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Generation and propagation of instabilities in a magnetized linear plasma column¹ ASHLEY EADON, MICHAEL TAYLOR, JOSEPH SENNE, EDWARD 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. For example, in fusion plasmas, sheared flows are a signature of enhanced confinement regimes. Investigations on the ALEXIS device use imposed radial potential structures to influence the axial and transverse flows and to modify the radial electric field. This presentation focuses on the generation of inhomogeneous energy density driven instabilities, starting from a pseudo-quiet mode, which is characterized by a broadband reduction in low frequency plasma oscillations. Along with the generation of ion cyclotron waves, this poster will also present studies of the changes in launched wave propagation during the formation of the IEDDI, and the impact on other plasma parameters.

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