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A determination of mc(mc) from HERA data using a matched heavy quark scheme

Tuesday 12 April 2016 17:10 (15 minutes)

In this talk I will present a novel determination of the mass of the charm quark extracted by analyzing the statistical quality of fits of parton distribution functions (PDFs) to inclusive and exclusive charm deep-inelastic scattering (DIS) cross-section data from Runs I and II of the HERA collider. We employ the running mass definition in the MSbar scheme, which improves the perturbative stability as compared to the pole-mass definition, in the framework of the FONLL general-mass scheme. The analysis is based on the xFfitter framework, with structure functions computed in the FONLL scheme as implemented in the APFEL code.

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