

## A statistical analysis of the plasma and magnetic field data at neutral sheet crossings of Geotail

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On the basis of a statistical analysis of the plasma and magnetic field data obtained during the neutral sheet crossings of the Geotail spacecraft in the magnetotail, we examined the magnetotail structure and dynamics. The results show that the amount of tailward fluxes of northward  $B_z$  and that of southward  $B_z$  are almost equally observed beyond the distance of about  $50R_E$  in geomagnetically active times. This feature indicates that plasmoids frequently occur in these times. It is evident that in the near-Earth region ( $X > -30R_E$ ) the plasmas travel earthward on average as the flows are deflected by the strong geomagnetic field. But the dawn-dusk components of these velocities increase on the duskside rather than on the dawnside. It could be interpreted as an effect of the cross tail currents.