

Abstract Submitted
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Separated exclusive kaon production cross sections up to $Q^2=2.1$ GeV^2 and the kaon form factor¹ MARCO CARMIGNOTTO, TANJA HORN, The Catholic University of America — Electromagnetic form factors are a key observable in probing hadronic structure, providing us with important information about underlying physical quantities related to nonperturbative QCD. Light mesons composed of a valence quark-antiquark pair can be described by a single electric form factor and have been shown to be a great laboratory for these studies. Using electroproduction experiments, a successful program was developed at Jefferson Laboratory for probing the charged pion form factor in the regime of Q^2 up to 2.45 GeV^2 . This provided a first glimpse at a possible transition from the nonperturbative to the perturbative regime, and also information on the structure of the pion. The kaon is the next lightest existing hadron, providing an interesting channel for assessing the strangeness degree of freedom with mesons. Although the kaon is relatively unexploited to date, there are promising results from experiments of the 6 GeV era of Jefferson Laboratory with potential for kaon form factor extractions. In this talk we will present the recent analysis of the t-channel kaon cross section and discuss the relative contribution of longitudinal and transverse photons to the cross section up to Q^2 values of 2.1 GeV^2 and prospects for form factor extractions.

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