Abstract Submitted
for the DPP08 Meeting of
The American Physical Society

Studies of x-ray and XUV radiation from wire-array z-pinches on COBRA using an x-ray streak camera[1] P.-A. GOURDAIN, S.A. PIKUZ, T.A. SHELKOVENKO, P.F. KNAPP, D.A. HAMMER, Laboratory of Plasma Studies, Cornell University, D.B. SIMAR, Sandia National Laboratories — Time- and space-resolved short-wavelength radiation from wire-array z-pinches has been studied using a low-magnification Kentech x-ray streak camera in experiments on the 1 MA COBRA pulsed power generator at Cornell University. In the x-ray spectral band, a standard photochode and imaging slit were used to record one-dimensional images in the axial direction. Axial and radial images of wire arrays were recorded in XUV radiaion using an open pinhole and a specially made transparent mesh-type photocathode. The development of the precursor plasma and hot spots in the stagnated plasma have been observed. The images were compared with results obtained with an optical streak camera and 4-frame gated microchannel plate imager.

[1]Work supported by the Stewardship Sciences Academic Alliances program of the National Nuclear Security Administration under DOE Cooperative Agreement No DE-FC03-02NA00057.

P.-A. Gourdain
Cornell University

Date submitted: 19 Jul 2008 Electronic form version 1.4