

Abstract Submitted
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Deformable contact liner implosion performed using 8 cm diameter electrode apertures with full axial coverage radiography. J.H. DEGNAN, D. AMDAHL, G.F. KIUTTU, F.M. LEHR, J.D. LETTERIO, N.F. RODERICK, E.L. RUDEN, W. TUCKER, P.J. TURCHI, Directed Energy Directorate, Air Force Research Laboratory, Kirtland AFB, NM, USA, A. BROWN, S.K. COFFEY, G.G. CRADDOCK, M.H. FRESE, S.D. FRESE, B. GUFFEY, NumerEx, Albuquerque, NM, USA, T. CAVAZOS, D. GALE, T.C. GRABOWSKI, R.E. PETERKIN, JR, W. SOMMARS, SAIC, Albuquerque, NM, USA, R.E. SIEMON, University of Nevada Reno, NV, USA, Y.F.C. THIO, DOE-OFES — Full axial coverage radiographic data, agreeing with 2D-MHD, indicate the feasibility of using a varying thickness in a long cylindrical solid liner, driven as a 12 megamp Z-pinch, to achieve factor 16 cylindrical convergence, while using 8 cm diameter aperture electrodes. The Al liner was 30 cm long, with 9.78 cm inner diameter for its full length, 10.0 cm outer diameter for the central 18 cm of its length, and outer diameter increased linearly to 10.2 cm at 1 cm from either electrode, and to 11 cm at electrode contacts. The electrode apertures allow injection of Field Reversed Configurations in proposed future experiments on magnetized target fusion. Sponsored by DOE-OFES.

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