

Abstract Submitted
for the DPP16 Meeting of
The American Physical Society

Striation Formation in Cylindrical Liners Made of Various Materials Driven by a 1 MA Pulsed Power Generator¹ LEVON ATOYAN, TOM BYVANK, JOSEPH ENGELBRECHT, JOHN GREENLY, SERGEI PIKUZ, WILLIAM POTTER, TANIA SHELKOVENKO, BRUCE KUSSE, DAVID HAMMER, Cornell University — Peterson *et al.* found on the 20 MA Z machine that, without any applied external axial magnetic field, horizontal striations appear in radiographic images of a metal liner [*Phys. Plasmas* 19, 092701, 2012], a result that has been reproduced on other pulsed power machines since. In this work we present experimental results of horizontal striations on the 1 MA, 100-200 ns COBRA pulsed power generator [T. A. Shelkovenko et al, *Rev. Sci. Instrum.* 77, 10F521, 2006]. The pattern is observed in our experiments using extreme ultraviolet imaging, laser imaging, and X-ray backlighting. Using this combination of diagnostics, we were able to view simultaneously the pattern near the liner surface as well as in the higher density portion of the liner, displaying features with different wavelengths. Furthermore, materials such as Al, Cu, and Ti will be used for the liner to determine if the striation formation is affected by the nature of the material.

¹This research is supported by the NNSA Stewardship Sciences Academic Programs under Department of Energy Cooperative Agreement DE-NA0001836 and DOE account DE-NA0002952.

Levon Atoyán
Cornell University

Date submitted: 15 Jul 2016

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