

Abstract Submitted
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Al Double Planar Wire Array Z-pinches on the UM MAIZE LTD generator¹ M.T. SCHMIDT-PETERSEN, A.S. SAFRONOVA, V.L. KANTSYREV, I. SHRESTHA, V.V. SHLYAPTSEVA, C.J. BUTCHER, A. STAFFORD, University of Nevada, Reno, P.C. CAMPBELL, A.M. STEINER, D.A. YAGER-ELORRIAGA, N.M. JORDAN, R.M. GILGENBACH, University of Michigan — Double Planar Wire Arrays (DPWAs), which consist of two parallel rows of fine wires, are very efficient radiators and a very good object to study implosion dynamics and radiative properties of wire arrays. New DPWA experiments were performed using 12.7 and 15 micron Al wires in different load geometries on the University of Michigan's 0.5-1 MA, 150-250 ns risetime MAIZE Linear Transformer Driver (LTD) generator. Diagnostics included four x-ray detecting diodes, two x-ray pinhole cameras, two x-ray spectrometers, and 12 frame shadowgraphy which captured a very broad range spanning 120 ns up to 190 ns from the current start. Non-LTE kinetic modeling of x-ray spectra estimates electron temperatures up to 445 eV for K-shell plasmas. Implosion and radiative analysis of Al DPWA Z-pinches will be discussed.

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