

Abstract Submitted  
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**Preshot Calculations for the Ortega Experiment** NICHOLAS JENKINS, BRUCE TRENT, MARVIN ZOCHER, MICHAEL FURLANETTO, LANL — Calculations for the Ortega experiment were performed prior to the execution of the test in order to help establish experimental expectations and to aid in the setup of the radiographic and velocity diagnostics. A numerical model was developed from the fabrication schematics with necessary simplifications made in order to preserve numerical stability. Computations were performed with a LANL developed finite volume based Lagrangian hydrocode on a two-dimensional unstructured mesh. Current state of the art material strength and damage models were implemented with utilization of adaptive mesh refinement to perform extensive simulations on high speed computing platforms. Systematic numerical tests were completed to verify the validity of each simplifying assumption, and a final pre-shot quantitative prediction for velocimetry and material deformation was presented. The development of the model and the predictions are provided in this presentation.

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