

ENERGY DEPENDENCE OF THE FISSION MODE PROBABILITY OF ^{234}U BY NEUTRONS

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Mass distribution of the fission fragments of ^{234}U fission by neutrons can be described using three fission modes: S1 (Standard 1), S2 (Standard 2) and SL (Super Long). Yields of these modes can be calculated using the form of the potential barriers along three different paths in the configuration space of nuclei deformation. Vibrational resonance at neutron energy about 0.7 MeV influence the cross section and angular distribution of fission fragments at this energy. We test the hypothesis that the resonance is occurring only for one fission mode after the bifurcation. The result of the calculation are comparing with experimental data of work [1] about mass distribution of fission fragments.

1. A.Al-Adili et al. // .Phys.Rev. 2016. C93, 034603.

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