

^{248}Cm SF decay 2009Ur02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, G. Mukherjee, A. A. Sonzogni		NDS 111, 2555 (2010)	30-Jun-2009

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

2009Ur02: ^{248}Cm SF decay; measured prompt and delayed γ rays, E_γ , I_γ , $\gamma\gamma$, $\gamma\gamma(\theta)$, $T_{1/2}$; EUROGAM2 array, 15 large escape-suppressed Ge detectors.

 ^{95}Y Levels

E(level) [†]	J^π	$T_{1/2}$	Comments
0.0	$1/2^-$		
826.8 2	$5/2^-$		
1087.5 3	$9/2^+$	51.2 μs 9	$T_{1/2}$: from $\gamma(t)$ in $^{235}\text{U}(n,\text{F}\gamma)$ study (2009Ur02).
1827.7 4	$(11/2^+)$		
2173.3 4	$13/2^+$		
3142.4 5	$17/2^-$	16 ns 3	$T_{1/2}$: from $\gamma(t)$ gated on 969.1 γ (2009Ur02).
3314.2 6	$(19/2^+)$		
3775.7 7	$(21/2^+)$		
4075.9 7	$(21/2^-)$		
4339.8 7	$(23/2^+)$		
4921.0 7	$(23/2^-)$		
5022.1 7	$(27/2^-)$	65 ns 4	$T_{1/2}$: from $\gamma(t)$ gated on 682.3 γ in ^{252}Cf SF decay.

[†] From least-squares fit to E_γ 's, assuming 0.3 keV uncertainty for each γ .

 $\gamma(^{95}\text{Y})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
171.8	30 3	3314.2	$(19/2^+)$	3142.4	$17/2^-$	D	Mult.: $\Delta J=1$, dipole from $(172\gamma)(1086\gamma)(\theta)$.
260.7		1087.5	$9/2^+$	826.8	$5/2^-$		
345.6	22 2	2173.3	$13/2^+$	1827.7	$(11/2^+)$		
461.5	14 2	3775.7	$(21/2^+)$	3314.2	$(19/2^+)$		
564.1	7 2	4339.8	$(23/2^+)$	3775.7	$(21/2^+)$		
682.3	2 1	5022.1	$(27/2^-)$	4339.8	$(23/2^+)$		
740.2	25 2	1827.7	$(11/2^+)$	1087.5	$9/2^+$		
761.7	3 1	4075.9	$(21/2^-)$	3314.2	$(19/2^+)$		
826.8		826.8	$5/2^-$	0.0	$1/2^-$		
969.1	50 4	3142.4	$17/2^-$	2173.3	$13/2^+$	(M2)	Mult.: Q from $(969\gamma)(1086\gamma)(\theta)$, M2 from isomer half-life.
1085.8	47 3	2173.3	$13/2^+$	1087.5	$9/2^+$	Q	Mult.: from $(969\gamma)(1086\gamma)(\theta)$.
1145.3	4 1	4921.0	$(23/2^-)$	3775.7	$(21/2^+)$		

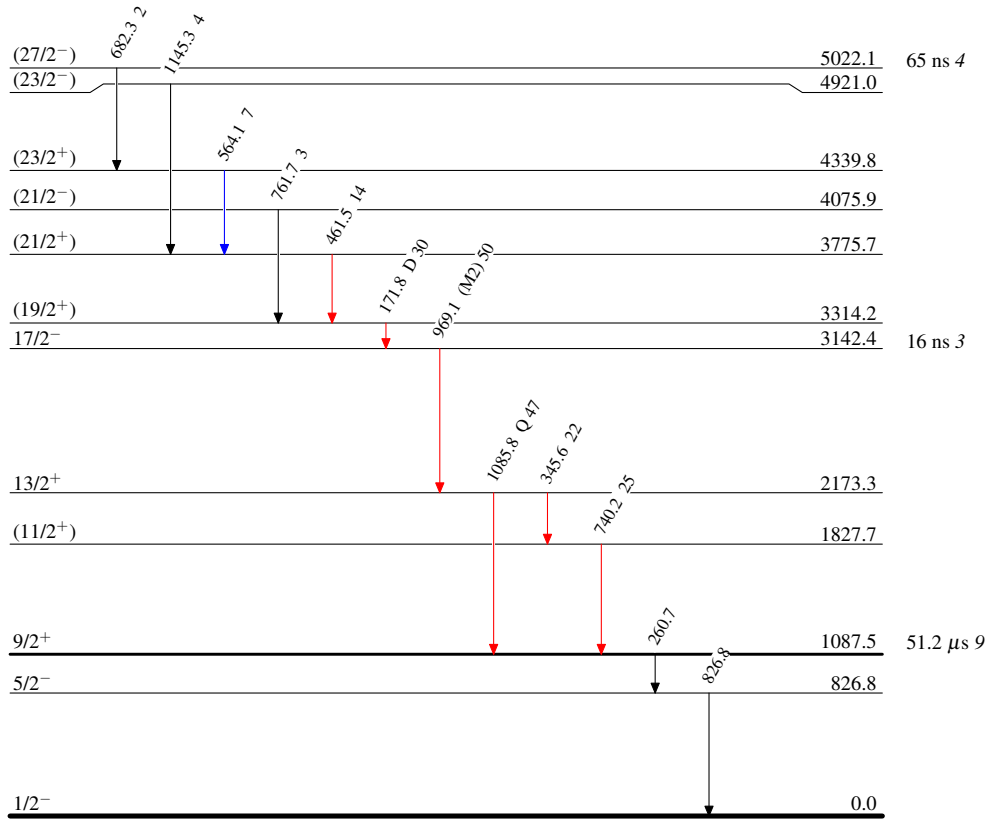
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Level Scheme

Intensities: Relative I_γ

Legend

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

 $^{95}_{39}\text{Y}_{56}$