^{101}Ag ε decay (11.1 min) 1978Ha11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2006

Parent: ^{101}Ag: E=0.0; J$^\pi$=9/2$^+$; T$_{1/2}$=11.1 min *3*; Q(ε)=4.20×10^3 *10*; %ε+%β^+ decay=100.0

Other: 1967Do05.

Q(ε)=4100 *150* (1972IsZR), 4350 *200* (1978Ha11), 4665 *80* (1967Do05) from measured E(β^+); 4200 *100* (2003Au03) mass adjustment. Other: 1970BeYT.

^{101}Pd Levels

E(level)	J$^\pi$	T$_{1/2}$
0.0	(5/2)$^+$	8.47 h *6*
80.3	(3/2$^+$)	4.8 ns *5*
261.0	(7/2$^+$)	
274.7	(7/2,9/2$^+$)	
588.0	(7/2$^+$)	
623.6	(7/2$^+$)	
667.3	(9/2$^+$)	
734.7	(7/2$^+$)	
938.9	(11/2$^+$)	
1081.8		
1173.9	(7/2$^+$)	
1199.3		
1205.3	(7/2$^+$)	
1265.6		
1403.8	13/2$^+$	
1534.5	(7/2$^+$)	
1560.5	(7/2$^+$,9/2$^+$,11/2$^+$)	
1614.7		
1823.9		
1932.9		
1981.7?		
2041.6	(7/2$^+$,9/2$^+$,11/2$^+$)	
2220.5	(11/2$^-$)	
2265.3	(7/2$^+$,9/2$^+$,11/2$^+$)	
2300.2		
2392.7	9/2$^+$	
2641.0	(7/2$^+$,9/2$^+$,11/2$^+$)	
2803.1		
2891.3		
2895.9	(7/2$^+$,9/2$^+$,11/2$^+$)	
2960.1	(7/2$^+$,9/2$^+$,11/2$^+$)	
3305.0	(7/2$^+$,9/2$^+$,11/2$^+$)	
3404.3	(7/2$^+$,9/2$^+$,11/2$^+$)	

ε,β^+ radiations

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I($\varepsilon+\beta^+$)†	Comments
(8.0×10^2 *10*)	3404.3		≈0.17	≈5.7	≈0.17	εK=0.8610 *10*; εL=0.1118 *8*; εM+=0.02723 *22*
(9.0×10^2 *10*)	3305.0		≈0.24	≈5.6	≈0.24	εK=0.8618; εL=0.1112 *6*; εM+=0.02707 *17*
(1.24×10^3 *10*)	2960.1		≈0.4	≈5.7	≈0.4	εK=0.8629 *17*; εL=0.1099 *5*; εM+=0.02669 *13*
(1.30×10^3 *10*)	2895.9	0.002	0.9	5.4	0.902	av Eβ=133 *44*; εK=0.862 *4*; εL=0.1096 *7*; εM+=0.02662 *18*
(1.56×10^3 *10*)	2641.0	0.02	0.8	5.6	0.82	av Eβ=243 *44*; εK=0.846 *16*; εL=0.1069 *22*; εM+=0.0260 *6*
(1.81×10^3 *10*)	2392.7	≈0.03	≈0.3	≈6.2	≈0.33	av Eβ=351 *44*; εK=0.80 *4*; εL=0.100 *5*; εM+=0.0243 *10*
(1.90×10^3 *10*)	2300.2	≈0.05	≈0.4	≈6.1	≈0.45	av Eβ=391 *44*; εK=0.77 *4*; εL=0.096 *5*; εM+=0.0234 *12*
(1.93×10^3 *10*)	2265.3	0.1	0.8	5.8	0.9	av Eβ=406 *44*; εK=0.75 *4*; εL=0.095 *5*; εM+=0.0230 *13*
(1.98×10^3 *10*)	2220.5	≈0.10	≈0.6	≈6.0	≈0.7	av Eβ=426 *44*; εK=0.74 *5*; εL=0.093 *6*; εM+=0.0225 *13*
(2.16×10^3 *10*)	2041.6	0.43 *13*	1.4 *3*	5.65 *12*	1.8 *3*	av Eβ=505 *45*; εK=0.66 *5*; εL=0.083 *6*; εM+=0.0201 *15*
(2.27×10^3 *10*)	1932.9	≈0.041	≈0.099	≈6.8	≈0.140	av Eβ=553 *45*; εK=0.61 *5*; εL=0.076 *6*; εM+=0.0185 *15*
(2.59×10^3 *10*)	1614.7	≈0.1	≈0.2	≈6.7	≈0.3	av Eβ=696 *46*; εK=0.46 *5*; εL=0.058 *6*; εM+=0.0140 *14*
(2.64×10^3 *10*)	1560.5	1.24 *17*	1.26 *18*	5.86 *9*	2.50 *25*	av Eβ=720 *46*; εK=0.44 *5*; εL=0.055 *6*; εM+=0.0133

Continued on next page (footnotes at end of table)

^{101}Ag ε decay (11.1 min) 1978Ha11 (continued)

ε,$β^+$ radiations (continued)

E(decay)	E(level)	Iβ$^+$ †	Iε†	Log *ft*	I(ε+β$^+$)†	Comments
						14
(2.67×10^3 *10*)	1534.5	0.56 *12*	0.54 *11*	6.24 *11*	1.10 *16*	av Eβ=732 *46*; εK=0.43 *5*; εL=0.053 *6*; εM+=0.0129 *14*
(2.93×10^3 *10*)	1265.6	1.18 *23*	0.72 *16*	6.20 *11*	1.9 *3*	av Eβ=854 *46*; εK=0.33 *4*; εL=0.041 *5*; εM+=0.0099 *11*
(2.99×10^3 *10*)	1205.3	4.2 *6*	2.3 *4*	5.71 *10*	6.5 *7*	av Eβ=882 *46*; εK=0.31 *4*; εL=0.038 *5*; εM+=0.0093 *10*
(3.00×10^3 *10*)	1199.3	1.8 *4*	0.95 *21*	6.10 *11*	2.8 *5*	av Eβ=884 *46*; εK=0.30 *4*; εL=0.038 *4*; εM+=0.0092 *10*
(3.03×10^3 *10*)	1173.9	11.2 *16*	5.8 *10*	5.32 *10*	17.0 *19*	av Eβ=896 *46*; εK=0.30 *4*; εL=0.037 *4*; εM+=0.0090 *10*
(3.12×10^3 *10*)	1081.8	≈0.28	≈0.12	≈7.0	≈0.4	av Eβ=938 *46*; εK=0.27 *3*; εL=0.034 *4*; εM+=0.0082 *9*
(3.26×10^3 *10*)	938.9	1.2 *5*	0.46 *17*	6.49 *17*	1.7 *5*	av Eβ=1004 *47*; εK=0.234 *25*; εL=0.029 *4*; εM+=0.0071 *8*
(3.47×10^3 *10*)	734.7	0.6	0.2	7.0	0.8	av Eβ=1098 *47*; εK=0.191 *20*; εL=0.0238 *25*; εM+=0.0058 *6*
(3.53×10^3 *10*)	667.3	3.8 *7*	0.99 *20*	6.22 *10*	4.8 *7*	av Eβ=1130 *47*; εK=0.179 *19*; εL=0.0223 *23*; εM+=0.0054 *6*
(3.58×10^3 *10*)	623.6	1.20 *21*	0.30 *6*	6.76 *10*	1.50 *22*	av Eβ=1150 *47*; εK=0.172 *18*; εL=0.0214 *22*; εM+=0.0052 *6*
(3.61×10^3 *10*)	588.0	6.9 *8*	1.63 *25*	6.03 *9*	8.5 *8*	av Eβ=1166 *47*; εK=0.166 *17*; εL=0.0207 *21*; εM+=0.0050 *5*
(3.94×10^3 *10*)	261.0	37 *6*	6.1 *11*	5.53 *9*	43 *6*	av Eβ=1319 *47*; εK=0.123 *12*; εL=0.0153 *15*; εM+=0.0037 *4*

† Absolute intensity per 100 decays.

γ(^{101}Pd)

Iγ normalization: for Σ(Iγ+ce)=100 to g.s., if %(ε+β^+)≈0 to g.s. since ΔJ=2 ,Δπ=no.
γγ-coin: 1978Ha11. Other: 1967Do05.

E_γ	I_γ †	E_i(level)	J^π_i	E_f	J^π_f	Mult.	δ	α ‡	Comments
80.26 *12*	9.0 *5*	80.3	(3/2$^+$)	0.0	(5/2)$^+$	M1+E2	+0.41 *+11−12*	1.06 *16*	α(K)=0.85 *12*; α(L)=0.16 *5*; α(M)=0.031 *8*; α(N+..)=0.0050 *13* α(N)=0.0050 *13* B(M1)(W.u.)=0.0037 *6*; B(E2)(W.u.)=9.E+1 *5* Mult.: deduced from intensity balance at E(level)=80. Analogs: δ=+0.11 *3* (119 keV,^{103}Pd), +0.08 *2* (280 keV,^{105}Pd).
180.5 *5*	0.5 *2*	261.0	(7/2$^+$)	80.3	(3/2$^+$)				
261.01 *13*	100	261.0	(7/2$^+$)	0.0	(5/2)$^+$	(M1)		0.028	α(K)=0.0247 *4*; α(L)=0.00296 *5*; α(M)=0.000557 *8*; α(N+..)=9.38×10^{-5} *14* α(N)=9.38×10^{-5} *14* δ= 0.00 *2* (1974Si02) via (^{12}C,3nγ) γ(θ).
274.68 *15*	3.2 *3*	274.7	(7/2,9/2$^+$)	0.0	(5/2)$^+$				
326.91 *15*	3.6 *3*	588.0	(7/2$^+$)	261.0	(7/2$^+$)				
386.7 *4*	0.45 *7*	1560.5	(7/2$^+$,9/2$^+$,11/2$^+$)	1173.9	(7/2$^+$)				
406.29 *17*	1.2 *2*	667.3	(9/2$^+$)	261.0	(7/2$^+$)				
420.1 *4*	0.15 *7*	1823.9		1403.8	13/2$^+$				
439.20 *15*	5.42 *18*	1173.9	(7/2$^+$)	734.7	(7/2$^+$)				
459.9 *3*	0.7 *1*	734.7	(7/2$^+$)	274.7	(7/2,9/2$^+$)				
470.6 *3*	0.6 *1*	1205.3	(7/2$^+$)	734.7	(7/2$^+$)				
494.0 *5*	0.5 *1*	1081.8		588.0	(7/2$^+$)				
506.6 *3*	1.1 *2*	1173.9	(7/2$^+$)	667.3	(9/2$^+$)				
507.6 *4*	3.9 *9*	588.0	(7/2$^+$)	80.3	(3/2$^+$)				
532.2 *3*	0.6 *1*	1199.3		667.3	(9/2$^+$)				
537.92 *21*	2.63 *16*	1205.3	(7/2$^+$)	667.3	(9/2$^+$)				
543.32 *15*	4.4 *3*	623.6	(7/2$^+$)	80.3	(3/2$^+$)				
550.22 *22*	0.74 *9*	1173.9	(7/2$^+$)	623.6	(7/2$^+$)				
575.55 *23*	0.67 *9*	1199.3		623.6	(7/2$^+$)				
577.9 *5*	0.10 *6*	1981.7?		1403.8	13/2$^+$				
581.3 *5*	0.4 *1*	1205.3	(7/2$^+$)	623.6	(7/2$^+$)				
585.9 *4*	2.0 *5*	1173.9	(7/2$^+$)	588.0	(7/2$^+$)				
588.00 *15*	19.0 *9*	588.0	(7/2$^+$)	0.0	(5/2)$^+$				
598.22 *15*	1.14 *11*	1265.6		667.3	(9/2$^+$)				
611.30 *18*	1.25 *13*	1199.3		588.0	(7/2$^+$)				
617.6 *3*	0.3 *1*	1205.3	(7/2$^+$)	588.0	(7/2$^+$)				
623.58 *15*	1.47 *10*	623.6	(7/2$^+$)	0.0	(5/2)$^+$				
654.40 *15*	3.0 *2*	734.7	(7/2$^+$)	80.3	(3/2$^+$)				
667.32 *12*	18.7 *6*	667.3	(9/2$^+$)	0.0	(5/2)$^+$				

γ(^{101}Pd) (continued)

E_γ	I_γ †	E_i(level)	J^π_i	E_f	J^π_f
677.70 22	2.5 5	1265.6		588.0	(7/2$^+$)
677.9 3	4.5 6	938.9	(11/2$^+$)	261.0	(7/2$^+$)
734.71 18	6.2 5	734.7	(7/2$^+$)	0.0	(5/2)$^+$
736.5 3	1.8 4	1403.8	13/2$^+$	667.3	(9/2$^+$)
799.9 3	0.56 5	1534.5	(7/2$^+$)	734.7	(7/2$^+$)
806.9 5	0.20 6	1081.8		274.7	(7/2,9/2$^+$)
825.9 3	0.47 9	1560.5	(7/2$^+$,9/2$^+$,11/2$^+$)	734.7	(7/2$^+$)
867.2 3	0.53 12	1534.5	(7/2$^+$)	667.3	(9/2$^+$)
893.2 2	2.14 20	1560.5	(7/2$^+$,9/2$^+$,11/2$^+$)	667.3	(9/2$^+$)
899.39 22	0.91 11	1173.9	(7/2$^+$)	274.7	(7/2,9/2$^+$)
910.0 10	0.12 5	1534.5	(7/2$^+$)	623.6	(7/2$^+$)
912.84 23	1.1 1	1173.9	(7/2$^+$)	261.0	(7/2$^+$)
930.5 3	0.6 1	1205.3	(7/2$^+$)	274.7	(7/2,9/2$^+$)
938.32 18	2.6 2	1199.3		261.0	(7/2$^+$)
944.33 21	2.2 2	1205.3	(7/2$^+$)	261.0	(7/2$^+$)
1093.59 15	5.0 2	1173.9	(7/2$^+$)	80.3	(3/2$^+$)
1125.27 25	0.79 16	1205.3	(7/2$^+$)	80.3	(3/2$^+$)
1173.94 15	17.0 4	1173.9	(7/2$^+$)	0.0	(5/2)$^+$
1205.26 15	5.0 2	1205.3	(7/2$^+$)	0.0	(5/2)$^+$
1299.46 15	1.78 16	1560.5	(7/2$^+$,9/2$^+$,11/2$^+$)	261.0	(7/2$^+$)
1306.7 5	1.4 2	2041.6	(7/2$^+$,9/2$^+$,11/2$^+$)	734.7	(7/2$^+$)
1326.1 5	1.3 2	2265.3	(7/2$^+$,9/2$^+$,11/2$^+$)	938.9	(11/2$^+$)
1353.58 22	0.55 10	1614.7		261.0	(7/2$^+$)
1399.3 5	0.2 1	2803.1		1403.8	13/2$^+$
1418.01 24	0.80 15	2041.6	(7/2$^+$,9/2$^+$,11/2$^+$)	623.6	(7/2$^+$)
1454.02 25	0.84 15	1534.5	(7/2$^+$)	80.3	(3/2$^+$)
1487.5 4	0.32 6	2891.3		1403.8	13/2$^+$
1632.8 4	0.9 3	2220.5	(11/2$^-$)	588.0	(7/2$^+$)
1632.9 4	0.8 3	2300.2		667.3	(9/2$^+$)
1641.8 3	0.31 6	2265.3	(7/2$^+$,9/2$^+$,11/2$^+$)	623.6	(7/2$^+$)
1671.9 4	0.26 8	1932.9		261.0	(7/2$^+$)
^{x}1815.5 7	0.48 17				
1901.2 5	0.46 15	3305.0	(7/2$^+$,9/2$^+$,11/2$^+$)	1403.8	13/2$^+$
1959.0 3	0.47 15	2220.5	(11/2$^-$)	261.0	(7/2$^+$)
2041.81 21	1.17 9	2041.6	(7/2$^+$,9/2$^+$,11/2$^+$)	0.0	(5/2)$^+$
2053.1 3	1.56 14	2641.0	(7/2$^+$,9/2$^+$,11/2$^+$)	588.0	(7/2$^+$)
2131.7 4	0.6 2	2392.7	9/2$^+$	261.0	(7/2$^+$)
2307.8 3	1.2 2	2895.9	(7/2$^+$,9/2$^+$,11/2$^+$)	588.0	(7/2$^+$)
^{x}2444.4 7	0.2 1				
^{x}2519.4 6	0.16 9				
2635.1 5	0.56 8	2895.9	(7/2$^+$,9/2$^+$,11/2$^+$)	261.0	(7/2$^+$)
^{x}2664.3 8	0.34 9				
2699.1 3	0.7 2	2960.1	(7/2$^+$,9/2$^+$,11/2$^+$)	261.0	(7/2$^+$)
^{x}2854.0 8	0.26 8				
^{x}2888.1 6	0.26 8				
3143.3 8	0.33 8	3404.3	(7/2$^+$,9/2$^+$,11/2$^+$)	261.0	(7/2$^+$)
^{x}3197.4 9	0.13 5				

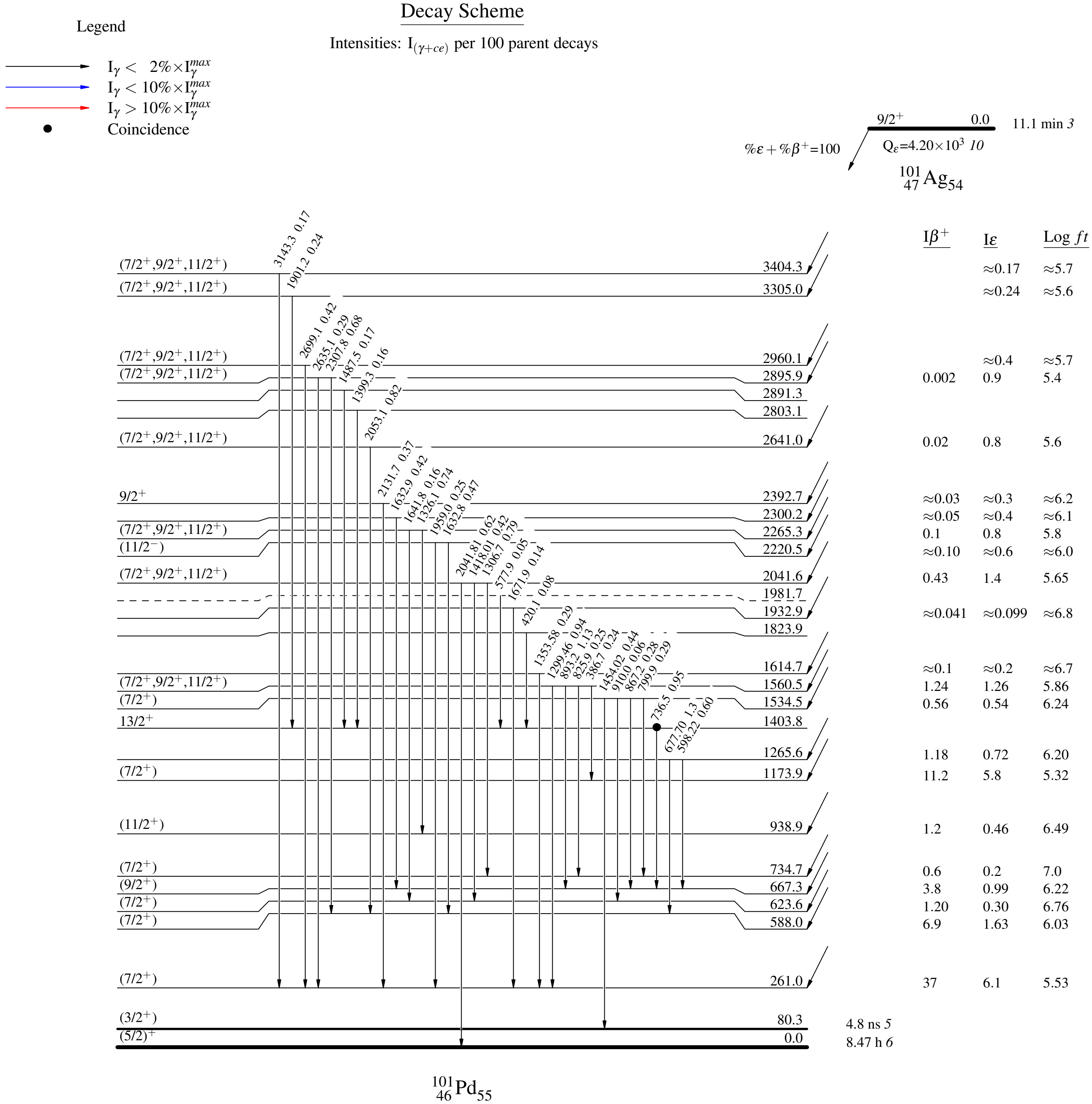
† For absolute intensity per 100 decays, multiply by 0.526 8.

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

^{x} γ ray not placed in level scheme.

^{101}Ag ε decay (11.1 min) 1978Ha11

Decay Scheme



^{101}Ag ε decay (11.1 min) 1978Ha11

Decay Scheme (continued)

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