

Abstract Submitted
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Multiple Monochromatic Imaging (MMI) Status and Plans for LANL Campaigns on Omega and NIF¹ F.J. WYSOCKI, S.C. HSU, I.L. TREGILLIS, M.J. SCHMITT, G.A. KYRALA, D.D. MARTINSON, T.J. MURPHY, LANL, R.C. MANCINI, T. NAGAYAMA, UNR — LANL's DIME (Defect Implosion Experiment) campaigns on Omega and NIF are aimed at obtaining improved understanding of defect-induced mix via experiments and simulations of directly driven high-Z doped plastic capsules with DD or DT gas fill. To this end, the MMI diagnostic has been identified as a key diagnostic for providing space and time-resolved density, temperature, and mix profiles. The high Z shell dopants used on Omega are Ti and V, and to be used on NIF are Ge and Se. This poster will discuss the following four areas of MMI-related work at LANL, in collaboration with UNR: (1) data and preliminary analysis of MMI data from FY11 Omega campaigns, (2) development of a capability to generate simulated MMI data from radiation-hydrodynamic simulations of ICF implosions, (3) design of an MMI instrument for NIF that will cover the photon energy range 9.5-16.9 keV which includes the Ge/Se, H-like/He-like, α/β lines, and (4) the development of MMI data post-processing and spectroscopic analysis tools.

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