

^{252}Cf SF decay [2005Fo09,2000Zh04](#)

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Jean Blachot	ENSDF	1-Mar-2009

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

Measured E_γ , I_γ , $\gamma\gamma\gamma$ of prompt γ rays from ^{252}Cf SF decay, using GAMMASPHERE array with 102 Compton-suppresses Ge detectors. See also preliminary work [2000Zh04](#) from the same group where the low-lying level scheme is somewhat different. Level scheme not adopted.

 ^{117}Pd Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0	(3/2) ⁺		
34.50 ²⁴	(5/2) ⁺		
131.60 ²⁴	(5/2) ⁺		
203.1 ³	(9/2) ⁻	19.1 ms	$T_{1/2}$: From Adopted Levels (1991Pe10).
266.8 [#] ⁵	(11/2) ⁻		
706.8 [#] ⁶	(15/2) ⁻		
1324.7 [#] ⁶	(19/2) ⁻		
2091.4 [#] ⁷	(23/2) ⁻		
2828.7 ⁷	(21/2,23/2) ⁻		
2955.3 [#] ⁸	(27/2) ⁻		
3292.4 ⁸	(25/2,27/2) ⁻		

[†] From E_γ 's, assuming $\Delta(E_\gamma)=0.3$ for each γ ray.

[‡] Not adopted.

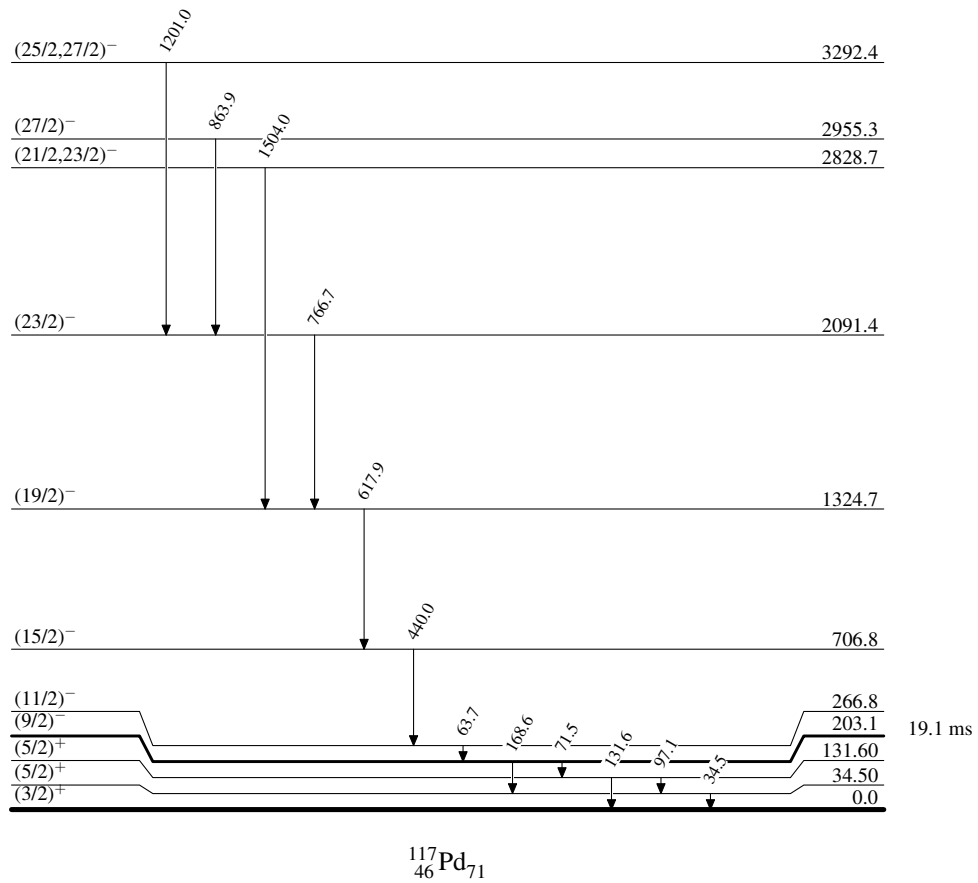
[#] Band(A): $\nu h_{11/2}$ band.

 $\gamma(^{117}\text{Pd})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
34.5	34.50	(5/2) ⁺	0.0	(3/2) ⁺	440.0	706.8	(15/2) ⁻	266.8	(11/2) ⁻
63.7	266.8	(11/2) ⁻	203.1	(9/2) ⁻	617.9	1324.7	(19/2) ⁻	706.8	(15/2) ⁻
71.5	203.1	(9/2) ⁻	131.60	(5/2) ⁺	766.7	2091.4	(23/2) ⁻	1324.7	(19/2) ⁻
97.1	131.60	(5/2) ⁺	34.50	(5/2) ⁺	863.9	2955.3	(27/2) ⁻	2091.4	(23/2) ⁻
131.6	131.60	(5/2) ⁺	0.0	(3/2) ⁺	1201.0	3292.4	(25/2,27/2) ⁻	2091.4	(23/2) ⁻
168.6	203.1	(9/2) ⁻	34.50	(5/2) ⁺	1504.0	2828.7	(21/2,23/2) ⁻	1324.7	(19/2) ⁻

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Level Scheme



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