Rencontres de Moriond EW 2013



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Electroweak results from HERA

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The neutral and charged current deep inelastic ep scattering, with longitudinally polarised lepton beams, have been studied with the H1 and ZEUS detectors at HERA. The differential cross sections are measured in the range of four-momentum transfer squared, Q2, up to 50'000 GeV2, where electroweak effects become clearly visible. The measurements are used to determine the structure function xF_3 and to constrain vector and axial-vector couplings of light quarks to the Z0 boson. The polarisation dependence of the charged current total cross section is also measured.

Limits for flavour changing neutral current processes are computed from search for single-top production. The elastic Z0 production cross section is measured to be in agreement with the SM prediction. Limits n new physics phenomena at high Q2 are also derived within the general framework of four-fermion eeqq contact interactions.

Summary

Presentation of the recent electroweak results from HERA, on behalf of the H1 and ZEUS Collaborations.

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Classification de thématique: Experiment