^{247}Fm

In 1967, Flerov et al. identified ^{247}Fm in the paper "Synthesis of isotopes of fermium with mass numbers 247 and 246" (1967Fl15). A ^{239}Pu target was bombarded with 72−74 MeV ^{12}C from the Dubna 310-cm heavy-ion cyclotron and ^{247}Fm was formed in (4n) fusion-evaporation reactions. Recoil products were collected with an oriented gas jet and subsequent α decay was measured with Si(Au) detectors. "Based on the coincidence of the half lives and excitation functions, it can be concluded that the activities with E_0 equal to 7.87±0.05 and 7.93±0.05 MeV are associated with the decay of Fm^{247} from a single state. For a more accurate determination of the half life of Fm^{247} in this state, measurements were carried out in the cycle with τ=200 sec. The results of the measurements are shown in [the figure] from which a value of $T_{1/2}$ = 35±4 sec is obtained." In addition, an isomer with a half-life of 9.2(23) s was measured.

Adapted from reference (2013Th02)

1967Fl15 G. N. Flerov, S. M. Polikanov, V. L. Mikheev, V. I. Ilyushchenko *et al.*, Sov. At. Energy **22**, 434 (1967).

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Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"