

Abstract Submitted
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Initial operation and performance projections for the Lithium Tokamak eXperiment (LTX)¹ R. MAJESKI, L. BERZAK, T. GRAY, R. KAITA, T. KOZUB, D.P. LUNDBERG, J. MANICKAM, K. SNECKUS, D. STOTLER, T. STRICKLER, J. TIMBERLAKE, J. YOO, L. ZAKHAROV, PPPL, C.L. ELLISON, U. Col.-Boulder, G.V. PEREVERZEV, IPP-Garching, V. SOUKHANOVSKII, LLNL — LTX is a modest-sized spherical tokamak with $R=0.4$ m, $a=0.26$ m, $\kappa=1.5$, $B_{toroidal} < 3.4$ kG, $I_p < 400$ kA, and $\tau_{flatop} > 50$ msec. First plasma is expected in September 2008. The research objective is to investigate modifications to equilibria and transport when global recycling is reduced to very low values ($<50\%$), by means of a conformal wall coated with a liquid lithium film. Initial operation will utilize a reduced Ohmic power supply, and lithium will not be introduced into the device until trials of all systems are successfully completed. The device itself, early discharges, and performance projections using the ASTRA simulation code will be discussed. MHD stability with a very close, conducting, conformal wall is also briefly discussed (see poster by J. Manickam). Diagnostics are discussed in companion posters by L. Berzak, D. Lundberg, and T. Strickler.

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