^{192}Bi α decay (34.6 s) 1991Va04,1988Hu03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Juutinen, D. J. Hartley	NDS 150, 1 (2018)	1-Feb-2018

Parent: ^{192}Bi: E=0.0; J^π=(3$^+$); $T_{1/2}$=34.6 s *9*; Q(α)=6377 *4*; %α decay=12 *5*
^{192}Bi-E,J^π,$T_{1/2}$: From 2012Ba36. Other: $T_{1/2}$=20 s *3* (2013Ny01).
^{192}Bi-%α decay: From 2012Ba36.

1991Va04 (and 1988Hu03): sources from ^{nat}Re(^{16}O,xn), E(^{16}O)<180 MeV, ^{181}Ta(^{20}Ne,xn) and ^{182}W(^{20}Ne,pxn), E(^{20}Ne)<240 MeV, mass separation; measured time-sequential α, x-ray, and γ-ray spectra, $\alpha\gamma$ coin, Xγ coin.

^{188}Tl Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0.0	(2$^-$)	71 s *2*	$T_{1/2}$: From Adopted Levels. configuration: $\pi s_{1/2}\otimes\nu p_{3/2}$.
184.6 *3*	(3$^+$)	34 ns *4*	J^π: 184.6γ E1 to (2$^-$); favored decay from ^{192}Bi α decay (J^π=(3$^+$)). $T_{1/2}$: From $\alpha\gamma$(t) in 1991Va04. configuration: $\pi h_{9/2}\otimes\nu p_{3/2}$.

[†] From adopted values.

α radiations

Eα[‡]	E(level)	Iα[‡#]	HF[†]	Comments
6060 *5*	184.6	97.0 *6*	1.3 *6*	Eα: Other: 6064 keV *5* (2013Ny01).
6245 *5*	0.0	3.0 *6*	2.4×10^2 *11*	

[†] r_0=1.503 *5*, average of values in neighboring even-Z nuclei: r_0(^{186}Hg)=1.491 *5*, r_0(^{188}Hg)=1.500 *13*, r_0(^{188}Pb)=1.511 *8* and r_0(^{190}Pb)=1.511 *6*.
[‡] From 1991Va04.
[#] For absolute intensity per 100 decays, multiply by 0.12 *5*.

γ(^{188}Tl)

E$_\gamma$[‡]	I$_\gamma$[#]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.[‡]	α[†]	Comments
184.6 *3*	88.8 *6*	184.6	(3$^+$)	0.0	(2$^-$)	E1	0.0927	α(K)=0.0754 *11*; α(L)=0.01329 *20*; α(M)=0.00311 *5* α(N)=0.000775 *12*; α(O)=0.0001446 *22*; α(P)=1.104×10^{-5} *16* I$_\gamma$: From Iα(6060α)=97.0 *6* and α by the evaluators. Mult.: α(K)exp=0.057 *12* (1991Va04).

[†] Additional information 1.
[‡] From 1991Va04.
[#] For absolute intensity per 100 decays, multiply by 0.12 *5*.

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Decay Scheme

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