

^{171}Lu IT decay (79 s) [1965Ba10](#),[1965Bj01](#),[1967Gi10](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin, E. A. Mccutchan		NDS 151, 334 (2018)	30-Jun-2018

Parent: ^{171}Lu : E=71.10 9; $J^\pi=1/2^-$; $T_{1/2}=79$ s 2; %IT decay=100.0

Identification: decay observed in Lu activity milked from separated ^{171}Hf .

 ^{171}Lu Levels

E(level) [‡]	J^π [†]	$T_{1/2}$ [†]	Comments
0.0	$7/2^+$	8.247 d 23	
71.10 9	$1/2^-$	79 s 2	%IT=100 $T_{1/2}$: from 1967Gi10 . Other value: 76 s 4 (1965Bj01).

[†] From the Adopted Levels.

[‡] From E_γ .

 $\gamma(^{171}\text{Lu})$

I_γ normalization: from $T_i(71.1)=100\%$.

E_γ	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	α [‡]	$I_{(\gamma+ce)}$ [†]	Comments
71.10 9	0.210 3	71.10	$1/2^-$	0.0	$7/2^+$	E3	475	100	ce(K)/($\gamma+ce$)=0.00333 8; ce(L)/($\gamma+ce$)=0.742 9; ce(M)/($\gamma+ce$)=0.200 4; ce(N+)/($\gamma+ce$)=0.0520 12 ce(N)/($\gamma+ce$)=0.0465 11; ce(O)/($\gamma+ce$)=0.00545 13; ce(P)/($\gamma+ce$)=5.19×10 ⁻⁶ 12 E_γ : from Adopted Gammas. I_γ : deduced from $I(\gamma+ce)$ and α . Mult.: from $\alpha(L)\text{exp}$. $\alpha(K)\text{exp}=3.0$ 10 ($I_\gamma(K \text{ x ray})/I_\gamma$ (1965Bj01)); $\alpha(L)\text{exp}=400$ 150 ($\text{Ice}(L)/I_\gamma$ and $\text{Ice}(L)/I_\gamma(K \text{ x ray})$ (1965Bj01), $\alpha(L)\text{exp}=500$ 80 (simultaneous I_γ and Ice measurements (1969Gi06)); L2/L3=0.93 10 (1970Gi03).

[†] 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 multiplicities, and mixing ratios, unless otherwise specified.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0

