

^{248}Cm SF decay [1996Gu04,1991Ho16,1990DuZW](#)

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2008

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

[1996Gu04](#): ^{248}Cm SF decay. 6.5×10^4 fissions/s. Eurogam 45 large volume Ge detectors, DCO.

[1990Ho12](#), [1991Ho16](#): ^{248}Cm SF decay. 6.5×10^4 fissions/s. Argonne Notre Dame γ facility 10 Bi-germinate-suppressed Ge detectors, 2 Leps, 1 array of 50 Bi-Ge scin used as a multiplicity filter. They select only fission fragments with an average γ multiplicity of ≈ 10 . The assignment is mainly based on coin with complementary Ba isotopes.

[1990DuZW](#): ^{252}Cf SF decay. Same method.

The level scheme is as given by [1996Gu04](#).

 ^{108}Mo Levels

E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	$T_{1/2}$
0.0 ‡	0 $^+$	1090.0 ‡ 3	6 $^+$	2170.2 $^\#$ 4	8 $^+$	1.7 $^\text{@}$ ps 2
192.91 ‡ 16	2 $^+$	1232.19 $^\#$ 20	5 $^+$	2223.5 11		
563.79 ‡ 19	4 $^+$	1507.9 $^\#$ 3	6 $^+$	2524.4 $^\#$ 5	(9 $^+$)	
586.09 $^\#$ 16	2 $^+$	1698.87 22		2529.4 ‡ 5	(10 $^+$)	0.77 $^\text{@}$ ps 8
783.07 $^\#$ 18	3 $^+$	1752.7 ‡ 4	8 $^+$	2593.8 11		
978.39 $^\#$ 18	4 $^+$	1817.4 $^\#$ 3	7 $^+$			

† From [1996Gu04](#) based on DCO and systematics.

‡ Band(A): g.s. band.

$^\#$ Band(B): possible γ -vibrational band.

$^\text{@}$ From [1996Sm04](#), Doppler-profile method.

 $\gamma(^{108}\text{Mo})$

$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
192.7 2	100	192.91	2 $^+$	0.0	0 $^+$	529.5 2	100	1507.9	6 $^+$	978.39	4 $^+$
195.2 2	14 6	978.39	4 $^+$	783.07	3 $^+$	585.2 2	100	1817.4	7 $^+$	1232.19	5 $^+$
196.9 2	19.2 13	783.07	3 $^+$	586.09	2 $^+$	586.1 2	54 11	586.09	2 $^+$	0.0	0 $^+$
219.4 2	9.0 13	783.07	3 $^+$	563.79	4 $^+$	590.1 2	100 3	783.07	3 $^+$	192.91	2 $^+$
253.7 2	7.5 15	1232.19	5 $^+$	978.39	4 $^+$	662.1 2	7	1752.7	8 $^+$	1090.0	6 $^+$
370.3 2	100	2593.8		2223.5		662.3 2	100	2170.2	8 $^+$	1507.9	6 $^+$
370.9 2	100	563.79	4 $^+$	192.91	2 $^+$	668.3 2	42 3	1232.19	5 $^+$	563.79	4 $^+$
392.4 2	91 11	978.39	4 $^+$	586.09	2 $^+$	707.0 2	100	2524.4	(9 $^+$)	1817.4	7 $^+$
393.2 2	100 11	586.09	2 $^+$	192.91	2 $^+$	720.6 2	63 8	1698.87		978.39	4 $^+$
414.6 2	100 11	978.39	4 $^+$	563.79	4 $^+$	776.6 3	100	2529.4	(10 $^+$)	1752.7	8 $^+$
449.2 2	100 3	1232.19	5 $^+$	783.07	3 $^+$	785.5 2	80 9	978.39	4 $^+$	192.91	2 $^+$
466.4 3	33 6	1698.87		1232.19	5 $^+$	915.8 2	100 10	1698.87		783.07	3 $^+$
524.6 2		2223.5		1698.87		991.2 2		2223.5		1232.19	5 $^+$
527.0 2	100	1090.0	6 $^+$	563.79	4 $^+$						

† From [1996Gu04](#).

‡ Relative photon branching from each level ([1996Gu04](#)).

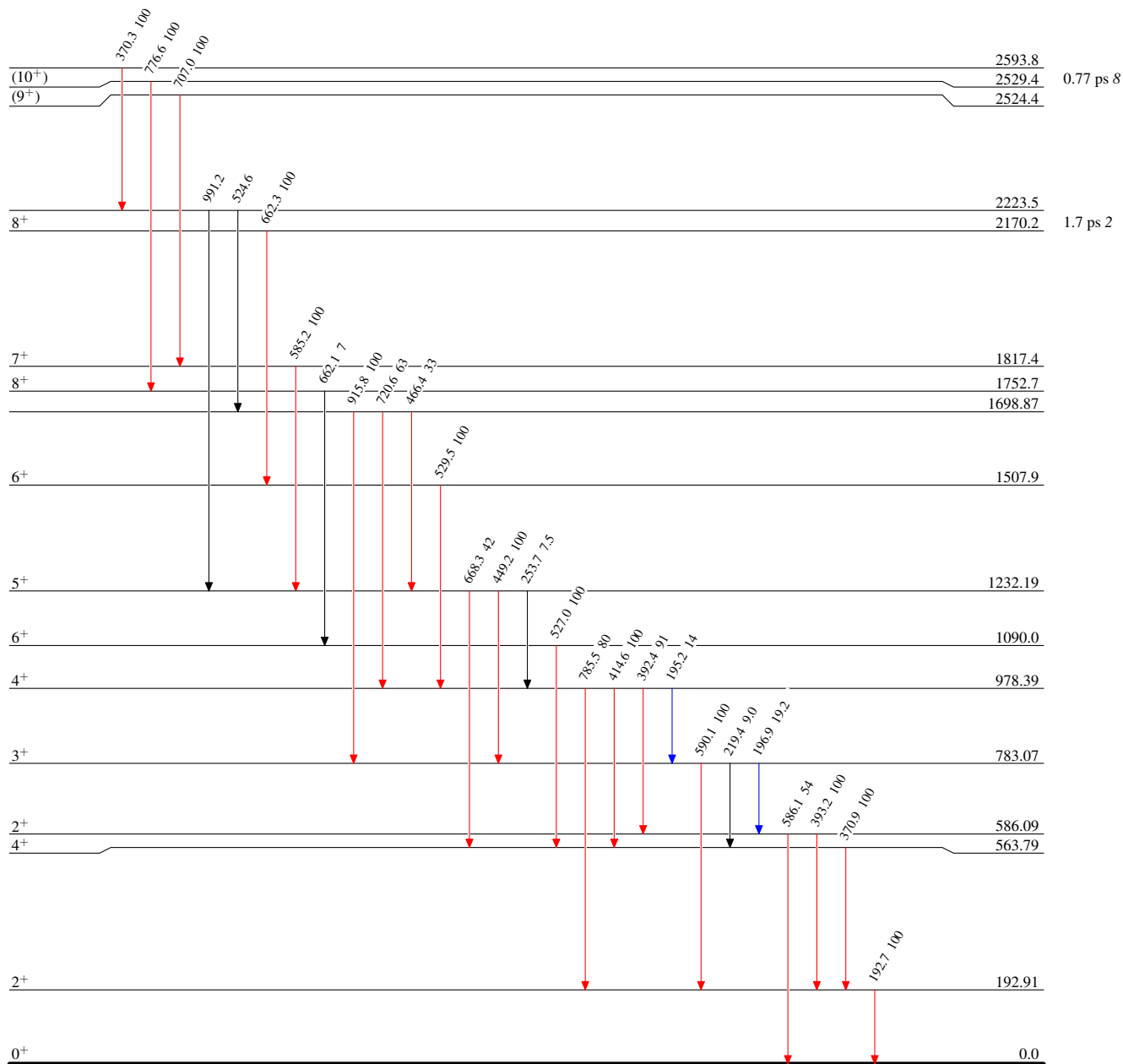
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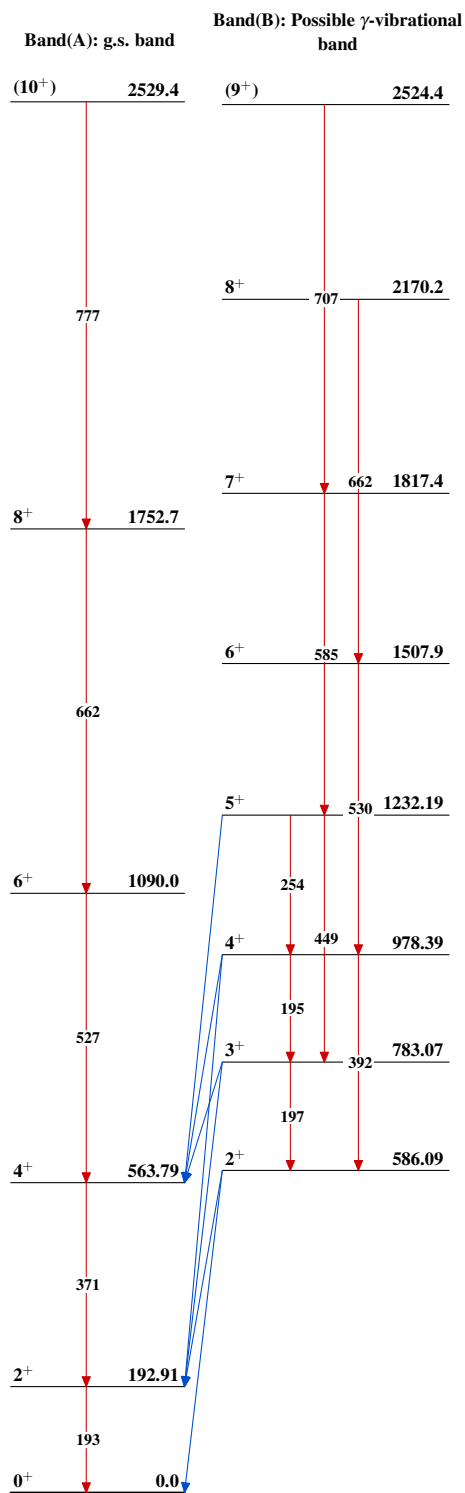
Level Scheme

Intensities: Type not specified

Legend

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

 $^{108}_{42}\text{Mo}_{66}$

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