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Spin observable measurements in pseudo scalar-meson polarized photo-production using polarized deutrons in solid HD TSUNEO KAGEYA, Thomas Jefferson National Accelerator Facility, Newport News, Va 23606, CLAS COLLABORATION — Recent Lattice QCD calculations have supported the long standing quark model expectation of many more excited states of the nucleon than have been experimentally observed. These missing states are expected to be broad and overlapping and require detailed partial wave analyses (PWA) to disentangle. Measurements of many polarization observables are required to constrain PWA. Furthermore, for evaluation of isoscalar and isovector contributions to photocouplings of 1/2-isospin resonances, photocouplings both off protons and neutrons are needed. To address the latter, the g14/E06-101 experiment at Jlab completed data taking in 2012 using the CLAS with circularly and linearly polarized photons incident on longitudinally polarized neutrons in solid deuterium-hydride (HD) frozen-spin targets. Analysis has been on-going for the data with linearly as well as circularly polarized photon beams. Corrections have been performed for energy loss of charged particles passing through materials on the cryogenic target. Preliminary analyses for double-spin asymmetries on deutron, such as a reaction γ + d $\rightarrow \pi^-$ + p + X aiming to the one on neutron; γ + n(p) $\rightarrow \pi^-$ + p (p) will be discussed.

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