

Abstract Submitted
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Design and Assembly of a Langmuir Probe for the Lithium Tokamak Experiment (LTX)¹ SOPHIA GERSHMAN, LAURA BERZAK, DENNIS BOYLE, ERIK GRANSTEDT, CRAIG JACOBSON, ANDREW JONES, ROBERT KAITA, TOM KOZUB, BENOIT P. LEBLANC, DANIEL LUNDBERG, RICHARD MAJESKI, KURT SНИЕCKUS, T. STRICKLER, JOHN TIMBERLAKE, LEONID ZAKHAROV, PPPL, G.V. PEREVERZEV, IPP-Garching, V. SOUKHANOVSKII, LLNL, C.E. THOMAS, Third Dimension — The presence of lithium coatings on plasma facing surfaces has been shown to reduce recycling, increase the electron temperature, and significantly improve the energy confinement in a tokamak. LTX is designed for detailed investigation of the transport phenomena and plasma properties in this new low recycling regime. Edge diagnostics are an important part of this study. A swept probe has been designed to determine the plasma temperature and density in the scrape-off layer. The probe is designed to accommodate continued lithium evaporation and the expected low edge densities and high temperatures characteristic to this regime. Data from the probe will support the study of the transport properties and provide input parameters for the codes modeling the edge plasma in lithium boundary tokamaks.

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