



Plasma structure during the 26 December Titan encounter: electron results

A. J. Coates (1), N. Andre (1), H.J. McAndrews (1), F. J. Crary (2), T.W. Hill (3), K. Szego (4), Z. Bebesi (4), A. Eviatar (5) and D. T. Young (2)

(1) Mullard Space Science Laboratory, UCL, UK, (2) SwRI, USA, (3) Rice University, USA, (4) KFKI-RMKI, Hungary, (5) Tel Aviv University, Israel

Cassini's encounter with Titan on Boxing Day 2005 provided an unique encounter geometry during the tour and some surprising results. The encounter was within Saturn's magnetosphere. The spacecraft passed through the nominal corotation wake at several Titan radii downstream. The structure in the CAPS-ELS electron data shows two intervals of Titan-related disturbances, asymmetric with respect to the nominal wake. First, a region of cold, dense electrons deflected in the direction towards Saturn with respect to the nominal wake direction. Second a region with intermittent cool, dense electrons in the region away from Saturn along the spacecraft trajectory. We examine the morphology of these regions, present results on the energy density of electrons compared to earlier encounters, and provide initial interpretations.