Hyperons production in Σ^-, neutron and pion interactions at 345 GeV/c in Hyperon experiment WA–89 at CERN.

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Abstract

We report a hyperon differential and total production cross section measurement in three type of interactions : Σ^-, neutron and pion. We studied production of vees (Λ_0, K_0, $\bar{\Lambda}$) and Ξ-hyperons ($\Xi(1320)$, $\Xi(1530)$, $\Xi(1820)$, $\Xi(1960)$). Very strong leading effect was observed in case of Σ^- interaction. A new decay mode was observed for $\Xi(1690) \longrightarrow \Xi(1320)\pi$.