

Contribution ID: 47

Type: Oral (Non-Student) / Orale (non-étudiant(e))

Deep Exclusive Kaon Electroproduction at Jefferson Lab

Thursday 12 June 2025 17:15 (15 minutes)

One of the long standing questions in the standard model of particle physics is the origin of the nucleon spin and the charge and density distributions inside the nucleon. In the theory of the strong interaction, the structure of the nucleon is described by form factors which can be accessed through hard exclusive meson production. The main focus of this study is to measure the form factor of one of the lightest mesons and simplest bound state of a quark and an antiquark, the kaon. The kaon form factor is measured indirectly from the scattering of a high-intensity electron beam on a proton target producing a kaon along with the Λ and Σ baryons. The data analyzed here were taken at 3.8 GeV and 4.9 GeV beam energies at Jefferson Lab using the high precision Hall C spectrometers. We will present the status and plans to measure the kaon form factor at the Hall C experiment in Jefferson Lab, using data from production run in fall of 2018.

Keyword-1

QCD

Keyword-2

Hadron Structure

Keyword-3

Author: HAMDI, Abdennacer (University of Regina)

Presenter: HAMDI, Abdennacer (University of Regina)

Session Classification: (DNP) R2-6 Fundamental symmetries | Symétries fondamentales (DPN)

Track Classification: Technical Sessions / Sessions techniques: Nuclear Physics / Physique nucléaire (DNP-DPN)