^{200}Au β^- decay (48.4 min) 1976Hi06,1972He36

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 192,1 (2023)	1-Aug-2023

Parent: ^{200}Au: E=0; J$^\pi$=(1$^-$); T$_{1/2}$=48.4 min *3*; Q(β^-)=2263 *27*; %β^- decay=100

1976Hi06: Source: ^{200}Au in equilibrium with the parent ^{200}Pt, produced in ^{204}Hg(n,2p3n). The HgO target was enriched to 92.64% in ^{204}Hg. ^{200}Pt was chemically separated; Detectors: two Ge(Li), one LEPS; Measured: γ, $\gamma\gamma$ coin., Eγ, Iγ; Deduced: level scheme.

1972He36: Source: ^{200}Au obtained by irradiation of natural mercury with neutrons at E(n)=14.5 MeV; Detectors: one Ge(Li) and plastic scintillator; Measured: γ, β, $\beta\gamma$ coin., Eγ, Eβ, Iγ, Iβ; Deduced: end-point β- decay energy, level scheme.

Others: 1968Sc07, 1960Gi01, 1959Ro53.

^{200}Hg Levels

E(level)†	J$^\pi$‡	T$_{1/2}$‡	E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡
0.0	0$^+$	stable	1573.672 *9*	2$^+$	1734.355 *9*	3$^+$
367.945 *9*	2$^+$	46.4 ps *4*	1593.442 *10*	2$^+$	1856.787 *9*	0$^+$
947.247 *11*	4$^+$	3.21 ps *14*	1630.899 *8*	1$^+$	1882.867 *8*	2$^+$
1029.351 *7*	0$^+$	8 ps *4*	1641.451 *8*	2$^+$	1972.288 *10*	(2)$^+$
1254.105 *8*	2$^+$	3.5 ps *7*	1659.035 *23*	3$^+$	2061.264 *9*	1$^+$
1515.181 *7*	0$^+$		1718.312 *8*	1$^+$		
1570.283 *8*	1$^+$		1730.935 *8*	2$^+$		

† From a least-squares fit to Eγ.
‡ From Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^-†	Log *ft*	Comments
(202 *27*)	2061.264	0.084 *20*	6.29 *23*	av Eβ=54.6 *80*
(291 *27*)	1972.288	0.17 *3*	6.49 *16*	av Eβ=81.2 *84*
(380 *27*)	1882.867	0.21 *4*	6.77 *14*	av Eβ=109.2 *87*
(406 *27*)	1856.787	0.00053 *8*	9.47 *12*	av Eβ=117.6 *88*
(532 *27*)	1730.935	0.017 *6*	8.35 *17*	av Eβ=159.4 *93*
(545 *27*)	1718.312	0.23 *7*	7.25 *16*	av Eβ=163.7 *93*
(622 *27*)	1641.451	0.12 *6*	7.73 *23*	av Eβ=190.3 *95*
(632 *27*)	1630.899	3.8 *6*	6.25 *10*	av Eβ=194.0 *96*
(670 *27*)	1593.442	10.9 *17*	5.88 *10*	av Eβ=207.3 *97* E(decay): 670 keV *70* in 1972He36.
(693 *27*)	1570.283	0.63 *11*	7.17 *10*	av Eβ=215.5 *97*
(1009 *27*)	1254.105	0.07 *4*	8.7 *3*	av Eβ=333 *11*
(1234 *27*)	1029.351	0.23 *4*	8.49 *9*	av Eβ=421 *11*
(1895 *27*)	367.945	4.7 *10*	7.87 *10*	av Eβ=692 *12*
(2263 *27*)	0.0	79 *3*	6.94 *3*	av Eβ=848 *12* E(decay): Measured: 2260 keV *100* (1972He36), 2200 keV *100* (1960Gi01), 2250 keV *200* (1959Ro53). Iβ^- to g.s. 79% *3* (1976Hi06). Other: 74% *5* (1959Ro53).

† Absolute intensity per 100 decays.

γ(^{200}Hg)

Iγ normalization: From Iβ^-(g.s.)=79% *3* in 1976Hi06.

E$_\gamma$ [†]	I$_\gamma$ [‡&]	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult. [†]	α [@]	Comments
76.857 *4*	0.36 [#] *10*	1718.312	1$^+$	1641.451	2$^+$	[M1,E2]	10 *7*	%Iγ=0.0068 *21* α(L)=8 *5*; α(M)=1.9 *14* α(N)=0.48 *34*; α(O)=0.08 *6*; α(P)=0.0011 *9*
115.714 *9*	3.6 [#] *10*	1630.899	1$^+$	1515.181	0$^+$	[M1]	5.20 *7*	%Iγ=0.068 *21* α(K)=4.26 *6*; α(L)=0.723 *10*; α(M)=0.1683 *24* α(N)=0.0422 *6*; α(O)=0.00799 *11*; α(P)=0.000610 *9*
137.50 *2*	≈0.0173 [#]	1730.935	2$^+$	1593.442	2$^+$	[M1,E2]	2.4 *8*	%Iγ≈0.000328 α(K)=1.5 *11*; α(L)=0.65 *21*; α(M)=0.16 *6* α(N)=0.040 *15*; α(O)=0.0070 *22*; α(P)=2.1×10^{-4} *16*
138.471 *16*	≈0.0012 [#]	1856.787	0$^+$	1718.312	1$^+$	[M1]	3.12 *4*	%Iγ≈2.27×10^{-5} α(K)=2.55 *4*; α(L)=0.432 *6*; α(M)=0.1006 *14* α(N)=0.02524 *35*; α(O)=0.00477 *7*; α(P)=0.000365 *5*
140.898 *12*	≈0.0096 [#]	1734.355	3$^+$	1593.442	2$^+$	[M1,E2]	2.2 *8*	%Iγ≈0.000182 α(K)=1.4 *10*; α(L)=0.59 *18*; α(M)=0.15 *5* α(N)=0.037 *13*; α(O)=0.0064 *19*; α(P)=2.0×10^{-4} *15*
144.639 *10*	0.19 [#] *3*	1718.312	1$^+$	1573.672	2$^+$	[M1,E2]	2.0 *7*	%Iγ=0.0036 *8* α(K)=1.3 *10*; α(L)=0.53 *15*; α(M)=0.13 *4* α(N)=0.033 *11*; α(O)=0.0058 *16*; α(P)=1.8×10^{-4} *14*
148.026 *4*	0.160 [#] *16*	1718.312	1$^+$	1570.283	1$^+$	[M1,E2]	1.9 *7*	%Iγ=0.0030 *5* α(K)=1.2 *9*; α(L)=0.49 *13*; α(M)=0.12 *4* α(N)=0.030 *9*; α(O)=0.0053 *13*; α(P)=1.7×10^{-4} *13*
148.500 *6*	0.114 [#] *24*	1882.867	2$^+$	1734.355	3$^+$	[M1,E2]	1.8 *7*	%Iγ=0.0022 *5* α(K)=1.2 *9*; α(L)=0.48 *13*; α(M)=0.12 *4* α(N)=0.030 *9*; α(O)=0.0052 *13*; α(P)=1.7×10^{-4} *13*
151.932 *5*	0.19 [#] *4*	1882.867	2$^+$	1730.935	2$^+$	[M1,E2]	1.7 *7*	%Iγ=0.0036 *9* α(K)=1.1 *8*; α(L)=0.44 *11*; α(M)=0.110 *32* α(N)=0.027 *8*; α(O)=0.0048 *11*; α(P)=1.6×10^{-4} *12*
160.659 *11*	≈0.003 [#]	1730.935	2$^+$	1570.283	1$^+$	[M1,E2]	1.4 *6*	%Iγ≈5.68×10^{-5} α(K)=1.0 *7*; α(L)=0.35 *7*; α(M)=0.088 *23* α(N)=0.022 *6*; α(O)=0.0039 *7*; α(P)=1.4×10^{-4} *10*
160.659 *11*	≈0.0014 [#]	1734.355	3$^+$	1573.672	2$^+$	[M1,E2]	1.4 *6*	%Iγ≈2.65×10^{-5} α(K)=1.0 *7*; α(L)=0.35 *7*; α(M)=0.088 *23* α(N)=0.022 *6*; α(O)=0.0039 *7*; α(P)=1.4×10^{-4} *10*
164.544 *6*	0.258 [#] *24*	1882.867	2$^+$	1718.312	1$^+$	[M1,E2]	1.3 *6*	%Iγ=0.0049 *8*

$^{200}_{80}$Hg$_{120}$-2

$\gamma(^{200}Hg)$ (continued)

E_γ [†]	I_γ [‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [†]	δ [†]	α [@]	Comments
									α(K)=0.9 *6*; α(L)=0.32 *6*; α(M)=0.081 *19* α(N)=0.020 *5*; α(O)=0.0035 *6*; α(P)=1.3×10^{-4} *9*
203.135 *7*	0.090[#] *10*	1718.312	1$^+$	1515.181	0$^+$	M1		1.058 *15*	%Iγ=0.00170 *31* α(K)=0.868 *12*; α(L)=0.1460 *20*; α(M)=0.0340 *5* α(N)=0.00852 *12*; α(O)=0.001612 *23*; α(P)=0.0001234 *17*
204.477 *8*	0.0056[#] *4*	2061.264	1$^+$	1856.787	0$^+$	[M1]		1.039 *15*	%Iγ=0.000106 *17* α(K)=0.852 *12*; α(L)=0.1433 *20*; α(M)=0.0333 *5* α(N)=0.00836 *12*; α(O)=0.001583 *22*; α(P)=0.0001211 *17*
215.743 *13*	0.0026[#] *6*	1730.935	2$^+$	1515.181	0$^+$	[E2]		0.302 *4*	%Iγ=4.9×10^{-5} *13* α(K)=0.1410 *20*; α(L)=0.1209 *17*; α(M)=0.0311 *4* α(N)=0.00774 *11*; α(O)=0.001312 *18*; α(P)=1.767×10^{-5} *25*
224.750 *6*	0.027[#] *3*	1254.105	2$^+$	1029.351	0$^+$	[E2]		0.264 *4*	%Iγ=0.00051 *9* α(K)=0.1276 *18*; α(L)=0.1021 *14*; α(M)=0.0263 *4* α(N)=0.00653 *9*; α(O)=0.001109 *16*; α(P)=1.603×10^{-5} *22*
225.885 *6*	≈0.0021[#]	1856.787	0$^+$	1630.899	1$^+$	M1		0.788 *11*	%Iγ≈3.98×10^{-5} α(K)=0.646 *9*; α(L)=0.1084 *15*; α(M)=0.02523 *35* α(N)=0.00633 *9*; α(O)=0.001198 *17*; α(P)=9.17×10^{-5} *13*
241.356 *12*	0.034[#] *11*	1972.288	(2)$^+$	1730.935	2$^+$	[M1,E2]		0.43 *22*	%Iγ=0.00064 *23* α(K)=0.32 *22*; α(L)=0.083 *7*; α(M)=0.0203 *7* α(N)=0.00507 *21*; α(O)=0.00091 *8*; α(P)=4.5×10^{-5} *31*
241.425 *10*	0.047[#] *12*	1882.867	2$^+$	1641.451	2$^+$	[M1,E2]		0.43 *22*	%Iγ=0.00089 *26* α(K)=0.32 *22*; α(L)=0.083 *7*; α(M)=0.0203 *7* α(N)=0.00506 *21*; α(O)=0.00091 *8*; α(P)=4.5×10^{-5} *31*
251.969 *7*	0.48[#] *4*	1882.867	2$^+$	1630.899	1$^+$	M1+E2	0.38 *21*	0.53 *5*	%Iγ=0.0091 *15* α(K)=0.43 *5*; α(L)=0.0780 *23*; α(M)=0.0183 *4* α(N)=0.00460 *10*; α(O)=0.000860 *27*; α(P)=6.1×10^{-5} *7*
253.991 *15*	0.026[#] *8*	1972.288	(2)$^+$	1718.312	1$^+$	[M1,E2]		0.37 *20*	%Iγ=0.00049 *17* α(K)=0.28 *19*; α(L)=0.070 *8*; α(M)=0.0171 *12* α(N)=0.00427 *31*; α(O)=0.00077 *9*; α(P)=3.9×10^{-5} *27*
286.518 *13*	≈0.0002[#]	1856.787	0$^+$	1570.283	1$^+$	[M1]		0.409 *6*	%Iγ≈3.79×10^{-6} α(K)=0.336 *5*; α(L)=0.0561 *8*; α(M)=0.01305 *18* α(N)=0.00327 *5*; α(O)=0.000619 *9*; α(P)=4.75×10^{-5} *7*
289.425 *9*	0.86[#] *5*	1882.867	2$^+$	1593.442	2$^+$	M1+E2	0.62 *12*	0.320 *22*	%Iγ=0.0163 *25* α(K)=0.255 *20*; α(L)=0.0498 *15*; α(M)=0.01181 *30* α(N)=0.00296 *8*; α(O)=0.000548 *17*; α(P)=3.58×10^{-5} *29*
306.863 *11*	0.0175[#] *22*	1254.105	2$^+$	947.247	4$^+$	[E2]		0.0996 *14*	%Iγ=0.00033 *6* α(K)=0.0597 *8*; α(L)=0.0300 *4*; α(M)=0.00760 *11* α(N)=0.001892 *26*; α(O)=0.000327 *5*; α(P)=7.70×10^{-6} *11*

γ(^{200}Hg) (continued)

E_γ †	I_γ ‡&	E_i(level)	J^π_i	E_f	J^π_f	Mult. †	δ †	α @	Comments
309.209 *8*	0.366# *24*	1882.867	2+	1573.672	2+	M1+E2	0.35 *23*	0.307 *34*	%Iγ=0.0069 *11* α(K)=0.250 *31*; α(L)=0.0437 *24*; α(M)=0.0102 *5* α(N)=0.00256 *12*; α(O)=0.000482 *27*; α(P)=3.5×10^{-5} *4*
312.613 *13*	0.053# *7*	1882.867	2+	1570.283	1+	[M1,E2]		0.21 *11*	%Iγ=0.00100 *20* α(K)=0.16 *10*; α(L)=0.036 *8*; α(M)=0.0087 *16* α(N)=0.0022 *4*; α(O)=0.00040 *9*; α(P)=2.2×10^{-5} *15*
313.23 *3*	0.026# *8*	1972.288	(2)+	1659.035	3+	[M1,E2]		0.21 *11*	%Iγ=0.00049 *17* α(K)=0.16 *10*; α(L)=0.036 *8*; α(M)=0.0086 *16* α(N)=0.0022 *4*; α(O)=0.00039 *9*; α(P)=2.2×10^{-5} *15*
316.176 *8*	0.263# *18*	1570.283	1+	1254.105	2+	M1(+E2)		0.20 *11*	%Iγ=0.0050 *8* α(K)=0.16 *10*; α(L)=0.035 *8*; α(M)=0.0084 *16* α(N)=0.0021 *4*; α(O)=0.00038 *9*; α(P)=2.2×10^{-5} *15*
319.566 *15*	≈0.0014#	1573.672	2+	1254.105	2+	(M1+E2)		0.20 *11*	%Iγ≈2.65×10^{-5} α(K)=0.15 *10*; α(L)=0.034 *8*; α(M)=0.0081 *16* α(N)=0.0020 *4*; α(O)=0.00037 *9*; α(P)=2.1×10^{-5} *14*
330.303 *16*	0.0028# *4*	2061.264	1+	1730.935	2+	[M1,E2]		0.18 *10*	%Iγ=5.3×10^{-5} *11* α(K)=0.14 *9*; α(L)=0.030 *8*; α(M)=0.0073 *15* α(N)=0.0018 *4*; α(O)=3.3×10^{-4} *9*; α(P)=1.9×10^{-5} *13*
330.84 *3*	≈0.04#	1972.288	(2)+	1641.451	2+	[M1,E2]		0.18 *10*	%Iγ≈0.000758 α(K)=0.14 *9*; α(L)=0.030 *8*; α(M)=0.0073 *15* α(N)=0.0018 *4*; α(O)=3.3×10^{-4} *9*; α(P)=1.9×10^{-5} *13*
339.40	3.4# *17*	1593.442	2+	1254.105	2+	M1(+E0)			%Iγ=0.064 *33*
341.375 *12*	0.140# *11*	1972.288	(2)+	1630.899	1+	[M1,E2]		0.16 *9*	%Iγ=0.0027 *4* α(K)=0.13 *8*; α(L)=0.028 *7*; α(M)=0.0066 *15* α(N)=0.0016 *4*; α(O)=3.0×10^{-4} *8*; α(P)=1.8×10^{-5} *12*
342.939 *12*	0.0096# *8*	2061.264	1+	1718.312	1+	[M1,E2]		0.16 *9*	%Iγ=0.000182 *30* α(K)=0.13 *8*; α(L)=0.027 *7*; α(M)=0.0065 *15* α(N)=0.0016 *4*; α(O)=3.0×10^{-4} *8*; α(P)=1.8×10^{-5} *12*
367.942 *10*	1000	367.945	2+	0.0	0+	E2		0.0594 *8*	%Iγ=18.9 *27* α(K)=0.0388 *5*; α(L)=0.01553 *22*; α(M)=0.00389 *5* α(N)=0.000970 *14*; α(O)=0.0001694 *24*; α(P)=5.08×10^{-6} *7*
376.79 *2*	0.58# *13*	1630.899	1+	1254.105	2+	[M1,E2]		0.13 *7*	%Iγ=0.0110 *29* α(K)=0.10 *6*; α(L)=0.020 *6*; α(M)=0.0049 *13* α(N)=0.00122 *33*; α(O)=2.2×10^{-4} *7*; α(P)=1.4×10^{-5} *9*
387.345 *9*	0.43# *3*	1641.451	2+	1254.105	2+	M1(+E0)		0.1808 *25*	%Iγ=0.0081 *13* α(K)=0.1487 *21*; α(L)=0.02465 *35*; α(M)=0.00573 *8* α(N)=0.001436 *20*; α(O)=0.000272 *4*; α(P)=2.089×10^{-5} *29*
398.63 *2*	0.15# *2*	1972.288	(2)+	1573.672	2+	[M1,E2]		0.11 *6*	%Iγ=0.0028 *6*

γ(^{200}Hg) (continued)

E_γ †	I_γ ‡&	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	δ †	α @	Comments
									α(K)=0.08 *5*; α(L)=0.017 *6*; α(M)=0.0041 *12* α(N)=1.03×10^{-3} *30*; α(O)=1.9×10^{-4} *6*; α(P)=1.2×10^{-5} *8*
404.94 *4*	≈0.00036#	1659.035	3+	1254.105	2+	[M1,E2]		0.10 *6*	%Iγ≈6.82×10^{-6} α(K)=0.08 *5*; α(L)=0.017 *5*; α(M)=0.0039 *11* α(N)=9.8×10^{-4} *29*; α(O)=1.8×10^{-4} *6*; α(P)=1.1×10^{-5} *7*
419.828 *10*	0.044# *3*	2061.264	1+	1641.451	2+	M1		0.1458 *20*	%Iγ=0.00083 *13* α(K)=0.1199 *17*; α(L)=0.01984 *28*; α(M)=0.00461 *6* α(N)=0.001156 *16*; α(O)=0.0002187 *31*; α(P)=1.682×10^{-5} *24*
430.368 *10*	0.11# *4*	2061.264	1+	1630.899	1+	M1		0.1364 *19*	%Iγ=0.0021 *8* α(K)=0.1123 *16*; α(L)=0.01856 *26*; α(M)=0.00431 *6* α(N)=0.001081 *15*; α(O)=0.0002046 *29*; α(P)=1.574×10^{-5} *22*
464.214 *12*	0.222# *15*	1718.312	1+	1254.105	2+	E2+M1		0.07 *4*	%Iγ=0.0042 *7* α(K)=0.057 *34*; α(L)=0.011 *4*; α(M)=0.0026 *9* α(N)=6.6×10^{-4} *22*; α(O)=1.2×10^{-4} *4*; α(P)=8.E−6 *5*
467.86 *2*	0.040# *2*	2061.264	1+	1593.442	2+	M1		0.1093 *15*	%Iγ=0.00076 *11* α(K)=0.0900 *13*; α(L)=0.01484 *21*; α(M)=0.00344 *5* α(N)=0.000864 *12*; α(O)=0.0001636 *23*; α(P)=1.259×10^{-5} *18*
476.815 *13*	0.084# *5*	1730.935	2+	1254.105	2+	E2+M1(+E0)		0.07 *4*	%Iγ=0.00159 *25* α(K)=0.054 *32*; α(L)=0.010 *4*; α(M)=0.0024 *8* α(N)=6.1×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=7.E−6 *5*
480.24 *3*	≈0.0043#	1734.355	3+	1254.105	2+	[M1,E2]		0.07 *4*	%Iγ≈8.14×10^{-5} α(K)=0.053 *31*; α(L)=0.010 *4*; α(M)=0.0024 *8* α(N)=6.0×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=7.E−6 *4*
487.56 *2*	0.044# *3*	2061.264	1+	1573.672	2+	M1(+E2)		0.063 *35*	%Iγ=0.00083 *13* α(K)=0.051 *30*; α(L)=0.010 *4*; α(M)=0.0023 *8* α(N)=5.7×10^{-4} *20*; α(O)=1.1×10^{-4} *4*; α(P)=7.E−6 *4*
490.95 *2*	0.028# *2*	2061.264	1+	1570.283	1+	E2+M1	≈1.2	≈0.0561	%Iγ=0.00053 *8* α(K)≈0.0444; α(L)≈0.00888; α(M)≈0.002110 α(N)≈0.000528; α(O)≈9.75×10^{-5}; α(P)≈6.12×10^{-6}
540.948 *16*	2.30# *15*	1570.283	1+	1029.351	0+	M1		0.0745 *10*	%Iγ=0.044 *7* α(K)=0.0614 *9*; α(L)=0.01008 *14*; α(M)=0.002340 *33* α(N)=0.000587 *8*; α(O)=0.0001111 *16*; α(P)=8.57×10^{-6} *12*
544.21 *7*	≈0.0017#	1573.672	2+	1029.351	0+	[E2]		0.02201 *31*	%Iγ≈3.22×10^{-5} α(K)=0.01625 *23*; α(L)=0.00438 *6*; α(M)=0.001070 *15* α(N)=0.000267 *4*; α(O)=4.79×10^{-5} *7*; α(P)=2.156×10^{-6} *30*
546.10 *2*	0.017# *1*	2061.264	1+	1515.181	0+	M1		0.0727 *10*	%Iγ=0.00032 *5* α(K)=0.0599 *8*; α(L)=0.00983 *14*; α(M)=0.002282 *32* α(N)=0.000572 *8*; α(O)=0.0001083 *15*; α(P)=8.36×10^{-6} *12*

$^{200}_{80}Hg_{120}$-5

γ(^{200}Hg) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[†]	δ[†]	α[@]	Comments
564.19 *5*	2.8 *3*	1593.442	2^+	1029.351	0^+	[E2]		0.02024 *28*	%Iγ=0.053 *9* α(K)=0.01505 *21*; α(L)=0.00394 *6*; α(M)=0.000960 *13* α(N)=0.0002397 *34*; α(O)=4.31×10^{-5} *6*; α(P)=1.998×10^{-6} *28*
579.300 *17*	2.1 *3*	947.247	4^+	367.945	2^+	E2		0.01905 *27*	%Iγ=0.040 *8* α(K)=0.01424 *20*; α(L)=0.00365 *5*; α(M)=0.000888 *12* α(N)=0.0002217 *31*; α(O)=3.99×10^{-5} *6*; α(P)=1.891×10^{-6} *26*
601.48 *5*	0.69[#] *13*	1630.899	1^+	1029.351	0^+	[M1]		0.0565 *8*	%Iγ=0.0131 *31* α(K)=0.0466 *7*; α(L)=0.00762 *11*; α(M)=0.001767 *25* α(N)=0.000443 *6*; α(O)=8.39×10^{-5} *12*; α(P)=6.48×10^{-6} *9*
602.73 *7*	≈0.00054[#]	1856.787	0^+	1254.105	2^+	[E2]		0.01740 *24*	%Iγ≈1.023×10^{-5} α(K)=0.01312 *18*; α(L)=0.00326 *5*; α(M)=0.000791 *11* α(N)=0.0001976 *28*; α(O)=3.56×10^{-5} *5*; α(P)=1.741×10^{-6} *24*
612.12 *3*	0.67[#] *5*	1641.451	2^+	1029.351	0^+	E2		0.01681 *24*	%Iγ=0.0127 *20* α(K)=0.01271 *18*; α(L)=0.00312 *4*; α(M)=0.000757 *11* α(N)=0.0001890 *26*; α(O)=3.41×10^{-5} *5*; α(P)=1.686×10^{-6} *24*
626.52 *10*	≈0.00224[#]	1573.672	2^+	947.247	4^+	[E2]		0.01596 *22*	%Iγ≈4.24×10^{-5} α(K)=0.01211 *17*; α(L)=0.00293 *4*; α(M)=0.000708 *10* α(N)=0.0001769 *25*; α(O)=3.20×10^{-5} *4*; α(P)=1.607×10^{-6} *23*
628.80 *3*	1.25[#] *10*	1882.867	2^+	1254.105	2^+	M1(+E2)	≤0.3	0.0489 *16*	%Iγ=0.024 *4* α(K)=0.0403 *13*; α(L)=0.00662 *19*; α(M)=0.00154 *4* α(N)=0.000385 *11*; α(O)=7.29×10^{-5} *20*; α(P)=5.60×10^{-6} *19*
646.17 *7*	1.4 *3*	1593.442	2^+	947.247	4^+	[E2]		0.01490 *21*	%Iγ=0.027 *7* α(K)=0.01137 *16*; α(L)=0.00269 *4*; α(M)=0.000649 *9* α(N)=0.0001622 *23*; α(O)=2.94×10^{-5} *4*; α(P)=1.508×10^{-6} *21*
661.36 *3*	20.7 *12*	1029.351	0^+	367.945	2^+	E2		0.01416 *20*	%Iγ=0.39 *6* α(K)=0.01085 *15*; α(L)=0.002524 *35*; α(M)=0.000609 *9* α(N)=0.0001520 *21*; α(O)=2.76×10^{-5} *4*; α(P)=1.439×10^{-6} *20*
688.94 *3*	1.56[#] *12*	1718.312	1^+	1029.351	0^+	M1		0.0397 *6*	%Iγ=0.030 *5* α(K)=0.0327 *5*; α(L)=0.00533 *7*; α(M)=0.001237 *17* α(N)=0.000310 *4*; α(O)=5.87×10^{-5} *8*; α(P)=4.54×10^{-6} *6*
694.14 *5*	0.14[#] *3*	1641.451	2^+	947.247	4^+	[E2]		0.01275 *18*	%Iγ=0.0027 *7* α(K)=0.00984 *14*; α(L)=0.002218 *31*; α(M)=0.000533 *7* α(N)=0.0001332 *19*; α(O)=2.424×10^{-5} *34*; α(P)=1.304×10^{-6} *18*
701.56 *3*	0.36[#] *3*	1730.935	2^+	1029.351	0^+	(E2)		0.01246 *17*	%Iγ=0.0068 *11* α(K)=0.00963 *13*; α(L)=0.002156 *30*; α(M)=0.000518 *7* α(N)=0.0001295 *18*; α(O)=2.357×10^{-5} *33*; α(P)=1.276×10^{-6} *18*
711.70 *5*	≈0.009[#]	1659.035	3^+	947.247	4^+	M1(+E2)		0.024 *12*	%Iγ≈0.000170 α(K)=0.020 *10*; α(L)=0.0035 *14*; α(M)=8.2×10^{-4} *32* α(N)=2.0×10^{-4} *8*; α(O)=3.8×10^{-5} *16*; α(P)=2.7×10^{-6} *15*

$^{200}_{80}$Hg$_{120}$-6

$\gamma(^{200}Hg)$ (continued)

E_γ †	I_γ ‡&	E_i(level)	J^π_i	E_f	J^π_f	Mult. †	δ †	α @	Comments
718.04 *10*	0.33# *9*	1972.288	(2)$^+$	1254.105	2$^+$	[M1,E2]		0.024 *12*	%Iγ=0.0063 *19* α(K)=0.019 *10*; α(L)=0.0034 *14*; α(M)=8.0×10^{-4} *31* α(N)=2.0×10^{-4} *8*; α(O)=3.7×10^{-5} *15*; α(P)=2.6×10^{-6} *14*
783.71 *4*	0.13# *1*	1730.935	2$^+$	947.247	4$^+$	E2		0.00986 *14*	%Iγ=0.0025 *4* α(K)=0.00774 *11*; α(L)=0.001623 *23*; α(M)=0.000388 *5* α(N)=9.68×10^{-5} *14*; α(O)=1.773×10^{-5} *25*; α(P)=1.023×10^{-6} *14*
787.10 *4*	≈0.06#	1734.355	3$^+$	947.247	4$^+$	M1+E2	+0.08 *4*	0.0280 *4*	%Iγ≈0.001136 α(K)=0.02314 *35*; α(L)=0.00376 *6*; α(M)=0.000870 *13* α(N)=0.0002182 *32*; α(O)=4.13×10^{-5} *6*; α(P)=3.20×10^{-6} *5*
807.20 *5*	0.069# *5*	2061.264	1$^+$	1254.105	2$^+$	M1(+E2)	0.6 *6*	0.022 *6*	%Iγ=0.00131 *21* α(K)=0.018 *5*; α(L)=0.0030 *7*; α(M)=0.00070 *15* α(N)=0.00017 *4*; α(O)=3.3×10^{-5} *7*; α(P)=2.5×10^{-6} *7*
886.20 *4*	7.3 *6*	1254.105	2$^+$	367.945	2$^+$	E2+M1	−1.79 *17*	0.0108 *5*	%Iγ=0.138 *23* α(K)=0.0087 *4*; α(L)=0.00158 *6*; α(M)=0.000370 *15* α(N)=9.3×10^{-5} *4*; α(O)=1.73×10^{-5} *7*; α(P)=1.18×10^{-6} *6*
936.1 *4*	0.09# *5*	1882.867	2$^+$	947.247	4$^+$	(E2)		0.00688 *10*	%Iγ=0.0017 *10* α(K)=0.00550 *8*; α(L)=0.001057 *15*; α(M)=0.0002500 *35* α(N)=6.25×10^{-5} *9*; α(O)=1.154×10^{-5} *16*; α(P)=7.23×10^{-7} *10*
(1029.348 *9*)		1029.351	0$^+$	0.0	0$^+$	E0			
1147.20 *8*	6.5 *5*	1515.181	0$^+$	367.945	2$^+$	E2		0.00463 *6*	%Iγ=0.123 *20* α(K)=0.00375 *5*; α(L)=0.000668 *9*; α(M)=0.0001568 *22* α(N)=3.92×10^{-5} *5*; α(O)=7.30×10^{-6} *10*; α(P)=4.91×10^{-7} *7*; α(IPF)=9.74×10^{-7} *14*
1202.35 *7*	8.8# *9*	1570.283	1$^+$	367.945	2$^+$	M1+E2	−0.43 *4*	0.00873 *18*	%Iγ=0.167 *29* α(K)=0.00721 *15*; α(L)=0.001162 *23*; α(M)=0.000269 *5* α(N)=6.75×10^{-5} *13*; α(O)=1.277×10^{-5} *26*; α(P)=9.87×10^{-7} *21*; α(IPF)=6.66×10^{-6} *12*
1205.75 *7*	<0.7	1573.672	2$^+$	367.945	2$^+$	M1+E2	+0.252 *19*	0.00917 *14*	%Iγ<0.0133 α(K)=0.00758 *11*; α(L)=0.001217 *18*; α(M)=0.000282 *4* α(N)=7.06×10^{-5} *10*; α(O)=1.338×10^{-5} *20*; α(P)=1.040×10^{-6} *16*; α(IPF)=7.43×10^{-6} *11*

γ(^{200}Hg) (continued)

E_γ †	I_γ ‡&	E_i(level)	J^π_i	E_f	J^π_f	Mult. †	δ †	α @	Comments
1225.44 *8*	564 *31*	1593.442	2+	367.945	2+	M1+E2(+E0)	−2.48 *+16−32*	0.00479 *15*	%Iγ=10.7 *16* α(K)=0.00391 *13*; α(L)=0.000667 *19*; α(M)=0.000156 *4* α(N)=3.90×10^{-5} *11*; α(O)=7.30×10^{-6} *21*; α(P)=5.18×10^{-7} *18*; α(IPF)=7.06×10^{-6} *15*
1254.14 *10*	3.3# *3*	1254.105	2+	0.0	0+	E2		0.00391 *5*	%Iγ=0.063 *11* α(K)=0.00318 *4*; α(L)=0.000552 *8*; α(M)=0.0001290 *18* α(N)=3.23×10^{-5} *5*; α(O)=6.02×10^{-6} *8*; α(P)=4.15×10^{-7} *6*; α(IPF)=9.75×10^{-6} *14*
1262.96 *8*	165 *9*	1630.899	1+	367.945	2+	M1+E2	+0.12 *5*	0.00838 *13*	%Iγ=3.1 *5* α(K)=0.00692 *11*; α(L)=0.001108 *17*; α(M)=0.000256 *4* α(N)=6.42×10^{-5} *10*; α(O)=1.218×10^{-5} *19*; α(P)=9.50×10^{-7} *15*; α(IPF)=1.796×10^{-5} *27*
1273.43 *10*	8.9 *8*	1641.451	2+	367.945	2+	M1(+E2)	+0.02 *3*	0.00828 *12*	%Iγ=0.169 *28* α(K)=0.00683 *10*; α(L)=0.001093 *15*; α(M)=0.0002527 *35* α(N)=6.33×10^{-5} *9*; α(O)=1.201×10^{-5} *17*; α(P)=9.38×10^{-7} *13*; α(IPF)=2.032×10^{-5} *29*
1291.11 *11*	≈0.02	1659.035	3+	367.945	2+	M1(+E2)		0.0059 *21*	%Iγ≈0.000379 α(K)=0.0048 *18*; α(L)=7.9×10^{-4} *27*; α(M)=1.8×10^{-4} *6* α(N)=4.6×10^{-5} *15*; α(O)=8.6×10^{-6} *30*; α(P)=6.5×10^{-7} *26*; α(IPF)=2.0×10^{-5} *5*
1350.35 *16*	1.76# *16*	1718.312	1+	367.945	2+	M1+E2	+0.035 *31*	0.00716 *10*	%Iγ=0.033 *6* α(K)=0.00589 *8*; α(L)=0.000940 *13*; α(M)=0.0002174 *31* α(N)=5.45×10^{-5} *8*; α(O)=1.034×10^{-5} *15*; α(P)=8.08×10^{-7} *11*; α(IPF)=4.16×10^{-5} *6*
1363.2 *2*	0.78 *23*	1730.935	2+	367.945	2+	M1+E2	−0.32 *10*	0.00666 *23*	%Iγ=0.015 *5* α(K)=0.00548 *19*; α(L)=0.000876 *29*; α(M)=0.000203 *7* α(N)=5.08×10^{-5} *17*; α(O)=9.63×10^{-6} *32*; α(P)=7.49×10^{-7} *27*; α(IPF)=4.44×10^{-5} *12*
1366.8 *7*	≈0.051#	1734.355	3+	367.945	2+	M1(+E2)		0.0051 *18*	%Iγ≈0.000966 α(K)=0.0042 *15*; α(L)=6.9×10^{-4} *23*; α(M)=1.6×10^{-4} *5* α(N)=4.0×10^{-5} *13*; α(O)=7.5×10^{-6} *25*; α(P)=5.7×10^{-7} *22*; α(IPF)=3.8×10^{-5} *9*
1488.5 *4*	≈0.03	1856.787	0+	367.945	2+	E2		0.00289 *4*	%Iγ≈0.000568 α(K)=0.002328 *33*; α(L)=0.000387 *5*; α(M)=8.99×10^{-5} *13* α(N)=2.250×10^{-5} *32*; α(O)=4.22×10^{-6} *6*; α(P)=3.03×10^{-7} *4*; α(IPF)=6.14×10^{-5} *9*

$^{200}_{80}$Hg$_{120}$-8

γ(^{200}Hg) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[†]	δ[†]	α[@]	Comments
									%Iγ≈0.000568 α(K)=0.002328 *33*; α(L)=0.000387 *5*; α(M)=8.99×10^{-5} *13* α(N)=2.250×10^{-5} *32*; α(O)=4.22×10^{-6} *6*; α(P)=3.03×10^{-7} *4*; α(IPF)=6.14×10^{-5} *9*
[x]1494.7[a]	<0.25								%Iγ<0.00474 E_γ,I_γ: From 1976Hi06.
[x]1507.0[a]	<0.25								%Iγ<0.00474 E_γ,I_γ: From 1976Hi06.
1514.90 *10*	6.0 *6*	1882.867	2$^+$	367.945	2$^+$	M1+E2(+E0)	+0.10 *4*	0.00542 *8*	%Iγ=0.114 *20* α(K)=0.00440 *6*; α(L)=0.000699 *10*; α(M)=0.0001617 *24* α(N)=4.05×10^{-5} *6*; α(O)=7.69×10^{-6} *11*; α(P)=6.02×10^{-7} *9*; α(IPF)=0.0001121 *16*
(1515.178 *9*)		1515.181	0$^+$	0.0	0$^+$	E0			
1570.45 *15*	21.9 *23*	1570.283	1$^+$	0.0	0$^+$	M1		0.00501 *7*	%Iγ=0.41 *7* α(K)=0.00404 *6*; α(L)=0.000641 *9*; α(M)=0.0001483 *21* α(N)=3.72×10^{-5} *5*; α(O)=7.05×10^{-6} *10*; α(P)=5.52×10^{-7} *8*; α(IPF)=0.0001423 *20*
1573.6 *10*	0.0012[#]	1573.672	2$^+$	0.0	0$^+$	[E2]		0.00264 *4*	%Iγ≈2.27×10^{-5} α(K)=0.002105 *30*; α(L)=0.000346 *5*; α(M)=8.03×10^{-5} *11* α(N)=2.009×10^{-5} *28*; α(O)=3.77×10^{-6} *5*; α(P)=2.73×10^{-7} *4*; α(IPF)=8.93×10^{-5} *13*
1593.18 *18*	6 *4*	1593.442	2$^+$	0.0	0$^+$	[E2]		0.00259 *4*	%Iγ=0.11 *8* α(K)=0.002059 *29*; α(L)=0.000337 *5*; α(M)=7.83×10^{-5} *11* α(N)=1.959×10^{-5} *27*; α(O)=3.68×10^{-6} *5*; α(P)=2.67×10^{-7} *4*; α(IPF)=9.63×10^{-5} *14*
1604.50 *14*	8.0 *6*	1972.288	(2)$^+$	367.945	2$^+$	M1+E2	+0.15 *4*	0.00473 *7*	%Iγ=0.152 *24* α(K)=0.00379 *6*; α(L)=0.000602 *9*; α(M)=0.0001390 *21* α(N)=3.48×10^{-5} *5*; α(O)=6.61×10^{-6} *10*; α(P)=5.18×10^{-7} *8*; α(IPF)=0.0001602 *24*
1630.7 *4*	14[#] *3*	1630.899	1$^+$	0.0	0$^+$	(M1)		0.00461 *6*	%Iγ=0.27 *7* α(K)=0.00367 *5*; α(L)=0.000583 *8*; α(M)=0.0001347 *19* α(N)=3.38×10^{-5} *5*; α(O)=6.41×10^{-6} *9*; α(P)=5.02×10^{-7} *7*; α(IPF)=0.0001767 *25*
1693.13 *14*	4.0 *8*	2061.264	1$^+$	367.945	2$^+$	M1+E2	−0.03 *2*	0.00424 *6*	%Iγ=0.076 *19* α(K)=0.00334 *5*; α(L)=0.000530 *7*; α(M)=0.0001224 *17* α(N)=3.07×10^{-5} *4*; α(O)=5.82×10^{-6} *8*; α(P)=4.57×10^{-7} *6*; α(IPF)=0.0002137 *30*
1718.35 *14*	3.9 *8*	1718.312	1$^+$	0.0	0$^+$	M1		0.00411 *6*	%Iγ=0.074 *18* α(K)=0.00322 *5*; α(L)=0.000511 *7*; α(M)=0.0001180 *17*

$^{200}_{80}$Hg$_{120}$-9

$\gamma(^{200}$Hg) (continued)

E_γ[†]	E_i(level)	Comments
		α(N)=2.96×10^{-5} *4*; α(O)=5.61×10^{-6} *8*; α(P)=4.40×10^{-7} *6*; α(IPF)=0.0002294 *32*

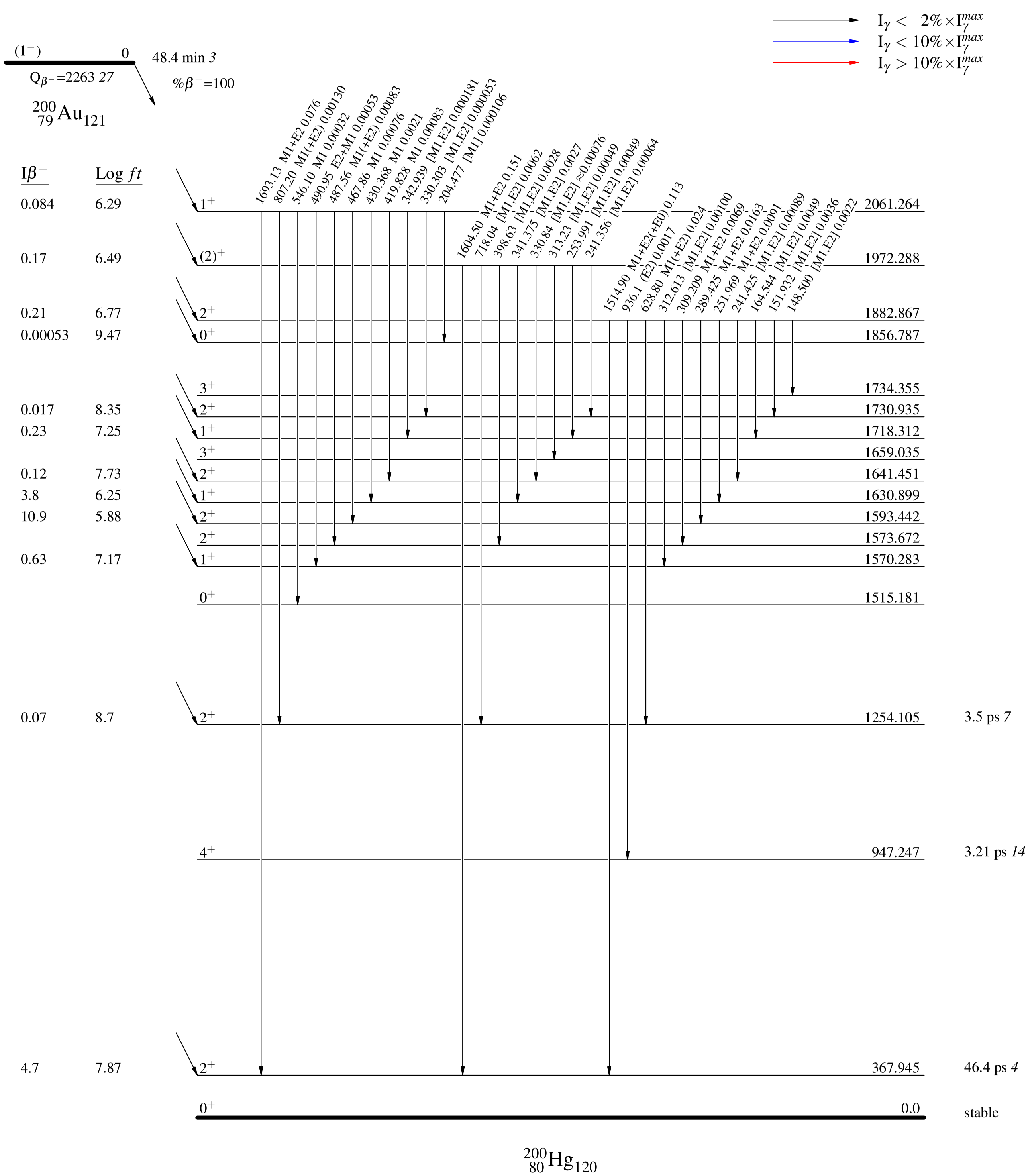
[†] From adopted gammas.
[‡] From 1976Hi06, unless otherwise stated.
[#] From branching ratios in adopted gammas; normalized to Iγ for the strongest transition that depopulates the level of interest.
[@] Additional information 1.
[&] For absolute intensity per 100 decays, multiply by 0.0189 *27*.
[a] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

$^{200}_{80}$Hg$_{120}$-10

^{200}Au β^- decay (48.4 min) 1976Hi06,1972He36

Decay Scheme

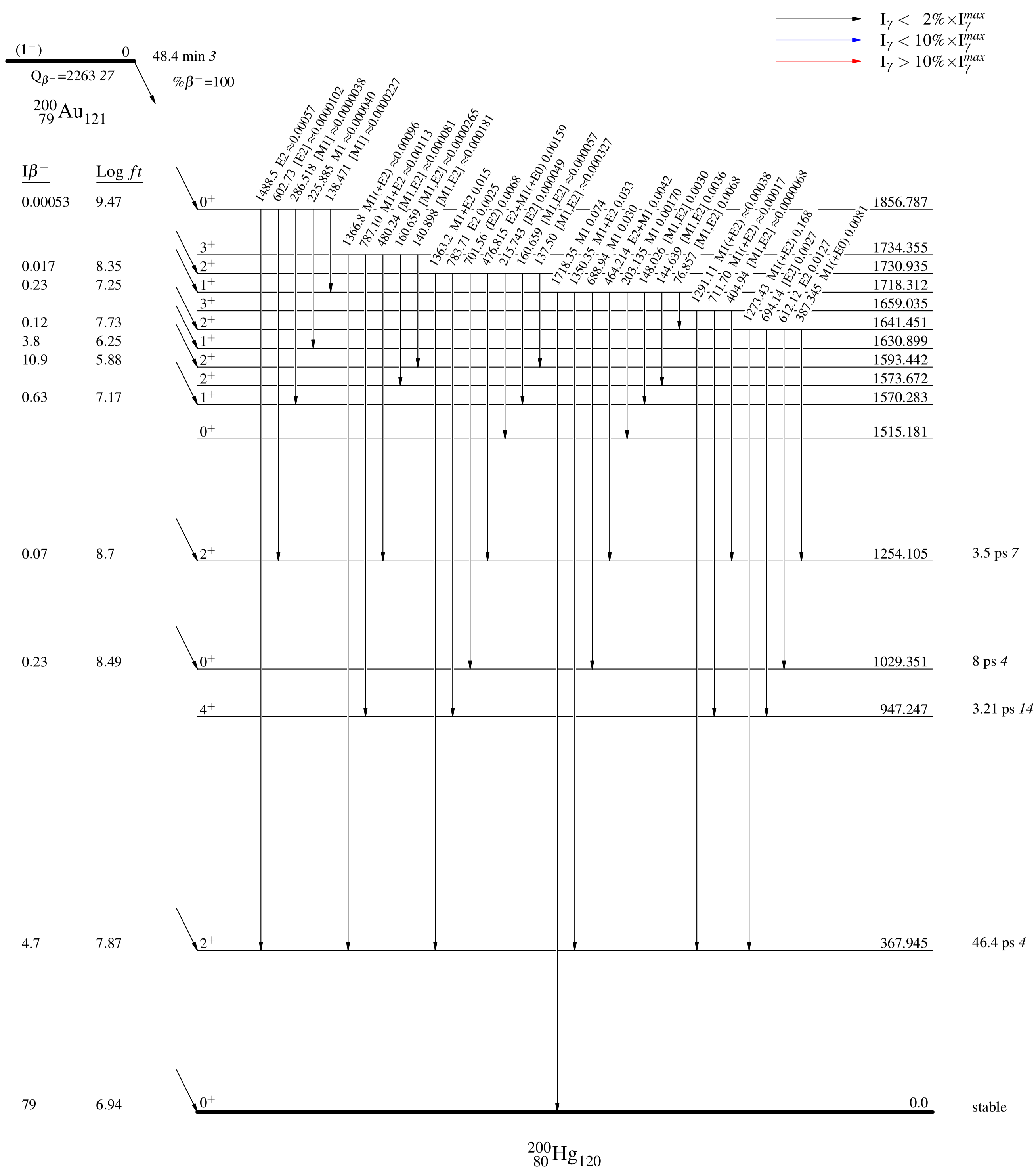
Intensities: I_γ per 100 parent decays



^{200}Au β^- decay (48.4 min) 1976Hi06,1972He36

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays



^{200}Au β^- decay (48.4 min) 1976Hi06,1972He36

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays