Abstract Submitted
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Polar Direct-Drive Plastic Capsule Implosions for Studying Mix on the National Ignition Facility[1] T.J. MURPHY, G.A. KYRALA, P.A. BRADLEY, J.A. COBBLE, I.L. TREGILLIS, K.A.D. OBREY, M.J. SCHMITT, S.C. HSU, R.C. SHAH, N.S. KRASHENINNIKOVA, P. HAKEL, S.H. BATHA, Los Alamos National Laboratory, R.J. WALLACE, Lawrence Livermore National Laboratory, P. FITZSIMMONS, A. NIKROO, General Atomics, P. MCKENTY, U of Rochester, LLE — Capsules driven with polar drive on the National Ignition Facility will be used to study mix in convergent geometry induced by an equatorial defect imposed on an inertial confinement fusion capsule. The 2.2-mm diameter capsules are mounted on a fill tube, through which a 5 atm deuterium fill is introduced. The inner 2 microns of the capsules will be doped with germanium to determine how much ablator material is mixed into the gas. Initial tests are scheduled for late July to verify the symmetry and performance of these capsules. Symmetry will be measured using backlit imaging from the equator and self-emission images from the pole.

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