

## $^{267}\text{Rf}$

In the 2004 paper “Measurements of cross sections and decay properties of the isotopes of elements 112, 114, and 116 produced in the fusion reactions  $^{233,238}\text{U}$ ,  $^{242}\text{Pu}$ , and  $^{248}\text{Cm}+^{48}\text{Ca}$ ”, Oganessian et al. identified  $^{267}\text{Rf}$  (2004Og12).  $^{238}\text{U}$  and  $^{242}\text{Pu}$  targets were bombarded with  $^{48}\text{Ca}$  beams from the Dubna U400 cyclotron producing  $^{283}\text{Cn}$  and  $^{287}\text{114}$ , respectively.  $^{267}\text{Rf}$  was then populated by  $\alpha$  decays. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Subsequent  $\alpha$  particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector. “Data on the decay characteristics of the isotopes  $^{286,287}\text{114}$ ,  $^{282,283}\text{112}$ , and  $^{279}\text{110}$ , as well as  $^{275}\text{Hs}$ ,  $^{271}\text{Sg}$ , and  $^{267}\text{Rf}$  synthesized in the reactions  $^{242}\text{Pu}$ ,  $^{238}\text{U}+^{48}\text{Ca}$ , are summarized in [the table].” A single event for  $^{267}\text{Rf}$  was observed, decaying by spontaneous fission with a half-life of  $2.3^{+98}_{-1.7}$  h.

Adapted from reference (2013Th02)

2004Og12 Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **70**, 064609 (2004).

2013Th02 M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

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