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Computer Simulation of the Tri-MeV Electron Beam Accelerator
DAVID HOUSLEY, RICK SPIELMAN, Idaho State University — Tri-MeV is an electron beam accelerator originally built by Pulse Sciences Incorporated capable of producing pulses of 3 MeV and 30 kA with a rise time and duration of 3 and 14 ns respectively. These characteristics make Tri-MeV a good choice for studying the focus of electron beams [1]. Tri-Mev was recently relocated to Idaho State University and since has been reconditioned in preparation for plasma and radiography experiments. In this talk the current status of this project, in particular, SCREAMER [2] simulations will be compared to recent experimental observations of the Tri-MeV accelerator.

[1]D.R. Welch, B.V. Oliver, S.E. Rosenthal and C.L. Olson, in IEEE Conference Record Abstracts, 1999 IEEE International Conference on Plasma Science, Monterey, California, June 20-24, 1999, IEEE Cat. No. 99CH36297, (Institute of Electrical and Electronic Engineers, Piscataway, NJ, 1999), p. 182.
[2]R. B. Spielman, M. L. Kiefer, K. L. Shaw, K. W. Struve, and M. M. Widner, SCREAMER, a pulsed power design tool, users guide for version 3.3.1 (2014).

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