
 ^{158}Hf α decay [1996Pa01,1983To01,1979Ho10](#)

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

Parent: ^{158}Hf : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=2.85$ s 7; $Q(\alpha)=5404.8$ 27; $\% \alpha$ decay=44.3 19

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

^{158}Hf - $Q(\alpha)$: [Additional information 2](#).

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

^{158}Hf - $\% \alpha$ decay: Weighted average of: 0.46 3 ([1979Ho10](#)); 0.40 4 ([1989Wo02](#)); and 0.45 3 ([1996Pa01](#)).

[Additional information 3](#).

Produced by $^{144}\text{Sm}(^{20}\text{Ne},6n)$ with $E(^{20}\text{Ne})=143$ MeV ([1983To01](#)) and $E(^{20}\text{Ne})=92$ MeV ([1965Ma14](#)) and products implanted in Si detector ([1979Ho10](#)).

 ^{154}Yb Levels

E(level)	J^π	$T_{1/2}$	Comments
≥ 0	0^+	0.409 s 2	$T_{1/2}$: Adopted value.

 α radiations

E_α	E(level)	$I_\alpha^\ddagger$	HF †	Comments
5268 3	≥ 0	100	1	E_α : Weighted average of: 5268 5 (1979Ho10); 5263 5 (1983To01); and 5269 4 (1996Pa01). Prior to the averaging, the values of 1979Ho10 and 1983To01 were increased by 1 keV to take into account an energy-scale recalibration, as discussed by 1991Ry01 . Other: 5270 20 (1965Ma14).

† The nuclear radius parameter $r_0(^{154}\text{Yb})=1.5614$ 31 is deduced by assuming HF=1.0 for the ground-state to ground-state alpha decay branch.

‡ For absolute intensity per 100 decays, multiply by 0.443 19.