Abstract Submitted
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Be capsule implosions driven by dynamic hohlraum x-rays[1] J.E. BAILEY, G.A. ROCHAU, S.A. SLUTZ, G.A. CHANDLER, G. COOPER, P.W. LAKE, R.J. LEEPER , T.A. MEHLHORN , A. NELSON, K.L. PETERSON, C.L. RUIZ, W. VARNUM, Sandia National Laboratories, Albuquerque, NM, 87185-1196, R.C. MANCINI, University of Nevada, Reno, NV, I. GOLOVKIN, J.J. MACFARLANE, Prism Computational Sciences, Madison, WI, A. NIKROO, D.G. SCHROEN, J.D. KILKENNY, H. XU, General Atomics, La Jolla, CA, G.S. DUNHAM, T.C. MOORE, K-Tech Corporation, Albuquerque, NM — Be is a promising ablator material for ICF capsule implosions. Ignition-size 2-mm-diameter capsules filled with 20 atm D_2 + 0.085 atm Ar absorbing up to 80 kJ were driven with a dynamic hohlraum (peak Tr $>$ 200 eV). The capsule wall was $\sim$20 microns CH overcoated with 33-55 microns Be. The thin-wall capsules produced implosion cores with $T_e \sim 1$ keV, $\rho \sim 1$ g cm^{-3}, convergence ~ 7.5, neutron yield up to 3 x10^{11}, and pole/equator symmetry ratio of ~ 1. The thickest wall capsules implode into multiple hot spots. These first-ever indirect drive Be implosions provide a foundation for examining issues such as the fill tube effects, sensitivity to columnar growth in sputtered Be fabrication, and of Cu dopant effects.

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