

Abstract Submitted  
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**Role of Electron Density Fluctuations in Momentum Transport in a Stochastic Magnetic Field** W.X. DING, D.L. BROWER, W.F. BERGERSON, L. LIN, T.F. YATES, University of California, Los Angeles, A. ALMAGRI, G. FIKSEL, D.J. DEN HARTOG, S.C. PRAGER, J.A. REUSCH, J.S. SARFF, University of Wisconsin, Madison — Plasma density fluctuations associated with magnetic fluctuations are not simply the result of passive advection. They can feed back on the plasma flow through fluctuating pressure, causing parallel momentum transport. The pressure fluctuations resulting from density fluctuations have been measured by using a high-speed polarimetry-interferometry (for both radial magnetic field and density fluctuations), Thomson scattering (for mean electron temperature), Rutherford scattering (for mean ion temperature). Measurements show that the density-fluctuation-induced momentum flux is comparable to the total momentum flux during a sawtooth crash. The temperature fluctuation-induced momentum flux is yet to be measured. Work supported by US DOE and NSF.

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