^{151}Tm

In the 1982 paper "Yrast $(\pi h_{11/2})^n$ excitations in proton rich N=82 nuclei" Helppi et al. identified ^{151}Tm (1982He08). ^{95}Mo and ^{93}Nb targets were bombarded with 255 MeV ^{58}Ni and ^{60}Ni beams from the Argonne Tandem-Linac forming ^{153}Tm and ^{153}Yb, respectively. ^{151}Tm was then formed in (2n) and (1p1n) fusion-evaporation reactions. Gamma-ray spectra were measured with Ge(Li) and NaI detectors. "Since in addition the lines were found to be coincident with Tm X-rays, they are assigned to the N=82 nucleus ^{151}Tm. The detailed results showed that the four transitions occur in cascade, de-exciting an isomer with $T_{1/2}$=470±50 ns, and they established the E2 character for the 140 keV transition." The cascade of the four γ-rays populate the ground state. The half-life of the ground state (3.8(8) s) was reported only five months later by Nolte et al. (1982No13).

Adapted from reference (2013Fr10)

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1982No13 E. Nolte, G. Korschinek, and Ch. Setzensack, Z. Phys. A **309**, 33 (1982).

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