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Proposal of an experiment about $\Lambda - n$ interaction via FSI in $\gamma + d$ reaction at ELPH, Tohoku University MASASHI KANETA, Department of Physics, Tohoku University, THE NKS2 COLLABORATION — The experiment of strangeness photo-production, NKS2, has been carried out at Research Center for Electron Photon Science (ELPH), Tohoku University. We had focused on the neutral channel near the threshold and reported K^0 and Lambda differential cross section of $\gamma + d$ reaction in that energy region. ELPH started to provide the real photon beam from a 1.3 GeV electron synchrotron after recovering from the damage of the Great East Japan Earthquake. As the prospect of the next experiment, we are planning to measure $\Lambda - n$ interaction via $\gamma + d \to K^+ + \Lambda + n$. Theoretical studies predict that the K^+ cross section enhanced only near the threshold region due to FSI of $\Lambda + n$ in $\gamma + d$ reaction comparing to $\gamma + p$. NKS2 has an acceptance in forward angle and covers almost full kinematic region. The characteristics give us an advantage of experiment, that is, not only K^+ but also K^+ Lambda coincidence measurement. Additionally, the gamma beam provided (maximum: 1.25 GeV) is suitable for the strangeness photo production in the threshold region (0.9 GeV in lab). We will present a capability of measurement for $\Lambda + n$ interaction using the NKS2 spectrometer at ELPH.

Masashi Kaneta
Department of Physics, Tohoku University

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