

Abstract Submitted
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Radiated X-ray Power and Energy current scaling at 80ns implosion times¹ MICHAEL MAZARAKIS, MICHAEL CUNEO, WILLIAM STYGAR, Sandia National Laboratories, HENRY HARJES, DANIEL SINARS, BRENT JONES, Sandia National Laboratories, CHRISTOPHER DEENEY, National Nuclear Security Administration, EDUARDO WAISMAN, THOMAS NASH, KENNETH STRUVE, DILLON MCDANIEL, Sandia National Laboratories — The results of our current scaling experiments with the Z accelerator for the compact, single, 20-mm diameter, 10-cm long wire arrays, are compared with the predictions of the W.A. Stygar *et al.* [Phys. Rev. E **69**, 046403 (2004)] and [Phys. Rev. E **72**, 026404 (2005)] heuristic model for ablation dominated pinches. We also derive an empirical predictive relation that connects the power-scaling exponent with the array parameters. Utilizing the results of the present work with those of W.A. Stygar *et al.* and T. Nash *et al.* [Phys. Plasmas **11**, 5156 (2004)] we evaluate the proportionality constant of the heuristic model.

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