

DIS 2015 - XXIII. International Workshop on Deep-Inelastic Scattering and Related Subjects

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Combination of D^* Differential Cross-Section Measurements in Deep-Inelastic ep Scattering at HERA

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H1 and ZEUS have published single-differential cross sections for inclusive D meson production in deep-inelastic ep scattering at HERA from their respective final data sets. These cross sections are combined in the common visible phase space region of photon virtuality $Q^2 > 5 \text{ GeV}^2$, electron inelasticity $0.02 < y < 0.7$ and the D meson's transverse momentum $p_T(D) > 1.5 \text{ GeV}$ and pseudorapidity $|\eta(D)| < 1.5$. The combination procedure takes into account all relevant correlations yielding significantly reduced experimental uncertainties. To extend the kinematic range down to $Q^2 > 1.5 \text{ GeV}^2$, double-differential cross sections are also combined with a subset of earlier D^* data. Perturbative next-to-leading order QCD predictions are compared to the results.

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