Abstract Submitted
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Study of planar wire arrays with various distribution of mass along the array plane on the 1 MA Zebra generator[1] K. WILLIAMSON, V. KANTSYREV, A. SAFRONOVA, V. IVANOV, I. SHRESTHA, G. OSBORNE, N. OUART, F. YILMAZ, V. SHLYAPTSEVA, A. ASTANOVITSKY, S. BATIE, B. LEGALLOUDEC, V. NALAJALA, W. MCDANIEL, A. HABOUB, T. COWAN, University of Nevada, Reno — Recent studies of planar array implosions have shown remarkable x-ray yield and high-powered pulses. The study of the dependence of radiation properties on the distribution of mass along the array plane were performed using spatially-resolved, time-integrated x-ray/EUV spectroscopy, time-gated x-ray and laser probing imaging, fast x-ray/EUV diodes, and a Ni bolometer. The following planar mass distributions were measured and will be discussed: the linear mass of the exterior wires was four times more than the interior wires with gradual linear mass transition, the linear mass of the interior wires was four times more than the exterior wires with gradual linear mass transition, constant linear mass distribution across an even number of wires such that the implosion took place on inter-wire gap, and constant linear mass distribution across an odd number of wires such that the implosion took place on the central wire. The results of a periodic variation of the linear mass will also be reported.

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