

Abstract Submitted
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**Determination of the Thickness of the Back Dead-Layer of
GRETINA Crystals via Comparisons of Measured Photopeak Efficiencies
with GEANT4 Simulations¹** L. R. JARVIS, C. G. STINE, L. A. RILEY,
Ursinus College — Measurements of the photopeak efficiency of the GRETINA array up to 3.5 MeV made at the National Superconducting Cyclotron Laboratory with ^{152}Eu and ^{56}Co sources were compared with GEANT 4 simulations. We developed a method of determining the average thickness of the back dead layers of the GRETINA crystals by considering the partial photopeak efficiencies of events including gamma-ray interactions in the back slice of the crystals. The impact of dead-layer thicknesses on the accuracy of simulated photopeak efficiencies and the ratio of photopeak counts measured in the two GRETINA crystal types is discussed.

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