^{201}Bi ε decay 1978Ri04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 187,355 (2023)	20-Sep-2022

Parent: ^{201}Bi: E=0; J^π=9/2$^-$; $T_{1/2}$=103 min *3*; Q(ε)=3842 *18*; %ε+%β^+ decay=100

1978Ri04: mass-separated source following (p,xn) reaction of 73-MeV protons on natural lead; Detectors: Ge(Li) and Si(Li); Radiochemical separation of bismuth from its lead and thallium daughters; Measured: Eγ, Iγ, γγ coin, α(K)exp, α(L)exp; Deduced: J^π, level scheme.

Others: 1956St05, 1970DaZM, 1970Jo26.

^{201}Pb Levels

E(level)†	J^πe	$T_{1/2}$e	E(level)†	J^πe
0‡	5/2$^-$	9.33 h *5*	1737.3 *4*	9/2$^+$
88.5# *5*	3/2$^-$		1843.8 *5*	11/2$^+$
169.9@ *9*	(1/2$^-$)		1875.6 *5*	9/2$^+$
538.8 *7*	(3/2$^-$)		1977.6 *5*	7/2$^+$,9/2$^+$
629.1& *3*	13/2$^+$	60.8 s *18*	2119.5 *5*	9/2$^+$
879.9? *6*	(5/2)$^-$		2151.9 *6*	7/2$^+$
910.5? *12*	5/2$^-$		2208.9 *6*	(9/2$^+$)
936.1b *3*	7/2$^-$		2279.8 *8*	(9/2)$^+$
990.5c *3*	7/2$^-$		2439.5 *7*	7/2$^+$,9/2$^+$
1014.2b *4*	9/2$^-$		2459.9 *6*	7/2$^+$,9/2$^+$
1185.8 *4*	(7/2)$^-$		2474.6 *5*	(7/2$^+$,9/2$^+$)
1325.4a *5*	7/2$^-$		2506.8 *4*	9/2$^+$
1415.4d *4*	9/2$^+$		2548.9 *6*	(11/2$^-$)
1447.9 *5*	(11/2)$^+$		2788.8 *6*	11/2$^-$
1490.3 *6*	7/2$^-$,9/2$^-$		2961.8 *6*	(7/2,9/2$^-$)
1651.0 *4*	7/2$^+$		3050.7 *5*	(7/2)$^+$

† From a least squares fit to Eγ.

‡ Configuration=ν $f^{-1}_{5/2}$.

Configuration=ν $p^{-1}_{3/2}$.

@ Configuration=ν $p^{-1}_{1/2}$. The assignment is tentative.

& Configuration=ν $i^{-1}_{13/2}$.

a Configuration=ν $f^{-1}_{7/2}$. The assignment is tentative.

b Configuration=ν $(f^{-1}_{5/2})\otimes 2^+$.

c Configuration=ν $(p^{-1}_{3/2})\otimes 2^+$.

d Configuration=ν $(i^{-1}_{13/2})\otimes 2^+$.

e From Adopted Levels.

ε,β^+ radiations

E(decay)	E(level)	Iε‡	Log *ft*	I(ε+β^+)†‡	Comments
(791 *18*)	3050.7	3.8 *5*	6.48 *7*	3.8 *5*	εK=0.7802 *9*; εL=0.1648 *7*; εM+=0.05497 *25*
(880 *18*)	2961.8	1.31 *15*	7.04 *6*	1.31 *15*	εK=0.7840 *7*; εL=0.1621 *5*; εM+=0.05392 *20*
(1053 *18*)	2788.8	3.0 *4*	6.85 *7*	3.0 *4*	εK=0.7892 *5*; εL=0.1584 *4*; εM+=0.05243 *13*
(1293 *18*)	2548.9	1.4 *3*	7.37 *10*	1.4 *3*	εK=0.7940 *3*; εL=0.15493 *21*; εM+=0.05107 *9*
(1335 *18*)	2506.8	6.5 *6*	6.73 *5*	6.5 *6*	εK=0.7946 *3*; εL=0.15446 *20*; εM+=0.05089 *8*
(1367 *18*)	2474.6	5.6 *5*	6.82 *5*	5.6 *5*	εK=0.7950 *3*; εL=0.15412 *19*; εM+=0.05075 *8*
(1382 *18*)	2459.9	2.4 *4*	7.20 *8*	2.4 *4*	εK=0.7952 *3*; εL=0.15396 *19*; εM+=0.05069 *8*
(1403 *18*)	2439.5	2.3 *3*	7.23 *6*	2.3 *3*	εK=0.7954 *3*; εL=0.15376 *19*; εM+=0.05061 *8*

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^{201}Bi ε decay 1978Ri04 (continued)

ε,β+ radiations (continued)

E(decay)	E(level)	Iβ+ ‡	Iε‡	Log *ft*	I(ε+β+)†‡	Comments
(1562 *18*)	2279.8		0.71 *12*	7.84 *8*	0.71 *12*	εK=0.7968 *1*; εL=0.15229 *16*; εM+=0.05004 *6*
(1633 *18*)	2208.9	0.00074 *24*	0.50 *15*	8.03 *14*	0.50 *15*	av Eβ=297.0 *81*; εK=0.7970; εL=0.1517 *2*; εM+=0.04981 *6*
(1690 *18*)	2151.9	0.0063 *14*	3.0 *6*	7.29 *9*	3.0 *6*	av Eβ=322.2 *80*; εK=0.7971; εL=0.1512 *2*; εM+=0.04963 *6*
(1723 *18*)	2119.5	0.0035 *8*	1.4 *3*	7.63 *10*	1.4 *3*	av Eβ=336.6 *80*; εK=0.7970; εL=0.1509 *2*; εM+=0.04953 *6*
(1864 *18*)	1977.6	0.012 *2*	2.4 *3*	7.47 *6*	2.4 *3*	av Eβ=398.9 *79*; εK=0.7961 *2*; εL=0.14976 *16*; εM+=0.04909 *6*
(1966 *18*)	1875.6	0.017 *3*	2.2 *3*	7.56 *7*	2.2 *3*	av Eβ=443.8 *79*; εK=0.7948 *3*; εL=0.14887 *17*; εM+=0.04876 *6*
(1998 *18*)	1843.8	0.017 *3*	2.0 *3*	7.62 *7*	2.0 *3*	av Eβ=457.7 *79*; εK=0.7942 *4*; εL=0.14858 *17*; εM+=0.04866 *6*
(2105 *18*)	1737.3	0.048 *7*	3.9 *5*	7.37 *6*	3.9 *5*	av Eβ=504.3 *79*; εK=0.7918 *5*; εL=0.14757 *18*; εM+=0.04830 *7*
(2191 *18*)	1651.0	0.053 *8*	3.2 *5*	7.48 *7*	3.3 *5*	av Eβ=542.1 *79*; εK=0.7894 *6*; εL=0.14669 *20*; εM+=0.04799 *7*
(2352 *18*)	1490.3	0.018 *6*	0.72 *24*	8.20 *15*	0.74 *25*	av Eβ=612.3 *79*; εK=0.7833 *8*; εL=0.14487 *22*; εM+=0.04736 *8*
(2394 *18*)	1447.9	0.12 *1*	4.5 *5*	7.42 *5*	4.6 *5*	av Eβ=630.9 *79*; εK=0.7813 *9*; εL=0.14435 *23*; εM+=0.04718 *8*
(2427 *18*)	1415.4	0.12 *2*	4.1 *8*	7.48 *9*	4.2 *8*	av Eβ=645.1 *79*; εK=0.7797 *9*; εL=0.14393 *24*; εM+=0.04704 *8*
(2517 *18*)	1325.4	0.20 *2*	5.4 *4*	7.39 *4*	5.6 *4*	av Eβ=684.5 *79*; εK=0.7750 *11*; εL=0.1427 *3*; εM+=0.04663 *9*
(2656 *18*)	1185.8	0.11 *3*	2.3 *7*	7.81 *13*	2.4 *7*	av Eβ=745.7 *79*; εK=0.7662 *13*; εL=0.1407 *3*; εM+=0.04593 *10*
(2828 *18*)	1014.2	0.20 *5*	2.9 *7*	7.76 *12*	3.1 *8*	av Eβ=821.1 *80*; εK=0.7535 *15*; εL=0.1379 *4*; εM+=0.04499 *11*
(2852 *18*)	990.5	0.28 *5*	4.0 *7*	7.63 *9*	4.3 *8*	av Eβ=831.5 *80*; εK=0.7515 *15*; εL=0.1374 *4*; εM+=0.04485 *11*
(2906 *18*)	936.1	0.36 *7*	4.6 *8*	7.58 *8*	5.0 *9*	av Eβ=855.5 *80*; εK=0.7469 *16*; εL=0.1365 *4*; εM+=0.04452 *11*
(3213 *18*)	629.1	0.71 *11*	18 *3*	8.65[1u] *7*	19 *3*	av Eβ=977.9 *76*; εK=0.7682 *8*; εL=0.14651 *22*; εM+=0.04814 *8*

† Deduced from the decay scheme using intensity balances considerations and by assuming no direct feeding to the g.s.
‡ Absolute intensity per 100 decays.

^{201}Bi ε decay 1978Ri04 (continued)

$\gamma(^{201}Pb)$

Iγ normalization: Deduced using Σ(I(γ+ce)[g.s. ^{201}Pb])=100% and by assuming that there is no direct feeding to the ^{201}Pb g.s. (J^{π}=5/2$^-$).

E$_\gamma$[†]	I$_\gamma$[‡a]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[#]	δ[@]	α[&]	Comments
(81.4 *10*)	0.26 *5*	169.9	(1/2$^-$)	88.5	3/2$^-$	[M1]		3.16 *12*	%Iγ=0.096 *13* α(L)=2.41 *9*; α(M)=0.566 *22* α(N)=0.144 *6*; α(O)=0.0287 *11*; α(P)=0.00306 *12* E$_\gamma$: Not observed experimentally; Eγ from E(level) difference. I$_\gamma$: From intensity balance at the 169.9-keV level.
88.6 *10*	4.4 *9*	88.5	3/2$^-$	0	5/2$^-$	M1+E2		9.1 *21*	%Iγ=1.08 *20* α(L)=4.8 *29*; α(M)=1.2 *8* α(N)=0.31 *20*; α(O)=0.056 *34*; α(P)=0.0029 *5* Mult.: α(exp)=9.1 *21* from the intensity balance at the 88.5 level. α: From intensity balance at the 88.5-keV level.
[x]138.8 *10*	0.51 *10*					M1		3.67 *9*	%Iγ=0.126 *25* α(K)=2.99 *7*; α(L)=0.518 *13*; α(M)=0.1215 *31* α(N)=0.0309 *8*; α(O)=0.00615 *15*; α(P)=0.000657 *17* Mult.: α(K)exp=3.7 *5*.
142.6 *10*	0.17 *4*	2119.5	9/2$^+$	1977.6	7/2$^+$,9/2$^+$	[M1]		3.40 *8*	%Iγ=0.042 *10* α(K)=2.77 *7*; α(L)=0.480 *12*; α(M)=0.1124 *28* α(N)=0.0286 *7*; α(O)=0.00570 *14*; α(P)=0.000608 *15*
171.7 *5*	10.4 *5*	1185.8	(7/2)$^-$	1014.2	9/2$^-$	M1(+E2)	<0.5	1.88 *13*	%Iγ=2.56 *17* α(K)=1.50 *14*; α(L)=0.292 *10*; α(M)=0.0694 *34* α(N)=0.0176 *8*; α(O)=0.00347 *12*; α(P)=0.000344 *16* Mult.: From α(L)exp=0.27 *3*, L12/L3>66.
[x]181.2 *10*	0.26 *5*								%Iγ=0.064 *13*
[x]185.5 *10*	0.34 *7*								%Iγ=0.084 *18*
[x]186.9 *10*	0.34 *7*								%Iγ=0.084 *18*
224.5 *10*	1.6 *3*	1875.6	9/2$^+$	1651.0	7/2$^+$	M1(+E2)	<0.44	0.90 *6*	%Iγ=0.39 *8* α(K)=0.72 *5*; α(L)=0.1319 *27*; α(M)=0.0312 *6* α(N)=0.00791 *15*; α(O)=0.001566 *32*; α(P)=0.000161 *8* Mult.: From α(K)exp=0.75 *8*.
239.7 *10*	0.69 *14*	2788.8	11/2$^-$	2548.9	(11/2$^-$)	M1+E2	0.47 *7*	0.690 *28*	%Iγ=0.170 *35* α(K)=0.549 *26*; α(L)=0.1073 *22*; α(M)=0.0255 *5* α(N)=0.00649 *13*; α(O)=0.001274 *26*; α(P)=0.000126 *4* Mult.: From α(K)exp=0.55 *2*.
243.1 *10*	0.34 *7*	2119.5	9/2$^+$	1875.6	9/2$^+$	[M1,E2]		0.49 *27*	%Iγ=0.084 *18* α(K)=0.36 *26*; α(L)=0.096 *10*; α(M)=0.0237 *14* α(N)=0.0060 *4*; α(O)=0.00115 *12*; α(P)=1.0×10^{-4} *4*

$^{201}_{82}Pb_{119}$-3

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
250.9 *10*	0.69 *14*	2459.9	7/2$^+$,9/2$^+$	2208.9	(9/2$^+$)	M1+E2	0.6 *4*	0.57 *12*	%Iγ=0.170 *35* α(K)=0.44 *11*; α(L)=0.092 *5*; α(M)=0.0220 *8* α(N)=0.00559 *22*; α(O)=0.00109 *6*; α(P)=0.000104 *17* Mult.: From α(K)exp=0.46 *12*.
[x]273.2 *10*	0.09 *2*								%Iγ=0.022 *5*
275.5 *10*	2.2 *5*	2119.5	9/2$^+$	1843.8	11/2$^+$	M1(+E2)	<0.25	0.527 *15*	%Iγ=0.54 *13* α(K)=0.430 *13*; α(L)=0.0746 *15*; α(M)=0.01751 *33* α(N)=0.00445 *8*; α(O)=0.000885 *17*; α(P)=9.38×10^{-5} *24* Mult.: From α(K)exp=0.52 *9*.
288.6 *10*	1.21 *24*	1737.3	9/2$^+$	1447.9	(11/2)$^+$	M1(+E2)	<0.24	0.465 *12*	%Iγ=0.30 *6* α(K)=0.379 *11*; α(L)=0.0656 *13*; α(M)=0.01539 *29* α(N)=0.00391 *7*; α(O)=0.000779 *15*; α(P)=8.26×10^{-5} *20* Mult.: From α(K)exp=0.45 *5*.
[x]295.7 *10*	0.43 *9*								%Iγ=0.106 *23*
305.7[b] *10*	0.43 *9*	1185.8	(7/2)$^-$	879.9?	(5/2)$^-$	[M1]		0.405 *7*	%Iγ=0.106 *23* α(K)=0.331 *6*; α(L)=0.0565 *9*; α(M)=0.01323 *22* α(N)=0.00336 *6*; α(O)=0.000671 *11*; α(P)=7.17×10^{-5} *12*
322.3 *10*	0.78 *16*	2474.6	(7/2$^+$,9/2$^+$)	2151.9	7/2$^+$	[M1]		0.351 *6*	%Iγ=0.19 *4* α(K)=0.287 *5*; α(L)=0.0489 *8*; α(M)=0.01145 *19* α(N)=0.00291 *5*; α(O)=0.000580 *10*; α(P)=6.20×10^{-5} *10*
325.7[b] *10*	0.69 *14*	1651.0	7/2$^+$	1325.4	7/2$^-$	[E1]		0.0244 *4*	%Iγ=0.170 *35* α(K)=0.02005 *31*; α(L)=0.00336 *5*; α(M)=0.000784 *12* α(N)=0.0001976 *31*; α(O)=3.85×10^{-5} *6*; α(P)=3.60×10^{-6} *6*
339.7 *10*	0.60 *12*	2548.9	(11/2$^-$)	2208.9	(9/2$^+$)	[E1]		0.02220 *34*	%Iγ=0.148 *30* α(K)=0.01823 *28*; α(L)=0.00304 *5*; α(M)=0.000709 *11* α(N)=0.0001789 *28*; α(O)=3.49×10^{-5} *5*; α(P)=3.28×10^{-6} *5*
368.8 *10*	0.86 *16*	538.8	(3/2$^-$)	169.9	(1/2$^-$)	[M1]		0.243 *4*	%Iγ=0.21 *4* α(K)=0.1993 *31*; α(L)=0.0339 *5*; α(M)=0.00792 *13* α(N)=0.002013 *32*; α(O)=0.000401 *6*; α(P)=4.29×10^{-5} *7*
372.3[b] *10*	0.43 *9*	910.5?	5/2$^-$	538.8	(3/2$^-$)	[M1]		0.237 *4*	%Iγ=0.106 *23* α(K)=0.1942 *31*; α(L)=0.0330 *5*; α(M)=0.00772 *12* α(N)=0.001962 *31*; α(O)=0.000391 *6*; α(P)=4.19×10^{-5} *7*
384.4 *10*	0.52 *10*	1875.6	9/2$^+$	1490.3	7/2$^-$,9/2$^-$	[E1]		0.01683 *25*	%Iγ=0.128 *25* α(K)=0.01385 *21*; α(L)=0.002283 *35*; α(M)=0.000532 *8* α(N)=0.0001341 *20*; α(O)=2.62×10^{-5} *4*; α(P)=2.50×10^{-6} *4*
387.3 *10*	0.34 *7*	2506.8	9/2$^+$	2119.5	9/2$^+$	[M1]		0.2134 *33*	%Iγ=0.084 *18* α(K)=0.1747 *27*; α(L)=0.0296 *5*; α(M)=0.00693 *11* α(N)=0.001762 *28*; α(O)=0.000351 *6*; α(P)=3.76×10^{-5} *6*
[x]393.4 *10*	0.60 *12*								%Iγ=0.148 *30*
396.1 *10*	1.12 *22*	1843.8	11/2$^+$	1447.9	(11/2)$^+$	[M1]		0.2009 *31*	%Iγ=0.28 *6*

^{201}Bi ε decay 1978Ri04 (continued)

γ(^{201}Pb) (continued)

E_γ †	I_γ ‡a	E_i(level)	J_i^π	E_f	J_f^π	Mult.#	δ@	α&	Comments
									α(K)=0.1645 *26*; α(L)=0.0279 *4*; α(M)=0.00652 *10* α(N)=0.001658 *26*; α(O)=0.000331 *5*; α(P)=3.54×10^{-5} *6*
411.6 *10*	2.2 *4*	1737.3	9/2$^+$	1325.4	7/2$^-$	[E1]		0.01448 *22*	%Iγ=0.54 *10*
									α(K)=0.01193 *18*; α(L)=0.001954 *29*; α(M)=0.000455 *7* α(N)=0.0001148 *17*; α(O)=2.245×10^{-5} *34*; α(P)=2.159×10^{-6} *32*
414.6 *10*	5.5 *11*	2151.9	7/2$^+$	1737.3	9/2$^+$	M1(+E2)	<0.6	0.160 *17*	%Iγ=1.36 *28*
									α(K)=0.130 *15*; α(L)=0.0230 *17*; α(M)=0.0054 *4* α(N)=0.00137 *10*; α(O)=0.000272 *20*; α(P)=2.85×10^{-5} *28*
									Mult.: From α(K)exp=0.14 *3*, α(L)exp=0.040 *10*.
424.5 *10*	3.7 *7*	1415.4	9/2$^+$	990.5	7/2$^-$	(E1)		0.01354 *20*	%Iγ=0.91 *18*
									α(K)=0.01117 *17*; α(L)=0.001823 *27*; α(M)=0.000424 *6* α(N)=0.0001070 *16*; α(O)=2.095×10^{-5} *31*; α(P)=2.021×10^{-6} *30*
									Mult.: From α(K)exp=0.050 *20*, implies E1+M2 with δ=2.1 *5*.
428.0 *10*	2.9 *5*	1875.6	9/2$^+$	1447.9	(11/2)$^+$	M1(+E2)	<0.9	0.136 *27*	%Iγ=0.71 *13*
									α(K)=0.110 *23*; α(L)=0.0200 *27*; α(M)=0.0047 *6* α(N)=0.00120 *15*; α(O)=0.000237 *32*; α(P)=2.4×10^{-5} *4*
									Mult.: From α(K)exp=0.12 *3*.
450.3 *10*	0.60 *12*	538.8	(3/2$^-$)	88.5	3/2$^-$	[M1]		0.1426 *22*	%Iγ=0.148 *30*
									α(K)=0.1168 *18*; α(L)=0.01973 *30*; α(M)=0.00461 *7* α(N)=0.001173 *18*; α(O)=0.000234 *4*; α(P)=2.50×10^{-5} *4*
460.1 *10*	1.6 *3*	1875.6	9/2$^+$	1415.4	9/2$^+$	M1(+E2)	<0.7	0.118 *16*	%Iγ=0.39 *8*
									α(K)=0.096 *14*; α(L)=0.0170 *17*; α(M)=0.0040 *4* α(N)=0.00101 *10*; α(O)=0.000201 *20*; α(P)=2.10×10^{-5} *27*
									Mult.: From α(K)exp=0.16 *6*.
x490.8 *10*	0.78 *16*					M1,E2		0.07 *4*	%Iγ=0.19 *4*
									α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0027 *10* α(N)=6.8×10^{-4} *25*; α(O)=1.3×10^{-4} *5*; α(P)=1.3×10^{-5} *7*
									Mult.: α(K)exp=0.06 *4*.
x495.2 *10*	0.43 *9*								%Iγ=0.106 *23*
499.9 *10*	4.1 *8*	1490.3	7/2$^-$,9/2$^-$	990.5	7/2$^-$	M1(+E2)	<1.2	0.085 *23*	%Iγ=1.01 *20*
									α(K)=0.069 *20*; α(L)=0.0124 *25*; α(M)=0.0029 *6* α(N)=0.00075 *14*; α(O)=0.000147 *29*; α(P)=1.5×10^{-5} *4*
									Mult.: From α(K)exp=0.08 *3*.
x511.1[b] *10*	2.3 *5*								%Iγ=0.57 *13* E_γ: Possibly γ$^\pm$.
529.8 *10*	3.5 *7*	1977.6	7/2$^+$,9/2$^+$	1447.9	(11/2)$^+$	[M1,E2]		0.059 *34*	%Iγ=0.86 *18*
									α(K)=0.047 *29*; α(L)=0.009 *4*; α(M)=0.0022 *8* α(N)=5.5×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=1.1×10^{-5} *6*
538.7 *10*	0.43 *9*	538.8	(3/2$^-$)	0	5/2$^-$	[M1]		0.0887 *13*	%Iγ=0.106 *23* α(K)=0.0727 *11*; α(L)=0.01222 *18*; α(M)=0.00286 *4* α(N)=0.000726 *11*; α(O)=0.0001447 *21*; α(P)=1.551×10^{-5} *23*

$^{201}_{82}Pb_{119}$-5

^{201}Bi ε decay 1978Ri04 (continued)

γ(^{201}Pb) (continued)

E_γ[†]	I_γ[‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
[x]548.1 *10*	0.60 *12*							%Iγ=0.148 *30*
[x]552.7 *10*	1.21 *24*							%Iγ=0.30 *6*
557.7 *10*	1.8 *4*	2208.9	(9/2$^+$)	1651.0	7/2$^+$	[M1]	0.0809 *12*	%Iγ=0.44 *10* α(K)=0.0664 *10*; α(L)=0.01114 *16*; α(M)=0.00260 *4* α(N)=0.000662 *10*; α(O)=0.0001320 *20*; α(P)=1.415×10^{-5} *21*
562.5 *10*	1.5 *3*	1977.6	7/2$^+$,9/2$^+$	1415.4	9/2$^+$	[M1,E2]	0.051 *28*	%Iγ=0.37 *8* α(K)=0.041 *24*; α(L)=0.0077 *32*; α(M)=0.0018 *7* α(N)=4.7×10^{-4} *18*; α(O)=9.E−5 *4*; α(P)=9.E−6 *5*
[x]564.7 *10*	0.86 *17*							%Iγ=0.21 *4*
584.3 *10*	0.60 *12*	2459.9	7/2$^+$,9/2$^+$	1875.6	9/2$^+$	[M1,E2]	0.05 *3*	%Iγ=0.148 *30* α(K)=0.0587 *9*; α(L)=0.00985 *14*; α(M)=0.002301 *34* α(N)=0.000585 *9*; α(O)=0.0001166 *17*; α(P)=1.250×10^{-5} *18*
610.4[b] *10*	1.21 *24*	1490.3	7/2$^-$,9/2$^-$	879.9?	(5/2)$^-$	[M1,E2]	0.041 *23*	%Iγ=0.30 *6* α(K)=0.033 *19*; α(L)=0.0062 *26*; α(M)=0.0015 *6* α(N)=3.7×10^{-4} *15*; α(O)=7.3×10^{-5} *31*; α(P)=7.E−6 *4*
[x]614.4 *10*	0.78 *16*							%Iγ=0.19 *4*
[x]618.9 *10*	0.34 *7*							%Iγ=0.084 *18*
629.1 *5*	100 *5*	629.1	13/2$^+$	0	5/2$^-$	M4	0.813 *12*	%Iγ=24.7 *12* α(K)=0.552 *8*; α(L)=0.1949 *28*; α(M)=0.0504 *7* α(N)=0.01299 *19*; α(O)=0.00252 *4*; α(P)=0.0002177 *31* Mult.: From α(K)exp=0.6 *2*, K/L=2.3 *3* and L12/L3=4 *1* in 1956St05; α(L)exp=0.21 *1* in 1978Ri04.
[x]642.0 *10*	0.86 *17*							%Iγ=0.21 *4*
651.8 *10*	0.69 *14*	1977.6	7/2$^+$,9/2$^+$	1325.4	7/2$^-$	[E1]	0.00559 *8*	%Iγ=0.170 *35* α(K)=0.00464 *7*; α(L)=0.000729 *10*; α(M)=0.0001689 *24* α(N)=4.27×10^{-5} *6*; α(O)=8.42×10^{-6} *12*; α(P)=8.45×10^{-7} *12*
661.5[b] *10*	3.8 *8*	2151.9	7/2$^+$	1490.3	7/2$^-$,9/2$^-$	[E1]	0.00543 *8*	%Iγ=0.94 *20* α(K)=0.00451 *6*; α(L)=0.000708 *10*; α(M)=0.0001639 *23* α(N)=4.14×10^{-5} *6*; α(O)=8.17×10^{-6} *12*; α(P)=8.21×10^{-7} *12*
671.9 *10*	0.43 *9*	2119.5	9/2$^+$	1447.9	(11/2)$^+$	[M1]	0.0497 *7*	%Iγ=0.106 *23* α(K)=0.0408 *6*; α(L)=0.00681 *10*; α(M)=0.001590 *23* α(N)=0.000404 *6*; α(O)=8.06×10^{-5} *12*; α(P)=8.65×10^{-6} *13*
[x]675.4 *10*	0.34 *7*							%Iγ=0.084 *18*
[x]698.8 *10*	1.03 *21*							%Iγ=0.25 *5*
703.9 *10*	3.3 *7*	2119.5	9/2$^+$	1415.4	9/2$^+$	[M1,E2]	0.029 *15*	%Iγ=0.81 *18* α(K)=0.023 *13*; α(L)=0.0042 *18*; α(M)=1.0×10^{-3} *4* α(N)=2.5×10^{-4} *10*; α(O)=5.0×10^{-5} *21*; α(P)=5.1×10^{-6} *26*
710.0[b] *10*	0.52 *10*	879.9?	(5/2)$^-$	169.9	(1/2$^-$)	[E2]	0.01333 *19*	%Iγ=0.128 *25* α(K)=0.01019 *15*; α(L)=0.002387 *35*; α(M)=0.000579 *8* α(N)=0.0001467 *21*; α(O)=2.83×10^{-5} *4*; α(P)=2.51×10^{-6} *4*

$^{201}_{82}Pb_{119}$-6

γ(^{201}Pb) (continued)

E_γ[†]	I_γ[‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
[x]716.3 *10*	1.12 *22*								%Iγ=0.28 *6*
723.5 *10*	1.03 *21*	1737.3	9/2$^+$	1014.2	9/2$^-$	[E1]		0.00457 *7*	%Iγ=0.25 *5* α(K)=0.00380 *5*; α(L)=0.000591 *8*; α(M)=0.0001368 *20* α(N)=3.46×10^{-5} *5*; α(O)=6.83×10^{-6} *10*; α(P)=6.91×10^{-7} *10*
736.4 *10*	5.3 *11*	2151.9	7/2$^+$	1415.4	9/2$^+$	M1		0.0391 *6*	%Iγ=1.31 *28* α(K)=0.0322 *5*; α(L)=0.00535 *8*; α(M)=0.001250 *18* α(N)=0.000317 *5*; α(O)=6.33×10^{-5} *9*; α(P)=6.80×10^{-6} *10* Mult.: From α(K)exp=0.048 *10*.
740.7[b] *10*	2.2 *4*	1651.0	7/2$^+$	910.5?	5/2$^-$	E1		0.00436 *6*	%Iγ=0.54 *10* α(K)=0.00363 *5*; α(L)=0.000565 *8*; α(M)=0.0001306 *19* α(N)=3.30×10^{-5} *5*; α(O)=6.52×10^{-6} *9*; α(P)=6.61×10^{-7} *9* Mult.: From α(K)exp=0.0030 *20*.
746.8 *10*	4.7 *9*	1737.3	9/2$^+$	990.5	7/2$^-$	E1		0.00430 *6*	%Iγ=1.16 *23* α(K)=0.00357 *5*; α(L)=0.000556 *8*; α(M)=0.0001285 *18* α(N)=3.25×10^{-5} *5*; α(O)=6.42×10^{-6} *9*; α(P)=6.51×10^{-7} *9* Mult.: From α(K)exp=0.0050 *10*.
[x]768.2 *10*	1.4 *3*								%Iγ=0.35 *8*
[x]772.3 *10*	1.6 *3*								%Iγ=0.39 *8*
786.4 *5*	39.7 *20*	1415.4	9/2$^+$	629.1	13/2$^+$	E2		0.01077 *15*	%Iγ=9.8 *7* α(K)=0.00836 *12*; α(L)=0.001835 *26*; α(M)=0.000443 *6* α(N)=0.0001121 *16*; α(O)=2.170×10^{-5} *31*; α(P)=1.981×10^{-6} *28* Mult.: From α(K)exp=0.0095 *8*.
791.0[b] *10*	1.9 *4*	879.9?	(5/2)$^-$	88.5	3/2$^-$	M1(+E2)	<1.1	0.027 *6*	%Iγ=0.47 *10* α(K)=0.022 *5*; α(L)=0.0037 *7*; α(M)=0.00087 *16* α(N)=0.00022 *4*; α(O)=4.4×10^{-5} *9*; α(P)=4.6×10^{-6} *10* Mult.: From α(K)exp=0.028 *11*.
818.9 *5*	30.6 *15*	1447.9	(11/2)$^+$	629.1	13/2$^+$	E2+M1	7.8 *10*	0.01023 *17*	%Iγ=7.5 *5* α(K)=0.00800 *14*; α(L)=0.001698 *27*; α(M)=0.000408 *6* α(N)=0.0001034 *16*; α(O)=2.007×10^{-5} *32*; α(P)=1.863×10^{-6} *31* Mult.: From α(K)exp=0.0080 *20*.
822.6[b] *10*	3.4 *7*	910.5?	5/2$^-$	88.5	3/2$^-$	M1(+E2)	<1.7	0.022 *7*	%Iγ=0.84 *18* α(K)=0.018 *6*; α(L)=0.0031 *9*; α(M)=7.3×10^{-4} *20* α(N)=1.9×10^{-4} *5*; α(O)=3.7×10^{-5} *10*; α(P)=3.9×10^{-6} *12* Mult.: From α(K)exp=0.019 *8*.
832.0 *10*	1.8 *4*	2279.8	(9/2)$^+$	1447.9	(11/2)$^+$	M1(+E2)	<1.3	0.023 *6*	%Iγ=0.44 *10* α(K)=0.018 *5*; α(L)=0.0032 *7*; α(M)=0.00074 *17* α(N)=0.00019 *4*; α(O)=3.7×10^{-5} *9*; α(P)=3.9×10^{-6} *10* Mult.: From α(K)exp=0.028 *14*.

γ(^{201}Pb) (continued)

E_γ[†]	I_γ[‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
[x]839.7 *10*	0.34 *7*								%Iγ=0.084 *18*
847.7 *10*	7.4 *15*	936.1	7/2⁻	88.5	3/2⁻	E2		0.00924 *13*	%Iγ=1.8 *4* α(K)=0.00724 *10*; α(L)=0.001524 *22*; α(M)=0.000366 *5* α(N)=9.27×10⁻⁵ *13*; α(O)=1.801×10⁻⁵ *26*; α(P)=1.675×10⁻⁶ *24* Mult.: From α(K)exp=0.009 *5*.
855.8 *10*	5.7 *12*	2506.8	9/2⁺	1651.0	7/2⁺	M1(+E2)	<2.0	0.020 *7*	%Iγ=1.41 *30* α(K)=0.016 *6*; α(L)=0.0028 *9*; α(M)=6.5×10⁻⁴ *19* α(N)=1.6×10⁻⁴ *5*; α(O)=3.3×10⁻⁵ *10*; α(P)=3.4×10⁻⁶ *12* Mult.: From α(K)exp=0.020 *10*.
[x]867.0 *10*	8.4 *17*					E2		0.00883 *13*	%Iγ=2.1 *4* α(K)=0.00694 *10*; α(L)=0.001443 *21*; α(M)=0.000346 *5* α(N)=8.77×10⁻⁵ *13*; α(O)=1.705×10⁻⁵ *24*; α(P)=1.594×10⁻⁶ *23* Mult.: α(K)exp=0.007 *3*.
879.6[b] *10*	7.0 *14*	879.9?	(5/2)⁻	0	5/2⁻	E2+M1	7.3 *16*	0.00888 *22*	%Iγ=1.73 *35* α(K)=0.00700 *18*; α(L)=0.001430 *30*; α(M)=0.000342 *7* α(N)=8.68×10⁻⁵ *18*; α(O)=1.69×10⁻⁵ *4*; α(P)=1.60×10⁻⁶ *4* Mult.: From α(K)exp=0.007 *3*.
885.0 *10*	1.4 *3*	1875.6	9/2⁺	990.5	7/2⁻	[E1]		0.00313 *4*	%Iγ=0.35 *8* α(K)=0.00260 *4*; α(L)=0.000400 *6*; α(M)=9.24×10⁻⁵ *13* α(N)=2.337×10⁻⁵ *33*; α(O)=4.63×10⁻⁶ *7*; α(P)=4.74×10⁻⁷ *7*
902.0 *5*	34.8 *17*	990.5	7/2⁻	88.5	3/2⁻	E2		0.00816 *11*	%Iγ=8.6 *6* α(K)=0.00644 *9*; α(L)=0.001313 *18*; α(M)=0.000314 *4* α(N)=7.96×10⁻⁵ *11*; α(O)=1.550×10⁻⁵ *22*; α(P)=1.463×10⁻⁶ *21* Mult.: From α(K)exp=0.006 *2*.
911.0[b] *10*	7.9 *16*	910.5?	5/2⁻	0	5/2⁻	M1(+E2)	<0.5	0.0211 *15*	%Iγ=1.9 *4* α(K)=0.0174 *13*; α(L)=0.00289 *18*; α(M)=0.00068 *4* α(N)=0.000172 *11*; α(O)=3.42×10⁻⁵ *22*; α(P)=3.66×10⁻⁶ *25* Mult.: From α(K)exp=0.028 *7*.
[x]916.9 *10*	0.95 *19*								%Iγ=0.23 *5*
[x]924.2 *10*	1.12 *22*								%Iγ=0.28 *6*
931.6 *10*	3.5 *7*	3050.7	(7/2)⁺	2119.5	9/2⁺	M1(+E2)	<0.6	0.0195 *18*	%Iγ=0.86 *18* α(K)=0.0160 *15*; α(L)=0.00268 *23*; α(M)=0.00063 *5* α(N)=0.000159 *13*; α(O)=3.17×10⁻⁵ *27*; α(P)=3.38×10⁻⁶ *31* Mult.: From α(K)exp=0.020 *5*.
936.2 *5*	47.1 *24*	936.1	7/2⁻	0	5/2⁻	M1,E2		0.014 *7*	%Iγ=11.6 *7* α(K)=0.012 *6*; α(L)=0.0020 *8*; α(M)=4.8×10⁻⁴ *19* α(N)=1.2×10⁻⁴ *5*; α(O)=2.4×10⁻⁵ *10*; α(P)=2.5×10⁻⁶ *11* Mult.: From α(K)exp=0.004 *3*.
[x]957.0 *10*	0.43 *9*								%Iγ=0.106 *23*
[x]960.0 *10*	1.21 *24*								%Iγ=0.30 *6*

^{201}Bi ε decay 1978Ri04 (continued)

γ(^{201}Pb) (continued)

E_γ[†]	I_γ[‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
970.0 *10*	1.03 *21*	2459.9	7/2$^+$,9/2$^+$	1490.3	7/2$^-$,9/2$^-$	[E1]		0.00264 *4*	%Iγ=0.25 *5* α(K)=0.002205 *31*; α(L)=0.000337 *5*; α(M)=7.77×10^{-5} *11* α(N)=1.965×10^{-5} *28*; α(O)=3.89×10^{-6} *6*; α(P)=4.02×10^{-7} *6*
[x]978.3 *10*	0.60 *12*								%Iγ=0.148 *30*
986.5 *10*	3.5 *7*	1977.6	7/2$^+$,9/2$^+$	990.5	7/2$^-$	E1		0.00256 *4*	%Iγ=0.86 *18* α(K)=0.002140 *30*; α(L)=0.000326 *5*; α(M)=7.53×10^{-5} *11* α(N)=1.904×10^{-5} *27*; α(O)=3.77×10^{-6} *5*; α(P)=3.90×10^{-7} *5*
990.6 *5*	13.5 *7*	990.5	7/2$^-$	0	5/2$^-$	E2+M1	2.2 *6*	0.0087 *13*	Mult.: From α(K)exp=0.005 *3*. %Iγ=3.33 *22* α(K)=0.0070 *11*; α(L)=0.00130 *16*; α(M)=0.00031 *4* α(N)=7.8×10^{-5} *9*; α(O)=1.53×10^{-5} *19*; α(P)=1.53×10^{-6} *21*
[x]998.6 *10*	0.52 *10*								Mult.: From α(K)exp=0.007 *2*. %Iγ=0.128 *25*
[x]1005.7 *10*	1.29 *25*								%Iγ=0.32 *6*
1014.1 *5*	44.6 *22*	1014.2	9/2$^-$	0	5/2$^-$	E2		0.00648 *9*	%Iγ=11.0 *7* α(K)=0.00517 *7*; α(L)=0.001000 *14*; α(M)=0.0002379 *33* α(N)=6.03×10^{-5} *8*; α(O)=1.179×10^{-5} *17*; α(P)=1.140×10^{-6} *16*
[x]1019.7 *10*	0.78 *16*								Mult.: From α(K)exp=0.005 *2*. %Iγ=0.19 *4*
1024.2 *10*	1.8 *4*	2439.5	7/2$^+$,9/2$^+$	1415.4	9/2$^+$	M1+E2	2.9 *11*	0.0075 *13*	%Iγ=0.44 *10* α(K)=0.0060 *11*; α(L)=0.00111 *17*; α(M)=0.00026 *4* α(N)=6.7×10^{-5} *10*; α(O)=1.31×10^{-5} *20*; α(P)=1.30×10^{-6} *23*
[x]1033.0 *10*	0.69 *14*								Mult.: From α(K)exp=0.006 *3*. %Iγ=0.170 *35*
1042.8 *10*	0.95 *19*	1977.6	7/2$^+$,9/2$^+$	936.1	7/2$^-$	[E1]		2.32×10^{-3} *3*	%Iγ=0.23 *5* α(K)=0.001938 *27*; α(L)=0.000295 *4*; α(M)=6.79×10^{-5} *10* α(N)=1.718×10^{-5} *24*; α(O)=3.41×10^{-6} *5*; α(P)=3.53×10^{-7} *5*
1051.6 *10*	2.3 *5*	2788.8	11/2$^-$	1737.3	9/2$^+$	E1		2.29×10^{-3} *3*	%Iγ=0.57 *13*

$^{201}_{82}Pb_{119}$-9

^{201}Bi ε decay 1978Ri04 (continued)

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(K)=0.001909 *27*; α(L)=0.000290 *4*; α(M)=6.69×10^{-5} *9* α(N)=1.692×10^{-5} *24*; α(O)=3.36×10^{-6} *5*; α(P)=3.47×10^{-7} *5* Mult.: From α(K)exp=0.0011 *10*.
1059.7 *10*	2.1 *4*	2474.6	(7/2$^+$,9/2$^+$)	1415.4	9/2$^+$	[M1,E2]	0.011 *5*	%Iγ=0.52 *10* α(K)=0.01262 *18*; α(L)=0.002077 *30*; α(M)=0.000484 *7* α(N)=0.0001230 *17*; α(O)=2.455×10^{-5} *35*; α(P)=2.64×10^{-6} *4*
1091.5 *10*	2.6 *6*	2506.8	9/2$^+$	1415.4	9/2$^+$	[M1,E2]	0.010 *5*	%Iγ=0.64 *15* α(K)=0.01170 *17*; α(L)=0.001925 *27*; α(M)=0.000448 *6* α(N)=0.0001139 *16*; α(O)=2.274×10^{-5} *32*; α(P)=2.447×10^{-6} *35*
1108.1 *5*	16.4 *8*	1737.3	9/2$^+$	629.1	13/2$^+$	E2	0.00546 *8*	%Iγ=4.04 *27* α(K)=0.00439 *6*; α(L)=0.000820 *12*; α(M)=0.0001942 *27* α(N)=4.92×10^{-5} *7*; α(O)=9.65×10^{-6} *14*; α(P)=9.48×10^{-7} *13*; α(IPF)=2.05×10^{-7} *5* Mult.: From α(K)exp=0.005 *1*.
1137.7[b] *10*	0.67 *13*	2151.9	7/2$^+$	1014.2	9/2$^-$	[E1]	1.99×10^{-3} *3*	%Iγ=0.165 *33* α(K)=0.001661 *23*; α(L)=0.0002513 *35*; α(M)=5.79×10^{-5} *8* α(N)=1.465×10^{-5} *21*; α(O)=2.91×10^{-6} *4*; α(P)=3.02×10^{-7} *4*; α(IPF)=3.06×10^{-6} *11*
[x]1147.1 *10*	0.86 *17*							%Iγ=0.21 *4*
[x]1151.5 *10*	0.34 *7*							%Iγ=0.084 *18*
1161.2 *10*	1.29 *25*	2151.9	7/2$^+$	990.5	7/2$^-$	[E1]	1.92×10^{-3} *3*	%Iγ=0.32 *6* α(K)=0.001603 *23*; α(L)=0.0002422 *34*; α(M)=5.58×10^{-5} *8* α(N)=1.412×10^{-5} *20*; α(O)=2.80×10^{-6} *4*; α(P)=2.92×10^{-7} *4*; α(IPF)=6.25×10^{-6} *19*
[x]1175.0 *10*	1.5 *3*							%Iγ=0.37 *8*
1183.7 *10*	1.03 *21*	2119.5	9/2$^+$	936.1	7/2$^-$	[E1]	1.87×10^{-3} *3*	%Iγ=0.25 *5* α(K)=0.001550 *22*; α(L)=0.0002340 *33*; α(M)=5.39×10^{-5} *8* α(N)=1.364×10^{-5} *19*; α(O)=2.71×10^{-6} *4*; α(P)=2.82×10^{-7} *4*; α(IPF)=1.098×10^{-5} *29*
1186.5 *10*	0.87 *17*	1185.8	(7/2)$^-$	0	5/2$^-$	[M1]	0.01149 *16*	%Iγ=0.21 *4* α(K)=0.00946 *13*; α(L)=0.001552 *22*; α(M)=0.000362 *5* α(N)=9.18×10^{-5} *13*; α(O)=1.834×10^{-5} *26*; α(P)=1.974×10^{-6} *28*; α(IPF)=5.12×10^{-6} *14*
[x]1193.1 *10*	0.69 *14*							%Iγ=0.170 *35*
[x]1196.2 *10*	0.60 *12*							%Iγ=0.148 *30*
[x]1203.2 *10*	2.4 *5*					M1+E2	0.0079 *32*	%Iγ=0.59 *13* α(K)=0.0064 *27*; α(L)=0.0011 *4*; α(M)=2.6×10^{-4} *9* α(N)=6.5×10^{-5} *24*; α(O)=1.3×10^{-5} *5*; α(P)=1.4×10^{-6} *6*; α(IPF)=5.8×10^{-6} *17* Mult.: α(K)exp=0.009 *5*.

$^{201}_{82}Pb_{119}$-10

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	δ [@]	α [&]	Comments
1214.5 *5*	10.1 *5*	1843.8	11/2$^+$	629.1	13/2$^+$	M1(+E2)	<2.3	0.0082 *26*	%Iγ=2.49 *17* α(K)=0.0067 *22*; α(L)=0.00113 *33*; α(M)=2.6×10^{-4} *8* α(N)=6.7×10^{-5} *19*; α(O)=1.3×10^{-5} *4*; α(P)=1.4×10^{-6} *5*; α(IPF)=7.5×10^{-6} *17* Mult.: From α(K)exp=0.006 *3*.
[x]1225.6 *10*	1.4 *3*								%Iγ=0.35 *8*
[x]1234.7 *10*	7.3 *15*								%Iγ=1.8 *4*
1241.4[b] *10*	6.0 *12*	2151.9	7/2$^+$	910.5?	5/2$^-$	(E1)		1.74×10^{-3} *2*	%Iγ=1.48 *30* α(K)=0.001427 *20*; α(L)=0.0002149 *30*; α(M)=4.95×10^{-5} *7* α(N)=1.252×10^{-5} *18*; α(O)=2.488×10^{-6} *35*; α(P)=2.60×10^{-7} *4*; α(IPF)=2.94×10^{-5} *6* Mult.: From α(K)exp=0.004 *3*.
[x]1244.8 *10*	0.77 *15*								%Iγ=0.19 *4*
1253.8 *10*	3.1 *6*	2439.5	7/2$^+$,9/2$^+$	1185.8	(7/2)$^-$	[E1]		1.71×10^{-3} *2*	%Iγ=0.76 *15* α(K)=0.001403 *20*; α(L)=0.0002111 *30*; α(M)=4.86×10^{-5} *7* α(N)=1.230×10^{-5} *17*; α(O)=2.445×10^{-6} *34*; α(P)=2.55×10^{-7} *4*; α(IPF)=3.40×10^{-5} *6*
1265.6 *10*	1.03 *21*	2279.8	(9/2)$^+$	1014.2	9/2$^-$	[E1]		1.69×10^{-3} *2*	%Iγ=0.25 *5* α(K)=0.001380 *19*; α(L)=0.0002077 *29*; α(M)=4.78×10^{-5} *7* α(N)=1.210×10^{-5} *17*; α(O)=2.404×10^{-6} *34*; α(P)=2.512×10^{-7} *35*; α(IPF)=3.85×10^{-5} *7*
[x]1269.0 *10*	0.76 *15*								%Iγ=0.19 *4*
[x]1275.1 *10*	1.01 *20*								%Iγ=0.25 *5*
[x]1278.1 *10*	1.29 *25*								%Iγ=0.32 *6*
1288.9 *10*	7.9 *16*	2474.6	(7/2$^+$,9/2$^+$)	1185.8	(7/2)$^-$	(E1)		1.65×10^{-3} *2*	%Iγ=1.9 *4* α(K)=0.001338 *19*; α(L)=0.0002010 *28*; α(M)=4.63×10^{-5} *7* α(N)=1.171×10^{-5} *16*; α(O)=2.328×10^{-6} *33*; α(P)=2.434×10^{-7} *34*; α(IPF)=4.78×10^{-5} *8* Mult.: From α(K)exp=0.003 *1*.
1298.4 *10*	1.4 *3*	2208.9	(9/2$^+$)	910.5?	5/2$^-$	[M2]		0.02165 *31*	%Iγ=0.35 *8* α(K)=0.01755 *25*; α(L)=0.00312 *4*; α(M)=0.000737 *10* α(N)=0.0001875 *27*; α(O)=3.74×10^{-5} *5*; α(P)=3.98×10^{-6} *6*; α(IPF)=7.33×10^{-6} *13*
1313.2 *10*	2.2 *4*	3050.7	(7/2)$^+$	1737.3	9/2$^+$	[M1]		0.00889 *13*	%Iγ=0.54 *10* α(K)=0.00730 *10*; α(L)=0.001195 *17*; α(M)=0.000278 *4*

$^{201}_{82}Pb_{119}$-11

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									α(N)=7.069×10^{-5} *99*; α(O)=1.412×10^{-5} *20*; α(P)=1.520×10^{-6} *21*; α(IPF)=3.11×10^{-5} *5*
1320.9 *10*	3.1 *6*	2506.8	9/2$^+$	1185.8	(7/2)$^-$	[E1]		1.59×10^{-3} *2*	%Iγ=0.76 *15*
									α(K)=0.001282 *18*; α(L)=0.0001925 *27*; α(M)=4.43×10^{-5} *6*
									α(N)=1.121×10^{-5} *16*; α(O)=2.229×10^{-6} *31*; α(P)=2.333×10^{-7} *33*; α(IPF)=6.21×10^{-5} *10*
1325.2 *5*	25.4 *13*	1325.4	7/2$^-$	0	5/2$^-$	M1+E2	0.6 *4*	0.0074 *11*	%Iγ=6.3 *4*
									α(K)=0.0061 *9*; α(L)=0.00101 *14*; α(M)=0.000235 *33*
									α(N)=6.0×10^{-5} *8*; α(O)=1.19×10^{-5} *17*; α(P)=1.27×10^{-6} *19*; α(IPF)=3.08×10^{-5} *35*
									Mult.: From α(K)exp=0.006 *1*.
[x]1358.1 *10*	3.4 *7*								%Iγ=0.84 *18*
[x]1380.4 *10*	1.4 *3*								%Iγ=0.35 *8*
[x]1389.1 *10*	0.75 *15*								%Iγ=0.18 *4*
[x]1394.2 *10*	1.5 *3*								%Iγ=0.37 *8*
1400.3[b] *10*	2.2 *4*	2279.8	(9/2)$^+$	879.9?	(5/2)$^-$	[M2]		0.01781 *25*	%Iγ=0.54 *10*
									α(K)=0.01445 *20*; α(L)=0.00255 *4*; α(M)=0.000600 *8*
									α(N)=0.0001527 *22*; α(O)=3.04×10^{-5} *4*; α(P)=3.25×10^{-6} *5*; α(IPF)=1.950×10^{-5} *31*
[x]1411.0 *10*	0.95 *19*								%Iγ=0.23 *5*
[x]1417.9 *10*	4.8 *10*					(E2)		0.00347 *5*	%Iγ=1.18 *25*
									α(K)=0.00280 *4*; α(L)=0.000485 *7*; α(M)=0.0001138 *16*
									α(N)=2.88×10^{-5} *4*; α(O)=5.69×10^{-6} *8*; α(P)=5.78×10^{-7} *8*; α(IPF)=4.05×10^{-5} *6*
									Mult.: α(K)exp=0.003 *2*.
[x]1420.9 *10*	0.52 *10*								%Iγ=0.128 *25*
1469.5 *10*	1.4 *3*	2459.9	7/2$^+$,9/2$^+$	990.5	7/2$^-$	[E1]		1.43×10^{-3} *2*	%Iγ=0.35 *8*
									α(K)=0.001070 *15*; α(L)=0.0001598 *22*; α(M)=3.68×10^{-5} *5*
									α(N)=9.31×10^{-6} *13*; α(O)=1.852×10^{-6} *26*; α(P)=1.946×10^{-7} *27*; α(IPF)=0.0001501 *22*
1472.1 *10*	1.5 *3*	2961.8	(7/2,9/2$^-$)	1490.3	7/2$^-$,9/2$^-$				%Iγ=0.37 *8*
1490.1 *10*	1.6 *3*	1490.3	7/2$^-$,9/2$^-$	0	5/2$^-$	[M1,E2]		0.0049 *17*	%Iγ=0.39 *8*
									α(K)=0.0039 *14*; α(L)=6.5×10^{-4} *21*; α(M)=1.5×10^{-4} *5*
									α(N)=3.9×10^{-5} *13*; α(O)=7.7×10^{-6} *25*; α(P)=8.1×10^{-7} *29*; α(IPF)=8.2×10^{-5} *22*
1503.0 *10*	4.3 *9*	2439.5	7/2$^+$,9/2$^+$	936.1	7/2$^-$	[E1]		1.40×10^{-3} *2*	%Iγ=1.06 *23*

$^{201}_{82}Pb_{119}$-12

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(K)=0.001030 *14*; α(L)=0.0001538 *22*; α(M)=3.54×10^{-5} *5* α(N)=8.95×10^{-6} *13*; α(O)=1.781×10^{-6} *25*; α(P)=1.873×10^{-7} *26*; α(IPF)=0.0001723 *25*
[x]1505.7 *10*	1.9 *4*							%Iγ=0.47 *10*
1516.4 *10*	3.8 *8*	2506.8	9/2$^+$	990.5	7/2$^-$	[E1]	1.39×10^{-3} *2*	%Iγ=0.94 *20* α(K)=0.001015 *14*; α(L)=0.0001514 *21*; α(M)=3.48×10^{-5} *5* α(N)=8.82×10^{-6} *12*; α(O)=1.754×10^{-6} *25*; α(P)=1.846×10^{-7} *26*; α(IPF)=0.0001814 *26*
1523.3 *10*	5.5 *11*	2459.9	7/2$^+$,9/2$^+$	936.1	7/2$^-$	[E1]	1.39×10^{-3} *2*	%Iγ=1.36 *28* α(K)=0.001007 *14*; α(L)=0.0001503 *21*; α(M)=3.46×10^{-5} *5* α(N)=8.75×10^{-6} *12*; α(O)=1.741×10^{-6} *24*; α(P)=1.832×10^{-7} *26*; α(IPF)=0.0001861 *27*
1538.4 *5*	11.4 *6*	2474.6	(7/2$^+$,9/2$^+$)	936.1	7/2$^-$	[E1]	1.38×10^{-3} *2*	%Iγ=2.81 *19* α(K)=0.000991 *14*; α(L)=0.0001477 *21*; α(M)=3.40×10^{-5} *5* α(N)=8.60×10^{-6} *12*; α(O)=1.712×10^{-6} *24*; α(P)=1.802×10^{-7} *25*; α(IPF)=0.0001964 *28*
1547.6[b] *10*	1.21 *24*	2459.9	7/2$^+$,9/2$^+$	910.5?	5/2$^-$	[E1]	1.37×10^{-3} *2*	%Iγ=0.30 *6* α(K)=0.000981 *14*; α(L)=0.0001462 *21*; α(M)=3.36×10^{-5} *5* α(N)=8.51×10^{-6} *12*; α(O)=1.694×10^{-6} *24*; α(P)=1.784×10^{-7} *25*; α(IPF)=0.0002028 *29*
[x]1553.0 *10*	0.90 *18*							%Iγ=0.22 *5*
1558.6 *10*	5.6 *11*	2548.9	(11/2$^-$)	990.5	7/2$^-$	(E2)	0.00296 *4*	%Iγ=1.38 *28* α(K)=0.002359 *33*; α(L)=0.000400 *6*; α(M)=9.36×10^{-5} *13* α(N)=2.372×10^{-5} *33*; α(O)=4.69×10^{-6} *7*; α(P)=4.82×10^{-7} *7*; α(IPF)=8.27×10^{-5} *12* Mult.: From α(K)exp=0.0020 *10*.
1570.8 *5*	10.0 *5*	2506.8	9/2$^+$	936.1	7/2$^-$	E1	1.36×10^{-3} *2*	%Iγ=2.47 *16* α(K)=0.000957 *13*; α(L)=0.0001426 *20*; α(M)=3.28×10^{-5} *5* α(N)=8.30×10^{-6} *12*; α(O)=1.652×10^{-6} *23*; α(P)=1.740×10^{-7} *24*; α(IPF)=0.0002190 *31* Mult.: From α(K)exp=0.0009 *5*.
1579.8 *10*	0.34 *7*	2208.9	(9/2$^+$)	629.1	13/2$^+$	[E2]	0.00290 *4*	%Iγ=0.084 *18* α(K)=0.002303 *32*; α(L)=0.000389 *5*; α(M)=9.10×10^{-5} *13* α(N)=2.307×10^{-5} *32*; α(O)=4.56×10^{-6} *6*; α(P)=4.69×10^{-7} *7*; α(IPF)=9.00×10^{-5} *13*
1603.8 *10*	4.9 *9*	2788.8	11/2$^-$	1185.8	(7/2)$^-$	(E2)	0.00283 *4*	%Iγ=1.21 *23* α(K)=0.002241 *31*; α(L)=0.000377 *5*; α(M)=8.83×10^{-5} *12*

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									α(N)=2.238×10^{-5} *31*; α(O)=4.43×10^{-6} *6*; α(P)=4.56×10^{-7} *6*; α(IPF)=9.86×10^{-5} *14* Mult.: From α(K)exp=0.0040 *10*.
x1626.0 *10*	1.4 *3*								%Iγ=0.35 *8*
1634.9 *10*	8.0 *16*	3050.7	(7/2)$^+$	1415.4	9/2$^+$	M1(+E2)	<1.2	0.0045 *7*	%Iγ=2.0 *4* α(K)=0.0036 *6*; α(L)=0.00059 *9*; α(M)=0.000137 *22* α(N)=3.5×10^{-5} *6*; α(O)=6.9×10^{-6} *11*; α(P)=7.4×10^{-7} *13*; α(IPF)=0.000164 *23* Mult.: From α(K)exp=0.0040 *10*.
1638.7[b] *10*	0.75 *15*	2548.9	(11/2$^-$)	910.5?	5/2$^-$	[M3]		0.02050 *29*	%Iγ=0.18 *4* α(K)=0.01640 *23*; α(L)=0.00311 *4*; α(M)=0.000739 *10* α(N)=0.0001883 *27*; α(O)=3.74×10^{-5} *5*; α(P)=3.93×10^{-6} *6*; α(IPF)=3.25×10^{-5} *5*
1650.9 *5*	24.2 *12*	1651.0	7/2$^+$	0	5/2$^-$	E1		1.33×10^{-3} *2*	%Iγ=6.0 *4* α(K)=0.000881 *12*; α(L)=0.0001310 *18*; α(M)=3.01×10^{-5} *4* α(N)=7.62×10^{-6} *11*; α(O)=1.517×10^{-6} *21*; α(P)=1.601×10^{-7} *22*; α(IPF)=0.000276 *4* Mult.: From α(K)exp=0.0006 *4*.
x1664.0 *10*	0.60 *12*								%Iγ=0.148 *30*
x1703.1 *10*	2.2 *4*								%Iγ=0.54 *10*
x1709.4 *10*	2.3 *5*								%Iγ=0.57 *13*
x1718.9 *10*	1.12 *22*								%Iγ=0.28 *6*
x1730.8 *10*	0.80 *16*								%Iγ=0.20 *4*
1737.6 *10*	0.54 *11*	1737.3	9/2$^+$	0	5/2$^-$	[M2]		0.01038 *15*	%Iγ=0.133 *28* α(K)=0.00839 *12*; α(L)=0.001443 *20*; α(M)=0.000339 *5* α(N)=8.61×10^{-5} *12*; α(O)=1.718×10^{-5} *24*; α(P)=1.840×10^{-6} *26*; α(IPF)=0.0001037 *15*
x1758.5 *10*	1.03 *21*								%Iγ=0.25 *5*
x1767.7 *10*	0.45 *9*								%Iγ=0.111 *23*
1775.7 *10*	2.1 *4*	2961.8	(7/2,9/2$^-$)	1185.8	(7/2)$^-$				%Iγ=0.52 *10*
x1788.3 *10*	2.2 *4*								%Iγ=0.54 *10*
x1790.9 *10*	0.34 *7*								%Iγ=0.084 *18*
x1798.8 *10*	1.03 *21*								%Iγ=0.25 *5*
1851.9 *10*	0.26 *5*	2788.8	11/2$^-$	936.1	7/2$^-$	[E2]		2.30×10^{-3} *3*	%Iγ=0.064 *13* α(K)=0.001729 *24*; α(L)=0.000284 *4*; α(M)=6.61×10^{-5} *9* α(N)=1.675×10^{-5} *24*; α(O)=3.32×10^{-6} *5*; α(P)=3.46×10^{-7} *5*; α(IPF)=0.0001981 *28*
x1855.3 *10*	1.29 *25*								%Iγ=0.32 *6*
x1866.2 *10*	0.80 *16*								%Iγ=0.20 *4*
1877.4 *10*	0.60 *12*	2506.8	9/2$^+$	629.1	13/2$^+$	[E2]		2.26×10^{-3} *3*	%Iγ=0.148 *30*

$^{201}_{82}Pb_{119}$-14

^{201}Bi ε decay 1978Ri04 (continued)

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(K)=0.001687 *24*; α(L)=0.000276 *4*; α(M)=6.43×10^{-5} *9* α(N)=1.630×10^{-5} *23*; α(O)=3.23×10^{-6} *5*; α(P)=3.37×10^{-7} *5*; α(IPF)=0.0002094 *30*
[x]1889.7 *10*	0.75 *15*							%Iγ=0.18 *4*
[x]1897.9 *10*	0.33 *7*							%Iγ=0.081 *18*
[x]1911.6 *10*	0.55 *11*							%Iγ=0.136 *28*
1919.4 *10*	0.70 *14*	2548.9	(11/2$^-$)	629.1	13/2$^+$	[E1]	1.29×10^{-3} *2*	%Iγ=0.173 *35* α(K)=0.000687 *10*; α(L)=0.0001016 *14*; α(M)=2.333×10^{-5} *33* α(N)=5.91×10^{-6} *8*; α(O)=1.177×10^{-6} *17*; α(P)=1.247×10^{-7} *17*; α(IPF)=0.000472 *7*
[x]1928.7 *10*	1.6 *3*							%Iγ=0.39 *8*
[x]1949.7 *10*	0.45 *9*							%Iγ=0.111 *23*
1971.0 *10*	0.65 *13*	2961.8	(7/2,9/2$^-$)	990.5	7/2$^-$			%Iγ=0.160 *33*
[x]1980.4 *10*	1.4 *3*							%Iγ=0.35 *8*
[x]2021.3 *10*	0.43 *9*							%Iγ=0.106 *23*
2025.6 *10*	1.05 *21*	2961.8	(7/2,9/2$^-$)	936.1	7/2$^-$			%Iγ=0.26 *5*
2035.8 *10*	0.34 *7*	3050.7	(7/2)$^+$	1014.2	9/2$^-$	[E1]	1.30×10^{-3} *2*	%Iγ=0.084 *18* α(K)=0.000624 *9*; α(L)=9.21×10^{-5} *13*; α(M)=2.115×10^{-5} *30* α(N)=5.35×10^{-6} *8*; α(O)=1.067×10^{-6} *15*; α(P)=1.133×10^{-7} *16*; α(IPF)=0.000555 *8*
2060.9 *10*	0.75 *15*	3050.7	(7/2)$^+$	990.5	7/2$^-$	[E1]	1.30×10^{-3} *2*	%Iγ=0.18 *4* α(K)=0.000612 *9*; α(L)=9.02×10^{-5} *13*; α(M)=2.072×10^{-5} *29* α(N)=5.25×10^{-6} *7*; α(O)=1.046×10^{-6} *15*; α(P)=1.110×10^{-7} *16*; α(IPF)=0.000573 *8*
[x]2064.8 *10*	2.8 *6*							%Iγ=0.69 *15*
2082.0[b] *10*	0.30 *6*	2961.8	(7/2,9/2$^-$)	879.9?	(5/2)$^-$			%Iγ=0.074 *15*
[x]2091.8 *10*	1.50 *3*							%Iγ=0.370 *18*
[x]2105.3 *10*	0.53 *11*							%Iγ=0.131 *28*
2114.7 *10*	0.45 *9*	3050.7	(7/2)$^+$	936.1	7/2$^-$	[E1]	1.31×10^{-3} *2*	%Iγ=0.111 *23* α(K)=0.000587 *8*; α(L)=8.65×10^{-5} *12*; α(M)=1.986×10^{-5} *28* α(N)=5.03×10^{-6} *7*; α(O)=1.002×10^{-6} *14*; α(P)=1.065×10^{-7} *15*; α(IPF)=0.000610 *9*
[x]2124.7 *10*	1.03 *21*							%Iγ=0.25 *5*
[x]2129.1 *10*	1.5 *3*							%Iγ=0.37 *8*
[x]2145.0 *10*	0.43 *9*							%Iγ=0.106 *23*
2159.7 *10*	3.3 *7*	2788.8	11/2$^-$	629.1	13/2$^+$	[E1]	1.32×10^{-3} *2*	%Iγ=0.81 *18* α(K)=0.000567 *8*; α(L)=8.35×10^{-5} *12*; α(M)=1.918×10^{-5} *27* α(N)=4.85×10^{-6} *7*; α(O)=9.68×10^{-7} *14*; α(P)=1.029×10^{-7} *14*; α(IPF)=0.000641 *9*

$^{201}_{82}Pb_{119}$-15

^{201}Bi ε decay 1978Ri04 (continued)

γ(^{201}Pb) (continued)

E_γ [†]	I_γ [‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
2170.4[b] *10*	0.71 *14*	3050.7	(7/2)$^+$	879.9?	(5/2)$^-$	[E1]	1.32×10^{-3} *2*	%Iγ=0.175 *35* α(K)=0.000562 *8*; α(L)=8.28×10^{-5} *12*; α(M)=1.902×10^{-5} *27* α(N)=4.82×10^{-6} *7*; α(O)=9.60×10^{-7} *13*; α(P)=1.021×10^{-7} *14*; α(IPF)=0.000648 *9*
[x]2189.3 *10*	0.35 *7*							%Iγ=0.086 *18*
[x]2196.1 *10*	0.62 *12*							%Iγ=0.153 *30*
[x]2201.0 *10*	1.6 *3*							%Iγ=0.39 *8*
[x]2210.5 *10*	2.3 *5*							%Iγ=0.57 *13*
[x]2219.6 *10*	0.11 *2*							%Iγ=0.027 *5*
[x]2238.3 *10*	0.57 *12*							%Iγ=0.141 *30*
[x]2242.4 *10*	0.45 *9*							%Iγ=0.111 *23*
[x]2261.0 *10*	0.72 *15*							%Iγ=0.18 *4*
[x]2313.6 *10*	0.69 *14*							%Iγ=0.170 *35*
[x]2321.6 *10*	0.78 *16*							%Iγ=0.19 *4*
[x]2403.2 *10*	1.6 *3*							%Iγ=0.39 *8*

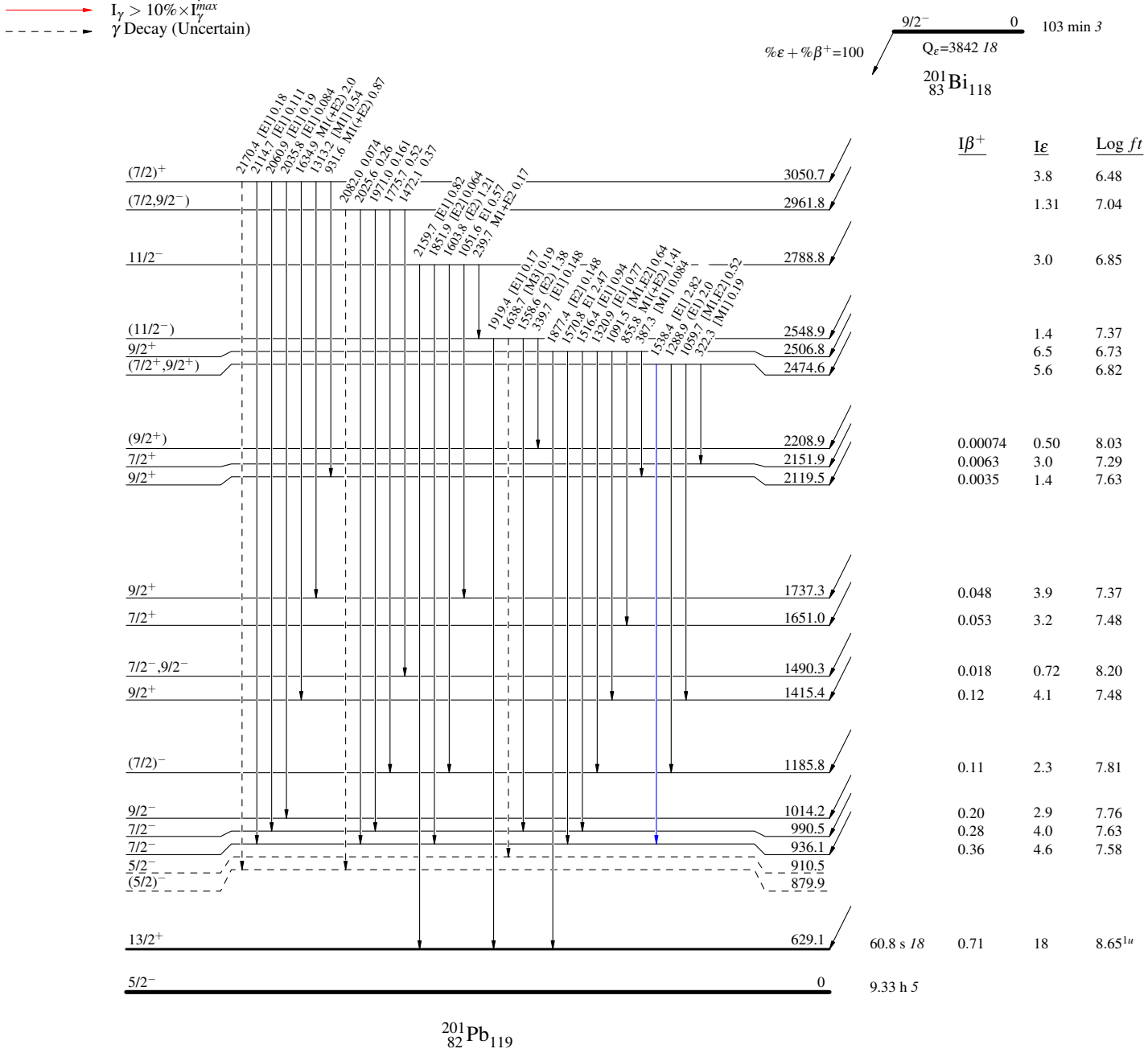
[†] From 1978Ri04 where ΔEγ≤0.5 keV for Iγ≥10 and ΔEγ≤1.0 keV for Iγ≤1 were reported. The evaluator assigns ΔEγ=1 keV for Iγ<10 and 0.5 keV for Iγ≥10.
[‡] From 1978Ri04 where ΔIγ≤5% for Iγ≥10 and ≤20% for Iγ≤1 were reported. The evaluator assigns ΔIγ=5% for Iγ≥10 and 20% for Iγ<10.
[#] Based on α(K)exp, α(L)exp and subshell ratios in 1978Ri04, unless otherwise stated; α(K)exp and α(L)exp values were normalized using M4 mult. for 629.5γ, as determined in 1956St05.
[@] From α(K)exp, α(L)exp and subshell ratios in 1978Ri04 and the briccmixing program, unless otherwise stated.
[&] Additional information 1.
[a] For absolute intensity per 100 decays, multiply by 0.247 *11*.
[b] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

$^{201}_{82}Pb_{119}$-16

^{201}Bi ε decay 1978Ri04

Decay Scheme

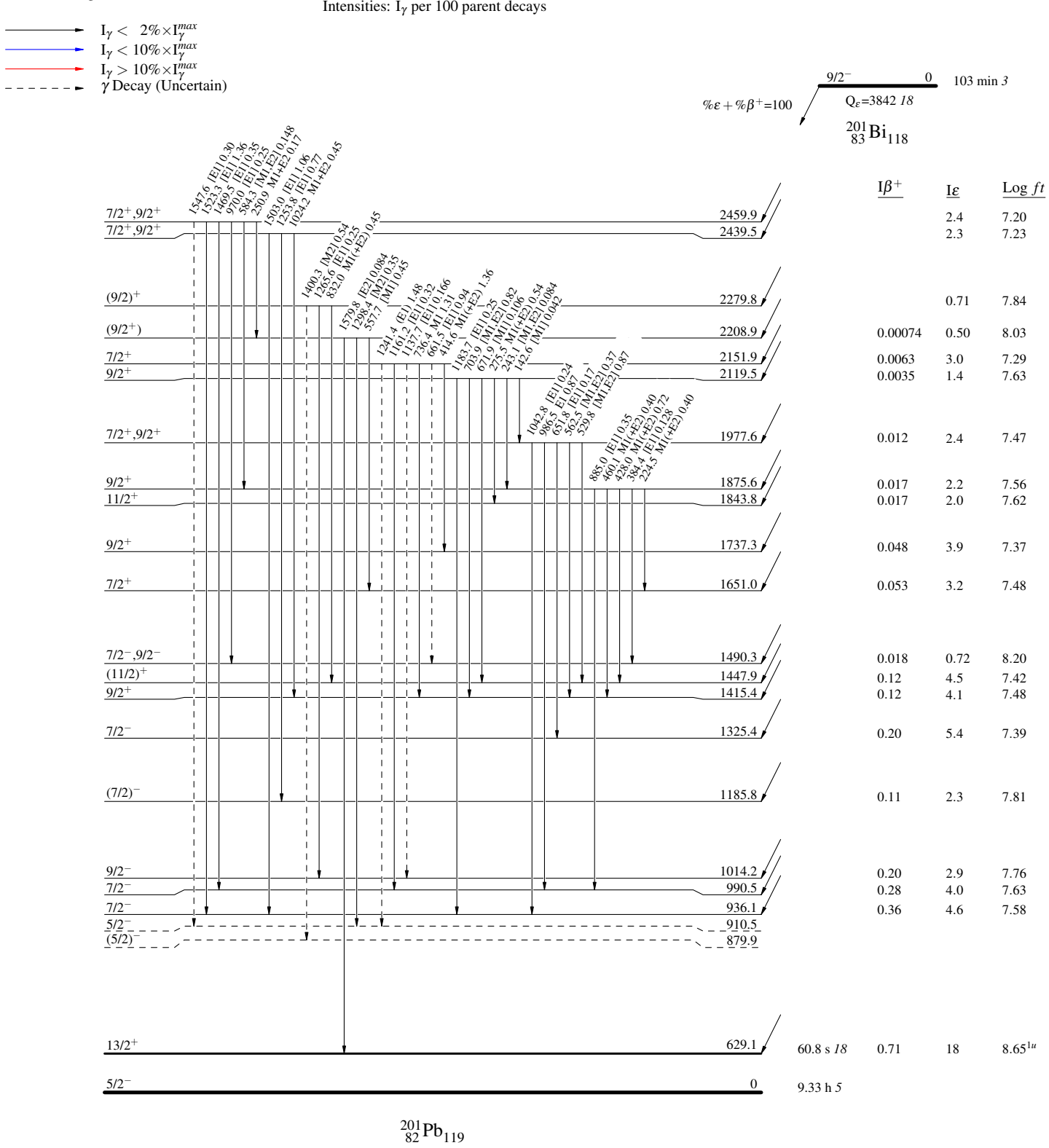
Intensities: I_γ per 100 parent decays



^{201}Bi ε decay 1978Ri04

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays



^{201}Bi ε decay 1978Ri04

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays