Abstract Submitted
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Parallel X pinches on the 1 MA COBRA pulser[1] S.A. PIKUZ, T.A. SHELKOVENKO, P.F. KNAPP, C.L. HOYT, J.B. GREENLY, H. WILHELM, D.A. HAMMER, Cornell University — Two standard and nested X pinches have been tested in parallel as the load on the 1MA, 100 ns risetime COBRA pulsed power generator at Cornell University. The spatial, temporal, and spectral parameters of the X pinches were studied using laser-based imaging, time gated XUV-sensitive cameras, a slit-step-wedge and pinhole cameras, X-ray spectroscopy and x-ray radiography. The latter includes testing a new method of point-projection quasi-monochromatic radiography. Electrical cross-talk of the X pinches was studied using very small B-dot probes placed in the space between X-pinches. The experiments show that the parallel nested x-pinches produce smaller, brighter and more stable x-ray source points than the standard configuration.

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David Hammer
Cornell University

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