

^{248}Cm SF decay [1997Ur01](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 154, 1 (2018)	20-Nov-2018

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

[1997Ur01](#): EUROGAM2, 52 Ge detectors, including 24 4-crystal clover detectors, 4 LEPS. Measured γ - γ - $\gamma(\theta)$. Assigned by coincidence with Zr partner.

^{140}Ba Levels

E(level) [†]	J^π	E(level) [†]	J^π	E(level) [†]	J^π	E(level) [†]	J^π
0.0 ^b	0 ⁺	1660.02 ^b 18	6 ⁺ ‡	2467.83 ^b 20	(8 ⁺)‡	3383.4 ^b 3	(10) ^a
601.90 ^b 10	2 ⁺ ‡	1802.01 ^c 23	3 ⁻ ‡	2722.4 ^c 3	(7) [@]	3769.0 ^c 4	
1130.20 ^b 15	4 ⁺ ‡	2151.96 ^c 23	(5 ⁻) [#]	3296.37 ^c 25	(9) ^{&}		

[†] From fit of energy levels from [1997Ur01](#).

[‡] From the Adopted Levels. Confirmed in the present study.

[#] J^π assignment: level not observed in β^- decay ([1997Ur01](#)).

[@] γ from (9); γ to (5⁻).

[&] $\Delta J=1$ dipole γ to (8⁺).

^a J^π assignment: membership in band ([1997Ur01](#)).

^b Band(A): g.s. band.

^c Band(B): octupole band.

$\gamma(^{140}\text{Ba})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
385.6 2	3 1	3769.0		3383.4	(10)		
473.0 [†] 2	2 1	3769.0		3296.37	(9)		
528.3 1	80 15	1130.20	4 ⁺	601.90	2 ⁺		
529.8 1	50 10	1660.02	6 ⁺	1130.20	4 ⁺	Q	DCO=0.87 8 from $\gamma\gamma$; DCO=1.04 14 from $\gamma\gamma\gamma$.
570.5 2	8 2	2722.4	(7)	2151.96	(5 ⁻)		
574.0 2	4 1	3296.37	(9)	2722.4	(7)		
601.9 1	100 10	601.90	2 ⁺	0.0	0 ⁺		
807.8 1	23 4	2467.83	(8 ⁺)	1660.02	6 ⁺	Q	DCO=0.8 2 from $\gamma\gamma$.
828.5 2	8 2	3296.37	(9)	2467.83	(8 ⁺)	D	DCO=1.4 3 from $\gamma\gamma$.
915.6 2	6 2	3383.4	(10)	2467.83	(8 ⁺)		
1021.8 2	5 1	2151.96	(5 ⁻)	1130.20	4 ⁺		
1062 2	7 1	2722.4	(7)	1660.02	6 ⁺		
1200.1 2	2 1	1802.01	3 ⁻	601.90	2 ⁺		

[†] Placement of transition in the level scheme is uncertain.

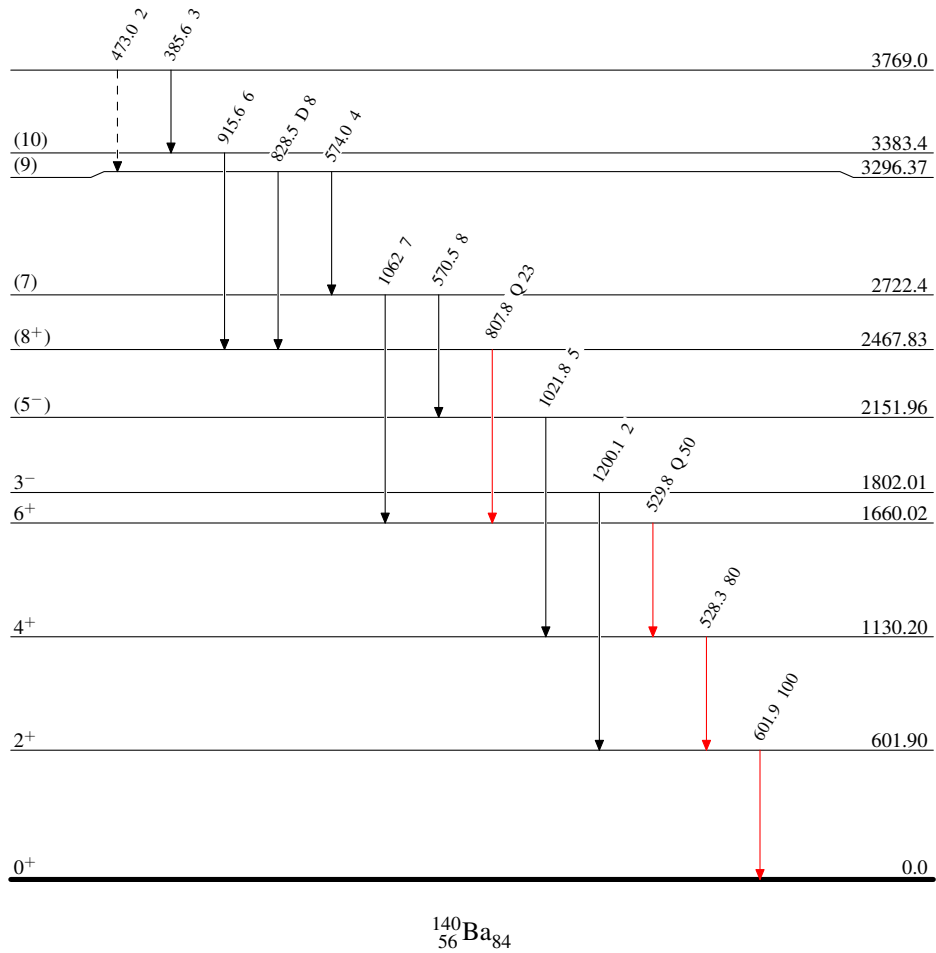
^{248}Cm SF decay 1997Ur01

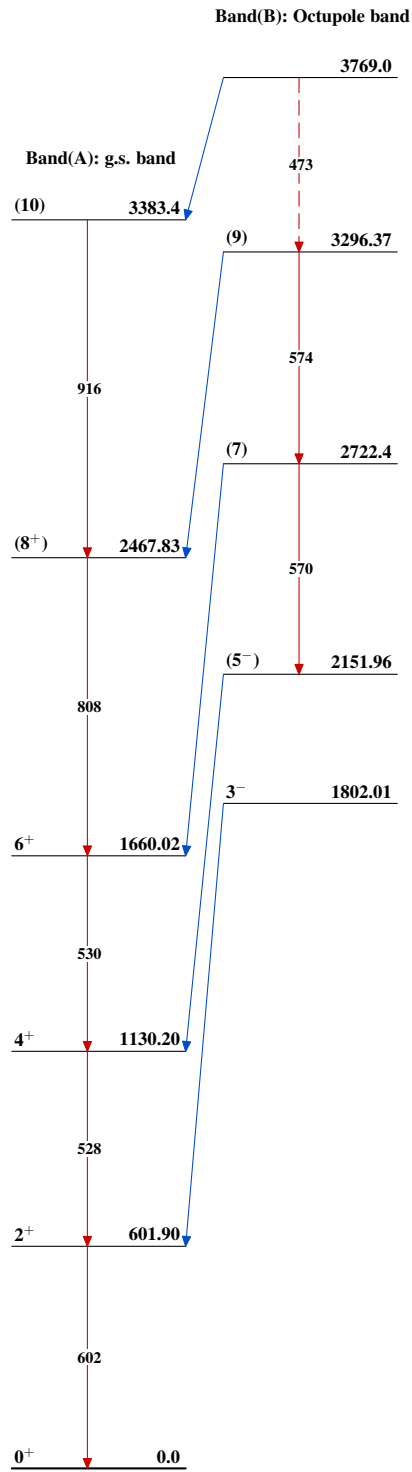
Legend

Level Scheme

Intensities: Relative I_γ

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
- - - - - γ Decay (Uncertain)



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