

Abstract Submitted  
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**Translation and Capture of High-Density Field Reversed Configurations for Magnetized Target Fusion** P.E. SIECK, T.P. INTRATOR, G.A. WURDEN, W.J. WAGANAAR, Los Alamos National Laboratory, R.J. CORTEZ, University of Alabama, Huntsville, R.J. OBERTO, University of Washington — A physics demonstration of Magnetized Target Fusion (MTF) is being pursued by a collaborative team from Los Alamos National Laboratory and Air Force Research Laboratory. The LANL facility, known as the Field Reversed eXperiment — Liner (FRX-L), focuses on the physics of producing high-density Field Reversed Configurations (FRCs), translating them, and capturing them in a static flux conserver. Observations of FRCs in translation and capture will be presented. The data suggest FRCs are formed at density above  $10^{22}/\text{m}^3$ , translate over the one meter chamber at 97 km/s, and a captured portion having radius 4 cm lives for  $10\mu\text{s}$ . The repeatability of FRC capture will be discussed in context of that necessary for MTF. This work is supported by the Office of Fusion Energy Sciences, and DOE/LANL contract DE-AC52-06NA25396.

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