Abstract #000, March 19, 1999

Measurement of Internal Jet Structure in Dijet Production in Deep-Inelastic Scattering at HERA

M. Erdmann[1] (for the H1 Collaboration)

(1) University Karlsruhe / DESY, Notkestr. 85, D-22607 Hamburg, Germany

Internal jet structure in dijet production in deep-inelastic scattering is measured with the H1 detector at HERA. Jets with transverse energies $E_{T,\mathrm{Breit}} > 5$ GeV are selected in the Breit frame employing $k_\perp$ and cone jet algorithms. In the kinematic region of squared momentum transfers $10 < Q^2 \leq 120$ GeV^2 and x-Bjorken values $2 \cdot 10^{-4} \leq x_{\mathrm{Bj}} \leq 8 \cdot 10^{-3}$, jet shapes and subjet multiplicities are measured as a function of a resolution parameter. Distributions of both observables are corrected for detector effects and presented as functions of the transverse jet energy and jet pseudo-rapidity. Dependences of the jet shape and the average number of subjets on the transverse energy and the pseudo-rapidity of the jet are observed. With increasing transverse jet energies and decreasing pseudo-rapidities, i.e. towards the photon hemisphere, the jets are more collimated. QCD models give a fair description of the data.

[1] H1 Collaboration, C.Adloff et al.,
DESY-98-210 / submitted to Nuc. Phys. B.