

^{248}Cm SF decay 2004Ur03

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev		NDS 113, 1315 (2012)	1-Aug-2011

Parent: ^{248}Cm : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=348\times 10^3$ y 6; %SF decay=8.39 16

2004Ur03: Source: ^{248}Cm ; Detectors: EUROGAM2 array consisting of 52 large anti-Compton Ge detectors, including 24 four-crystal CLOVER detectors; Measured: E_γ , I_γ , $\gamma\gamma\gamma$, $\gamma\gamma(\theta)$ DCO; Deduced: level scheme.

 ^{110}Mo Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0 [#]	0 ⁺	0.296 s 17	$T_{1/2}$: From Adopted Levels.
213.7 [#] 5	2 ⁺		
599.3 [#] 7	(4 ⁺)		
1130.9 [#] 9	(6 ⁺)		
1782.9 [#] 10	(8 ⁺)		
2531.1 [#] 12	(10 ⁺)		E(level): The doppler broadening observed for the depopulating 748.2 γ implies a very short lifetime for this state.

[†] From a least-square fit to E_γ .

[‡] From 2004Ur03, based on the assigned g.s. band.

[#] Band(A): g.s. band.

 $\gamma(^{110}\text{Mo})$

E_γ [†]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	Comments
213.7 5	100 5	213.7	2 ⁺	0.0	0 ⁺		
385.6 5	50 5	599.3	(4 ⁺)	213.7	2 ⁺	(E2)	Mult.: $A_2/A_0=+0.08$ 3, $A_4/A_0=-0.04$ 3 (2004Ur03).
531.6 5	25 5	1130.9	(6 ⁺)	599.3	(4 ⁺)		
652.0 5	14 4	1782.9	(8 ⁺)	1130.9	(6 ⁺)		
748.2 5	6 2	2531.1	(10 ⁺)	1782.9	(8 ⁺)		

[†] From 2004Ur03. ΔE_γ were estimated by the evaluators. Assignment to ^{110}Mo is based on coincidences with γ rays of ^{136}Xe , which is the strongest fission-fragment partner.

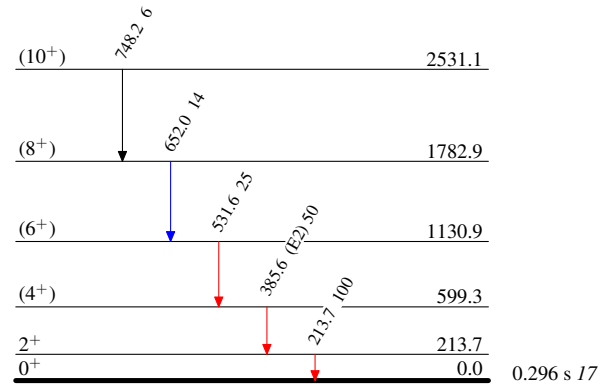
^{248}Cm SF decay 2004Ur03

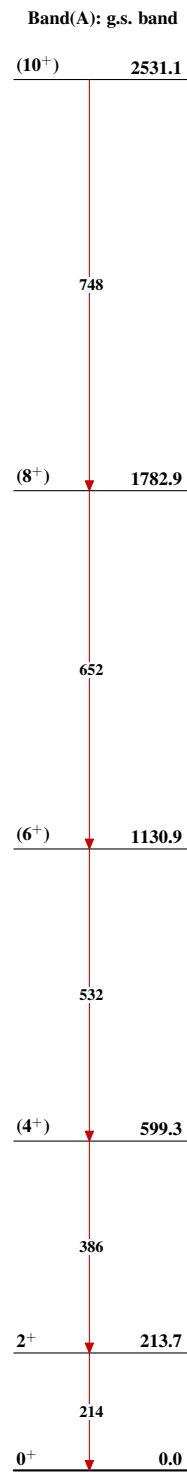
Level Scheme

Intensities: Relative I_γ

Legend

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

 $^{110}_{42}\text{Mo}_{68}$

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