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Exploring hadron structure through exclusive kaon electroproduction from JLab 6GeV to 12GeV[1] MARCO CARMIGNOTTO, TANJA HORN, INDRA SAPKOTA, ARTHUR MKRTCHYAN, The Catholic University of America — Exclusive reactions have been successfully used to probe hadrons at long and short distance scales, allowing us to study the interaction of elementary particles and their dynamics on the basis of Quantum Chromodynamics (QCD). The electroproduction of mesons has shown to be a powerful tool for these studies. High precision data for the pion taken at the 6 GeV Jefferson Lab provided important information about the pion form factor and brought us puzzles regarding the applicability of hard-soft QCD factorization. The kaon provides an interesting way to expand these studies, opening the possibility to access the production mechanism involving strangeness physics and also search for the onset of factorization on systems containing heavier quarks. Most of the precision cross section measurements at the 6 GeV Jefferson Lab were primarily designed for pions, but some of these experiments also captured kaons in their acceptance. In this talk, I will show preliminary kaon cross section results from such experiments. I will also discuss plans to explore the extended Q^2 range capability with dedicated kaon experiments at the 12 GeV Jefferson Lab to study the onset of factorization for mesons including strangeness and the meson electroproduction mechanism in general.

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Marco Carmignotto
The Catholic University of America

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