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Electron Pressure Anisotropy Measurements on the Terrestrial Reconnection Experiment[1] RACHEL MYERS, JAN EGEDAL, JOSEPH OLSON, SAMUEL GREESS, ALEXANDER MILLET-AYALA, MICHAEL CLARK, DOUGLASS ENDRIZZI, JOHN WALLACE, CARY FOREST, University of Wisconsin - Madison — The Terrestrial Reconnection Experiment (TREX) at the Wisconsin Plasma Physics Laboratory (WiPPL) studies collisionless magnetic reconnection with a guide field. In this regime, electron pressure anisotropy should develop, deviating from Hall reconnection dynamics and driving large-scale current layer formation [1]. A multi-directional Langmuir probe measures this anisotropy. This probe contains three external tips and three shielded tips designed to rotate and detect directional electron flow from a full set of angles. Modifications to the I-V characteristic depending on shielding and probe orientation relative to the magnetic field (measured by a 3D $\dot{B}$ pickup loop) display the extent of observed anisotropy in the collisionless reconnection region. Since the Langmuir tips are smaller than the Larmor radius, gyromagnetic effects can be ignored. Results and analysis from the probe are presented. [1] J. Egedal *et al.*, Phys. Plasmas (2013).

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