<center>^{164}**Re α decay (0.85 s)**   **1996Pa01,1981Ho10,2009Ha42**</center>

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 176,1 (2021)	1-May-2021

Parent: ^{164}Re: E=0.0; $T_{1/2}$=0.85 s +*14−11*; Q(α)=5926 *5*; %α decay=?

^{164}Re-E,$T_{1/2}$,Q(α): 2009Ha42 assumed this state to be the g.s. of ^{164}Re, and assumed the existence of an undetermined isomeric state as origin of a second α-decay branch.

^{164}Re-$T_{1/2}$: Measured in 2009Ha42. Other measurements: 0.38 s *16* (1996Pa01); and 0.88 s *24* (1979Ho10, 1981Ho10).

^{164}Re-Q(α): From 2021Wa16.

Additional information 1.

2009Ha42 was compiled for XUNDL database by B. Singh (McMaster) and K. Abusaleem (U. of Jordan).

2009Ha42: ^{164}Re source from ^{172}Au–>^{168}Ir decay chain, ^{172}Au produced in ^{96}Ru(^{78}Kr,pn) at E=342, 348 MeV. Measured: Eγ, Iγ, $\gamma(\theta)$, Eα, $\alpha\gamma$ coin, (recoil)α, (recoil)$\alpha\gamma$ coin, half-lives, α decay branching ratios.

1996Pa01: measured Eα, Iα, $T_{1/2}$, α branching ratio (52 decays).

1981Ho10: measured Eα, $T_{1/2}$, α branching ratio (19 decays).

BR=0.58 calculated by 1979Ho10, based on theoretically derived partial β decay half-life values (1973Ta30) and the measured $T_{1/2}$ value.

<center>^{160}Ta Levels</center>

The energy of the level populated in the α decay is not known.

E(level)
≥0.0

<center>α radiations</center>

Eα	E(level)	Iα	Comments
5782 *7*	≥0.0	100	Eα: weighted average of 5780 *10* (2009Ha42), 5784 *7* (1996Pa01), and 5778 *10* (1979Ho10) is 5781.5 *50*; the rounded-off value and smallest unc are adopted.