

^{151}Tb α decay [1967Go32](#),[1974To07](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	N. Nica and B. Singh		NDS 181, 1 (2022)	9-Mar-2022

Parent: ^{151}Tb : E=0.0; $J^\pi=1/2^{(+)}$; $T_{1/2}=17.609$ h 14; $Q(\alpha)=3496$ 4; % α decay=0.0095 15

^{151}Tb -E, J^π , $T_{1/2}$: from [2009Si01](#).

^{151}Tb - $Q(\alpha)$: from [2021Wa16](#).

^{151}Tb -% α decay: from [1974To07](#).

Others: [1953Ra02](#), [1958To33](#), [1964Ma19](#), [1965Gr28](#), [1967Ko09](#), [1969To04](#).

 ^{147}Eu Levels

E(level)	J^π [†]	$T_{1/2}$	Comments
0.0	$5/2^+$	24.1 d 6	$T_{1/2}$: from Adopted Levels.
229.3	$7/2^+$		

[†] Adopted values.

 α radiations

E_α	E(level)	I_α [‡]	HF [†]	Comments
3183 5	229.3	0.1	71 12	E_α : from 1967Go32 , mag spect. I_α : from 1967Go32 .
3407 4	0.0	99.9	5.7 10	E_α : from evaluation by 1991Ry01 . E=3409 5 (1967Go32 , mag spect).

[†] The nuclear radius parameter $r_0(^{147}\text{Eu})=1.5772$ 70 is deduced from interpolation (or unweighted average) of radius parameters of the adjacent even-even nuclides.

[‡] For absolute intensity per 100 decays, multiply by 9.5×10^{-5} 15.

 $\gamma(^{147}\text{Eu})$

E_γ	I_γ [†]	E_i (level)	J_i^π	E_f	J_f^π	Mult.	δ	α [‡]	Comments
229.32 2	100	229.3	$7/2^+$	0.0	$5/2^+$	M1+E2	+0.13 2	0.180 3	All data from Adopted Gammas (I_γ is the relative photon branching from level).

[†] For absolute intensity per 100 decays, multiply by 8.1×10^{-8} 13.

[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays