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[ ] Theory [x] Experiment

Design and Testing of Cryogenic Target Systems,* G.E. Besenbruch, N.B. Alexander, W.A. Baugh, K.K. Boline, L.C. Brown, C.R. Gibson, D.T. Goodin, K.R. Schultz, R.W. Stemke, *GA,* T.P. Bernat, R.P. Collins, *LLNL* D.R. Harding, L. Lund, *UR/LLE,* A. Nobile, *LANL* — The OMEGA laser at the University of Rochester Laboratory for Laser Energetics (UR/LLE) will begin Inertial Confinement Fusion (ICF) direct drive implosion shots on cryogenic targets in 1999. General Atomics (GA), in collaboration with UR/LLE and Los Alamos National Laboratory (LANL), has designed the OMEGA Cryogenic Target System (OCTS). This system will fill plastic targets to high pressure, cool them down to cryogenic temperatures, layer and characterize the targets, and then transport them to the center of the OMEGA Target Chamber where they are shot. All equipment was procured, assembled and tested at GA and UR/LLE. The National Ignition Facility (NIF) at the Lawrence Livermore National Laboratory (LLNL) will require cryogenic targets in 2005. A cryogenic target supply system, similar to the OMEGA system, is being developed. Since NIF will initially utilize indirect drive targets, the cryogenic target handling system will be designed to fill hohlraum targets, provide the layering of targets, and transport the cryogenic targets to the center of the target chamber. GA, in cooperation with LLNL and LANL, is designing a test unit to evaluate the key process parameters and design issues associated with fielding cryogenic targets on the NIF.

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[x] Prefer Poster Session
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