

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

π^-/π^+ **Exclusive Pion Electroproduction Results from Jefferson Lab**¹ GARTH HUBER, University of Regina, PION FORM FACTOR COLLABORATION — Forward exclusive meson production is a particularly useful tool in the study of hadronic structure. Measurements at different squared four-momenta of the exchanged virtual photon, Q^2 , and at different four-momentum transfer, t , allow one to probe QCD's transition from meson-nucleon degrees of freedom at long distances to quark-gluon degrees of freedom at short scales. Furthermore, by forming ratios of separated response functions in π^- and π^+ electroproduction, there may be a partial cancellation of nonperturbative QCD contributions, allowing this transition to be more readily apparent. These strong theoretical motivations make worthwhile the significant experimental challenges needed to accurately separate the four response functions in forward, exclusive π^-/π^+ electroproduction off deuterium. We report the results of our study from Jefferson Lab Hall C, where for the first time ratios of separated response functions were extracted at several kinematic settings: $Q^2 = 0.6, 1.0, 1.6 \text{ GeV}^2$ with $W=1.95 \text{ GeV}$, and $Q^2=2.45 \text{ GeV}^2$ with $W=2.22 \text{ GeV}$, respectively.

¹Supported by the Natural Sciences and Engineering Research Council of Canada (NSERC)

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Date submitted: 08 Jan 2013

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