

Abstract Submitted
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Status of the Lithium Tokamak eXperiment (LTX)¹ R. MAJESKI, T. GRAY, R. KAITA, T. KOZUB, J. SPALETA, J. TIMBERLAKE, L. ZAKHAROV, PPPL, V. SOUKHANOVSKII, LLNL, R. MAINGI, ORNL, S. KRASHENINNIKOV, UCSD — Nonrecycling boundary conditions have been predicted to produce fundamental changes in magnetic confinement. Recent experimental results from CDX-U indicate that liquid lithium and lithium coatings can provide greatly reduced recycling and enhanced confinement in a spherical tokamak. The Lithium Tokamak eXperiment (LTX) is designed to nearly eliminate recycling with a full thin-film molten lithium wall. Electron temperature and current profiles, transport and stability properties which are qualitatively different from a conventional high recycling tokamak are expected to result. We will summarize the design and construction of LTX (scheduled for first plasma in late spring 2007). We will also briefly examine how the final results from CDX-U impact our expectations for the performance and plasma parameters achievable in LTX.

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