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Kinetic Simulations of Asymmetric Reconnection MICHAEL SHAY, PAUL CASSAK, CHRIS BARD, University of Delaware — Asymmetric magnetic reconnection is reconnection with different inflow conditions (density and magnetic field magnitude). A recent paper¹ predicted scaling relations for the diffusion region during asymmetric reconnection which were verified with MHD simulations. The structure of the diffusion region during kinetic reconnection, however, is less well understood. We will present kinetic PIC simulations of asymmetric reconnection with a focus on understanding the structure of the kinetic diffusion region.

¹Cassak, P. A. and M. A. Shay, Physics of Plasmas, 14, 102114, 2007.

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