^{117}In β^- decay (43.2 min)   **1970Ba62**

History

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

Parent: ^{117}In: E=0; J$^\pi$=9/2$^+$; T$_{1/2}$=43.2 min *3*; Q(β^-)=1455 *5*; %β^- decay=100.0

1987Fu07 measure $\beta\gamma$.

Others: 1969Be02, 1954Le09, 1955Mc17, 1956Go27.

$\gamma\gamma(\theta)$: 552γ-158γ A$_2$=−0.043 *6* 1965Ma23.

α: Additional information 1.

^{117}Sn Levels

E(level)	J$^{\pi\dagger}$	T$_{1/2}$†	Comments
0	1/2$^+$	stable	
158.6	3/2$^+$		
314.6	11/2$^-$	13.60 d *4*	
711.5	7/2$^+$	980 ps *30*	T$_{1/2}$: from 1987Fu07, Other: 1.0 ns *1* (1970Ba62).

† From Adopted Levels.

β^- radiations

E(decay)	E(level)	I$\beta^{-\dagger}$	Log *ft*	Comments
(744 *5*)	711.5	99.83	4.4	av Eβ=244.9 *20*
(1140 *5*)	314.6	0.17	7.9	av Eβ=405.9 *21*

† Absolute intensity per 100 decays.

γ(^{117}Sn)

Iγ normalization: Ti(158γ)=100.

Eγ†	Iγ†‡	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.	α	Comments
156.0		314.6	11/2$^-$	158.6	3/2$^+$			
158.6 *2*	87 *9*	158.6	3/2$^+$	0	1/2$^+$	M1	0.1556	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* Mult.: from electron measurement in ^{117}Sn IT decay (1968Bo09).
396.6 *4*	0.174 *8*	711.5	7/2$^+$	314.6	11/2$^-$			Iγ: from 1987Fu07.
552.9 *2*	100 *10*	711.5	7/2$^+$	158.6	3/2$^+$			

† From 1970Ba62.
‡ Absolute intensity per 100 decays.

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Decay Scheme

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

Legend

$I_\gamma < \ 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

| $9/2^+$ | 0 | 43.2 min 3 |
| $Q_{\beta^-}=1455$ 5 | | $\%\beta^-=100$ |

$^{117}_{49}In_{68}$

| $\underline{I\beta^-}$ | $\underline{Log\ ft}$ |
| 99.83 | 4.4 |

$7/2^+$ 711.5   980 ps 30

552.9 100
396.6 0.174

156.0
158.6 M1 101

| 0.17 | 7.9 |

$11/2^-$ 314.6   13.60 d 4

$3/2^+$ 158.6

$1/2^+$ 0   stable

$^{117}_{50}Sn_{67}$