

Abstract Submitted
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2-D Simulations of OMEGA Fast-Ignition Cone Targets K.S. ANDERSON, R. BETTI, P.W. MCKENTY, P.B. RADHA, Laboratory for Laser Energetics, U. of Rochester, M.M. MARINAK, LLNL — The fast-ignition (FI) concept requires the assembly of a dense fuel, while allowing access for a high-energy ignitor beam. One approach to FI relies on the insertion of a high-density gold cone into the capsule, with its tip near the center of the capsule, allowing the injection of the ignitor beam close to the compressed high-density fuel mass. The insertion of the gold cone may degrade the uniformity of the assembled fuel, however, possibly degrading the yield. Two-dimensional (2-D) simulations of FI cone implosions are required to characterize nonuniformities introduced by the FI cone, which will allow the optimization of cone implosions on the OMEGA laser system. Current work on 2-D FI cone-in-shell simulations is presented. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-92SF19460.

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