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Using target shimming to compensate for asymmetric drive in ICF implosions F.H. SÉGUIN, C.K. LI, J.A. FRENJE, J.R. RYGG, R.D. PETRASSO, MIT, V.A. SMALYUK, R.S. CRAXTON, J.P. KNAUER, F.J. MARSHALL, T.C. SANGSTER, S. SKUPSKY, UR-LLE, A. GREENWOOD, J. KILKENNY, GA — Proton emission imaging has been used to measure the size and shape of the nuclear burn region in D^3He-filled capsules imploded with direct drive at the OMEGA laser facility. We have shown that intentional P2 asymmetry in the thickness of a plastic capsule shell, in combination with symmetric laser illumination, results in a P2 asymmetry in the burn region. We have also shown that intentional P2 asymmetry in the laser illumination of a symmetric capsule results in a P2 asymmetry in the burn region together with diminished burn yield. The measured relationship between shell-asymmetry amplitude and burn-asymmetry amplitude has been combined with the measured relationship between drive-asymmetry amplitude and burn-asymmetry amplitude, together with simple models, to prediction how the thickness of a capsule shell could be varied to compensate for asymmetric drive and produce symmetric implosions. We will discuss application of this prediction to both "Polar Direct Drive" and indirect drive without "shine shields" at the NIF, each of which could produce prolate implosions without target shimming. *This work was supported in part by LLE, LLNL, the U.S. DoE, and the N.Y.State Energy Research and Development Authority.*

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