

## Multi-spacecraft analysis of the dipolarization propagation in the magnetotail

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Dipolarization is one of the most dramatic and key phenomena in the course of substorms. During the substorm, the current disruption produces turbulent magnetic fields and accelerated particles in the inner magnetosphere, while the associated dipolarization propagates in all directions [Jacquey et al., 1993; Ohtani et al., 1993; Liou et al., 2002]. Yet, it is not still understood how extensive the dipolarization region is, how the dipolarization propagates, and/or how the dipolarization affects on the global magnetospheric configuration.

In this study, we use data from the THEMIS spacecraft in the inner magnetosphere during its magnetotail season. The inner three spacecraft have an apogee of 10-12  $R_E$  and provides statistically enough numbers of conjunction events in the inner magnetosphere between Dec. 2007 and Apr. 2008. Using such three-spacecraft conjunctions of all five we will examine the propagation and extent of the dipolarization. The results are discussed in terms of the relationships to the fast flows, energetic particles and turbulent field fluctuations.