

$^{158}\text{Yb}$   $\alpha$  decay [1977Ha48](#)

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

Parent:  $^{158}\text{Yb}$ :  $E=0$ ;  $J^\pi=0^+$ ;  $T_{1/2}=1.49$  min *I3*;  $Q(\alpha)=4170$  *7*;  $\% \alpha$  decay= $0.0021$  *I2*

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

$^{158}\text{Yb}$ - $\% \alpha$  decay: From [1992Ha10](#). Other:  $\approx 0.00003$  ([1977Ha48](#)).

[Additional information 1.](#)

[1977Ha48](#): Produced by  $^{181}\text{Ta}(p,\text{spall})$  with  $E=600$  MeV ([1977Ha48](#)).

[1992Ha10](#): Produced by  $\text{Ca}(^{127}\text{I},x)$  with  $E \leq 711$  MeV. Measured  $\alpha$  with Si detectors.

 $^{154}\text{Er}$  Levels

<u>E(level)</u>	<u><math>J^\pi</math></u>	<u><math>T_{1/2}</math></u>
0	$0^+$	3.73 min <i>9</i>

 $\alpha$  radiations

<u><math>E_\alpha</math></u>	<u>E(level)</u>	<u><math>I_\alpha^\ddagger</math></u>	<u>HF<math>^\dagger</math></u>	<u>Comments</u>
4065 <i>7</i>	0	100	1.000	$E_\alpha$ : Average of 4069 <i>I0</i> ( <a href="#">1977Ha48</a> ) and 4059 <i>I2</i> ( <a href="#">1992Ha10</a> ).

$^\dagger$  The nuclear radius parameter  $r_0(^{154}\text{Er})=1.528$  *36* is deduced by assuming  $\text{HF}=1.0$  for the ground-state to ground-state alpha decay branch.

$^\ddagger$  For absolute intensity per 100 decays, multiply by 0.000021 *I2*.