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Using backlit thin shell capsules to tune drive symmetry during ignition implosions. JOHN EDWARDS, R. KIRKWOOD, E. DEWALD, D. MEEKER, J. MILOVICH, D. KALANTAR, O. LANDEN, LLNL, R. GOLDMAN, M. SCHMITT, LANL, B. AFEYAN, Polymath — In order to attain ignition in cryogenic implosions on the NIF it is necessary for the assembling hot spot to be highly symmetric. To achieve this the drive must be carefully managed to integrate out to less than $\sim 1\%$, avoiding symmetry swings larger than $\sim$ few %. Drive symmetry swings typically occur during rapid changes in the laser pulse due to albedo changes but also as a result of laser spot motion. The swings can be controlled by the relative powers in the inner and outer laser cones as a function of time. Thin, light shells respond rapidly to drive asymmetries, which can then be detected in radiographs of the shells at some later times. Here we describe how this technique can be used to tune drive symmetry in the early parts of an ignition laser pulse. This work was performed under the auspices of the U.S. Department of Energy by the University of California, Lawrence Livermore National Laboratory under contract No. W-7405-Eng-48. UCRL-ABS- 232769

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