

Abstract Submitted
for the SHOCK11 Meeting of
The American Physical Society

Application of Proton Radiography to Detonation Wave Propagation - a “Sandwich Test” MARIA RIGHTLEY, Los Alamos National Laboratory, THE PRAD COLLABORATION — Proton Radiography (often referred to as pRad) was invented at Los Alamos National Laboratory and has been operational for many years at the Prad Facility as part of the Los Alamos Neutron Science Center. Early in its history, it was realized that this diagnostic was very well suited to visualizing evolving detonation front(s). In this presentation, we concentrate specifically on one configuration that has been radiographed at the pRad facility. A block of PBX 9501 is “sandwiched” between two plates of steel and initiated by line wave generators at each end. With the multiple frame capability of pRad (20+ frames), the propagation of the detonation wave over several microseconds is captured. The experimental configuration, some details of the pRad facility, and the results will be discussed in this presentation.

Maria Rightley
Los Alamos National Laboratory

Date submitted: 16 Feb 2011

Electronic form version 1.4