

Adopted Levels

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

$Q(\beta^-) = -4260$ SY; $S(n) = 6590$ SY; $S(p) = 3520$ SY; $Q(\alpha) = 8258$ IO [2012Wa38](#)
 $\Delta Q(\beta^-) = 240$, $\Delta S(n) = 120$, $\Delta S(p) = 250$ (syst, [2012Wa38](#)).

Identification:

[1967Fl15](#): Synthesized from $^{239}\text{Pu}(^{12}\text{C}, ^4\text{N})$. Identified by emitted α energies, $T_{1/2}$ and excitation functions.

Theoretical studies:

[2012Zh01](#): Comparison of the low-lying one-quasineutron band for $N=147$ isotones between the experimental values and calculated values using the cranked shell model (CSM) with pairing correlations.

[2011Ad15](#): One-quasiparticle levels for $N=147$ nuclei using the microscopic-macroscopic modified TCSM, QPM and the self-consistent SHFB approaches.

[2009Sa25](#): Calculated α decay $T_{1/2}$ using semi-empirical formulas, and compared with experimental values and systematics.

[2006Sh19](#): Calculated energy levels of ground-state rotational band in $N=147$ isotones.

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

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

[1997Mo25](#): Calculated ground-state binding energy, proton and neutron pairing gaps, neutron and proton separation energies, Q values.

[1995Mo29](#), [1980Ho32](#): Calculated ground-state masses and nuclear ground state deformations.

[1993Bu09](#): Calculated partial α decay half-life, α branching, nuclear radius using the cluster model predictions.

[1985Cw01](#): Calculated fission barrier.

[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.

 ^{247}Fm LevelsCross Reference (XREF) Flags

A ^{251}No α decay (0.80 s)
B ^{251}No α decay (1.02 s)

E(level)	J^π	$T_{1/2}$	XREF	Comments
0.0	(7/2 ⁺)	31 s 1	AB	$\% \alpha = 64$; $\% \varepsilon + \% \beta^+ = 36$ $T_{1/2}$: From 2006He27 . Others: 57 s +30-17 (2009Fo02), 29 s 1 (2004He28), 37 s +21-10 (1989He03), 35 s 4 (1967Fl15). J^π : From favoured alpha transition ($HF \approx 0.68$) from g.s level in ^{251}No and proposed configuration=7/2[624] (2006He27 , 2004He28). $\%IT = 12$ 2 (2006He27); $\% \alpha = 88$ 2 J^π : From favoured alpha transition ($HF \approx 1.1$) from 106-keV level in ^{251}No and proposed configuration=1/2[631] (2006He27 , 2004He28). $T_{1/2}$: From 2006He27 . Other: 4.3 s 4 (2004He28). E(level): From 2006He27 based on the mean value derived from the α energy in the αK x-ray measurement and the difference in measured $Q(\alpha)$ values for decays from g.s. to g.s and g.s to isomeric states.
45 7	(1/2 ⁺)	5.1 s 2	AB	