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Simulation and Analysis of Time-Resolved Narrowband Radiographs of Cryogenic Implosions on OMEGA R. EPSTEIN, C. STOECKL, V.N. GONCHAROV, P.W. MCKENTY, S.P. REGAN, Laboratory for Laser Energetics, U. of Rochester — Spherical polymer shells containing cryogenic DT ice layers have been imploded on the OMEGA Laser System and radiographed with Al backlighter targets ($h\nu = 1.865\,\text{keV}$) driven with 20-ps IR pulses from the OMEGA EP Laser System. X-ray radiographs have been simulated using *DRACO* and *Spect3D*. The shadows of the converging DT ice and polymer shell edges at times before and after stagnation are visible while the self-emission is minimized using a time-resolved (40-ps) narrowband crystal imaging system. The self-emission from the diverging shock wave following stagnation is also visible. The simulated radiographs will be compared to the measured ones to investigate the feasibility of diagnosing the low-mode asymmetry in the compressed DT shell around stagnation. This material is based upon work supported by the U.S. Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

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