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The $\gamma n \to K^0\Lambda$ photoproduction studied with an electromagnetic calorimeter complex FOREST YUSUKE TSUCHIKAWA, Research Center for Electron Photon Science (ELPH), Tohoku University, Sendai 982-0826, Japan, RYO HASHIMOTO, CMRC and PF, Institute of Materials Structure Science, KEK, QINGHUA HE, TAKATSUGU ISHIKAWA, ELPH, Tohoku University, SHINICHI MASUMOTO, Department of Physics, University of Tokyo, MANABU MIYABE, NORIHITO MURAMATSU, HAJIME SHIMIZU, ELPH, Tohoku University, YASUHISA TAJIMA, Department of Physics, Yamagata University, HIROHITO YAMAZAKI, RYUJI YAMAZAKI, ELPH, Tohoku University, FOREST COLLABORATION — Nucleon resonance have been experimentally studied by means of meson production reactions for understanding low-energy scale QCD. Photoproduction is one of the useful tools to reveal properties of excited nucleons. Indeed, the π and η photoproduction reactions have been intensively investigated until now. Kaon photoproduction is the best probe to study highly excited nucleons, which hardly couple to πN and ηN. Simultaneous $K^0\Lambda$ production is more advantageous than $K^+\Lambda$ production which is reported by many experimental groups. It is because the kaon exchange is forbidden in the $K^0\Lambda$ photoproduction, and because Born term contribution is small. The $\gamma d \to (K^0\Lambda)p \to (\pi^0\pi^0 p\pi^-)p$ reaction is experimentally investigated with an electromagnetic calorimeter FOREST at Research Center for Electron Photon Science, Tohoku University. The K^0 and Λ particles are clearly observed in $\pi^0\pi^0$ and $\pi^- p$ invariant mass distributions. We will present the current status of the exclusive $\gamma n \to K^0\Lambda$ reaction.

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