

Strangeness Production in Deep-Inelastic ep Scattering at HERA

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The production of strange hadrons is investigated using deep-inelastic scattering events measured with the H1 detector at HERA. The measurements of K_s and Λ production are performed in two regions of phase space defined by the negative four-momentum transfer squared of the photon Q^2 . The K_s and Λ production cross sections and their ratios are determined and presented differentially as a function of several kinematical variables. The K_s production rate is compared to the production of charged particles in the same region of phase space. In addition, the Λ - Anti- Λ asymmetry is measured. The production of $K(892)$ vector mesons in deep-inelastic scattering at low Q^2 , observed through the decay chain $K^{+-} \rightarrow K^0_s \pi^{+-}$, is measured for the first time at HERA. The analysis is based on data taken in the HERA-II running period. Inclusive cross sections are presented as a function of the transverse momentum squared P_T^2 , the rapidity y and the centre-of-mass energy W of the hadronic final state. The data are compared to theoretical predictions, based on leading order Monte Carlo programs with parton showers.

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