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Scaled Momentum Spectra in deep inelastic Scattering at HERA

Content :

Charged particle production has been studied in neutral current deep inelastic ep scattering with the ZEUS detector at HERA using an integrated luminosity of 0.44 fb-1. Distributions of scaled momenta in the Breit frame are presented for particles in the current fragmentation region. The evolution of these spectra with the photon virtuality, Q2, is described in the kinematic region 10 < Q2 < 41000 GeV2. Next-to-leading-order and modified leading-log- approximation QCD calculations as well as predictions from Monte Carlo models are compared to the data. The results are also compared to e+e- annihilation data. The dependences of the pseudorapidity distribution of the particles on Q2 and on the energy in the p system, W, are presented and interpreted in the context of the hypothesis of limiting fragmentation.

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Comments :

These results will be presented on behalf of the ZEUS Collaboration