

Probing the strange content of the proton via charm production in charged-current deep inelastic scattering at HERA

Thursday 5 July 2018 12:15 (15 minutes)

The production of charm quarks in charged current interactions at HERA is investigated using the ZEUS detector. The present analysis considers measurements taken in HERA II period (2003 - 2007) where major detector upgrades were implemented at ZEUS. With an integrated luminosity of about 350 pb^{-1} , the HERA II data has enough statistics to probe the strangeness in the proton via charm production at high Q^2 in charged current deep inelastic scattering (CC DIS). The life-time tagging method was used to select charm events, suppressing the light-flavour contribution in the CC cross section. The charm cross section measurement in CC DIS at HERA as well as estimation of major systematics is presented and compared with theoretical expectations.

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Session Classification: Strong Interactions and Hadron Physics

Track Classification: Strong Interactions and Hadron Physics