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Exploring hadron structure through exclusive kaon electroproduction[1] MARCO CARMIGNOTTO, INDRA SAPKOTA, TANJA HORN, The Catholic University of America — Exclusive pion and kaon electroproduction are important tools in the study of hadron structure, and in particular for our understanding of the dominant reaction mechanism in exclusive reactions. The dependence of the cross section on the Mandelstam variable $-t$ provides important information about the role of the t-channel meson exchange, which is also needed for the extraction of meson form factors. Increasing the photon virtuality, Q^2, makes one more sensitive to the partonic picture, where soft non-perturbative and hard physics have been shown to factorize. In that regime, Generalized Parton Distributions (GPDs) provide the most complete description of the non-perturbative physics. The additional flavor degree of freedom in the p(e,e'K+)Λ and p(e,e'K+)Σ0 reactions provides a unique opportunity to study the reaction mechanism underlying strangeness production and the transition from hadronic to partonic degrees of freedom in exclusive processes. In this talk I will present the current status and discuss the outlook on future studies of strange quarks with kaon electroproduction as well as the particle identification requirements for each of these stages.

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Marco Carmignotto
The Catholic University of America

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