^{248}Cm SF decay   2001Fo02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	K. Abu Saleem, Z. Wu, S. Chaudhury, D, Bernard, E. Browne	ENSDF	31-Jan-2011

Parent: ^{248}Cm: E=0.0; J^π=0$^+$; $T_{1/2}$=3.48×10^5 y 6; %SF decay=?

Measured Eγ, $\gamma\gamma$, $\gamma\gamma\gamma$ using GAMMASPHERE at ANL.

1999Ur01, 1997Bh06: Earlier works, updated by the more extensive work of 2001Fo02.

^{134}Sb Levels

E(level)‡	$J^{\pi\dagger}$	$T_{1/2}$	Comments
279 1	(7$^-$)	10.07 s 5	%β^-=100; %β^-n=0.088 4 (1993Ru01)
			Additional information 1.
			E(level): From ^{135}Sn β^-n decay (2005Sh23).
			$T_{1/2}$: From Adopted Levels.
			Configuration=((π g$_{7/2}$)+(ν f$_{7/2}$)).
1351.7 3	(8$^-$)		Configuration=((π g$_{7/2}$)+(ν h$_{9/2}$)).
2405.3 3	(9$^+$)		Configuration=((π h$_{11/2}$)+(ν f$_{7/2}$)).
2713.0 3	(10$^+$)		Configuration=((π g$_{7/2}$)+(ν i$_{13/2}$)).
4373 1	(10$^-$)		
4704 1	(11$^-$)		
4796 1	(12$^-$)		
4849 1	(12$^-$)		
5045 1	(13$^-$)		
5324 1	(14$^-$)		

† As given by 2001Fo02, from $\gamma\gamma$ coincidences, γ intensity pattern, Shell Model calculations.

‡ Deduced by evaluators from least-squares fit to γ-ray energies assuming $\Delta E\gamma$=0.3 keV for γ-ray energies given to one decimal place, and ΔE=1 keV for those given to the nearest keV. Energies of levels above 1000 keV are relative to 279 keV for the ^{134}Sb (10.07 s) isomer.

$\gamma(^{134}$Sb)

E$_\gamma^\ddagger$	I$_\gamma$	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.‡	$\alpha^\dagger$	Comments
196		5045	(13$^-$)	4849	(12$^-$)			
249		5045	(13$^-$)	4796	(12$^-$)			
279		5324	(14$^-$)	5045	(13$^-$)			
307.5$^\#$	100	2713.0	(10$^+$)	2405.3	(9$^+$)	D		I$_\gamma$: From Iγ(308)/Iγ(2434) = 1.8 4.
423		4796	(12$^-$)	4373	(10$^-$)			
1053.2$^\#$		2405.3	(9$^+$)	1351.7	(8$^-$)			
1072.5$^\#$		1351.7	(8$^-$)	279	(7$^-$)			
1361.5$^\#$	13 3	2713.0	(10$^+$)	1351.7	(8$^-$)			I$_\gamma$: From RI(308)/RI(1361) = 8 2.
1968		4373	(10$^-$)	2405.3	(9$^+$)			
1991		4704	(11$^-$)	2713.0	(10$^+$)			
2083		4796	(12$^-$)	2713.0	(10$^+$)			
2126.5$^\#$		2405.3	(9$^+$)	279	(7$^-$)	(M2+E3)	0.00080 7	α=0.00080 7; α(K)=0.00052 7; α(L)=6.3×10^{-5} 8; α(M)=1.23×10^{-5} 16; α(N+..)=0.000205 9 α(N)=2.4×10^{-6} 3; α(O)=2.4×10^{-7} 3; α(IPF)=0.000202 10
2136		4849	(12$^-$)	2713.0	(10$^+$)			
2391		4796	(12$^-$)	2405.3	(9$^+$)			
2434	56 12	2713.0	(10$^+$)	279	(7$^-$)			I$_\gamma$: From RI(2434)/RI(1361) = 4.4 15.
2444		4849	(12$^-$)	2405.3	(9$^+$)			

^{248}Cm SF decay   2001Fo02 (continued)

$\gamma(^{134}\text{Sb})$ (continued)

† Additional information 2.
‡ Frpm 2001Fo02, unless otherwise specified.
# From 1999Ur01.

^{248}Cm SF decay   2001Fo02 (continued)

^{248}Cm SF decay   2001Fo02

Legend

Level Scheme

Intensities: Relative I_γ

$I_\gamma <\ 2\%\times I_\gamma^{max}$
$I_\gamma < 10\%\times I_\gamma^{max}$
$I_\gamma > 10\%\times I_\gamma^{max}$

$^{134}_{51}Sb_{83}$