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## Measurement of the azimuthal decorrelation angle between the leading jet and the scattered lepton in deep inelastic scattering at HERA

The azimuthal decorrelation angle  $\Delta\phi$  between the leading jet and scattered lepton in deep inelastic scattering has been measured with the ZEUS detector at HERA. The experimental data set was taken in the HERA II data-taking period and corresponds to an integrated luminosity of 326 pb<sup>-1</sup>. The measurement was performed within a range of the exchanged photon virtuality  $Q^2$  from 10 to 350 GeV<sup>2</sup>, the lepton energy  $E_e > 10$  GeV, and the lepton angle  $140 < \theta_e < 180$ . The jets were measured in the transverse-momentum and pseudorapidity ranges  $2.5 \text{ GeV} < p_{T,\text{jet}} < 30 \text{ GeV}$  and  $-1.5 < \eta_{\text{jet}} < 1.8$ . The differential cross section was normalized to the inclusive cross section and are presented here as a function of  $\Delta\phi$  in various ranges of  $p_{T,\text{jet}}$ ,  $Q^2$  and the jet multiplicity. The measurements obtained in this study show good agreement with predictions from perturbative calculations up to next-to-next-to-leading order.

### Collaboration / Activity

ZEUS

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