

Abstract Submitted
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Development and Implementation of Magnetic Probe Diagnostics on a Linear Magnetized Plasma Column¹ AMI DUBOIS, EDWARD THOMAS, Auburn University, ERIK TEJERO, Auburn University and Global Strategies Group, WILLIAM AMATUCCI, Naval Research Laboratory — Electromagnetic ion cyclotron (EMIC) waves in the near-Earth space environment are of interest because of their ability to interact with and scatter energetic electrons. Experiments in the Auburn Linear Experiment for Instability Studies (ALEXIS), a 170 cm long, 10 cm diameter magnetized plasma column, are part of a combined study with the Naval Research Laboratory to study the generation and propagation of EMIC waves. This presentation reports on the development of a single axis magnetic loop probe for measuring the changing magnetic field. Results will be presented on the development of the magnetic loop probe and calibration data. Results of initial measurements of magnetic fluctuations in the ALEXIS plasma may also be presented.

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