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# Multiplicity Distributions and Fragmentation functions in Deep-Inelastic *ep* Scattering in the Breit Frame of Reference

H1 Collaboration

**Abstract**

Deep-inelastic $ep$ scattering data taken in 1994 with the H1 detector at HERA are analysed in the Breit frame of reference. Measurements of fragmentation functions averaged over parton species are presented and the $Q^2$ dependence of the essential parameters of the distributions are given and compared with $e^+e^-$ results. With the improved statistical precision of data taken in 1994, small discrepancies in the average charged multiplicity between these results and those from $e^+e^-$ interactions disappear as the phase space in the current hemisphere in the Breit frame is increasingly constrained to be more similar to that in fragmentation in $e^+e^-$ annihilation. Distributions of multiplicity are also presented as a function of $Q^2$ and KNO scaling is tested.

Plenary Sessions:
2. Soft Interactions and Diffraction Phenomena - S. Levonian
4. QCD and Low $x$ Physics - H. Abramowicz, R. Brock
Parallel Session: I Strong Interaction Physics
2. Soft Interactions
3. Structure Functions and Low $x$ Physics
4. Hard Processes and Perturbative QCD