

$^{108}\text{Sb}$   $\beta^+$  decay [1997Sh13,1976Ox01](#)

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2008

Parent:  $^{108}\text{Sb}$ :  $E=0.0$ ;  $J^\pi=(4^+)$ ;  $T_{1/2}=7.4$  s 3;  $Q(\beta^+)=9533.0$  SY;  $\% \beta^+$  decay=100.0

[1997Sh13](#):  $^{108}\text{Sb}$  was produced by fusion-evaporation reaction induced by  $^{58}\text{Ni}$  beam from unilac on  $^{58}\text{Ni}$  target and on-line separated. A febiad-E ion source was used.

Measured:  $\gamma$ ,  $\gamma\gamma$ ,  $\gamma(t)$ .

[1976Ox01](#): The authors observed two gammas having  $\approx 7$ -s half-lives which they tentatively assign to the decay of the heretofore unobserved nucleus  $^{108}\text{Sb}$ .  $^{108}\text{Sb}$  was formed through the  $^{112}\text{Sn}(p,5n)$  reaction. The two observed gammas are the same as previously observed in the reactions  $^{100}\text{Ru}(^{12}\text{C},4n\gamma)$  ([1969InZZ](#)) and  $^{106}\text{Cd}(\alpha,2n\gamma)$  ([1969Ya05](#)). The authors give a level scheme with two levels (1206, 2111).

The level scheme is as given by [1997Sh13](#).

 $^{108}\text{Sn}$  Levels

E(level)	$J^\pi$	E(level)	$J^\pi$	E(level)	$J^\pi$	E(level)	$J^\pi$
0.0	$0^+$	2154.8 3	$(2^+)$	2640.2 4		2975.5 3	$(3^+,4^+)$
1205.8 2	$2^+$	2363.8 3	$6^+$	2804.3 4		3074.5 6	
2110.51 25	$4^+$	2478.7 4		2854.5 3	$4^+$		

 $\gamma(^{108}\text{Sn})$ 

$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
253.3 2	3.8 6	2363.8	$6^+$	2110.51	$4^+$	1205.8 2	100	1205.8	$2^+$	0.0	$0^+$
490.7 3	1.3 3	2854.5	$4^+$	2363.8	$6^+$	1272.9 3	15 2	2478.7		1205.8	$2^+$
529.7 4	1.2 2	2640.2		2110.51	$4^+$	1434.4 4	3.7 8	2640.2		1205.8	$2^+$
744.0 3	2.0 3	2854.5	$4^+$	2110.51	$4^+$	1598.5 3	19 3	2804.3		1205.8	$2^+$
820.7 3	5.0 8	2975.5	$(3^+,4^+)$	2154.8	$(2^+)$	1648.6 4	7.2 12	2854.5	$4^+$	1205.8	$2^+$
865.0 3	6.5 10	2975.5	$(3^+,4^+)$	2110.51	$4^+$	1769.7 5	6.6 11	2975.5	$(3^+,4^+)$	1205.8	$2^+$
904.8 2	26 4	2110.51	$4^+$	1205.8	$2^+$	1868.7 5	3.9 8	3074.5		1205.8	$2^+$
949.2 3	5.3 9	2154.8	$(2^+)$	1205.8	$2^+$	2154.4 5	4.1 8	2154.8	$(2^+)$	0.0	$0^+$

$^\dagger$  From [1997Sh13](#).

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Decay Scheme

Legend

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

Intensities: Type not specified

$\% \epsilon + \% \beta^+ = 100$   $\begin{matrix} (4^+) & 0.0 & 7.4 \text{ s } 3 \\ Q_\epsilon = 9533.0 \text{ SY} \\ ^{108}\text{Sb}_{57} \end{matrix}$

