



## Low-frequency drifting radio bursts at Saturn

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The Cassini Radio and Plasma Wave Science (RPWS) instrument has recently detected an unusual new component of radio emission from Saturn's magnetosphere. This new component consists of extremely narrowband bursts in the range from 3 to 30 kHz. All the bursts drift to lower frequencies at a rate of about 3-4 Hz/sec. Often these bursts appear in fundamental-harmonic pairs, and sometimes appear to be periodically spaced. Between arrival of Cassini at Saturn on July 1, 2004 and the end of 2005, 9 episodes of these bursts have been detected, with each episode consisting of many individual bursts. The episodes range in duration from as short as 1 hour to as long as ~50 hours. Many of the 9 episodes are multiples of 16 days apart, suggesting some connection to Titan. In fact, a large increase in the occurrence of the bursts coincides with Titan passing through the noon meridian. The newly-discovered bursts will be described and the statistics of their occurrence will be shown.