

Abstract Submitted
for the SHOCK11 Meeting of
The American Physical Society

Radiography of the pre-ignition thermal decomposition of Energetic Materials LAURA SMILOWITZ, BRYAN HENSON, JERRY ROMERO, DAVID OSCHWALD, LANL — We have designed a small scale radiography experiment to image the density evolution of energetic materials during heating to ignition. The signal to noise of the system allows for sensitivity on the order of 1% change in density. We have used this apparatus to study the density evolution in several different HMX and RDX based formulations and can watch phase transitions and material flow. During the final seconds leading up to the ignition event, the loss of solid density can be observed. A summary of results to date will be presented.

Laura Smilowitz
LANL

Date submitted: 08 Feb 2011

Electronic form version 1.4