Heavy-meson production in ep scattering

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Recent results on the production of charm and beauty mesons in ep scattering at HERA are reported. The measurement of open-charm production, via D^* tagging, provides a crucial test of perturbative QCD and information on the charm content of the proton and the photon. Results from using other tagging methods such as leptons and lifetimes have become available. The large beauty production cross sections observed at Tevatron and HERA have triggered considerable theoretical interest. The data are compared with QCD calculations at next-to-leading order (NLO) in most cases. Following topics could be covered:

- $D^{*\pm}$ production in deep inelastic scattering (DIS); D^*-muon correlations.
- $D^{\pm}$, D^0 and D_s production at HERA; observation of excited charm-strange mesons.
- Dijet angular distribution and charm excitation in the photon.
- Inelastic J/ψ and ψ' production; comparison with color-singlet and color-octet models.
- Open beauty production in DIS and photoproduction, compared with NLO QCD predictions.
- News from HERA-II running, in which the vertex tagging has been improved by upgraded detectors.