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Gain Curves for Fast-Ignition Inertial Confinement Fusion A.A. SOLODOV, R. BETTI, J.A. DELETTREZ, C. ZHOU, Fusion Science Center, Laboratory for Laser Energetics, U. of Rochester — Hydrodynamic simulations of realistic high-gain fast-ignition targets,[1] including one-dimensional simulations of the implosion and two-dimensional simulations of ignition by electron beams and burn propagation, have been performed. Based on these simulations, a maximum gain curve has been generated that can be used to assess the benefits of fast ignition with respect to conventional hot-spot ignition. Two-dimensional simulations of pseudo cone targets (assuming that the cone walls are rigid and truncated at a given distance from the center) have also been carried out, to determine the gain deterioration due to the cone. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement Nos. DE-FC02-04ER54789 and DE-FC52-92SF19460.

[1]R. Betti and C. Zhou, Phys. Plasmas **12**, 110702 (2005).

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