



Spectrum and temporal variations of SKR

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Since Cassini entered Saturn's magnetosphere in July 2004, the kilometric radiation of Saturn (SKR), which dominates RPWS dynamic spectra, is observed quasi-continuously from all local times. To study SKR emissions on the long term, we extracted, calibrated and normalized SKR signal from Cassini RPWS/HFR data, to finally produce long term SKR time series and dynamic spectra independent of instrumental modes. We use these to identify SKR sub-components (on the basis of their polarization, frequency band, time variations, and source location). We study the variations of averaged and peak SKR spectra versus Local Time of the observer, time and latitude, and compare our results to previous knowledge from Voyager studies. Finally we discuss time variations of SKR spectral components in order to address the rotation period of Saturn, possible high latitude magnetic field anomalies, and SKR control by moons.