

Review of some recent theoretical developments devoted to the fission process

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In the past few years, experimental studies have revealed many interesting features of the fission process, such as for instance

- i) a transition between single and double-humped mass distributions with a triple-humped structure for some Thorium isotopes,
- ii) a bimodality in the Total Kinetic Energy distributions of some fermium and transfermium isotopes.

From a theoretical point of view, fission is a very complicated process, in which many nuclear properties play a role, such as very deformed nuclear configurations, large amplitude motion, and the coupling between collective modes and /or between collective modes and intrinsic excitations.

In this talk, we will present a summary of some recent theoretical developments devoted to

- i) fission barriers ii) fission fragment distributions iii) fission fragment properties such as deformation and spin and iv) the importance of the dynamics.

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