

^{197}Bi ε decay (5.04 min) 1991Va09

Type	Author	History	Citation	Literature Cutoff Date
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Parent: ^{197}Bi : $E=500$ SY; $J^\pi=(1/2^+)$; $T_{1/2}=5.04$ min 16; $Q(\varepsilon)=5061$ 10; $\% \varepsilon + \% \beta^+$ decay=45 40

^{197}Bi - $\% \varepsilon + \% \beta^+$ decay: From $5\% \leq I_\alpha \leq 95\%$ (1985Co06).

Sources produced by $\text{Re}(^{16}\text{O}, \text{xn})$ and $\text{Ir}(^{14}\text{N}, \text{pxn})$ (1991Va09).

1991Va09: measured E_γ , I_γ , $I_{x\text{-ray}}$, I_{ce} , $\gamma\gamma(t)$, $eG(t)$, $\gamma(x\text{-ray})(t)$ $\gamma\gamma$ -coin. By HpGe, Ge(Li), Si(Li) detectors.

γ -intensities, which belong to the ε decay of $1/2^+$ isomer in ^{197}Bi , relative to the 854.5-keV line (the strongest line in ε decay of ^{197}Bi g.s.), is low (2%); this indicates that, first of all, the the low-spin isomer in ^{197}Bi is poorly fed in the heavy-ion reaction (5%) and that, secondly, the competition of the α -decay channel becomes important ($15 \leq \alpha \text{ br} \leq 95\%$). The β^+/ε decay of low-spin isomer in ^{197}Bi is too weak. The decay scheme cannot be constructed.

 ^{197}Pb Levels

E(level) [†]	J^π [†]	$T_{1/2}$ [†]
0	$3/2^-$	8.1 min 17
84.9 1	$5/2^-$	
319.31 11	$13/2^+$	42.9 min 9

[†] From Adopted Levels.

 $\gamma(^{197}\text{Pb})$

I_γ normalization: Cannot be given.

E_γ [‡]	I_γ [†]	$E_i(\text{level})$
^x 215.3 3	0.3 1	
^x 1809.0 3	2.5 2	
^x 1837.7 3	2.6 4	

[†] Relative intensity renormalized to $I_\gamma(854.5\gamma)$, attributed to ε decay of g.s. in ^{197}Bi =100.

[‡] Belong to ε decay of ^{197}Bi (5.04 min).

^x γ ray not placed in level scheme.