

Abstract Submitted  
for the HAW14 Meeting of  
The American Physical Society

**New developments in proton radiography at LANSCE** CHRISTOPHER MORRIS, Los Alamos Natl Lab, PROTON RADIOGRAPHY TEAM — In a new application of nuclear physics, a facility for using proton for flash radiography has been developed at the Los Alamos Neutron Science Center (LANSCE) [1]. Protons have proven far superior to high energy x-rays for flash radiography. Although this facility is primarily used for studying very fast phenomena such as high explosive driven experiments, it is finding increasing application to other fields, such as tomography of static objects [2], phase changes in materials [3], and the dynamics of chemical reactions [4]. The advantages of protons will be discussed and data from some of the recent experiments will be presented.

- [1] Morris, C., et al., *Journal of Applied Physics*, **109** 104905 (2011).
- [2] Morris, C., et al., *Review of Scientific Instruments* **84** 023902 (2013).
- [3] Clarke, A., et al., *Scientific reports*, **3** 2020 (2013).
- [4] Bernert, T., et al., *Solid State Sciences*, 2013. **22** 33(2013).

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Date submitted: 30 Jun 2014

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