

Combined inclusive diffractive cross sections measured with forward proton spectrometers at HERA

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Summary

A combination of the inclusive diffractive cross section measurements made by the H1 and ZEUS Collaborations at HERA is presented. The analysis uses diffractive deep inelastic scattering data measured by means of proton spectrometers. Correlations of systematic uncertainties are taken into account by the combination method, resulting in improved precision. The combined data cover the range $2.5 < Q^2 < 200 \text{ GeV}^2$ in photon virtualities, $0.00035 < x_{\text{IP}} < 0.09$ in fractional momentum losses, $0.09 < |t| < 0.55 \text{ GeV}^2$ in four momentum transfer at the proton vertex and $0.0018 < \beta < 0.56$ in $\beta = x/x_{\text{IP}}$, where x is the Bjorken scaling variable.

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