

²⁴⁸Cm SF decay 2004Ur04

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

Parent: ²⁴⁸Cm: E=0.0; J^π=0⁺; T_{1/2}=3.48×10⁵ y 6; %SF decay=?

Measured E_γ, I_γ, γγ with the EUROAM2 array, which consisted of 52 large Ge detectors in anti-Compton shields including 24 four-crystal (clover) detectors, which also served as Compton polarimeters, and four Low Energy Photon (lep) detectors (2001Ur01).

¹¹⁵Pd Levels

E(level) [†]	J ^π [‡]	T _{1/2} [#]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]
0.0	(3/2 ⁺)		532.5& 9	(15/2 ⁻)	2739.0& 12	(27/2 ⁻)
89.1 4	(9/2 ⁻)	50 s	885.2@ 7		3326.2@ 13	
98.9 9	(7/2 ⁻)		1112.5& 10	(19/2 ⁻)	3735.0& 13	(31/2 ⁻)
127.9 4	(5/2 ⁺)		1527.8@ 9		4071.5@ 14	
137.7& 7	(11/2 ⁻)		1856.0& 11	(23/2 ⁻)	4937.5@ 14	
253.7 5	(7/2 ⁺)		2159.3@ 10			
354.7& 5	(7/2,9/2) ⁺		2710.6@ 11			

[†] From least-squares fit to E_γ's ΔE_γ=0.5 keV assumed for each γ-ray.

[‡] J^π are from the authors. Adopted J^π are from 2005Fo09. They have added a level at 127.9 keV (9/2⁻) and the (11/2⁻) at 176.9 keV.

[#] From Adopted Levels.

@ Band(A): (11/2⁻) band.

& Band(B): band based on (7/2⁺,9/2⁺).

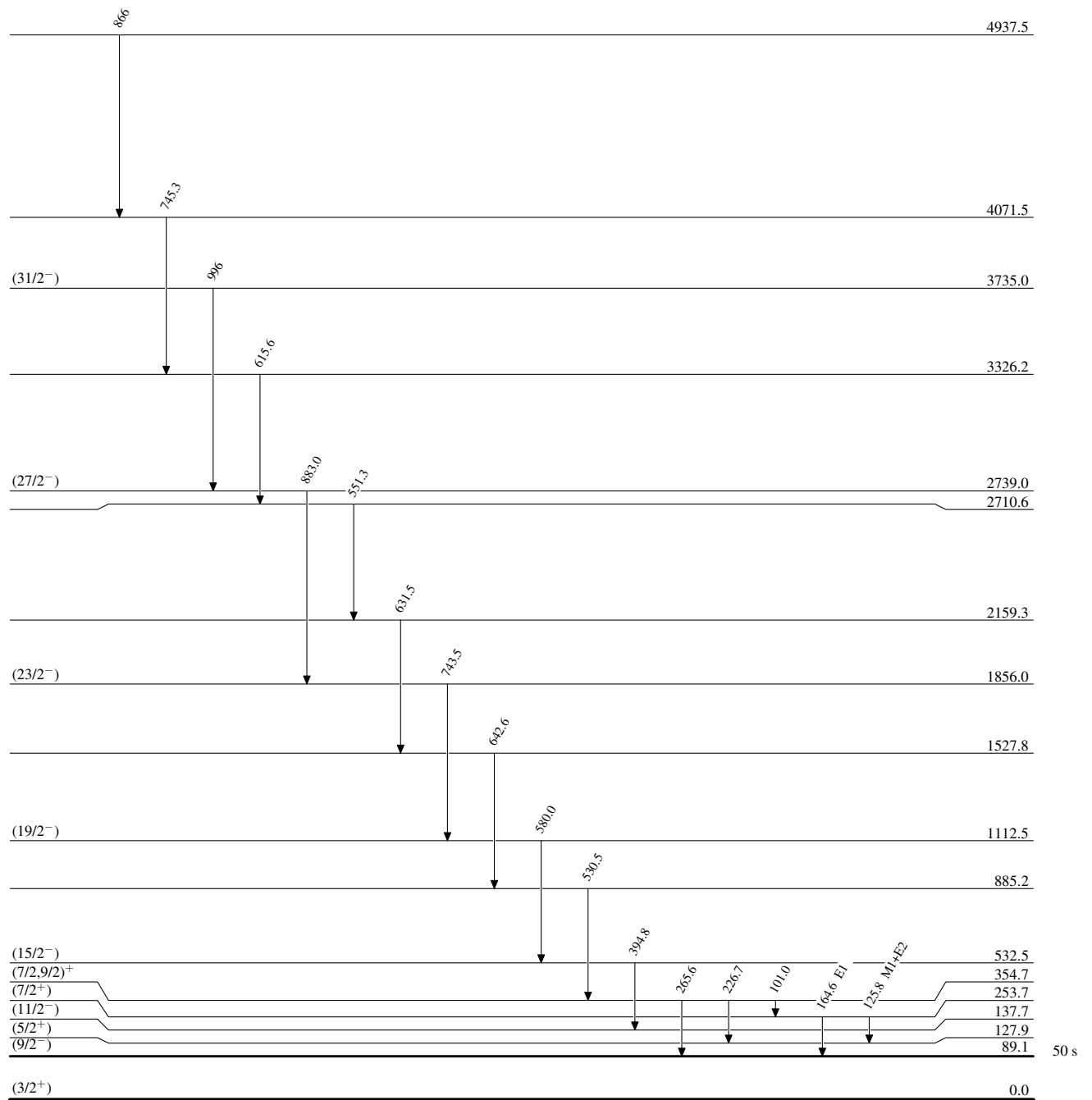
γ(¹¹⁵Pd)

E _γ	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	Comments
38.8 [†]	137.7	(11/2 ⁻)	98.9 (7/2 ⁻)		M1+E2	E _γ : From text of 2004Ur04; not shown in authors' figure 2. now for 2005Fo09, this γ is deexisting a 127.9 level.
48.6	137.7	(11/2 ⁻)	89.1 (9/2 ⁻)		M1+E2	
89.1	89.1	(9/2 ⁻)	0.0 (3/2 ⁺)		E3	
101.0	354.7	(7/2,9/2) ⁺	253.7 (7/2 ⁺)		M1+E2	Mult.: ΔJ≤1 transition (literature).
125.8	253.7	(7/2 ⁺)	127.9 (5/2 ⁺)		M1+E2	Mult.: ΔJ≤1 transition (literature).
127.9	127.9	(5/2 ⁺)	0.0 (3/2 ⁺)		M1+E2	Mult.: ΔJ≤1 transition (literature).
164.6	253.7	(7/2 ⁺)	89.1 (9/2 ⁻)		E1	Mult.: M2 multipolarity for this γ-ray is unlikely, considering the prompt character of this transition.
226.7	354.7	(7/2,9/2) ⁺	127.9 (5/2 ⁺)			
265.6	354.7	(7/2,9/2) ⁺	89.1 (9/2 ⁻)			
394.8	532.5	(15/2 ⁻)	137.7 (11/2 ⁻)			
530.5	885.2		354.7 (7/2,9/2) ⁺			
551.3	2710.6		2159.3			
580.0	1112.5	(19/2 ⁻)	532.5 (15/2 ⁻)			
615.6	3326.2		2710.6			
631.5	2159.3		1527.8			
642.6	1527.8		885.2			
743.5	1856.0	(23/2 ⁻)	1112.5 (19/2 ⁻)			
745.3	4071.5		3326.2			
866	4937.5		4071.5			
883.0	2739.0	(27/2 ⁻)	1856.0 (23/2 ⁻)			
996	3735.0	(31/2 ⁻)	2739.0 (27/2 ⁻)			

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

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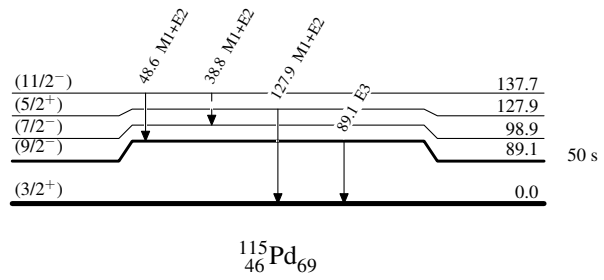
Level Scheme

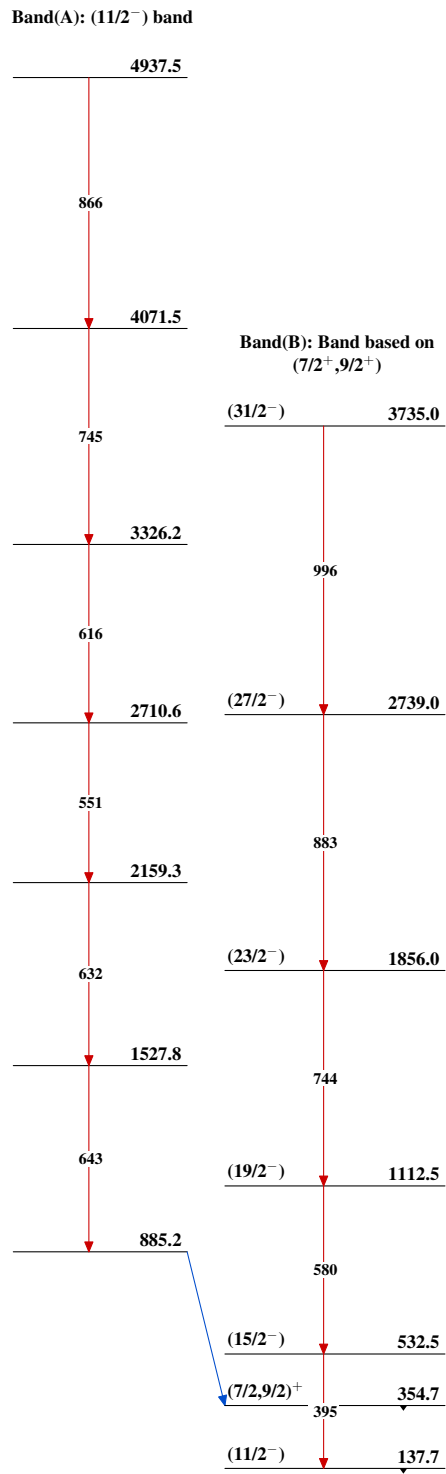
 $^{115}_{46}\text{Pd}_{69}$

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Legend

Level Scheme (continued)

-----► γ Decay (Uncertain)

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