

Abstract Submitted
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Geant4 simulations of the GRETINA array BENJAMIN ROBERTS,
Ursinus College — The GRETINA array, recently installed at the National Superconducting Cyclotron Laboratory (NSCL) at Michigan State University, is a powerful new tool for gamma ray spectroscopy. Early next year we are scheduled to use it to study the shell structure of exotic calcium nuclei. In summer of 2012 we visited the NSCL to assist with the preliminary testing of GRETINA at the NSCL. We took on the task of improving an existing simulation of GRETINA using the Geant4 library developed at CERN. We began with an early build of the simulation which included only the target, the beam pipe, and the detectors, and added a substantial amount of the dead material around the detectors in order to better model the Compton continuum in measured spectra. We present comparisons of simulations with gamma-ray spectra collected during our visit to the NSCL.

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