

Abstract Submitted  
for the DPP06 Meeting of  
The American Physical Society

**Preliminary Hyades Modeling of Multi-Interface Diverging Experiments for NIF**<sup>1</sup> M.J. GROSSKOPF, R.P. DRAKE, C.C. KURANZ, University of Michigan, T. PLEWA, University of Chicago, J.F. HANSEN, B. BLUE, H.F. ROBEY, S.G. GLENDINNING, B.A. REMINGTON, W. HSING, A.R. MILES, M.J. EDWARDS, Lawrence Livermore National Laboratory — In experiments using the Omega Laser at the University of Rochester, researchers studying supernova dynamics have been able to observe the growth of Rayleigh-Taylor instabilities in a high energy density system, using a planar target with a single, multi-mode sinusoidal interface. These experiments will be expanded to incorporate multiple layers for use at the NIF laser. We report attempts to perform scaling simulations and model the interface dynamics of a multilayered diverging Rayleigh-Taylor experiment for NIF using a combination of 1D and 2D Hyades, a Lagrangian 3-temperature, 1-fluid hydrodynamic simulation code used within the high energy density physics community. The 2D simulations use a two-dimensional mesh defined in R-Z coordinate space with a rotation axis of symmetry at R=0. The simulation work will be used to help develop parameters for experimental design.

<sup>1</sup>Work supported by the University of Michigan.

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Date submitted: 22 Jul 2006

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