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Electroproduction of hypernuclei

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Electroproduction of hypernuclei is an object of interest. The experiments carried out at the Thomas Jefferson National Accelerator Facility (USA) provide an accurate measurement of the cross section in electroproduction of hypernuclei. I will provide basic ideas of theory that describes the process in impulse approximation. Issues will be discussed, such as kinematics, calculating kaon momentum either from many-body energy conservation or two-body energy conservation, and optimum factorization, with non-zero proton momentum, which was calculated up to now by using "frozen proton approximation". Another topic will be description of the technique of the calculation of the elementary amplitude in general reference frame that allows comparison between "frozen proton" and moving proton approximations. The results of the cross section will be shown to demonstrate the differences between these two approaches.

Collaboration

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