

Formation mechanism of decay fragments in spontaneous ternary fission of heavy nuclei

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A model for describing spontaneous ternary fission of heavy nuclei is presented. It follows from the suggested model that heavy nuclei have the same half-lives in spontaneous ternary and binary fission processes. The collinear cluster tripartition process observed in experiments is found to be the dominant reaction channel in spontaneous true ternary fission of heavy nuclei within our model. Competition between binary fission and the formation of a trinuclear system, which is responsible for the ratio of spontaneous ternary and binary fission yields, is introduced.

Section

Experimental and theoretical studies of nuclear reactions

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