

²⁵²Cf SF decay 2005Fo09,2000Zh04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113, 2391 (2012)	1-Sep-2012

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

Prompt γ rays from heavy-ion induced fission.

2000Zh04: Measured E_γ, I_γ, γγγ using GAMMASPHERE array with 72 Compton-suppressed Ge detectors.

2005Fo09: Measured E_γ, I_γ, γγγ of prompt γ rays from ²⁵²Cf SF decay, using GAMMASPHERE array with 102 Compton-suppresses Ge detectors. Both are the same group.

The level scheme is as given by 2005Fo09.

2005Fo09 placed the 11/2⁻ level at 177.3 keV.

¹¹⁵Pd Levels

E(level) [†]	J ^π [‡]	T _{1/2}	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]
0.0	(1/2) ⁺		957.1 ^{@ 11}		2710.1 ^{& 15}	
89.3 3	(7/2) ⁻	50 s	1152.3 ^{# 20}	(19/2) ⁻	2778.9 ^{# 25}	(27/2) ⁻
128.3 10	(9/2) ⁻		1484.5 ^{@ 12}		2992.5 25	(25/2,27/2) ⁻
177.3 ^{# 14}	(11/2) ⁻		1527.1 ^{& 15}		3119.5 ^{@ 13}	
253.4 10			1896.1 ^{# 23}	(23/2) ⁻	3325.8 ^{& 16}	
354.5 14			1962.4 ^{@ 12}		3775 ^{# 3}	(31/2) ⁻
468.7 ^{@ 11}			2158.4 ^{& 15}		3909.5 ^{@ 13}	
572.3 ^{# 18}	(15/2) ⁻		2456.3 20	(21/2,23/2) ⁻	4071.1 ^{& 16}	
884.7 ^{& 14}			2477.6 ^{@ 12}			

[†] From least-squares fit to E_γ's.

[‡] From syst. and band assignments, (1/2⁺) occurs as a low-lying excited state in odd-Pd nuclides, A<115.

Band(A): νh_{11/2}, α=-1/2 band.

@ Band(B): Band 2, only given by 2000Zh04.

& Band(C): Band 3, only given by 2000Zh04.

γ(¹¹⁵Pd)

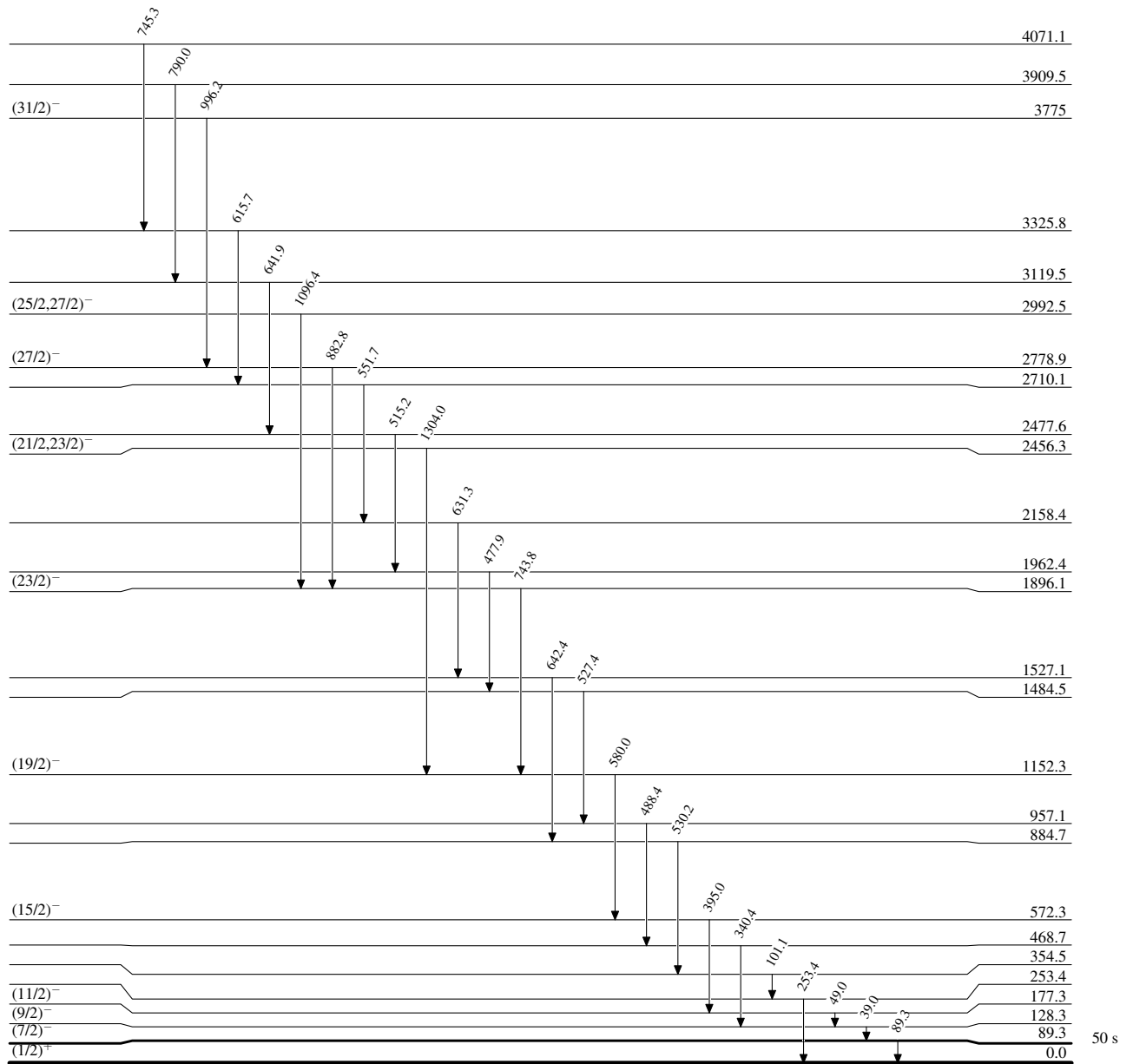
E _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π	E _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π
39.0	128.3	(9/2) ⁻	89.3	(7/2) ⁻	580.0	1152.3	(19/2) ⁻	572.3	(15/2) ⁻
49.0	177.3	(11/2) ⁻	128.3	(9/2) ⁻	615.7 3	3325.8		2710.1	
89.3 ^{‡ 3}	89.3	(7/2) ⁻	0.0	(1/2) ⁺	631.3 3	2158.4		1527.1	
101.1 [‡]	354.5		253.4		641.9 3	3119.5		2477.6	
253.4 [‡]	253.4		0.0	(1/2) ⁺	642.4 3	1527.1		884.7	
340.4 3	468.7		128.3	(9/2) ⁻	743.8	1896.1	(23/2) ⁻	1152.3	(19/2) ⁻
395.0	572.3	(15/2) ⁻	177.3	(11/2) ⁻	745.3 3	4071.1		3325.8	
477.9 3	1962.4		1484.5		790.0 3	3909.5		3119.5	
488.4 3	957.1		468.7		882.8	2778.9	(27/2) ⁻	1896.1	(23/2) ⁻
515.2 3	2477.6		1962.4		996.2	3775	(31/2) ⁻	2778.9	(27/2) ⁻
527.4 3	1484.5		957.1		1096.4	2992.5	(25/2,27/2) ⁻	1896.1	(23/2) ⁻
530.2 3	884.7		354.5		1304.0 3	2456.3	(21/2,23/2) ⁻	1152.3	(19/2) ⁻
551.7 3	2710.1		2158.4						

[†] ΔE not given in the paper, estimated 0.3 by evaluator.

[‡] From Adopted Levels.

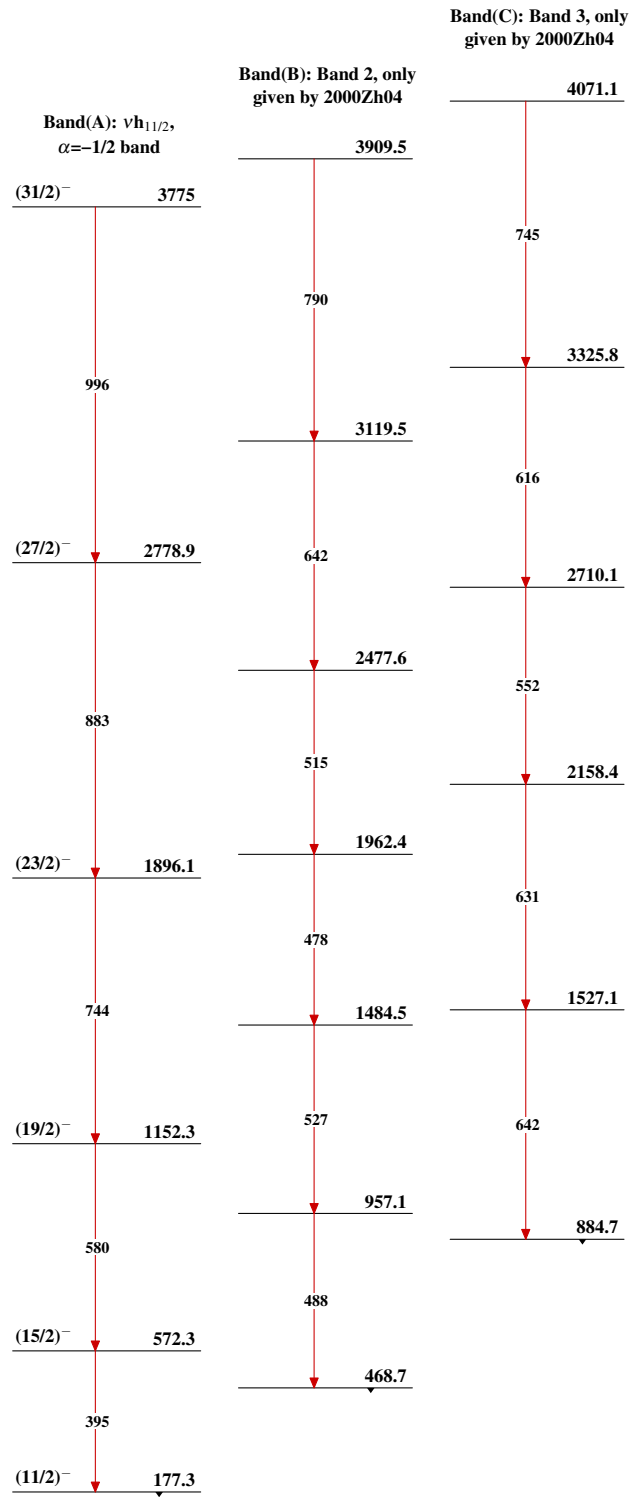
^{252}Cf SF decay 2005Fo09,2000Zh04

Level Scheme



$^{115}_{46}\text{Pd}_{69}$

50 s

^{252}Cf SF decay 2005Fo09,2000Zh04 $^{115}_{46}\text{Pd}_{69}$