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A study of the $\gamma d \to \pi^+\pi^- d$ reaction TAYA CHETRY, KENNETH HICKS, Ohio University, REINHARD SCHUMACHER, Carnegie Mellon University, CLAS COLLABORATION — This study investigates a recently-observed $N\Delta$ (d^*) resonance decaying to the πd final state using CLAS at Jefferson Lab, Virginia. Tagged photons with beam energies between 0.8 and 3.6 GeV were produced using the bremsstrahlung process incident on a liquid deuterium target. The final state particles detected were an energetic deuteron and two oppositely charged pions. The peak of the resonance-like structure is at about 2160 MeV. The possible d^* resonance has been seen in two CLAS datasets [1]. Partial-wave analysis of pion-deuteron scattering has also shown a resonance at a mass of about 2145 MeV in the ${}^1D_2$ partial wave. A preliminary differential cross section measurement of this resonance will be presented.

[1]R. Schumacher, YITP workshop MIN16 "Meson in Nucleus 2016".

[X] Prefer Oral Session
[ ] Prefer Poster Session

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