

Abstract Submitted
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Studies of the $(e, e'p)$ reaction on ^{208}Pb , ^{209}Bi and ^{12}C at quasielastic kinematics at large values of Q^2 GUIDO URCIUOLI, Istituto Nazionale di Fisica Nucleare - Sezione di Roma, Piazzale Aldo Moro 2, 00815 Rome, Italy, JEFFERSON LAB HALL A COLLABORATION — Experiment E06-007 took place in Hall A at JLab (Virginia, USA) in 2007 and 2008. It measured the $^{208}\text{Pb}(e, e'p)^{207}\text{Tl}$, $^{209}\text{Bi}(e, e'p)^{208}\text{Pb}$ and $^{12}\text{C}(e, e'p)^{11}\text{B}$ reaction cross sections at true quasielastic kinematics with (\mathbf{q}, ω) constant ($x_B = 1$, $q = 1$ GeV/c, $\omega = 0.433$ GeV) and at both sides of \mathbf{q} over a wide range of missing momenta ($0 < p_m < 500$ MeV/c). The experiment addresses several issues concerning our understanding of nuclear structure like the role of relativity and of long-range correlations in the description of nuclei and a possible dependence on Q^2 of spectroscopic factors. The existence of long range correlations is checked looking for excess of strength with respect to the predictions of the mean field approximation at high missing momentum. The presence of relativistic effects in nuclei is checked measuring the asymmetry A_{TL} , that is the ratio between the difference of the cross sections of both sides of \mathbf{q} divided by the sum. The possible dependence on Q^2 of spectroscopic factors is investigated with the measurements of the cross sections at low missing momentum and at Q^2 from 0.81 to 1.97 GeV/c².

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