

Abstract Submitted  
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**Experimental Results from the High-Adiabat Cryogenic Implosion Campaign on OMEGA** J.P. KNAUER, R. BETTI, V. GOPALASWAMY, M.J. BONINO, E.M. CAMPBELL, T.J.B. COLLINS, C.J. FORREST, V.YU. GLEBOV, V.N. GONCHAROV, D.R. HARDING, J.A. MAROZAS, F.J. MARSHALL, P.W. MCKENTY, P.B. RADHA, S.P. REGAN, T.C. SANGSTER, C. STOECKL, Laboratory for Laser Energetics, U. of Rochester — The 1-D cryogenic experiments at the Omega Laser Facility are designed to systematically explore implosions where the multidimensional effects are small. These are typically high-adiabat ( $\alpha \sim 7$ ) implosions where the implosion velocity is varied. The implosion velocity is increased by thinning the cryogenic DT layer and using larger diameter targets that increase the coupling of laser energy. Data are used to develop a predictive model for the 1-D implosion series. Experimental data are shown for implosion velocities from 350 to 500 km/s that give neutron yields  $> 10^{14}$ . 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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