

Measurement of charged and neutral current deep inelastic scattering at HERA with longitudinally polarised positron beams

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The cross sections for neutral and charged current deep inelastic scattering in e^+p collisions with longitudinally polarised positron beams have been measured with the ZEUS detector at HERA using an integrated luminosity of 40 pb^{-1} . The total cross section for e^+p charged current deep inelastic scattering has been measured for positive and negative longitudinal-polarisation values of the positron beam. In addition, single differential cross sections are presented for charged and neutral current deep inelastic scattering for $Q^2 > 200 \text{ GeV}^2$, where Q^2 is the four-momentum squared of the exchanged boson. The measured cross sections are compared with the predictions of the Standard Model.

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