^{104}Ag ε decay (33.5 min) 1978Mu01,1971Do10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 108,2035 (2007)	30-Mar-2007

Parent: ^{104}Ag: E=6.9 *4*; J$^{\pi}$=2^{+}; T$_{1/2}$=33.5 min *20*; Q(ε)=4279 *4*; %ε+%β^{+} decay=100.0

^{104}Pd Levels

E(level)	J$^{\pi}$†	E(level)	J$^{\pi}$†	E(level)	J$^{\pi}$†	E(level)	J$^{\pi}$†
0.0	0^{+}	2337.9 *3*	1^{+},2^{+}	2760.3 *4*	(4,5,6)	3116.5 *5*	1,2$^{(+)}$
555.81 *4*	2^{+}	2457.3 *4*	(1,2,3)	2771.5 *5*		3194.1 *7*	(3^{-},4^{-})
1323.59? *6*	4^{+}	2478.3	1,2	2800.5 *6*	4^{+}	3213.5 *4*	1^{+},2^{+},3^{+}
1333.59 *8*	0^{+}	2492.0 *6*		2810.0? *5*	2^{+},3^{+}	3285.4 *6*	1^{+},2^{+},3^{+}
1341.68 *5*	2^{+}	2521.4 *4*	2^{+}	2918.3 *4*	(1,2,3)	3333.8 *4*	(3^{-},4^{-})
1792.3	0^{+}	2533.4 *5*	(1,2,3)	2960.5 *7*	(2^{+},3)	3408.0 *4*	1^{+},2^{+},3^{+}
1794.3 *9*	1,2	2571.6 *4*	(4,5)$^{+}$	2975.5 *5*	(1,2,3)	3474.4 *5*	1,2,3
1820.65 *16*	3^{+}	2622.2 *5*	(1,2,3)	2993.6 *8*	2^{+},3^{+}	3647.8? *5*	
1999.1	(1,2)	2626.9 *4*	1,2	3008.3	1^{+},2^{+}	4009.2 *5*	1^{+},2^{+},3^{+}
2193.4 *6*		2642.6	(1,2,3)	3034.0 *5*	(1,2^{+})	4029.7 *5*	1^{+},2^{+},3^{+}
2245.4 *5*	2^{+}	2677.8	4^{+}	3078.6 *5*	2^{+},3^{+}		
2276.5 *3*	1^{+},2^{+}	2695.0 *5*	1 to 3	3097.8 *5*	1,2		
2298.9	4^{-}	2714.8 *6*	(4,5,6)	3113.3 *6*	(1,2,3)		

† From Adopted Levels.

ε,β^{+} radiations

Iβ is based on the<0.07% isomeric branching reported by 1990Gu24. This value does not agree with %IT=33% 5 from 1971Mu22. E(β^{+})=2600 *100* (1959Gi63), 2705 *15* (1960Nu02).

E(decay)	E(level)	Iβ^{+} †	Iε†	Log *ft*	I(ε+β^{+})†	Comments
(256 *4*)	4029.7		0.14 *5*	5.20 *16*	0.14 *5*	εK=0.8458 *4*; εL=0.1236 *3*; εM+=0.03058 *9*
(277 *4*)	4009.2		0.41 *3*	4.81 *5*	0.41 *3*	εK=0.8476 *4*; εL=0.1222 *3*; εM+=0.03019 *8*
(812 *4*)	3474.4		0.28 *4*	5.96 *7*	0.28 *4*	εK=0.8612; εL=0.11165 *3*; εM+=0.027198 *8*
(878 *4*)	3408.0		1.98 *22*	5.18 *6*	1.98 *22*	εK=0.8616; εL=0.11127 *3*; εM+=0.027090 *6*
(952 *4*)	3333.8		0.11 *5*	6.50 *20*	0.11 *5*	εK=0.8621; εL=0.11091 *2*; εM+=0.026988 *6*
(1001 *4*)	3285.4		1.2 *2*	5.51 *8*	1.2 *2*	εK=0.8624; εL=0.11070 *2*; εM+=0.026930 *5*
(1072 *4*)	3213.5		1.8 *2*	5.39 *6*	1.8 *2*	εK=0.8627; εL=0.11043 *2*; εM+=0.026853 *4*
(1092 *4*)	3194.1		0.01 *1*	7.7 *5*	0.01 *1*	εK=0.8628; εL=0.11036 *2*; εM+=0.026834 *4*
(1169 *4*)	3116.5		0.02 *1*	7.43 *22*	0.02 *1*	εK=0.8630; εL=0.11011 *2*; εM+=0.026762 *4*
(1173 *4*)	3113.3		0.04 *1*	7.13 *12*	0.04 *1*	εK=0.8630; εL=0.11010 *2*; εM+=0.026759 *4*
(1188 *4*)	3097.8		0.018 *10*	7.49 *25*	0.018 *10*	εK=0.8630; εL=0.11004 *2*; εM+=0.026745 *4*
(1207 *4*)	3078.6		0.9 *1*	5.80 *6*	0.9 *1*	εK=0.8630; εL=0.10998 *2*; εM+=0.026727 *4*
(1252 *4*)	3034.0		0.2 *1*	6.49 *22*	0.2 *1*	εK=0.8628; εL=0.10981 *2*; εM+=0.026682 *5*
(1278 *4*)	3008.3	9.×10^{-5} *1*	0.08 *1*	6.90 *6*	0.08 *1*	av Eβ=121.1 *18*; εK=0.8625; εL=0.10970 *2*; εM+=0.026652 *5*
(1292 *4*)	2993.6	0.00032 *4*	0.22 *2*	6.47 *5*	0.22 *2*	av Eβ=127.5 *18*; εK=0.8623; εL=0.10963 *2*; εM+=0.026634 *6*
(1310 *4*)	2975.5	0.001	0.7 *1*	5.98 *7*	0.7 *1*	av Eβ=135.4 *18*; εK=0.8620; εL=0.10954 *3*; εM+=0.026610 *6*
(1325 *4*)	2960.5	0.00042 *3*	0.18 *1*	6.58 *4*	0.18 *1*	av Eβ=141.9 *18*; εK=0.8616 *1*; εL=0.10946 *3*; εM+=0.026589 *7*
(1368 *4*)	2918.3	0.0018 *3*	0.45 *6*	6.21 *7*	0.45 *6*	av Eβ=160.2 *18*; εK=0.8603 *2*; εL=0.10919 *3*; εM+=0.026519 *8*

Continued on next page (footnotes at end of table)

^{104}Ag ε decay (33.5 min) 1978Mu01,1971Do10 (continued)

ε,β^+ radiations (continued)

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I(ε+β^+)†	Comments
(1485 *4*)	2800.5	0.0007 *1*	0.06 *1*	7.17 *8*	0.06 *1*	av Eβ=211.1 *18*; εK=0.8533 *4*; εL=0.10803 *6*; εM+=0.02623 *2*
(1514 *4*)	2771.5	0.001	0.09 *1*	7.01 *6*	0.09 *1*	av Eβ=223.6 *18*; εK=0.8506 *4*; εL=0.10763 *6*; εM+=0.02613 *2*
(1526 *4*)	2760.3	0.0049 *4*	0.29 *2*	6.51 *4*	0.29 *2*	av Eβ=228.5 *18*; εK=0.8495 *5*; εL=0.10746 *7*; εM+=0.02609 *2*
(1571 *4*)	2714.8	0.002	0.09 *1*	7.04 *6*	0.09 *1*	av Eβ=248.2 *18*; εK=0.8441 *6*; εL=0.10669 *8*; εM+=0.02590 *2*
(1591 *4*)	2695.0	0.042 *5*	1.53 *19*	5.81 *7*	1.57 *20*	av Eβ=256.7 *18*; εK=0.8414 *6*; εL=0.10632 *9*; εM+=0.02581 *2*
(1643 *4*)	2642.6	0.002	0.06 *1*	7.26 *8*	0.06 *1*	av Eβ=279.3 *18*; εK=0.8330 *8*; εL=0.1052 *1*; εM+=0.02553 *3*
(1659 *4*)	2626.9	0.02	0.5 *1*	6.35 *9*	0.5 *1*	av Eβ=286.1 *18*; εK=0.8302 *8*; εL=0.1048 *1*; εM+=0.02543 *3*
(1664 *4*)	2622.2	0.033 *2*	0.79 *5*	6.14 *4*	0.82 *5*	av Eβ=288.2 *18*; εK=0.8293 *8*; εL=0.1047 *1*; εM+=0.02540 *3*
(1714 *4*)	2571.6	0.062 *4*	1.12 *7*	6.02 *4*	1.18 *7*	av Eβ=310.1 *18*; εK=0.8189 *9*; εL=0.10327 *12*; εM+=0.02506 *3*
(1753 *4*)	2533.4	0.054 *7*	0.80 *10*	6.18 *7*	0.85 *11*	av Eβ=326.7 *18*; εK=0.8099 *11*; εL=0.10208 *14*; εM+=0.02477 *4*
(1765 *4*)	2521.4	0.013 *1*	0.19 *2*	6.82 *5*	0.20 *2*	av Eβ=331.9 *18*; εK=0.8068 *11*; εL=0.10169 *14*; εM+=0.02467 *4*
(1794 *4*)	2492.0	0.005 *1*	0.06 *1*	7.36 *8*	0.06 *1*	av Eβ=344.7 *18*; εK=0.7990 *12*; εL=0.10066 *15*; εM+=0.02442 *4*
(1808 *4*)	2478.3	0.007 *1*	0.08 *1*	7.19 *6*	0.09 *1*	av Eβ=350.7 *18*; εK=0.7952 *12*; εL=0.10016 *15*; εM+=0.02430 *4*
(1829 *4*)	2457.3	0.031 *2*	0.33 *2*	6.60 *4*	0.36 *2*	av Eβ=359.9 *18*; εK=0.7890 *13*; εL=0.09936 *16*; εM+=0.02411 *4*
(1948 *4*)	2337.9	0.47 *7*	3.0 *4*	5.69 *7*	3.5 *5*	av Eβ=412.1 *18*; εK=0.7489 *15*; εL=0.09418 *20*; εM+=0.02284 *5*
(1987 *4*)	2298.9	0.050 *3*	0.28 *2*	6.75 *4*	0.33 *2*	av Eβ=429.2 *18*; εK=0.7341 *16*; εL=0.09227 *21*; εM+=0.02238 *5*
(2009 *4*)	2276.5	0.74 *7*	3.9 *3*	5.62 *5*	4.6 *4*	av Eβ=439.0 *18*; εK=0.7252 *17*; εL=0.09113 *21*; εM+=0.02210 *5*
(2041 *4*)	2245.4	0.16 *2*	0.74 *9*	6.35 *6*	0.90 *11*	av Eβ=452.7 *18*; εK=0.7124 *17*; εL=0.08950 *22*; εM+=0.02171 *6*
(2093 *4*)	2193.4	0.055 *20*	0.22 *8*	6.91 *17*	0.27 *10*	av Eβ=475.6 *18*; εK=0.6902 *18*; εL=0.08667 *23*; εM+=0.02102 *6*
(2287 *4*)	1999.1	0.030 *2*	0.069 *4*	7.48 *4*	0.099 *6*	av Eβ=561.8 *18*; εK=0.6006 *20*; εL=0.07528 *25*; εM+=0.01825 *6*
(2465 *4*)	1820.65	0.23 *4*	0.33 *6*	6.86 *9*	0.56 *10*	av Eβ=641.6 *18*; εK=0.5160 *19*; εL=0.06459 *24*; εM+=0.01566 *6*
(2492 *4*)	1794.3	1.8 *2*	2.5 *2*	5.99 *5*	4.3 *4*	av Eβ=653.4 *19*; εK=0.5038 *19*; εL=0.06305 *24*; εM+=0.01529 *6*
(2944 *4*)	1341.68	1.1 *3*	0.63 *15*	6.74 *11*	1.7 *4*	av Eβ=858.5 *19*; εK=0.3229 *14*; εL=0.04030 *17*; εM+=0.00977 *4*
(3730 *4*)	555.81	58 *3*	12 *1*	5.67 *4*	70 *4*	av Eβ=1221.5 *19*; εK=0.1487 *6*; εL=0.01851 *7*; εM+=0.004482 *17*

† Absolute intensity per 100 decays.

^{104}Ag ε decay (33.5 min) 1978Mu01,1971Do10 (continued)

γ(^{104}Pd)

Iγ normalization: assuming the sum of γ's to the g.s.=99.93 and no ε to g.s.
Activity from ^{106}Cd(p,2pn), ^{107}Ag(p,p3n), ^{104}Pd(p,n), ^{103}Rh(^{3}He,2n) (1971Do10).
Measured γ, γγGe(Li) pair spectrometer (1978Mu01).
See also ^{104}Ag IT decay.

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[#]	Comments
450.3 3		1792.3	0+	1341.68	2+			
479.2 3	0.12 3	1820.65	3+	1341.68	2+	M1,E2		
555.8 2	100	555.81	2+	0.0	0+	E2	0.00447	α(K)=0.00384; α(L)=0.00048
767.6[@] 2	1.0 3	1323.59?	4+	555.81	2+	E2	0.00190	α(K)=0.00164; α(L)= 0.0002
777.7 3	0.7 1	1333.59	0+	555.81	2+			
785.7 2	2.1 3	1341.68	2+	555.81	2+			
934.6 2	0.50 5	2276.5	1+,2+	1341.68	2+			
974.2[†] 2	0.02	2298.9	4−	1323.59?	4+			
996.1 3	0.55 5	2337.9	1+,2+	1341.68	2+			
1133.1[†] 3	0.19	2457.3	(1,2,3)	1323.59?	4+			
1191.5[@] 4	0.20 5	2533.4	(1,2,3)	1341.68	2+			
1238.8 3	4.3 3	1794.3	1,2	555.81	2+			
1247.2 3	0.52	2571.6	(4,5)+	1323.59?	4+			
1265.2 3	0.50 10	1820.65	3+	555.81	2+			
1297.8[†] 3	0.91	2622.2	(1,2,3)	1323.59?	4+			
1341.8 3	1.8 2	1341.68	2+	0.0	0+			
1354.3[†] 3	0.05	2677.8	4+	1323.59?	4+			
1382.4[†] 3	0.44	4009.2	1+,2+,3+	2626.9	1,2			
1418.5[†] 3	0.33	2760.3	(4,5,6)	1341.68	2+			
1636.1[†] 5	0.20	2960.5	(2+,3)	1323.59?	4+			
1637.5[†] 5	0.3 1	2193.4		555.81	2+			
1652.1[†] 5	0.18	2993.6	2+,3+	1341.68	2+			
1689.5 4	1.0 1	2245.4	2+	555.81	2+			
1720.8 4	1.9 2	2276.5	1+,2+	555.81	2+			
1743.1[†] 5	0.35	2298.9	4−	555.81	2+			
1781.8 5	2.3 5	2337.9	1+,2+	555.81	2+			
1794.6 4	0.45 5	1794.3	1,2	0.0	0+			
1869.7 5	0.014	3194.1	(3−,4−)	1323.59?	4+			
1890.6[@] 4	0.15 5	3213.5	1+,2+,3+	1323.59?	4+			
1900.9[†] 5	0.21	2457.3	(1,2,3)	555.81	2+			
1936.1[†] 5	0.07	2492.0		555.81	2+			
1965.6[†] 5	0.22	2521.4	2+	555.81	2+			
1977.5 4	0.95 10	2533.4	(1,2,3)	555.81	2+			
1992.0[†] 5	0.07	3333.8	(3−,4−)	1341.68	2+			
1999.1 5	0.11	1999.1	(1,2)	0.0	0+			
2015.8[†] 5	0.79	2571.6	(4,5)+	555.81	2+			
2065.9 5	0.25 5	3408.0	1+,2+,3+	1341.68	2+			
2086.8[†] 5	0.07	2642.6	(1,2,3)	555.81	2+			
2139.2 5	1.75 20	2695.0	1 to 3	555.81	2+			
2158.9[†] 5	0.10	2714.8	(4,5,6)	555.81	2+			
2215.6[†] 5	0.10	2771.5		555.81	2+			
2244.6[†] 5	0.07	2800.5	4+	555.81	2+			
2254.2[@] 5	0.1 1	2810.0?	2+,3+	555.81	2+			

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^{104}Ag ε decay (33.5 min) 1978Mu01,1971Do10 (continued)

$\gamma(^{104}Pd)$ (continued)

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π
2276.7 *4*	2.7 *2*	2276.5	$1^+,2^+$	0.0	0^+	2777.9[†] *5*	0.06	3333.8	$(3^-,4^-)$	555.81	2^+
2338.3 *3*	1.0 *1*	2337.9	$1^+,2^+$	0.0	0^+	2852.5 *5*	0.35 *5*	3408.0	$1^+,2^+,3^+$	555.81	2^+
2362.4 *4*	0.50 *5*	2918.3	(1,2,3)	555.81	2^+	2918.8 *5*	0.20 *4*	3474.4	1,2,3	555.81	2^+
2419.6 *4*	0.8 *1*	2975.5	(1,2,3)	555.81	2^+	3008.3[†] *5*	0.09	3008.3	$1^+,2^+$	0.0	0^+
2437.3[†] *5*	0.06	2993.6	$2^+,3^+$	555.81	2^+	3034.0 *5*	0.25 *5*	3034.0	$(1,2^+)$	0.0	0^+
2478.3[†] *5*	0.11	2478.3	1,2	0.0	0^+	3097.8[†] *5*	0.02	3097.8	1,2	0.0	0^+
2522.7 *4*	0.95 *10*	3078.6	$2^+,3^+$	555.81	2^+	3116.5[†] *5*	0.024	3116.5	$1,2^{(+)}$	0.0	0^+
2557.4[†] *5*	0.05	3113.3	(1,2,3)	555.81	2^+	3213.6 *5*	1.60 *20*	3213.5	$1^+,2^+,3^+$	0.0	0^+
2626.9 *4*	1.0 *1*	2626.9	1,2	0.0	0^+	3407.8 *5*	1.60 *20*	3408.0	$1^+,2^+,3^+$	0.0	0^+
2657.5 *5*	0.35 *5*	3213.5	$1^+,2^+,3^+$	555.81	2^+	3473.9 *5*	0.11 *1*	3474.4	1,2,3	0.0	0^+
2705.3[†] *5*	0.15 *5*	4029.7	$1^+,2^+,3^+$	1323.59?	4^+	3647.8[@] *5*	0.03 *3*	3647.8?		0.0	0^+
2729.5 *5*	1.30 *15*	3285.4	$1^+,2^+,3^+$	555.81	2^+	4009.0[†] *5*	0.016	4009.2	$1^+,2^+,3^+$	0.0	0^+

[†] From 1978Mu01.
[‡] For absolute intensity per 100 decays, multiply by 0.90 *5*.
[#] 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.
[@] Placement of transition in the level scheme is uncertain.

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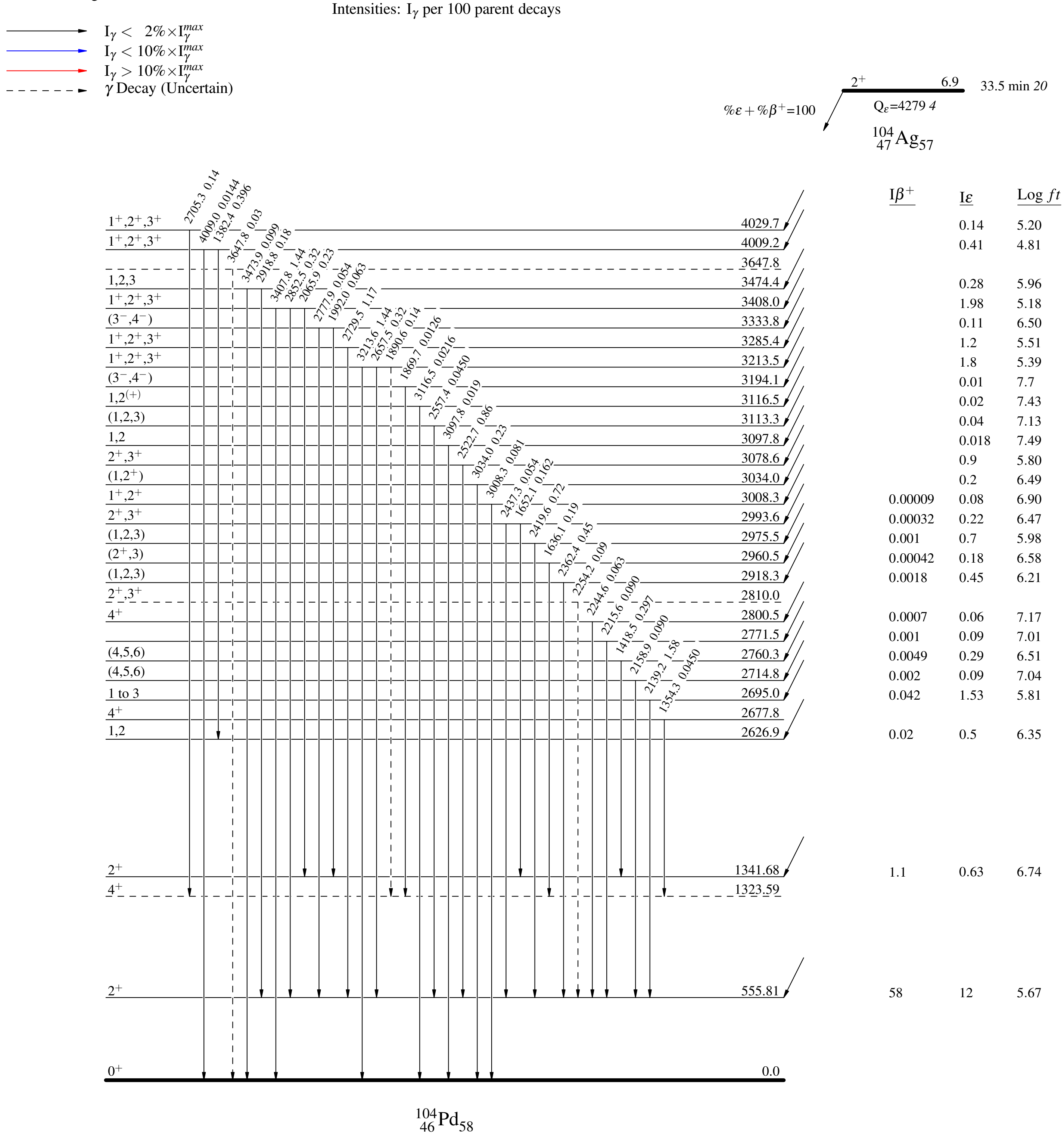
Decay Scheme

Intensities: I_γ per 100 parent decays



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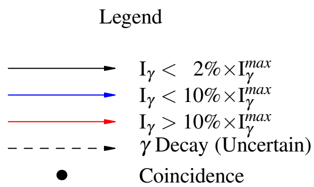

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays