

$^{218}\text{U}$   $\alpha$  decay (0.51 ms) 2005Le42,2007Le14

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Shaofei Zhu and E. A. Mccutchan		NDS 175, 1 (2021)	1-May-2021

Parent:  $^{218}\text{U}$ :  $E=0.0$ ;  $J^\pi=0^+$ ;  $T_{1/2}=0.51$  ms  $+17-10$ ;  $Q(\alpha)=8775$  9;  $\% \alpha$  decay=100.0

$^{218}\text{U}$ - $Q(\alpha)$ : from 2021Wa16.

$^{218}\text{U}$ - $T_{1/2}$ : from Adopted Levels of  $^{218}\text{U}$  (2019Si39).

2005Le42,2007Le14:  $^{218}\text{U}$  was produced in  $^{182}\text{W}(^{40}\text{Ar},4n)$  reaction with a beam at 186 MeV; evaporation residues (ER) were separated in-flight by the RITU gas-filled separator and implanted into PAD or DSSD silicon detectors at the focal plane.  $E\alpha$  and  $T_{1/2}$  were measured by ER- $\alpha$ - $\alpha$  time and position correlations.

 $^{214}\text{Th}$  Levels

<u>E(level)</u>	<u><math>J^\pi</math></u>
0.0	$0^+$

 $\alpha$  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>
8612 9	0.0	100	1.000	$E\alpha$ : from 2005Le42 and 2007Le14. Other: 8625 25 (1992An04). $I\alpha$ : No $\alpha$ to $2^+$ was observed.

$^\dagger$   $r_0(^{214}\text{Th})=1.512$  17 is calculated from  $\text{HF}(8612\alpha)=1.0$ .

$^\ddagger$  Absolute intensity per 100 decays.