

^{291}Lv

^{291}Lv was first identified by Oganessian et al. in “Measurements of cross sections for the fusion-evaporation reactions $^{244}\text{Pu}(^{48}\text{Ca},\text{xn})^{292-x}\text{114}$ and $^{245}\text{Cm}(^{48}\text{Ca},\text{xn})^{293-x}\text{116}$ ” in 2004 ([2004Og07](#)). A 243 MeV ^{48}Ca beam from the Dubna U400 cyclotron bombarded a CmO_2 target enriched in ^{245}Cm . ^{291}Lv was populated in (2n) fusion-evaporation reactions. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Subsequent α particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector. “As a result, the longer ER- α – α – α -SF chains observed in the $^{245}\text{Cm}+^{48}\text{Ca}$ reaction must arise from the decay of $^{291}\text{116}$ produced via the 2n-evaporation channel. Then, the shorter chains should be assigned to the decay of even-even $^{290}\text{116}$, the product of 3n-evaporation.” Two decay chains of the isotope were observed.

Adapted from reference ([2013Th02](#))

[2004Og07](#) Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **69**, 054607 (2004).

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

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