

Abstract Submitted
for the DPP05 Meeting of
The American Physical Society

X-Pinch Experiments Driven by a Compact Marx Generator TREVOR STRICKLER, R.M. GILGENBACH, M. GOMEZ, J. ZIER, W. TANG, Y.Y. LAU, University of Michigan, T.A. MEHLHORN, M.E. CUNEO, M. MAZARAKIS, Sandia National Laboratories — Experiments are underway on an X-pinch driven by a 4-stage compact Marx generator with pulse-sharpening switch at the following design parameters: peak voltage ~ 160 -400 kV, current ~ 20 -50 kA, and 10-90% risetime ~ 170 ns. Diagnostics include ultraviolet emission spectroscopy, resonant laser shadowgraphy, soft x-ray PIN diodes, and Rogowski coils. Initial ultraviolet emission spectroscopy experiments have measured Al line emission during 30.3-micron-wire explosions at ~ 20 kA peak current.

* This work was supported by U. S. DoE through Sandia National Laboratories award number 240985 to the University of Michigan. Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under Contract DE-AC04-94AL85000. T. S. Strickler was supported by the National Physical Sciences Consortium Graduate Fellowship in the Physical Sciences.

Trevor Strickler
University of Michigan

Date submitted: 26 Jul 2005

Electronic form version 1.4