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Analyzing power of Inverse Diproton Photodisintegration at Intermediate Energies

Photoabsorption on two-nucleon systems γ{NN}⟶NN, and the inverse reaction, hard bremsstrahlung NN⟶{NN}γ, are widely used to test different theoretical ideas of the nucleon-nucleon interaction. The reaction pp⟶{pp}s γ, where diproton {pp}s is a proton pair in 1S0 state, has been observed with the ANKE spectometer at COSY-Jülich. It is kinematicaly very similar to well-studied reaction pn⟶dγ, however dynamically they significantly differ from each other due to the different quantum numbers of diproton and deuteron. As a result multipole contributions will also be significantly different. In this talk we will present the progress on obtaining the analyzing power Ay of the pp⟶{pp}sγ reaction at forward angles at several energies in the region of Δ(1232) isobar exictation: 500, 550 and 700 MeV. Together with its differential cross section measured earlier, this will help to better estimate the multipole contributions to this reaction.

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