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Electric and magnetic field cutoffs of low frequency instabilities in a magnetized, linear plasma column¹ ERIK TEJERO, ASHLEY EADON, EDWARD THOMAS, Auburn University — Flows generated in plasmas due to the presence of crossed electric and magnetic fields are of relevance to both the fusion and space plasma communities. Studies in the ALEXIS device, a 170 cm long, 10 cm diameter magnetized plasma column, seek to determine the stability regimes for driven flows. This presentation focuses on the electric and magnetic field cutoffs of low frequency (in the ion cyclotron regime) instabilities observed in the ALEXIS device. These oscillations are generated by the presence of axial and transverse flows, which are modified by radial potential structures externally imposed on the plasma. This poster will present initial measurements of the effects of modifying the magnetic and radial electric fields on the frequency and amplitude of these ion cyclotron waves.

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