

Abstract Submitted
for the DPP16 Meeting of
The American Physical Society

Enhancing X-ray Output with a Gas-Puff Based Plasma Opening Switch JOSEPH ENGELBRECHT, Cornell University, NICHOLAS OUART, Naval Research Laboratory, NIANSHENG QI, L-3 Communications, PHILIP DE GROUCHY, Imperial College London, TATIANA SHELKOVENKO, SERGEI PIKUZ, Lebedev Institute, JACOB BANASEK, WILLIAM POTTER, LAUREN RANSOHOFF, SOPHIA ROCCO, Cornell University, JOHN GIULIANI, Naval Research Laboratory, DAVID HAMMER, BRUCE KUSSE, Cornell University — This talk introduces an idea for employing a low density gas-puff implosion as a plasma opening switch to rapidly transfer a current pulse into a more inductive load. A gas-puff on axial wire configuration is used to investigate the promise of this opening switch as a means of increasing the x-ray yield from the wire. We demonstrate the development of this configuration into a tunable current switch, and present promising x-ray measurements which suggest that this switch merits further investigation into its potential usefulness in x-ray source applications.

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Date submitted: 22 Jul 2016

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