

Abstract Submitted
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Characterization of neutron scatter for the 25-m neutron time of flight detector at the Z Accelerator¹ EDWARD NORRIS, KELLY HAHN, GORDON CHANDLER, CARLOS RUIZ, Sandia National Laboratories, JEDEDIAH STYRON, GARY COOPER, University of New Mexico, BRENT JONES, JOSE TORRES, DECKER SPENCER, ALAN NELSON, Sandia National Laboratories — We are investigating neutron scattering effects using Monte Carlo simulations for neutron time of flight (NTOF) detectors fielded at the Z Accelerator at Sandia National Laboratories. For the radial NTOF detector at 25 m, a large scatter distribution is observed during and after primary DD neutron signals produced during inertial-confinement fusion experiments which obfuscates inference of quantities such as ion temperature, yield, and liner areal density. We present comparisons of measurements with simulation results. We also propose improvements to this line-of-sight.

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