

Abstract Submitted
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Multiple Monochromatic Imaging of Implosions on the National Ignition Facility¹ GEORGE A. KYRALA, T.J. MURPHY, D. MARTINSON, F.E. LOPEZ, P. POLK, R.C. SHAH, M.J. SCHMITT, P.A. BRADLEY, J.A. COBBLE, S.C. HSU, K.A.D. OBREY, N.S. KRASHENINNIKOVA, M.J. FAGAN, S.H. BATHA, I. TREGILLIS, Los Alamos National Laboratory, P. FITZSIMMONS, A. NIKROO, General Atomics, R.J. WALLACE, Lawrence Livermore National Laboratory — Experiments are being planned to install and use a Multiple Monochromatic Imager at the National Ignition facility study mix in a convergent geometry inertial confinement fusion capsule. Initially, The 2.2-mm diameter capsules will be imploded using polar direct drive. The capsules are mounted on a fill tube, through which a 5 atm deuterium fill is introduced. The inner 2 microns of the 42-micron thick CH plastic walls of the capsules will be doped with germanium. When Ge mixes into the D2 plasma, H-like and He-like emission will be observed with the MMI, and a measure of the temporal and spatial distribution of the hot Germanium will be made. Estimates of how much ablator material is mixed into the gas will be derived from the data. Initial tests are scheduled early August to qualify the instrument for later use on capsule with and without defects.

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