

Abstract Submitted
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Exclusive Meson Production in Hall C at JLab 12 GeV¹ MARCO CARMIGNOTTO, TANJA HORN, JULLIANNA COUTO, BIJAY NEPAL, The Catholic University of America — Exclusive meson production plays an important role in probing the quark and gluon distributions in hadrons. The additional flavor degree of freedom in the $H(e, e'K^+)\Lambda/\Sigma^0$ reactions provides a unique opportunity to study the mechanism underlying strangeness production and the transition from hadronic to partonic degrees of freedom. The 12 GeV upgrade at Jefferson Lab provides the energies, and Hall C, with its heavily-shielded detector setup in a highly-focusing spectrometer, is optimal for precision kaon cross section measurements. A new threshold aerogel Cerenkov detection system provides a simple and economical option for kaon identification. Measurements of reactions with neutral final states allow one to probe universal features of the Generalized Parton Distribution and to verify their formalism in thus far unexplored regimes. The addition of a neutral particle spectrometer in Hall C augments its scientific capabilities to include photon detection from, e.g., π^0 decay or Deeply Virtual Compton Scattering. In this talk I will present the current status and discuss the outlook on future studies of probing quark and gluon distributions through exclusive reactions in Hall C as well as the particle identification requirements for each of these stages.

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