^{245}Cf

In the 1956 article "Mass assignment of the 44-minute californium-245 and the new isotope californium-244", Chetham-Strode et al. identified ^{245}Cf (1956Ch43). Samples of ^{244}Cm were bombarded with α particles from the Berkeley 60-in. cyclotron. Subsequent emission of α particles was measured following chemical separation. "The 44-minute californium alpha emitter previously thought to be Cf^{244} has been reassigned to mass number 245 on the basis of milking experiments, excitation functions, cross bombardments, and decay scheme studies. Californium-245 decays by the emission of (7.11±0.02)-Mev alpha particles (∼30%) and by orbital electron capture (∼70%). The new isotope Cf^{244} was also identified and found to decay by the emission of (7.1±0.02)-Mev alpha particles with a half-life of 25±3 minutes." In the paper reporting the discovery of the element californium the 45 min half-life had tentatively been assigned to ^{244}Cf instead of ^{245}Cf (1950Th56, 1950Th57).

Adapted from reference (2013Fr02)

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