Abstract Submitted
for the NWS17 Meeting of
The American Physical Society

A Characterization of Tri-MeV as a Flash Radiography Device
DAVID HOUSLEY, Idaho State University, RICK SPIELMAN, Idaho Accelerator Center — The Tri-MeV electrostatic electron accelerator can deliver a 3 MeV voltage pulse with a current and duration of 30 kA and 20 ns. Up to now available literature [1] suggests the smallest radiographic spot size the Tri-MeV system can produce is 0.8 mm in diameter, being the full width half maximum (FWHM) of the source, with a duration of 19 ns and a dose of 1.2 rad one meter from the source. A recent series of experiments with Tri-MeV have revealed its capability to produce an x-ray burst 5 ns in duration, a dose of 0.7 rad at one meter with a 720 um FWHM x-ray source diameter. In this presentation I will discus x-ray source as observed in this series of experiments.
[1] Peter R. Menge, David L, Johnson, John E. Maenchen, Craig L. Olson, and Dean C. Rovang, "Experimental Comparison of 2-3MV X-ray Sources for Flash Radiography", Sandia National Laboratory Report SAND2002-0082, 2002.

David Housley
Idaho State University

Date submitted: 07 May 2017 Electronic form version 1.4