

^{252}Cf SF decay **1997Zh25,1993Bu12,1992Zh42**

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

Parent: ^{252}Cf : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=2.645$ y 8; %SF decay=?

1997Zh25,1999HaZV: measured $\gamma\gamma$ at Gammasphere with 20 Compton-suppressed Ge detectors, and $\gamma\gamma\gamma$ with 36 detectors respectively.

1993Bu12,1992Zh42: measured γ , $\gamma\gamma$.

1971Ch44,1970WiZN: measured γ .

Z and A identification from multiparameter coincidences.

The data for this data set are from 1997Zh25; same level scheme is reproduced in 1999HaZV.

 ^{140}Ba Levels

E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$
0.0 ‡	0 $^+$	1803.0 $^\#$ 4	(3 $^-$)	3296.7 $^\#$ 6	(9 $^-$)
602.4 ‡ 3	(2 $^+$)	2151.9 $^\#$ 6	(5 $^-$)	3383.6 ‡ 7	(10 $^+$)
1130.5 ‡ 4	(4 $^+$)	2468.2 ‡ 6	(8 $^+$)	3769.4 ‡ 7	(11 $^-$)
1660.2 ‡ 5	(6 $^+$)	2722.7 $^\#$ 6	(7 $^-$)	4102.7 ‡ 9	(12 $^+$)
				4531.1 $^\#$ 9	(13 $^-$)

† From 1997Zh25, who assumed the assignments of 1986Ro16 and 1993Bu12, plus statement on regular γ -transition spacings.

‡ Band(A): g.s. band.

$^\#$ Band(B): octupole band.

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

I γ normalization: 0.52 γ /100 fissions in 1970WiZN.

ΔE_γ taken by evaluator as 0.3 keV, 0.4 keV, and 0.5 keV for $I(\gamma)\geq 10$, $10\geq I(\gamma)\geq 1$, and $1\geq I(\gamma)\geq 0.1$ respectively.

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
87 ‡		3383.6	(10 $^+$)	3296.7	(9 $^-$)	672.6 4	3.2	1803.0	(3 $^-$)	1130.5	(4 $^+$)
254.5 5	0.3	2722.7	(7 $^-$)	2468.2	(8 $^+$)	719.0 5	0.6	4102.7	(12 $^+$)	3383.6	(10 $^+$)
385.6 5	0.5	3769.4	(11 $^-$)	3383.6	(10 $^+$)	761.7 5	0.5	4531.1	(13 $^-$)	3769.4	(11 $^-$)
472.8 5	0.6	3769.4	(11 $^-$)	3296.7	(9 $^-$)	808.0 4	7.1	2468.2	(8 $^+$)	1660.2	(6 $^+$)
491.9 5	0.8	2151.9	(5 $^-$)	1660.2	(6 $^+$)	828.6 4	2.4	3296.7	(9 $^-$)	2468.2	(8 $^+$)
528.1 3	52	1130.5	(4 $^+$)	602.4	(2 $^+$)	915.4 4	1.4	3383.6	(10 $^+$)	2468.2	(8 $^+$)
529.7 3	18	1660.2	(6 $^+$)	1130.5	(4 $^+$)	1021.5 5	0.2	2151.9	(5 $^-$)	1130.5	(4 $^+$)
570.9 4	2.9	2722.7	(7 $^-$)	2151.9	(5 $^-$)	1062.5 4	1.4	2722.7	(7 $^-$)	1660.2	(6 $^+$)
573.9 4	1.5	3296.7	(9 $^-$)	2722.7	(7 $^-$)	1200.5 3	12	1803.0	(3 $^-$)	602.4	(2 $^+$)
602.4 3	100	602.4	(2 $^+$)	0.0	0 $^+$						

† For absolute intensity per 100 decays, multiply by 0.0052.

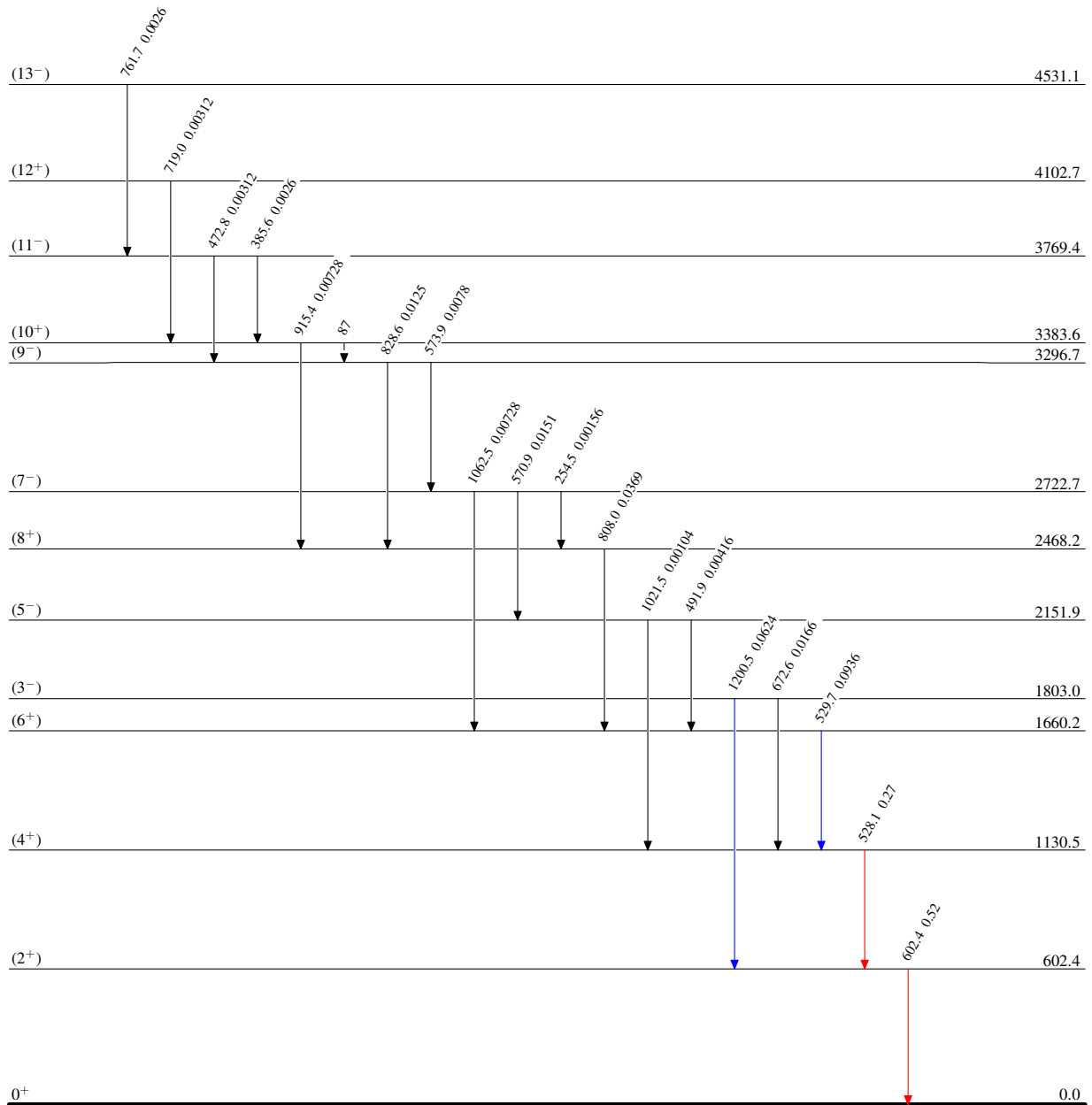
‡ Placement of transition in the level scheme is uncertain.

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Legend

Level SchemeIntensities: $I_{(\gamma+ce)}$ per 100 parent decays

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

 $^{140}_{56}\text{Ba}_{84}$

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