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Multi-monochromatic imaging of defect-induced mix experiments at OMEGA[1] ROBERTO MANCINI, HEATHER JOHNS, TIRTHA JOSHI, DANIEL MAYES, TUNAY DURMAZ, TAISUKE NAGAYAMA, University of Nevada, Reno, SCOTT HSU, IAN TREGILLIS, NATALIA KRASHENINNIKOVA, JAMES COBBLE, THOMAS MURPHY, RAHUL SHAH, GEORGE KYRALA, PETER HAKEL, PAUL BRADLEY, MARK SCHMITT, Los Alamos National Laboratory — In a series of polar-drive implosions performed at OMEGA for the defect-induced mix experiment (DIME) campaign of Los Alamos National Laboratory, two identical multi-monochromatic imager (MMI) instruments were fielded to record gated, x-ray spectrally-resolved images of D-filled Ti-doped plastic shells. The shells included a defect on the equatorial plane to study defect-induced mix while no-defect shells were employed in reference shots. The MMI data recorded simultaneously along quasi-orthogonal lines-of-sight afforded unique observations of the implosion based on the K-shell spectral signatures of the Ti tracer. Several analysis techniques have been used to process the MMI data (T. Nagayama et al, J. App. Phys. **109**, 093303 (2011)) in order to study defect-induced mixing by tracking the spatial distribution and state of the tracer. Comparisons were made with results from post-processed 2D and 3D simulations to provide further insight into the interpretation of the experimental results and to constrain the simulation physics model.

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Roberto Mancini
University of Nevada, Reno

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