^{122}Cs IT decay (0.36 s) 1983We07,1987WeZW

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. Tamura	NDS 108, 455 (2007)	30-Sep-2006

Parent: ^{122}Cs: E=127.05 *18*; $J^\pi=(5)^-$; $T_{1/2}$=0.36 s *2*; %IT decay=100.0

1987WeZW,1983We07: Ce,La(^{3}He,spallation) E(^{3}He)=280 MeV on-line MS semi, ce, $\gamma\gamma$-coin.

Other: 1969NeZX; ^{109}Ag(^{18}O,5n) E(^{18}O)=94 MeV, ^{113}In(^{12}C,3n) E(^{12}C)=68 MeV; measured γ, ce and excitation functions.

^{122}Cs Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	1^+	21.18 s *19*	
45.85 *15*	$(3)^+$	>1 μs	$T_{1/2}$: estimated from 3-parameter coin (1987WeZW).
127.05 *18*	$(5)^-$	0.36 s *2*	$T_{1/2}$: from ce-multiscaler counting (1983We07). Other: 0.35 s *7* (1969NeZX).

γ(^{122}Cs)

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
45.85 *15*	0.80 *10*	45.85	$(3)^+$	0.0	1^+	E2	33.8	α(K)=8.52; α(L)=19.59; α(M)=4.25 α(L)exp=16.6 *+30−23*, L:M=253 *8*:60 *5*. Evaluator assumes the L/M ratio could be much near to the theoretical value (33.7) than the presented value 4.6.
81.20 *10*	2.26 *10*	127.05	$(5)^-$	45.85	$(3)^+$	M2	20.24	α(K)=15.72; α(L)=3.55; α(M)=0.761; α(N+..)=0.2087 α(K)exp=11.6 *8*, α(M)exp=0.86 *9*, K/L=3.25 *15*. Evaluator assumes α(K)exp(81.2)=12.8, K/L(81.2)=3.59.

[†] From α(K)exp; data are normalized to ce(K)(331γ in ^{122}Xe) as mult.=E2 (1987WeZW); Evaluator notes that the 81.2-K and 45.9-L peak seems to be inadequately divided by 1987WeZW. This might be a cause of a large imbalance at 45.9 keV level.

[‡] For absolute intensity per 100 decays, multiply by 2.08 *11*.

[#] 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

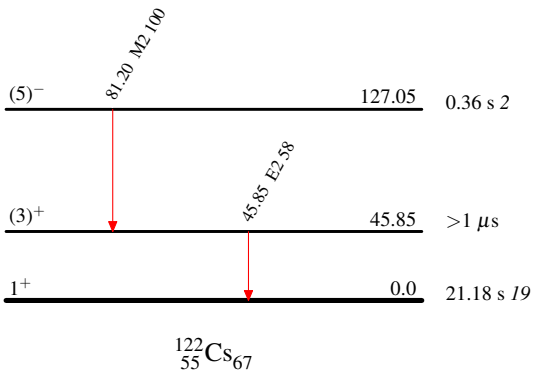
%IT=100.0

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{122}_{55}Cs_{67}$