



STEREO substorm observation in the tail and sheath at 200-360 Re: plasmoids and energetic electrons

A. Opitz (1), C. Jacquy (1), J. Sauvaud (1), B. Lavraud (1), R. Lin (2), D. Larson (2), J. Luhmann (2), H. Frey (2), L. Kistler (3), C. Russell (4)

(1) CESR, Toulouse, France, (2) SSL/UCB, UCB, Berkeley, USA, (3) UNH, SSC, Durham, USA, (4) UCLA, IGPP, Los Angeles, USA (Contact e-mail: opitz@cesr.fr)

At the beginning of 2007 the STEREO-B spacecraft flew in the vicinity of the distant Earth's magnetosphere up to 360 Re. STEREO-B was located in the distant magnetosheath most of the time, but experienced also some incursion inside the magnetotail. We report features observed with IMPACT and PLASTIC experiments in this region. We focus on enhanced energetic electron fluxes detected in the sheath during substorms when STEREO-B appeared to be connected to the magnetosphere by the IMF. Furthermore, we present detailed study on the large deformation of the tail by traveling plasmoids.