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Application of cross-beam energy transfer to control drive symmetry in CH, ICF implosions with a medium gas fill Hohlraum at the NIF[1] L. A. PICKWORTH, J. RALPH, T. DOPPNER, D. E. HINKEL, B. BACHMANN, L. MASSE, H. CHEN, J. PARK, M. HOHENBERGER, A. MOORE, L. R. BENEDETTI, S. KHAN, D. MARISCAL, M. SCHNEIDER, N. LEMOS, L. DIVOL, P. A. MICHEL, D. CALLAHAN, O. HURRICANE, Lawrence Livermore National Lab — We present a demonstration of stagnated core symmetry control using a 1 Å wavelength difference between inner and outer drive beams at the National Ignition Facility. Application of a wavelength difference utilizes the process of Cross-Beam Energy Transfer to increase the x-ray drive incident on the waist of the ICF capsule, producing symmetry control in implosions with a plastic ablator. We show these findings over seven experiments by comparing the case of no wavelength difference, $\Delta\lambda$ =0 Å, to that of $\Delta\lambda$ = 1Å. We experimentally show implosion symmetry control of ˜24 um in Legendre mode 2 (P2) symmetry, based on experimental playbooks this corresponds to a 25% increase of inner beam drive at the waist of the hohlraum.

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