

Abstract Submitted
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Experimental r - θ density profiles of wire-array and cylindrical foil Z-pinches on COBRA¹ ISAAC BLESENER, JOHN GREENLY, SERGEY PIKUZ, TATIANA SHELKOVENKO, BRUCE KUSSE, CHARLES SEYLER, Cornell University - LPS — Calibrated r - θ ion density profiles from wire-array and cylindrical foil experiments on the 1-MA COBRA machine will be presented. Profiles are axially averaged over the 1-cm height of the array. The data was gathered using an axial X pinch backlighter.² Images have better than 5-micron resolution with calibrated ion densities from 10^{18} to 10^{20} cm^{-3} . The latest data will be presented, comparing the timing and development of ablation streams and precursor formation between wire-arrays and cylindrical foils. Experimental data will also be compared to simulation results.

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²I.C. Blesener et al., “Axial x-ray backlighting of wire-array Z-pinches using X pinches”, Rev. Sci. Instrum. 80, 123505 (2009).

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