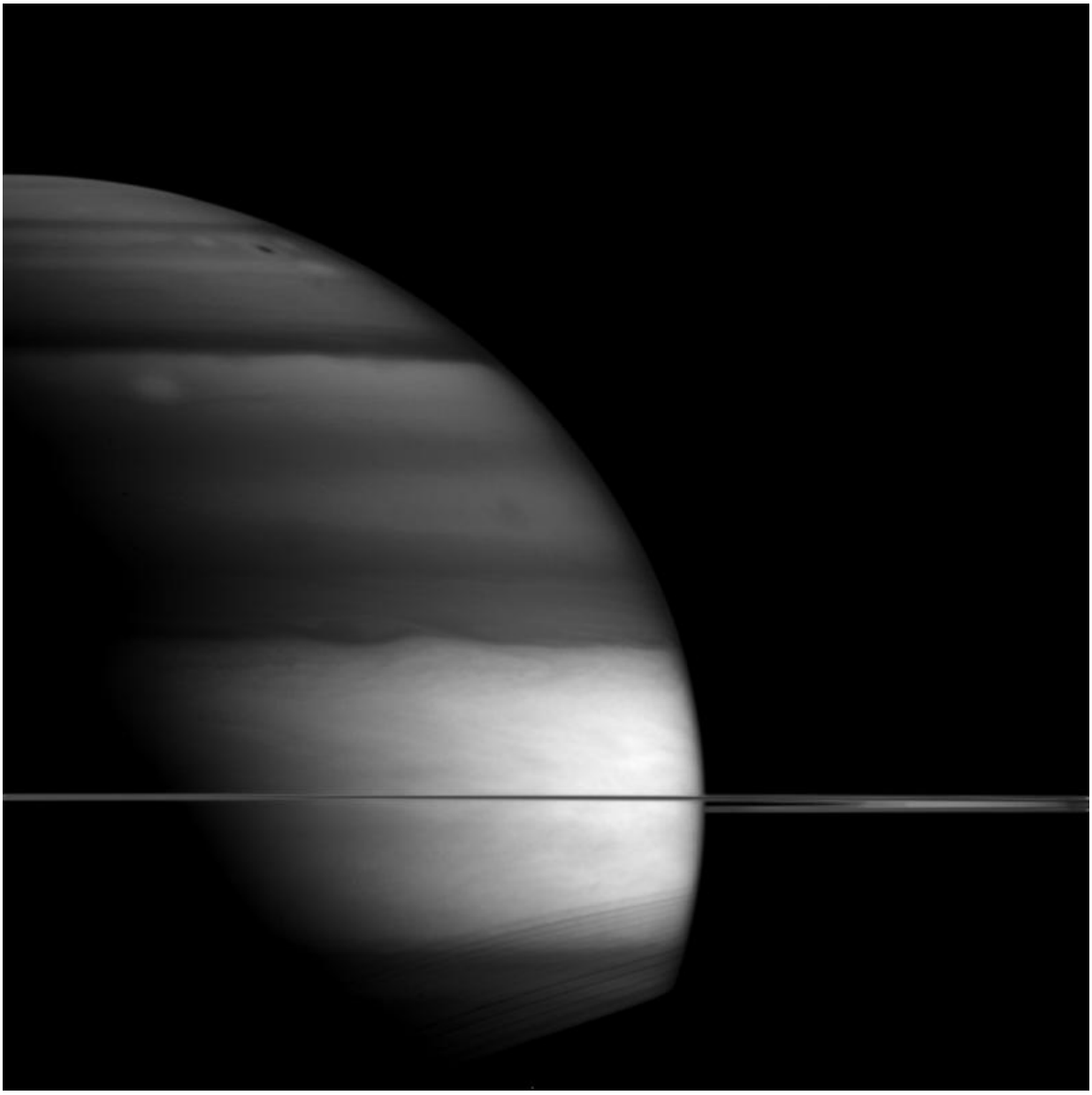

Credit: NASA/JPL-Caltech/Space Science Institute

Saturn's unusual appearance in this picture is a result of the planet being imaged via an infrared filter.

Infrared images can help scientists determine the location of clouds in the planet's atmosphere. In this image, Cassini's wide-angle camera used a filter which is especially sensitive to infrared wavelengths that are absorbed by methane. Methane is not a major component of Saturn's atmosphere, but enough of it is present to make a difference in how much light is reflected by different clouds. The darker areas reveal clouds that are lower in the atmosphere, therefore under more methane. Bright areas on Saturn are higher altitude clouds. Scientists think that these lower-altitude clouds are in regions where "air" is descending while the higher-altitude clouds are in regions where air is rising. Thus, images like this one can help us map the vertical air movements on Saturn.

This view looks toward the unilluminated side of the rings from less than one degree from the ring plane. The image was taken with the Cassini spacecraft wide-angle camera on May 25, 2015 using a spectral filter which preferentially admits wavelengths of near-infrared light centered at 890 nanometers.

The view was acquired at a distance of approximately 930,000 miles (1.5 million kilometers) from Saturn and at a Sun-Saturn-spacecraft, or phase, angle of 99 degrees. Image scale is 55 miles (89 kilometers) per pixel.

Provided by NASA