

Variable and Constant Features on Titan from HST

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Abstract. Observations with HST WFPC-2 from 1994 to 1997 show a number of features which can be attributed to the surface (notably the large as-yet-unnamed bright region, several smaller bright areas and a number of dark regions). The delineation of these features in several datasets is presented. Other features are variable and are due to atmospheric phenomena: these include the total brightness of Titan (drop by 5% 1994-1997 at 350 nm; increase by 7% at 889 nm), the hemispheric north-south asymmetry, and the hint of a south polar hood.

Additionally, small variable features, apparently due to clouds, are documented. As well as variability from one year to the next, these show anomalous center-to-limb brightness behaviour, and a 673/940 nm color much bluer than the large surface feature, consistent with clouds in the troposphere.