

Abstract Submitted  
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**Mixed and Uniform Double Planar Wire Arrays on University of Michigan's Linear Transformer Driver.**<sup>1</sup> A.S. SAFRONOVA, V.L. KANTSYREV, I.K. SHRESTHA, V.V. SHLYAPTSEVA, M.T. SCHMIDT-PETERSEN, C.J. BUTCHER, E.E. PETKOV, A. STAFFORD, M.C. COOPER, University of Nevada, Reno, A.M. STEINER, D.A. YAGER-ELORRIAGA, N.M. JORDAN, R.M. GILGENBACH, University of Michigan — Uniform Double Planar Wire Arrays (DPWA), which consist of two parallel planes of wires of the same material, have previously demonstrated high radiation efficiency, compact size, and usefulness for various applications in experiments on a University-scale high impedance Z-pinch generator. We have already reported on the outcome of the first experiments with uniform Al DPWAs on the University of Michigan's low-impedance Linear Transformer Driver (LTD) MAIZE generator [A.S. Safronova *et al*, IEEE Trans. Plasma Sci. 44, 432 (2016)]. Here we present the most recent results on the experiments with both uniform (Al wires) and mixed (one plane from Al and another plane from stainless steel or copper wires) DPWAs produced using a diagnostic set similar to the first campaign, including: filtered X-ray diodes, X-ray spectrographs and pinhole cameras, but with a new four frame shadowgraphy system with 2-ns, 532 nm frequency doubled Nd:YAG laser that was further upgraded to a twelve frame shadowgraphy system. Application of different wire planes and much longer period of time observed by the shadowgraphy led to the new results about wire array implosions on the LTD device.

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