

THE FISSION OF URANIUM AND THORIUM INDUCED BY 700 MeV/c K^- MESONS

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Abstract: In this experiment the fission of U and Th induced by K^- mesons of a momentum of 700 MeV/c was investigated using polycarbonate detectors. The basic characteristics of the fission of U and Th are given, and the mass distributions of fission fragments are determined.

The ranges of the fragments arising from the fission of U and Th induced by 700 MeV/c K^- mesons lie in the interval $10 \leq R \leq 30 \mu\text{m}$.

About 90% of U and Th fission events have solid angles within the interval $160^\circ \leq \theta \leq 180^\circ$.

The mass distributions of fragments arising from the fission of U and Th induced by K^- mesons exhibit the tendency of symmetry, but with two peaks characteristics of low-energy fission.

Consequently, the fission of U and Th induced by 700 MeV/c K^- mesons has the characteristics of low-energy fission.