Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 189,1 (2023)	14-Feb-2023

Q(β^-)=−5130 *syst*; S(n)=6840 *syst*; S(p)=3120 *syst*; Q(α)=8440 *syst* 2021Wa16
ΔQ(β^-)=330, ΔS(n)=280, ΔS(p)=270, ΔQ(α)=100 (syst,2021Wa16).
S(2n)=15270 *240*, S(2p)=5380 *270*, Q(εp)=1430 *200* (syst,2021Wa16).

^{245}Fm Levels

Cross Reference (XREF) Flags

A ^{249}No α decay

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	(1/2$^+$)	5.6 s *7*	A	%α<100; %ε+%β^+=11.5 *+68−50*; %SF<0.3 J$^\pi$: (1/2$^+$) based on systematics of N=145 isotones (^{239}Pu, ^{241}Cm, ^{243}Cf); 1/2$^+$[631] calculated with the two-center shell model (TCSM) code (2010Ad19), and the cranked shell model (CSM) code with pairing correlations treated by a particle-number conserving (PNC) method (2012Zh01). %A ≈ 100 (2020Kh10). %ε+β from correlations of the ^{249}No alpha activity with subsequent alpha decays of energy 7728(20) keV and T$_{1/2}$= 1.2 m *+10−4* measured by 2022Te01 which corresponds to the α decay of ^{245}Es. Other: %ε < 7 based number of observed ^{245}Es (2020Kh10), %SF < 0.3 based on number of observed fission and α events (2020Kh10). T$_{1/2}$: Weighted average of 5.5 s *7* from time distribution (2022Te01), 7.7 s *+53−23* from ER-α-α(t) (2022Lo03) and 4.2 s *13* from α decay curve (1967Nu01). See also T$_{1/2}$=5.4 s *8* from 2021Sv02 (superseded and same group as 2022Te01). T$_{1/2}$(SF)>1.1 h, estimated from excitation function systematics (2000Ho27). Configuration=1/2$^+$[631].
10 *calc*	(3/2$^+$)		A	Additional information 1.
40 *calc*	(5/2$^+$)		A	Additional information 2. Configuration=5/2$^+$[622].

γ(^{245}Fm)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	E$_f$	J$_f^\pi$
10	(3/2$^+$)	(10† *1*)	0.0	(1/2$^+$)
40	(5/2$^+$)	(30† *1*)	10	(3/2$^+$)

† Deduced by 2022Te01 based on the broad alpha spectrum supported by Geant4 simulations.

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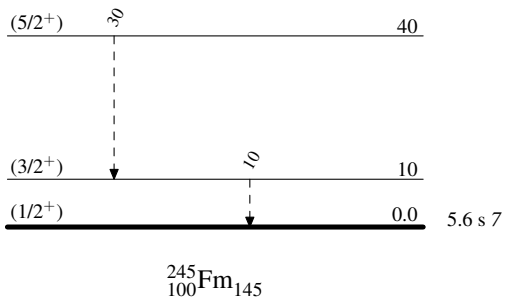
Level Scheme



$^{245}_{100}Fm_{145}$