Abstract Submitted
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Regulation of the Normalized Rate of Driven Magnetic Reconnection through Shocked Flux Pileup[1] JOSEPH OLSON, JAN EGEDAL, DOUG ENDRIZZI, SAM GREESS, ALEX MILLET-AYALA, RACHEL MYERS, CARY B. FOREST, University of Wisconsin - Madison — Magnetic reconnection is explored on the Terrestrial Reconnection Experiment[2] at the Wisconsin Plasma Physics Laboratory[3] where the absolute rate of reconnection is set by an external drive. A shock interface between the supersonically driven plasma inflow and a region of magnetic flux pileup permits the normalized reconnection rate to self regulate to a fixed value. The observations demonstrate the role of shock formation in driven reconnection and confirm previous theoretical results on the normalized rate of reconnection.

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[2]Olson, J., *et al.*, Phys. Rev. Letters, **116**, 255001 (2016).
[3]Forest, C.B., *et al.*, J. Plasma Phys., **81**, 1 (2015)

Joseph Olson
University of Wisconsin - Madison

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