

ELECTRONS AS CURRENT CARRIERS IN THE GEOTAIL CURRENT SHEET.

P. L. Israelevich, A. I. Ershkovich, and R. Oran

Tel Aviv University

We have studied statistical distributions of the current density in the geomagnetic tail current sheet for different sets of local plasma parameters using Cluster data. It is shown that the electric current density calculated from 4-point magnetic field measurements exhibits no correlation with the number flux of ions. We conclude that main current carriers in the magnetospheric system of reference are electrons.