^{243}Bk ε decay 1975Ya03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja, E. A. Mccutchan	NDS 121, 695 (2014)	30-Sep-2013

Parent: ^{243}Bk: E=0.0; J^π=(3/2$^-$); $T_{1/2}$=4.5 h *2*; Q(ε)=1508 *5*; %ε+%β^+ decay=99.9

1975Ya03: ^{243}Bk activity from ^{241}Am(α,2n), Eα=32 MeV, followed by chemical and electromagnetic separation. Measured Eγ, Iγ with coaxial Ge(Li) detector, Ece, Ice with cooled Si(Li) detector and (X-ray)(ce)(t) with Na(Tl) detector and Si(Li) detector.

Others: 1966Ah02, 1956Ch77.

The data for ^{243}Bk ε decay is incomplete; a reliable decay scheme is not established.

α: Additional information 1.

^{243}Cm Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0.0	5/2$^+$	29.1[†] y *1*	
87.4 *1*	1/2$^+$	1.08 μs *3*	$T_{1/2}$: from (K x-ray)(ce 87.4γ)(t) (1975Ya03).

[†] From the Adopted Levels.

γ(^{243}Cm)

E$_\gamma$[†]	I$_\gamma$[‡]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.	α	Comments
87.4 *1*		87.4	1/2$^+$	0.0	5/2$^+$	E2	35.1	α(L)=25.4 *4*; α(M)=7.18 *11*; α(N)=2.00 *3* α(O)=0.483 *8*; α(P)=0.0800 *12*; α(Q)=0.000296 *5* α(L2)exp=13.5, α(L3)exp=8.8, α(M)exp=7.0, α(N+...)exp=2.6 (1975Ya03). Mult.: from ce data.
[x]755 *2*	10							
[x]840 *40*	3							
[x]946 *2*	≈8							

[†] 87.4γ is measurement of 1975Ya03. Other gammas are from 1966Ah02 and 1956Ch77.

[‡] Relative photon intensity (1966Ah02, 1956Ch77).

[x] γ ray not placed in level scheme.

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Decay Scheme

Intensities: Relative $I_{(\gamma+ce)}$