# $^{155}$Tm

$^{155}$Tm was first observed by Toth et al. as reported in the 1971 paper "Investigation of thulium $\alpha$ emitters; new isotopes $^{155}$Tm and $^{156}$Tm" (1971To10). The Oak Ridge isochronous cyclotron was used to bombard enriched $^{144}$Sm and $^{147}$Sm targets with $^{14}$N beams of up to 103 MeV and $^{155}$Tm was formed in (3n) fusion evaporation reactions, respectively. A helium gas system transported recoil products in front of a Si(Au) detector where subsequent $\alpha$-emission was detected. "The sum of the two curves, labeled $A_1(t)+A_2(t)$, is seen to agree with the data points; thus the decay data obtained at 65 MeV for the 4.60-MeV peak are certainly consistent with our assignment of the 4.45-MeV $\alpha$-particle group to $^{155}$Tm" The measured half-life of 39(3) s for $^{155}$Tm was subsequently questioned (1977Ag01), however, later Toth et al. demonstrated that their first experiment was likely a sum of the ground state (21.6(2) s) and an isomeric state (45(3) s).

Adapted from reference (2013Fr10)


1971To10 K. S. Toth, R. L. Hahn, and M. A. Ijaz, Phys. Rev. C **4**, 2223 (1971).

1977Ag01 P. Aguer, G. Bastin, C. F. Liang, J. Libert *et al.*, J. Phys. (Paris) **38**, 435 (1977).

2013Fr10 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 520 (2013).



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