

The Electron Diffusion Region in Asymmetric Magnetic Reconnection with Guide Fields

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The launch of the Magnetospheric Multiscale mission is leading to a revolution in our understanding of the way magnetic reconnection works. During the first orbit phases, MMS science focuses on asymmetric reconnection, as is commonly found at the Earth's magnetopause. MMS observations have begun to support the view that reconnection operates primarily as a quasi-laminar process, supporting one class of theoretical predictions and a number of concurrent simulations. In this presentation, we present a detailed look at model predictions pertaining to asymmetric magnetic reconnection with a guide magnetic field, and we present a comparison to recent MMS observations.

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