

^{64}Se εp decay (22.6 ms) 2019Ru07

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 196,17 (2024)	30-Sep-2023

Parent: ^{64}Se : $E=0$; $J^\pi=0^+$; $T_{1/2}=22.6$ ms 2; $Q(\varepsilon\text{p})=12770$ syst; % εp decay=?

^{64}Se - $T_{1/2}$: From implant-proton correlation in 2019Ru07.

^{64}Se - $Q(\varepsilon\text{p})$: 12770 500 (syst,2021Wa16).

2019Ru07: ^{64}Se source was produced by fragmentation of $E=350$ MeV/nucleon ^{78}Kr beam on a ^9Be target at RIKEN. Fragments were separated and selected with the BigRIPS separator and implanted into the WAS3ABi device consisting of 3 DSSSDs, surrounded by the EURICA array. Measured E_γ , $E(\text{p})$, implant-p and implant- β correlations. Deduced parent levels, decay $T_{1/2}$.

All data are from 2019Ru07, unless otherwise noted.

Note that results from 2019Ru07 are preliminary as stated by the authors.

 ^{63}Ge Levels

E(level)	J^π	$T_{1/2}$	Comments
0	(3/2 ⁻)	153.3 ms 6	J^π : from Adopted Levels. $T_{1/2}$: from implant- β (t) in 2019Ru07.
417.5 1			

 $\gamma(^{63}\text{Ge})$

E_γ	$E_i(\text{level})$	E_f	J_f^π
417.5 1	417.5	0	(3/2 ⁻)

Delayed Protons (^{63}Ge)

$E(\text{p})^\dagger$	$E(^{63}\text{Ge})$	$E(^{64}\text{As})$
604 58	0	507.1
1580 36	417.5	1956.4
1986 34	0	1956.4
3262 44	0	3.16×10^3
3721 58	0	3.62×10^3
4001 66	0	3.90×10^3
4602 57	0	4.50×10^3

[†] From the decay scheme in Figure 6 of 2019Ru07. Note that $E(\text{p})$ values are also given in the proton spectrum of ^{64}Se decay in Figure 4, but none of them match the value quoted here.

⁶⁴Se ep decay (22.6 ms) 2019Ru07

Decay Scheme

