

Abstract Submitted
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Neutron Photoproduction from ^{nat}Hg Using 11-15 MeV Linearly Polarized γ -Rays¹ J. HAUVER, W.R. HENDERSON, R.K. THRASHER, C.S. WHISNANT, James Madison University, M.W. AHMED, H.J. KARWOWSKI, J.M. MUELLER, L.S. MYERS, J. SILANO, J.R. TOMPKINS, H.R. WELLER, W.R. ZIMMERMAN, TUNL, B.J. DAVIS, D.M. MARKOFF, North Carolina Central University, M. SPRAKER, R.M. PRIOR, North Georgia College & State Univ., R.H. FRANCE, Georgia College — The linearly polarized photon beam at the High Intensity γ -ray Source (HI γ S) was used to study neutron emission from a ^{nat}Hg target at energies of 11, 12, 13, 14, and 15 MeV. Twelve liquid scintillator detectors were placed at polar angles of 55° , 90° and 125° and at azimuthal angles of $\phi = 0^\circ, 90^\circ, 180^\circ, 270^\circ$. Six more detectors were placed at polar angles of 72° , 107° , and 142° at $\phi = 0^\circ$ and 90° . The ratio of neutron yields parallel to neutron yields perpendicular to the plane of polarization were determined as a function of E_γ , E_n , and θ . Results will be discussed.

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