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Target Performance of Direct-Drive, D₂-, D³He- and DT-Filled, Plastic-Shell Implosions on OMEGA S.P. REGAN, J.A. DELETTREZ, V.YU. GLEBOV, V.N. GONCHAROV, J.P. KNAUER, J.A. MAROZAS, F.J. MARSHALL, R.L. MCCRORY, P.W. MCKENTY, D.D. MEYERHOFER, P.B. RADHA, T.C. SANGSTER, S. SKUPSKY, V.A. SMALYUK, C. STOECKL, Laboratory for Laser Energetics, U. of Rochester, J.R. RYGG, J.A. FRENJE, C.K. LI, R.D. PETRASSO, F.H. SÉGUIN, PSFC, MIT — The effects of reduced laser irradiation nonuniformities in the $\ell < 80$ range on the target performance of high-adiabat, D₂-, D³He-, and DT-filled, plastic-shell implosions on the 60-beam, 30-kJ, 351-nm OMEGA Laser System were investigated. Improved performance was observed for targets that are less susceptible to high ℓ -mode laser imprint. Simulations from the 2-D hydrodynamics code *DRACO*, initialized with the calculated on-target laser irradiation nonuniformities caused by single beam far-field, beam-to-beam energy imbalance, beam mispointing, and target offset, will be compared with the measured results. This work was supported by the U.S. Department of Energy Office of Inertial Confinement Fusion under Cooperative Agreement No. DE-FC52-92SF19460.

Prefer Oral Session
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