

Abstract Submitted
for the APR11 Meeting of
The American Physical Society

Exclusive Kaon Electroproduction in Hall C at JLab NATHANIEL HLAVIN, TANJA HORN, Catholic University of America — The additional flavor degree of freedom in the $H(e,e'K+)\Lambda$ and $H(e,e'K+)\Sigma^0$ 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. However, due to experimental challenges the potential of these reactions has not been fully unexploited to date. One such challenge is the separation of kaons from pion and proton backgrounds. At high momenta, a kaon aerogel Cerenkov detector is the simplest and most economical way of addressing this issue. At CUA, we are building such a detector for Hall C at the 12 GeV Jefferson Lab. Desirable properties are high light output for kaons, and good efficiency in the collecting and converting the light using cost-effective PMTs. Computational optimizations using simulations have been performed and component testing has begun. In this talk, I will discuss the importance of kaon production for hadron structure and the detectors needed to address the experimental challenges.

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Date submitted: 23 Dec 2010

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