

^{158}Ta α decay (55 ms) [1997Da07,1996Pa01](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 200,2 (2025)	22-Aug-2022

Parent: ^{158}Ta : $E=0$; $J^\pi=(2^-)$; $T_{1/2}=55$ ms 15; $Q(\alpha)=6124$ 4; $\% \alpha$ decay=95 5

^{158}Ta - $Q(\alpha)$: From [2021Wa16](#).

^{158}Ta - E : [Additional information 1](#).

^{158}Ta - J^π : [Additional information 2](#).

^{158}Ta - $T_{1/2}$: [Additional information 3](#).

^{158}Ta - $\% \alpha$ decay: $\% \alpha \approx 93$ estimated from $T_{1/2}(\varepsilon + \beta^+) \approx 0.8$ s (gross beta-decay theory ([2019Mo01](#))) and the adopted $T_{1/2}$;

$\% \alpha = 100$ 8 ([1997Da07](#)); $\% \alpha \approx 100$ ([2021Ko07](#)). As suggested by [1997Da07](#) $\% \alpha = 95$ 5 is adopted to match the value from the ^{158}Ta α decay (36.0 ms), which also includes the listed values.

[Additional information 4](#).

Production: from ^{162}Re α decay.

 ^{154}Lu Levels

E(level)	J^π	Comments
0	(2 ⁻)	E(level): Assignment of α to ground state (1997Da07). J^π : From ^{154}Lu Adopted Levels.

 α radiations

$E\alpha$	E(level)	$I\alpha^\ddagger$	HF [†]	Comments
5968 4	0	100	2.4 8	$E\alpha$: Weighted average of 5969 8 (1996Pa01) and 5968 5 (1997Da07). $I\alpha$: The only observed branch.

[†] The nuclear radius parameter $r_0(^{154}\text{Lu})=1.5570$ 56 is deduced from interpolation of radius parameters of the adjacent even-even nuclides in [2020Si16](#).

[‡] For absolute intensity per 100 decays, multiply by 0.95 5.