

Joint 20th International Workshop on Hadron Structure and Spectroscopy and 5th workshop on Correlations in Partonic and Hadronic Interactions



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Inverse Kinematics Nucleon Knockout Measurements with a 45 GeV/c Carbon Beam

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Investigating the ground-state (g.s.) distributions of nucleons in atomic nuclei remains a key challenge in nuclear physics, often addressed through particle knockout reactions. In 2022, an experiment conducted at JINR utilized a 45 GeV/c carbon-12 beam incident on liquid hydrogen to explore the hard quasi-free $^{12}\text{C}(p,2p)^{11}\text{B}$ reaction in inverse kinematics. By tagging the reaction fragments, the experiment effectively suppressed initial and final state interactions (ISI/FSI), enabling an extraction of g.s. properties. We aim to extract the quasi-elastic cross-section and compare the results with previous measurements at lower energies. This contribution presents a discussion of the preliminary results from the experiment.

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