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Imaging and spectroscopy of copper dopant migration of indirectly driven Beryllium capsule implosion on the National Ignition Facility.[1] GEORGE KYRALA, A. ZYLSTRA, S. A. YI, J.L. KLLINE, R. C. SHAH, F. E. LOPEZ, S. A. BATHA, Los Alamos National Lab, T. DOPPNER, D.B. THORN, S. MACLAREN, N. MASTERS, D. CALLAHAN, O. HURRICANE, Livermore National Laboratory, N RICE, H. HUANG, C.M. KRAULAND, General Atomics, M. MACDONALD, Univ Calif at Berkeley — Using beryllium, as an ablator material for indirectly driven inertial fusion, requires the use of a Copper dopant to block preheat from the hohlraum M-band radiation. However, due to the microstructure and imperfections of the capsule, some of the copper may be injected into the core of the implosion, affecting the yield and performance. Alternatively, the copper dopant may blow into the ablated plasma affecting the hohlraum performance as well. We will present some of data on time integrated imaging of the copper dopant into the core of the capsule using either the 2-dimensional multiple monochromatic imaging of the implosion, as well as the 1D spectrally resolved imaging of the copper dopant emission. In either case we found that the copper did migrate to the hot core, while fewer copper ions ablated into the hohlraum.

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