

Abstract Submitted
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Emission Structures and Bursty Events in WIRX D. CRAIG, C. ADAMS, D. BLASING, M. MCMILLAN, Wheaton College, Wheaton IL USA — We report on observations and analysis of ICCD images taken in the Wheaton Impulsive Reconnection Experiment (WIRX). The experiment is composed of two parallel electrodes, linked by a magnetic arcade generated by a coil surrounding the electrodes. Images reveal a plasma ball which expands from the arcade and an elongated emission feature connected to one end of the arcade. These are interpreted using magnetic field line tracing and an ad hoc model of the plasma current. Under some driving conditions, bursty events appear which are similar in some ways to reconnection events in other plasmas. Work is ongoing to determine if these events involve reconnection. ICCD camera images suggest a bursty emission of plasma from the arcade during these events. Photodiode cameras and magnetic probes are under development to better characterize the evolution of the arcade in time and space and to look for signatures of reconnection. Work supported by U.S.D.O.E. grant DE-FG02-08ER55002.

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