^{203}At ε decay 1987Se04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 177, 509, 2021	4-Jul-2021

Parent: ^{203}At: E=0; J$^\pi$=9/2$^-$; T$_{1/2}$=7.4 min *2*; Q(ε)=5148 *12*; %ε+%β^+ decay=69 *3*

1987Se04: Source produced using the Ir(^{16}O,xn) reaction. E(^{16}O)= 125 and 130 MeV; Measured: γ, I(ce), I x-ray, $\gamma\gamma$(t), γ(ce)(t); Deduced: levels, J^π, α(K)exp, α(L)exp, multipolarity.

Others: 1971Jo19, 1975BaYJ, 1970DaZM, 1969MoZW.

^{203}Po Levels

E(level)†	J$^\pi$‡	T$_{1/2}$‡	E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡
0.0	5/2$^-$	36.7 min *5*	1129.27 *16*	9/2$^+$	1671.28 *21*	(11/2)$^+$
62.51 *11*	3/2$^-$		1153.62 *13*	(7/2)$^-$	1698.1 *3*	(7/2,9/2)$^+$
531.84 *12*	(5/2)$^-$		1174.87 *15*	(9/2)$^-$	1766.53 *24*	(7/2,9/2)
639.33 *11*	7/2$^-$		1280.34 *23*	(11/2)$^+$	1863.6 *3*	(7/2,9/2)
641.54 *14*	13/2$^+$	45 s *2*	1369.13 *24*	(7/2,9/2)$^-$	1975.8 *3*	(9/2)$^+$
686.46 *16*	(5/2)$^-$		1379.62 *20*	(9/2)$^+$	2010.2 *4*	(7/2,9/2)$^+$
719.03 *12*	7/2$^-$		1428.6 *4*	(7/2$^-$)	2043.2 *3*	(7/2,9/2)$^+$
803.20 *20*	9/2$^-$		1526.6 *3*	(7/2,9/2)$^+$	2187.0 *3*	(7/2,9/2)
1029.28 *17*	(7/2)$^-$		1527.84 *23*	(7/2,9/2$^-$)	2530.5 *3*	(7/2,9/2)
1056.27 *15*	(7/2,9/2)$^-$		1542.8 *4*	(7/2,9/2)		
1112.77 *16*	(7/2)$^-$		1624.36 *20*	(9/2,11/2)$^+$		

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

ε,β^+ radiations

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I($\varepsilon+\beta^+$)†	Comments
(2618 *12*)	2530.5	0.018 *2*	0.46 *5*	7.41 *5*	0.48 *5*	av Eβ=729.6 *62*; εK=0.7688 *8*; εL=0.14502 *20*; εM+=0.04819 *7*
(2961 *12*)	2187.0	0.027 *2*	0.36 *3*	7.63 *4*	0.39 *3*	av Eβ=880.3 *62*; εK=0.7456 *12*; εL=0.13966 *25*; εM+=0.04635 *9*
(3105 *12*)	2043.2	0.031 *3*	0.34 *3*	7.70 *5*	0.37 *3*	av Eβ=943.5 *62*; εK=0.7335 *13*; εL=0.1371 *3*; εM+=0.04547 *9*
(3138 *12*)	2010.2	0.020 *4*	0.21 *5*	7.92 *10*	0.23 *5*	av Eβ=958.0 *62*; εK=0.7305 *13*; εL=0.1364 *3*; εM+=0.04526 *9*
(3172 *12*)	1975.8	0.065 *6*	0.64 *5*	7.44 *5*	0.71 *6*	av Eβ=973.1 *62*; εK=0.7274 *13*; εL=0.1358 *3*; εM+=0.04503 *10*
(3284 *12*)	1863.6	0.10 *1*	0.88 *6*	7.34 *4*	0.98 *7*	av Eβ=1022.6 *62*; εK=0.7166 *14*; εL=0.1335 *3*; εM+=0.04428 *10*
(3381 *12*)	1766.53	0.031 *6*	0.23 *4*	7.95 *9*	0.26 *5*	av Eβ=1065.5 *62*; εK=0.7066 *15*; εL=0.1315 *3*; εM+=0.04359 *10*
(3450 *12*)	1698.1	0.144 *16*	0.99 *10*	7.33 *6*	1.13 *12*	av Eβ=1095.8 *62*; εK=0.6993 *16*; εL=0.1300 *3*; εM+=0.04309 *11*
(3477 *12*)	1671.28	0.235 *16*	1.55 *10*	7.14 *4*	1.79 *12*	av Eβ=1107.7 *62*; εK=0.6963 *16*; εL=0.1294 *4*; εM+=0.04289 *11*
(3524 *12*)	1624.36	0.291 *20*	1.82 *12*	7.08 *4*	2.11 *14*	av Eβ=1128.5 *62*; εK=0.6911 *16*; εL=0.1284 *4*; εM+=0.04254 *11*
(3605 *12*)	1542.8	0.25 *10*	1.4 *6*	7.20 *18*	1.7 *7*	av Eβ=1164.7 *63*; εK=0.6818 *17*; εL=0.1265 *4*; εM+=0.04192 *11*
(3620 *12*)	1527.84	0.073 *8*	0.41 *4*	7.76 *5*	0.48 *5*	av Eβ=1171.3 *63*; εK=0.6800 *17*; εL=0.1262 *4*; εM+=0.04180 *11*
(3621 *12*)	1526.6	0.14 *1*	0.76 *7*	7.48 *5*	0.90 *8*	av Eβ=1171.9 *63*; εK=0.6799 *17*; εL=0.1261 *4*;

Continued on next page (footnotes at end of table)

^{203}At ε decay 1987Se04 (continued)

ϵ,β^+ radiations (continued)

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I($\varepsilon+\beta^+$)†	Comments
						εM+=0.04179 *11*
(3719 *12*)	1428.6	0.29 *3*	1.45 *15*	7.23 *5*	1.74 *18*	av Eβ=1215.4 *63*; εK=0.6682 *17*; εL=0.1238 *4*; εM+=0.04102 *12*
(3768 *12*)	1379.62	0.65 *5*	3.1 *2*	6.92 *5*	3.7 *3*	av Eβ=1237.2 *63*; εK=0.6622 *18*; εL=0.1226 *4*; εM+=0.04063 *12*
(3779 *12*)	1369.13	0.11 *1*	0.54 *4*	7.68 *4*	0.65 *5*	av Eβ=1241.9 *63*; εK=0.6609 *18*; εL=0.1224 *4*; εM+=0.04054 *12*
(3868 *12*)	1280.34	0.38 *8*	1.6 *3*	7.22 *9*	2.0 *4*	av Eβ=1281.4 *63*; εK=0.6498 *18*; εL=0.1202 *4*; εM+=0.03982 *12*
(3973 *12*)	1174.87	0.292 *21*	1.12 *8*	7.40 *4*	1.41 *10*	av Eβ=1328.5 *63*; εK=0.6363 *19*; εL=0.1176 *4*; εM+=0.03894 *12*
(3994 *12*)	1153.62	0.318 *21*	1.19 *8*	7.38 *4*	1.51 *10*	av Eβ=1338.0 *63*; εK=0.6335 *19*; εL=0.1171 *4*; εM+=0.03876 *12*
(4019 *12*)	1129.27	0.73 *13*	2.7 *5*	7.03 *8*	3.4 *6*	av Eβ=1348.9 *63*; εK=0.6304 *19*; εL=0.1164 *4*; εM+=0.03856 *12*
(4035 *12*)	1112.77	0.40 *3*	1.45 *9*	7.30 *4*	1.85 *12*	av Eβ=1356.3 *63*; εK=0.6282 *19*; εL=0.1160 *4*; εM+=0.03842 *12*
(4092 *12*)	1056.27	0.34 *16*	1.2 *5*	7.41 *21*	1.5 *7*	av Eβ=1381.5 *63*; εK=0.6207 *19*; εL=0.1146 *4*; εM+=0.03794 *12*
(4119 *12*)	1029.28	0.40 *3*	1.32 *11*	7.36 *5*	1.72 *14*	av Eβ=1393.6 *63*; εK=0.6172 *19*; εL=0.1139 *4*; εM+=0.03771 *12*
(4345 *12*)	803.20	0.43 *3*	1.16 *8*	7.46 *4*	1.59 *11*	av Eβ=1494.9 *63*; εK=0.5866 *20*; εL=0.1080 *4*; εM+=0.03576 *13*
(4429 *12*)	719.03	1.8 *1*	4.6 *3*	6.88 *4*	6.4 *4*	av Eβ=1532.8 *63*; εK=0.5750 *20*; εL=0.1058 *4*; εM+=0.03502 *13*
(4506 *12*)	641.54	2.51 *17*	16.1 *10*	8.23^{1u} *4*	18.6 *12*	av Eβ=1523.7 *60*; εK=0.6900 *12*; εL=0.1315 *3*; εM+=0.04377 *9*
(4509 *12*)	639.33	2.4 *2*	5.5 *4*	6.82 *4*	7.9 *5*	av Eβ=1568.6 *63*; εK=0.5641 *20*; εL=0.1037 *4*; εM+=0.03433 *13*

† Absolute intensity per 100 decays.

$\gamma(^{203}$Po)

Iγ normalization: Using ΣI(γ+ce)(to g.s.)=100% and by assuming that there is no direct feeding to the g.s. The decay scheme has some deficiencies, since there is some net ε feeding to the 531.8- and 686.46-keV levels (J^π=5/2$^-$), which is ignored in the present evaluation.

E_γ†	I_γ†@	E_i(level)	J^π_i	E_f	J^π_f	Mult.‡	δ‡	α#	$I_{(\gamma+ce)}$@	Comments
(2.3 *2*)		641.54	13/2$^+$	639.33	7/2$^-$	[E3]		4.×10^{11} *3*	58.3 *6*	%Iγ=3.2×10^{-11} *24* ce(N)/(γ+ce)=0.8 *4*; ce(O)/(γ+ce)=0.15 *17*; ce(P)/(γ+ce)=0.009 *11* α(N)=3.E11 3; α(O)=5.E10 5; α(P)=3.E9 3 E_γ: From adopted gammas. $I_{(\gamma+ce)}$: From, %Branching in ^{202}Po it decay, Iγ(641.5γ)=55.8 *6* and α.
62.6 *2*	2.5 *4*	62.51	3/2$^-$	0.0	5/2$^-$	M1+E2	0.52 *8*	20 *3*		%Iγ=0.55 *11* α(L)=15.0 *22*; α(M)=3.8 *6* α(N)=0.98 *15*; α(O)=0.19 *3*; α(P)=0.0196 *23* I_γ: From intensity balance. Iγ=3.7 *4* in 1987Se04. Mult.: α(L)exp=15 *2*.
99.3 *3*		1379.62	(9/2)$^+$	1280.34	(11/2)$^+$					
151.1 *3*	1.3 *3*	1280.34	(11/2)$^+$	1129.27	9/2$^+$	[M1,E2]		3.43 *6*		%Iγ=0.28 *7* α(K)=2.78 *5*; α(L)=0.492 *8*; α(M)=0.1161 *18* α(N)=0.0299 *5*; α(O)=0.00625 *10*; α(P)=0.000808 *13*
^{x}289.3 *2*	1.8 *1*									%Iγ=0.394 *31*
291.7 *2*	1.7 *1*	1671.28	(11/2)$^+$	1379.62	(9/2)$^+$	M1(+E2)	≤1.3	0.42 *13*		%Iγ=0.372 *30* α(K)=0.33 *12*; α(L)=0.069 *9*; α(M)=0.0166 *18* α(N)=0.0043 *5*; α(O)=0.00088 *11*; α(P)=0.000107 *21* Mult.: α(L)exp=0.07 *1*.
318.5 *2*	3.8 *3*	1698.1	(7/2,9/2)$^+$	1379.62	(9/2)$^+$	M1+E2	0.5 *3*	0.36 *7*		%Iγ=0.83 *8* α(K)=0.29 *6*; α(L)=0.056 *5*; α(M)=0.0133 *11* α(N)=0.0034 *3*; α(O)=0.00071 *7*; α(P)=8.9×10^{-5} *11* Mult.: α(K)exp=0.29 *5*.
389.9 *2*	3.4 *4*	1029.28	(7/2)$^-$	639.33	7/2$^-$	E2+M1	2.6 *−5+9*	0.084 *11*		%Iγ=0.74 *10* α(K)=0.059 *10*; α(L)=0.0193 *11*; α(M)=0.00484 *23* α(N)=0.00124 *6*; α(O)=0.000249 *14*; α(P)=2.74×10^{-5} *20* Mult.: α(K)exp=0.059 *9*.
^{x}396.0 *2*	2.0 *2*									%Iγ=0.44 *5*
397.3 *2*	3.4 *2*	1526.6	(7/2,9/2)$^+$	1129.27	9/2$^+$	M1(+E2)	≤0.7	0.21 *3*		%Iγ=0.74 *6*

$^{203}_{84}$Po$_{119}$-3

γ(^{203}Po) (continued)

E_γ†	I_γ†@	E_i(level)	J^π_i	E_f	J^π_f	Mult.‡	δ‡	α#	Comments
									α(K)=0.17 3; α(L)=0.030 3; α(M)=0.0072 7 α(N)=0.00186 17; α(O)=0.00039 4; α(P)=4.9×10^{-5} 6 Mult.: α(L)exp=0.041 11.
410.2 2	5.9 2	1129.27	9/2$^+$	719.03	7/2$^-$	E1		0.01560	%Iγ=1.29 8 α(K)=0.01280 18; α(L)=0.00214 3; α(M)=0.000502 7 α(N)=0.0001284 18; α(O)=2.64×10^{-5} 4; α(P)=3.25×10^{-6} 5 Mult.: α(K)exp=0.020 10.
417.0 2	13.3 4	1056.27	(7/2,9/2)$^-$	639.33	7/2$^-$	E2+M1	2.0 −4+6	0.082 13	%Iγ=2.91 19 α(K)=0.060 11; α(L)=0.0166 13; α(M)=0.0041 3 α(N)=0.00106 8; α(O)=0.000214 17; α(P)=2.44×10^{-5} 24 Mult.: α(K)exp=0.060 10.
434.5 2	1.6 1	1153.62	(7/2)$^-$	719.03	7/2$^-$	M1(+E2)	≤0.6	0.167 19	%Iγ=0.350 29 α(K)=0.135 17; α(L)=0.0243 20; α(M)=0.0057 5 α(N)=0.00148 11; α(O)=0.000308 25; α(P)=3.9×10^{-5} 4 Mult.: α(K)exp=0.14 2.
469.4 2	2.3 2	531.84	(5/2)$^-$	62.51	3/2$^-$	M1(+E2)	≤0.6	0.136 16	%Iγ=0.50 5 α(K)=0.110 13; α(L)=0.0196 17; α(M)=0.0046 4 α(N)=0.00119 10; α(O)=0.000249 21; α(P)=3.2×10^{-5} 3 Mult.: α(K)exp=0.15 4.
^{x}480.6 2	2.2 1								%Iγ=0.481 35
484.0 2	4.5 2	1863.6	(7/2,9/2)	1379.62	(9/2)$^+$				%Iγ=0.98 7
486.5 3	8 3	1542.8	(7/2,9/2)	1056.27	(7/2,9/2)$^-$				%Iγ=1.7 7
487.7 2	22 2	1129.27	9/2$^+$	641.54	13/2$^+$	[E2]		0.0341	%Iγ=4.8 5 α(K)=0.0233 4; α(L)=0.00809 12; α(M)=0.00204 3 α(N)=0.000523 8; α(O)=0.0001042 15; α(P)=1.139×10^{-5} 16
495.0 2	2.9 1	1624.36	(9/2,11/2)$^+$	1129.27	9/2$^+$	M1(+E2)	≤0.4	0.124 7	%Iγ=0.63 4 α(K)=0.101 6; α(L)=0.0177 8; α(M)=0.00417 18 α(N)=0.00107 5; α(O)=0.000224 10; α(P)=2.89×10^{-5} 14 Mult.: α(K)exp=0.12 2.
497.5 2	3.7 1	1029.28	(7/2)$^-$	531.84	(5/2)$^-$	[M1,E2]		0.1291 19	%Iγ=0.81 5 α(K)=0.1053 15; α(L)=0.0182 3; α(M)=0.00428 6 α(N)=0.001101 16; α(O)=0.000230 4; α(P)=2.98×10^{-5} 5
531.9 2	15.1 4	531.84	(5/2)$^-$	0.0	5/2$^-$	M1+E2	1.5 −5+8	0.052 16	%Iγ=3.30 21 α(K)=0.041 14; α(L)=0.0090 18; α(M)=0.0022 4 α(N)=0.00056 10; α(O)=0.000114 22; α(P)=1.4×10^{-5} 3 Mult.: α(K)exp=0.040 10.
535.7 2	4.0 2	1174.87	(9/2)$^-$	639.33	7/2$^-$	M1(+E2)	≤0.23	0.1041 25	%Iγ=0.87 7 α(K)=0.0849 21; α(L)=0.0147 3; α(M)=0.00346 7 α(N)=0.000890 18; α(O)=0.000186 4; α(P)=2.41×10^{-5} 6 Mult.: α(K)exp=0.10 1.
577.0 2	9.8 2	639.33	7/2$^-$	62.51	3/2$^-$	E2		0.0230	%Iγ=2.14 13

From ENSDF

$^{203}_{84}Po_{119}$-4

^{203}At ε decay 1987Se04 (continued)

γ(^{203}Po) (continued)

E_γ[†]	I_γ[†@]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[‡]	δ[‡]	α[#]	Comments
									α(K)=0.01657 *24*; α(L)=0.00486 *7*; α(M)=0.001209 *17* α(N)=0.000311 *5*; α(O)=6.24×10^{-5} *9*; α(P)=7.03×10^{-6} *10* Mult.: α(K)exp=0.020 *10*.
581.1 *2*	1.2 *2*	1112.77	(7/2)$^-$	531.84	(5/2)$^-$	M1(+E2)	≤0.6	0.077 *9*	%Iγ=0.26 *5* α(K)=0.063 *8*; α(L)=0.0110 *10*; α(M)=0.00261 *22* α(N)=0.00067 *6*; α(O)=0.000140 *13*; α(P)=1.80×10^{-5} *18* Mult.: α(K)exp=0.08 *2*.
596.2 *2*	3.2 *2*	1975.8	(9/2)$^+$	1379.62	(9/2)$^+$	E2		0.0214	%Iγ=0.70 *6* α(K)=0.01553 *22*; α(L)=0.00442 *7*; α(M)=0.001098 *16* α(N)=0.000282 *4*; α(O)=5.67×10^{-5} *8*; α(P)=6.43×10^{-6} *9* Mult.: α(K)exp=0.02 *1*.
621.7 *2*	2.8 *1*	1153.62	(7/2)$^-$	531.84	(5/2)$^-$	M1+E2	1.3 *−5+13*	0.039 *13*	%Iγ=0.61 *4* α(K)=0.031 *11*; α(L)=0.0062 *15*; α(M)=0.0015 *4* α(N)=0.00038 *9*; α(O)=7.9×10^{-5} *19*; α(P)=1.0×10^{-5} *3* Mult.: α(K)exp=0.03 *1*.
623.9 *2*	5.0 *2*	686.46	(5/2)$^-$	62.51	3/2$^-$	M1+E2	0.8 *5*	0.051 *16*	%Iγ=1.09 *8* α(K)=0.041 *14*; α(L)=0.0076 *19*; α(M)=0.0018 *5* α(N)=0.00046 *11*; α(O)=9.6×10^{-5} *24*; α(P)=1.2×10^{-5} *4* Mult.: α(K)exp=0.040 *10*.
630.6 *3*	1.0 *2*	2010.2	(7/2,9/2)$^+$	1379.62	(9/2)$^+$	M1(+E2)	≤0.6	0.062 *7*	%Iγ=0.22 *5* α(K)=0.051 *6*; α(L)=0.0089 *8*; α(M)=0.00209 *18* α(N)=0.00054 *5*; α(O)=0.000113 *10*; α(P)=1.45×10^{-5} *14* Mult.: α(K)exp=0.09 *3*.
638.8 *3*	3 *1*	1280.34	(11/2)$^+$	641.54	13/2$^+$	[M1,E2]		0.0667	%Iγ=0.66 *22* α(K)=0.0545 *8*; α(L)=0.00934 *14*; α(M)=0.00219 *3* α(N)=0.000565 *8*; α(O)=0.0001183 *17*; α(P)=1.531×10^{-5} *22*
639.4 *2*	100	639.33	7/2$^-$	0.0	5/2$^-$	M1		0.0666	%Iγ=21.9 *11* α(K)=0.0544 *8*; α(L)=0.00931 *13*; α(M)=0.00219 *3* α(N)=0.000563 *8*; α(O)=0.0001180 *17*; α(P)=1.527×10^{-5} *22* Mult.: α(K)exp=0.08 *2*. Value estimated by assuming that the obscuring 641.5 keV transition has a pure M4 multipolarity.
641.5 *2*	55.8 *6*	641.54	13/2$^+$	0.0	5/2$^-$	M4		0.858	%Iγ=12.2 *6* α(K)=0.574 *8*; α(L)=0.211 *3*; α(M)=0.0553 *8* α(N)=0.01444 *21*; α(O)=0.00295 *5*; α(P)=0.000348 *5* Mult.: α(L)exp=0.25 *3*; K/Lexp=3.2 *6* (1971Jo19).
650.1 *2*	2.8 *1*	1369.13	(7/2,9/2)$^-$	719.03	7/2$^-$	M1(+E2)	≤0.7	0.056 *8*	%Iγ=0.61 *4* α(K)=0.046 *7*; α(L)=0.0080 *9*; α(M)=0.00189 *21* α(N)=0.00049 *6*; α(O)=0.000102 *12*; α(P)=1.31×10^{-5} *16* Mult.: α(K)exp=0.050 *11*.
656.4 *2*	26.6 *3*	719.03	7/2$^-$	62.51	3/2$^-$	(E2)		0.01732	%Iγ=5.82 *34* α(K)=0.01285 *18*; α(L)=0.00338 *5*; α(M)=0.000832 *12* α(N)=0.000214 *3*; α(O)=4.32×10^{-5} *6*; α(P)=4.98×10^{-6} *7* Mult.: α(K)exp=0.020 *10*.

$^{203}_{84}Po_{119}$-5

γ(^{203}Po) (continued)

E_γ †	I_γ †@	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	δ‡	α#	Comments
663.6 *2*	1.6 *1*	2043.2	(7/2,9/2)$^+$	1379.62	(9/2)$^+$	M1(+E2)	≤0.4	0.057 *4*	%Iγ=0.350 *29* α(K)=0.047 *3*; α(L)=0.0081 *4*; α(M)=0.00190 *9* α(N)=0.000490 *22*; α(O)=0.000102 *5*; α(P)=1.32×10^{-5} *7* Mult.: α(K)exp=0.062 *12*.
^{x}669.0 *2*	1.0 *1*								%Iγ=0.219 *25*
686.5 *2*	3.0 *1*	686.46	(5/2)$^-$	0.0	5/2$^-$	[M1,E2]		0.0553	%Iγ=0.66 *5* α(K)=0.0451 *7*; α(L)=0.00772 *11*; α(M)=0.00181 *3* α(N)=0.000467 *7*; α(O)=9.77×10^{-5} *14*; α(P)=1.266×10^{-5} *18*
^{x}701.2 *2*	1.9 *1*								%Iγ=0.416 *32*
^{x}705.8 *2*	1.2 *1*								%Iγ=0.262 *26*
719.0 *2*	13.8 *4*	719.03	7/2$^-$	0.0	5/2$^-$	M1(+E2)	≤0.4	0.0466 *25*	%Iγ=3.02 *20* α(K)=0.0380 *21*; α(L)=0.0065 *3*; α(M)=0.00154 *7* α(N)=0.000396 *18*; α(O)=8.3×10^{-5} *4*; α(P)=1.07×10^{-5} *6* Mult.: α(L)exp=0.008 *2*.
^{x}729.3 *2*	5.2 *2*								%Iγ=1.14 *8*
738.1 *2*	38.4 *4*	1379.62	(9/2)$^+$	641.54	13/2$^+$	(E2)		0.01351	%Iγ=8.4 *5* α(K)=0.01025 *15*; α(L)=0.00247 *4*; α(M)=0.000604 *9* α(N)=0.0001551 *22*; α(O)=3.15×10^{-5} *5*; α(P)=3.69×10^{-6} *6* Mult.: α(K)exp=0.08 *2*.
803.2 *2*	7.2 *3*	803.20	9/2$^-$	0.0	5/2$^-$	E2		0.01136	%Iγ=1.57 *12* α(K)=0.00873 *13*; α(L)=0.00199 *3*; α(M)=0.000484 *7* α(N)=0.0001244 *18*; α(O)=2.54×10^{-5} *4*; α(P)=3.01×10^{-6} *5* Mult.: α(K)exp=0.008 *3*.
807.4 *2*	1.8 *1*	2187.0	(7/2,9/2)	1379.62	(9/2)$^+$				%Iγ=0.394 *31*
^{x}901.8 *2*	2.9 *2*								%Iγ=0.63 *6*
982.9 *2*	6.4 *3*	1624.36	(9/2,11/2)$^+$	641.54	13/2$^+$				%Iγ=1.40 *10*
996.0 *2*	2.2 *2*	1527.84	(7/2,9/2$^-$)	531.84	(5/2)$^-$				%Iγ=0.48 *5*
1029.7 *2*	5.7 *1*	1671.28	(11/2)$^+$	641.54	13/2$^+$	M1+E2	1.4 +*10*−*5*	0.011 *3*	%Iγ=1.25 *7* α(K)=0.0090 *23*; α(L)=0.0016 *4*; α(M)=0.00039 *8* α(N)=9.9×10^{-5} *20*; α(O)=2.1×10^{-5} *5*; α(P)=2.6×10^{-6} *6* Mult.: α(K)exp=0.009 *2*.
^{x}1042.1 *2*	5.5 *2*								%Iγ=1.20 *8*
1047.5 *2*	1.2 *2*	1766.53	(7/2,9/2)	719.03	7/2$^-$				%Iγ=0.26 *5*
1056.2 *2*	0.5 *1*	1056.27	(7/2,9/2)$^-$	0.0	5/2$^-$	[M1,E2]		0.0181	%Iγ=0.109 *32* α(K)=0.01480 *21*; α(L)=0.00250 *4*; α(M)=0.000586 *9* α(N)=0.0001508 *22*; α(O)=3.16×10^{-5} *5*; α(P)=4.10×10^{-6} *6*
1112.6 *2*	7.1 *1*	1112.77	(7/2)$^-$	0.0	5/2$^-$	M1+E2	1.0 +*7*−*4*	0.0109 *24*	%Iγ=1.55 *9* α(K)=0.0089 *20*; α(L)=0.0016 *3*; α(M)=0.00037 *7* α(N)=9.4×10^{-5} *19*; α(O)=2.0×10^{-5} *4*; α(P)=2.5×10^{-6} *6*; α(IPF)=3.4×10^{-7} *6* Mult.: α(K)exp=0.009 *2*.
1150.9 *2*	2.2 *2*	2530.5	(7/2,9/2)	1379.62	(9/2)$^+$				%Iγ=0.48 *5*

$^{203}_{84}$Po$_{119}$-6

^{203}At ε decay 1987Se04 (continued)

$\gamma(^{203}Po)$ (continued)

E_γ [†]	I_γ [†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	α [#]	Comments
1153.8 *2*	2.1 *2*	1153.62	(7/2)$^-$	0.0	5/2$^-$	[M1,E2]	0.01439	%Iγ=0.46 *7* α(K)=0.01179 *17*; α(L)=0.00199 *3*; α(M)=0.000466 *7* α(N)=0.0001198 *17*; α(O)=2.51×10^{-5} *4*; α(P)=3.26×10^{-6} *5*; α(IPF)=2.10×10^{-6} *4*
1174.7 *2*	2.0 *1*	1174.87	(9/2)$^-$	0.0	5/2$^-$	[E2]	0.00541	%Iγ=0.44 *4* α(K)=0.00433 *6*; α(L)=0.000822 *12*; α(M)=0.000196 *3* α(N)=5.03×10^{-5} *7*; α(O)=1.038×10^{-5} *15*; α(P)=1.285×10^{-6} *18*; α(IPF)=1.99×10^{-6} *3*
1366.1 *3*	7.9 *7*	1428.6	(7/2$^-$)	62.51	3/2$^-$	[E2]	0.00410	%Iγ=1.73 *18* α(K)=0.00329 *5*; α(L)=0.000595 *9*; α(M)=0.0001410 *20* α(N)=3.62×10^{-5} *5*; α(O)=7.50×10^{-6} *11*; α(P)=9.40×10^{-7} *14*; α(IPF)=2.73×10^{-5} *4*

[†] From 1987Se04.
[‡] From α(K)exp and α(L)exp data in 1987Se04.
[#] Additional information 1.
[@] For absolute intensity per 100 decays, multiply by 0.219 *12*.
[x] γ ray not placed in level scheme.

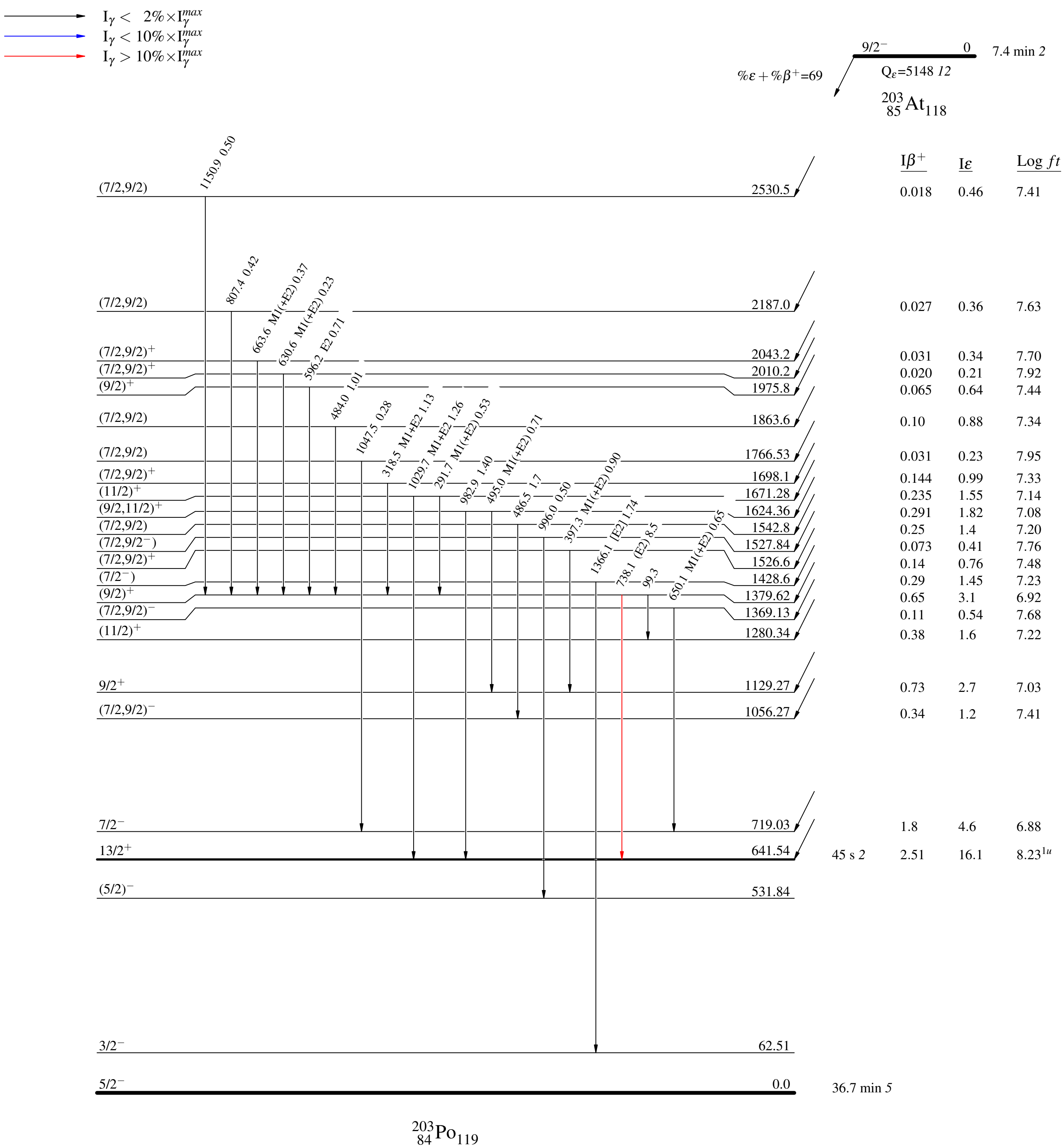
From ENSDF

$^{203}_{84}Po_{119}$-7

^{203}At ε decay 1987Se04

Decay Scheme

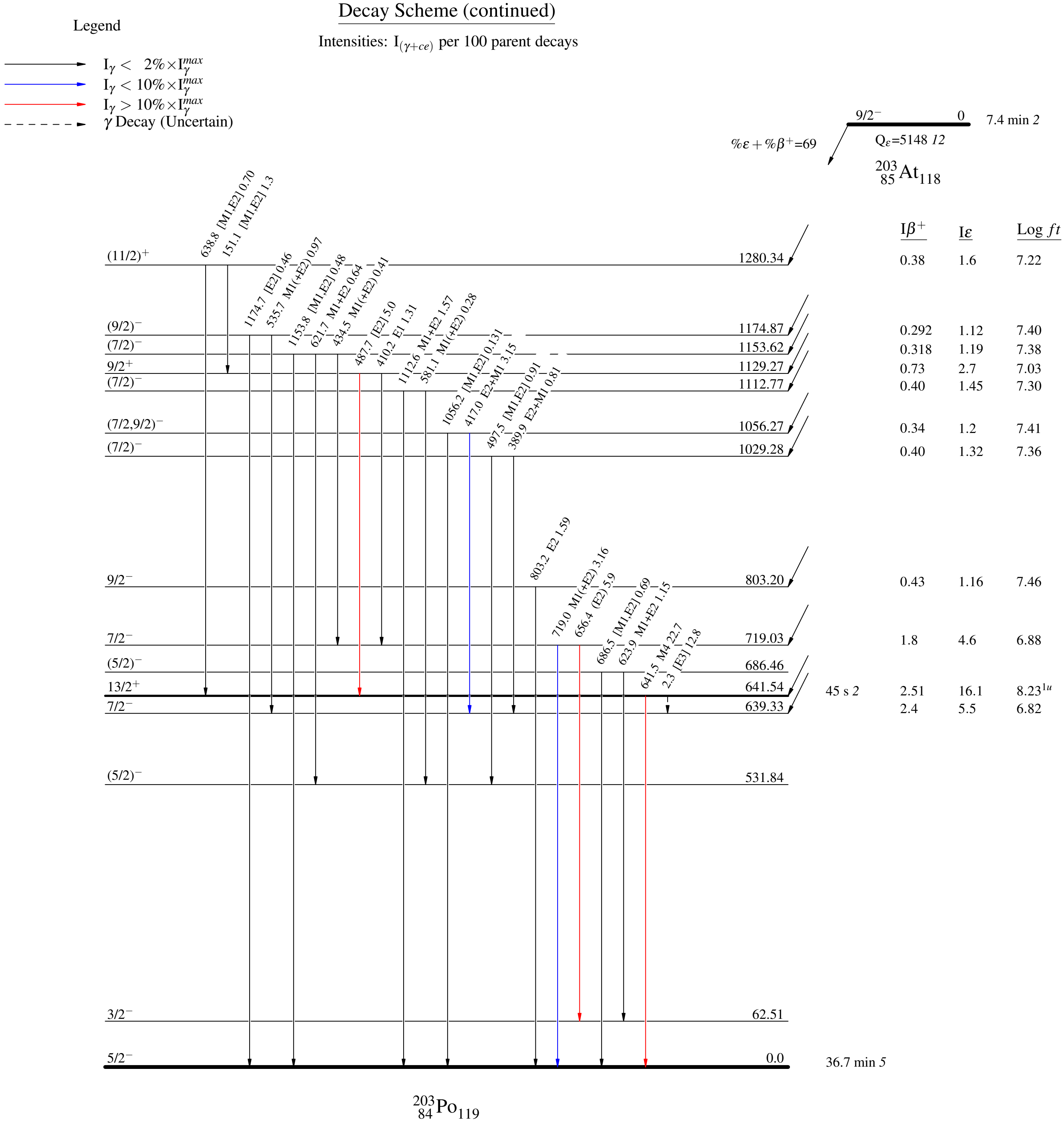
Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{203}At ε decay 1987Se04

Decay Scheme (continued)

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



^{203}At ε decay 1987Se04

Decay Scheme (continued)