

^{169}Re α decay (8.1 s) [1992Me10](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 194,460 (2024)	31-Oct-2022

Parent: ^{169}Re : $E=0$; $J^\pi=(9/2^-)$; $T_{1/2}=8.1$ s 5; $Q(\alpha)=5014$ 13; $\% \alpha$ decay <0.01

^{169}Re - $J^\pi, T_{1/2}$: From ^{169}Re Adopted Levels in the ENSDF database (March 2015 update). Adopted $T_{1/2}$ is taken from [1992Me10](#).

^{169}Re - $Q(\alpha)$: From [2021Wa16](#).

^{169}Re - $\% \alpha$ decay: $\% \alpha < 0.01$ from ^{169}Re Adopted Levels in the ENSDF database (March 2015 update).

[1992Me10](#): ^{169}Re ions were produced via $^{141}\text{Pr}(^{32}\text{S},4n)$ with 235 MeV ^{32}S beam from the VICKSI accelerator at the Hahn-Meitner-Institut in Berlin and collected with a helium-jet system and a fast transport-tape. α particles were detected with a 450 mm² SB α -detector mounted between a γ/X detector and a γ detector. Measured $E\alpha$, $I\alpha$, $\alpha(t)$. Deduced levels, parent $T_{1/2}$.

 ^{165}Ta Levels

E(level)[†]

25? 18

200? 18

[†] From measured $E\alpha$ and $Q(\alpha)(^{169}\text{Re})=5014$ 13.

 α radiations

<u>$E\alpha$</u>	<u>E(level)</u>	<u>$I\alpha^{\ddagger\#}$</u>	<u>HF[†]</u>
4700 12	200?	62	>1.1
4871 12	25?	38	>16

[†] The nuclear radius parameter $r_0(^{165}\text{Ta})=1.571$ 21 is deduced from interpolation of radius parameters of the adjacent even-even nuclides in [2020Si16](#).

[‡] From $I\alpha(4871)/I\alpha(4700)=62/100$ in [1992Me10](#), assuming no other α branches.

[#] For absolute intensity per 100 decays, multiply by <0.0001.