

Abstract Submitted  
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**Analysis of implosion dynamics of nested cylindrical wire arrays of Mo and Al on the Zebra and Cobra generators**<sup>1</sup> M.E. WELLER, M.F. YILMAZ, A.S. SAFRONOVA, V.L. KANTSYREV, A.A. ESAULOV, K.M. WILLIAMSON, I. SHRESTHA, G.C. OSBORNE, N.D. OUART, V. SHYLAPTSEVA, UNR — Results of experiments with nested cylindrical wire arrays of Mo and Al that were performed on the 1.6 MA, 100 ns Zebra generator and the 1.0 MA, 100 ns Cobra generator are presented. Both the Zebra and Cobra experiments had loads with Al tracer wires with different concentrations in linear mass ( $\sim 30\%$  Al for Zebra and  $\sim 15\%$  Al for Cobra). The full set of diagnostics produced data that were compared and analyzed, which include PCD, XRD, and bolo signals, laser shadowgraphy and optical streak images, and time-gated/integrated pinhole and spectra images. Implosion dynamics is analyzed with a wire-ablation dynamics model. Non-LTE kinetic modeling was utilized to derive plasma parameters of electron temperature and density and to estimate opacity effects. The advantage of using Mo wires for future study of L-shell radiators from wire arrays is demonstrated.

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