Results on $D^{*\pm}$ production from CERN experiment WA92

Cristina Lazzeroni

Department of Physics and INFN–Pisa
BEATRICE Collaboration

June 23, 1998

Abstract

We report on $D^{*\pm}$ production in interactions between 350 GeV/c π^- particles and nuclei. Reconstruction of the decay $D^{*+} \to D^0\pi^+$ and charge conjugate, with D^0 identified via its decays to $K^-\pi^+$ and $K^-\pi^+\pi^+\pi^-$, has allowed isolation of a sample of 614 ± 30 $D^{*\pm}$ mesons, produced at positive x_F. Assuming a linear A–dependence, the measured forward cross sections per nucleon are 1.36 ± 0.11 μb for D^{*+} and 1.84 ± 0.12 μb for D^{*-}. We present measurements of differential cross sections with respect to x_F and $P_t{}^2$, and compare data for $D^{*\pm}$ (vector–meson) production with data for production of charmed pseudoscalar mesons.