



Saturn Kilometric Radiation: Study of spectral structures observed by the wide band receiver onboard Cassini spacecraft

M. Y. Boudjada(1), P. H. M. Galopeau(2), W. S. Kurth(3), H.O. Rucker(1,4)

(1) Space Research Institute, Austrian Academy of Sciences, Graz, Austria, (2) Centre d'étude des Environnements Terrestre et Planétaires, CNRS, IPSL, Vélizy, France, (3) Department of Physics and Astronomy, University of Iowa, Iowa, USA, (4) Institute of Physics, University of Graz, Graz, Austria.

We study the dynamic spectra recorded by the wide band receiver (WBR) in the period from July to December 2004. The high spectral and temporal resolutions of the receiver lead to distinguish different spectral structures in the lower frequency part of the SKR, i.e. from few kilohertz to about 80 kHz. We classify the observed shapes in mainly three types: continuum, narrow-band, and millisecond burst. More than 85% of the total observed shapes are a mixture and a combination of the previous types. We derive observational parameters which may characterize each type, like the frequency bandwidth, the time duration and the corresponding level of intensity. The results are discussed and compared to the similar spectral features observed in particular in the case of Jupiter decametric emissions.