First physics results from SELEX (E781)

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Abstract

The SELEX experiment (E781) is a 3–stage magnetic spectrometer for high statistics study of hadroproduction of charm baryon up to large x_f using 650 GeV Σ^-, π^- and proton beams. The main features of the spectrometer are: high precision silicon vertex system with 30 μrad angular resolution, powerful particle identification provided by TRD and RICH, forward L(s) decay spectrometer and 3–stage lead glass photon detector. Experiment overwiew and description of the spectrometer features are shown. Preliminary reconstructed charm states and results on Λ_c and D^+ particles and antiparticles produced by Σ^-, π^- and proton beams at $x_f > 0.3$ are presented. Asymmetry for Λ_c production is also discussed.