^{109}Sn ε decay 1981Bu17

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Kumar(a), J. Chen(b) and F. G. Kondev	NDS 137, 1 (2016)	31-May-2016

Parent: ^{109}Sn: E=0; $J^\pi=5/2^+$; $T_{1/2}$=18.1 min *2*; Q(ε)=3857 *9*; %ε+%$β^+$ decay=100.0

1981Bu17: ^{109}Sn source was produced via the ^{106}Cd(α,n) reaction with E=25 MeV alpha beam from the isochronous cyclotron of the Institute of Nuclear Physics, Academy of Sciences of the Kazakh SSR and with targets of self-supporting Cadmium foils about 10 mg/cm^2 thick (64% enriched). γ rays were detected by Ge(Li) detectors. Measured Eγ, Iγ, γγ-coin, spectra of integral anticoincidence. Deduced levels, γ-ray branching ratios, beta decay branching ratios, log *ft*.

1970Sh05: ^{109}Sn sources were produced by bombarding enriched metal ^{106}Cd with 19-MeV alpha particles from the Yale Heavy Ion Accelerator. γ rays were detected using NaI(Tl) counters and Ge(Li) detectors; electrons were detected using a anthracene crystal. Measured Eγ, Iγ, E(X-ray), I(X-ray), Eβ, E(ce), I(ce), γγ-coin, βγ-coin, γ(t). Deduced levels, J^π, branching ratios, conversion coefficients, γ-ray multipolarities, half-life of decay parent. Systematics of low-lying levels of odd-mass In isotopes.

Others: 1965Kh04, 1956Pe56.

The decay schemes is from 1981Bu17.

^{109}In Levels

E(level)†	J^π#	$T_{1/2}$#	E(level)†	J^π#
0.0	$9/2^+$	4.159 h *10*	2469.05 *24*	$(3/2,5/2,7/2)^+$
649.80 *10*	$1/2^-$	1.34 min *6*	2508.33‡ *13*	$(3/2,5/2^-)$
980.93 *11*	$3/2^-$		2542.01 *11*	$(5/2^+,7/2)$
1026.42 *10*	$11/2^+$		2561.02 *19*	$3/2^+$
1099.29 *9*	$5/2^+$		2564.2‡ *7*	$(5/2^+)$
1171.72 *16*	$1/2^+$		2574.8‡ *3*	$(5/2^+,7/2)$
1321.26 *11*	$5/2^+$		2591.87 *17*	$7/2^+$
1334.74?‡ *22*	$(3/2,5/2,7/2^-)$		2602.3‡ *4*	$(5/2^+,7/2)$
1428.3 *6*	$13/2^+$		2617.16‡ *21*	$(5/2,7/2)^+$
1440.67 *21*	$5/2^-$		2785.62 *14*	$(5/2^+,7/2)$
1463.62 *19*	$9/2^+$		2808.8‡ *3*	3/2
1482.22‡ *22*	$(5/2^+,7/2^-)$		2813.46‡ *20*	$(5/2^+,7/2)$
1483.76 *18*	$5/2^+$		2845.78‡ *12*	3/2
1574.36 *13*	$(5/2^+,7/2)$		2851.72‡ *23*	$7/2^+$
1713.27 *12*	$9/2^+$		2858.58 *18*	$(5/2^+,7/2)$
1722.38 *16*	$7/2^+$		2871.19 *14*	$5/2^+$
1759.31‡ *12*	3/2,5/2,7/2		2919.8‡ *7*	$(5/2^+,7/2)$
1816.66 *13*	$(3/2,5/2)^-$		2924.48 *13*	(3/2,5/2)
1843.7‡ *6*	$(5/2^+,7/2)$		2943.0 *4*	$(5/2^+,7/2^-)$
1957.11‡ *11*	$5/2^+$		2986.8‡ *3*	$(3/2^+,5/2^+)$
2055.14‡ *25*	$(5/2^+,7/2)$		3013.4 *3*	$(5/2^+,7/2)$
2064.3 *4*	$(3/2^-,5/2^-,7/2^-)$		3029.70 *21*	$(5/2^+)$
2125.77 *11*	$(5/2^+,7/2)$		3034.8 *4*	$(5/2^+,7/2)$
2138.44 *12*	$(3/2^+)$		3050.74 *20*	$(5/2^+,7/2)$
2151.4‡ *3*	$(3/2,5/2^-)$		3065.65 *20*	$(5/2^+,7/2)$
2218.56‡ *15*	$(5/2^+,7/2)$		3140.3‡ *5*	$(5/2^+,7/2)$
2235.8‡ *3*	$(5/2^+,7/2)$		3316.8 *3*	$(5/2^+,7/2)$
2271.4‡ *5*	$(3/2^+)$		3361.0 *6*	$(5/2^+,7/2)$
2276.5 *7*	$(7/2^+)$		3395.68 *20*	$(5/2^+,7/2)$
2305.2‡ *4*	$(3/2,5/2^-)$		3418.5‡ *4*	$5/2^+,7/2^-$
2356.15‡ *23*	$(3/2,5/2,7/2^-)$		3426.53‡ *22*	$(5/2^+,7/2)$
2410.9‡ *4*	$(3/2,5/2^+)$			

Continued on next page (footnotes at end of table)

^{109}Sn ε decay 1981Bu17 (continued)

^{109}In Levels (continued)

† From a least-squares fit to Eγ.
‡ Seen only in 1981Bu17.
# From Adopted Levels.

ε,β+ radiations

E(decay)	E(level)	Iβ+ ‡	Iε‡	Log *ft*	I(ε+β+)†‡	Comments
(430 *9*)	3426.53		0.52 *12*	4.95 *11*	0.52 *12*	εK=0.8490 *4*; εL=0.1200 *3*; εM+=0.03092 *8*
(439 *9*)	3418.5		0.149 *15*	5.51 *5*	0.149 *15*	εK=0.8493 *4*; εL=0.11983 *25*; εM+=0.03085 *8*
(461 *9*)	3395.68		0.20 *4*	5.43 *9*	0.20 *4*	εK=0.8501 *3*; εL=0.11924 *23*; εM+=0.03068 *7*
(496 *9*)	3361.0		0.021 *6*	6.48 *13*	0.021 *6*	εK=0.8511 *3*; εL=0.11847 *19*; εM+=0.03045 *6*
(540 *9*)	3316.8		0.088 *15*	5.93 *8*	0.088 *15*	εK=0.8522 *2*; εL=0.11764 *16*; εM+=0.03020 *5*
(717 *9*)	3140.3		0.18 *6*	5.88 *15*	0.18 *6*	εK=0.8551 *2*; εL=0.11538 *9*; εM+=0.02953 *3*
(791 *9*)	3065.65		0.076 *15*	6.34 *9*	0.076 *15*	εK=0.8559 *1*; εL=0.11474 *7*; εM+=0.02934 *2*
(806 *9*)	3050.74		0.44 *6*	5.60 *6*	0.44 *6*	εK=0.85607 *9*; εL=0.11463 *7*; εM+=0.02931 *2*
(822 *9*)	3034.8		0.120 *18*	6.18 *7*	0.120 *18*	εK=0.8562; εL=0.11451 *7*; εM+=0.02927 *2*
(827 *9*)	3029.70		1.69 *15*	5.03 *4*	1.69 *15*	εK=0.8563; εL=0.11448 *7*; εM+=0.02926 *2*
(844 *9*)	3013.4		0.123 *15*	6.19 *6*	0.123 *15*	εK=0.8564; εL=0.11436 *7*; εM+=0.02923 *2*
(870 *9*)	2986.8		0.59 *11*	5.54 *9*	0.59 *11*	εK=0.8566; εL=0.11419 *6*; εM+=0.02918 *2*
(914 *9*)	2943.0		0.25 *4*	5.95 *7*	0.25 *4*	εK=0.8570; εL=0.11393 *6*; εM+=0.02910 *2*
(933 *9*)	2924.48		3.87 *22*	4.78 *3*	3.87 *22*	εK=0.8571; εL=0.11382 *5*; εM+=0.02907 *2*
(937 *9*)	2919.8		0.015 *6*	7.20 *18*	0.015 *6*	εK=0.8571; εL=0.11380 *5*; εM+=0.02906 *2*
(986 *9*)	2871.19		3.42 *25*	4.89 *4*	3.42 *25*	εK=0.8575; εL=0.11355 *5*; εM+=0.02898 *2*
(998 *9*)	2858.58		2.70 *15*	5.00 *3*	2.70 *15*	εK=0.8575; εL=0.11349 *5*; εM+=0.02897 *2*
(1005 *9*)	2851.72		1.52 *19*	5.25 *6*	1.52 *19*	εK=0.8576; εL=0.11345 *5*; εM+=0.02896 *2*
(1011 *9*)	2845.78		2.96 *21*	4.97 *4*	2.96 *21*	εK=0.8576; εL=0.11343 *5*; εM+=0.02895 *2*
(1044 *9*)	2813.46		1.00 *9*	5.47 *4*	1.00 *9*	εK=0.8578; εL=0.11328 *4*; εM+=0.02891 *2*
(1048 *9*)	2808.8		0.67 *11*	5.65 *8*	0.67 *11*	εK=0.8578; εL=0.11326 *4*; εM+=0.02890 *2*
(1071 *9*)	2785.62		7.1 *12*	4.64 *8*	7.1 *12*	εK=0.8580; εL=0.11316 *4*; εM+=0.02887 *2*
(1240 *9*)	2617.16		0.70 *9*	5.78 *6*	0.70 *9*	εK=0.8584; εL=0.11252 *4*; εM+=0.02868 *1*
(1255 *9*)	2602.3		0.66 *15*	5.81 *10*	0.66 *15*	εK=0.8583; εL=0.11246 *4*; εM+=0.02866 *1*
(1265 *9*)	2591.87	0.0033 *6*	5.0 *3*	4.94 *3*	5.0 *3*	av Eβ=116.9 *40*; εK=0.8583; εL=0.11242 *4*; εM+=0.02865 *1*
(1282 *9*)	2574.8		0.108 *18*	6.62 *8*	0.108 *18*	εK=0.8582; εL=0.11234 *4*; εM+=0.02863 *2*
(1293 *9*)	2564.2	0.00010 *3*	0.100 *21*	6.66 *10*	0.100 *21*	av Eβ=129.0 *41*; εK=0.8581 *1*; εL=0.11230 *5*; εM+=0.02862 *2*
(1296 *9*)	2561.02	0.0095 *16*	8.7 *7*	4.72 *4*	8.7 *7*	av Eβ=130.4 *41*; εK=0.8580 *1*; εL=0.11228 *5*; εM+=0.02861 *2*
(1315 *9*)	2542.01	0.0063 *9*	4.33 *21*	5.038 *23*	4.34 *21*	av Eβ=138.9 *40*; εK=0.8578 *2*; εL=0.11219 *5*; εM+=0.02859 *2*
(1349 *9*)	2508.33	0.0024 *4*	1.05 *14*	5.68 *6*	1.05 *14*	av Eβ=153.6 *40*; εK=0.8572 *2*; εL=0.11201 *6*; εM+=0.02854 *2*
(1388 *9*)	2469.05	0.0015 *4*	0.41 *9*	6.11 *10*	0.41 *9*	av Eβ=170.8 *40*; εK=0.8562 *3*; εL=0.11176 *7*; εM+=0.02847 *2*
(1446 *9*)	2410.9	0.0043 *8*	0.67 *11*	5.94 *8*	0.67 *11*	av Eβ=196.0 *40*; εK=0.8539 *5*; εL=0.11131 *9*; εM+=0.02835 *3*
(1501 *9*)	2356.15	0.0054 *10*	0.52 *9*	6.07 *8*	0.53 *9*	av Eβ=219.8 *39*; εK=0.8508 *7*; εL=0.1108 *1*; εM+=0.02821 *3*
(1552 *9*)	2305.2	0.013 *2*	0.84 *11*	5.90 *6*	0.85 *11*	av Eβ=241.9 *39*; εK=0.8468 *9*; εL=0.11013 *13*; εM+=0.02804 *4*
(1581 *9*)	2276.5	0.0086 *24*	0.46 *13*	6.17 *12*	0.47 *13*	av Eβ=254.3 *40*; εK=0.8441 *10*; εL=0.10971 *14*; εM+=0.02793 *4*
(1586 *9*)	2271.4	0.011 *2*	0.58 *9*	6.08 *7*	0.59 *9*	av Eβ=256.5 *39*; εK=0.8435 *10*; εL=0.10963 *15*; εM+=0.02791 *4*
(1621 *9*)	2235.8	0.0163 *10*	0.675 *19*	6.031 *14*	0.691 *19*	av Eβ=272.0 *39*; εK=0.8396 *11*; εL=0.10904 *17*; εM+=0.02776 *5*

Continued on next page (footnotes at end of table)

^{109}Sn ε decay 1981Bu17 (continued)

ε,β+ radiations (continued)

E(decay)	E(level)	Iβ+ ‡	Iε‡	Log *ft*	I(ε+β+)†‡	Comments
(1638 *9*)	2218.56	0.11 *1*	4.2 *3*	5.25 *4*	4.3 *3*	av Eβ=279.5 *39*; εK=0.8374 *12*; εL=0.10873 *17*; εM+=0.02768 *5*
(1706 *9*)	2151.4	0.024 *4*	0.62 *11*	6.12 *8*	0.64 *11*	av Eβ=308.6 *40*; εK=0.8276 *15*; εL=0.10733 *21*; εM+=0.02732 *6*
(1719 *9*)	2138.44	0.35 *3*	8.3 *5*	4.99 *3*	8.7 *5*	av Eβ=314.3 *40*; εK=0.8254 *16*; εL=0.10702 *22*; εM+=0.02724 *6*
(1731 *9*)	2125.77	0.04 *1*	0.9 *3*	5.98 *15*	0.9 *3*	av Eβ=319.8 *40*; εK=0.8232 *17*; εL=0.10672 *23*; εM+=0.02716 *6*
(1793 *9*)	2064.3	0.034 *5*	0.56 *8*	6.20 *7*	0.59 *9*	av Eβ=346.5 *40*; εK=0.8113 *20*; εL=0.1051 *3*; εM+=0.02674 *7*
(1802 *9*)	2055.14	0.071 *9*	1.13 *14*	5.90 *6*	1.20 *15*	av Eβ=350.5 *40*; εK=0.8093 *20*; εL=0.1048 *3*; εM+=0.02667 *7*
(1900 *9*)	1957.11	0.036 *22*	0.37 *23*	6.4 *3*	0.41 *25*	av Eβ=393.4 *40*; εK=0.7854 *25*; εL=0.1016 *4*; εM+=0.02584 *9*
(2013 *9*)	1843.7	0.089 *8*	0.61 *5*	6.26 *4*	0.70 *6*	av Eβ=443.1 *40*; εK=0.752 *3*; εL=0.0970 *4*; εM+=0.02468 *10*
(2040 *9*)	1816.66	0.18 *3*	1.14 *18*	6.01 *7*	1.32 *21*	av Eβ=455.0 *40*; εK=0.743 *3*; εL=0.0959 *4*; εM+=0.02438 *11*
(2098 *9*)	1759.31	<0.1	<0.7	>6.3	<0.8	av Eβ=480.3 *40*; εK=0.722 *4*; εL=0.0932 *5*; εM+=0.02370 *11*
(2135 *9*)	1722.38	0.32 *12*	1.5 *6*	5.93 *17*	1.8 *7*	av Eβ=496.6 *40*; εK=0.709 *4*; εL=0.0914 *5*; εM+=0.02324 *12*
(2144 *9*)	1713.27	0.19 *5*	0.87 *20*	6.17 *11*	1.06 *25*	av Eβ=500.6 *40*; εK=0.705 *4*; εL=0.0909 *5*; εM+=0.02313 *12*
(2283 *9*)	1574.36	0.59 *7*	1.8 *2*	5.90 *6*	2.4 *3*	av Eβ=562.3 *40*; εK=0.650 *4*; εL=0.0837 *5*; εM+=0.02127 *13*
(2373 *9*)	1483.76	0.64 *5*	1.56 *12*	6.00 *4*	2.20 *17*	av Eβ=602.7 *41*; εK=0.611 *4*; εL=0.0787 *5*; εM+=0.02000 *13*
(2375 *9*)	1482.22	0.46 *4*	1.11 *9*	6.15 *4*	1.57 *13*	av Eβ=603.3 *41*; εK=0.611 *4*; εL=0.0786 *5*; εM+=0.01998 *13*
(2416 *9*)	1440.67	0.32 *4*	0.72 *8*	6.36 *5*	1.04 *12*	av Eβ=621.9 *41*; εK=0.593 *4*; εL=0.0763 *5*; εM+=0.01939 *13*
(2522 *9*)	1334.74?	0.32 *4*	0.56 *7*	6.50 *6*	0.88 *11*	av Eβ=669.4 *41*; εK=0.547 *4*; εL=0.0704 *5*; εM+=0.01788 *13*
(2536 *9*)	1321.26	1.4 *6*	2.5 *9*	5.86 *17*	3.9 *15*	av Eβ=675.4 *41*; εK=0.542 *4*; εL=0.0696 *5*; εM+=0.01769 *13*
(2685 *9*)	1171.72	0.64 *10*	0.81 *12*	6.40 *7*	1.45 *22*	av Eβ=742.8 *41*; εK=0.479 *4*; εL=0.0615 *5*; εM+=0.01564 *12*
(2758 *9*)	1099.29	1.9 *5*	2.0 *5*	6.02 *12*	3.9 *10*	av Eβ=775.6 *41*; εK=0.450 *4*; εL=0.0578 *5*; εM+=0.01468 *12*
(2831 *9*)	1026.42	0.61 *15*	0.59 *15*	6.58 *11*	1.2 *3*	av Eβ=808.6 *41*; εK=0.422 *4*; εL=0.0542 *5*; εM+=0.01377 *12*
(2876 *9*)	980.93	<0.3	<0.2	>7.0	<0.5	av Eβ=829.3 *41*; εK=0.406 *4*; εL=0.0520 *5*; εM+=0.01322 *11*
(3207 *9*)	649.80	1.6 *6*	2.5 *9*	7.65[1u] *15*	4.1 *14*	av Eβ=996.3 *41*; εK=0.522 *3*; εL=0.0679 *4*; εM+=0.01729 *10*

† Deduced by evaluators from intensity balances.
‡ Absolute intensity per 100 decays.

γ(^{109}In)

Iγ normalization: from ΣI(γ+ce)(to g.s.)=100, by assuming no direct feeding to g.s.

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
119.0 *6*	0.2 *1*	1099.29	5/2$^+$	980.93	3/2$^-$	[E1]	0.1062 *22*	α(K)=0.0922 *19*; α(L)=0.01142 *24*; α(M)=0.00220 *5* α(N)=0.000396 *8*; α(O)=2.61×10^{-5} *6* %Iγ=0.06 *3*, using the calculated normalization.
[x]142.8 *5*	0.3 *1*							%Iγ=0.09 *3*, using the calculated normalization.
158.6[c] *6*	0.3 *1*	3029.70	(5/2$^+$)	2871.19	5/2$^+$	[M1]	0.1416 *25*	α(K)=0.1227 *22*; α(L)=0.0154 *3*; α(M)=0.00298 *6* α(N)=0.000546 *10*; α(O)=4.05×10^{-5} *7* %Iγ=0.09 *3*, using the calculated normalization.
181.8 *6*	0.2 *1*	2138.44	(3/2$^+$)	1957.11	5/2$^+$	[M1]	0.0977 *17*	α(K)=0.0847 *14*; α(L)=0.01056 *18*; α(M)=0.00205 *4* α(N)=0.000376 *7*; α(O)=2.79×10^{-5} *5* %Iγ=0.06 *3*, using the calculated normalization.
216.9[c] *7*	0.2 *1*	3029.70	(5/2$^+$)	2813.46	(5/2$^+$,7/2)			%Iγ=0.06 *3*, using the calculated normalization.
220.5 *6*	0.4 *2*	3029.70	(5/2$^+$)	2808.8	3/2			%Iγ=0.12 *6*, using the calculated normalization.
222.2 *7*	0.2 *1*	1321.26	5/2$^+$	1099.29	5/2$^+$	[M1]	0.0571 *10*	α(K)=0.0496 *8*; α(L)=0.00614 *10*; α(M)=0.001192 *20* α(N)=0.000218 *4*; α(O)=1.62×10^{-5} *3* %Iγ=0.06 *3*, using the calculated normalization.
229.2 *3*	0.4 *2*	1713.27	9/2$^+$	1483.76	5/2$^+$	[E2]	0.0837	α(K)=0.0696 *11*; α(L)=0.01146 *17*; α(M)=0.00226 *4* α(N)=0.000400 *6*; α(O)=2.23×10^{-5} *4* %Iγ=0.12 *6*, using the calculated normalization.
250.1 *6*	0.4 *2*	2469.05	(3/2,5/2,7/2)$^+$	2218.56	(5/2$^+$,7/2)			%Iγ=0.12 *6*, using the calculated normalization.
261.1 *12*	1.1 *4*	2218.56	(5/2$^+$,7/2)	1957.11	5/2$^+$			%Iγ=0.32 *12*, using the calculated normalization.
285.0 *5*	1.2 *3*	1713.27	9/2$^+$	1428.3	13/2$^+$	[E2]	0.0402	α(K)=0.0338 *6*; α(L)=0.00516 *8*; α(M)=0.001012 *16* α(N)=0.000180 *3*; α(O)=1.076×10^{-5} *17* %Iγ=0.35 *9*, using the calculated normalization.
310.3 *5*	0.5	2871.19	5/2$^+$	2561.02	3/2$^+$	[M1]	0.0239	E_γ,I_γ: From adopted gammas and Iγ(614.1)=6.0. α(K)=0.0208 *3*; α(L)=0.00255 *4*; α(M)=0.000494 *8* α(N)=9.06×10^{-5} *14*; α(O)=6.76×10^{-6} *10* %Iγ=0.146 *3*, using the calculated normalization.
312.0 *3*	2.0 *2*	1483.76	5/2$^+$	1171.72	1/2$^+$	[E2]	0.0299	E_γ: not given in the table 3 (1981Bu17). α(K)=0.0252 *4*; α(L)=0.00374 *6*; α(M)=0.000733 *11* α(N)=0.0001311 *19*; α(O)=8.02×10^{-6} *12* %Iγ=0.59 *6*, using the calculated normalization.
331.2 *2*	32.2 *13*	980.93	3/2$^-$	649.80	1/2$^-$	M1	0.0203	α(K)=0.01761 *25*; α(L)=0.00215 *3*; α(M)=0.000417 *6* α(N)=7.65×10^{-5} *11*; α(O)=5.72×10^{-6} *8* %Iγ=9.4 *4*, using the calculated normalization. Mult.: α(K)exp=0.012 (1965Kh04), α(K)exp=0.028 (1970Sh05).
340.2 *3*	0.8 *2*	1321.26	5/2$^+$	980.93	3/2$^-$	[E1]	0.00586	α(K)=0.00511 *8*; α(L)=0.000611 *9*; α(M)=0.0001179 *17* α(N)=2.15×10^{-5} *3*; α(O)=1.534×10^{-6} *22* %Iγ=0.23 *6*, using the calculated normalization.
353.9 *2*	3.4 *3*	1334.74?	(3/2,5/2,7/2$^-$)	980.93	3/2$^-$			%Iγ=1.00 *9*, using the calculated normalization.

^{109}Sn ε decay 1981Bu17 (continued)

γ(^{109}In) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	δ[†@]	α[#]	Comments
362.9 *1*	0.8 *2*	2871.19	$5/2^+$	2508.33	$(3/2,5/2^-)$				%Iγ=0.23 *6*, using the calculated normalization.
373.7 *3*	0.8 *2*	2591.87	$7/2^+$	2218.56	$(5/2^+,7/2)$	[M1]		0.01493	α(K)=0.01298 *19*; α(L)=0.001582 *23*; α(M)=0.000306 *5* α(N)=5.62×10^{-5} *8*; α(O)=4.21×10^{-6} *6* %Iγ=0.23 *6*, using the calculated normalization.
376.1 *5*	0.3	1816.66	$(3/2,5/2)^-$	1440.67	$5/2^-$	[M1]		0.01469	α(K)=0.01277 *19*; α(L)=0.001556 *23*; α(M)=0.000302 *5* α(N)=5.53×10^{-5} *8*; α(O)=4.14×10^{-6} *6* %Iγ=0.0879 *16*, using the calculated normalization. E_γ: not listed in Table 3 (1981Bu17).
383	≈3	1482.22	$(5/2^+,7/2^-)$	1099.29	$5/2^+$			0.01404	%Iγ=0.9 *5*, using the calculated normalization. I_γ: 11.0 *9* for 383γ+384.5γ in 1981Bu17.
384.5 *4*	≈8	1483.76	$5/2^+$	1099.29	$5/2^+$	M1		0.01390	α(K)=0.01209 *18*; α(L)=0.001472 *21*; α(M)=0.000285 *4* α(N)=5.23×10^{-5} *8*; α(O)=3.91×10^{-6} *6* %Iγ=2.3 *12*, using the calculated normalization. I_γ: 11.0 *9* for 383γ+384.5γ in 1981Bu17.
401.8 *4*	0.3 *1*	2218.56	$(5/2^+,7/2)$	1816.66	$(3/2,5/2)^-$				%Iγ=0.09 *3*, using the calculated normalization.
401.97 *6*	0.22 *7*	1428.3	$13/2^+$	1026.42	$11/2^+$	M1+E2	+0.07 +*5*−*4*	0.01244	%Iγ=0.064 *21*, using the calculated normalization. E_γ,Mult.,δ: From Adopted gammas. I_γ: From I(γ+ce)=1.2 *4* (from intensity balances) and branching from adopted gammas.
[x]407.3 *4*	0.5 *2*								%Iγ=0.15 *6*, using the calculated normalization.
[x]414.7 *4*	0.4 *3*								%Iγ=0.12 *9*, using the calculated normalization. Additional information 1.
[x]422.6 *2*	3.2 *4*								%Iγ=0.94 *12*, using the calculated normalization.
437.2 *3*	5.5 *6*	1463.62	$9/2^+$	1026.42	$11/2^+$	M1		0.01010	α(K)=0.00879 *13*; α(L)=0.001065 *15*; α(M)=0.000206 *3* α(N)=3.78×10^{-5} *6*; α(O)=2.84×10^{-6} *4* %Iγ=1.61 *18*, using the calculated normalization. I_γ: From adopted gammas. Other: 8.6 *13* for 437.2γ+437.4γ, I(437.2γ)=5 and I(437.4γ)=3.6 in 1981Bu17.
437.4 *3*	3.6 *13*	1759.31	3/2,5/2,7/2	1321.26	$5/2^+$				%Iγ=1.1 *4*, using the calculated normalization. I_γ: from 8.6 *13* for 437.2γ+437.4γ, I(437.2γ)=5 and I(437.4γ)=3.6 in 1981Bu17.
[x]448.7 *5*	0.3 *1*								%Iγ=0.09 *3*, using the calculated normalization.
452.8[c] *5*	0.5 *2*	2591.87	$7/2^+$	2138.44	$(3/2^+)$	[E2]		0.00936	α(K)=0.00802 *12*; α(L)=0.001088 *16*; α(M)=0.000212 *3* α(N)=3.83×10^{-5} *6*; α(O)=2.54×10^{-6} *4* %Iγ=0.15 *6*, using the calculated normalization.
454.4[c] *20*	0.6 *2*	2410.9	$(3/2,5/2^+)$	1957.11	$5/2^+$				%Iγ=0.18 *6*, using the calculated normalization.
459.8[a] *4*	0.45[a] *12*	1440.67	$5/2^-$	980.93	$3/2^-$	(M1)		0.00892	α(K)=0.00776 *11*; α(L)=0.000940 *14*; α(M)=0.000182 *3* α(N)=3.34×10^{-5} *5*; α(O)=2.50×10^{-6} *4* %Iγ=0.13 *4*, using the calculated normalization. I_γ: From adopted gammas and Iγ(790.9γ)=5.2. Iγ=0.7 3 in 1991Bu17.
459.8[ac] *4*	0.7[a] *3*	2871.19	$5/2^+$	2410.9	$(3/2,5/2^+)$				%Iγ=0.21 *9*, using the calculated normalization.

$^{109}_{49}In_{60}$-5

γ(^{109}In) (continued)

E_γ [†]	I_γ [‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
465.8 *8*	0.5 *2*	2591.87	7/2$^+$	2125.77	(5/2$^+$,7/2)	[M1]	0.00864	α(K)=0.00752 *11*; α(L)=0.000910 *14*; α(M)=0.000176 *3* α(N)=3.23×10^{-5} *5*; α(O)=2.42×10^{-6} *4* %Iγ=0.15 *6*, using the calculated normalization.
473.2 *5*	0.6 *2*	1957.11	5/2$^+$	1483.76	5/2$^+$	[M1]	0.00831	α(K)=0.00724 *11*; α(L)=0.000875 *13*; α(M)=0.0001694 *25* α(N)=3.11×10^{-5} *5*; α(O)=2.33×10^{-6} *4* %Iγ=0.18 *6*, using the calculated normalization.
478.5 *4*	0.4 *2*	2617.16	(5/2,7/2)$^+$	2138.44	(3/2$^+$)			%Iγ=0.12 *6*, using the calculated normalization.
482.7 *6*	0.4 *2*	1816.66	(3/2,5/2)$^-$	1334.74?	(3/2,5/2,7/2$^-$)	[E1]	0.00245	α(K)=0.00214 *3*; α(L)=0.000254 *4*; α(M)=4.90×10^{-5} *7* α(N)=8.95×10^{-6} *13*; α(O)=6.49×10^{-7} *10* %Iγ=0.12 *6*, using the calculated normalization.
495.8 *4*	1.3 *3*	1816.66	(3/2,5/2)$^-$	1321.26	5/2$^+$	[E1]	0.00230	α(K)=0.00201 *3*; α(L)=0.000238 *4*; α(M)=4.59×10^{-5} *7* α(N)=8.39×10^{-6} *12*; α(O)=6.09×10^{-7} *9* %Iγ=0.38 *9*, using the calculated normalization.
501.0 *6*	1.28 *18*	1483.76	5/2$^+$	980.93	3/2$^-$	[E1]	0.00225	α(K)=0.00196 *3*; α(L)=0.000232 *4*; α(M)=4.48×10^{-5} *7* α(N)=8.18×10^{-6} *12*; α(O)=5.94×10^{-7} *9* %Iγ=0.38 *6*, using the calculated normalization. E_γ,I_γ: From adopted gammas and Iγ(384.5)=8.
501.2 *3*	0.9 *3*	1482.22	(5/2$^+$,7/2$^-$)	980.93	3/2$^-$		0.00224	%Iγ=0.26 *9*, using the calculated normalization.
521.9 *2*	9.6 *6*	1171.72	1/2$^+$	649.80	1/2$^-$	E1	0.00204	α(K)=0.001780 *25*; α(L)=0.000211 *3*; α(M)=4.07×10^{-5} *6* α(N)=7.43×10^{-6} *11*; α(O)=5.41×10^{-7} *8* %Iγ=2.81 *18*, using the calculated normalization. Mult.: α(K)exp=0.012 (1970Sh05).
522	≈2	2235.8	(5/2$^+$,7/2)	1713.27	9/2$^+$			%Iγ=0.6 *3*, using the calculated normalization. E_γ: not given in the table 3 (1981Bu17).
539.4[c] *2*	0.7 *2*	2845.78	3/2	2305.2	(3/2,5/2$^-$)			%Iγ=0.21 *6*, using the calculated normalization.
[x]548.9 *7*	0.5 *2*							%Iγ=0.15 *6*, using the calculated normalization.
560.3 *7*	0.3 *1*	3029.70	(5/2$^+$)	2469.05	(3/2,5/2,7/2)$^+$			%Iγ=0.09 *3*, using the calculated normalization.
594.6[c] *3*	0.3 *2*	2410.9	(3/2,5/2$^+$)	1816.66	(3/2,5/2)$^-$			%Iγ=0.09 *6*, using the calculated normalization.
597.2 *12*	0.5 *2*	2356.15	(3/2,5/2,7/2$^-$)	1759.31	3/2,5/2,7/2			%Iγ=0.15 *6*, using the calculated normalization.
614.1 *3*	6.0 *4*	1713.27	9/2$^+$	1099.29	5/2$^+$	E2	0.00397	α(K)=0.00343 *5*; α(L)=0.000442 *7*; α(M)=8.58×10^{-5} *12* α(N)=1.558×10^{-5} *22*; α(O)=1.084×10^{-6} *16* %Iγ=1.76 *12*, using the calculated normalization.
623.4 *4*	7.2 *20*	1722.38	7/2$^+$	1099.29	5/2$^+$	M1	0.00428	α(K)=0.00373 *6*; α(L)=0.000447 *7*; α(M)=8.65×10^{-5} *13* α(N)=1.588×10^{-5} *23*; α(O)=1.194×10^{-6} *17* %Iγ=2.1 *6*, using the calculated normalization.
649.8 *2*	101 *4*	649.80	1/2$^-$	0.0	9/2$^+$	M4	0.0695	α(K)=0.0582 *9*; α(L)=0.00914 *13*; α(M)=0.00182 *3* α(N)=0.000331 *5*; α(O)=2.25×10^{-5} *4* %Iγ=29.6 *9*, using the calculated normalization. I_γ: from Table 3 in 1981Bu17, while Iγ=93 from Table 4. Mult.: α(exp)=0.07 *2*(1956Pe56), α(exp)=0.08 *3*, K/L=6.2 9 (1965Kh04), 0.07 (1970Sh05).
660.1 *1*	4.8 *6*	1759.31	3/2,5/2,7/2	1099.29	5/2$^+$			%Iγ=1.41 *18*, using the calculated normalization.
[x]686.8 *3*	2.5 *4*							%Iγ=0.73 *12*, using the calculated normalization.

$^{109}_{49}In_{60}$-6

γ(^{109}In) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	δ[†@]	α[#]	Comments
710.7 *3*	1.4 *3*	2151.4	(3/2,5/2$^-$)	1440.67	5/2$^-$				%Iγ=0.41 *9*, using the calculated normalization.
[x]722.1 *5*	1.9 *3*								%Iγ=0.56 *9*, using the calculated normalization.
732.5 *5*	2.1 *3*	2858.58	(5/2$^+$,7/2)	2125.77	(5/2$^+$,7/2)				%Iγ=0.62 *9*, using the calculated normalization.
745.3 *9*	1.1 *3*	2871.19	5/2$^+$	2125.77	(5/2$^+$,7/2)				%Iγ=0.32 *9*, using the calculated normalization.
[x]780.1 *4*	0.8 *3*								%Iγ=0.23 *9*, using the calculated normalization.
785.3 *2*	0.9 *2*	1957.11	5/2$^+$	1171.72	1/2$^+$	[E2]		0.00213	α(K)=0.00184 *3*; α(L)=0.000230 *4*; α(M)=4.45×10^{-5} *7* α(N)=8.11×10^{-6} *12*; α(O)=5.80×10^{-7} *9* %Iγ=0.26 *6*, using the calculated normalization.
790.9 *3*	5.2 *2*	1440.67	5/2$^-$	649.80	1/2$^-$	E2		0.00209	α(K)=0.00181 *3*; α(L)=0.000226 *4*; α(M)=4.37×10^{-5} *7* α(N)=7.97×10^{-6} *12*; α(O)=5.70×10^{-7} *8* %Iγ=1.52 *7*, using the calculated normalization.
[x]804.9 *4*	0.7 *2*								%Iγ=0.21 *6*, using the calculated normalization.
816.2[a] *4*	1.8[a] *4*	2138.44	(3/2$^+$)	1321.26	5/2$^+$	[M1]		0.00228	α(K)=0.00199 *3*; α(L)=0.000237 *4*; α(M)=4.58×10^{-5} *7* α(N)=8.41×10^{-6} *12*; α(O)=6.34×10^{-7} *9* %Iγ=0.53 *12*, using the calculated normalization.
816.2[a] *4*	1.8[a] *4*	2871.19	5/2$^+$	2055.14	(5/2$^+$,7/2)				%Iγ=0.53 *12*, using the calculated normalization.
828.8 *2*	2.9 *3*	2542.01	(5/2$^+$,7/2)	1713.27	9/2$^+$				%Iγ=0.85 *9*, using the calculated normalization.
835.7 *1*	2.9 *4*	1816.66	(3/2,5/2)$^-$	980.93	3/2$^-$	M1,E2		0.00216	α(K)=0.00189 *3*; α(L)=0.000224 *4*; α(M)=4.34×10^{-5} *6* α(N)=7.96×10^{-6} *12*; α(O)=6.00×10^{-7} *9* %Iγ=0.85 *12*, using the calculated normalization.
848.6 *8*	0.5 *2*	2986.8	(3/2$^+$,5/2$^+$)	2138.44	(3/2$^+$)				%Iγ=0.15 *6*, using the calculated normalization.
857.9 *2*	1.8 *2*	2617.16	(5/2,7/2)$^+$	1759.31	3/2,5/2,7/2				%Iγ=0.53 *6*, using the calculated normalization.
869.3 *4*	2.3 *3*	2591.87	7/2$^+$	1722.38	7/2$^+$	[M1]		0.00198	α(K)=0.001724 *25*; α(L)=0.000205 *3*; α(M)=3.96×10^{-5} *6* α(N)=7.27×10^{-6} *11*; α(O)=5.48×10^{-7} *8* %Iγ=0.67 *9*, using the calculated normalization.
879.2 *5*	2.0 *5*	2602.3	(5/2$^+$,7/2)	1722.38	7/2$^+$				%Iγ=0.59 *15*, using the calculated normalization.
888.7 *1*	2.1 *5*	2845.78	3/2	1957.11	5/2$^+$				%Iγ=0.62 *15*, using the calculated normalization.
897.5 *2*	3.2 *4*	2218.56	(5/2$^+$,7/2)	1321.26	5/2$^+$				%Iγ=0.94 *12*, using the calculated normalization.
[x]903.4 *4*	0.6 *2*								%Iγ=0.18 *6*, using the calculated normalization.
967.2 *4*	1.6 *3*	2924.48	(3/2,5/2)	1957.11	5/2$^+$				%Iγ=0.47 *9*, using the calculated normalization.
976.3 *1*	3.6 *3*	1957.11	5/2$^+$	980.93	3/2$^-$	[E1]		5.40×10^{-4}	α(K)=0.000472 *7*; α(L)=5.50×10^{-5} *8*; α(M)=1.059×10^{-5} *15* α(N)=1.94×10^{-6} *3*; α(O)=1.440×10^{-7} *21* %Iγ=1.05 *9*, using the calculated normalization.
985.3 *2*	1.3 *2*	2469.05	(3/2,5/2,7/2)$^+$	1483.76	5/2$^+$	M1,E2		1.49×10^{-3}	α(K)=0.001300 *19*; α(L)=0.0001539 *22*; α(M)=2.97×10^{-5} *5* α(N)=5.46×10^{-6} *8*; α(O)=4.13×10^{-7} *6* %Iγ=0.38 *6*, using the calculated normalization.

$^{109}_{49}In_{60}$-7

^{109}Sn ε decay 1981Bu17 (continued)

γ(^{109}In) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	δ[†@]	α[#]	Comments
1026.4[b] *1*	13.6[b] *7*	1026.42	11/2$^+$	0.0	9/2$^+$	M1+E2	+0.41 *13*	0.00133 *3*	α(K)=0.001160 *23*; α(L)=0.000138 *3*; α(M)=2.66×10^{-5} *5* α(N)=4.88×10^{-6} *9*; α(O)=3.67×10^{-7} *8* %Iγ=3.98 *21*, using the calculated normalization. I_γ: from 17.6 *7* for the doublet placed from levels at E=1026 and 2126, and individual intensity of Iγ≈13 and Iγ=4, respectively, in 1981Bu17. Mult.: α(K)exp=0.0046 (1970Sh05).
1026.4[b] *1*	4.0[b] *7*	2125.77	(5/2$^+$,7/2)	1099.29	5/2$^+$				%Iγ=1.17 *21*, using the calculated normalization. I_γ: from 17.6 *7* for the doublet placed from levels at E=1026 and 2126, and individual intensity of Iγ≈13 and Iγ=4, respectively, in 1981Bu17.
1039.0 *2*	15.0 *6*	2138.44	(3/2$^+$)	1099.29	5/2$^+$	[M1]		1.32×10^{-3}	α(K)=0.001155 *17*; α(L)=0.0001366 *20*; α(M)=2.64×10^{-5} *4* α(N)=4.85×10^{-6} *7*; α(O)=3.66×10^{-7} *6* %Iγ=4.39 *19*, using the calculated normalization.
1054.2 *2*	2.1 *2*	2813.46	(5/2$^+$,7/2)	1759.31	3/2,5/2,7/2				%Iγ=0.62 *6*, using the calculated normalization.
1072.7 *3*	0.8 *2*	2785.62	(5/2$^+$,7/2)	1713.27	9/2$^+$				%Iγ=0.23 *6*, using the calculated normalization.
1078.5	0.3	2542.01	(5/2$^+$,7/2)	1463.62	9/2$^+$				%Iγ=0.0879 *16*, using the calculated normalization. E_γ: not given in the table 3 (1981Bu17).
1083.4 *3*	2.0 *3*	2064.3	(3/2$^-$,5/2$^-$,7/2$^-$)	980.93	3/2$^-$	(M1,E2)		1.21×10^{-3}	α(K)=0.001053 *15*; α(L)=0.0001244 *18*; α(M)=2.40×10^{-5} *4* α(N)=4.41×10^{-6} *7*; α(O)=3.33×10^{-7} *5* %Iγ=0.59 *9*, using the calculated normalization.
1092.2 *5*	1.8 *5*	2851.72	7/2$^+$	1759.31	3/2,5/2,7/2				%Iγ=0.53 *15*, using the calculated normalization.
1099.2 *2*	100	1099.29	5/2$^+$	0.0	9/2$^+$	E2		9.85×10^{-4}	α(K)=0.000858 *12*; α(L)=0.0001035 *15*; α(M)=2.00×10^{-5} *3* α(N)=3.66×10^{-6} *6*; α(O)=2.68×10^{-7} *4* %Iγ=29.3 *5*, using the calculated normalization. Mult.: α(K)exp=0.0013 (1970Sh05).
1107.2[a] *8*	1.6[a] *3*	2591.87	7/2$^+$	1483.76	5/2$^+$	[M1]		1.15×10^{-3}	α(K)=0.001004 *15*; α(L)=0.0001185 *17*; α(M)=2.29×10^{-5} *4*

$^{109}_{49}In_{60}$-8

^{109}Sn ε decay 1981Bu17 (continued)

γ(^{109}In) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
								α(N)=4.20×10^{-6} *6*; α(O)=3.18×10^{-7} *5*; α(IPF)=5.40×10^{-7} *17* %Iγ=0.47 *9*, using the calculated normalization. E_γ,I_γ: unresolved with 1107.7γ from E=2924 level.
1107.7[a] *8*	1.6[a] *3*	2924.48	(3/2,5/2)	1816.66	(3/2,5/2)$^-$			%Iγ=0.47 *9*, using the calculated normalization. E_γ,I_γ: unresolved with 1107.2γ from E=2592 level.
1119.2 *3*	10.5 *5*	2218.56	(5/2$^+$,7/2)	1099.29	5/2$^+$			%Iγ=3.08 *16*, using the calculated normalization.
1128.2 *3*	4.7 *2*	2591.87	7/2$^+$	1463.62	9/2$^+$	[M1]	1.10×10^{-3}	α(K)=0.000963 *14*; α(L)=0.0001136 *16*; α(M)=2.19×10^{-5} *3* α(N)=4.03×10^{-6} *6*; α(O)=3.05×10^{-7} *5*; α(IPF)=1.075×10^{-6} *18* %Iγ=1.38 *7*, using the calculated normalization.
1130.5 *8*	0.3 *2*	2851.72	7/2$^+$	1722.38	7/2$^+$	[M1]	1.10×10^{-3}	α(K)=0.000959 *14*; α(L)=0.0001131 *16*; α(M)=2.18×10^{-5} *3* α(N)=4.01×10^{-6} *6*; α(O)=3.03×10^{-7} *5*; α(IPF)=1.15×10^{-6} *4* %Iγ=0.09 *6*, using the calculated normalization.
1157.8 *3*	1.7 *3*	2871.19	5/2$^+$	1713.27	9/2$^+$	[E2]	8.84×10^{-4}	α(K)=0.000768 *11*; α(L)=9.23×10^{-5} *13*; α(M)=1.783×10^{-5} *25* α(N)=3.26×10^{-6} *5*; α(O)=2.40×10^{-7} *4*; α(IPF)=2.86×10^{-6} *5* %Iγ=0.50 *9*, using the calculated normalization.
1166.6 *3*	1.5 *3*	1816.66	(3/2,5/2)$^-$	649.80	1/2$^-$	[M1,E2]	1.03×10^{-3}	α(K)=0.000895 *13*; α(L)=0.0001055 *15*; α(M)=2.04×10^{-5} *3* α(N)=3.74×10^{-6} *6*; α(O)=2.83×10^{-7} *4*; α(IPF)=3.04×10^{-6} *5* %Iγ=0.44 *9*, using the calculated normalization.
1170.2	0.3	2151.4	(3/2,5/2$^-$)	980.93	3/2$^-$			I_γ: 1.8 is listed in Table 4 (1981Bu17). %Iγ=0.0879 *16*, using the calculated normalization. E_γ: not given in the table 3 (1981Bu17).
[x]1174.6 *1*	0.6 *2*							%Iγ=0.18 *6*, using the calculated normalization.
1187.8 *5*	0.8 *3*	2508.33	(3/2,5/2$^-$)	1321.26	5/2$^+$			%Iγ=0.23 *9*, using the calculated normalization.
1205.6 *5*	1.3 *2*	2305.2	(3/2,5/2$^-$)	1099.29	5/2$^+$			%Iγ=0.38 *6*, using the calculated normalization.
1211.4 *3*	3.3 *4*	2785.62	(5/2$^+$,7/2)	1574.36	(5/2$^+$,7/2)			%Iγ=0.97 *12*, using the calculated normalization.
1220.9 *5*	0.5 *2*	2542.01	(5/2$^+$,7/2)	1321.26	5/2$^+$			%Iγ=0.15 *6*, using the calculated normalization.
1227.4 *3*	1.1 *3*	2986.8	(3/2$^+$,5/2$^+$)	1759.31	3/2,5/2,7/2			%Iγ=0.32 *9*, using the calculated normalization.
[x]1231.0 *1*	1.9 *4*							%Iγ=0.56 *12*, using the calculated normalization.
1239.9 *7*	1.3 *3*	2410.9	(3/2,5/2$^+$)	1171.72	1/2$^+$			%Iγ=0.38 *9*, using the calculated normalization.
1250.1 *10*	0.8 *3*	2276.5	(7/2$^+$)	1026.42	11/2$^+$	[E2]	7.65×10^{-4}	α(K)=0.000654 *10*; α(L)=7.82×10^{-5} *11*; α(M)=1.510×10^{-5} *22* α(N)=2.77×10^{-6} *4*; α(O)=2.04×10^{-7} *3*; α(IPF)=1.44×10^{-5} *3* %Iγ=0.23 *9*, using the calculated normalization.
1271.5 *3*	1.6 *3*	2845.78	3/2	1574.36	(5/2$^+$,7/2)			%Iγ=0.47 *9*, using the calculated normalization.
1290.0	0.5	2271.4	(3/2$^+$)	980.93	3/2$^-$	[E1]	4.08×10^{-4}	α(K)=0.000283 *4*; α(L)=3.28×10^{-5} *5*; α(M)=6.31×10^{-6} *9* α(N)=1.157×10^{-6} *17*; α(O)=8.64×10^{-8} *12*; α(IPF)=8.46×10^{-5} *12* %Iγ=0.146 *3*, using the calculated normalization. E_γ: not given in the table 3 (1981Bu17).
1300.7 *2*	1.7 *4*	3426.53	(5/2$^+$,7/2)	2125.77	(5/2$^+$,7/2)			%Iγ=0.50 *12*, using the calculated normalization.
[x]1307.1 *3*	1.1 *2*							%Iγ=0.32 *6*, using the calculated normalization.
1321.3 *2*	39.4 *23*	1321.26	5/2$^+$	0.0	9/2$^+$	E2	6.98×10^{-4}	α(K)=0.000584 *9*; α(L)=6.95×10^{-5} *10*; α(M)=1.343×10^{-5} *19* α(N)=2.46×10^{-6} *4*; α(O)=1.82×10^{-7} *3*; α(IPF)=2.80×10^{-5} *4* %Iγ=11.5 *7*, using the calculated normalization.
1350.1 *1*	3.0 *3*	2924.48	(3/2,5/2)	1574.36	(5/2$^+$,7/2)			%Iγ=0.88 *9*, using the calculated normalization.

$^{109}_{49}In_{60}$-9

^{109}Sn ε decay 1981Bu17 (continued)

γ(^{109}In) (continued)

E_γ [†]	I_γ [‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
1375.2 *2*	1.3 *2*	2356.15	(3/2,5/2,7/2$^-$)	980.93	3/2$^-$			%Iγ=0.38 *6*, using the calculated normalization.
1388.2 *5*	0.8 *2*	2851.72	7/2$^+$	1463.62	9/2$^+$	[M1]	7.44×10^{-4}	α(K)=0.000615 *9*; α(L)=7.22×10^{-5} *11*; α(M)=1.393×10^{-5} *20* α(N)=2.56×10^{-6} *4*; α(O)=1.94×10^{-7} *3*; α(IPF)=4.04×10^{-5} *6* %Iγ=0.23 *6*, using the calculated normalization.
1408.9 *2*	2.3 *2*	2508.33	(3/2,5/2$^-$)	1099.29	5/2$^+$			%Iγ=0.67 *6*, using the calculated normalization.
1428.32 *10*	0.98 *3*	1428.3	13/2$^+$	0.0	9/2$^+$	E2	6.30×10^{-4}	%Iγ=0.287 *10*, using the calculated normalization. E_γ,Mult.: From Adopted gammas. I_γ: From I(γ+ce)=1.2 *4* (from intensity balances) and branching from adopted gammas.
1429.7 *4*	1.0 *2*	2410.9	(3/2,5/2$^+$)	980.93	3/2$^-$			%Iγ=0.29 *6*, using the calculated normalization.
1442.7 *1*	2.4 *2*	2542.01	(5/2$^+$,7/2)	1099.29	5/2$^+$			%Iγ=0.70 *6*, using the calculated normalization.
1455.3 *5*	2.2 *3*	3029.70	(5/2$^+$)	1574.36	(5/2$^+$,7/2)			%Iγ=0.64 *9*, using the calculated normalization.
1462.0 *6*	7 *2*	2561.02	3/2$^+$	1099.29	5/2$^+$	[M1]	6.92×10^{-4}	α(K)=0.000551 *8*; α(L)=6.46×10^{-5} *9*; α(M)=1.247×10^{-5} *18* α(N)=2.29×10^{-6} *4*; α(O)=1.735×10^{-7} *25*; α(IPF)=6.15×10^{-5} *9* %Iγ=2.1 *6*, using the calculated normalization.
1463.6 *4*	10 *3*	1463.62	9/2$^+$	0.0	9/2$^+$	[E2]	6.14×10^{-4}	α(K)=0.000476 *7*; α(L)=5.63×10^{-5} *8*; α(M)=1.088×10^{-5} *16* α(N)=1.99×10^{-6} *3*; α(O)=1.483×10^{-7} *21*; α(IPF)=6.88×10^{-5} *10* %Iγ=2.9 *9*, using the calculated normalization.
1464.2 *2*	12 *4*	2785.62	(5/2$^+$,7/2)	1321.26	5/2$^+$			%Iγ=3.5 *12*, using the calculated normalization.
1482.3 *3*	1.4 *3*	1482.22	(5/2$^+$,7/2$^-$)	0.0	9/2$^+$			%Iγ=0.41 *9*, using the calculated normalization. E_γ: it is indicated in Table 3 of 1981Bu17 that this γ is assigned in the decay scheme but no specific placement is made. Evaluators have made this placement based on γ-ray energy.
1488.7 *1*	13.5 *11*	2138.44	(3/2$^+$)	649.80	1/2$^-$	[E1]	4.76×10^{-4}	α(K)=0.000222 *4*; α(L)=2.56×10^{-5} *4*; α(M)=4.92×10^{-6} *7* α(N)=9.03×10^{-7} *13*; α(O)=6.76×10^{-8} *10*; α(IPF)=0.000223 *4* %Iγ=4.0 *4*, using the calculated normalization.
1492.6 *8*	4.5 *6*	2591.87	7/2$^+$	1099.29	5/2$^+$	[M1]	6.75×10^{-4}	α(K)=0.000527 *8*; α(L)=6.18×10^{-5} *9*; α(M)=1.193×10^{-5} *17* α(N)=2.19×10^{-6} *3*; α(O)=1.660×10^{-7} *24*; α(IPF)=7.13×10^{-5} *11* %Iγ=1.32 *18*, using the calculated normalization.
1501.7 *4*	0.5 *2*	2151.4	(3/2,5/2$^-$)	649.80	1/2$^-$			%Iγ=0.15 *6*, using the calculated normalization.
[x]1507.6 *4*	0.4 *1*							%Iγ=0.12 *3*, using the calculated normalization.
1524.9 *3*	1.7 *2*	2845.78	3/2	1321.26	5/2$^+$			%Iγ=0.50 *6*, using the calculated normalization.
1546.6 *8*	0.4 *1*	2986.8	(3/2$^+$,5/2$^+$)	1440.67	5/2$^-$	[E1]	5.04×10^{-4}	α(K)=0.000208 *3*; α(L)=2.40×10^{-5} *4*; α(M)=4.61×10^{-6} *7* α(N)=8.46×10^{-7} *12*; α(O)=6.34×10^{-8} *9*; α(IPF)=0.000267 *4* %Iγ=0.12 *3*, using the calculated normalization.
[x]1557.9 *2*	0.8 *2*							%Iγ=0.23 *6*, using the calculated normalization.
1565.6 *5*	0.8 *2*	2591.87	7/2$^+$	1026.42	11/2$^+$	[E2]	5.84×10^{-4}	α(K)=0.000417 *6*; α(L)=4.92×10^{-5} *7*; α(M)=9.50×10^{-6} *14* α(N)=1.741×10^{-6} *25*; α(O)=1.299×10^{-7} *19*; α(IPF)=0.0001059 *15* %Iγ=0.23 *6*, using the calculated normalization.
1574.4 *2*	18.2 *8*	1574.36	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=5.33 *24*, using the calculated normalization.
1580.7 *5*	3.8 *4*	2561.02	3/2$^+$	980.93	3/2$^-$	[E1]	5.22×10^{-4}	α(K)=0.000201 *3*; α(L)=2.31×10^{-5} *4*; α(M)=4.45×10^{-6} *7* α(N)=8.16×10^{-7} *12*; α(O)=6.11×10^{-8} *9*; α(IPF)=0.000293 *5* %Iγ=1.11 *12*, using the calculated normalization.

$^{109}_{49}In_{60}$-10

^{109}Sn ε decay 1981Bu17 (continued)

γ(^{109}In) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
1603.3 *3*	1.3 *2*	2924.48	(3/2,5/2)	1321.26	$5/2^+$			%Iγ=0.38 *6*, using the calculated normalization.
1621.7 *5*	1.5 *3*	2271.4	$(3/2^+)$	649.80	$1/2^-$	[E1]	5.44×10^{-4}	α(K)=0.000192 *3*; α(L)=2.21×10^{-5} *4*; α(M)=4.26×10^{-6} *6* α(N)=7.82×10^{-7} *11*; α(O)=5.86×10^{-8} *9*; α(IPF)=0.000324 *5* %Iγ=0.44 *9*, using the calculated normalization.
1655.7 *6*	1.6 *3*	2305.2	$(3/2,5/2^-)$	649.80	$1/2^-$			%Iγ=0.47 *9*, using the calculated normalization.
[x]1674.1 *12*	0.7 *2*							%Iγ=0.21 *6*, using the calculated normalization.
1686.3 *3*	2.5 *3*	2785.62	$(5/2^+,7/2)$	1099.29	$5/2^+$			%Iγ=0.73 *9*, using the calculated normalization.
1700.7 *13*	0.4 *1*	2871.19	$5/2^+$	1171.72	$1/2^+$	[E2]	5.70×10^{-4}	α(K)=0.000356 *5*; α(L)=4.18×10^{-5} *6*; α(M)=8.07×10^{-6} *12* α(N)=1.480×10^{-6} *21*; α(O)=1.107×10^{-7} *16*; α(IPF)=0.0001620 *24* %Iγ=0.12 *3*, using the calculated normalization.
1709.3 *6*	0.3 *1*	2808.8	3/2	1099.29	$5/2^+$			%Iγ=0.09 *3*, using the calculated normalization.
1713.5 *2*	3.3 *4*	1713.27	$9/2^+$	0.0	$9/2^+$	[M1]	6.08×10^{-4}	α(K)=0.000395 *6*; α(L)=4.62×10^{-5} *7*; α(M)=8.91×10^{-6} *13* α(N)=1.638×10^{-6} *23*; α(O)=1.242×10^{-7} *18*; α(IPF)=0.0001556 *22* %Iγ=0.97 *12*, using the calculated normalization.
1722.2 *2*	3.5 *3*	1722.38	$7/2^+$	0.0	$9/2^+$	[M1]	6.07×10^{-4}	α(K)=0.000391 *6*; α(L)=4.57×10^{-5} *7*; α(M)=8.82×10^{-6} *13* α(N)=1.621×10^{-6} *23*; α(O)=1.228×10^{-7} *18*; α(IPF)=0.0001593 *23* %Iγ=1.03 *9*, using the calculated normalization.
[x]1734.3 *5*	1.0 *2*							%Iγ=0.29 *6*, using the calculated normalization.
1759.2 *5*	3.7 *2*	2858.58	$(5/2^+,7/2)$	1099.29	$5/2^+$			%Iγ=1.08 *6*, using the calculated normalization.
[x]1770.8 *2*	1.2 *2*							%Iγ=0.35 *6*, using the calculated normalization.
[x]1792.0 *3*	0.8 *2*							%Iγ=0.23 *6*, using the calculated normalization.
1819.0 *4*	0.6 *2*	3140.3	$(5/2^+,7/2)$	1321.26	$5/2^+$			%Iγ=0.18 *6*, using the calculated normalization.
1825.1[a] *3*	2.1[a] *2*	2851.72	$7/2^+$	1026.42	$11/2^+$	[E2]	5.75×10^{-4}	α(K)=0.000312 *5*; α(L)=3.65×10^{-5} *6*; α(M)=7.04×10^{-6} *10* α(N)=1.292×10^{-6} *18*; α(O)=9.68×10^{-8} *14*; α(IPF)=0.000218 *3* %Iγ=0.62 *6*, using the calculated normalization.
1825.3[a] *3*	2.1[a] *2*	2924.48	(3/2,5/2)	1099.29	$5/2^+$			%Iγ=0.62 *6*, using the calculated normalization.
1843.7 *6*	2.4 *2*	1843.7	$(5/2^+,7/2)$	0.0	$9/2^+$			%Iγ=0.70 *6*, using the calculated normalization.
[x]1850.1 *5*	1.7 *3*							%Iγ=0.50 *9*, using the calculated normalization.
1858.7 *2*	1.3 *2*	2508.33	$(3/2,5/2^-)$	649.80	$1/2^-$			%Iγ=0.38 *6*, using the calculated normalization.
1889.8 *3*	5.1 *5*	2871.19	$5/2^+$	980.93	$3/2^-$	[E1]	6.98×10^{-4}	α(K)=0.0001504 *21*; α(L)=1.726×10^{-5} *25*; α(M)=3.32×10^{-6} *5* α(N)=6.10×10^{-7} *9*; α(O)=4.58×10^{-8} *7*; α(IPF)=0.000526 *8* %Iγ=1.49 *15*, using the calculated normalization.
1911.1 *2*	19.3 *8*	2561.02	$3/2^+$	649.80	$1/2^-$	[E1]	7.11×10^{-4}	α(K)=0.0001477 *21*; α(L)=1.696×10^{-5} *24*; α(M)=3.26×10^{-6} *5* α(N)=5.99×10^{-7} *9*; α(O)=4.50×10^{-8} *7*; α(IPF)=0.000542 *8* %Iγ=5.7 *25*, using the calculated normalization.
1930.5 *3*	1.7 *2*	3029.70	$(5/2^+)$	1099.29	$5/2^+$	[M1]	6.08×10^{-4}	α(K)=0.000310 *5*; α(L)=3.61×10^{-5} *5*; α(M)=6.96×10^{-6} *10* α(N)=1.280×10^{-6} *18*; α(O)=9.71×10^{-8} *14*; α(IPF)=0.000253 *4* %Iγ=0.50 *6*, using the calculated normalization.
1943.5 *3*	3.6 *4*	2924.48	(3/2,5/2)	980.93	$3/2^-$			%Iγ=1.05 *12*, using the calculated normalization.
1951.3	0.3	3050.74	$(5/2^+,7/2)$	1099.29	$5/2^+$			%Iγ=0.0879 *16*, using the calculated normalization. E_γ: not given in the table 3 (1981Bu17).
1956.9 *2*	1.3 *2*	1957.11	$5/2^+$	0.0	$9/2^+$	[E2]	5.93×10^{-4}	α(K)=0.000274 *4*; α(L)=3.20×10^{-5} *5*; α(M)=6.17×10^{-6} *9*

$^{109}_{49}In_{60}$-11

^{109}Sn ε decay 1981Bu17 (continued)

γ(^{109}In) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
								α(N)=1.132×10^{-6} *16*; α(O)=8.49×10^{-8} *12*; α(IPF)=0.000280 *4*
								%Iγ=0.38 *6*, using the calculated normalization.
1962.2 *5*	0.5 *1*	2943.0	(5/2$^+$,7/2$^-$)	980.93	3/2$^-$			%Iγ=0.15 *3*, using the calculated normalization.
[x]2007.1 *3*	0.3 *1*							%Iγ=0.09 *3*, using the calculated normalization.
[x]2030.0[c] *2*	1.2 *3*							%Iγ=0.35 *9*, using the calculated normalization.
2049.0 *5*	1.0 *2*	3029.70	(5/2$^+$)	980.93	3/2$^-$	[E1]	7.92×10^{-4}	α(K)=0.0001326 *19*; α(L)=1.520×10^{-5} *22*; α(M)=2.93×10^{-6} *4*
								α(N)=5.37×10^{-7} *8*; α(O)=4.04×10^{-8} *6*; α(IPF)=0.000640 *9*
								%Iγ=0.29 *6*, using the calculated normalization.
2055.2 *3*	5.9 *3*	2055.14	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=1.73 *10*, using the calculated normalization.
2074.8 *9*	0.3 *1*	3395.68	(5/2$^+$,7/2)	1321.26	5/2$^+$			%Iγ=0.09 *3*, using the calculated normalization.
[x]2078.8 *5*	0.2 *1*							%Iγ=0.06 *3*, using the calculated normalization.
[x]2099.2 *7*	0.3 *1*							%Iγ=0.09 *3*, using the calculated normalization.
[x]2106.2 *5*	0.1 *1*							%Iγ=0.03 *3*, using the calculated normalization.
2125.9 *2*	4.6 *3*	2125.77	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=1.35 *9*, using the calculated normalization.
2158.9 *4*	2.4 *3*	2808.8	3/2	649.80	1/2$^-$			%Iγ=0.70 *9*, using the calculated normalization.
2195.6 *2*	4.7 *3*	2845.78	3/2	649.80	1/2$^-$			%Iγ=1.38 *9*, using the calculated normalization.
2218.5 *5*	0.73 *7*	2218.56	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.214 *21*, using the calculated normalization.
2235.8 *3*	0.36 *5*	2235.8	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.105 *15*, using the calculated normalization.
2276.5 *8*	0.8 *3*	2276.5	(7/2$^+$)	0.0	9/2$^+$	[M1]	6.76×10^{-4}	α(K)=0.000223 *4*; α(L)=2.59×10^{-5} *4*; α(M)=4.99×10^{-6} *7*
								α(N)=9.18×10^{-7} *13*; α(O)=6.96×10^{-8} *10*; α(IPF)=0.000421 *6*
								%Iγ=0.23 *9*, using the calculated normalization.
[x]2302.5[c] *6*	0.4 *2*							%Iγ=0.12 *6*, using the calculated normalization.
2437.5 *4*	0.47 *5*	3418.5	5/2$^+$,7/2$^-$	980.93	3/2$^-$			%Iγ=0.138 *15*, using the calculated normalization.
2541.8 *3*	8.7 *5*	2542.01	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=2.55 *15*, using the calculated normalization.
2564.2 *7*	0.34 *7*	2564.2	(5/2$^+$)	0.0	9/2$^+$	[E2]	7.64×10^{-4}	α(K)=0.0001689 *24*; α(L)=1.96×10^{-5} *3*; α(M)=3.77×10^{-6} *6*
								α(N)=6.92×10^{-7} *10*; α(O)=5.22×10^{-8} *8*; α(IPF)=0.000571 *8*
								%Iγ=0.100 *21*, using the calculated normalization.
2574.8 *3*	0.37 *6*	2574.8	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.108 *18*, using the calculated normalization.
2591.6 *4*	2.0 *2*	2591.87	7/2$^+$	0.0	9/2$^+$	[M1]	7.70×10^{-4}	α(K)=0.0001732 *25*; α(L)=2.01×10^{-5} *3*; α(M)=3.87×10^{-6} *6*
								α(N)=7.11×10^{-7} *10*; α(O)=5.40×10^{-8} *8*; α(IPF)=0.000572 *8*
								%Iγ=0.59 *6*, using the calculated normalization.
2602.7 *4*	0.26 *4*	2602.3	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.076 *12*, using the calculated normalization.
2617.0 *10*	0.2 *1*	2617.16	(5/2,7/2)$^+$	0.0	9/2$^+$			%Iγ=0.06 *3*, using the calculated normalization.
2785.4 *3*	5.8 *4*	2785.62	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=1.70 *12*, using the calculated normalization.
2813.2 *4*	1.3 *2*	2813.46	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.38 *6*, using the calculated normalization.
2852.2 *10*	0.2 *1*	2851.72	7/2$^+$	0.0	9/2$^+$	[M1]	8.59×10^{-4}	α(K)=0.0001443 *21*; α(L)=1.669×10^{-5} *24*; α(M)=3.22×10^{-6} *5*
								α(N)=5.91×10^{-7} *9*; α(O)=4.49×10^{-8} *7*; α(IPF)=0.000694 *10*
								%Iγ=0.06 *3*, using the calculated normalization.
2858.6 *2*	3.4 *3*	2858.58	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=1.00 *9*, using the calculated normalization.
2871.2 *9*	0.27 *5*	2871.19	5/2$^+$	0.0	9/2$^+$	[E2]	8.69×10^{-4}	α(K)=0.0001390 *20*; α(L)=1.605×10^{-5} *23*; α(M)=3.09×10^{-6} *5*
								α(N)=5.68×10^{-7} *8*; α(O)=4.29×10^{-8} *6*; α(IPF)=0.000711 *10*
								%Iγ=0.079 *15*, using the calculated normalization.
2919.8 *7*	0.05 *2*	2919.8	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.015 *6*, using the calculated normalization.

$^{109}_{49}In_{60}$-12

^{109}Sn ε decay 1981Bu17 (continued)

γ(^{109}In) (continued)

E_γ[†]	I_γ[‡&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[#]	Comments
2942.8 *4*	0.37 *5*	2943.0	(5/2$^+$,7/2$^-$)	0.0	9/2$^+$			%Iγ=0.108 *15*, using the calculated normalization.
3013.4 *3*	0.42 *5*	3013.4	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.123 *15*, using the calculated normalization.
3029.5 *6*	0.15 *6*	3029.70	(5/2$^+$)	0.0	9/2$^+$	[E2]	9.25×10^{-4}	α(K)=0.0001269 *18*; α(L)=1.463×10^{-5} *21*; α(M)=2.82×10^{-6} *4* α(N)=5.18×10^{-7} *8*; α(O)=3.91×10^{-8} *6*; α(IPF)=0.000780 *11* %Iγ=0.044 *18*, using the calculated normalization.
3034.8 *4*	0.41 *6*	3034.8	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.120 *18*, using the calculated normalization.
3050.7 *2*	1.2 *2*	3050.74	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.35 *6*, using the calculated normalization.
3065.6 *2*	0.26 *5*	3065.65	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.076 *15*, using the calculated normalization.
3139.8[c] *6*	0.14 *4*	3140.3	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.041 *12*, using the calculated normalization.
3316.7 *3*	0.30 *5*	3316.8	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.088 *15*, using the calculated normalization.
3360.9 *6*	0.07 *2*	3361.0	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.021 *6*, using the calculated normalization.
3395.6 *2*	0.37 *5*	3395.68	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.108 *15*, using the calculated normalization.
3418.5	0.04	3418.5	5/2$^+$,7/2$^-$	0.0	9/2$^+$			%Iγ=0.01172 *21*, using the calculated normalization. E_γ: not given in the table 3 (1981Bu17).
3427.3 *8*	0.06 *2*	3426.53	(5/2$^+$,7/2)	0.0	9/2$^+$			%Iγ=0.018 *6*, using the calculated normalization.

[†] From adopted gammas. ce data from ^{109}Sn ε decay are given in the comments.
[‡] From 1981Bu17, unless otherwise stated.
[#] Additional information 2.
[@] If No value given it was assumed δ=0.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[&] For absolute intensity per 100 decays, multiply by 0.293 *5*.
[a] Multiply placed with undivided intensity.
[b] Multiply placed with intensity suitably divided.
[c] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

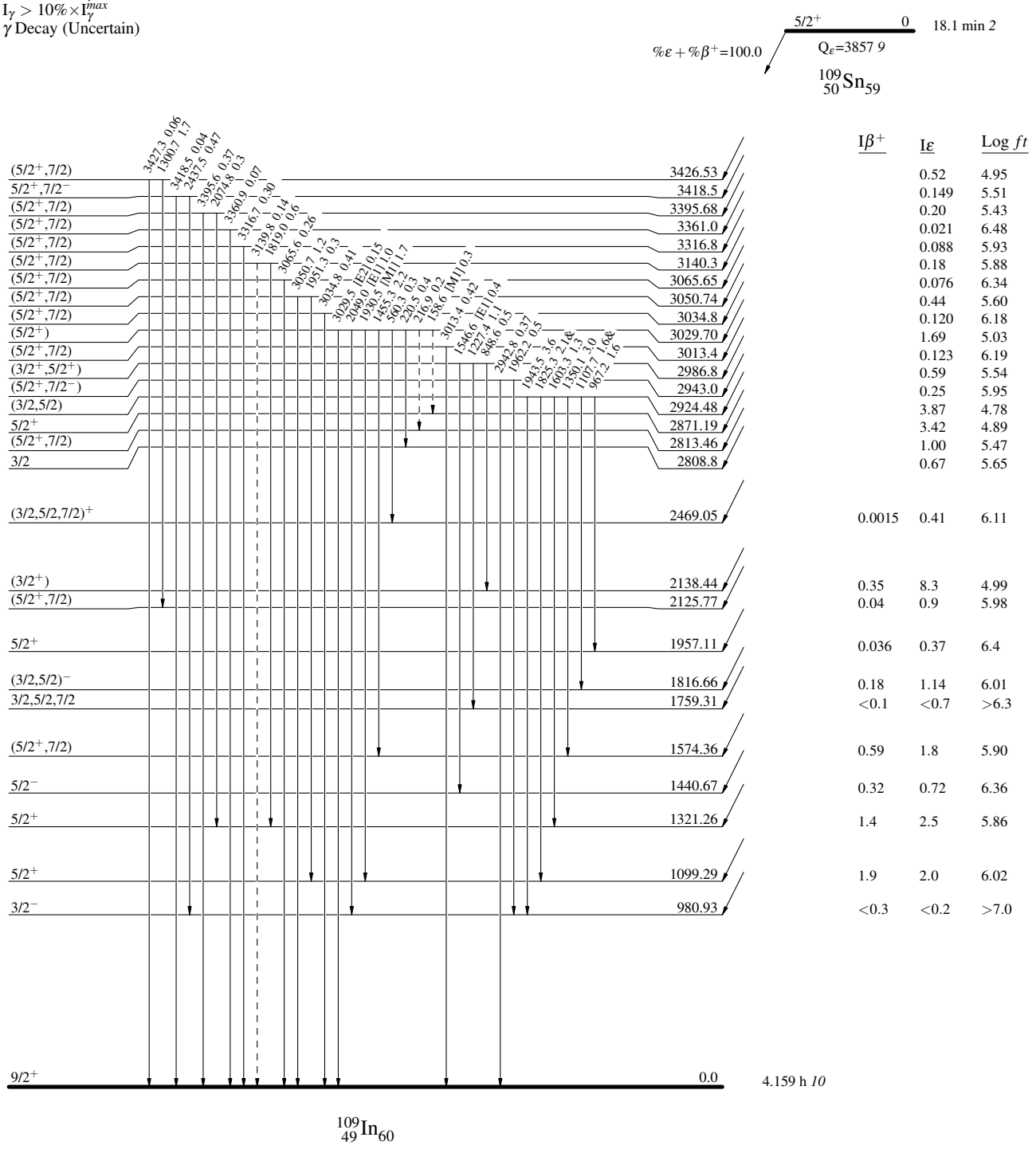
$^{109}_{49}In_{60}$-13

^{109}Sn ε decay 1981Bu17

Decay Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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)



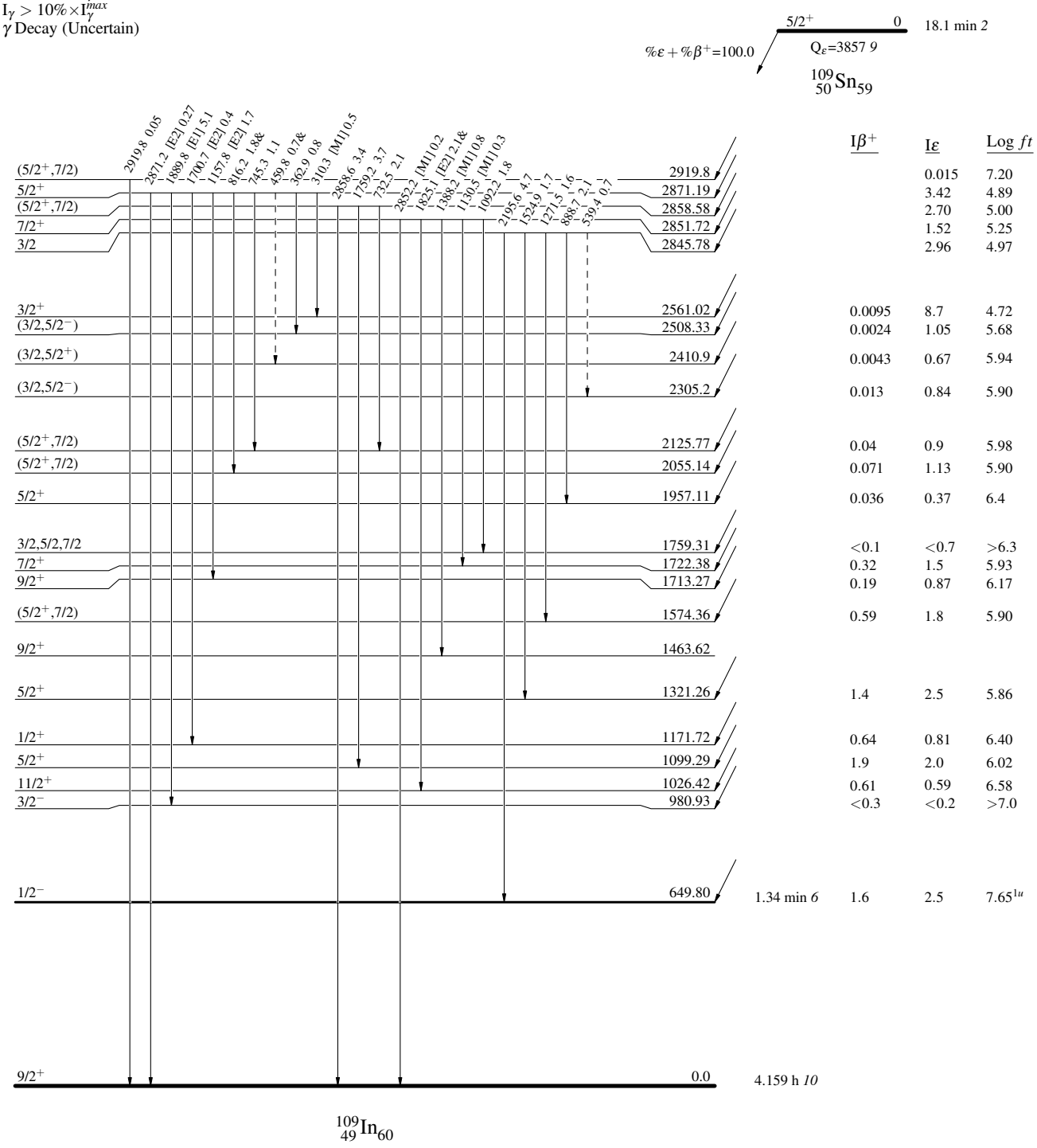
	Iβ+	Iε	Log *ft*
		0.52	4.95
		0.149	5.51
		0.20	5.43
		0.021	6.48
		0.088	5.93
		0.18	5.88
		0.076	6.34
		0.44	5.60
		0.120	6.18
		1.69	5.03
		0.123	6.19
		0.59	5.54
		0.25	5.95
		3.87	4.78
		3.42	4.89
		1.00	5.47
		0.67	5.65
	0.0015	0.41	6.11
	0.35	8.3	4.99
	0.04	0.9	5.98
	0.036	0.37	6.4
	0.18	1.14	6.01
	<0.1	<0.7	>6.3
	0.59	1.8	5.90
	0.32	0.72	6.36
	1.4	2.5	5.86
	1.9	2.0	6.02
	<0.3	<0.2	>7.0

^{109}Sn ε decay 1981Bu17

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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)



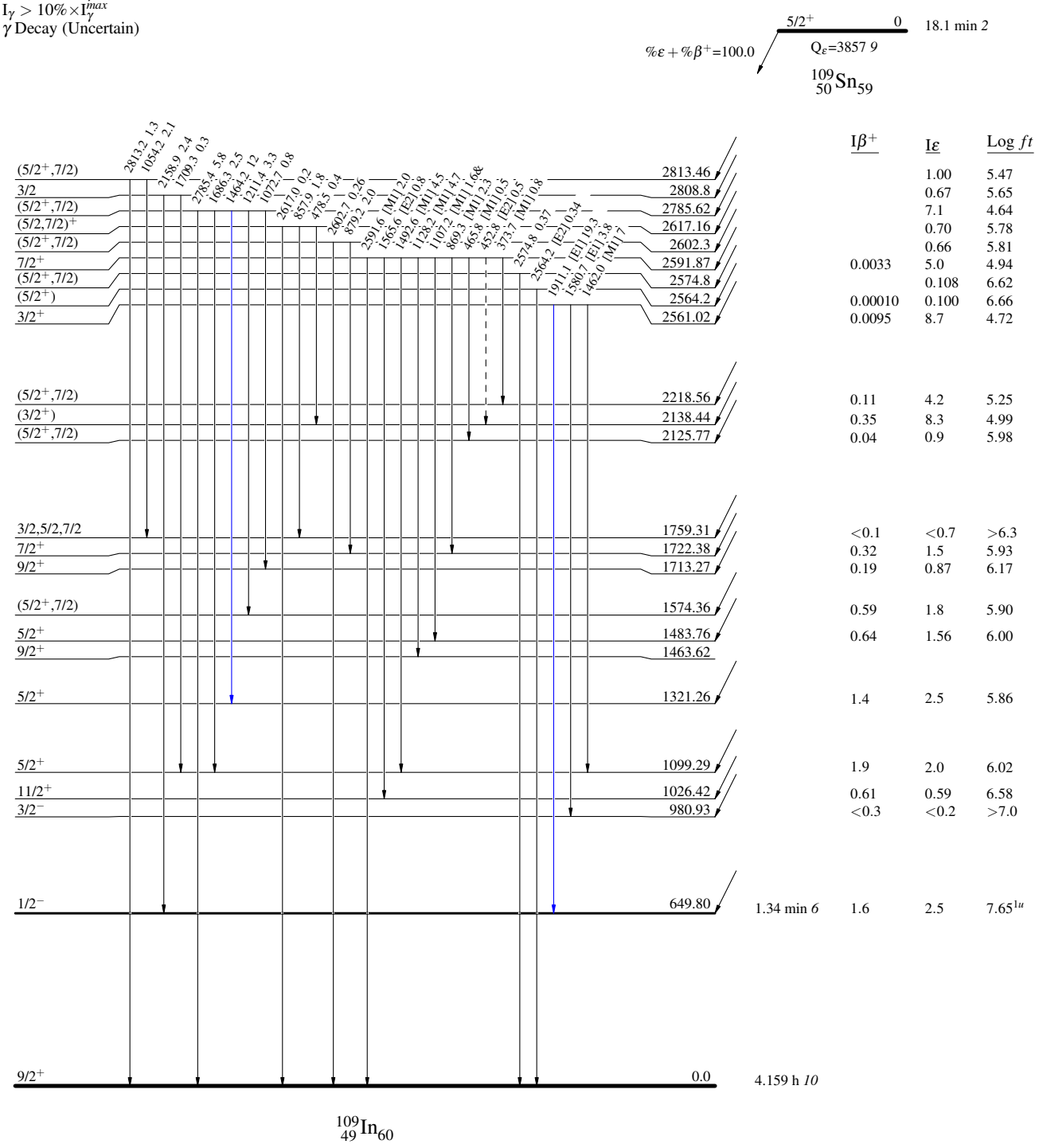
	Iβ+	Iε	Log *ft*
		0.015	7.20
		3.42	4.89
		2.70	5.00
		1.52	5.25
		2.96	4.97
	0.0095	8.7	4.72
	0.0024	1.05	5.68
	0.0043	0.67	5.94
	0.013	0.84	5.90
	0.04	0.9	5.98
	0.071	1.13	5.90
	0.036	0.37	6.4
	<0.1	<0.7	>6.3
	0.32	1.5	5.93
	0.19	0.87	6.17
	0.59	1.8	5.90
	1.4	2.5	5.86
	0.64	0.81	6.40
	1.9	2.0	6.02
	0.61	0.59	6.58
	<0.3	<0.2	>7.0
1.34 min 6	1.6	2.5	7.65[1u]

^{109}Sn ε decay 1981Bu17

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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)

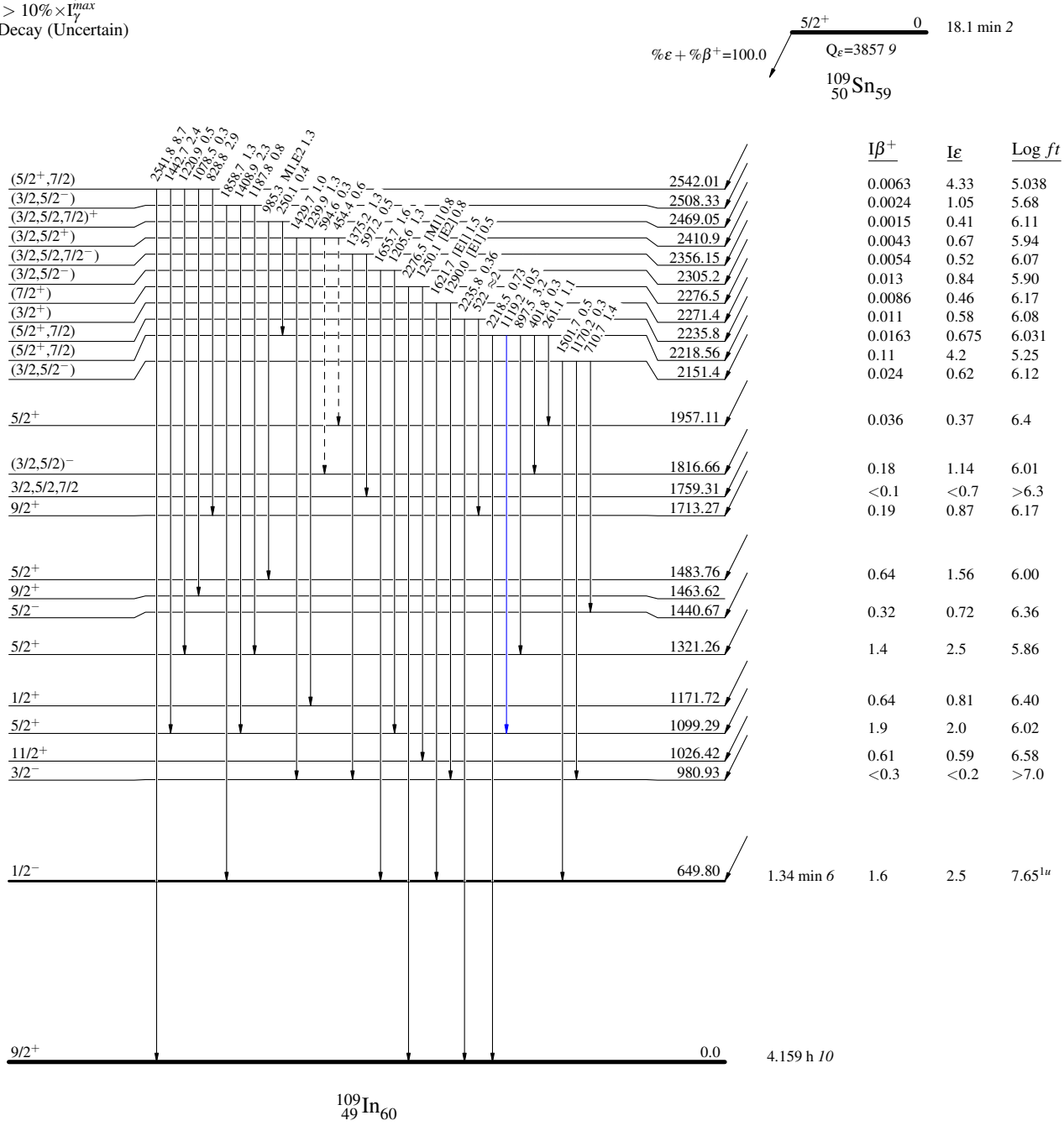


^{109}Sn ε decay 1981Bu17

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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)

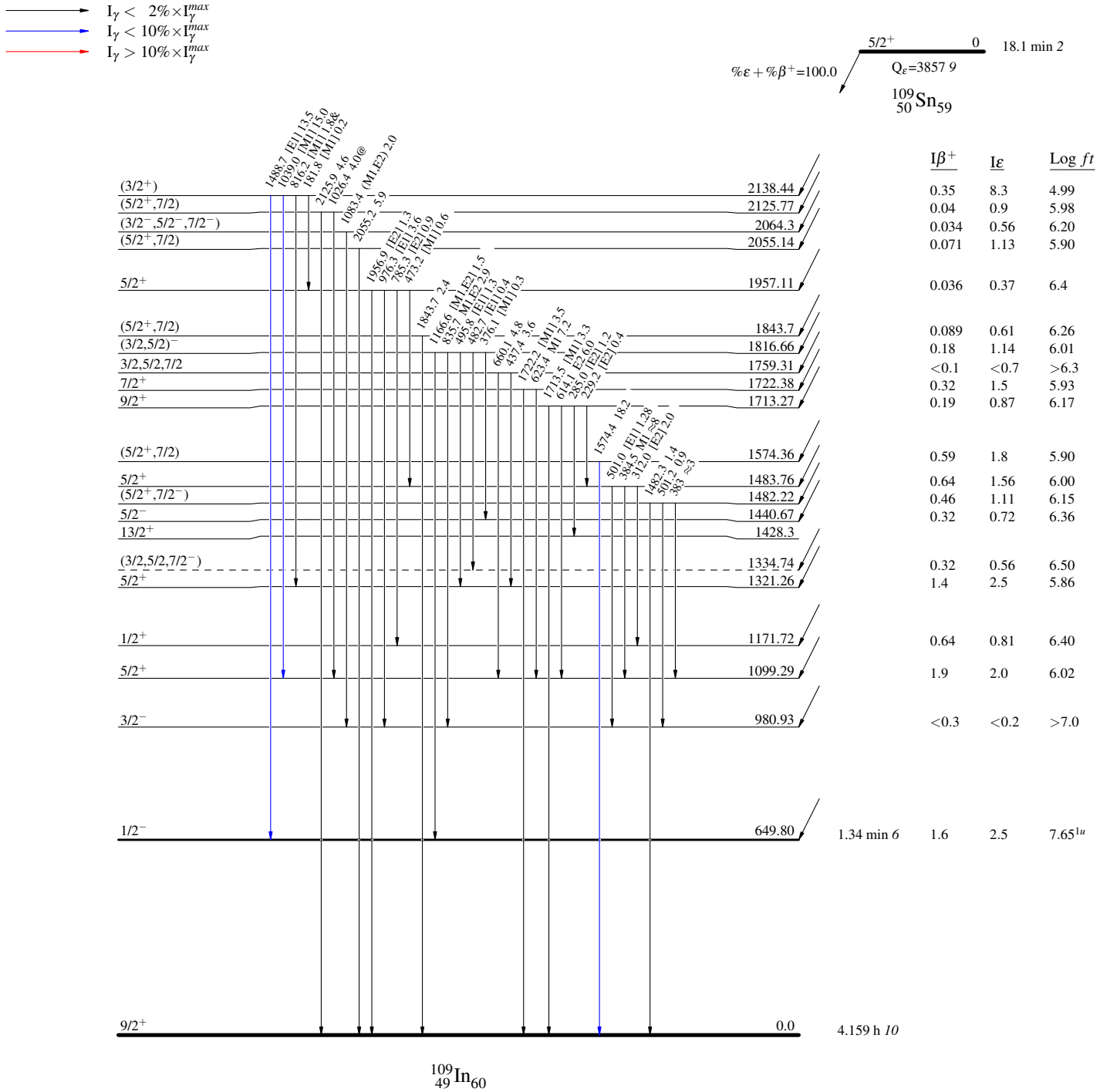


	Iβ+	Iε	Log ft
2542.01	0.0063	4.33	5.038
2508.33	0.0024	1.05	5.68
2469.05	0.0015	0.41	6.11
2410.9	0.0043	0.67	5.94
2356.15	0.0054	0.52	6.07
2305.2	0.013	0.84	5.90
2276.5	0.0086	0.46	6.17
2271.4	0.011	0.58	6.08
2235.8	0.0163	0.675	6.031
2218.56	0.11	4.2	5.25
2151.4	0.024	0.62	6.12
1957.11	0.036	0.37	6.4
1816.66	0.18	1.14	6.01
1759.31	<0.1	<0.7	>6.3
1713.27	0.19	0.87	6.17
1483.76	0.64	1.56	6.00
1463.62			
1440.67	0.32	0.72	6.36
1321.26	1.4	2.5	5.86
1171.72	0.64	0.81	6.40
1099.29	1.9	2.0	6.02
1026.42	0.61	0.59	6.58
980.93	<0.3	<0.2	>7.0
649.80	1.6	2.5	7.65^{1u}

^{109}Sn ε decay 1981Bu17

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

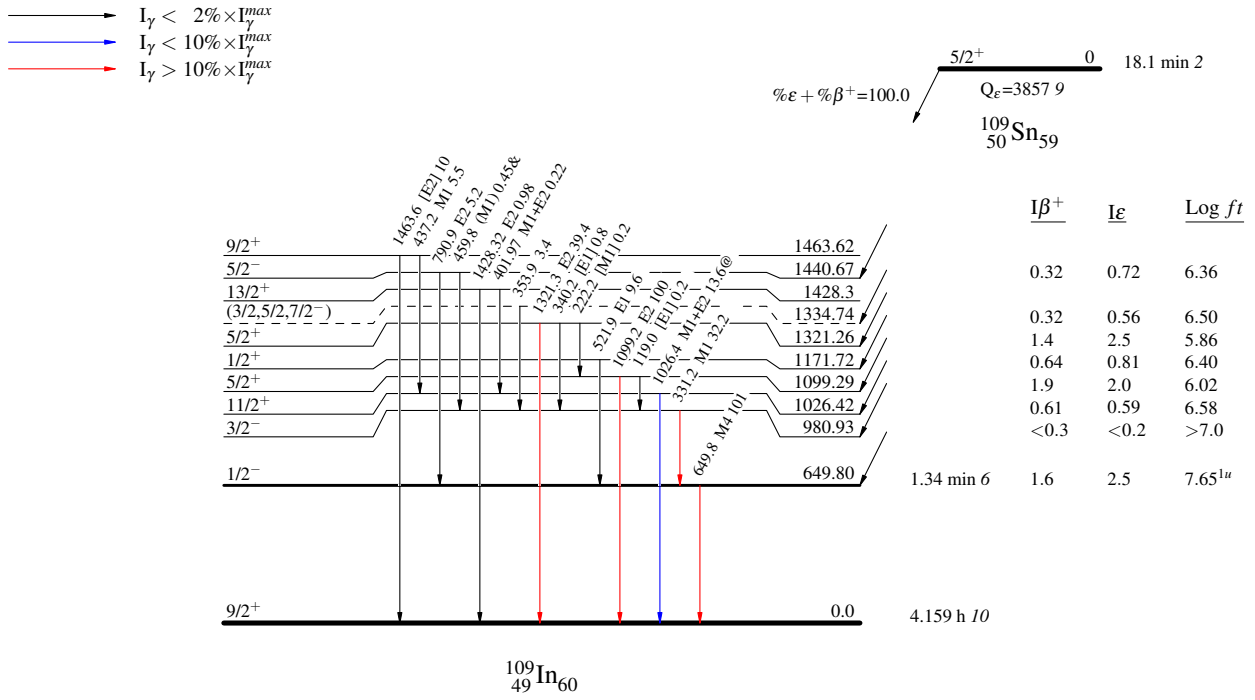


$^{109}_{49}In_{60}$

^{109}Sn ε decay 1981Bu17

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



	Iβ+	Iε	Log *ft*
1463.62			
1440.67	0.32	0.72	6.36
1428.3			
1334.74	0.32	0.56	6.50
1321.26	1.4	2.5	5.86
1171.72	0.64	0.81	6.40
1099.29	1.9	2.0	6.02
1026.42	0.61	0.59	6.58
980.93	<0.3	<0.2	>7.0
649.80	1.6	2.5	7.65[1u]