^{228}Pu

In 1994, Andreyev et al. reported the discovery of ^{228}Pu in the paper "New nuclides ^{228,229}Pu" (1994An02). Enriched ^{207}Pb and ^{208}Pb targets were bombarded with a 5.50 MeV/u ^{24}Mg and a 5.58 MeV/u ^{26}Mg beam from the Dubna U400 cyclotron. ^{228}Pu was formed in the fusion-evaporation reaction ^{208}Pb(^{24}Mg,4n). ^{228}Pu was separated with the VASSILISSA electrostatic separator and implanted into a position sensitive silicon strip detector which also recorded subsequent α decay. "Applying the time window of 0-4 ms three additional correlation chains starting from the α-decays with the average energy of E_{α_I}=(7810±20) keV were found in the products of the ^{208}Pb(^{24}Mg,4n)^{228}Pu reaction at the beam energy of E/A=5.50 MeV/u. They were assigned to ^{228}Pu on the basis of the genetic correlations with the α decays of known isotope ^{224}U ($E_{\alpha_{II}}$=8470 keV) and the full sum of the pulses from its daughter products ^{224}Th+^{216}Ra ($E_{\alpha_{III+IV}}$=18140 keV)."

Adapted from reference (2013Fr02)

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