



## **Remnant Kronian Magnetic Fields at Titan During Magnetosheath Excursion: Cassini T32 Observations**

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With a Kronian magnetopause average stand-off distance of at least 21 planetary radii, Titan spends most of its time inside the rotating magnetosphere of its parent planet. However, for Saturn local times near noon and during periods of high solar wind pressure, Titan is expected to be found within the magnetosheath. In June 2007, Cassini became the first spacecraft to provide in situ observations of the plasma environment of Titan outside the Kronian magnetosphere, as the moon was standing in the shocked solar wind plasma of Saturn's magnetosheath at the time of closest approach. This opportune finding was followed by the unexpected detection of layers of remnant, heavily massloaded Kronian magnetic fields -just above the moon's collisional ionosphere- to which Titan had been exposed a few minutes before the encounter. This presentation describes these findings and discusses the implications for the response of the Titan's induced magnetosphere to the changes in the external conditions.