

Abstract Submitted
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Pre-Lithium Langmuir Probe results from Lithium Tokamak Experiment (LTX)¹ D. SOBERS, M. LUCIA, S. GERSHMAN, R. MAJESKI, R. KAITA, L. BERZAK, C. JACOBSON, T. KOZUB, D. LUNDBERG, R. MARSALA, K. SNEIECKUS, J. TAYLOR, LTX TEAM — The LTX research goals encompass the investigation of the effects of low global recycling on plasma equilibrium and transport phenomena. Liquid lithium (Li) coatings on plasma facing surfaces are shown to reduce recycling, increase electron temperature and improve energy confinement time. A Langmuir probe has been constructed to study wall conditions. Edge diagnostics, and identifying and dealing with issues of probe operation in a Li environment, are important to this study. Our probe is specifically designed to deal with the complications of probe operation in a Li environment. Magnesium oxide insulators are employed in the probe; MgO is more resistant to chemical attack by liquid Li than other ceramics, like alumina. Here we report on initial probe measurement results in pre-lithium discharges during the commissioning of LTX. Data will be gathered to characterize both plasma edge conditions and probe behavior prior to Li injection, to provide a baseline for comparison with later, low recycling, results.

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