

Abstract Submitted  
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**Recent Cryogenic Implosion Results on OMEGA** T.C. SANGSTER, J.A. DELETTREZ, V.YU. GLEBOV, V.N. GONCHAROV, D.R. HARDING, J.P. KNAUER, F.J. MARSHALL, P.W. MCKENTY, D.D. MEYERHOFER, P.B. RADHA, S.P. REGAN, S. SKUPSKY, V.A. SMALYUK, C. STOECKL, Laboratory for Laser Energetics, U. of Rochester, J.A. FRENJE, C.K. LI, R.D. PETRASSO, F.H. SÉGUIN, PSFC, MIT — Direct-drive implosions using cryogenic fuel are being used to validate the performance of ignition-scaled targets on the OMEGA laser. This effort includes the validation of adiabat shaping using picket pulses with and without smoothing by spectral dispersion and the demonstration of high fuel areal density. These experiments are currently being performed with pure deuterium fuel using high-convergence, low-adiabat drive pulses. Work is under way to prepare the cryogenic target filling system to accept tritium with the expectation of filling, layering, and imploding the first DT cryogenic capsules before the end of 2005. This talk will present the latest results from the current D<sub>2</sub> implosion experiments and provide an update on the status of the DT target readiness. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-92SF19460.

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