^{117}In β^- decay (116.2 min) 1970Ba62

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Mar-2009

Parent: ^{117}In: E=315.302 *12*; $J^\pi=1/2^-$; $T_{1/2}$=116.2 min *3*; Q(β^-)=1455 *5*; %β^- decay=52.9 *15*
^{117}In-%β^- decay: from 1975Ta06.
Measured: γ, $\gamma\gamma$, β (1970Ba62).
Others: 1954Le09, 1955Mc17, 1939Co04.
See also ^{117}In IT decay.
α: Additional information 1.

^{117}Sn Levels

E(level)	J^π[†]	$T_{1/2}$[†]
0	$1/2^+$	stable
158.6	$3/2^+$	
1004.4		
1020.3		

[†] From Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^-[†]	Log *ft*	Comments
(750 *5*)	1020.3	0.021 *4*	8.80 *9*	av Eβ=247.4 *20*
(766 *5*)	1004.4	0.0068 *16*	9.32 *11*	av Eβ=253.6 *20*
(1612 *5*)	158.6	18.3 *18*	7.10 *5*	av Eβ=609.8 *23*
(1770 *5*)	0	34.6 *24*	6.99 *4*	av Eβ=680.4 *23*
				β^-: Eβ=1772 *5*, Iβ=55%; Eβ=1616 *5*, Iβ=23% (1955Mc17).

[†] For absolute intensity per 100 decays, multiply by 0.529 *15*.

$\gamma(^{117}Sn)$

Iγ normalization: from %IT=47.1 *15* for ^{117}In IT decay and Iγ(315γ)/Iγ(158γ)=1.21 *12* from 1970Ba62.

E_γ[†]	I$_\gamma$[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α	Comments
158.6 *2*	100	158.6	$3/2^+$	0	$1/2^+$	M1	0.1556	α(K)exp=0.110 *12* α(K)=0.1346 *20*; α(L)=0.01700 *25*; α(M)=0.00333 *5*; α(N)=0.000627 *9*; α(O)=5.44×10^{-5} *8* α(N+..)=0.000681 *10* α(K)exp: From K x ray/G. Mult.: Also from electron measurement in ^{117}Sn IT decay (1968Bo09).
846.1 *12*	0.012 *7*	1004.4		158.6	$3/2^+$			
861.6 *5*	0.12 *2*	1020.3		158.6	$3/2^+$			
1004.4 *7*	0.039 *8*	1004.4		0	$1/2^+$			
1020.3 *7*	0.043 *9*	1020.3		0	$1/2^+$			

[†] From 1970Ba62.
[‡] For absolute intensity per 100 decays, multiply by 0.159 *17*.

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Decay Scheme

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