

Adopted Levels, Gammas

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

Q(β^-)=4556 22; S(n)=5007 16; S(p)=1.200×10⁴ 8; Q(α)=-6068 17 [2012Wa38](#)
 Note: Current evaluation has used the following Q record 4557 225007 151.200×10⁴⁷ -6069 17 [2011AuZZ](#).
 Level scheme of [2005Fo09](#) has been adopted but it differs from that of [2004Ur04](#).

¹¹⁵Pd Levels

Cross Reference (XREF) Flags

A	¹¹⁵ Rh β^- decay	D	²³⁸ U(¹² C,F γ)
B	¹¹⁵ Pd IT decay	E	²⁵² Cf SF decay
C	²⁰⁸ Pb(¹⁸ O,F γ)	F	²⁴⁸ Cm SF decay

E(level) [†]	J π [‡]	T _{1/2}	XREF	Comments
0.0	(1/2) ⁺	25 s 2	ABCDE	$\% \beta^- = 100$ J π : see 2005Fo09 for the discussion about the new assignment of 1/2 ⁺ to the g.s. and all positive parity. T _{1/2} : from 1987FoZY , 1990Fo07 . Previous T _{1/2} measurements report mixture of the two isomers: 45 s 3 (1958Al90), 41 s 4 (1966We07) 36 s 3 (1968Kj01), 37.4 s 4 (1968RoZZ), 30 s 2 (1970Ar19), 41 s 2 (1973BrXC), 47 s 2 (1981Me17).
89.21 16	(7/2) ⁻	50 s 3	ABCDEF	$\% \beta^- = 92.0$ 20 (1990Fo07); $\%IT = 8.0$ 20 T _{1/2} : from 1987FoZY , 1990Fo07 . J π : E3 γ to (1/2) ⁺ . J π : see 2005Fo09 .
127.84 14	(3/2) ⁺		A E	
128.0 10	(9/2) ⁻		A E	
177.0 [#] 14	(11/2) ⁻		E	
253.62 13	(5/2) ⁺		A EF	
295.53 16			A	
354.58 18	(7/2) ⁺		A EF	
433.16 16			A	
468.34 [@] 24			E	
572.0 [#] 15	(15/2) ⁻		E	
575.6 21	(9/2) ⁺		A	
884.8 ^{&} 4			EF	
956.7 [@] 4			E	
1152.0 [#] 15	(19/2) ⁻		CDE	
1484.1 [@] 5			E	
1527.2 ^{&} 5			EF	
1895.8 [#] 15	(23/2) ⁻		CDE	
1962.0 [@] 6			E	
2158.5 ^{&} 6			EF	
2477.2 [@] 6			E	
2710.2 ^{&} 6			EF	
2778.6 [#] 15	(27/2) ⁻		CDE	
3119.1 [@] 7			E	
3325.9 ^{&} 7			EF	
3774.8 [#] 16	(31/2) ⁻		C E	

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Adopted Levels, Gammas (continued)

¹¹⁵Pd Levels (continued)

E(level) [†]	XREF
3909.2@ 8	E
4071.2& 8	EF

[†] From least-squares fit to γ energies.

[‡] assignments from 2005Fo09 and β - decay. Some of these are in conflict with earlier assignments of 2004Ur04.

Band(A): $\nu h_{11/2}$, $\alpha = -1/2$.

@ Band(B): Band 2.

& Band(C): Band 3.

								$\gamma(^{115}\text{Pd})$		
<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{\dagger}</u>	<u>I_{γ}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.</u>	<u>α^{\ddagger}</u>	<u>Comments</u>		
89.21	(7/2 ⁻)	89.3 2	100	0.0	(1/2) ⁺	E3	23.0	B(E3)(W.u.)=0.0022 6 $\alpha(K)=10.94$ 18; $\alpha(L)=10.05$ 19; $\alpha(M)=2.02$ 4; $\alpha(N+..)=0.305$ 6 $\alpha(N)=0.305$ 6		
127.84	(3/2 ⁺)	127.8 2	100	0.0	(1/2) ⁺	[M1]		$\alpha(K)=0.1666$ 25; $\alpha(L)=0.0204$ 3; $\alpha(M)=0.00384$ 6; $\alpha(N+..)=0.000646$ 10 $\alpha(N)=0.000646$ 10		
128.0	(9/2 ⁻)	38.8		89.21	(7/2 ⁻)	[M1]		$\alpha(K)=5.05$ 7; $\alpha(L)=0.631$ 9; $\alpha(M)=0.1188$ 17; $\alpha(N+..)=0.0199$ 3 $\alpha(N)=0.0199$ 3		
177.0	(11/2 ⁻)	49.0 10	0	128.0	(9/2 ⁻)					
253.62	(5/2 ⁺)	125.8 2	100	127.84	(3/2 ⁺)					
		164.5 2	51	89.21	(7/2 ⁻)					
		253.6 2	18	0.0	(1/2) ⁺	[E2]		$\alpha(K)=0.0442$ 7; $\alpha(L)=0.00647$ 10; $\alpha(M)=0.001227$ 18; $\alpha(N+..)=0.000200$ 3 $\alpha(N)=0.000200$ 3		
295.53		295.5 2	100	0.0	(1/2) ⁺					
354.58	(7/2 ⁺)	101.0 2	100	253.62	(5/2 ⁺)					
		226.7 2	23	127.84	(3/2 ⁺)	[E2]		$\alpha(K)=0.0647$ 10; $\alpha(L)=0.00980$ 15; $\alpha(M)=0.00186$ 3; $\alpha(N+..)=0.000302$ 5 $\alpha(N)=0.000302$ 5		
433.16		137.6 2		295.53						
		179.6 2	100	253.62	(5/2 ⁺)					
		305.3 2	29	127.84	(3/2 ⁺)					
468.34		340.5 2	100	127.84	(3/2 ⁺)					
572.0	(15/2 ⁻)	395.0 3	100	177.0	(11/2 ⁻)					
575.6	(9/2 ⁺)	221 3		354.58	(7/2 ⁺)					
		322 3		253.62	(5/2 ⁺)					
884.8		530.2 3	100	354.58	(7/2 ⁺)					
956.7		488.4 3	100	468.34						
1152.0	(19/2 ⁻)	580.0 3	100	572.0	(15/2 ⁻)					
1484.1		527.4 3	100	956.7						
1527.2		642.4 3	100	884.8						
1895.8	(23/2 ⁻)	743.8 3	100	1152.0	(19/2 ⁻)					
1962.0		477.9 3	100	1484.1						
2158.5		631.3 3	100	1527.2						
2477.2		515.2 3	100	1962.0						
2710.2		551.7 3	100	2158.5						
2778.6	(27/2 ⁻)	882.8 3	100	1895.8	(23/2 ⁻)					
3119.1		641.9 3	100	2477.2						
3325.9		615.7 3	100	2710.2						

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Adopted Levels, Gammas (continued) $\gamma(^{115}\text{Pd})$ (continued)

<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_γ^\dagger</u>	<u>I_γ</u>	<u>E_f</u>	<u>J_f^π</u>
3774.8	(31/2 ⁻)	996.2 3	100	2778.6	(27/2 ⁻)
3909.2		790.0 3	100	3119.1	
4071.2		745.3 3	100	3325.9	

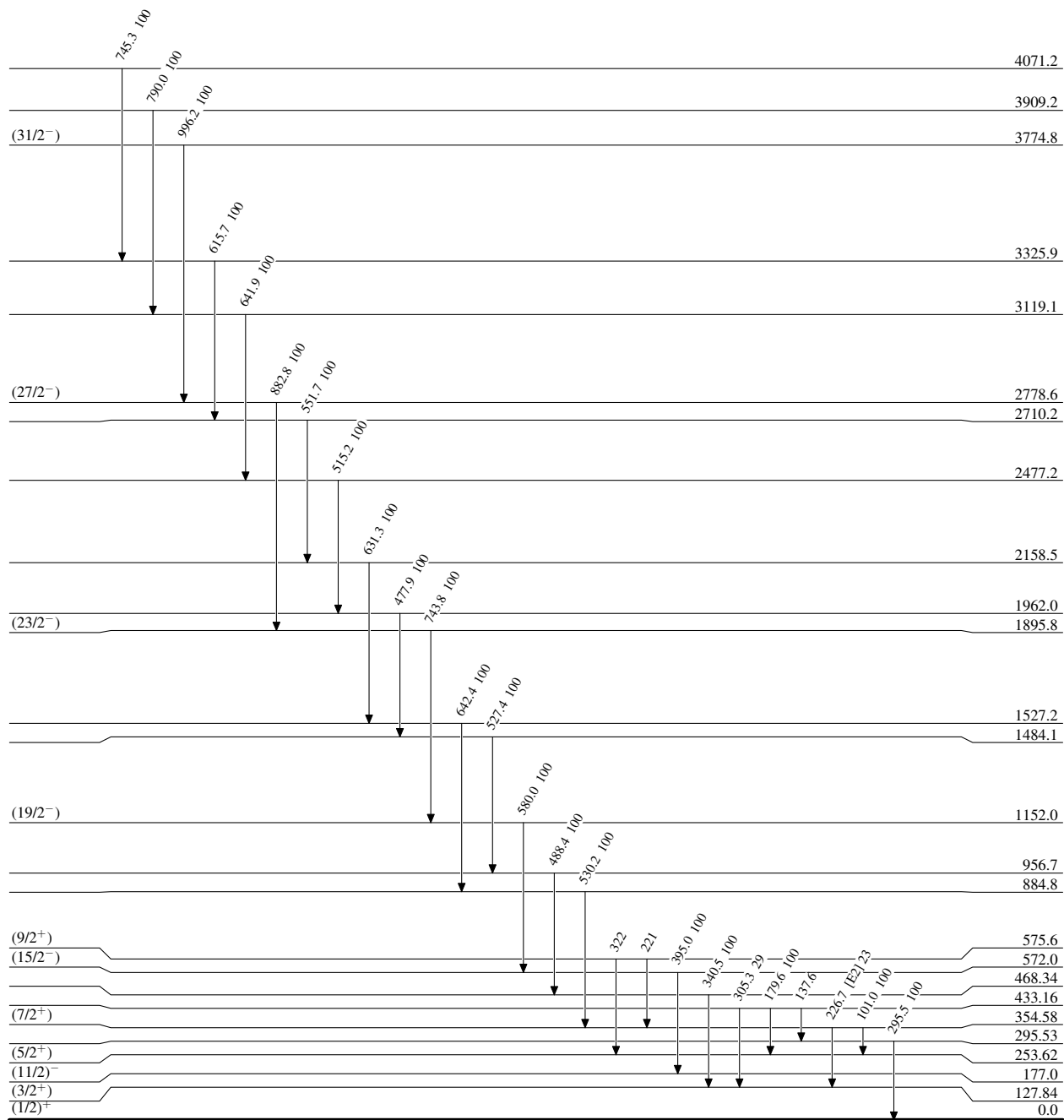
† From ^{115}Rh β^- decay and ^{252}Cf SF decay.

‡ Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

Adopted Levels, Gammas

Level Scheme

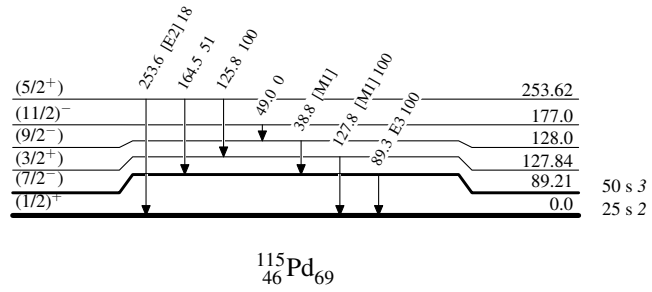
Intensities: Relative photon branching from each level

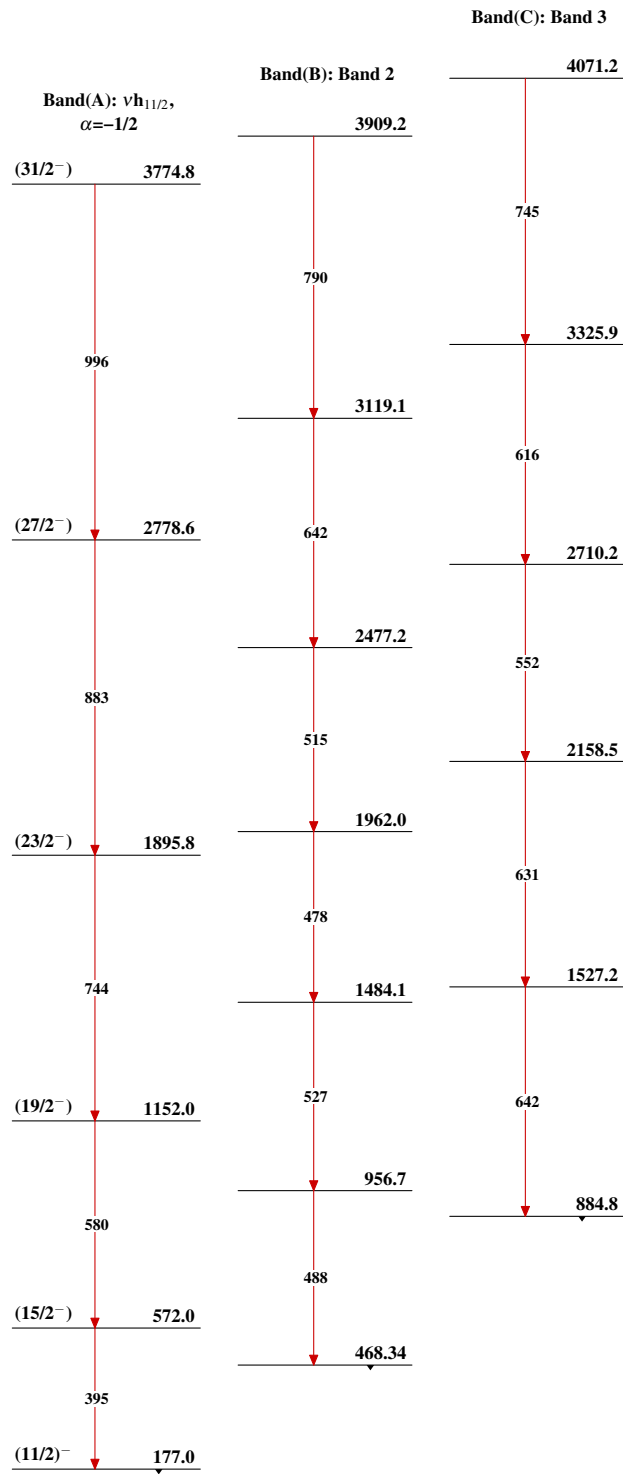


25 s 2

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



Adopted Levels, Gammas $^{115}_{46}\text{Pd}_{69}$