

Abstract Submitted  
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**Studies of Hot Spots in Wire-Array Z-Pinches and X-Pinches<sup>1</sup>**

KATE BELL, TATIANA SHELKOVENKO, SERGEY PIKUZ, DAVID HAMMER, JONATHAN DOUGLASS, RYAN MCBRIDE, JOHN GREENLY, Cornell University — Wire array Z-pinches and X-pinches radiate in both the soft (sub-keV) and hard (multi-keV) x-ray ranges. Hot spots are brief and intense x-ray bursts at localized small points within a Z- or X-pinch. Experiments have been carried out on the 1MA COBRA and 0.5 MA XP pulsed-power generators to investigate the temporal development, spatial structure, and x-ray emission structure of the hot spots in X-pinches and Z-pinches made from multiple fine metal wires. A Kentech x-ray streak camera and diamond photoconducting diodes (PCDs) with various filters were used to study the time evolution of the energy distribution emitted from the hot spots. Time integrated self emission pinhole images with various filters and time-gated four frame MCP images were used to study the spatial structure of hot spot x-ray emission.

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