

Abstract Submitted  
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**The Effect of Target Mounts in Direct-Drive Implosions on OMEGA I.V.** IGUMENSHCHEV, V.N. GONCHAROV, F.J. MARSHALL, M.J. BONINO, P.W. MCKENTY, D.D. MEYERHOFER, T.C. SANGSTER, Laboratory for Laser Energetics, U. of Rochester — Two types of target mounts are currently employed in direct-drive-implosion experiments on OMEGA. A silicon-carbon stalk glued normally to the target surface is used in the case of gas-filled plastic capsules, and a C-mount with four spider silks glued to the target surface is used in cryogenic implosion experiments. We use the 2-D radiation hydrodynamic code *DRACO*<sup>1</sup> to study the effects of target mounts in the implosions of capsules. The capsules are  $\sim 430\text{-}\mu\text{m}$  radius and driven by nanosecond-time-scale laser pulses with 10 to 25 kJ of total energy. The simulations indicate that the stalk mount can introduce a significant distortion to the hot spot in plastic implosions. The results of these simulations are compared with x-ray experimental images. The glue spots in the C-mount have been found to not significantly perturb cryogenic implosions, and the simulated neutron yield is only marginally affected. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement DE-FC52-92SF19460.

<sup>1</sup>P. B. Radha *et al.*, Phys. Plasmas **12**, 032702 (2005).

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