Geophysical Research Abstracts, Vol. 9, 07339, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-07339

Distribution of electron energy and acceleration features in the jovian S-burst emission region

S. Hess (1,2) P. Zarka (2) F. Mottez (1)

(1) LUTh - Observatoire de Paris/CNRS, (2) LESIA - Observatoire de Paris/CNRS

Jovian millisecond (or S-) bursts are intense decametric radio emissions generated by the Io-Jupiter interaction. They are discrete structures, drifting in the time frequency plane. Their drift is thought to be due to the adiabatic motion of the electrons which compose their source. Previous analyses [Hess et al. 2007] confirmed this assumption and showed that it is possible to determine the energy of the emitting electrons and to observe potential drops from the drift rate analysis. Then the S-bursts becomes a tool for probing the Io flux tube foot region. Using hundreds of dynamic spectra recorded in Kharkov during the same S-bursts storm we can cartography the evolution of the emitting electron energy. Moreover our study shows the evolution of the altitude and the amplitude of the potential drops.