

Abstract Submitted
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Modeling

Lab-

oratory Astrophysics Experiments using the CRASH code MATTHEW TRANTHAM, R.P. DRAKE, MICHAEL GROSSKOPF, MATTHEW BAUERLE, CAROLYN KRUANZ, PAUL KEITER, University of Michigan, GUY MALAMUD, University of Michigan and Nuclear Research Center - Negev, Isreal, CRASH TEAM — The understanding of high energy density systems can be advanced by laboratory astrophysics experiments. Computer simulations can assist in the design and analysis of these experiments. The Center for Radiative Shock Hydrodynamics (CRASH) at the University of Michigan developed a code that has been used to design and analyze high-energy-density experiments on OMEGA, NIF, and other large laser facilities. This Eulerian code uses block-adaptive mesh refinement (AMR) with implicit multigroup radiation transport and electron heat conduction. This poster/talk will demonstrate some of the experiments the CRASH code has helped design or analyze including: Radiative shocks experiments, Kelvin-Helmholtz experiments, Rayleigh-Taylor experiments, plasma sheet, and interacting jets experiments.

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