

DVCS and its t -dependence at HERA-2

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A measurement of elastic deeply virtual Compton scattering $\gamma p \rightarrow \gamma p$ using e - p collision data recorded with the H1 detector at HERA is presented. The analysed data sample corresponds to an integrated luminosity of 145 pb^{-1} . The cross section is measured as a function of the virtuality Q^2 of the exchanged photon and the centre-of-mass energy W of the γp system in the kinematic domain $6.5 < Q^2 < 80 \text{ GeV}^2$, $30 < W < 140 \text{ GeV}$ and $|t| < 1 \text{ GeV}^2$, where t denotes the squared momentum transfer at the proton vertex. The cross section is determined differentially in t for different Q^2 and W values and exponential t -slope parameters are derived. The measurements are compared to a NLO QCD calculation based on generalised parton distributions. In the context of the dipole approach, the geometric scaling property of the DVCS cross section is studied for different values of t .

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