

DOUBLE STRANGE EXCHANGE OF K^- MESONS OF A MOMENTUM OF 1.5 BeV/c IN
NUCLEAR EMULSION

Ž. Todorović and M. Jurić

Institute of Physics, Belgrade, Yugoslavia

Abstract: In this work an analysis was made of the processes of double strange exchange of 1.5 BeV/c K^- mesons on emulsion nuclei leading to the production of a hyperfragment together with strange particles. The process of double strange exchange of K^- mesons on nuclei (with the formation of two hyperons in the final state) is brought about through a secondary interaction of the Ξ hyperon or π meson with nucleons in the nucleus in which they are produced.

The lower limit of the value of the strange particle production frequency in events with a hyperfragment is 2.4%. Only (7-15)% of the events with a hyperfragment and strange particles are due to the process of double strange exchange of K^- mesons involving a secondary interaction of the π meson, while the remaining events arise from the process of double change in the strangeness of K^- mesons involving a secondary interaction of the Ξ hyperon.