^{153}Lu

^{153}Lu was observed by McNeill et al. in their 1989 paper "Exotic N=82 nuclei ^{153}Lu and ^{154}Hf and filling of the $\pi h_{11/2}$ subshell" (1989Mc07). A 245 MeV ^{54}Fe beam from the Daresbury NSF tandem accelerator bombarded an enriched ^{102}Pd target populating ^{153}Lu in the (2pn) fusion-evaporation reaction. The Daresbury Recoil Mass Separator RMS was used to separate the reaction products which were then implaned in an aluminum catcher surrounded by four large Ge detectors and a low-energy photon spectrometer. "The ^{153}Lu γ-rays decayed with the half-life $t_{1/2}$=15$\pm$3 μs, and they are all placed in the isomeric decay scheme ... on the basis of the comprehensive $\gamma\gamma$ coincidence results." A second isomer with a half-life of $>$100 ns was assigned to the 23/2$^-$ state. The ground state half-life of 0.9(2) s was submitted only two months later by Nitschke et al. (1989Ni04). In an even earlier report the existence of ^{153}Lu was inferred from α-correlation measurements: "Further, correlations were measured between the α lines of ^{157}Ta$-^{153}$Tm and ^{156}Hf$-^{152}$Er that prove a β-decay of the new isotopes ^{153}Lu, ^{152}Yb, and ^{152}Tm." (1981Ho10). However, no properties of ^{153}Lu or its decay were measured.

This assignment was changed from the original compilation (2012Gr19) which credited Nitschke et al. with the discovery of ^{153}Lu.

1981Ho10 S. Hofmann, G. Munzenberg, F. Hessberger, W. Reisdorf *et al.*, Z. Phys. A **299**, 281 (1981).

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