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Photodisintegration of Deuterium and Coherent and Incoherent Photoproduction Processes off the Deuteron WILLIAM BRISCOE, JESSICA GOHS, The George Washington University, EVIE DOWNIE, JOHN ANNAND, The University of Glasgow, CRYSTAL BALL AND TAPS AT MAMI COLLABORATION — The MAMI B photon beam with a maximum energy of 855 MeV is used with a liquid deuterium target and the Crystal Ball and TAPS to investigate photodisintegration and photoproduction processes. Among these are coherent π^0 production on the deuteron itself, π^0 production off the individual quasi-free nucleons, and the photodisintegration of the deuteron into a proton and a neutron. In addition to providing insight into the properties of the neutron, proton and nucleus, the photodisintegration data is also analyzed to calibrate the neutron efficiency of the Crystal Ball and TAPS detectors in their current configuration at MAMI. We will report on the preliminary physics and calibration results from measurements made with the deuterium target.

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