

High Q² Neutral current and Charged current analyses using the complete HERA data

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Measurements of Neutral Current (NC) $ep \rightarrow e X$ and Charged Current (CC) $ep \rightarrow \nu X$ cross sections by the H1 and ZEUS collaborations are presented using HERA data recorded during the years 1994-2007. The cross sections are measured in the region of large negative four-momentum transfer squared $Q^2 > 200 \text{ GeV}^2$. Single differential and double-differential cross-sections are extracted and compared to predictions of the Standard Model. The dependence on the lepton beam polarisation is also investigated. Using the ZEUS data on NC, CC and jet production, a NLO QCD analysis is performed, to assess the impact of the most recent data on the parton distribution functions and their uncertainties.

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