

Progress on Neutron-Target Multipoles above 1 GeV

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We report a new extraction of nucleon resonance couplings using π^- photoproduction cross sections on the neutron. The world database for the process $\gamma n \rightarrow \pi^- p$ above 1 GeV has quadrupled with the addition of new differential cross sections from the CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Lab in Hall B [1]. Differential cross sections from CLAS have been improved with a new final-state interaction determination using a diagrammatic technique taking into account the NN and πN final-state interaction amplitudes [2]. Resonance couplings have been extracted and compared to previous determinations. With the addition of these new cross sections, significant changes are seen in the high-energy behavior of the SAID cross sections and amplitudes [1].

[1] W. Chen *et al*, to be submitted to Phys. Rev. C.

[2] V. E. Tarasov, W. J. Briscoe, H. Gao, A. E. Kudryavtsev, and I. I. Strakovsky, Phys. Rev. C **84**, 035203 (2011).

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