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Simulation of Photodisintegration Process with Polarized γ-ray Beams[1] JAMES WALKER — Large asymmetries were observed in the angular distributions of photo-neutrons produced in the interaction of polarized gamma rays with a variety of targets. In the experiments at high intensity gamma ray source at the Triangle Universities Nuclear Laboratory a survey of physically interesting and/or otherwise important nuclei has been initiated using γ-ray energy 6-15 MeV In this experiment backgrounds could come from (γ,n) on nitrogen in the target room, from scattering on the detector mount, or from neutrons scattering from one detector to another. GEANT4 simulations were necessary in order to evaluate the importance of different background sources. GEANT4 applications suitable for simulating the experimental set-up were developed and used to evaluate relevant backgrounds.

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