

Abstract Submitted  
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**Intensity Dependence of Target Performance in Low-Adiabat, Warm Implosions on OMEGA** P.B. RADHA, C. STOECKL, V.N. GONCHAROV, J.A. DELETTREZ, T.C. SANGSTER, R. BETTI, R.L. MCCRORY, D.D. MEYERHOFER, S.P. REGAN, W. SEKA, S. SKUPSKY, V.A. SMALYUK, Laboratory for Laser Energetics, U. of Rochester, D. SHVARTS, NRCN — Low-adiabat cryogenic implosions on OMEGA indicate degraded areal densities with increasing intensity. Possible causes include shock mistiming, preheat attributable to coronal fast electrons, and the shadowing of laser illumination caused by silks used to suspend cryogenic targets. Low-adiabat, warm implosion experiments have been designed to study compression in capsule implosions. The adiabat in the shell is set primarily by the foot of the laser pulse and is relatively insensitive to shock mistiming. The plastic ablator in these implosions is similar to the ablator in cryogenic implosions, yielding a very similar density scale length, temperature, and intensity at the quarter-critical surface. Target performance including areal density, yield, bang time, and coronal emission is studied as a function of intensity on OMEGA. Analysis and comparison of experimental observations with 1-D and 2-D simulations will be presented. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-08NA28302.

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