

Abstract Submitted
for the SHOCK15 Meeting of
The American Physical Society

Detonation Performance Measurements of Cyclotol 75/25 TIMOTHY KUIPER, ERIC ANDERSON, MARK SHORT, SCOTT JACKSON, Los Alamos National Laboratory — Cyclotol is a melt-castable high explosive composed of RDX and TNT. The term Cyclotol may apply to other mixtures of these two components, but for the present work, experiments were conducted using 75 wt% RDX and 25 wt% TNT. Diameter-effect data for Cyclotol 75/25 is available from prior work. In the current effort, we report front-shape measurements that are crucial for calibration of the Detonation Shock Dynamics (DSD) based programmed burn models as well as for reactive burn models. Diameter-effect measurements are also obtained and compared to prior work. In addition, wall-velocity profiles from a cylinder test are reported along with product isentropes computed from the velocity profiles.

Eric Anderson
Los Alamos National Laboratory

Date submitted: 02 Feb 2015

Electronic form version 1.4