

New indications and evidences of multibody partitions of $^{252}\text{Cf}(\text{sf})$

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In our previous publications [1-4] we presented experimental evidences of rare ternary decay mode of low excited heavy nuclei called collinear cluster tri-partition (CCT). Essential feature of this process is that some of the fission fragments (FFs) born during binary fission undergo a break-up, while they pass a solid-state foil. This break-up is delayed and occurs after the binary fission of the mother system. It is reasonable to think of such specific FFs as formed in the shape-isomer states [5]. The break-up is due to the FF inelastic scattering in the foil medium. In the recent series of experiments at the double-armed time-of-flight COMETA spectrometer, we have obtained both indications of the FFs spontaneous fission from the shape-isomer states, and evidences of new modes of the break-up of such fragments in different foils.

References

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Section

Experimental and theoretical studies of nuclear reactions

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