

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 125, 395 (2015)	31-Mar-2014

$Q(\beta^-)=1950$  SY;  $S(n)=4360$  SY;  $Q(\alpha)=4280$  SY    [2012Wa38](#)  
 $\Delta Q(\beta^-)=220$ ,  $\Delta S(n)=200$ ,  $\Delta Q(\alpha)=450$  (syst, [2012Wa38](#)).

## Identification:

[1983Po16](#), [1983Po14](#): Pu irradiated with neutron followed by chemical extraction and measured by semiconductor  $\gamma$  spectrometry.

## Theoretical studies:

[2002Du16](#): Calculated partial half-lives for  $\alpha$  and cluster decays.

[2005Pa73](#): Calculated neutron one-quasiparticle states of heaviest nuclei within a macroscopic-microscopic approach.

[1997Mo25](#): Calculated ground-state binding energy, proton and neutron pairing gaps, neutron and proton separation energies,  $Q$  values and partial half-lives for  $\alpha$  and  $\beta$  decays.

[1995Mo29](#): Calculated ground-state masses and nuclear ground-state deformations.

[1981Mo24](#): Calculated ground-state electric multipole moments  $Q_2$ ,  $Q_4$  and masses.

[1980Ho32](#): Calculated mass excess,  $S(n)$ ,  $S(p)$ ,  $Q(\beta)$ ,  $Q(\alpha)$ , fission-barrier heights, deformation and energy at saddle-point.

## Systematic studies:

[2011Ad15](#): Behavior of low-lying one-quasiparticle states studied in the isotonic chain  $N=147, 149, 151, 153$ , and  $155$  within the microscopic-macroscopic TCSM and self-consistent SHFB approaches. Comparison of calculated low-lying one-quasineutron states in  $^{247}\text{Pu}$  with available experimental data of  $^{249}\text{Cm}$  shows a rather good agreement.

 $^{247}\text{Pu}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0.0	$(1/2^+)$	2.27 d 23	$\% \beta^- = 100$ $\beta^-$ decay has been inferred through $^{247}\text{Am}$ activity. Direct $\beta^-$ decay scheme of $^{247}\text{Pu}$ to $^{247}\text{Am}$ was not studied. $T_{1/2}$ : Measured by <a href="#">1983Po14</a> (see also <a href="#">1983Po16</a> ) from the increase in the intensity of the 226- and 285-keV $\gamma$ 's in $^{247}\text{Am}$ $\beta^-$ decay. $J^\pi$ : In analogy to $^{249}\text{Cm}$ , $^{251}\text{Cf}$ and $^{253}\text{Fm}$ isotones, $J^\pi(\text{g.s.})$ is probably $1/2^+$ of the $1/2[620]$ orbital.