^{195}Bi α decay (183 s) 1985Co06,1974Le02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 195,368 (2024)	1-Dec-2023

Parent: ^{195}Bi: E=0.0; J$^{\pi}$=9/2^{-}; $T_{1/2}$=183 s *4*; Q(α)=5832 *5*; %α decay=0.03 *2*
^{195}Bi-J$^{\pi}$: From 2016Ba42 (laser spectroscopy), also shell model calculations (1986Lo05).
^{195}Bi-$T_{1/2}$: From α(t) (1985Co06). Also in 2014Hu18 (evaluation).

^{195}Bi was produced from the ^{181}Ta(^{20}Ne,6n) (1985Co06,1970Ta14,1974Le02,1967Tr06), ^{185}Ir(^{16}O,6n) (1985Co06,1974Le02), and Re(^{16}O,xn) (1985Co06) reactions.

1985Co06: α decay of mass-separated Bi isotopes is studied to characterize shell-model intruder states. Measured Eα, Iα and $T_{1/2}$.
1974Le02: Measured Eα, Iα and $T_{1/2}$.

^{191}Tl Levels

E(level)	J$^{\pi}$	$T_{1/2}$	Comments
0	1/2^{+}		Configuration=π $s_{1/2}$ (1985Co06).
297 *7*	9/2^{-}	5.22 min *16*	E(level): From Eα=5422 keV *5* and Qα(^{195}Bi). 297 keV *7* (2021Ko07 – NUBASE). J$^{\pi}$: from 9/2^{-} level systematics (1985Co06); HF of α-transition from 9/2^{-} state in ^{195}Bi; configuration=π($h_{9/2}$) (1985Co06, and references therein). $T_{1/2}$: From Adopted Levels.

α radiations

Eα	E(level)	Iα †#	HF ‡	Comments
5422 *5*	297	91 *1*	1.7 *12*	Eα: Weighted average of 5420 *5* (1985Co06) and 5430 keV *10* (1974Le02). Others: 5480 keV *20* (1970Ta14), 5420 keV (1966Si11). HF: 1985Co06 estimate 1.1≤HF≤9.7, consistent with an unhindered decay.
5713 *5*	0	9 *1*	4.7×10^{2} *32*	Eα: from 1985Co06. Iα: from Iα(Eα=5713 keV)/Iα(Eα=5422 keV)=(10 *1*) % (1985Co06), Eα=5420 keV in 1985Co06. HF: A range of 300≤HF≤3000 is quoted in 1985Co06.

† From 1985Co06.
‡ Calculated by evaluator using r_0(^{191}Tl)=1.475 *13*, obtained from the neighboring even-even isotones, r_0(^{190}Hg)=1.437 *24* and r_0(^{192}Pb)=1.513 *3* (2020Si16).
# For absolute intensity per 100 decays, multiply by 0.0003 *2*.