SPONTANEOUS FISSION OF ^{254,256}Rf AND ^{250}No – NEW EXPERIMENTAL DATA

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In the last years we carried out several experiments aimed to investigate properties of short-lived SF isotopes.

The neutron-deficient isotopes ^{254,256}Rf were produced in fusion-evaporation reactions using an enriched lead targets and an intense ^{50}Ti beam. Fusion-evaporation residues were separated by the SHELS separator (FLNR, Dubna) and implanted into a large-area double-sided silicon 48x48 strip detector surrounded by ^{3}He-based neutron counters. The half-life, decay branching ratio and average number of neutrons per spontaneous fission ^{254,256}Rf is measured.

Next we carried out an experiment aimed at investigating the properties of spontaneous fission of neutron deficient isotope ^{250}No produced in the reaction with ^{48}Ca-beam and ^{204}Pb-target. Earlier two spontaneous fission half-lives ($t_{1/2} \approx 4$ and $t_{1/2} \approx 40$ μs) originate from ^{250}No were registered. The obtained excitation functions after the evaporation of 2 neutrons from the compound ^{252}No nuclei have been compared with similar data obtained earlier. From the experimental data for the first time the average number of neutrons per spontaneous fission and TKE-spectra of fission fragments of both ^{250}No activities was determined.