



One year of Titan's surface observations by the Visual and Infrared Mapping Spectrometer (VIMS) onboard CASSINI

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The origin of methane in Titan's atmosphere is one of the main questions that observations by the Cassini-Huygens mission will try to answer. Mapping the surface reveals the features that will enable us to draw the geological history of Saturn's largest moon. Three imaging instruments onboard the Cassini spacecraft are able to provide images of the surface. Among these instruments, VIMS (Visual and Infrared Mapping Spectrometer, Brown et al., 2003) has already observed Titan during 10 flybys since its orbit insertion around Saturn on July 1st 2004. Despite scattering by haze particles and strong absorption of light by the methane contained in the atmosphere, there are several infrared windows that allow observations of its surface. In particular, the 2.03 μm images provide the best trade-off between surface signal and blurring by the atmospheric scattering particles. We report here on the observations obtained so far both at medium (~ 30 km/pixel) and high resolution (up to 1-2 km/pixel).