Abstract Submitted
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Kelvin-Hemholtz/Drift Wave Coupling to Kinetic Shear Alfven Waves JEAN C. PEREZ, University of Wisconsin-Madison, W. HORTON, University of Texas at Austin, IFS, S. BOLDYREV, University of Wisconsin-Madison, J.H. KIM, University of Texas at Austin, IFS, R.D. BENGTSON, University of Texas at Austin, FRC, T. CARTER, University of California, Los Angeles — Two-component fluid models are proposed to study the coupling of $\mathbf{E}\times\mathbf{B}$ shear flow driven turbulence with the Alfvén waves in the Large Plasma Device (LaPD). Shear Alfvén waves can be easily excited and measured in the LaPD as reported by Vincena *et. al. Phys. Plasmas*, **8**(9), 3884, 2000. Here we present new $\delta\mathbf{B}$ measurement that show low frequency Alfvénic-like magnetic fluctuation driven by a strong localized shear flow layer created by a localized radial electric field. The electrostatic Kelvin-Helmholtz features have been extensively analyzed with computer simulations and the vorticity probe in Perez *et. al. Phys. Plasmas*, **13**(055701), 2006, and Horton *et. al. Phys. Plasmas*, **12**(022303), 2005. The simulations are extended to include the kinetic Alfvén wave (KAW) and intertial Aflvén wave physics. Comparisons between the electromagnetic $\mathbf{E}_\perp$ and the simulations are presented in some detail.

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