

^{212}Bi α decay (25.0 min) [1984Es01](#),[1978Ba44](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 108,1583 (2007)	1-Jun-2007

Parent: ^{212}Bi : $E=250$; $J^\pi=(9^-)$; $T_{1/2}=25.0$ min 2; $Q(\alpha)=6207.26$ 3; $\% \alpha$ decay=67 1

^{212}Bi - $\% \alpha$ decay: $\% \alpha=67$ 1 from $I(25 \text{ min } ^{212}\text{Bi } \alpha)/I(^{212}\text{Po } \alpha)$ ([1984Es01](#)).

Produced by ^{204}Hg , ^{205}Tl , ^{208}Pb (90-195 MeV ^{18}O , x pyn) reaction; chem. ([1984Es01](#)).

Produced by ^{238}U (288-340 MeV ^{40}Ar); chem. ms [1978Ba44](#).

This data set is identical to that in [1992Ar05](#), except for the following J^π changes. $J^\pi(\text{g.s.})$ from $5^{(+)}$ to 5^+ , $J^\pi(40)$ from $4^{(+)}$ to 4^+ , and $J^\pi(328)$ from $5^{(+)}$ to 5^+ , and an update of $Q(\alpha)$ As given in [2003Au03](#).

 ^{208}Tl Levels

E(level) [†]	J^π	Comments
0.0	5^+	
39.857 4	4^+	
328.04 4	5^+	E(level): from $\Delta Q(\alpha)$ E(level)=336.
621 3	(6^+)	E(level): from $\Delta Q(\alpha)$ E(level)=601.

[†] From 60.55 min ^{212}Bi g.s. α decay.

 α radiations

For known γ 's deexciting the levels in ^{208}Tl fed by these α 's, see Adopted Gammas.

$E\alpha$ [†]	E(level)	$I\alpha$ ^{†&}	HF ^{‡#}	Comments
5750	621	0.7 3	≈ 100	
6010	328.04	7.5 15	≈ 180	
6300	39.857	38.8 @ 15	≈ 540	$E\alpha$: from 1978Ba44 .
6340	0.0	52.2 @ 15	≈ 570	$E\alpha$: from 1978Ba44 .

[†] From [1984Es01](#), unless otherwise noted.

[‡] $r_0(^{208}\text{Tl})=1.50$ 2.

[#] The radius parameter is poorly known, and alone contributes an uncertainty of $\Delta(\text{HF})=+53\%$ and -35% .

@ $I\alpha(6300+6340)=61\%$ of the 25 min ^{212}Bi decay ([1984Es01](#)) and $I\alpha(6300)/I\alpha(6340)=0.75$ ([1978Ba44](#)).

& For absolute intensity per 100 decays, multiply by 0.67 1.