

Abstract Submitted
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Monte Carlo Modeling of a Carbon-Based ICF Neutron Diagnostic¹ B.E. COCHRAN, S.H. FAY, C.M. KUHN, E.E. SMITH, S.L. STEPHENSON, Gettysburg College, T.C. SANGSTER, V. GLEBOV, LLE University of Rochester, S.J. PADALINO, SUNY Geneseo — A carbon diagnostic system is being developed and tested at OMEGA to determine the tertiary neutron yield during an inertial confinement fusion (ICF) implosion. Past computational work has exclusively used MCNPX (Monte-Carlo N-Particle Extended), despite its inability to formally model the true time-dependent radioactive decay of ^{11}C . Tools have been developed to efficiently extrapolate information from Ptrac files in MCNPX. In addition, modeling the system with Geant4 (GEometry ANd Tracking) as a supplement to the results obtained with MCNPX is in progress. Results will be presented.

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