^{184}Lu

^{184}Lu was identified by Rykaczewski et al. as reported in "Investigation of neutron-rich rare-earth nuclei including the new isotopes ^{177}Tm and ^{184}Lu" in 1989 (1989Ry04). A stack of tungsten and tantalum foils were bombarded with 9-15 MeV/u ^{136}Xe, ^{186}W, and ^{238}U beams from the GSI UNILAC accelerator. Plastic scintillators and Ge(Li) detectors were used to measure β- and γ-ray spectra, respectively following on-line mass separation. "No coincidences of 107 keV γ-rays with γ-lines other than 368 and 243 keV were found. Thereby, a direct feeding of the 2^+ level in β-decay of a low-spin ground or isomeric state of ^{184}Lu is very likely. This was confirmed in an additional measurement with a 0.7 mm thick aluminium foil in front of the β-detector to absorb β-rays with energies $\leq$0.45 MeV. With these high-energy β-rays, 107 keV γ-rays and Hf K X-rays were measured in coincidence, which represents clear evidence for β-decay of a low-spin ^{184}Lu state to the 107 keV, 2^+ level in ^{184}Hf." The reported half-life was $\sim$18 s.

Adapted from reference (2012Gr19)

1989Ry04 K. Rykaczewski, K. L. Gippert, N. Kaffrell, R. Kirchner *et al.*, Nucl. Phys. A **499**, 529 (1989).

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