Forced Reconnection in the Hall Limit[1] J. HUBA, Naval Research Laboratory — We present new numerical results of the dynamics of forced magnetic reconnection in the Hall limit using the NRL Hall MHD code VooDoo. The system is forced by imposing inflow boundary conditions on the plasma density and velocity, and the magnetic field. A magnetic field of opposite polarity is injected from opposite boundaries. The inflow velocity is spatially uniform but the density profile is spatially nonuniform which allows an X-line to develop and magnetic reconnection to proceed. We present simulation results for various inflow conditions in both 2D and 3D geometries. We apply our results to laboratory and space plasma processes.

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