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Ultra-Violet imaging:

Imaging results from the UVIS experiment on Cassini

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Spectral imaging allows simultaneous images and spectroscopy. Cassini's Ultraviolet Imaging Spectrometer (UVIS) maps the distribution of constituents with detectable UV signatures. This includes water ice on Saturn's rings and moons; neutral oxygen and nitrogen in the Saturn system; auroral emissions; and aerosols on Titan and Saturn. I will show false color images of Saturn's rings and Saturn's auroral oval and models of the water vapor distribution in Enceladus plumes. The combination of spectral and spatial information allows us to explain the sources of neutrals in the Saturn system and test theories of the origins of Saturn's rings.