

^{162}Re α decay (107 ms) [1997Da07](#)

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	N. Nica	NDS 141, 1 (2017)	1-Feb-2017

Parent: ^{162}Re : $E=0.0$; $J^\pi=(2^-)$; $T_{1/2}=107$ ms *I3*; $Q(\alpha)=6240$ 5; $\% \alpha$ decay ≈ 97.0

^{162}Re - $\% \alpha$ decay: from gross beta theory ([1973Ta30](#)), $T_{1/2}(\varepsilon+\beta+) \approx 3$ seconds, so $\% \varepsilon + \% \beta + \approx 3$ and $\% \alpha \approx 97$; and from measurement $> 3\%$ ([1979Ho10](#)). In [1997Da07](#) a value of $\% \alpha = 94\%$ 6, equal to their value for the isomer, is assumed.

$J^\pi, T_{1/2}$: from Adopted Levels, Gammas dataset ([2007Re16](#)).

$Q_\alpha(^{162}\text{Re})$: from [2012Wa38](#).

[1997Da07](#): Produced by $^{92}\text{Mo}(^{78}\text{Kr}, \text{pxn})$ at 357 and 384 MeV with separation in Fragment Mass Analyzer and implanted in silicon strip detector. Particles emitted were time and position correlated.

 ^{158}Ta Levels

<u>E(level)</u>	<u>J^π</u>	<u>$T_{1/2}$</u>	<u>Comments</u>
0.0	(2^-)	55 ms <i>I5</i>	Placement of this α branch between the parent and daughter ground states is from 1997Da07 .

 α radiations

<u>E_α</u>	<u>E(level)</u>	<u>I_α^\ddagger</u>	<u>HF[†]</u>
6086 5	0.0	100	≈ 2

[†] $r_0=1.560$ 5, weighted average of r_0 values for $^{160,162}\text{W}$ and $^{162,164}\text{Os}$ in [1998Ak04](#).

[‡] For absolute intensity per 100 decays, multiply by ≈ 0.97 .