Adopted Levels, Gammas

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

Q(β^-)=−2930 *syst*; S(n)=6164 *3*; S(p)=4618 *15*; Q(α)=7258.5 *18* 2021Wa16
ΔQ(β^-)=170 (syst,2021Wa16).
S(2n)=13750 *180* (syst), S(2p)=8374.7 *24* (2021Wa16).

^{245}Cf Levels

Cross Reference (XREF) Flags

A ^{249}Fm α decay
B ^{245}Es ε decay

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[‡]	1/2$^+$	45.0 min *14*	A	%α=35.1 *40*; %ε=64.9 *40* T$_{1/2}$: Unweighted average of 43.6 min *8* (1967Fi04) and 46.4 min *3* (1996Ma72). Other: 44 min (1956Ch43). %α,%ε: From the intensity of the 252-keV γ ray from ^{245}Bk ε decay (I(252γ)=31.2%) relative to the alpha-particle intensity from ^{245}Cf α decay (1996Ma72). The evaluator has adjusted the branching ratio using the current absolute intensity for (I(252γ)=30.4 % *27*) in ^{245}Bk ε decay Others: %α=36 *4* (1992ShZZ), %α= 36.0 *26* (1996Ma72), α≈30 (1956Ch43). J$^\pi$: Favored alpha decay to ^{241}Cm (J^π=1/2$^+$) from ^{245}Cf g.s.
≈10[‡]	(3/2$^+$)		A	J$^\pi$: Band member.
57 *4*	(7/2$^+$)		A	Configuration=ν7/2[624] (2012He09). J$^\pi$: The 7540-keV α from ^{249}Fm g.s. with J^π=(7/2)$^+$ is expected to be a favored transition.

[†] From ^{249}Fm α decay.
[‡] Band(A): 1/2[631] rotational band.

γ(^{245}Cf)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	E$_f$	J$_f^\pi$	Mult.	α[†]	Comments
57	(7/2$^+$)	47 *3*	≈10	(3/2$^+$)	[E2]	8.0×10^2 *30*	α(L)=5.8×10^2 *22*; α(M)=1.6×10^2 *6* α(N)=46 *17*; α(O)=11 *4*; α(P)=1.8 *7*; α(Q)=0.0042 *14* E$_\gamma$: From ^{249}Fm α decay.

[†] Additional information 1.

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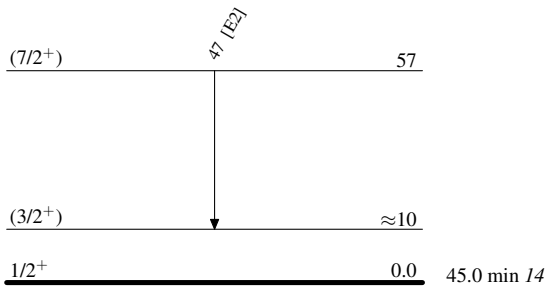
Level Scheme



$^{245}_{98}Cf_{147}$

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Band(A): 1/2[631]
rotational band

$(3/2^+)$ **≈10**

$1/2^+$ **0.0**

$^{245}_{98}Cf_{147}$