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**Plasma Jog Experiments on MRX in Collaboration with MMS team** MASAAKI YAMADA, JONGSOO YOO, TIM THARP, HANTAO JI, ERIC LAWRENCE, Princeton Plasma Physics Laboratory — In the Magnetic Reconnection Experiment (MRX), a multi-probe mock-up system is utilized to investigate the fine structure of the diffusion region of the reconnection layer and to identify data signatures which indicate the nearby presence of a reconnection neutral sheet. The reconnection layer is swept through the probe system in controlled speeds of 0.01-0.2 of the Alfvén velocity. This situation is very similar to the space measurements in which the current sheet moves with respect to satellites as expected in the Magnetosphere Multi-scale Satellite (MMS) cluster configuration [1]. The main objectives of the proposed joint research are (1) to compare basic properties of the reconnection regions in the neutral sheet of space and laboratory plasmas, (2) to study their roles in the process of magnetic reconnection, and (3) to measure fine scale profiles of the thin electron diffusion layer. A series of the first results from the experimental campaign are presented.

[1] J. Burch, et al., AGU 2005 Fall Meeting.

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