

Abstract Submitted  
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**Spectroscopy of Ablated Aluminum Foil Plasmas Driven by MA-LTD**<sup>1</sup> S.G. PATEL, J.C. ZIER, D.A. CHALENSKI, R.M. GILGENBACH, A.M. STEINER, Y.Y. LAU, University of Michigan — Spectroscopic analysis has been performed on Al foil plasmas ablated by the Linear Transformer Driver (LTD) at the University of Michigan. The MAIZE LTD can supply 1- MA, 100 kV pulses with 100 ns risetime into a matched load. The plasma load consisted of a 400 nm thick Al foil (cathode) placed between two, planar, current-return anode posts. An optical fiber was placed 1 cm away from the load; plasma light passed through a 0.75-m optical spectrograph and was gated for 10 ns by an intensified CCD detector. The density of the edge plasma was determined through Stark broadening of the H-alpha line. The Fourier transform was taken of the Voigt profile, which was then used to approximate the density of the Al plasma. This method resulted in a density of approximately  $10^{15} \text{ cm}^{-3}$  in the outer regions of the Al plasma at peak current. Spectra taken midway in the current rise yielded 1-2 eV plasma temperatures from the slope of the continuum emission. These data will be shown as well as planned future experiments.

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