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Measurement of charm production in DIS with D^* mesons and extraction of F_2^{cc}

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Charm production has been measured with the ZEUS detector in deep inelastic ep scattering at HERA.
The measurement is based on the full reconstruction of the decay chain $D \rightarrow D^0 \pi$, $D^0 \rightarrow K \pi$ and exploits the full HERA II statistics.
Differential cross sections have been measured.
The kinematic range is $1.5 \text{ GeV} < p_T(D) < 10 \text{ GeV}$, $|\eta(D)| < 1.5$, $5 < Q^2 < 1000 \text{ GeV}^2$ and $0.02 < y < 0.7$.
The observed cross sections is extrapolated to the full $p_T(D)$ and $\eta(D^)$ range in order to determine the open-charm contribution, $F_2^{cc}(x, Q^2)$ to the proton structure function, F_2 .*

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Track Classification: Structure functions and Parton Densities