^{125}In β^- decay (2.36 s) 1976Fo02,1978Al18

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112, 495 (2011)	1-Jan-2010

Parent: ^{125}In: E=0.0; $J^\pi=9/2^+$; $T_{1/2}$=2.36 s *4*; Q(β^-)=5418 *30*; %β^- decay=100.0

1976Fo02: U(n,F), on-line mass, semi γ, ce, $\gamma\gamma$ coin, $\beta\gamma$(t).

1978Al18: U(n,F), on-line mass, plastic scin coin-anticoin arrangement $\beta\gamma$-coin.

Other: 1974Gr29.

The decay scheme is that proposed by 1976Fo02.

^{125}Sn Levels

E(level)†	J^π‡	$T_{1/2}$‡
0.0	$11/2^-$	9.64 d *3*
27.50 *14*	$3/2^+$	9.52 min *5*
617.89 *9*	$(9/2^-)$	
854.69 *15*	$7/2^+$	
936.50 *9*	$(7/2)^-$	
1059.26 *17*	$7/2^+$	
1362.52 *10*	$7/2^+$	
2176.1 *4*	7/2,9/2,11/2	

† From a least-squares fit to Eγ's by evaluators.

‡ From Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^-†	Log *ft*	Comments
$(3.24\times10^3$ *3*)	2176.1	0.93 *15*	5.89 *8*	av Eβ=1358 *14*
$(4.06\times10^3$ *3*)	1362.52	79 *10*	4.38 *6*	av Eβ=1742 *15* Log *ft*: Allowed spectrum assumed for calcuations by LOGFT. E$_\beta$=4080 *7*, 4085 *19*, and 4080 *31* are reported by 1987Sp09 from $\beta\gamma$-coin with gates on the 1335, 745, and 426γ's, respectively. The authors' systematic uncertainty of 30 keV must be added in quadrature. Other: 4130 *80* (1978Al18).
$(4.36\times10^3$ *3*)	1059.26	9.6 *13*	5.43 *6*	av Eβ=1885 *15* Log *ft*: Allowed spectrum assumed for calcuations by LOGFT. E(decay): 4340 *280* from (β)(1031.75γ)-coin (1978Al18).
$(4.48\times10^3$ *3*)	936.50	0.5 *3*	6.8 *3*	av Eβ=1943 *15*
$(4.56\times10^3$ *3*)	854.69	1.9 *3*	6.22 *7*	av Eβ=1982 *15*
$(4.80\times10^3$ *3*)	617.89	1.3 *7*	6.48 *24*	av Eβ=2094 *15*
$(5.42\times10^3$ *3*)	0.0	<17	>5.6	av Eβ=2387 *15* Iβ^-: From 100 − ΣIγ(to g.s. + 27.5 level)=7 *10*.

† Absolute intensity per 100 decays.

^{125}In β^- decay (2.36 s) 1976Fo02,1978Al18 (continued)

$\gamma(^{125}Sn)$

Iγ normalization: From branching of 617.9γ, 7.4% *8* (1986Go10).

E_γ ‡	I_γ ‡&	E_i(level)	J_i^π	E_f	J_f^π	Mult. @	α †#	Comments
[x]318.7 *4*	0.12 *3*							
426.03 *10*	2.5 *2*	1362.52	$7/2^+$	936.50	$(7/2)^-$			α(K)exp<0.009.
507.7 *2*	0.5 *1*	1362.52	$7/2^+$	854.69	$7/2^+$			
617.88 *10*	8.0 *4*	617.89	$(9/2^-)$	0.0	$11/2^-$	(M1,E2)	0.0044 *4*	α=0.0044 *4*; α(K)=0.0038 *3*; α(L)=0.000482 *20*; α(M)=9.4×10^{-5} *4*; α(N+..)=1.92×10^{-5} *9* α(N)=1.77×10^{-5} *8*; α(O)=1.50×10^{-6} *13* Mult.: From α(K)exp=0.0040 *25*.
744.62 *10*	5.6 *5*	1362.52	$7/2^+$	617.89	$(9/2^-)$			
827.15 *10*	2.5 *2*	854.69	$7/2^+$	27.50	$3/2^+$			
936.50 *10*	3.0 *2*	936.50	$(7/2)^-$	0.0	$11/2^-$			
1031.75 *10*	10.3 *6*	1059.26	$7/2^+$	27.50	$3/2^+$			
1335.04 *10*	76 *4*	1362.52	$7/2^+$	27.50	$3/2^+$	(E2)	0.000728 *11*	α=0.000728 *11*; α(K)=0.000607 *9*; α(L)=7.29×10^{-5} *11*; α(M)=1.422×10^{-5} *20*; α(N+..)=3.37×10^{-5} *5* α(N)=2.68×10^{-6} *4*; α(O)=2.32×10^{-7} *4*; α(IPF)=3.08×10^{-5} *5* Mult.: From adopted gammas; (M1,E2) from α(K)exp=0.0007 *3*.
1362.5 *3*	0.25 *5*	1362.52	$7/2^+$	0.0	$11/2^-$			
1558.2 *4*	1.0 *1*	2176.1	7/2,9/2,11/2	617.89	$(9/2^-)$			

† Additional information 1.
‡ From 1976Fo02.
# α(K)exp from 1976Fo02.
@ From α(K)exp of 1976Fo02 based on relative Iγ and I_{ce}(K) intensities normalized using ^{85m}Kr and ^{135m}Xe standards.
& For absolute intensity per 100 decays, multiply by 0.93 *9*.
x γ ray not placed in level scheme.

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Decay Scheme

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