

Reconstruction of flux transfer events from Cluster data

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The structure of flux transfer events (FTEs), encountered by the Cluster satellites is visualized using the reconstruction technique. The method produces a map of the FTE cross section by using combined magnetic field and plasma data from all four spacecraft, under the assumptions that the structures are two-dimensional and time-independent. The orientation of the flux rope axis can be fairly well determined through a process of optimizing the map. The result has been compared with other different methods, and the nature of magnetopause reconnection leading to those FTEs is discussed.