

Abstract Submitted  
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**Recent results of the Defect-Induced Mix Experiments (DIME) on NIF**<sup>1</sup> M.J. SCHMITT, P.A. BRADLEY, J.A. COBBLE, P. HAKEL, S.C. HSU, N.S. KRASHENINNIKOVA, G.A. KYRALA, T.J. MURPHY, K.A. OBREY, R.C. SHAH, I.L. TREGILLIS, Los Alamos National Laboratory, S.C. CRAXTON, P.W. MCKENTY, Laboratory for Laser Energetics, U. of Rochester, R.C. MANCINI, H.M. JOHNS, TIRTHA JOSHI, DANIEL MAYES, University of Nevada, Reno — Investigations of directly driven implosions have been performed including experiments on Omega, and more recently NIF, to deduce the extent and uniformity of  $4\pi$  and defect-induced mix near the shell/gas interface of plastic (CH) capsules filled with 5 atm D<sub>2</sub> gas. Imaging diagnostics are used to measure the spatial variation of mix caused by the growth of non-uniformities in both capsule and laser drive characteristics. Thin ( $2\mu\text{m}$ ) layers containing 1-2% (atomic) mid-Z dopants are imaged spectrally at late time in the implosion using multiple monochromatic imaging of H-like and He-like atomic line emission. Areal image backlighting of the capsules provides both  $r(t)$  and the symmetry of the implosion. Recent results will be shown including inferred  $4\pi$  mix width, laser imprint induced mix, and mix from capsule variations.

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