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Modeling a High Explosive Cylinder Experiment MARVIN A. ZOCHER, Los Alamos National Laboratory — Cylindrical assemblies constructed from high explosives encased in an inert confining material are often used in experiments aimed at calibrating and validating continuum level models for the so-called equation of state (constitutive model for the spherical part of the Cauchy tensor). Such is the case in the work to be discussed here. In particular, work will be described involving the modeling of a series of experiments involving PBX-9501 encased in a copper cylinder. The objective of the work is to test and perhaps refine a set of phenomenological parameters for the Wescott-Stewart-Davis reactive burn model. The focus of this talk will be on modeling the experiments, which turned out to be non-trivial. The modeling is conducted using ALE methodology.

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