

Abstract Submitted  
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**3-D Modeling of Magnetic Fields for the Lithium Tokamak eXperiment**<sup>1</sup> N. LOGAN, L. BERZAK, R. KAITA, R. MAJESKI, J. MENARD, L. ZAKHAROV, PPPL — The Lithium Tokamak eXperiment (LTX) is designed to investigate low-recycling operating regimes by surrounding 85% of the last closed flux surface with liquid lithium evaporated onto a copper and stainless steel shell conformal to the plasma. Fields generated by currents in this conducting shell have significant effects on magnetic configurations. To understand these effects, the commercially available code Aether [<http://www.fieldp.com>] is used to simulate time varying magnetic fields in a 3-D model of LTX. The model is built using LTX CAD files and divided into a regular mesh for computing the evolution of coupled electromagnetic vector quantities through time and space. Applicable boundary conditions and symmetries are analyzed. Comparisons with measured data, results from a 2-D code, and results from a 3-D code designed specifically for LTX demonstrate the possible benefits and limitations of using this commercial code.

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N. Logan  
PPPL

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