Fine Structure of Energy Dissipation during Reconnection with a Strong Guide Field

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Abstract

The presence of a guide field can significantly affect the dynamics of reconnection and introduce additional fine structure to the diffusion region and separatrices. In this study we analyze a symmetric reconnection event in the magnetosheath with a strong guide field and investigate the patterns of energy dissipation as well as the generation of electron Kelvin-Helmholtz vortices from strong flow shears along the separatrices near the diffusion region.

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