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Charmed Mesons in ep Scattering at HERA

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The production of the charmed masons 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, F2cc, to the proton structure function, F2. F2cc data cover a large part of the (x,Q^2) plane accessible by inclusive F2 measurements. These data will crosscheck the gluon density. Scaling violations in F2cc is significantly larger than in F2.

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