^{194}Bi α decay (95 s) 1991Va04,1988Hu03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, [1] and Jun Chen[2]	NDS 169, 1 (2020)	15-Oct-2020

Parent: ^{194}Bi: E=0.0; J^π=(3$^+$); $T_{1/2}$=95 s *3*; Q(α)=5918 *5*; %α decay=0.46 *25*
^{194}Bi-J^π,$T_{1/2}$: From ^{194}Bi Adopted Levels in the ENSDF database (April 2006 update). No new data available.
^{194}Bi-Q(α): From 2017Wa10.
^{194}Bi-%α decay: from 1991Va04.
1991Va04, 1988Hu03 (also 1985HuZY: measured α, $\alpha\gamma$ coincidences.

^{190}Tl Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	2$^-$		
151.3 *3*	(3$^+$)	>34 ns	$T_{1/2}$: from $\alpha\gamma$(t) (1991Va04).

α radiations

Eα[†]	E(level)	Iα[‡&]	HF[@]
5645 *5*	151.3	99.41[#] *7*	0.9 *6*
5799 *5*	0.0	0.59 *7*	7.9×10^2 *45*

[†] From 1991Va04. Uncertainty from 1988Hu03.
[‡] From 1991Va04, renormalized to Iα(total)=100.
[#] Iα=37 *1* relative to 100 for 5598α from (10$^-$) isomer (1988Hu03).
[@] r_0(^{190}Tl)=1.490 *9*, deduced from neighboring nuclides, based on r_0 values in 2020Si16 evaluation.
[&] For absolute intensity per 100 decays, multiply by 0.0046 *25*.

γ(^{190}Tl)

E$_\gamma$	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.	α[†]	Comments
151.3 *3*	151.3	(3$^+$)	0.0	2$^-$	E1	0.1523 *23*	α(K)exp=0.13 *3* (1991Va04) α(K)=0.1232 *19*; α(L)=0.0224 *4*; α(M)=0.00523 *8* α(N)=0.001304 *20*; α(O)=0.000242 *4*; α(P)=1.78×10^{-5} *3* E$_\gamma$: on the basis of multipolarity and level lifetime, 1991Va04 suggest that this γ is different from 151.19γ reported in ^{190}Pb ε decay.

[†] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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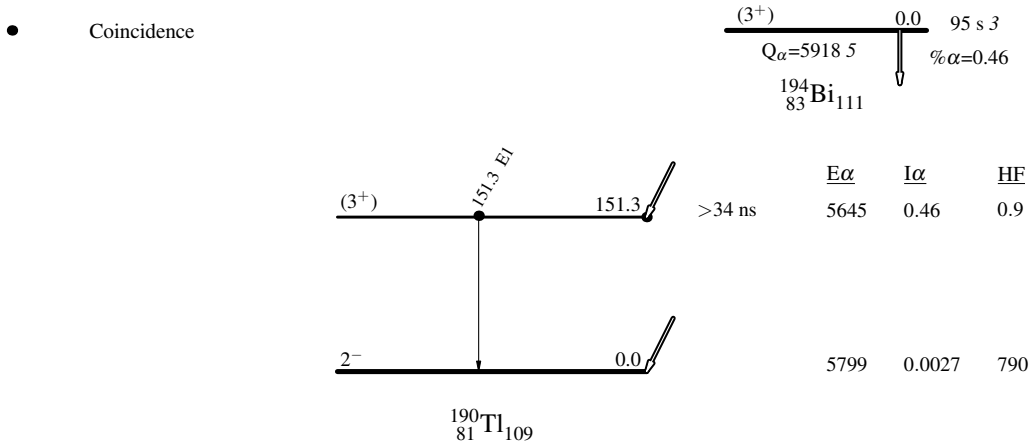
Legend

● Coincidence

Decay Scheme



	Eα	Iα	HF
	5645	0.46	0.9
	5799	0.0027	790