

Particule pitch angle distributions and flux modeling at Ganymede

R. Allieux , N. André , P. Louarn

(1) CESR-CNRS, UPS, Toulouse, France
(Renaud.Allieux@cesr.fr / Fax: +3356155 67 01)

Abstract

This study aims to model Ganymede magnetic field interaction with jupiter environment and the effects on the pitch angle distributions of high energy ions and electrons. Starting with isotropic distributions for incident particles far from Ganymede, we follow their evolutions in the simulation box. The distribution is then reconstructed at any location in the environment of Ganymede. We discuss the effects of finite gyroradius effects, magnetic shielding and trapping close to Ganymede magnetic equator. This is compared to the non magnetized situation, to estimate the shielding effect of the magnetic field. The results are then compared to EDP measurement from Galileo.