Hard Exclusive Electroproduction of Pions ◇

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We investigate the exclusive electroproduction of π^+ mesons from nucleons. To leading twist, leading order α_s accuracy the corresponding production amplitude can be decomposed into pseudovector and pseudoscalar parts. Both can be expressed in terms of quark double distribution functions of the nucleon. While the pseudovector contribution is connected to ordinary polarized quark distributions, the pseudoscalar part can be related to one pion t-channel exchange. We observe that the pseudovector part of the production amplitude is important at small momentum transfers $|t| \lesssim 0.01 GeV^2$ and $x_{Bj} < 0.1$. On the other hand, at $0.1 < x_{Bj} < 0.4$ contributions from one pion exchange dominate.

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