

Abstract Submitted  
for the DPP08 Meeting of  
The American Physical Society

**Field Reversed Configuration (FRC) formation and compression using liners** J.H. DEGNAN, P. ADAMSON, M. DOMONKOS, E.L. RUDEN, Air Force Research Laboratory, Directed Energy Directorate, Kirtland AFB, NM, C. GRABOWSKI, D. BROWN, D. GALE, M. KOSTORA, D. RALPH, W. SOMMARS, SAIC, Albuquerque, NM, M.H. FRESE, S.D. FRESE, D.J. AMDAHL, J.F. CAMACHO, S.K. COFFEY, NumerEx LLC, Albuquerque, NM, T.P. INTRATOR, G.A. WURDEN, S.C. HSU, P. SIECK, P.J. TURCHI, W.J. WAGANAAR, Los Alamos National Laboratory, Los Alamos, NM, R.E. SIEMON, T.J. AWE, University of Nevada Reno, NV, A.G. LYNN, N.F. RODERICK, University of New Mexico, Albuquerque, NM — AFRL and LANL are developing Magnetized Target Fusion (MTF) using the Shiva Star capacitor bank at AFRL to implode an Al liner containing an FRC to raise density and temperature. Experiments at LANL and AFRL explore FRC formation and translation. 2D-MHD calculations with MACH2 look at translation, capturing and compressing the FRC. Extended MHD examines FRC rotation. These guide the design of the compression experiments at AFRL. Field exclusion, interferometer, radiographic, radiation data, and 2D-MHD simulations will be presented. Supported by DOE-OFES.

J. H. Degnan  
Air Force Research Lab, Directed Energy Directorate, Kirtland AFB, NM

Date submitted: 22 Jul 2008

Electronic form version 1.4