Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jagdish K. Tuli, and Edgardo Browne	NDS 185, 560 (2022)	31-Aug-2022

S(n)=6695 *26*; S(p)=4220 *60*; Q(α)=6839 *20* 2021Wa16

S(2n)=15230 *60*, S(2p)=7480 *23*, Q(ε)=2680 *60* (2021Wa16).

1999La14: ^{231}Pu produced in ^{233}U(^{3}He,5n),E=42-47 MeV; followed by chemical separation. Measured Eα; $\alpha\alpha$-correlations between the parent nucleus and the descendant nuclei to identify ^{231}Pu. The measured activities from the α-decay chains: ^{231}Pu $\rightarrow$ ^{227}U $\rightarrow$ ^{223}Th $\rightarrow$ ^{219}Ra $\rightarrow$ ^{215}Rn, and ^{231}Np $\rightarrow$ ^{227}Pa $\rightarrow$ ^{223}Ac $\rightarrow$ ^{219}Fr $\rightarrow$ ^{215}At, the latter from ^{231}Pu ε decay. The 6.72 MeV α-particle group from ^{231}Pu α decay was only partially resolved from other lines in the spectrum.

Additional information 1.

1985Ar25, 1985Po09: ^{197}Au(^{40}Ar,dα),E=60 MeV/nucleon; measured measured dα(θ), azimuthal (particle)(particle)(ϕ).

Theoretical calculations: consult the NSR database (www.nndc.bnl.gov/nsr/) for 18 primary references dealing with half-lives and other aspects of radioactive decays, and two for nuclear structure. These references are listed in 'document' records, which can be accessed through on-line ENSDF database at www.nndc.bnl.gov/ensdf/.

^{231}Pu Levels

Cross Reference (XREF) Flags

A ^{235}Cm α decay (5.0 min)

E(level)	J^{π}	$T_{1/2}$	XREF	Comments
0	(3/2$^+$)	8.6 min *5*	A	%ε+%β^+=90 +3−7; %α=10 +7−3 (1999La14) $T_{1/2}$: from 1999La14 (α-decay curve). J^{π}: assignment based on analogy with ^{229}U g.s. (J^{π}=(3/2$^+$)). Alpha HF=1.8 to ^{227}U g.s. (J^{π}=(3/2$^+$)) is consistent with J^{π}=(3/2$^+$) for ^{231}Pu g.s. Possible configuration=ν3/2[631].
324? *28*			A	