

Abstract Submitted
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**Effects of Geometry on Line Wave Generator Breakout Profiles
Containing XTX-8003** BRADLEY WHITE, ROBERT REEVES, MICHAEL
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We performed computer simulations of Line Wave Generator (LWG) experiments
containing the extrudable PETN-based explosive, XTX-8003, using the Ignition and
Growth model in ALE3D. Parameters for the model were modified from a highly
loaded PETN-based explosive and verified against run-to-distance measurements
from shock initiation tests. The LWG experiments used 2 mm sized explosively
filled channels with output channel center-to-center spacings of 7.5 mm with airgaps
in between to prevent cross-talk between channels. Studies examined the effect of
channel and airgap geometries on the simultaneity of the detonation wave front em-
anating from the channels into an output slab of a second explosive (Composition
B). Planarity of the detonation front in the output slab at increasing depths was also
studied. We will present results of these studies, as well as findings from interac-
tions between multiple LWGs in a stacked configuration. This work was performed
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