

Abstract Submitted
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Overview of pulsed-power-driven high-energy-density plasma research at the University of Michigan R.D. MCBRIDE, P.C. CAMPBELL, S.M. MILLER, J.M. WOOLSTRUM, D.A. YAGER-ELORRIAGA, A.M. STEINER, N.M. JORDAN, Y.Y. LAU, R.M. GILGENBACH, Univ of Michigan, A.S. SAFRONOVA, V.L. KANTSYREV, V.V. SHLYAPTSEVA, I.K. SHRESTHA, C.J. BUTCHER, Univ of Nevada - Reno, G.R. LAITY, J.J. LECKBEE, M.L. WISHER, S.A. SLUTZ, M.E. CUNEO, Sandia National Labs — The Michigan Accelerator for Inductive Z-pinch Experiments (MAIZE) is a 3-m-diameter, single-cavity Linear Transformer Driver (LTD) at the University of Michigan (UM). MAIZE supplies a fast electrical pulse (0–1 MA in 100 ns for matched loads) to various experimental configurations, including wire-array z-pinches and cylindrical foil loads. This talk will report on projects aimed at upgrading the MAIZE facility (e.g., a new power feed and new diagnostics) as well as various physics campaigns on MAIZE (e.g., radiation source development, power flow, implosion instabilities, and other projects relevant to the MagLIF program at Sandia). In addition to MAIZE, UM is constructing a second, smaller LTD facility consisting of four 1.25-m-diameter cavities. These cavities were previously part of Sandia’s 21-cavity Ursa Minor facility. The status of the four Ursa Minor cavities at UM will also be presented. This research was funded in part by the University of Michigan, a Faculty Development Grant from the Nuclear Regulatory Commission, the NNSA under DOE grant DE-NA0003047 for UNR, and Sandia National Laboratories under DOE-NNSA contract DE-NA0003525.

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