

Abstract Submitted  
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**Magnetic Structures in WIRX** M. MCMILLAN, C. ADAMS, M. CARTOLANO, D. CRAIG, Wheaton College — We have developed a set of magnetic field probes to track structural changes in the magnetic field in the Wheaton Impulsive Reconnection Experiment (WIRX) and to look for candidate magnetic reconnection sites. These probes complement several existing fast imaging diagnostics. It is found that the light emitted by the plasma correlates well with the spatial position of the current as deduced from the magnetic field measurements. Both emission and magnetic profiles vary with plasma current and vacuum coil field. In some plasma, we observe bursty, fast time scale events in both photodiode camera data and magnetic data. The propagation of these magnetic disturbances throughout the plasma has been studied using correlation techniques. Work is ongoing to assess whether these fast events may involve magnetic reconnection. Work supported by U.S.D.O.E. grant DE-FG02-08ER55002.

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