

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh et al. ,	NDS 175, 1 (2021)	19-May-2021

$Q(\beta^-)=-6140$ 90; $S(n)=6670$ 19; $S(p)=2643$ 22; $Q(\alpha)=9950$ 12 [2021Wa16](#)
 $S(2n)=15820$ 80 (syst), $S(2p)=3488$ 17, $Q(\epsilon p)=3640$ 17 ([2021Wa16](#)).

Additional information 1.

[1994Ye08](#), [1993An07](#), [1994AnZY](#): ^{219}U activity was produced in $^{197}\text{Au}(^{27}\text{Al},5n),E=149$ MeV reaction, and separated using the electrostatic recoil separator VASSILISSA. ^{219}U fragment was identified through the α -decay chain by α - α time correlation and genetic position analysis. Both α decays from the daughter- (^{215}Th) and from the granddaughter (^{211}Ra) nuclei were observed.

[2007Le14](#) (also [2005Le42](#)): ^{219}U produced in $^{182}\text{W}(^{40}\text{Ar},X),E=191,197$ MeV at JYFL, Jyvaskyla facility, RITU separator, GREAT spectrometer for particle detection. Measured α -particle spectrum and half-life of ^{219}U .

[2019Zh54](#): ^{219}U formed in $^{183}\text{W}(^{40}\text{Ar},4n),E=188$ MeV, followed by separation of evaporation residues (ERs) using SHANS separator at the HRIFL-Lanzhou facility. Measured ER- α_1 - α_2 correlations, $E\alpha$ and half-life of the decay of ^{219}U .

Theoretical calculations: 26 primary references in the NSR database (www.nndc.bnl.gov/nsr), two related to structure calculations, and 24 to radioactivity.

 ^{219}U Levels

E(level)	$T_{1/2}$	Comments
0	$60 \mu\text{s} 7$	$\% \alpha=100$ E(level): detected activity is assumed to correspond to the g.s. of ^{219}U . $\% \epsilon + \% \beta^+ = 3.5 \times 10^{-5}$, (2019Mo01 , theory). $T_{1/2}$: weighted average of $60 \mu\text{s} 7$ (2019Zh54 , ten ER- α correlated decay chains for strong α branch to the g.s. of ^{215}Fr , $T_{1/2}$ from α branches to the excited states are: $50 \mu\text{s} +50-17$ and $105 \mu\text{s} +73-30$); $0.08 \text{ ms} +10-3$ (2007Le14 , also 2005Le42 , implants- α correlated events); and $42 \mu\text{s} +34-13$ (1994Ye08 , 1993An07 , 1994AnZY , ER- α correlated events). J^π : $9/2^+$ proposed from systematics (2021Ko07).