

Abstract Submitted  
for the SHOCK09 Meeting of  
The American Physical Society

**Shock Initiation Experiments on the TATB Based Explosive RX-03-GO with Ignition and Growth Modeling** KEVIN S. VANDERSALL, FRANK GARCIA, CRAIG M. TARVER, Energetic Materials Center, Lawrence Livermore National Laboratory, Livermore, CA 94550 — Shock initiation experiments on the TATB based explosive RX-03-GO (92.5% TATB, 7.5% Cytop A by weight) were performed to obtain in-situ pressure gauge data, characterize the run-distance-to-detonation behavior, and calculate Ignition and Growth modeling parameters. A 101 mm diameter propellant driven gas gun was utilized to initiate the explosive sample with manganin piezoresistive pressure gauge packages placed between sample slices. The RX-03-GO formulation utilized is similar to that of LX-17 (92.5% TATB, 7.5% Kel-f by weight) with the notable differences of a new binder material and TATB that has been dissolved and recrystallized in order to improve the purity and morphology. The shock sensitivity will be compared with that of prior data on LX-17 and other TATB formulations. Ignition and Growth modeling parameters were obtained with a reasonable fit to the experimental data. This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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Date submitted: 13 Feb 2009

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