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Photoproduction of Neutral Kaons on Deuterons[1] BRIAN BECKFORD, Florida International University, FLORIDA INTL. UNIVERSITY COLLABORATION, TOHOKU UNIVERSITY COLLABORATION — Experimentation to greater understand the strangeness production mechanism can be performed by observing the electromagnetic interaction that leads to Kaon photoproduction. The n (γ, K^0) Λ reaction may assist in answering questions about the strangeness photo-production process. An experiment into the elementary Kaon photoproduction process was investigated in an experiment conducted at the Laboratory of Nuclear Science of Tohoku University (LNS) using the Neutral Kaon Spectrometer. (NKS). The experiment was conducted by the d (γ, K^0) reaction. K^0 will be measured in the $K^0 \rightarrow \pi^+\pi^-$ decay chain by the NKS. The NKS implements many detectors working in coincidence: These ranging from the Tagged Photon Beam generated by the 1.2 GeV Electron beam via bremsstrahlung, an Inner Plastic Scintillator Hodoscope (IH), a Straw Drift Chamber (SDC), a Cylindrical Drift Chamber (CDC), and an Outer Plastic Scintillator Hodoscope. Due to the background produced through the $\gamma \rightarrow e+e-$ process, electron veto counters (EV) were placed in the middle of the OH to reject charged particles in the horizontal plane of the beam line. Preliminary analysis of the data indicates the need for pulse height correction. This was achieved by analysis of the Inner and Outer hodoscopes, and determining the energy deposit in the scintillators.

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