

First Results on the Dielectric Properties of the Surface of Titan as Measured by the Huygens Probe

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The Permittivity, Waves, and Altimetry (PWA) analyzer is included in the Huygens Atmospheric Structure Instrument (HASI) onboard the Huygens Probe. The mutual impedance (MI) sensor, which is integrated in PWA, has successfully obtained measurements from the surface of Titan. The mutual impedance of the ground was measured during 30min. To derive the dielectric constant and the conductivity of the medium at the landing site, the calibration of the MI sensor has been refined and geometrical modeling of the Huygens probe attitude on the surface has been developed. Preliminary results are presented and a special feature in MI data identified 12min after landing is analyzed. Implications on composition and structure of the soil are discussed.