Turbulence-Driven Magnetic Reconnection[1] WILLIAM NEVINS, ERIC WANG, ILON JOSEPH, LLNL, JEFF CANDY, GA, SCOTT PARKER, YANG CHEN, U of CO, GREG REWOLDT, PPPL — Data from finite-beta gyrokinetic simulations of ion temperature gradient turbulence show localized modifications to the magnetic shear in the neighborhood of low order rational surfaces. We analyze this data with the object of determining if these modifications result from magnetic reconnection. When magnetic reconnection occurs, we employ Poincaré surface-of-section plots to determine the degree to which the reconnection results in island formation or generalized magnetic stochasticity.

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Date submitted: 09 Jul 2009

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