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Measurement of beauty production in DIS and F2b bbar extraction at ZEUS

Content :

Beauty production in deep inelastic scattering with events in which a muon and a jet are observed in the final state has been measured with the ZEUS detector at HERA using an integrated luminosity of 114 pb⁻¹. The fraction of events with beauty quarks in the data was determined using the distribution of the transverse momentum of the muon relative to the jet. The cross section for beauty production was measured in the kinematic range of photon virtuality, $Q^2 > 2 \text{ GeV}^2$, and inelasticity, $0.05 < y < 0.7$, with the requirement of a muon and a jet. Total and differential cross sections are presented and compared to QCD predictions. The beauty contribution to the structure function F_2 was extracted and is compared to theoretical predictions.

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Comments :

These results are presented on behalf of the ZEUS Collaboration