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Integrated Two-Dimensional *DRACO* Simulations of Cryogenic DT Target Performance on OMEGA S.X. HU, P.B. RADHA, V.N. GONCHAROV, R. BETTI, R. EPSTEIN, F.J. MARSHALL, R.L. MCCRORY, D.D. MEYERHOFER, T.C. SANGSTER, S. SKUPSKY, Laboratory for Laser Energetics, U. of Rochester — Integrated simulations of cryogenic deuterium–tritium (DT) target implosions on OMEGA have been performed using the radiation–hydrodynamic code *DRACO*. Taking into account the known nonuniformities of target and laser irradiation, 2-D simulations examine the target performance of a variety of ignition-relevant implosions. The effects of cross-beam energy transfer and nonlocal heat transport are mimicked by a time-dependent flux limiter. *DRACO* simulations show good agreement with experiments in ρR, neutron yield, $T_{\rm i}$, neutron rate, and x-ray images for the mid-adiabat ($\alpha \approx 4$) implosions. For low-adiabat ($\alpha \approx 2$) and high in-flight aspect ratio (IFAR > 24) implosions, the integrated simulations with the known nonuniformity sources cannot fully explain the reduction in target performance. Examinations of other possible nonuniformity sources and the thermal conductivity model will be presented. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

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