

²⁴¹Cf

The 1970 discovery of ²⁴¹Cf by Silva et al. was described in the paper “New isotopes ²⁴¹Cf and ²⁴⁰Cf” (1970Si19). Enriched ²³³U, ²³⁴U, and ²³⁵U targets were bombarded with 118 MeV ¹²C beams from the Oak Ridge isochronous cyclotron. Reaction products were deposited with a helium jet on a platinum disk which was then moved in front of a Si(Au) detector to measure α -particles. “The half-lives of the 7.335- and 7.590-MeV α activities were determined to be 3.78 ± 0.70 and 1.06 ± 0.15 min, respectively, from computer least squares fits to 200-300 recorded decay events... the excitation functions for the 7.335- and 7.590-MeV activities support the assignment of the former α -particle activity to the decay of ²⁴¹Cf and of the latter to ²⁴⁰Cf.” Previously a 7.31 MeV peak had tentatively been assigned to ²⁴¹Cf (1967Fi04), however Silva et al. reassigned this peak to a state of ²⁴²Cf.

Adapted from reference (2013Fr02)

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