

Abstract Submitted
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Results from the Lithium Tokamak eXperiment (LTX)¹ R. MAJESKI, T. ABRAMS, L. BERZAK, D.P. BOYLE, M. CASSIN, E.M. GRANSTEDT, C.M. JACOBSON, R. KAITA, T. KOZUB, B.P. LEBLANC, D.P. LUNDBERG, M. LUCIA, A. RYOU, J. SQUIRE, D.P. STOTLER, L. ZAKHAROV, PPPL, L.R. BAYLOR, T.M. BIEWER, T.K. GRAY, R. MAINGI, ORNL, K. TRITZ, JHU, C.E. THOMAS, Third Dimension Inc., V. SOUKHANOVSKII — In 2010 LTX operated with two new lithium evaporation systems. No other wall conditioning techniques or low-Z limiters are employed. Early discharges in LTX were impurity-dominated, with plasma current 10 - 15 kA, lasting 4-6 msec. Operation with cold lithium coatings increased plasma currents to 70 kA, and discharge duration to 20 msec. Operation with hot lithium coated (300 C) walls produced rapid passivation of the lithium. Indications are that oxygen and other impurities segregate to the surface when the lithium is liquefied. For the 2011 run, bakeout and active cooling of the vacuum vessel is being implemented, along with a novel set of lithium getter pumps. A new liquid lithium filling system for the lower shell segments is currently being fabricated. These new systems will all be operable in 2011, and preliminary results will be presented.

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