Geophysical Research Abstracts, Vol. 9, 04235, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-04235


# Wave normal calculations of Saturnian plasma waves at high magnetic latitudes using the Cassini radio and plasma wave science five-channel waveform receiver

**G. B. Hospodarsky** (1), T. F. Averkamp (1), W. S. Kurth (1), D. A. Gurnett (1), M. K. Dougherty (2), P. Louarn (3)

(1) University of Iowa, Dept Physics and Astronomy, Iowa City, Iowa, USA, (2) Blackett Lab., Imperial College, London, UK, (3) CESR, Toulouse, France (george-hospodarsky@uiowa.edu / Phone: 319-335-1957 / Fax: 319-335-1753)

The Cassini spacecraft is currently in a series of higher inclination orbits providing measurements of the Saturnian system at high magnetic latitudes (>35 degrees). A variety of plasma and radio waves has been detected by the Radio and Plasma Wave Science (RPWS) investigation at these higher latitudes, including emissions similar to auroral hiss at the Earth. These high latitude emissions may be important in understanding the auroral processes occurring at Saturn. The Five-Channel Waveform Receiver (WFR) provides simultaneous waveforms from up to five separate sensors in passbands of either 1 Hz to 26 Hz, or 3 Hz to 2.5 kHz, allowing wave normal and Poynting analysis using the Means method to be performed on many of the high latitude plasma wave emissions. Preliminary results of this analysis will be presented and compared to analysis performed on similar emissions detected at Earth.