^{288}Fl

^{288}Fl was first identified by Oganessian et al. in "Measurements of cross sections for the fusion-evaporation reactions ^{244}Pu(^{48}Ca,xn)$^{292-x}$114 and ^{245}Cm(^{48}Ca,xn)$^{293-x}$116" in 2004 (2004Og07). ^{48}Ca beams of 243, 250, and 257 MeV from the Dubna U400 cyclotron bombarded a PuO_2 target enriched ^{244}Pu and a CmO_2 target enriched in ^{245}Cm. ^{288}Fl and ^{289}Fl were produced in (4n) and (3n) reactions, respectively, on the PuO_2 target. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Subsequent α particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector. "At E*=41 MeV, 47 and 53 MeV, we observed 12 events of the decay of a new nuclide that undergoes sequential ER$-\alpha-$SF decay over the span of about 1 second. The maximum yield of this nuclide, ^{288}114, corresponds to E* <43 MeV and a peak production cross section of $5.3^{+3.6}_{-2.1}$ pb." Based on these results the previous assignment for the observation of ^{288}Fl (2000Og05, 2000Og07) was changed to ^{289}Fl. A comprehensive overview of the reviewing the status of the discovery of these isotopes is presented in reference (2007Og01).

Adapted from reference (2013Th02)

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