

Abstract Submitted
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Spectrally resolved imaging of x-ray self emission from NIF symmetry surrogate capsules¹ N. IZUMI, LLNL, S. GLENN, P. SPRINGER, G.A. KYRALA, S. WEBER, C. CERJAN, G. STONE, R. PRASAD, D. HEY, T. MA, S. HAAN, J. EDWARDS, J. KOCH, O. LANDEN, R. HEETER, J. KILKENNY, A. MACKINNON, D.K. BRADLEY, P. BELL, S. GLENZER — Control of drive asymmetry is crucial to achieve conditions of ignition at the National Ignition Facility. For the measurement of drive asymmetry, we have been using surrogate capsules made of plastic (SymCap). Thickness of the surrogate capsules are designed so that the shape of x-ray self emission from the imploded core reflects asymmetry of the peak drive. However the core shape is affected also by hydrodynamic instabilities initiated by initial surface imperfections of the capsules. An interpenetration mixing of the gas and the shell material also affects the x-ray emission profile. A spectrally resolved x-ray imaging is one of a promising way to separate those complex phenomena. We designed pairs of matched x-ray filters (Ross filter) and applied them to time integrated pinhole imaging (with imaging plates). Concept of the filter setup and the experimental results will be presented.

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