

Abstract Submitted
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Modeling a Graphite Diagnostic System using MCNPX J. DEAVEN, S.L. STEPHENSON, Gettysburg College, S.J. PADALINO, SUNY Geneseo, V. YU. GLEBOV, T.C. SANGSTER, Laboratory for Laser Energetics — Inertial Confinement Fusion (ICF) implosions can be characterized by the target areal density (ρR). The ρR of ICF targets in the National Ignition Facility (NIF) target chamber can be determined by tertiary-induced neutron activation of elements with appropriately high thresholds. In such materials as ^{12}C , neutron activation results in beta decay and the emission of 511-keV coincidences which are detected by a pair of NaI(Tl) detectors. Optimal diagnostic thickness, contamination effects, and detector response have been modeled using MCNPX. Results will be presented.

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