

Abstract Submitted
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Sheared flow measurements in a magnetized plasma column¹ A. EADON, Auburn University, E. TEJERO, SFA, Inc. and Auburn University, E. THOMAS, Auburn University — Transverse and parallel sheared flows are important topics in both space and fusion plasmas, and have been the subjects of extensive study. The Auburn Linear EXperiment for Instability Studies (ALEXIS) is a 170 cm long, 10 cm diameter linear magnetized plasma column. Previous investigations [E. Thomas, et al., Phys. Plasmas, 10, 1191 (2003)] on the ALEXIS device have focused on using modifications of the radial electric field to generate spatially inhomogeneous flows, which in turn led to the generation of ion cyclotron instabilities. To better classify and study these low frequency instabilities, a Laser Induced Fluorescence (LIF) system was recently installed to characterize the plasma flow. Initial measurements of flows in radio frequency (rf) generated plasmas will be presented, along with evidence of flow modification resulting from varying the radial electric field.

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