

Abstract Submitted
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Thin Shell, High Velocity, High-Foot ICF Implosions on the National Ignition Facility¹ T. MA, O.A. HURRICANE, D.A. CALLAHAN, M.A. BARRIOS, D.T. CASEY, E.L. DEWALD, T.R. DITTRICH, T. DOEPPNER, D.E. HINKEL, L.F. BERZAK HOPKINS, S. LE PAPE, A.G. MACPHEE, A. PAK, H.S. PARK, P.K. PATEL, H.F. ROBEY, B.A. REMINGTON, J.D. SALMONSON, P.T. SPRINGER, R. TOMMASINI, Lawrence Livermore National Laboratory — Experiments have recently been conducted at the National Ignition Facility utilizing ICF capsule ablaters that are 175 μm in thickness, 10% thinner than the nominal thickness capsule used throughout the High-Foot and most of the National Ignition Campaigns. These three-shock, high-adiabat, high-foot implosions have demonstrated good performance, with higher velocity and better symmetry control at lower laser powers and energies than their nominal thickness ablator counterparts. Early results have shown good repeatability, with little to no hydrodynamic mix into the DT hot-spot, and $> 1/2$ the yield coming from α -particle self-heating.

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