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Abstract for an Invited Paper
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The experimental determination of the pion and kaon form factors and structure functions¹

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We are about to enter a revolutionary new period in our understanding of the structure of the two lightest charged mesons, the pion and kaon. As the lightest meson, the pion is the particle responsible for the long-range character of the $N - N$ interaction that binds the atomic nucleus. Furthermore, if QCD were chirally symmetric, the pion would be massless. But chiral symmetry is dynamically broken by quark-gluon interactions and the inclusion of light quark masses, giving the pion (and ultimately all other hadrons) significant mass. The kaon is also very important, as it too is heavily influenced by dynamical chiral symmetry breaking, and comparisons between the kaon and pion may allow the role of quark flavors at high x_B to be disentangled. Thus, the pion and kaon are central to many of the key questions of strong-interaction physics. However, the measurement of pion and kaon form factors and structure functions is very challenging, as it must make use of the dominance of the nucleon's virtual meson cloud in electroproduction at low $-t$. New experimental capabilities (either coming online or proposed) promise exciting new data in the years ahead. With the completion of the Jefferson Lab 12 GeV Upgrade, we will for the first time be able to acquire the high quality data needed to challenge our understanding. I will also briefly summarize the prospects for future measurements at the proposed Electron-Ion Collider.

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