

Abstract Submitted
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Preliminary density and temperature measurements in Lockheed Martin's magnetically encapsulated linear ring cusp confinement configuration REGINA SULLIVAN, JONATHON HEINRICH, DUSTIN MCCARREN, TOM MCGUIRE, JOHN RHOADS, ELIZABETH STRANDBERG, Lockheed Martin — Lockheed Martin's T4 experiment confines deuterium plasma with a magnetically encapsulated linear ring cusp configuration. Electron-Cyclotron Resonance Heating (ECRH) is used to generate and heat the plasma. An initial set of commissioning experiments at low-beta were performed on the device, across a range of ECRH powers and neutral gas pressures. Langmuir probe measurements were taken to determine the density and electron temperature of the plasma at these conditions, and to examine fluctuations in these parameters. The internal structure of the plasma was investigated using radial location sweeps of the probe. A 95 GHz microwave interferometer was used to independently measure line-averaged density, and results were compared to the probe data.

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