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Three-subjet distributions in neutral current deep inelastic scattering at HERA

Content :
Three-subjet distributions were measured in neutral current deep inelastic ep scattering with the ZEUS detector at HERA using an integrated luminosity of 299 pb^1. Jets were identified using the kt cluster algorithm in the laboratory frame. Subjets were defined as jet-like substructures identified by a reapplication of the cluster algorithm at a smaller value of the resolution parameter ycut. Measurements of subjet distributions for jets with exactly three subjets at ycut = 0.01 are presented as functions of observables sensitive to the pattern of parton radiation and to the colour coherence between the initial and final states. Measurements are also presented as functions of angular correlations between the three subjets which provide a stringent test of perturbative QCD and show sensitivity to the contributions from different colour configurations. Perturbative QCD predictions give an adequate description of the data.

Primary authors : Mr. HAAS, Tobias (DESY)

Co-authors : Dr. REISERT, Burkard (Max-Planck Institut für Physik München) ; Dr. GEISER, Achim (DESY) ; Prof. TASSI, Enrico (Universita della Calabria)

Presenter : Mr. HAAS, Tobias (DESY)

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Comments :

This talk will be given on behalf of the ZEUS Collaboration