

Abstract Submitted
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A Comparison of Thermal Explosions in HMX Based Formulations LAURA SMILOWITZ, BRYAN HENSON, Chemistry Division, LANL, BLAINE ASAY, Dynamic and Energetic Materials, LANL, JERRY ROMERO, Chemistry Division, LANL, PRAD COLLABORATION¹ — Radial thermal explosion experiments have been run using different HMX based formulations. The reaction violence of the different HMX based formulations under identical boundary conditions varies dramatically. In this talk, PBX 9501 and PBX N9 deflagrations will be compared. Diagnostics include proton radiography, case strain, burn front velocities, wall velocities, and post shot case fragments. The difference in reaction violence will be explored in the framework of our current understanding of burn mechanism.

¹Physics Division, LANL

Laura Smilowitz
Chemistry Division, LANL

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