

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 185, 2 (2022)	23-Aug-2022

$Q(\beta^-) = -10610$ SY; $S(n) = 13250$ SY; $S(p) = -250$ SY; $Q(\alpha) = 2760$ SY [2021Wa16](#)

$\Delta Q(\beta^-) = 360$, $\Delta S(n) = \Delta S(p) = \Delta Q(\alpha) = 200$ (syst, [2021Wa16](#)).

$Q(\epsilon) = 9800$ 200, $Q(\epsilon p) = 6760$ 220, $S(2n) = 24110$ 200, $S(2p) = 2760$ 200 (syst, [2021Wa16](#)).

^{149}Tm isotope produced and identified by [1987To12](#).

^{153}Lu isomers with $h_{11/2}$ and $s_{1/2}$ orbitals have been identified from ^{157}Ta α decay ([1997Ir01](#)). It is possible that these isomers decay by α decay to ^{149}Tm . Gross theory of β decay ([1973Ta30](#)) predicts $\% \alpha \approx 70$, but calculations of [2019Mo01](#) give $T_{1/2}(^{153}\text{Lu} \alpha \text{ decay}) = 10 \times 10^{16.67}$ s, suggesting negligible $\% \alpha$ decay.

Theoretical studies: consult the NSR database at www.nndc.bnl.gov/nsr/ for three references for structure and two for radioactive decay listed under 'document records' which can be accessed through web retrieval of the ENSDF database at www.nndc.bnl.gov/ensdf/.

[Additional information 1.](#)

 ^{149}Tm Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	$(11/2^-)$	0.9 s 2	$\% \epsilon + \% \beta^+ = 100$; $\% \epsilon p = 0.2 + 2 - 1$ (1987To12) J^π : probable $h_{11/2}$ proton state and systematics of neighboring isotones. $T_{1/2}$: from 1987To12 , γ -decay curves.