

## <sup>237</sup>Cf

<sup>237</sup>Cf was discovered in 1995 by Lazarev et al. and the results were reported in the paper “Spontaneous fission of light californium isotopes produced in <sup>206,207,208</sup>Pb + <sup>34,36</sup>S reactions; new nuclide <sup>238</sup>Cf” (1995La09). Enriched <sup>206</sup>Pb, <sup>207</sup>Pb and <sup>208</sup>Pb targets were bombarded with 215 MeV <sup>34</sup>S and <sup>36</sup>S beams from the Dubna U400 cyclotron. <sup>237</sup>Cf was formed in the fusion evaporation reactions <sup>206</sup>Pb(<sup>34</sup>S,4n) and <sup>207</sup>Pb(<sup>34</sup>S,3n). Mica fission-fragment detectors arranged around a rotating target cylinder detected spontaneous fission events. “We identified a new spontaneously fissioning isotope <sup>238</sup>Cf with  $T_{sf} \approx T_{1/2} = 21 \pm 2$  ms and obtained evidence of the production of a new isotope <sup>237</sup>Cf with  $T_{1/2} = 2.1 \pm 0.3$  s.”

Adapted from reference (2013Fr02)

1995La09 Yu. A. Lazarev, I. V. Shirokovsky, V. K. Utyonkov, S. P. Tretyakova, and V. B. Kutner, Nucl. Phys. A **588**, 501 (1995).

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