

Abstract Submitted  
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**FRC Formation, Translation and Capture Studies for the Field Reversed Configuration Heating Experiment (FRCHX)** C. GRABOWSKI, J.H. DEGNAN, R. DELANEY, M. DOMONKOS, F.M. LEHR, P.R. ROBINSON, E.L. RUDEN, W. WHITE, H. WOOD, Air Force Research Laboratory, Directed Energy Directorate, Kirtland AFB, NM USA, D. BROWN, D. GALE, M. KOSTORA, J. MCCULLOUGH, W. SOMMARS, SAIC, Albuquerque, NM USA, M.H. FRESE, S.D. FRESE, J.F. CAMACHO, S.K. COFFEY, V. MAKHIN, NumerEx LLC, Albuquerque, NM USA, T.P. INTRATOR, G.A. WURDEN, P.J. TURCHI, Los Alamos National Laboratory, Los Alamos, NM USA, R.E. SIEMON, S. FUELLING, University of Nevada Reno, Reno, NV USA, A.G. LYNN, University of New Mexico, Albuquerque, NM USA — During FRC compression-heating experiments using imploding solid liners it is difficult to diagnose the FRC once it enters the liner due to limited diagnostic access. To confirm capture of the FRC within the magnetic mirrors inside the liner and obtain measurements of its lifetime, density, temperature and excluded flux radius, numerous non-implosion tests are performed using a surrogate liner with greater diagnostic access prior to the compression heating tests. Such experiments are described along with the experimental setup, and data from interferometry, magnetic probes, and collimated light probes are presented. 2D-MHD simulations have been used to guide the parameter selection for these experiments. This work is supported by DOE-OFES.

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