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## Charmed Mesons in ep Scattering at HERA

*Friday, 26 March 2010 08:45 (30 minutes)*

The production of the charmed mesons in ep collisions at HERA was studied using a life time tag with the ZEUS detector at HERA. New results on D meson production at HERA have been presented. Combinatorial background to the D-meson signals is reduced by using the ZEUS microvertex detector to reconstruct displaced secondary vertices. Production cross sections are compared with the predictions of next-to-leading-order QCD, which is found to describe the data well. Measurements are extrapolated to the full kinematic phase space in order to obtain the open-charm contribution,  $F_{2cc}$ , to the proton structure function,  $F_2$ .  $F_{2cc}$  data cover a large part of the  $(x, Q^2)$  plane accessible by inclusive  $F_2$  measurements. These data will crosscheck the gluon density. Scaling violations in  $F_{2cc}$  is significantly larger than in  $F_2$ .

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