

Observation of the plasma sheet-lobe boundaries in the near-Earth magnetotail

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GEOTAIL plasma and magnetic field experiments revealed that about 10 percent of the plasma sheet-lobe boundaries can be identified as slow-mode shocks in the distant magnetotail. Using the same method we used for identifying slow-shock boundaries in the distant-tail region, we tried to identify slow-mode shocks in the near-tail region. It has turned out that slow-shock boundaries with nearly the same structure as those observed in the distant magnetotail are observed in the region farther than about 30Re while only few plasma sheet - lobe boundaries are identified as a slow mode shock in the near-tail region of <20Re.