

Statistical study of Nançay Non-Io Decametric radio emissions during Cassini Jupiter flyby

Ezequiel Echer(1), Philippe Zarka (2), Manilo Soares Marques (3), Fabiola Pinho Magalhaes (2),
Jenny Marcela Rodriguez (4), Laurent Lamy (2), Baptiste Ceconni (2)

(1) National Institute for Space Research (INPE), Brazil, (2) Observatoire de Paris, France, (3) Federal University of Rio Grande do Norte (UFRN), Brazil, (4) Skoltech Space Center, Russia,
(ezequiel.echer@inpe.br)

Abstract

Recently a catalog of Nançay Decametric Array digital observations has been compiled (Marques et al., 2017). Auroral emissions not controlled by the electrodynamic interaction between Jupiter and its moons Io (Marques et al., 2017) and Ganymede (Zarka et al. 2018) are obtained. These are called non-Io DAM emissions. The occurrence, duration, maximum frequency and sources/types of the non-Io DAM emissions are reported here for the Cassini Jupiter flyby interval (September 2000 to March 2001). The emission occurrence and parameters are correlated with solar wind pressure and interplanetary shocks (Echer et al., 2000; Hess et al., 2012, 2014) to study the solar wind effects on auroral Jupiter emissions. Further, correlation with Cassini RPWS auroral emissions in the hectometric range (Zarka et al. 2004) is also performed.

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