

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

A 3-D Model of Hot-Spot Formation in Inertial Confinement Fusion Implosions X. GONG, V.N. GONCHAROV, I.V. IGUMENSHCHEV, Laboratory for Laser Energetics, U. of Rochester — A 3-D model describing the formation of a hot-spot in inertial confinement fusion (ICF) implosions is presented. The model includes thermal conduction and mass ablation effects in a 3-D distorted hot spot using an approach developed by Sanz.¹ Evolution of the nonuniformity growth is calculated based on a sharp boundary model.² The results of the model will be compared against 2-D *DRACO* and 3-D hydrodynamic code calculations.³ This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

¹J. Sanz and R. Betti, *Phys. Plasmas* **12**, 042704 (2005).

²V. N. Goncharov *et al.*, *Phys. Plasmas* **7**, 5118 (2000).

³I. V. Igumenshchev *et al.*, “Numerical Study of Large-Scale, Laser-Induced Nonuniformities in Cryogenic OMEGA Implosions,” this conference.

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Date submitted: 23 Jul 2015

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