

Abstract Submitted
for the DPP10 Meeting of
The American Physical Society

Radial Foil Experiments on Cobra with Imposed B-Field¹ PETER SCHRAFEL, Cornell University, PIERRE GOURDAIN, JOHN GREENLY, BRUCE KUSSE — Previous investigations of exploding radial foils have shown the formation of an axial plasma jet in the early stages of the foil explosion. In this case a thin load foil is pressed at an outer annulus held at ground, and contacted in the center by a small straight rod cathode driven by the 1MA COBRA accelerator. Present experiments focus on the jet development when an externally produced B-field is applied. Some involve a field created by permanent magnets which runs perpendicular to the direction of jet propagation. Here we focus on experiments in which the B-field is created by a Helmholtz-coil configuration with field lines running parallel to the direction of jet propagation in the region of interest. Applied fields range from 0.5-2.0T.

¹This work was supported by NNSA Stockpile Stewardship Academic Alliances program under DOE cooperative agreement DE-FC52-02NA00057.

Peter Schrafel
Cornell University

Date submitted: 17 Jul 2010

Electronic form version 1.4