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Plasma wave observations at high magnetic latitudes at Saturn

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The Cassini spacecraft was in a series of higher inclination orbits in mid 2006 to early 2007, and will soon start a series of even higher inclination orbits to investigate the Saturnian auroral zone. A variety of plasma and radio waves have been detected by the Radio and Plasma Wave Science (RPWS) investigation at these higher latitudes, including emissions similar to auroral hiss at the Earth and low-frequency, broadband bursts that are associated with ion beams detected by the MIMI instruments. These high latitude emissions may be important in understanding the auroral processes occurring at Saturn. The RPWS 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 vector analysis to be performed on many of the low-frequency, high latitude plasma wave emissions. A survey of the results from 2006 and 2007 period, and initial results from the resent high latitude observations will be presented.