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WITHDRAWN–Core Temperature and Density Maps of Direct Drive Implosions using Multispectral X-ray Imaging[1] R. TOMMASINI, J.A. KOCH, Lawrence Livermore National Laboratory, Livermore, California 94550 USA, L.A. WELSER, R.C. MANCINI, Department of Physics, Univ. of Nevada, Reno, NV 89557, J. DELETTREZ, S.P. REGAN, V. SMALYUK, Laboratory of Laser Energetics, Univ. of Rochester, Rochester, NY 14623-1299 — We report on the experiments to obtain core temperature and density maps in direct drive implosions performed at the OMEGA laser facility using a multi-monochromatic X-ray imager, consisting of an array of pinholes and a flat multilayer mirror, providing unique multi-spectral images distributed over a wide spectral range. Employing Ar as a dopant in the DD-filled plastic shells produces emission images in the Ar He-β and Ly-β spectral regions. These images allow the retrieval of temperature and density maps of the imploding core. Using three identical imagers in a quasi-orthogonal line-of-sight geometry we obtain three-dimensional profiles and images of the cores in different temporal intervals. Temperature and density profiles will be presented and compared with earlier works on direct- and indirect-drive. [UCRL-ABS-213695]

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