

Abstract Submitted  
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**Z-Pinch Wire-Electrode Contact Resistance Studies Using Weighted and Soft Metal Gasket Contacts\*** M.R. GOMEZ, J.C. ZIER, A.F. THURTELL, D.M. FRENCH, R.M. GILGENBACH, W. TANG, Y.Y. LAU, University of Michigan — The contact made between z-pinch wires and electrodes has a significant effect on both the energy deposited in the wires and the uniformity of the expansion profile of the wires. We have shown that using soft metal gaskets can improve wire-electrode contact significantly over typical weighted contacts. Images of wire expansion profile and wire plasma emission will be presented for single and double wire shots on a 16 kA, 100 kV 4-stage Marx bank with 150 ns risetime. Bench resistance measurements for aluminum, stainless steel, and tungsten wires with diameters ranging from 7.5  $\mu\text{m}$  to 30  $\mu\text{m}$  will be presented. These measurements utilized both soft metal gasket contacts (gaskets include: indium, silver, aluminum, tin, and lead) and double-ended wire weight contacts (weights ranged from 0.4 g to 1.9 g). \*This research was supported by U. S. DoE through Sandia National Laboratories award document numbers 240985, 768225, 790791 and 805234 to the University of Michigan. MRG supported by NNSA Fellowship and JCZ supported by NPSC Fellowship sponsored by Sandia National Labs.

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