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Polar-Direct-Drive Defect Implosions at OMEGA inPreparation for Experiments at NIF[1] J.A. COBBLE, M.J. SCHMITT, T.J. MURPHY, I.L. TREGILLIS, F.J. WYSOCKI, K.D. OBREY, G.R. MAGELSSEN, LANL, V. GLEBOV, LLE, P.A. BRADLEY, S.C. HSU, N.V. KRASHENINNIKOVA, S.H. BATHA, LANL — The Defect-Implosion (DIME) campaign involves compressing perturbed spherical capsules with polar direct drive (PDD). For direct-drive implosions at NIF, PDD will be used. We have done simulations and experiments at OMEGA to test our modeling capability for equatorial-plane defects in fusion capsules and for PDD at NIF. Since PDD is anisotropic, we show the results of 0^{th} hydrodynamics of implosions and perturbation-driven features near stagnation. Later presentations discuss defect-induced mix and neutronics, and laser pointing for NIF experiments. Prototype OMEGA shots used 865-μm diameter CH shells filled with 5 atm of D_2. Machined channels 30-μm wide and up to 9-μm deep formed the defects.

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