

Abstract Submitted
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Simultaneous, coaxial neutron and x-ray imaging of inertial confinement fusion experiments at Omega CHRISTOPHER DANLY, GARY GRIM, NEVZAT GULER, MIRANDA INTRATOR, FRANK MERRILL, PETR VOLEGOV, CARL WILDE, Los Alamos National Laboratory — The campaign to understand the dynamics of implosions in inertial confinement fusion experiments has generated a desire to compare neutron and x-ray images of the assembled targets. Several diagnostics currently exist, both at the Omega laser and the National Ignition Facility, which provide either neutron or x-ray radiography capabilities. However, these diagnostics view the target from different angles, and there is no verifiable co-registration of the images they produce. A system has therefore been developed to produce neutron and x-ray images simultaneously, through the same aperture and with the same view of the target. Recent experiments at the Omega laser have demonstrated this technique; the results are presented, and compared to images from other x-ray diagnostics, and to images generated with radiation-hydrodynamic simulations.

Christopher Danly
Los Alamos National Laboratory

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