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Measurement of Dijet Cross Sections in Deep Inelastic Scattering at HERA

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Dijet cross sections in deep-inelastic scattering have been measured with the H1 detector at the positron proton collider HERA using data taken in the years 1994 – 1997, corresponding to an integrated luminosity of $\mathcal{L}_{int} \simeq 36$ pb^{-1}. A large kinematical range of four momentum transfers $10 < Q^2 < 5000$ GeV^2, transverse jet energies $70 < E^2_{t,jet,Breit} < 1200$ GeV^2 and invariant dijet masses $200 < M^2_{jj} < 7000$ GeV^2 is covered.
For the first time in this kinematical region double differential dijet cross sections have been measured for several sets of variables $(Q^2, E_{t,jet,Breit}, M_{jj}, \xi, x_{Bj})$. The results are compared to next-to-leading calculations. Over the whole phase space the next-to-leading predictions give a very good description of the data.
The sensitivity to theoretical parameters is demonstrated and QCD fits are performed.