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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 $Q^2 > 5$ GeV², electron inelasticity 0.02 < y < 0.7 and the D meson's transverse momentum p_T (D)> 1.5 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 Q2 > 1.5 GeV², 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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