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Measurement of electron-proton neutral current cross sections at high Bjorken-x with the ZEUS detector at HERA

Content :

A new method is employed to measure the neutral current cross section up to Bjorken-x values of one with the ZEUS detector at HERA using an integrated luminosity of 187 pb⁻¹ of e-p collisions at $\sqrt{s} = 318$ GeV. Cross sections have been extracted for $Q^2 \geq 575$ GeV². A much improved precision with respect to the previous ZEUS publication, which only used 16.7 pb⁻¹ of e-p collisions, is achieved, owing to the larger data sample and improved kinematic reconstruction methods. The measurement is well described by predictions based on the CTEQ6D PDFs.

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Comments :

These results are presented on behalf of the ZEUS Collaboration