^{106}Ag ε decay (8.28 d) 1973In08,1975Sc38,1977Ti01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne and A. Negret	NDS 109, 943 (2008)	1-May-2007

Parent: ^{106}Ag: E=89.66 *7*; J$^{\pi}$=6^{+}; T$_{1/2}$=8.28 d *2*; Q(ε)=2965 *3*; %ε+%β^{+} decay=100.0

1973In08: activity from ^{103}Rh(α,n) E=14 MeV, chem. Measured: Eγ, Iγ, ce deduced: ^{106}Pd levels, J^{π}, mult.

1975Sc38: activity from ^{106}Pd(d,2n) E=20 MeV, natural target; measured: I$\gamma(\theta)$ polarized nuclei oriented at low T. Deduced: ^{106}Pd levels, J^{π}, δ.

1977Ti01: activity from ^{107}Ag(γ,n) E=30 MeV bremsstrahlung, natural target. Measured: Iγ, $\gamma\gamma(\theta)$. Deduced: δ.

Others: 1950Me86, 1955Al44, 1960Ro12, 1963Sm06, 1967Ra11, 1967St10, 1967Te03, 1967Ba33, 1967Vr06, 1968Mo02, 1968Ta01, 1968We16, 1971Az02, 1974HeYW, 1975Sh28, 1975Si13.

$\gamma\gamma$ mainly from 1977Ti01 semi-semi spectra. Others: 1960Ro12, 1967Ba33, 1967Ra11, 1971Az02.

Q(ε)=3053 *3* deduced from L/K capture ratios to 2952 and 2757 states (1978Ge01).

^{106}Pd Levels

E(level)	J$^{\pi}$ †	T$_{1/2}$	Comments
0.0	0^{+}	stable	
511.85 *3*	2^{+}		
1128.04 *4*	2^{+}		
1229.33 *4*	4^{+}		
1557.71 *4*	3^{+}		
1561.9 *3*	2^{+}		
1932.25 *6*	4^{+}		
2076.50 *5*	6^{+}		
2076.98 *5*	4^{+}		
2084.06 *5*	3^{-}		
2282.80 *5*	4^{+}		
2305.75 *5*	4^{-}		
2350.69 *5*	4^{+}		
2365.84 *5*	5^{+}		
2397.6 *3*	(5)$^{-}$		
2578.8?	(4^{-})		
2756.85 *5*	5^{+}	<3.6 ns	T$_{1/2}$: <3.6 ns (K x ray)(γ)(t) scin (1968We16).
2951.84 *6*	5^{+}	<2.0 ns	T$_{1/2}$: <2.0 ns (K x ray)(γ)(t) scin (1968We16); other: 200 ns *50* (1967Ba33).

† From Adopted Levels.

ε,β^{+} radiations

β^{+} unobserved (<0.1%) 1953Be42 (scin).

E(decay)	E(level)	Iε †	Log *ft*	I(ε+β^{+}) †	Comments
(103 *3*)	2951.84	8.1 *6*	5.08 *5*	8.1 *6*	εK= 0.802 *3*; εL= 0.1578 *21*; εM+= 0.0404 *7* εL/εK exp=0.203 *3* (1978Ge01) via (1723γ)(x-ray) and I(x-ray) + I(Auger) measurements.
(298 *3*)	2756.85	92 *3*	5.087 *18*	92 *6*	εK= 0.8492; εL= 0.12098 *16*; εM+= 0.02984 *5* εL/εK exp=0.1457 *10* (1978Ge01) via (1528γ)(x-ray) and I(x-ray) + I(Auger) measurements.
(657 *3*)	2397.6	0.10 *3*	8.77 *13*	0.10 *3*	εK= 0.8596; εL= 0.1129; εM+= 0.02754
(978 *3*)	2076.50	1.3 *7*	8.02 *24*	1.3 *7*	εK= 0.8623; εL= 0.1108; εM+= 0.02696

† Absolute intensity per 100 decays.

γ(^{106}Pd)

Iγ normalization: for ΣI(γ+ce)=100 to g.s.; IT decay unobserved.

α(K)exp=ce(K)/Iγ normalized to α(K)(511.8γ)=0.00484 7 (E2 theory). I(ce(K)) data are primarily from 1973In08 (s), otherwise from 1964Sc15 (s); I(ce(L)) data are from 1987KrZQ. Others: 1955Al44, 1961Sm04, 1963Sm06, 1975Sh28, 1978Sh25.

E_γ[†]	I_γ[†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
^{x}69.0 *4*	5.9 *16*								
^{x}70.3 *3*	10.4 *16*								
^{x}80.1 *2*	3.9 *8*								
^{x}83.2 *6*	0.9 *5*								
178.2[a] *5*	0.6 *2*	2756.85	5$^+$	2578.8?	(4$^-$)				
195.05 *16*	3.5 *5*	2951.84	5$^+$	2756.85	5$^+$	M1(+E2)	0.13 *+22−13*	0.061	α(K)exp=0.061 *12* α(K)(M1)=0.053, α(K)(E2)=0.108.
221.701 *15*	75 *3*	2305.75	4$^-$	2084.06	3$^-$	M1+E2	−0.11 *2*	0.0441 *2*	α(K)=0.03813 *15*; α(L)=0.00463 *3*; α(M)=0.00087; α(N+..)=0.00016 α(K)exp=0.041 *4* L1:L2:L3=100:7.6 *4*:4.2 *2* (1978Sh25) δ: weighted average of: −0.13 *2* from $\gamma(\theta)$ oriented nuclei (1975Sc38); −0.08 *8* from $\gamma\gamma(\theta)$ (1977Ti01) and −0.08 *2* from NMR on oriented nuclei (1984Ed02).
228.633 *21*	24.0 *11*	2305.75	4$^-$	2076.98	4$^+$	E1		0.0145	α(K)=0.01273; α(L)=0.00150; α(M)=0.00028 α(K)exp=0.0135 *15*; α(L1)exp=0.0012 *4*; α(L2)exp=0.00008 *2*; α(L3)exp=0.00015 *3* L1:L2:L3=100:7.1 *18*:11.6 *17* (1978Sh25)
328.463 *23*	13.0 *6*	1557.71	3$^+$	1229.33	4$^+$	E2(+M1)		0.022	α(K)=0.019; α(L)=0.0026; α(M)=0.0004 α(K)exp=0.0198 *18* L1:L2:L3=100:22 *13*:8 *5* (1978Sh25) Mult.: δ>2.3 from α(K)exp.
374.46 *13*	3.0 *4*	1932.25	4$^+$	1557.71	3$^+$	M1(+E2)	0.0 *+3−0*	0.0126	α(K)=0.00207; α(L)=0.00025 α(K)exp=0.0089 *18*
391.035 *26*	42 *2*	2756.85	5$^+$	2365.84	5$^+$	E2+M1			α(K)=0.01083; α(L)=0.00143; α(M)=0.00027 α(K)exp=0.0109 *9* and also 0.00104 *9* (1990Ka35). δ≈−16 from $\gamma(\theta)$ (1975Sc38); ≈−33 or −1.7 *6* from NMR on oriented nuclei (1984Ed02).
406.182 *20*	153 *4*	2756.85	5$^+$	2350.69	4$^+$	M1+E2	−3.35 *14*	0.0110	α(K)=0.00950; α(L)=0.00124; α(M)=0.00023 α(K)exp=0.0095 *6* L1:L2:L3=100:20 *4*:12 *2* (1978Sh25) δ: weighted average: −3.2 *2* from $\gamma(\theta)$ (1975Sc38) and −3.5 *2* from NMR on oriented nuclei (1984Ed02). Other: −7 *4* (1977Ti01).
418.55 *23*	3.8 *7*	2350.69	4$^+$	1932.25	4$^+$				
429.646 *22*	150 *4*	1557.71	3$^+$	1128.04	2$^+$	M1+E2	−7.9 *8*	0.00938	α(K)=0.00813; α(L)=0.00106; α(M)=0.00020 α(K)exp=0.0085 *6*

From ENSDF

^{106}Ag ε decay (8.28 d) 1973In08,1975Sc38,1977Ti01 (continued)

$\gamma(^{106}Pd)$ (continued)

E_γ †	I_γ †@	E_i(level)	J^π_i	E_f	J^π_f	Mult.‡	δ#	α&	Comments
									L1:L2:L3=100:13 *4*:5.8 *15* (1978Sh25) δ: weighted average: −7.4 *7* from $\gamma(\theta)$ (1975Sc38) and −9 *1* from NMR on oriented nuclei (1984Ed02).
433.9 *5*	1.0 *4*	2365.84	5^+	1932.25	4^+				
450.976 *22*	322 *8*	2756.85	5^+	2305.75	4^-	E1		0.00243	α(K)=0.00213; α(L)=0.00025 α(K)exp=0.00220 *15*; α(L1)exp=0.00026 *4* (1987KaZQ); α(L2)exp=0.000010 *5* (1987KaZQ)
474.06 *3*	10.6 *6*	2756.85	5^+	2282.80	4^+	M1+E2			α(K)=0.00602; α(L)=0.00076; α(M)=0.00014 α(K)exp=0.0055 *19* δ: −4.0 *+9−6* or −0.10 *+4−10* (1975Sc38).
511.85 *3*	1000 *30*	511.85	2^+	0.0	0^+	E2			E_γ: other: 511.8605 *31* (1976Sh25, ^{106}Ru source) semi, relative to $E(\gamma^{\pm})$=511.0034 *14*. I_γ: $\gamma^{\pm}$ is negligible; unobserved β^+<0.1% (1953Be42).
522.3 *3*	1.0 *2*	2084.06	3^-	1561.9	2^+				
585.97 *10*	5.0 *11*	2951.84	5^+	2365.84	5^+	M1,E2			α(K)exp=0.0046 *14* α(K)(M1)=0.0034, α(K)(E2)=0.0033.
601.17 *7*	18.4 *10*	2951.84	5^+	2350.69	4^+	M1+E2	−3.0 *7*		α(K)=0.00310; α(L)=0.00038 α(K)exp=0.0025 *3* (1973In08); α(L1)exp=0.0007315 (1987KaZQ) α(L2)exp=0.00007 *2* (1987KaZQ) δ: from 1975Sc38; in analogy with $\delta(406\gamma)$=−3.2 (J=5^+ to 4^+).
616.17 *3*	246 *7*	1128.04	2^+	511.85	2^+	E0+M1+E2	−9.4 *20*		α(K)=0.00290; α(L)=0.00036 α(K)exp=0.00307 *15* L1:L2:L3=100:8.5 *8*:6.0 *7* (1978Sh25) α(K)exp: Weighted average of 0.00306 *14* (1973In08) and 0.00308 *14* (1990Ka35). Mult.: from electron conversion data of 1990Ka35. δ: from 1977Ti01. Other: −10 *+4−2* from $\gamma(\theta)$ (1975Sc38); −14 *8* or −0.53 *6* from NMR on oriented nuclei (1984Ed02); or 14 *+17−4* from 1990Ka35. ρ(E0)=0.16 *8* (1990Ka35).
646.03 *5*	16.6 *11*	2951.84	5^+	2305.75	4^-	E1		0.00106	α(K)=0.00092; α(L)=0.00011 α(K)exp=0.00055 *18*
679.64 *2*	7.3 *4*	2756.85	5^+	2076.98	4^+	[M1,E2]			E_γ: doublet decomposed by 1978IdZZ. I_γ: from doublet Iγ=24.9 *9* (1973In08) and Iγ(680.4γ)/Iγ(679.6γ)=2.4 *1* (1978IdZZ). Mult.: α(K)exp=0.0017 *3* for the 680 doublet consistent with mult(679.64γ)=E1 and mult(680.42γ)=M1,E2. Placement in the decay scheme $\Delta\pi$=no for both placements.This requirement leads to Σ I(ce(K))=0.057 *4*, compared with ΣI(ce(K))exp=0.042 *6*.
680.42 *1*	17.6 *9*	2756.85	5^+	2076.50	6^+	M1,E2			α(K)(M1)=0.0024; α(K)(E2)=0.0022. α(K)exp=0.0017 *3* doublet. I_γ: from doublet Iγ=24.9 *9* (1973In08) and Iγ(680.4γ)/Iγ(679.6γ)=2.4 *1* (1978IdZZ). Mult.: α(K)exp=0.0017 *3* for the 680 doublet consistent with

From ENSDF

$\gamma(^{106}$Pd) (continued)

E_γ [†]	I_γ [†@]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [‡]	δ [#]	Comments
								mult(679.64γ)=E1 and mult(680.42γ)=M1,E2. Placement in the decay scheme Δπ=no for both placements. This requirement leads to Σ I(ce(K))=0.057 *4*, compared with ΣI(ce(K))exp=0.042 *6*.
703.11 *8*	51 *2*	1932.25	4^+	1229.33	4^+	M1+E2	−2.30 *2*	α(K)=0.00207; α(L)=0.00025 α(K)exp=0.0016 *3* α(K)exp: other: 0.00202 *24* (1990Ka35). δ: from 1977Ti01; others: −1.1 *4* (1975Sc38); −1.7 *11* (1984Ed02).
717.34 *9*	330 *9*	1229.33	4^+	511.85	2^+	E2		α(K)=0.00195; α(L)=0.00024 α(K)exp=0.00197 *13* δ: ≤0.005 *10* (1977Ti01) γγ(θ).
748.36 *11*	235 *7*	2305.75	4^-	1557.71	3^+	E1		α(K)=0.00067 α(K)exp=0.00060 *11* Mult.: δ=+0.03 *10* (1977Ti01) from γγ(θ) overlaps zero.
793.17 *10*	67 *3*	2350.69	4^+	1557.71	3^+	M1+E2	−7.5 *15*	α(K)=0.00152; α(L)=0.00018 α(K)exp=0.0017 *3* δ: weighted average: −7.0 *20* from γ(θ) (1975Sc38); −4.3 *15* from γγ(θ) (1977Ti01) and −8.0 *20* from NMR on oriented nuclei (1984Ed02).
804.28 *10*	141 *6*	1932.25	4^+	1128.04	2^+	E2		α(K)=0.00146; α(L)=0.00018 α(K)exp=0.00138 *16* Mult.: E2 consistent with isotropic γγ(θ) A_2=0.002 *6* (1977Ti01).
808.36 *11*	46 *5*	2365.84	5^+	1557.71	3^+	M1+E2	+1.0 *8*	α(K)=0.00152 *7*; α(L)=0.00018 α(K)exp=0.0013 *3* δ: taken from 1977Ti01. M1 fraction impossible if J^π(2365)=5^+ and J^π(1557)=3^+.
824.69 *7*	175 *5*	2756.85	5^+	1932.25	4^+	M1+E2	−6.5 *6*	α(K)=0.00138; α(L)=0.00016 α(K)exp=0.00150 *15* δ: weighted average: −5.7 *+13−8* from γ(θ) 1975Sc38 and −6.8 *6* from NMR on oriented nuclei (1984Ed02). Other: −0.04 *+2−4* (1975Sc38).
847.03 *4*	32 *7*	2076.50	6^+	1229.33	4^+	E2		α(K)=0.00129; α(L)=0.00015 α(K)exp(doublet)=0.0014 *4*. E_γ: from 1978IdZZ. I_γ: doublet Iγ(848γ)=50 *2* (1973In08) minus Iγ=18 *6* component via 4^+, 2077.4-keV state. Mult.: α(K)exp=0.0014 *4* for 847γ doublet is consistent with mult (847.03γ)=M1,E2 and with mult (841.27γ)=M1,E2 or possibly E1. The placement in the decay scheme requires mult=E2 and Δπ=no, respectively.
847.27 *2*	18 *6*	2076.98	4^+	1229.33	4^+	(M1,E2)		E_γ: from 1978IdZZ. I_γ: γγ measurement (1977Ti01); other: Iγ(847.27γ)=Iγ(847.43γ) (1978IdZZ) suggests component Iγ=25. Mult.: α(K)exp=0.0014 *4* for 847γ doublet is consistent with mult (847.03γ)=M1,E2 and with mult (841.27γ)=M1,E2 or possibly E1.the placement in the decay scheme requires mult=E2 and Δπ=no, respectively. From α(K)exp=0.0014 *4* for 847γ doublet M1 or E2 most likely although E1 cannot be excluded.
874.81 *18*	3.8 *5*	2951.84	5^+	2076.98	4^+			

From ENSDF

γ(^{106}Pd) (continued)

E_γ[†]	I_γ[†@]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[‡]	δ[#]	Comments
949.52 *25*	2.2 *4*	2076.98	4+	1128.04	2+			
956.22 *23*	5.4 *9*	2084.06	3−	1128.04	2+			
[x]986.8 *4*	<0.04							
1019.72 *15*	11.9 *18*	2951.84	5+	1932.25	4+	M1,E2		α(K)exp=0.0011 *3* α(K)(M1)=0.00095, α(K)(E2)=0.00036.
1045.83 *8*	337 *11*	1557.71	3+	511.85	2+	M1+E2	−3.8 *4*	α(K)=0.00080 α(K)exp=0.00088 *6* L1:L2:L3=100:4.4 *16*:1.5 *9* (1978Sh25) δ: weighted average of: −4.7 *8*, −5.5 *15*, −2.4 *8* from $\gamma\gamma(\theta)$ (1977Ti01) and −3.8 *3* from NMR on oriented nuclei (1984Ed02).
1050.6 *5*	3.0 *15*	1561.9	2+	511.85	2+	(M1+E2)	+0.24 *1*	Mult.: $\Delta\pi$=no from decay scheme. δ: from 1977Ok03. Others: +0.20 *2* (1968We16), +0.19 *2* (1968Ha35), +0.21 *1* (1953Kl51), +0.30 *7* (1975Hs02).
1053.77 *21*	11.0 *16*	2282.80	4+	1229.33	4+			
1077.2 *5*	0.6 *2*	2305.75	4−	1229.33	4+			I_γ: other: 0.7 *1* (1977Ti01).
1121.59 *18*	6.5 *7*	2350.69	4+	1229.33	4+			
1128.02 *7*	134 *6*	1128.04	2+	0.0	0+	E2		α(K)=0.00067 α(K)exp=0.00072 *12*
1136.85 *19*	2.6 *3*	2365.84	5+	1229.33	4+			
1168.25 *25*	1.1 *3*	2397.6	(5)−	1229.33	4+	E1+M2	−0.04 *2*	I_γ: other: 1.1 *2* (1977Ti01). Mult.: D+Q from $\gamma\gamma(\theta)$. E1+M2 from linear pol in ^{96}Zr(^{13}C,3nγ). δ: from 1976Gr12.
1178.07 *21*	1.3 *3*	2305.75	4−	1128.04	2+			I_γ: other: 2.2 *3* (1977Ti01).
1199.39 *10*	128 *6*	2756.85	5+	1557.71	3+	E2		α(K)=0.00059 α(K)exp=0.00064 *12*
1222.88 *12*	80 *4*	2350.69	4+	1128.04	2+	E2		α(K)=0.00057 α(K)exp=0.00061 *13* Mult.: Q from $\gamma\gamma(\theta)$ (1977Ti01); E2 from α(K)exp and δ(M3/E2)=+0.2 *3* overlaps zero.
1349.5[a] *6*	1.4 *5*	2578.8?	(4−)	1229.33	4+	[E1]		α(K)=0.00022
1394.35 *14*	17 *2*	2951.84	5+	1557.71	3+	[E2]		α(K)=0.00043 α(K)exp=0.00049 *6*
1419.4 *8*	0.4 *2*	1932.25	4+	511.85	2+			I_γ: other: 0.12 *8* (1977Ti01).
1527.65 *19*	186 *15*	2756.85	5+	1229.33	4+	M1+E2	−2.46 *9*	α(K)exp=0.00039 *6* Mult.: D+Q from $\gamma\gamma(\theta)$. M1+E2 from linear pol in ^{96}Zr(^{13}C,3nγ). δ: weighted average: −2.3 *2* from $\gamma(\theta)$ (1975Sc38); −2.5 *1* from NMR on oriented nuclei (1984Ed02) and −2.3 *8* from $\gamma\gamma(\theta)$ (1977Ti01).
1565.4 *3*	5.5 *5*	2076.98	4+	511.85	2+			
1572.35 *15*	75 *6*	2084.06	3−	511.85	2+	E1		α(K)exp=0.00020 *5* δ=0.00 +*5*−*1* (1977Ti01) $\gamma\gamma(\theta)$.
[x]1690.2 *4*	0.41 *7*							I_γ: other: 0.38 *6* (1977Ti01).
1722.76 *18*	16 *2*	2951.84	5+	1229.33	4+	(M1+E2)	−2.5 *14*	α(K)exp=0.00027 *10* δ: from 1977Ti01; by analogy to δ(1528γ)=−2.3 (J=5+ to 4+) M1+E2 is suggested.

From ENSDF

γ(^{106}Pd) (continued)

E_γ[†]	I_γ[†@]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[‡]	Comments
1771.1 *3*	0.46 *8*	2282.80	4^+	511.85	2^+		I_γ: other: 0.51 *7* (1977Ti01).
1794.0 *3*	0.43 *17*	2305.75	4^-	511.85	2^+		I_γ: other: 0.37 *9* (1977Ti01).
1839.05 *10*	23 *3*	2350.69	4^+	511.85	2^+	E2	α(K)exp=0.00030 *7*
[x]1909.1 *6*	0.15 *5*						I_γ: other: 0.17 *5* (1977Ti01).
[x]2077.3 *8*	0.025 *15*						I_γ: authors report 0.02 *+2−1*. Other: <0.05 (1977Ti01).
2084.0 *4*	0.26 *5*	2084.06	3^-	0.0	0^+	[E3]	I_γ: from 1977Ti01; others: 0.34 *11* (1978IdZZ), 0.19 *15* (1973In08), 0.20 *6* (1968Mo02), 0.31 (1967Ra11).

[†] Taken from 1973In08, except where noted otherwise.

[‡] From α(K)exp, K:L1:L2:L3, γ(θ) or γγ(θ) data.

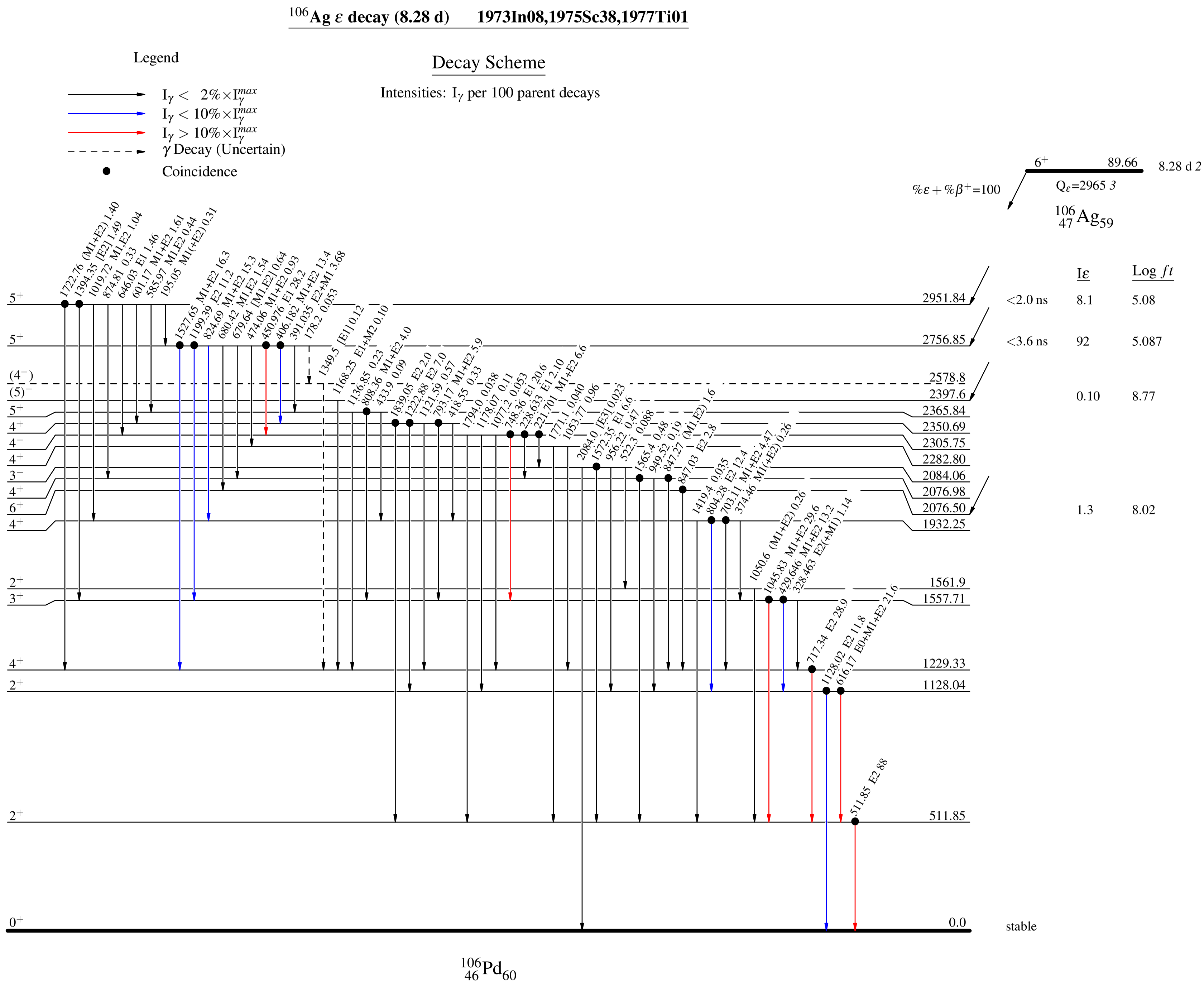
[#] From γ(θ) or γγ(θ) data.

[@] For absolute intensity per 100 decays, multiply by 0.0877 *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.

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

[x] γ ray not placed in level scheme.



^{106}Ag ε decay (8.28 d) 1973In08,1975Sc38,1977Ti01
Decay Scheme
Intensities: I_γ per 100 parent decays
Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)
Coincidence
6+ 89.66 8.28 d 2
Qε=2965 3
%ε+%β+=100
$^{106}_{47}Ag_{59}$
Iε Log ft
5+ 2951.84 <2.0 ns 8.1 5.08
5+ 2756.85 <3.6 ns 92 5.087
(4−) 2578.8
(5)− 2397.6 0.10 8.77
5+ 2365.84
4+ 2350.69
4− 2305.75
4+ 2282.80
3− 2084.06
4+ 2076.98
6+ 2076.50 1.3 8.02
4+ 1932.25
2+ 1561.9
3+ 1557.71
4+ 1229.33
2+ 1128.04
2+ 511.85
0+ 0.0 stable
1722.76 (M1+E2) 1.40
1394.35 [E2] 1.49
1019.72 M1,E2 1.04
874.81 0.33
646.03 E1 1.46
601.17 M1+E2 1.61
585.97 M1,E2 0.44
195.05 M1(+E2) 0.31
1527.65 M1+E2 16.3
1199.39 E2 11.2
824.69 M1+E2 15.3
680.42 M1,E2 1.54
679.64 [M1,E2] 0.64
474.06 M1+E2 0.93
450.976 E1 28.2
406.182 M1+E2 13.4
391.035 E2+M1 3.68
178.2 0.053
1349.5 [E1] 0.12
1168.25 E1+M2 0.10
1136.85 0.23
808.36 M1+E2 4.0
433.9 0.09
1839.05 E2 2.0
1222.88 E2 7.0
1121.59 0.57
793.17 M1+E2 5.9
418.55 0.33
1794.0 0.038
1178.07 0.11
1077.2 0.053
748.36 E1 20.6
228.633 E1 2.10
221.701 M1+E2 6.6
1771.1 0.040
1053.77 0.96
2084.0 [E3] 0.023
1572.35 E1 6.6
956.22 0.47
522.3 0.088
1565.4 0.48
949.52 0.19
847.27 (M1,E2) 1.6
847.03 E2 2.8
1419.4 0.035
804.28 E2 12.4
703.11 M1+E2 4.47
374.46 M1(+E2) 0.26
1050.6 (M1+E2) 0.26
1045.83 M1+E2 29.6
429.646 M1+E2 13.2
328.463 E2(+M1) 1.14
717.34 E2 28.9
1128.02 E2 11.8
616.17 E0+M1+E2 21.6
511.85 E2 88
$^{106}_{46}Pd_{60}$

$^{106}_{46}Pd_{60}$-7