

^{172}Lu IT decay (440 μs) [1967Co26](#),[1966Gr22](#),[1965Bj01](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 75,199 (1995)	31-May-1995

Parent: ^{172}Lu : E=109.21 11; $J^\pi=(1)^+$; $T_{1/2}=440 \mu\text{s}$ 12; %IT decay=100.0

Measured $T_{1/2}$, G.

Other: [1967Co20](#).

 ^{172}Lu Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}$	Comments
0.0	4^-		
41.86 4	1^-		
109.21 11	$(1)^+$	440 μs 12	$T_{1/2}$: weighted average of 430 μs 50 (1965Bj01), 450 μs 20 (1966Gr22) and 434 μs 15 (1967Co26).

† From Adopted Levels.

 $\gamma(^{172}\text{Lu})$

E_γ	$I_\gamma^{\ddagger\ddagger}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	$\alpha^\#$	$I_{(\gamma+ce)}^{\ddagger\ddagger}$	Comments
41.86 4	0.0039 2	41.86	1^-	0.0	4^-	M3	2.58×10^4	100	$\alpha(\text{L})=1.85 \times 10^4$; $\alpha(\text{M})=5.43 \times 10^3$ E_γ : from ce data in ^{172}Hf ε decay (1962Va07). Mult.: from L-subshell ratios in ^{172}Hf ε decay.
67.35 10	50.4 8	109.21	$(1)^+$	41.86	1^-	E1	0.99	100	$\alpha(\text{K})=0.800$; $\alpha(\text{L})=0.1452$; $\alpha(\text{M})=0.0326$; $\alpha(\text{N}+..)=0.00896$ E_γ : from ^{172}Hf ε decay (1979To18). Mult.: from ce data in ^{172}Hf ε decay.

† From $I(\gamma+ce)/(1+\alpha)$.

‡‡ Absolute intensity per 100 decays.

$^\#$ 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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