Abstract Submitted
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**Triggered Reconnection at 1 MA on COBRA**[1] JOHN GREENLY, KATE BLESENER, CHARLES SEYLER, XUAN ZHAO, Cornell University — We present new results in the study of magnetic reconnection of flux generated by two parallel currents in exploding Al wires driven to 1 MA by the Cornell COBRA pulser. Magnetic and thermal energy are stored in the system as the current rises in 200 ns. The stored energy is then dissipated in reconnection and outflows triggered at the time of voltage reversal and the decline of external magnetic pressure. Data are presented from a new optical spectroscopy diagnostic with high spatial and spectral resolution. The flows are supersonic. Strongly radiating shocks are associated with the current sheet and outflow boundaries. PERSEUS MHD and XMHD simulations are presented to compare with experiment and characterize the reconnection regime.

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