

^{152}Dy ε decay [1974De21,1975AIZE](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 114, 1497 (2013)	31-Aug-2013

Parent: ^{152}Dy : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=2.38$ h 2; $Q(\varepsilon)=600$ 40; $\% \varepsilon$ decay=99.900 7

Measured: γ , K x ray ([1974De21,1974To07,1975Gr35](#)), K x ray(t) ([1975AIZE](#)).

 ^{152}Tb Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}$	Comments
0.0	2^-		
256.93 13	1^+	0.39 ns 8	$T_{1/2}$: from 1975AIZE .

† Adopted values.

 ε radiations

E(decay)	E(level)	$I\varepsilon^\dagger$	Log ft	Comments
(3.4×10^2) 4)	256.93	100	3.87 13	$\varepsilon K=0.801$ 7; $\varepsilon L=0.153$ 5; $\varepsilon M+=0.0463$ 18

† For absolute intensity per 100 decays, multiply by 0.99900 7.

 $\gamma(^{152}\text{Tb})$

I_γ normalization: $\log f^{\text{u}}_t > 8.5$ leads to an expected branch to the 2^- g.s. of $<0.01\%$ and thus $I(\gamma+\text{ce})(256\gamma) > 99.99$. The evaluator adopts 99.995 5.

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J^π_i	E_f	J^π_f	Mult.	$\alpha^\ddagger$	Comments
256.93 13	97.60 4	256.93	1^+	0.0	2^-	E1	0.0245 4	$\alpha(K)=0.0208$ 3; $\alpha(L)=0.00293$ 5; $\alpha(M)=0.000637$ 9; $\alpha(N+..)=0.0001691$ 24 $\alpha(N)=0.0001459$ 21; $\alpha(O)=2.19 \times 10^{-5}$ 3; $\alpha(P)=1.296 \times 10^{-6}$ 19 E_γ : weighted average of 256.81 10 (1974De21), 256.5 3 (1974To07), 257.1 1 (1975Gr35). Mult.: $\alpha(K)_{\text{exp}}=0.0258$ 21; $K/L=7.3$ 7 (1975Gr35), $\alpha(K)_{\text{exp}}=0.018$ 2 (1974De21).

† For absolute intensity per 100 decays, multiply by 0.99895 9.

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

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch

