^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, F. G. Kondev	NDS 124, 157 (2015)	1-Aug-2014

Parent: ^{112}Sb: E=0.0; J^π=(3$^+$); $T_{1/2}$=53.5 s *6*; Q(ε)=7057 *18*; %ε+%$β^+$ decay=100.0

1975WiZX: Facility: AVF cyclotron at Vrije Universiteit, Amsterdam; Source: mass-separated ^{112}Sb from ^{112}Sn(p,n), E(p)=25 MeV, 35 mg/cm^2 thick target enriched to 87.51% in ^{112}Sn; Detectors: four coaxial Ge(Li), one planar Ge(Li) and one LEPS, active and passive anti-Compton shielding; Measured: γ, γ-γ, , γ(t), Eγ, Iγ; Deduced: ^{112}Sn level scheme, t, J^π, log *ft*; Also, from the same collaboration 1976Wi10.

Others: 1959Se56, 1969BoZS, 1970SuZY, 1972Si28, 1972Mi27.

^{112}Sn Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0	0$^+$	2556.6 *3*	(2$^+$)	2966.58 *8*	2$^+$	3417.42 *11*	4$^+$
1256.69 *4*	2$^+$	2721.07 *14*	2$^+$	3078.54 *13*	(2,3)$^+$	3456.32 *20*	(2,3)$^+$
2150.86 *6*	2$^+$	2756.02 *9*	3$^+$	3092.21 *10*	2$^+$	3524.55 *18*	2$^+$
2247.40 *6*	4$^+$	2783.90 *20*	4$^+$	3149.27 *21*	4$^+$	3530.13 *14*	2$^+$,3,4$^+$
2354.12 *5*	3$^-$	2913.14 *22*	4$^+$	3248.67 *10*	2$^+$	3553.7 *3*	(3)$^-$
2476.15 *11*	2$^+$	2917.39 *10*	2$^+$,3,4$^+$	3286.18 *15*	(2)$^+$	3813.72 *10*	(2$^+$,3$^+$,4$^+$)
2520.78 *8*	4$^+$	2945.40 *17*	4$^+$	3384.30 *22*	(3)$^-$		

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

ε,$β^+$ radiations

E(decay)	E(level)	Iβ$^+$ #	Iε†#	Log *ft*‡	I(ε+β$^+$)‡#	Comments
(3243 *18*)	3813.72	1.94 *6*	1.09 *4*	5.163 *19*	3.03 *9*	av Eβ=997.7 *83*; εK=0.308 *5*; εL=0.0398 *7*; εM+=0.01020 *17*
(3503 *18*)	3553.7	0.77 *5*	0.307 *21*	5.78 *3*	1.08 *7*	av Eβ=1117.5 *84*; εK=0.245 *4*; εL=0.0315 *5*; εM+=0.00809 *13*
(3527 *18*)	3530.13	0.23 *3*	0.089 *11*	6.32 *6*	0.32 *4*	av Eβ=1128.4 *84*; εK=0.240 *4*; εL=0.0309 *5*; εM+=0.00793 *13*
(3532 *18*)	3524.55	0.32 *3*	0.12 *1*	6.19 *5*	0.44 *4*	av Eβ=1131.0 *84*; εK=0.238 *4*; εL=0.0307 *5*; εM+=0.00789 *13*
(3601 *18*)	3456.32	0.259 *19*	0.092 *7*	6.33 *4*	0.351 *25*	av Eβ=1162.6 *84*; εK=0.225 *4*; εL=0.0289 *5*; εM+=0.00743 *12*
(3640 *18*)	3417.42	0.74 *5*	0.25 *2*	5.90 *3*	0.99 *6*	av Eβ=1180.6 *84*; εK=0.217 *4*; εL=0.0280 *5*; εM+=0.00718 *12*
(3673 *18*)	3384.30	0.66 *4*	0.21 *1*	5.98 *3*	0.87 *5*	av Eβ=1196.0 *84*; εK=0.211 *4*; εL=0.0272 *5*; εM+=0.00697 *11*
(3771 *18*)	3286.18	1.01 *5*	0.293 *14*	5.864 *24*	1.30 *6*	av Eβ=1241.6 *84*; εK=0.194 *3*; εL=0.0250 *4*; εM+=0.00641 *10*
(3808 *18*)	3248.67	1.27 *15*	0.36 *4*	5.79 *6*	1.63 *19*	av Eβ=1259.0 *84*; εK=0.188 *3*; εL=0.0242 *4*; εM+=0.00621 *10*
(3908 *18*)	3149.27	0.62 *4*	0.15 *1*	6.17 *3*	0.77 *5*	av Eβ=1305.4 *84*; εK=0.173 *3*; εL=0.0222 *4*; εM+=0.00571 *9*
(3965 *18*)	3092.21	0.95 *3*	0.226 *9*	6.020 *19*	1.18 *4*	av Eβ=1332.0 *84*; εK=0.1648 *25*; εL=0.0212 *4*; εM+=0.00544 *9*
(3978 *18*)	3078.54	1.23 *3*	0.288 *9*	5.918 *17*	1.52 *4*	av Eβ=1338.4 *84*; εK=0.1630 *25*; εL=0.0210 *4*; εM+=0.00538 *9*
(4090 *18*)	2966.58	4.29 *7*	0.895 *20*	5.450 *14*	5.18 *8*	av Eβ=1390.7 *85*; εK=0.1487 *22*; εL=0.0191 *3*; εM+=0.00491 *8*
(4112 *18*)	2945.40	0.209 *8*	0.0428 *18*	6.775 *21*	0.252 *10*	av Eβ=1400.6 *85*; εK=0.1462 *22*; εL=0.0188 *3*;

Continued on next page (footnotes at end of table)

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

ε,β+ radiations (continued)

E(decay)	E(level)	Iβ+ #	Iε†#	Log ft‡	I(ε+β+)‡#	Comments
						εM+=0.00482 *7*
(4140 *18*)	2917.39	3.3 *5*	0.65 *10*	5.60 *7*	3.9 *6*	av Eβ=1413.7 *85*; εK=0.1429 *21*; εL=0.0184 *3*; εM+=0.00472 *7*
(4144 *18*)	2913.14	1.51 *14*	0.30 *3*	5.94 *5*	1.81 *17*	av Eβ=1415.7 *85*; εK=0.1424 *21*; εL=0.0183 *3*; εM+=0.00470 *7*
(4273 *18*)	2783.90	≤0.10	≤0.018	≥7.2	≤0.12	av Eβ=1476.4 *85*; εK=0.1286 *19*; εL=0.01653 *24*; εM+=0.00424 *6*
(4301 *18*)	2756.02	1.48 *4*	0.253 *8*	6.043 *17*	1.73 *5*	av Eβ=1489.4 *85*; εK=0.1258 *18*; εL=0.01617 *23*; εM+=0.00415 *6*
(4336 *18*)	2721.07	0.426 *17*	0.071 *3*	6.603 *21*	0.497 *20*	av Eβ=1505.9 *85*; εK=0.1224 *18*; εL=0.01574 *23*; εM+=0.00404 *6*
(4500 *18*)	2556.6	0.179 *17*	0.0257 *24*	7.07 *5*	0.205 *19*	av Eβ=1583.3 *85*; εK=0.1080 *15*; εL=0.01388 *19*; εM+=0.00356 *5*
(4536 *18*)	2520.78	0.58 *12*	0.081 *17*	6.59 *10*	0.66 *14*	av Eβ=1600.2 *85*; εK=0.1052 *15*; εL=0.01351 *19*; εM+=0.00347 *5*
(4581 *18*)	2476.15	0.49 *5*	0.066 *7*	6.68 *5*	0.56 *6*	av Eβ=1621.2 *85*; εK=0.1018 *14*; εL=0.01307 *18*; εM+=0.00335 *5*
(4703 *18*)	2354.12	0.7 *3*	0.09 *3*	6.59 *17*	0.8 *3*	av Eβ=1678.9 *86*; εK=0.0931 *13*; εL=0.01196 *16*; εM+=0.00307 *4*
(4810 *18*)	2247.40	6.1 *6*	0.68 *7*	5.71 *5*	6.8 *7*	av Eβ=1729.3 *86*; εK=0.0863 *11*; εL=0.01108 *15*; εM+=0.00284 *4*
(4906 *18*)	2150.86	1.33 *19*	0.138 *20*	6.42 *7*	1.47 *21*	av Eβ=1775.1 *86*; εK=0.0807 *11*; εL=0.01035 *13*; εM+=0.00266 *4*
5770 *50*	1256.69	59.2 *5*	3.32 *5*	5.186 *10*	62.5 *5*	av Eβ=2201.2 *87*; εK=0.0457 *5*; εL=0.00586 *7*; εM+=0.001503 *16*
						E(decay): From 1972Si28. Others: 5550 *50* (1969BoZS), 6220 *100* (1972Mi27).

† From I(γ+ce) imbalance at each level.

‡ The decay scheme suffer from the pandemonium effect and there are many unplaced γ rays, so the values should be considered as approximate.

Absolute intensity per 100 decays.

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

γ(^{112}Sn)

Iγ normalization: from Σ (I(γ+ce) to g.s.)=100 and by assuming of no direct ε feeding to ^{112}Sn g.s. ($J^\pi=0^+$). The decay scheme suffer from the pandemonium effect and there are many unplaced γ rays, so the normalization should be considered as approximate.
I(511γ±)/I(1256γ)=1.83 *9* (1975WiZX,1976Wi10).

E_γ[#]	I_γ[†a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#&]	α[@]	Comments
203.2[†] *2*		2354.12	3^-	2150.86	2^+	[E1]		0.0246	α(K)=0.0214 *3*; α(L)=0.00262 *4*; α(M)=0.000510 *8* α(N)=9.51×10^{-5} *14*; α(O)=7.67×10^{-6} *11* E_γ: from the adopted gammas.
234.8[†] *3*	0.85 *8*	2756.02	3^+	2520.78	4^+	[M1+E2]		0.0542	α(K)=0.0469 *7*; α(L)=0.00586 *9*; α(M)=0.001148 *17* α(N)=0.000216 *4*; α(O)=1.88×10^{-5} *3*
279.5[†] *2*	0.57 *5*	2756.02	3^+	2476.15	2^+	[M1+E2]		0.0343	α(K)=0.0297 *5*; α(L)=0.00369 *6*; α(M)=0.000723 *11* α(N)=0.0001361 *20*; α(O)=1.188×10^{-5} *17*
283.8[†] *2*	0.43 *4*	3813.72	$(2^+,3^+,4^+)$	3530.13	$2^+,3,4^+$				
[x]301.9[†] *2*	1.64 *10*								
[x]377.0[†] *6*	0.58 *11*								
380.8 *2*		3530.13	$2^+,3,4^+$	3149.27	4^+				
392.8 *5*	0.69 *8*	2913.14	4^+	2520.78	4^+	[M1]		0.01440	α(K)=0.01250 *18*; α(L)=0.001535 *22*; α(M)=0.000300 *5* α(N)=5.65×10^{-5} *9*; α(O)=4.95×10^{-6} *8* E_γ: 392.3 keV *4* in 1975WiZX,1976Wi10.
401.3[†] *5*	0.37 *8*	2756.02	3^+	2354.12	3^-	[E1]		0.00406	α(K)=0.00354 *5*; α(L)=0.000425 *7*; α(M)=8.28×10^{-5} *12* α(N)=1.552×10^{-5} *23*; α(O)=1.303×10^{-6} *19*
431.9 *6*	0.33 *5*	3524.55	2^+	3092.21	2^+	[M1]		0.01136	α(K)=0.00987 *15*; α(L)=0.001208 *18*; α(M)=0.000236 *4* α(N)=4.45×10^{-5} *7*; α(O)=3.90×10^{-6} *6*
[x]446.2[†] *7*	0.43 *7*								
467.2[†] *3*	1.29 *12*	3384.30	$(3)^-$	2917.39	$2^+,3,4^+$				
470		2945.40	4^+	2476.15	2^+	[E2]		0.00882	α(K)=0.00754 *11*; α(L)=0.001033 *15*; α(M)=0.000203 *3* α(N)=3.78×10^{-5} *6*; α(O)=2.95×10^{-6} *5* E_γ: not observed in 1976Wi10,1975WiZX,1976Wi10.
508.8[c] *3*		2756.02	3^+	2247.40	4^+	M1+E2	0.2 *1*	0.00757	α(K)=0.00658 *10*; α(L)=0.000804 *12*; α(M)=0.0001572 *23* α(N)=2.96×10^{-5} *5*; α(O)=2.59×10^{-6} *4*
536		2783.90	4^+	2247.40	4^+	[M1+E2]		0.00669	α(K)=0.00582 *9*; α(L)=0.000707 *10*; α(M)=0.0001382 *20* α(N)=2.60×10^{-5} *4*; α(O)=2.29×10^{-6} *4* E_γ: not observed in 1975WiZX,1976Wi10.
557.8 *3*	0.88 *6*	3078.54	$(2,3)^+$	2520.78	4^+				E_γ: 558.4 keV *2* in 1975WiZX,1976Wi10. E_γ: transition placed by the evaluators on the basis of the observed γ-ray in 1975WiZX,1976Wi10 and the adopted gammas.
605.1[†] *2*	3.03 *18*	2756.02	3^+	2150.86	2^+	[M1+E2]		0.00500	α(K)=0.00435 *6*; α(L)=0.000527 *8*; α(M)=0.0001029 *15* α(N)=1.94×10^{-5} *3*; α(O)=1.705×10^{-6} *24*

$^{112}_{50}Sn_{62}$-3

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

γ(^{112}Sn) (continued)

E_γ[#]	I_γ[†a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#&]	α[@]	Comments
612.4 *1*	4.0 *3*	2966.58	2^+	2354.12	3^-	E1		1.50×10^{-3}	α(K)=0.001307 *19*; α(L)=0.0001555 *22*; α(M)=3.03×10^{-5} *5* α(N)=5.68×10^{-6} *8*; α(O)=4.85×10^{-7} *7* E_γ: 612.7 keV *2* in 1975WiZX,1976Wi10.
665.6 *3*	16.0[‡] *17*	2913.14	4^+	2247.40	4^+	[M1]		0.00399	α(K)=0.00347 *5*; α(L)=0.000419 *6*; α(M)=8.18×10^{-5} *12* α(N)=1.542×10^{-5} *22*; α(O)=1.357×10^{-6} *19* E_γ,I_γ: Not observed in 1975WiZX,1976Wi10.
669.9 *1*	39 *6*	2917.39	2^+,3,4^+	2247.40	4^+				E_γ: 670.0 keV *4* in 1975WiZX,1976Wi10.
700.3[†] *6*	0.67 *17*	3456.32	$(2,3)^+$	2756.02	3^+				
767.0 *2*	4.6 *3*	2917.39	2^+,3,4^+	2150.86	2^+				E_γ: 766.8 keV *2* in 1975WiZX,1976Wi10.
772.44 *24*	2.56 *19*	3248.67	2^+	2476.15	2^+	[M1+E2]		0.00282	α(K)=0.00245 *4*; α(L)=0.000295 *5*; α(M)=5.75×10^{-5} *8* α(N)=1.084×10^{-5} *16*; α(O)=9.55×10^{-7} *14* E_γ: 772.8 keV *2* in 1975WiZX,1976Wi10.
794.5 *2*		2945.40	4^+	2150.86	2^+	[E2]		0.00219	α(K)=0.00189 *3*; α(L)=0.000239 *4*; α(M)=4.67×10^{-5} *7* α(N)=8.74×10^{-6} *13*; α(O)=7.31×10^{-7} *11* E_γ: not observed in 1976Wi10,1975WiZX,1976Wi10.
[x]797.8[†] *3*	2.67 *19*								
831.1[†] *4*	0.66 *14*	3078.54	$(2,3)^+$	2247.40	4^+				
[x]868.7[†] *4*	0.50 *8*								
894.17 *4*	27.6 *21*	2150.86	2^+	1256.69	2^+	M1+E2	−0.28 *6*	0.00199	α(K)=0.00173 *3*; α(L)=0.000207 *3*; α(M)=4.05×10^{-5} *6* α(N)=7.63×10^{-6} *12*; α(O)=6.71×10^{-7} *11* E_γ: 894.6 keV *2* (1975WiZX,1976Wi10).
894.2 *2*	2.7 *19*	3248.67	2^+	2354.12	3^-	[E1]		6.79×10^{-4}	α(K)=0.000593 *9*; α(L)=6.97×10^{-5} *10*; α(M)=1.356×10^{-5} *19* α(N)=2.55×10^{-6} *4*; α(O)=2.20×10^{-7} *3* E_γ: 894.1keV 5 in 1975WiZX,1976Wi10.
900.8[†] *5*	2.9 *5*	3813.72	$(2^+,3^+,4^+)$	2913.14	4^+				
901.8[b] *6*	1.6[b] *5*	3149.27	4^+	2247.40	4^+	[M1+E2]		0.00197	α(K)=0.001718 *25*; α(L)=0.000206 *3*; α(M)=4.01×10^{-5} *6* α(N)=7.57×10^{-6} *11*; α(O)=6.68×10^{-7} *10* E_γ: 900.8 keV *5* in 1975WiZX,1976Wi10.
[x]921.5[†] *3*	0.73 *9*								
927.7 *2*	7.3 *2*	3078.54	$(2,3)^+$	2150.86	2^+	M1+E2	0.60 *+1−2*	0.00176 *3*	α(K)=0.001535 *22*; α(L)=0.000185 *3*; α(M)=3.61×10^{-5} *6* α(N)=6.80×10^{-6} *10*; α(O)=5.94×10^{-7} *9* E_γ: 927.6 keV *2* in 1975WiZX,1976Wi10.

$^{112}_{50}Sn_{62}$-4

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

γ(^{112}Sn) (continued)

E_γ[#]	I_γ[†a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#&]	α[@]	Comments
[x]963.1[†] *3*	1.7 *3*								
990.69 *4*	149 *4*	2247.40	4^+	1256.69	2^+	E2		1.31×10^{-3}	α(K)=0.001140 *16*; α(L)=0.0001402 *20*; α(M)=2.74×10^{-5} *4* α(N)=5.14×10^{-6} *8*; α(O)=4.38×10^{-7} *7* E_γ: 990.0 keV *1* (1975WiZX,1976Wi10).
1009.4[†] *4*	1.3 *3*	3530.13	$2^+,3,4^+$	2520.78	4^+				
1029.6[†] *7*	7.1 *5*	3813.72	$(2^+,3^+,4^+)$	2783.90	4^+				
1097.38 *4*	20 *2*	2354.12	3^-	1256.69	2^+	E1		4.59×10^{-4}	α(K)=0.000401 *6*; α(L)=4.70×10^{-5} *7*; α(M)=9.13×10^{-6} *13* α(N)=1.718×10^{-6} *24*; α(O)=1.492×10^{-7} *21* E_γ: 1098.0 keV *2* (1975WiZX,1976Wi10).
1097.4 *2*		3248.67	2^+	2150.86	2^+	[M1+E2]		1.27×10^{-3}	α(K)=0.001106 *16*; α(L)=0.0001317 *19*; α(M)=2.57×10^{-5} *4* α(N)=4.84×10^{-6} *7*; α(O)=4.28×10^{-7} *6* E_γ: transition placed by the evaluators.
[x]1154.4[†] *12*	2.1 *6*								
[x]1170.6[†] *13*	2.0 *5*								
1219.34 *13*	1.56[‡] *21*	2476.15	2^+	1256.69	2^+	M1+E2	−0.54 *7*	9.77×10^{-4} *16*	α(K)=0.000845 *14*; α(L)=0.0001006 *16*; α(M)=1.96×10^{-5} *3* α(N)=3.70×10^{-6} *6*; α(O)=3.25×10^{-7} *6*; α(IPF)=8.59×10^{-6} *14* E_γ: 1219.3 keV *2* (1975WiZX,1976Wi10).
1256.68 *4*	1000	1256.69	2^+	0.0	0^+	E2		8.05×10^{-4}	α(K)=0.000687 *10*; α(L)=8.28×10^{-5} *12*; α(M)=1.616×10^{-5} *23* α(N)=3.04×10^{-6} *5*; α(O)=2.62×10^{-7} *4*; α(IPF)=1.523×10^{-5} *22* E_γ: 1257.05 keV *8* (1975WiZX,1976Wi10).
1264.07 *7*	11.8 *13*	2520.78	4^+	1256.69	2^+	E2		7.96×10^{-4}	α(K)=0.000679 *10*; α(L)=8.18×10^{-5} *12*; α(M)=1.596×10^{-5} *23* α(N)=3.00×10^{-6} *5*; α(O)=2.59×10^{-7} *4*; α(IPF)=1.648×10^{-5} *24* E_γ: 1264.3 keV *3* (1975WiZX,1976Wi10).
1277.7 *5*	0.8 *3*	3524.55	2^+	2247.40	4^+	E2		7.82×10^{-4}	α(K)=0.000664 *10*; α(L)=8.00×10^{-5} *12*; α(M)=1.560×10^{-5} *22* α(N)=2.93×10^{-6} *5*; α(O)=2.53×10^{-7} *4*; α(IPF)=1.89×10^{-5} *3*
1282.4[†] *4*	1.0 *2*	3530.13	$2^+,3,4^+$	2247.40	4^+				
1293.6[†] *7*	1.0 *5*	3813.72	$(2^+,3^+,4^+)$	2520.78	4^+				
[x]1360.8[†] *2*	0.95 *5*								
[x]1369.1[†] *5*	0.27 *5*								

$^{112}_{50}Sn_{62}$-5

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

γ(^{112}Sn) (continued)

E_γ[#]	I_γ[†a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#&]	α[@]	Comments
1379.6[†] *2*	1.55 *7*	3530.13	2^+,3,4^+	2150.86	2^+				
[x]1421.2[†] *4*	0.29 *6*								
[x]1426.0[†] *3*	0.38 *6*								
1459.5[†] *1*	4.5 *2*	3813.72	(2^+,3^+,4^+)	2354.12	3^-				
1464.22 *15*	4.6 *2*	2721.07	2^+	1256.69	2^+	M1+E2	0.17 *10*	7.38×10^{-4}	α(K)=0.000589 *9*; α(L)=6.96×10^{-5} *11*; α(M)=1.357×10^{-5} *21* α(N)=2.56×10^{-6} *4*; α(O)=2.26×10^{-7} *4*; α(IPF)=6.28×10^{-5} *10* E_γ: 1464.7 keV *1* (1975WiZX,1976Wi10).
[x]1477.8[†] *2*	2.7 *2*								
1499.5[†] *1*	14.3 *4*	2756.02	3^+	1256.69	2^+	M1+E2	0.03 *5*	7.18×10^{-4}	α(K)=0.000562 *8*; α(L)=6.64×10^{-5} *10*; α(M)=1.294×10^{-5} *19* α(N)=2.44×10^{-6} *4*; α(O)=2.16×10^{-7} *3*; α(IPF)=7.41×10^{-5} *11*
1527.2 *2*	7.7 *3*	2783.90	4^+	1256.69	2^+	E2		6.25×10^{-4}	α(K)=0.000466 *7*; α(L)=5.54×10^{-5} *8*; α(M)=1.080×10^{-5} *16* α(N)=2.03×10^{-6} *3*; α(O)=1.770×10^{-7} *25*; α(IPF)=9.08×10^{-5} *13* E_γ: 1527.6 keV *2* (1975WiZX,1976Wi10).
[x]1534.7[†] *5*	0.31 *8*								
[x]1555.1[†] *2*	1.22 *7*								
1566.4[†] *2*	16.6 *4*	3813.72	(2^+,3^+,4^+)	2247.40	4^+				
[x]1582.4[†] *7*	0.20 *6*								
[x]1620.7[†] *6*	1.17 *8*								
[x]1631.0[†] *9*	0.25 *7*								
1656.7 *6*	5.6 *3*	2913.14	4^+	1256.69	2^+	E2		5.99×10^{-4}	α(K)=0.000398 *6*; α(L)=4.72×10^{-5} *7*; α(M)=9.19×10^{-6} *13* α(N)=1.731×10^{-6} *25*; α(O)=1.510×10^{-7} *22*; α(IPF)=0.0001424 *20* E_γ: 1656.7 keV *6* in 1975WiZX,1976Wi10.
1688.7 *3*	2.70 *10*	2945.40	4^+	1256.69	2^+	E2		5.96×10^{-4}	α(K)=0.000384 *6*; α(L)=4.55×10^{-5} *7*; α(M)=8.86×10^{-6} *13* α(N)=1.667×10^{-6} *24*; α(O)=1.456×10^{-7} *21*; α(IPF)=0.0001561 *22* E_γ: 1689.0 keV *2* in 1975WiZX,1976Wi10.
1709.9 *4*	14.1 *5*	2966.58	2^+	1256.69	2^+	M1(+E2)	≤0.7	6.36×10^{-4} *12*	α(K)=0.000418 *11*; α(L)=4.93×10^{-5} *12*; α(M)=9.60×10^{-6} *24* α(N)=1.81×10^{-6} *5*; α(O)=1.60×10^{-7} *5*; α(IPF)=0.000157 *3* E_γ: 1710.2 keV *2* in 1975WiZX,1976Wi10.

$^{112}_{50}Sn_{62}$-6

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

γ(^{112}Sn) (continued)

E_γ[#]	I_γ[†a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#&]	α[@]	Comments
[x]1804.3[†] *1*	0.43 *4*								
1821.8 *2*	7.5 *3*	3078.54	$(2,3)^+$	1256.69	2^+	M1+E2	−1.3 *+3−5*	6.11×10^{-4} *10*	α(K)=0.000348 *8*; α(L)=4.10×10^{-5} *9*; α(M)=7.99×10^{-6} *17* α(N)=1.51×10^{-6} *4*; α(O)=1.32×10^{-7} *3*; α(IPF)=0.000212 *4* E_γ: 1822.2 keV *2* in 1975WiZX,1976Wi10.
1836.0 *3*	10.3 *3*	3092.21	2^+	1256.69	2^+	M1+E2	−1.5 *10*	6.09×10^{-4} *20*	α(K)=0.000340 *21*; α(L)=4.01×10^{-5} *24*; α(M)=7.8×10^{-6} *5* α(N)=1.47×10^{-6} *9*; α(O)=1.29×10^{-7} *9*; α(IPF)=0.000219 *7* E_γ: 1836.5 keV *2* in 1975WiZX,1976Wi10.
[x]1879.2[†] *4*	0.24 *4*								
1892.2 *5*	6.7 *2*	3149.27	4^+	1256.69	2^+	[E2]		6.03×10^{-4}	α(K)=0.000310 *5*; α(L)=3.65×10^{-5} *6*; α(M)=7.11×10^{-6} *10* α(N)=1.340×10^{-6} *19*; α(O)=1.174×10^{-7} *17*; α(IPF)=0.000248 *4* E_γ: 1892.7 keV *2* in 1975WiZX,1976Wi10.
[x]1926.1[†] *1*	0.35 *12*								
[x]1986.0[†] *3*	0.40 *4*								
1992.25 *12*	2.27 *13*	3248.67	2^+	1256.69	2^+	M1+E2		6.41×10^{-4}	α(K)=0.000312 *5*; α(L)=3.66×10^{-5} *6*; α(M)=7.13×10^{-6} *10* α(N)=1.345×10^{-6} *19*; α(O)=1.192×10^{-7} *17*; α(IPF)=0.000284 *4* E_γ: 1992.2 keV *2* in 1975WiZX,1976Wi10;transition placed by the evaluators.
[x]2016.6[†] *3*	0.88 *8*								
2029.4 *2*	6.4 *4*	3286.18	$(2)^+$	1256.69	2^+	M1+E2	≤0.4	6.45×10^{-4} *10*	α(K)=0.000298 *5*; α(L)=3.50×10^{-5} *6*; α(M)=6.82×10^{-6} *11* α(N)=1.287×10^{-6} *20*; α(O)=1.139×10^{-7} *18*; α(IPF)=0.000303 *5* E_γ: 2029.7 keV *2* in 1975WiZX,1976Wi10.
[x]2082.3[†] *2*	0.38 *3*								
[x]2092.9[†] *2*	0.95 *7*								
2127.3 *3*	8.0 *5*	3384.30	$(3)^-$	1256.69	2^+	E1		8.44×10^{-4}	α(K)=0.0001324 *19*; α(L)=1.528×10^{-5} *22*; α(M)=2.97×10^{-6} *5* α(N)=5.59×10^{-7} *8*; α(O)=4.91×10^{-8} *7*; α(IPF)=0.000693 *10* E_γ: 2127.5 keV *2* in 1975WiZX,1976Wi10.
2150.9 *4*	4.6 *3*	2150.86	2^+	0.0	0^+	E2		6.53×10^{-4}	α(K)=0.000245 *4*; α(L)=2.88×10^{-5} *4*; α(M)=5.60×10^{-6} *8* α(N)=1.055×10^{-6} *15*; α(O)=9.27×10^{-8} *13*; α(IPF)=0.000372 *6* E_γ: 1257.0 keV *2* (1975WiZX,1976Wi10).
2160.7 *1*	10.6 *6*	3417.42	4^+	1256.69	2^+	E2		6.56×10^{-4}	α(K)=0.000243 *4*; α(L)=2.85×10^{-5} *4*; α(M)=5.55×10^{-6} *8* α(N)=1.046×10^{-6} *15*; α(O)=9.19×10^{-8} *13*; α(IPF)=0.000377 *6* E_γ: 2160.9 keV *2* in 1975WiZX,1976Wi10.
2199.6[†] *2*	3.1 *2*	3456.32	$(2,3)^+$	1256.69	2^+	M1+E2	2.8 *10*	6.67×10^{-4}	α(K)=0.000238 *5*; α(L)=2.79×10^{-5} *5*; α(M)=5.42×10^{-6} *10* α(N)=1.022×10^{-6} *18*; α(O)=8.99×10^{-8} *17*; α(IPF)=0.000395 *6*
[x]2247.4[†] *3*	0.67 *6*								

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

γ(^{112}Sn) (continued)

E_γ[#]	I_γ[†a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#&]	α[@]	Comments
2267.8 *2*	3.6 *3*	3524.55	2^+	1256.69	2^+	M1(+E2)	≥−0.5	6.88×10^{-4} *11*	α(K)=0.000230 *8*; α(L)=2.69×10^{-5} *9*; α(M)=5.24×10^{-6} *18* α(N)=9.9×10^{-7} *4*; α(O)=8.7×10^{-8} *4*; α(IPF)=0.000425 *7*
2297.0 *3*	11.6 *7*	3553.7	$(3)^-$	1256.69	2^+	[E1]		9.40×10^{-4}	α(K)=0.0001179 *17*; α(L)=1.359×10^{-5} *19*; α(M)=2.64×10^{-6} *4* α(N)=4.97×10^{-7} *7*; α(O)=4.37×10^{-8} *7*; α(IPF)=0.000806 *12* E_γ: 2297.1 keV *2* in 1975WiZX,1976Wi10.
x2398.2[†] *2*	1.88 *11*								
x2449.0[†] *6*	0.28 *6*								
x2454.8[†] *6*	0.26 *4*								
2475.8 *3*	7.6 *5*	2476.15	2^+	0.0	0^+	E2		7.48×10^{-4}	α(K)=0.000191 *3*; α(L)=2.23×10^{-5} *4*; α(M)=4.34×10^{-6} *6* α(N)=8.18×10^{-7} *12*; α(O)=7.20×10^{-8} *10*; α(IPF)=0.000529 *8* E_γ: 2475.9 keV *2* (1975WiZX,1976Wi10).
2556.6[†] *3*	2.2 *2*	2556.6	(2^+)	0.0	0^+	[E2]		7.73×10^{-4}	α(K)=0.000181 *3*; α(L)=2.11×10^{-5} *3*; α(M)=4.10×10^{-6} *6* α(N)=7.72×10^{-7} *11*; α(O)=6.80×10^{-8} *10*; α(IPF)=0.000567 *8*
x2610.7[†] *3*	0.94 *7*								
x2670.1[†] *4*	0.12 *2*								
2721.6 *3*	0.73 *6*	2721.07	2^+	0.0	0^+	E2		8.28×10^{-4}	α(K)=0.0001620 *23*; α(L)=1.89×10^{-5} *3*; α(M)=3.67×10^{-6} *6* α(N)=6.92×10^{-7} *10*; α(O)=6.10×10^{-8} *9*; α(IPF)=0.000643 *9* E_γ: 2721.3 keV *7* (1975WiZX,1976Wi10).
x2737.3[†] *7*	0.40 *3*								
x2755.2[†] *9*	0.16 *3*								
x2775.1[†] *9*	0.24 *4*								
x2781.4[†] *11*	0.15 *4*								
x2830.8[†] *5*	0.21 *3*								
x2887.3[†] *8*	0.31 *3*								
2966.6 *1*	37.5 *5*	2966.58	2^+	0.0	0^+	E2		9.11×10^{-4}	α(K)=0.0001398 *20*; α(L)=1.624×10^{-5} *23*; α(M)=3.16×10^{-6} *5* α(N)=5.95×10^{-7} *9*; α(O)=5.26×10^{-8} *8*; α(IPF)=0.000752 *11* E_γ: 2966.3 keV *3* in 1975WiZX,1976Wi10.
x2976.9[†] *5*	0.22 *3*								
3092.1 *1*	2.7 *2*	3092.21	2^+	0.0	0^+	E2		9.54×10^{-4}	α(K)=0.0001303 *19*; α(L)=1.513×10^{-5} *22*; α(M)=2.94×10^{-6} *5* α(N)=5.55×10^{-7} *8*; α(O)=4.90×10^{-8} *7*; α(IPF)=0.000805 *12* E_γ: 3092.4 keV *3* in 1975WiZX,1976Wi10.
x3130.4[†] *6*	0.16 *3*								
x3146.8[†] *7*	0.12 *3*								
3248.8 *8*	9.9 *6*	3248.67	2^+	0.0	0^+	E2		1.01×10^{-3}	α(K)=0.0001199 *17*; α(L)=1.391×10^{-5} *20*; α(M)=2.70×10^{-6} *4* α(N)=5.10×10^{-7} *8*; α(O)=4.50×10^{-8} *7*; α(IPF)=0.000871 *13* E_γ: 3248.1 keV *4* in 1975WiZX,1976Wi10.
3286.2 *2*	7.6 *5*	3286.18	$(2)^+$	0.0	0^+				E_γ: 3285.6 keV *4* in 1975WiZX,1976Wi10.
x3351.9[†] *7*	0.54 *4*								
x3408.4[†] *5*	0.19 *2*								

$^{112}_{50}Sn_{62}$-8

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10 (continued)

γ(^{112}Sn) (continued)

E_γ[#]	I_γ[†a]	E_i(level)	J_i^π	E_f	J_f^π	Comments
x3431.7† 5	0.13 2					
x3455.4† 5	0.13 2					
3524.2 10		3524.55	2+	0.0	0+	E_γ: from the adopted gammas. Not observed in 1976Wi10,1975WiZX,1976Wi10.
x3653.9† 5	1.95 12					
x3700.6† 15	0.14 3					
x3723.8† 1	0.13 3					
x3827.1† 8	0.18 2					
x3879.4† 6	0.29 3					
x3923.8† 6	0.23 3					
x4042.6† 7	0.06 2					
x4077.3† 9	0.11 3					
x4086.1† 7	0.28 3					
x4152.4† 16	0.11 2					
x4212.0† 9	0.13 2					
x4390.1† 1	0.12 2					
x4541.2† 14	0.08 2					
x4566.9† 15	0.12 2					
x4614.5† 16	0.09 2					
x4665.4† 17	0.12 2					
x4745.4† 27	0.05 2					
x4910.8† 25	0.06 2					
x5132.9† 34	0.07 2					

† From 1975WiZX,1976Wi10, unless otherwise noted.
‡ From adopted gammas, normalized to the Iγ of the strongest decay branch.
# From adopted gammas, unless otherwise stated.
@ Additional information 1.
& 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.
a For absolute intensity per 100 decays, multiply by 0.09314 *10*.
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.

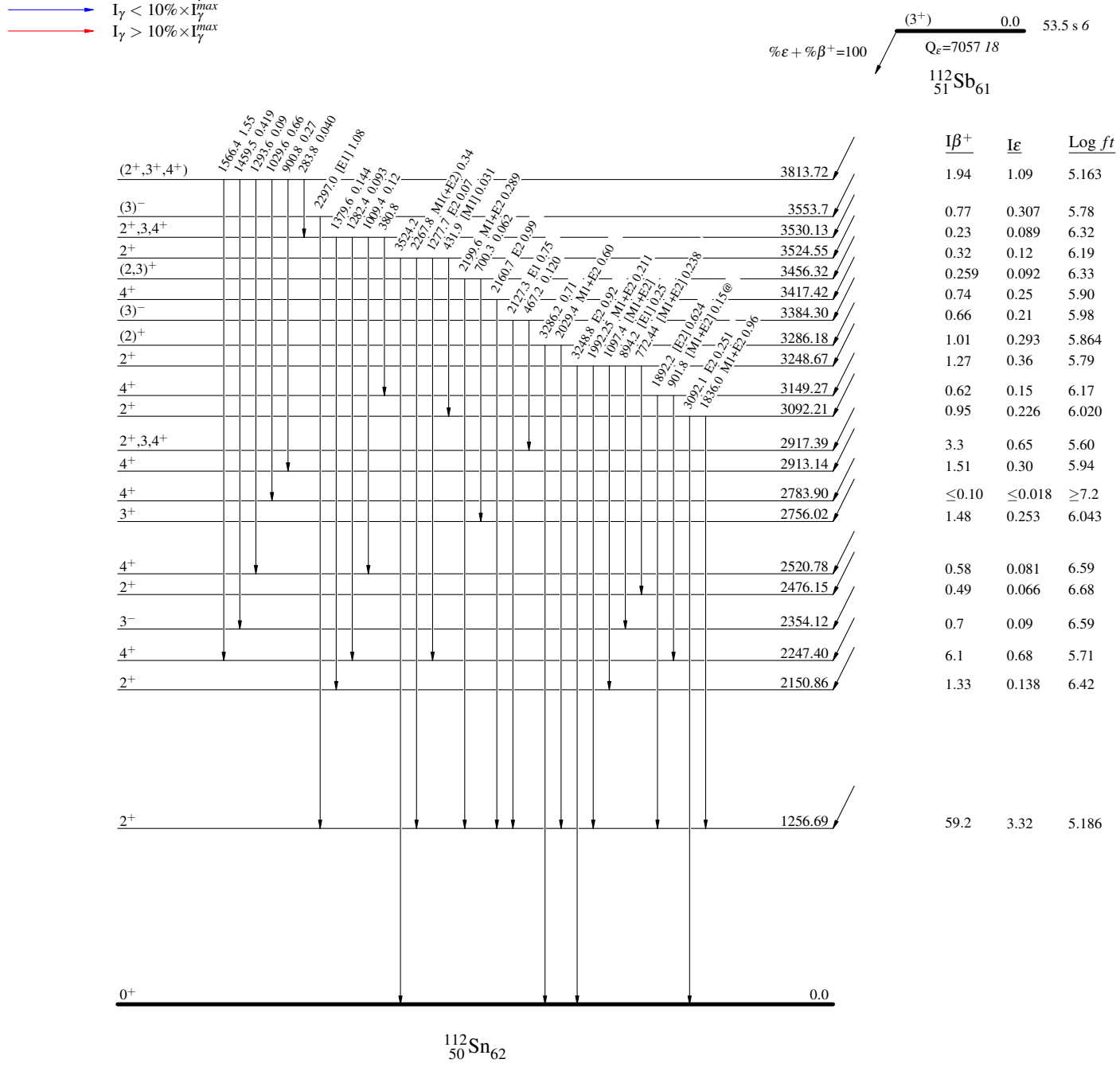
$^{112}_{50}Sn_{62}$-9

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10

Decay Scheme

Intensities: I_γ per 100 parent decays
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



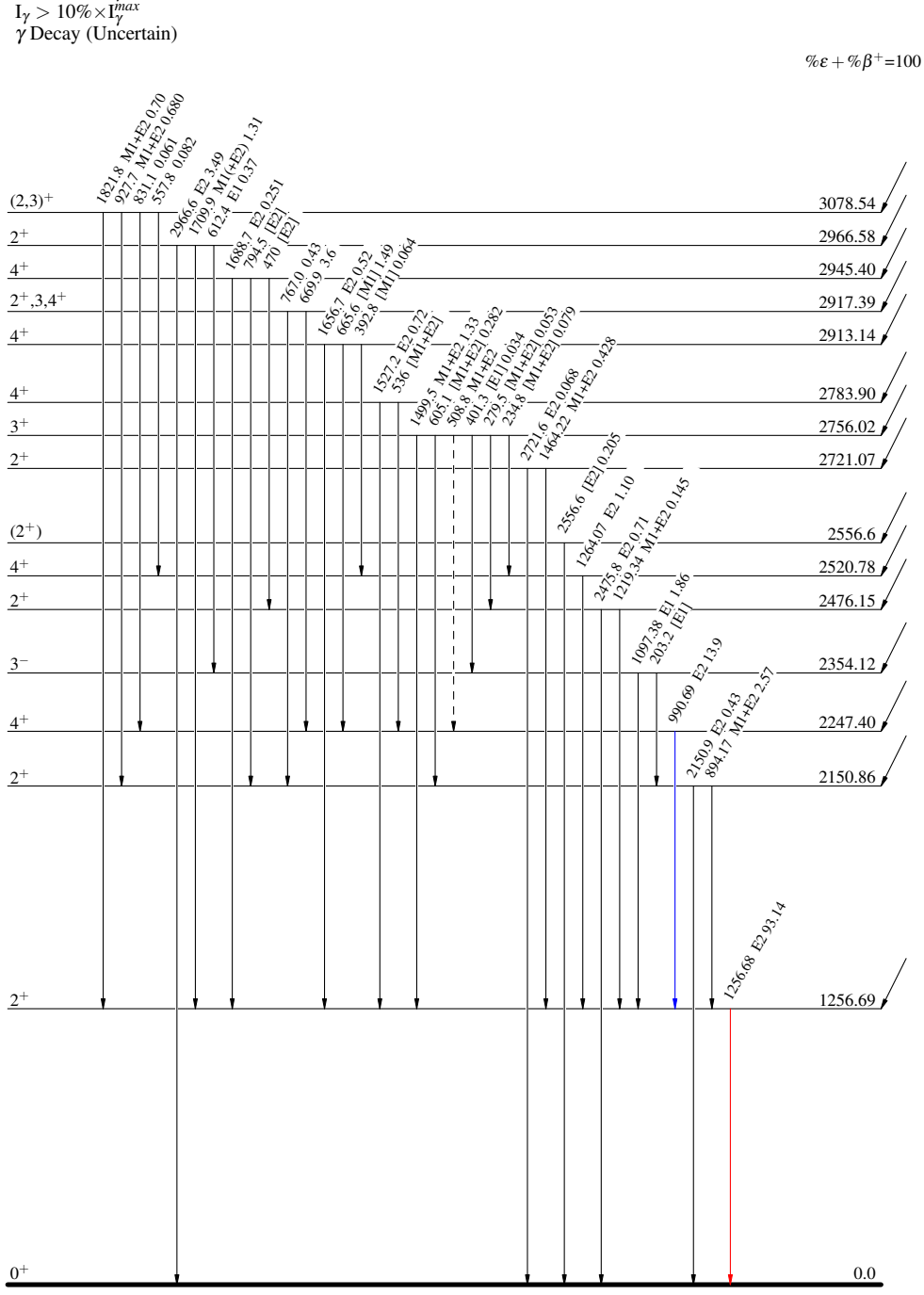
	Iβ+	Iε	Log *ft*
3813.72	1.94	1.09	5.163
3553.7	0.77	0.307	5.78
3530.13	0.23	0.089	6.32
3524.55	0.32	0.12	6.19
3456.32	0.259	0.092	6.33
3417.42	0.74	0.25	5.90
3384.30	0.66	0.21	5.98
3286.18	1.01	0.293	5.864
3248.67	1.27	0.36	5.79
3149.27	0.62	0.15	6.17
3092.21	0.95	0.226	6.020
2917.39	3.3	0.65	5.60
2913.14	1.51	0.30	5.94
2783.90	≤0.10	≤0.018	≥7.2
2756.02	1.48	0.253	6.043
2520.78	0.58	0.081	6.59
2476.15	0.49	0.066	6.68
2354.12	0.7	0.09	6.59
2247.40	6.1	0.68	5.71
2150.86	1.33	0.138	6.42
1256.69	59.2	3.32	5.186

^{112}Sb ε decay 1976Wi10,1975WiZX,1976Wi10

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays
@ Multiply placed: intensity suitably divided

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*
3078.54	1.23	0.288	5.918
2966.58	4.29	0.895	5.450
2945.40	0.209	0.0428	6.775
2917.39	3.3	0.65	5.60
2913.14	1.51	0.30	5.94
2783.90	≤0.10	≤0.018	≥7.2
2756.02	1.48	0.253	6.043
2721.07	0.426	0.071	6.603
2556.6	0.179	0.0257	7.07
2520.78	0.58	0.081	6.59
2476.15	0.49	0.066	6.68
2354.12	0.7	0.09	6.59
2247.40	6.1	0.68	5.71
2150.86	1.33	0.138	6.42
1256.69	59.2	3.32	5.186

$^{112}_{50}Sn_{62}$