

XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



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Pion and kaon structure at the Electron-Ion Collider

Wednesday, 25 March 2020 12:00 (20 minutes)

Understanding the structure and dynamics of hadron structure entails the question how the roughly 1-GeV mass scale that characterizes the proton and atomic nuclei appears, and in stark contrast why are composite Goldstone bosons such as pions and kaons abnormally light in comparison. To understand this a strong interplay between experiment and theory is crucial. The talk will present the potential ground-breaking opportunities at the Electron-Ion Collider that, through the Sullivan process and proper tagging in the forward detector direction, can essentially present the possibility of electron-pion and electron-kaon scattering data of quality similar to the existing HERA electron-proton data, allowing detailed structure function maps, and also spatial and transverse momentum imaging data of the pion and kaon. A summary of the present status of the study will be presented including its impact on understanding of dynamical mass and requirements for the Electron-Ion Collider forward detector.

Primary authors: Prof. HORN, Tanja (Catholic University of America); ENT, Rolf (Jefferson Lab)

Presenter: Prof. HORN, Tanja (Catholic University of America)

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