Geophysical Research Abstracts,
Vol. 10, EGU2008-A-09679, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-09679
EGU General Assembly 2008

Goniopolarimetric study of the SKR using Cassini radio data during a high orbital inclination flyby

B. Cecconi (1), P. Zarka (1), L. Lamy (1)
(1) CNRS-LESIA, Observatoire de Paris

We present goniopolarimetric (a.k.a. direction-finding) results of the Saturnian Kilometric Radiation (SKR), using data from the Cassini/RPWS/HFR (Radio and Plasma Wave Science / High Frequency Receiver). Tools to retrieve the characteristics of radio sources have been developed that allow to measure localization and beaming angle of the SKR sources as well as localization of the footprints of the active magnetic field lines. We present results from these analyses on a SKR burst observed during a perikrone (09/25/2006), including error bars. These results provide for the first time the invariant latitude and the local time of a typical instantaneous SKR source, and the beaming angle of the emission. These parameters are essential to constraint the models for radio emission generation and electron acceleration involved in auroral precipitations.