



## **Periodic crossings of Saturn's magnetospheric current/plasma sheet observed by Cassini CAPS/ELS and MAG**

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Cassini observations from Saturn's magnetotail during 2006/7 show evidence of periodic encounters with the plasma/current sheet. In this paper we discuss these encounters as observed by the Cassini magnetometer (MAG) and electron spectrometer (ELS). Simple structural models are constructed to represent various scenarios for generating flapping current-sheet motions [e.g., Carbary et al., 2007a; Southwood and Kivelson 2007; Khurana et al., submitted manuscript]. We use these simple models to fit the observations and explore the phase relationships between the magnetic field, low-energy electrons, and radio emissions (SKR) as ordered by the SLS3 longitude system [Kurth et al., submitted manuscript].

Carbary et al. (2007b) reported an abrupt phase shift in a "spiral pattern" in Cassini magnetotail data from July - October 2006. When taking into account viewing geometry and current-sheet shape we confirm this apparent shift.