

Tailward plasma flow observed in the near-Earth magnetosphere

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Magnetic reconnection in the near-Earth magnetotail produces earthward fast plasma flow called Bursty Bulk Flow (BBF) and tailward plasma flow. On the other hand, interaction of this BBF with dipolar field lines of the Earth's magnetic field results in tailward rebound of a BBF. In this study, the differences between these two tailward plasma flows are investigated using GEOTAIL observations and computer simulations. Virtual satellite observations in the three dimensional MHD simulations on the basis of spontaneous fast reconnection model are compared with results of the superposed epoch analyses of GEOTAIL observation data.

Keywords: reconnection, tailward