^{127}Sn β^- decay (2.10 h) 1974Ap01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. Hashizume	NDS 112, 1647 (2011)	1-Oct-2009

Parent: ^{127}Sn: E=0.0; J$^\pi$=(11/2$^-$); $T_{1/2}$=2.10 h *4*; Q(β^-)=3201 *24*; %β^- decay=100.0

1974Ap01, 1971Ap01: ^{235}U(n,F) E=th, chem; Ge(Li), NaI(Tl), γ, $\gamma\gamma$ coin, $\gamma\gamma$(t).

The decay scheme is that proposed by 1974Ap01 on the basis of $\gamma\gamma$-coin and Eγ sums.

^{127}Sb Levels

E(level)[†]	J$^\pi$[‡#]	$T_{1/2}$	Comments
0.0	7/2$^+$	3.85 d *5*	
491.20 *23*	(5/2)$^+$		
1095.48 *17*	(11/2$^+$)		
1114.35 *18*	(9/2$^+$)		
1471.4 *3*	(7/2$^+$)		
1584.31 *21*	(9/2$^+$)		
1711.8 *4*	(7/2)		
1920.21 *21*	(15/2$^-$)	11 μs *1*	$T_{1/2}$: From (438.2γ)(1095.6γ,1114.3γ)(t) (1971Ap01,1974Ap01). J$^\pi$: From approximately equal γ branching to the 9/2$^+$ and 11/2$^+$ levels, and from $T_{1/2}$=11 μs.
1937.50 *18*	(7/2,9/2,11/2$^+$)		
1955.08 *22*			
1990.6 *3*			
2003.50 *21*	(9/2,11/2$^+$)		
2093.43 *19*	(9/2,11/2$^+$)		
2102.4 *3*	(7/2$^+$,9/2$^+$)		
2110.3 *3*			
2124.32 *22*	(11/2$^-$,13/2,15/2$^+$)		
2140.39 *22*	(11/2$^-$,13/2,15/2$^+$)		
2150.57 *22*	(9/2,11/2$^+$)		
2160.0 *5*	(7/2$^+$,9/2,11/2$^+$)		
2202.1 *3*			
2221.56 *22*	(11/2$^-$,13/2,15/2$^+$)		
2256.4 *5*	7/2$^+$,9/2$^+$		
2274.70 *24*	(9/2,11/2,13/2$^+$)		
2304.1 *4*	(7/2$^+$,9/2$^+$)		
2317.6 *3*	(7/2$^+$,9/2,11/2$^+$)		
2345.68 *22*	(11/2$^-$,13/2,15/2$^+$)		
2351.82 *24*			
2358.5 *3*	(11/2$^-$,13/2)		
2372.59 *24*	(11/2$^-$,13/2,15/2$^+$)		
2406.3 *3*	(9/2,11/2,13/2$^+$)		
2447.4 *3*	(9/2,11/2$^+$)		
2455.87 *21*	(9/2,11/2,13/2)		
2470.0 *5*	(7/2$^+$,9/2,11/2$^+$)		
2482.8 *5*	(9/2,11/2,13/2$^+$)		
2500.72 *22*	(9/2,11/2,13/2$^+$)		
2513.9 *5*	(7/2$^+$,9/2,11/2$^+$)		
2529.69 *21*	(11/2$^-$,13/2)		
2553.7 *3*	(9/2,11/2,13/2)		
2584.9? *5*			
2586.81 *21*	(9/2$^-$,11/2$^-$)		
2630.7 *6*	(9/2,11/2$^+$)		
2638.5 *3*	(9/2,11/2,13/2)		
2663.7 *3*	(9/2,11/2,13/2)		
2695.7 *4*	(9/2,11/2$^+$)		

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^{127}Sn β^- decay (2.10 h) 1974Ap01 (continued)

^{127}Sb Levels (continued)

E(level)†	Jπ‡#	E(level)†	Jπ‡#
2762.21 *25*	(9/2⁻,11/2⁻)	2834.4 *5*	(9/2,11/2,13/2⁺)
2785.3 *4*	(11/2⁻,13/2)	2846.3 *4*	(9/2⁻)
2805.24 *25*	(9/2,11/2⁺)	2867.3 *3*	(9/2⁻,11/2⁻)
		2881.1 *5*	(9/2⁺)

† From a least-squares fit to E(γ′s).

‡ From Adopted Levels.

\# 1974Ap01 analyze the ^{127}Sn(11/2⁻) isomer and the levels fed by β decay from the model of one particle coupled to two quasiparticles. 1974Ap01 propose configuration=(ν $h_{11/2}$)(ν $d_{3/2}$,ν $d_{3/2}$) for the ^{127}Sn(11/2⁻) isomer and configuration=(π $d_{3/2}$)(ν $d_{3/2}$,ν $h_{11/2}$), configuration=(π $d_{5/2}$)(ν $d_{3/2}$,ν $h_{11/2}$) or configuration=(π $g_{7/2}$)(ν $d_{3/2}$,ν $h_{11/2}$) for excited states in ^{127}Sb. 1974Ap01 suggest that β decay to those levels consisting of configuration=(π $d_{3/2}$)(ν $d_{3/2}$,ν $h_{11/2}$) have large transition probabilities (log ft <5.9) and the ^{127}Sn isomer decays with smaller transition probabilities for other states. The very small transition probability to the 1920.2 (15/2⁻) isomer in ^{127}Sb (log ft>7.2) may be interpreted if this level consists of configuration=(π $g_{7/2}$)(ν $d_{3/2}$,ν $h_{11/2}$). (1974Ap01).

β⁻ radiations

E(decay)	E(level)	Iβ⁻†	Log *ft*	Comments
(320 *24*)	2881.1	0.27 *7*	6.21 *16*	av Eβ=92.4 *79*
(334 *24*)	2867.3	1.14 *24*	5.64 *14*	av Eβ=96.9 *80*
(355 *24*)	2846.3	1.3 *3*	5.67 *15*	av Eβ=103.8 *80*
(367 *24*)	2834.4	0.19 *6*	6.56 *17*	av Eβ=107.8 *81*
(396 *24*)	2805.24	1.4 *3*	5.80 *13*	av Eβ=117.6 *82*
(416 *24*)	2785.3	0.61 *14*	6.23 *14*	av Eβ=124.4 *83*
(439 *24*)	2762.21	2.6 *5*	5.68 *12*	av Eβ=132.3 *84*
(505 *24*)	2695.7	1.8 *4*	6.05 *12*	av Eβ=155.7 *86*
(537 *24*)	2663.7	0.99 *22*	6.40 *12*	av Eβ=167.2 *88*
(563 *24*)	2638.5	4.5 *9*	5.81 *11*	av Eβ=176.3 *88*
(570 *24*)	2630.7	1.0 *3*	6.48 *15*	av Eβ=179.2 *89*
(614 *24*)	2586.81	11.2 *22*	5.54 *11*	av Eβ=195.4 *90*
(647 *24*)	2553.7	0.80 *18*	6.77 *12*	av Eβ=207.8 *91*
(671 *24*)	2529.69	4.4 *9*	6.09 *11*	av Eβ=216.8 *92*
(687 *24*)	2513.9	0.11 *5*	7.72 *21*	av Eβ=222.8 *92*
(700 *24*)	2500.72	6.5 *13*	5.98 *11*	av Eβ=227.8 *93*
(718 *24*)	2482.8	0.53 *11*	7.11 *11*	av Eβ=234.7 *93*
(731 *24*)	2470.0	0.11 *5*	7.82 *21*	av Eβ=239.6 *93*
(745 *24*)	2455.87	4.4 *9*	6.25 *11*	av Eβ=245.1 *94*
(754 *24*)	2447.4	1.9 *4*	6.63 *11*	av Eβ=248.4 *94*
(795 *24*)	2406.3	1.6 *5*	6.78 *15*	av Eβ=264.4 *95*
(828 *24*)	2372.59	0.2 *4*	7.8 *9*	av Eβ=277.7 *96*
(843 *24*)	2358.5	5.3 *12*	6.36 *11*	av Eβ=283.3 *96*
(849 *24*)	2351.82	0.44 *17*	7.45 *18*	av Eβ=286.0 *96*
(855 *24*)	2345.68	0.2 *3*	7.8 *7*	av Eβ=288.4 *96*
(883 *24*)	2317.6	0.27 *16*	7.7 *3*	av Eβ=299.6 *97*
(897 *24*)	2304.1	0.23 *7*	7.82 *14*	av Eβ=305.0 *97*
(926 *24*)	2274.70	2.8 *8*	6.78 *14*	av Eβ=316.9 *98*
(945 *24*)	2256.4	0.19 *6*	7.98 *15*	av Eβ=324.3 *98*
(979 *24*)	2221.56	0.9 *6*	7.4 *3*	av Eβ=338.5 *99*
(999 *24*)	2202.1	<0.04	>8.7	av Eβ=346.5 *99*
(1041 *24*)	2160.0	0.68 *16*	7.58 *11*	av Eβ=364 *10*
(1050 *24*)	2150.57	2.0 *5*	7.13 *12*	av Eβ=368 *10*

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^{127}Sn β^- decay (2.10 h) 1974Ap01 (continued)

β^- radiations (continued)

E(decay)	E(level)	Iβ^- †	Log *ft*	Comments
(1061 *24*)	2140.39	0.29 *16*	7.98 *25*	av Eβ=372 *10*
(1077 *24*)	2124.32	0.2 *5*	8.2 *11*	av Eβ=379 *10*
(1091 *24*)	2110.3	1.6 *8*	7.29 *22*	av Eβ=384 *10*
(1099 *24*)	2102.4	0.30 *13*	8.03 *20*	av Eβ=388 *10*
(1108 *24*)	2093.43	4.9 *19*	6.83 *18*	av Eβ=391 *10*
(1198 *24*)	2003.50	2.6 *9*	7.23 *16*	av Eβ=429 *11*
(1246 *24*)	1955.08	<0.2	>8.4	av Eβ=450 *11*
(1264 *24*)	1937.50	≤3.5	≥7.2	av Eβ=457 *11*
(1281 *24*)	1920.21	2.8 *18*	7.3 *3*	av Eβ=465 *11*
(1489 *24*)	1711.8	0.42 *10*	8.38 *11*	av Eβ=555 *11*
(1617 *24*)	1584.31	1.0 *9*	8.1 *4*	av Eβ=611 *11*
(1730 *24*)	1471.4	<4	>7.7	av Eβ=661 *11*
(2087 *24*)	1114.35	<8	>7.7	av Eβ=822 *11*
(2106 *24*)	1095.48	<4	>8.0	av Eβ=830 *11*
(3201 *24*)	0.0	22 *8*	9.4^{1u} *3*	av Eβ=1325 *11*

† Absolute intensity per 100 decays.

$\gamma(^{127}$Sb)

Iγ normalization: From I$_\beta$ to g.s. = 22% *8* (1974Ap01), based on the radioactive decay and growth for ^{127}Sn and ^{127}Sb, respectively.

E$_\gamma$ †	I$_\gamma$ @	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.#	δ	α‡	Comments
^{x}34.9 *3*	0.10 *2*								
^{x}46.9 *3*	0.21 *4*								
^{x}51.5 *3*	0.05 *1*								
^{x}52.8 *3*	0.10 *2*								
^{x}56.9 *3*	0.15 *3*								
66.4 *3*	0.38 *8*	2003.50	(9/2,11/2$^+$)	1937.50	(7/2,9/2,11/2$^+$)	[M1,E2]		5 *3*	α(K)=2.9 *12*; α(L)=1.3 *11*; α(M)=0.27 *23*; α(N+..)=0.05 *5* α(N)=0.05 *4*; α(O)=0.004 *3*
70.3 *3*	1.0 *2*	1990.6		1920.21	(15/2$^-$)	[E2]		5.78 *12*	α(K)=3.49 *7*; α(L)=1.84 *5*; α(M)=0.382 *10*; α(N+..)=0.0739 *18* α(N)=0.0691 *17*; α(O)=0.00487 *12*
^{x}83.4 *3*	0.5 *1*								
^{x}88.1 *3*	0.11 *2*								
97.2 *3*	1.2 *2*	2221.56	(11/2$^-$,13/2,15/2$^+$)	2124.32	(11/2$^-$,13/2,15/2$^+$)	[M1,E2]		1.2 *6*	α(K)=0.9 *4*; α(L)=0.25 *18*; α(M)=0.05 *4*; α(N+..)=0.010 *8* α(N)=0.010 *7*; α(O)=0.0007 *5*
104.1 *4*	0.5 *1*	2455.87	(9/2,11/2,13/2)	2351.82		[M1,E2]		1.0 *5*	α(K)=0.8 *3*; α(L)=0.19 *13*; α(M)=0.04 *3*; α(N+..)=0.008 *6* α(N)=0.007 *5*; α(O)=0.0006 *4*
110.1 *4*	1.0 *1*	2455.87	(9/2,11/2,13/2)	2345.68	(11/2$^-$,13/2,15/2$^+$)	[M1,E2]		0.8 *4*	α(K)=0.63 *23*; α(L)=0.15 *10*; α(M)=0.031 *21*; α(N+..)=0.006 *4* α(N)=0.006 *4*; α(O)=0.0005 *3*
119.7 *4*	5.7 *6*	2110.3		1990.6		[M1,E2]		0.62 *25*	α(K)=0.49 *17*; α(L)=0.11 *7*; α(M)=0.022 *14*; α(N+..)=0.004 *3* α(N)=0.004 *3*; α(O)=0.00033 *18*
124.0 *4*	0.2 *1*	2345.68	(11/2$^-$,13/2,15/2$^+$)	2221.56	(11/2$^-$,13/2,15/2$^+$)	[M1,E2]		0.55 *22*	α(K)=0.44 *15*; α(L)=0.09 *6*; α(M)=0.019 *12*; α(N+..)=0.0039 *23* α(N)=0.0036 *22*; α(O)=0.00029 *16*
141.9 *4*	1.1 *1*	2500.72	(9/2,11/2,13/2$^+$)	2358.5	(11/2$^-$,13/2)	[M1+E2]	1.0 *10*	0.36 *13*	α(K)=0.29 *9*; α(L)=0.06 *3*; α(M)=0.011 *7*; α(N+..)=0.0023 *13* α(N)=0.0021 *12*; α(O)=0.00018 *9*
143.7 *4*	1.3 *1*	2345.68	(11/2$^-$,13/2,15/2$^+$)	2202.1		[M1,E2]		0.34 *12*	α(K)=0.27 *8*; α(L)=0.05 *3*; α(M)=0.011 *6*; α(N+..)=0.0022 *12* α(N)=0.0020 *11*; α(O)=0.00017 *8*
155.6 *4*	0.6 *1*	2093.43	(9/2,11/2$^+$)	1937.50	(7/2,9/2,11/2$^+$)	[M1,E2]		0.26 *9*	α(K)=0.21 *6*; α(L)=0.040 *20*; α(M)=0.008 *4*; α(N+..)=0.0016 *8* α(N)=0.0015 *8*; α(O)=0.00013 *6*
156.9 *4*	0.7 *1*	2529.69	(11/2$^-$,13/2)	2372.59	(11/2$^-$,13/2,15/2$^+$)	[M1,E2]		0.26 *8*	α(K)=0.21 *6*; α(L)=0.038 *19*; α(M)=0.008 *4*;

From ENSDF

γ(^{127}Sb) (continued)

E_γ[†]	I_γ[@]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	α[‡]	Comments
								α(N+..)=0.0016 *8* α(N)=0.0015 *8*; α(O)=0.00012 *6*
169.2 *4*	5.3 *5*	2124.32	(11/2⁻,13/2,15/2⁺)	1955.08		[M1,E2]	0.20 *6*	α(K)=0.16 *4*; α(L)=0.029 *14*; α(M)=0.006 *3*; α(N+..)=0.0012 *6* α(N)=0.0011 *5*; α(O)=0.00010 *4*
170.3 *4*	0.2 *2*	2372.59	(11/2⁻,13/2,15/2⁺)	2202.1				
178.0 *4*	0.3 *1*	2529.69	(11/2⁻,13/2)	2351.82		[M1,E2]	0.17 *5*	α(K)=0.14 *4*; α(L)=0.024 *11*; α(M)=0.0049 *22*; α(N+..)=0.0010 *5* α(N)=0.0009 *4*; α(O)=8.E−5 *3*
181.1 *4*	0.4 *1*	2553.7	(9/2,11/2,13/2)	2372.59	(11/2⁻,13/2,15/2⁺)			
184.0 *4*	1.2 *2*	2529.69	(11/2⁻,13/2)	2345.68	(11/2⁻,13/2,15/2⁺)	[M1,E2]	0.15 *4*	α(K)=0.13 *3*; α(L)=0.021 *9*; α(M)=0.0043 *19*; α(N+..)=0.0009 *4* α(N)=0.0008 *4*; α(O)=7.1×10^{-5} *25*
184.7 *4*	2.9 *6*	2406.3	(9/2,11/2,13/2⁺)	2221.56	(11/2⁻,13/2,15/2⁺)	[M1,E2]	0.15 *4*	α(K)=0.13 *3*; α(L)=0.021 *9*; α(M)=0.0043 *19*; α(N+..)=0.0009 *4* α(N)=0.0008 *4*; α(O)=7.0×10^{-5} *24*
190.1 *4*	1.5 *2*	2110.3		1920.21	(15/2⁻)	[M1,E2]	0.14 *4*	α(K)=0.115 *25*; α(L)=0.019 *8*; α(M)=0.0038 *16*; α(N+..)=0.0008 *3* α(N)=0.0007 *3*; α(O)=6.4×10^{-5} *21*
195.0[&] *4*	0.2 *1*	2695.7	(9/2,11/2⁺)	2500.72	(9/2,11/2,13/2⁺)			
202.8 *4*	2.0 *2*	2140.39	(11/2⁻,13/2,15/2⁺)	1937.50	(7/2,9/2,11/2⁺)	[M1,E2]	0.11 *3*	α(K)=0.094 *18*; α(L)=0.015 *6*; α(M)=0.0031 *12*; α(N+..)=0.00063 *23* α(N)=0.00058 *21*; α(O)=5.1×10^{-5} *15*
204.1 *4*	0.6 *1*	2124.32	(11/2⁻,13/2,15/2⁺)	1920.21	(15/2⁻)	[M1,E2]	0.110 *25*	α(K)=0.092 *18*; α(L)=0.015 *6*; α(M)=0.0030 *12*; α(N+..)=0.00061 *22* α(N)=0.00056 *21*; α(O)=5.0×10^{-5} *15*
205.2 *4*	0.6 *1*	2345.68	(11/2⁻,13/2,15/2⁺)	2140.39	(11/2⁻,13/2,15/2⁺)	[M1,E2]	0.109 *24*	α(K)=0.091 *17*; α(L)=0.015 *6*; α(M)=0.0029 *11*; α(N+..)=0.00060 *22* α(N)=0.00055 *20*; α(O)=4.9×10^{-5} *15*
208.0 *4*	0.4 *1*	2553.7	(9/2,11/2,13/2)	2345.68	(11/2⁻,13/2,15/2⁺)			
211.5 *4*	0.3 *1*	2202.1		1990.6				
212.9 *4*	0.3 *1*	2150.57	(9/2,11/2⁺)	1937.50	(7/2,9/2,11/2⁺)	[M1,E2]	0.097 *20*	α(K)=0.081 *15*; α(L)=0.013 *5*; α(M)=0.0026 *10*; α(N+..)=0.00053 *18* α(N)=0.00049 *17*; α(O)=4.4×10^{-5} *12*
215.0 *7*	0.2 *1*	2317.6	(7/2⁺,9/2,11/2⁺)	2102.4	(7/2⁺,9/2⁺)			
220.4 *4*	0.8 *1*	2140.39	(11/2⁻,13/2,15/2⁺)	1920.21	(15/2⁻)			
228.4 *4*	0.5 *1*	2586.81	(9/2⁻,11/2⁻)	2358.5	(11/2⁻,13/2)			
232.2 *4*	2.2 *2*	2638.5	(9/2,11/2,13/2)	2406.3	(9/2,11/2,13/2⁺)			
234.3 *4*	1.4 *1*	2455.87	(9/2,11/2,13/2)	2221.56	(11/2⁻,13/2,15/2⁺)	[M1,E2]	0.072 *13*	α(K)=0.060 *9*; α(L)=0.009 *3*; α(M)=0.0019 *6*; α(N+..)=0.00038 *11* α(N)=0.00035 *11*; α(O)=3.2×10^{-5} *8*
235.3 *4*	0.7 *1*	2345.68	(11/2⁻,13/2,15/2⁺)	2110.3				
248.6 *4*	0.2 *1*	2372.59	(11/2⁻,13/2,15/2⁺)	2124.32	(11/2⁻,13/2,15/2⁺)			

γ(^{127}Sb) (continued)

E_γ†	I_γ@	E_i(level)	J^π_i	E_f	J^π_f	Mult.#	α‡	Comments
255.3 4	0.3 1	2529.69	(11/2$^-$,13/2)	2274.70	(9/2,11/2,13/2$^+$)			
262.5 4	6.1 6	2372.59	(11/2$^-$,13/2,15/2$^+$)	2110.3				
266.2 4	5.6 6	2638.5	(9/2,11/2,13/2)	2372.59	(11/2$^-$,13/2,15/2$^+$)			
271.5 4	0.3 1	2274.70	(9/2,11/2,13/2$^+$)	2003.50	(9/2,11/2$^+$)			
279.3 4	1.5 2	2500.72	(9/2,11/2,13/2$^+$)	2221.56	(11/2$^-$,13/2,15/2$^+$)			
282.0 4	1.4 1	2202.1		1920.21	(15/2$^-$)			
284.3 4	7.0 7	2221.56	(11/2$^-$,13/2,15/2$^+$)	1937.50	(7/2,9/2,11/2$^+$)			
292.9 4	3.3 3	2638.5	(9/2,11/2,13/2)	2345.68	(11/2$^-$,13/2,15/2$^+$)			
301.7& 4	0.3 1	2221.56	(11/2$^-$,13/2,15/2$^+$)	1920.21	(15/2$^-$)			
305.9& 4	0.2 1	2762.21	(9/2$^-$,11/2$^-$)	2455.87	(9/2,11/2,13/2)			
331.7 4	1.2 1	2455.87	(9/2,11/2,13/2)	2124.32	(11/2$^-$,13/2,15/2$^+$)			
348.4 4	1.3 1	2351.82		2003.50	(9/2,11/2$^+$)			
353.3 4	0.3 1	1937.50	(7/2,9/2,11/2$^+$)	1584.31	(9/2$^+$)			
357.0 4	0.5 1	1471.4	(7/2$^+$)	1114.35	(9/2$^+$)			
360.6 4	0.5 1	2500.72	(9/2,11/2,13/2$^+$)	2140.39	(11/2$^-$,13/2,15/2$^+$)			
362.7 4	1.1 1	2455.87	(9/2,11/2,13/2)	2093.43	(9/2,11/2$^+$)			
365.5 4	0.5 1	2586.81	(9/2$^-$,11/2$^-$)	2221.56	(11/2$^-$,13/2,15/2$^+$)			
378.9 4	0.5 1	2529.69	(11/2$^-$,13/2)	2150.57	(9/2,11/2$^+$)			
390.5 4	3.3 3	2345.68	(11/2$^-$,13/2,15/2$^+$)	1955.08				
396.9 4	0.9 1	2351.82		1955.08				
405.0 4	1.2 2	2529.69	(11/2$^-$,13/2)	2124.32	(11/2$^-$,13/2,15/2$^+$)			
407.1 4	4.0 4	2500.72	(9/2,11/2,13/2$^+$)	2093.43	(9/2,11/2$^+$)			
^{x}420.7 4	0.4 1							
425.7 4	0.6 1	2345.68	(11/2$^-$,13/2,15/2$^+$)	1920.21	(15/2$^-$)			
438.2 4	16.0 16	2358.5	(11/2$^-$,13/2)	1920.21	(15/2$^-$)			
444.7 4	1.2 2	2762.21	(9/2$^-$,11/2$^-$)	2317.6	(7/2$^+$,9/2,11/2$^+$)			
446.3 4	0.6 2	2586.81	(9/2$^-$,11/2$^-$)	2140.39	(11/2$^-$,13/2,15/2$^+$)			
452.1 4	1.0 1	2372.59	(11/2$^-$,13/2,15/2$^+$)	1920.21	(15/2$^-$)			
468.7 4	1.2 1	2406.3	(9/2,11/2,13/2$^+$)	1937.50	(7/2,9/2,11/2$^+$)			
487.5 4	1.2 1	2805.24	(9/2,11/2$^+$)	2317.6	(7/2$^+$,9/2,11/2$^+$)			
490.9 4	14.0 14	491.20	(5/2)$^+$	0.0	7/2$^+$	[M1,E2]	0.0086 5	α=0.0086 5; α(K)=0.0074 5; α(L)=0.000964 14; α(M)=0.000191 3; α(N+..)=4.02$\times10^{-5}$ 6 α(N)=3.67$\times10^{-5}$ 6; α(O)=3.55$\times10^{-6}$ 13
493.2 4	8.2 8	2586.81	(9/2$^-$,11/2$^-$)	2093.43	(9/2,11/2$^+$)			
500.7 4	4.0 4	2455.87	(9/2,11/2,13/2)	1955.08				
509.0 4	3.8 8	2093.43	(9/2,11/2$^+$)	1584.31	(9/2$^+$)			
509.7 4	2.0 4	2447.4	(9/2,11/2$^+$)	1937.50	(7/2,9/2,11/2$^+$)			
513.9 4	0.7 2	2638.5	(9/2,11/2,13/2)	2124.32	(11/2$^-$,13/2,15/2$^+$)			
518.2 4	0.5 1	2455.87	(9/2,11/2,13/2)	1937.50	(7/2,9/2,11/2$^+$)			
528.5 7	0.3 2	2630.7	(9/2,11/2$^+$)	2102.4	(7/2$^+$,9/2$^+$)			
530.6 7	0.3 2	2805.24	(9/2,11/2$^+$)	2274.70	(9/2,11/2,13/2$^+$)			
539.6 4	0.6 2	2663.7	(9/2,11/2,13/2)	2124.32	(11/2$^-$,13/2,15/2$^+$)			
545.4 4	6.0 6	2500.72	(9/2,11/2,13/2$^+$)	1955.08				

$\gamma(^{127}$Sb) (continued)

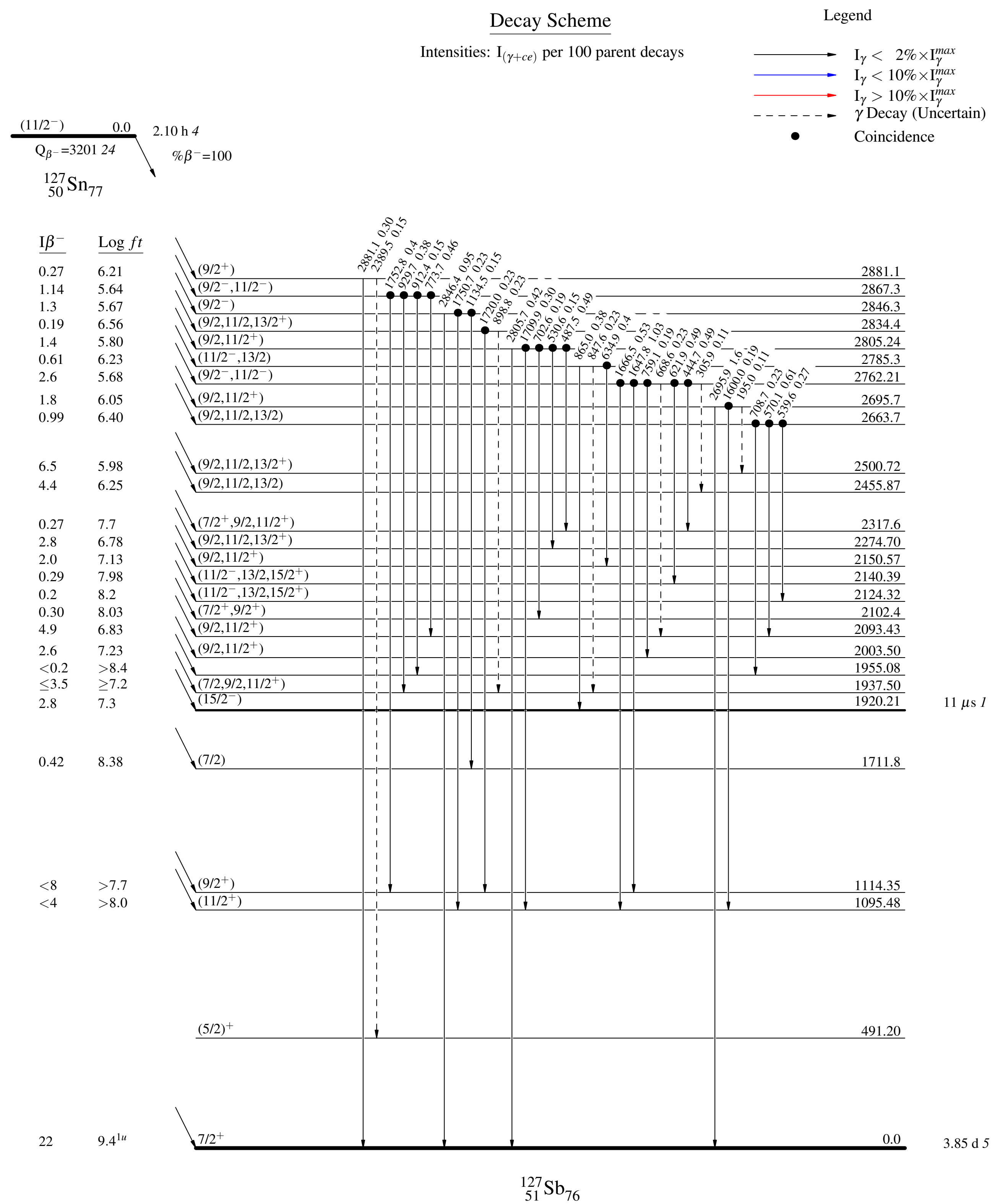
E_γ †	I_γ @	E_i(level)	J^π_i	E_f	J^π_f	Mult. #	α ‡	Comments
563.4 *4*	0.4 *2*	2500.72	(9/2,11/2,13/2$^+$)	1937.50	(7/2,9/2,11/2$^+$)			
565.8 *7*	0.3 *2*	2150.57	(9/2,11/2$^+$)	1584.31	(9/2$^+$)			
570.1 *4*	1.5 *2*	2663.7	(9/2,11/2,13/2)	2093.43	(9/2,11/2$^+$)			
583.3 *4*	8.4 *8*	2586.81	(9/2$^-$,11/2$^-$)	2003.50	(9/2,11/2$^+$)			
592.3 *4*	5.3 *5*	2529.69	(11/2$^-$,13/2)	1937.50	(7/2,9/2,11/2$^+$)			
609.5 *4*	0.8 *1*	2529.69	(11/2$^-$,13/2)	1920.21	(15/2$^-$)			
616.1 *4*	0.6 *1*	2553.7	(9/2,11/2,13/2)	1937.50	(7/2,9/2,11/2$^+$)			
621.9 *4*	1.2 *1*	2762.21	(9/2$^-$,11/2$^-$)	2140.39	(11/2$^-$,13/2,15/2$^+$)			
631.6 *7*	1.4 *3*	2586.81	(9/2$^-$,11/2$^-$)	1955.08				
634.9 *7*	0.7 *2*	2785.3	(11/2$^-$,13/2)	2150.57	(9/2,11/2$^+$)			
649.1 *4*	2.1 *2*	2586.81	(9/2$^-$,11/2$^-$)	1937.50	(7/2,9/2,11/2$^+$)			
668.6& *4*	0.5 *1*	2762.21	(9/2$^-$,11/2$^-$)	2093.43	(9/2,11/2$^+$)			
702.6 *4*	0.4 *1*	2805.24	(9/2,11/2$^+$)	2102.4	(7/2$^+$,9/2$^+$)			
708.7 *4*	0.5 *1*	2663.7	(9/2,11/2,13/2)	1955.08				
759.1 *7*	0.4 *1*	2762.21	(9/2$^-$,11/2$^-$)	2003.50	(9/2,11/2$^+$)			
773.7 *4*	1.1 *1*	2867.3	(9/2$^-$,11/2$^-$)	2093.43	(9/2,11/2$^+$)			
805.9 *4*	21.7 *22*	1920.21	(15/2$^-$)	1114.35	(9/2$^+$)	[M2,E3]	0.0062 *12*	α=0.0062 *12*; α(K)=0.0053 *10*; α(L)=0.00072 *10*; α(M)=0.000142 *19*; α(N+..)=3.0×10^{-5} *5* α(N)=2.7×10^{-5} *4*; α(O)=2.6×10^{-6} *5*
823.1 *4*	28 *6*	1937.50	(7/2,9/2,11/2$^+$)	1114.35	(9/2$^+$)			
824.7 *4*	16 *3*	1920.21	(15/2$^-$)	1095.48	(11/2$^+$)	[M2,E3]	0.0058 *11*	α=0.0058 *11*; α(K)=0.0050 *10*; α(L)=0.00067 *9*; α(M)=0.000133 *18*; α(N+..)=2.8×10^{-5} *4* α(N)=2.6×10^{-5} *4*; α(O)=2.5×10^{-6} *4*
847.6& *7*	0.5 *1*	2785.3	(11/2$^-$,13/2)	1937.50	(7/2,9/2,11/2$^+$)			
859.5 *4*	21.0 *21*	1955.08		1095.48	(11/2$^+$)			
865.0 *4*	0.9 *1*	2785.3	(11/2$^-$,13/2)	1920.21	(15/2$^-$)			
889.0 *4*	0.9 *1*	2003.50	(9/2,11/2$^+$)	1114.35	(9/2$^+$)			
898.8& *7*	0.5 *1*	2834.4	(9/2,11/2,13/2$^+$)	1937.50	(7/2,9/2,11/2$^+$)			
912.4 *4*	0.3 *1*	2867.3	(9/2$^-$,11/2$^-$)	1955.08				
916.5 *4*	3.1 *3*	2500.72	(9/2,11/2,13/2$^+$)	1584.31	(9/2$^+$)			
929.7 *4*	0.9 *1*	2867.3	(9/2$^-$,11/2$^-$)	1937.50	(7/2,9/2,11/2$^+$)			
976.1 *7*	2.0 *4*	2447.4	(9/2,11/2$^+$)	1471.4	(7/2$^+$)			
979.2 *4*	19 *4*	2093.43	(9/2,11/2$^+$)	1114.35	(9/2$^+$)			
980.3 *4*	2.0 *4*	1471.4	(7/2$^+$)	491.20	(5/2)$^+$			
997.9 *4*	5.1 *5*	2093.43	(9/2,11/2$^+$)	1095.48	(11/2$^+$)			
1002.6 *4*	4.6 *5*	2586.81	(9/2$^-$,11/2$^-$)	1584.31	(9/2$^+$)			
1036.1 *4*	5.2 *5*	2150.57	(9/2,11/2$^+$)	1114.35	(9/2$^+$)			
1044.9 *4*	0.7 *1*	2140.39	(11/2$^-$,13/2,15/2$^+$)	1095.48	(11/2$^+$)			
1055.5 *4*	0.6 *2*	2150.57	(9/2,11/2$^+$)	1095.48	(11/2$^+$)			
1064.6 *7*	1.0 *2*	2160.0	(7/2$^+$,9/2,11/2$^+$)	1095.48	(11/2$^+$)			
1093.3 *7*	10 *2*	1584.31	(9/2$^+$)	491.20	(5/2)$^+$			
1095.6 *4*	51 *10*	1095.48	(11/2$^+$)	0.0	7/2$^+$			

γ(^{127}Sb) (continued)

E_γ[†]	I_γ[@]	E_i(level)	J^π_i	E_f	J^π_f
1114.3 4	100 10	1114.35	(9/2$^+$)	0.0	7/2$^+$
1134.5 4	0.3 1	2846.3	(9/2$^-$)	1711.8	(7/2)
1142.0 4	0.5 1	2256.4	7/2$^+$,9/2$^+$	1114.35	(9/2$^+$)
1159.2 7	2.4 5	2630.7	(9/2,11/2$^+$)	1471.4	(7/2$^+$)
1160.4 4	6.3 13	2274.70	(9/2,11/2,13/2$^+$)	1114.35	(9/2$^+$)
1179.2 4	1.3 1	2274.70	(9/2,11/2,13/2$^+$)	1095.48	(11/2$^+$)
1220.5 4	1.4 1	1711.8	(7/2)	491.20	(5/2)$^+$
1237.4 4	0.3 1	2351.82		1114.35	(9/2$^+$)
1292.1 4	2.0 2	2406.3	(9/2,11/2,13/2$^+$)	1114.35	(9/2$^+$)
1310.5[&] 4	0.2 1	2406.3	(9/2,11/2,13/2$^+$)	1095.48	(11/2$^+$)
1360.3 4	0.4 1	2455.87	(9/2,11/2,13/2)	1095.48	(11/2$^+$)
1368.4 4	1.4 1	2482.8	(9/2,11/2,13/2$^+$)	1114.35	(9/2$^+$)
1434.4 4	0.8 1	2529.69	(11/2$^-$,13/2)	1095.48	(11/2$^+$)
1458.4 7	0.7 2	2553.7	(9/2,11/2,13/2)	1095.48	(11/2$^+$)
1471.2 7	2.0 4	1471.4	(7/2$^+$)	0.0	7/2$^+$
1472.5 4	3.3 7	2586.81	(9/2$^-$,11/2$^-$)	1114.35	(9/2$^+$)
1542.7[&] 4	0.2 1	2638.5	(9/2,11/2,13/2)	1095.48	(11/2$^+$)
1584.3 4	4.7 5	1584.31	(9/2$^+$)	0.0	7/2$^+$
1600.0 4	0.4 1	2695.7	(9/2,11/2$^+$)	1095.48	(11/2$^+$)
1610.8 4	0.4 1	2102.4	(7/2$^+$,9/2$^+$)	491.20	(5/2)$^+$
1647.8 4	2.7 3	2762.21	(9/2$^-$,11/2$^-$)	1114.35	(9/2$^+$)
1666.5 4	1.3 1	2762.21	(9/2$^-$,11/2$^-$)	1095.48	(11/2$^+$)
1709.9 4	0.7 1	2805.24	(9/2,11/2$^+$)	1095.48	(11/2$^+$)
1720.0 4	0.5 1	2834.4	(9/2,11/2,13/2$^+$)	1114.35	(9/2$^+$)
1750.7 7	0.5 2	2846.3	(9/2$^-$)	1095.48	(11/2$^+$)
1752.8 7	0.7 2	2867.3	(9/2$^-$,11/2$^-$)	1114.35	(9/2$^+$)
1812.8 5	0.3 1	2304.1	(7/2$^+$,9/2$^+$)	491.20	(5/2)$^+$
1937.3 5	0.2 1	1937.50	(7/2,9/2,11/2$^+$)	0.0	7/2$^+$
2003.4 5	14.0 14	2003.50	(9/2,11/2$^+$)	0.0	7/2$^+$
2093.3 5	0.2 1	2093.43	(9/2,11/2$^+$)	0.0	7/2$^+$
2102.4 5	1.3 1	2102.4	(7/2$^+$,9/2$^+$)	0.0	7/2$^+$
2150.3 5	0.09 9	2150.57	(9/2,11/2$^+$)	0.0	7/2$^+$
2160.0 5	0.8 1	2160.0	(7/2$^+$,9/2,11/2$^+$)	0.0	7/2$^+$
2304.2 5	0.3 1	2304.1	(7/2$^+$,9/2$^+$)	0.0	7/2$^+$
2317.4 5	2.9 3	2317.6	(7/2$^+$,9/2,11/2$^+$)	0.0	7/2$^+$
2389.5[&] 5	0.3 1	2881.1	(9/2$^+$)	491.20	(5/2)$^+$
2447.5 5	0.9 1	2447.4	(9/2,11/2$^+$)	0.0	7/2$^+$
2470.0 5	0.3 1	2470.0	(7/2$^+$,9/2,11/2$^+$)	0.0	7/2$^+$
2513.9 5	0.3 1	2513.9	(7/2$^+$,9/2,11/2$^+$)	0.0	7/2$^+$
2584.9[&] 5	4.1 4	2584.9?		0.0	7/2$^+$
2695.9 5	4.3 4	2695.7	(9/2,11/2$^+$)	0.0	7/2$^+$
2805.7 5	1.0 1	2805.24	(9/2,11/2$^+$)	0.0	7/2$^+$
2846.4 5	2.5 3	2846.3	(9/2$^-$)	0.0	7/2$^+$
2881.1 5	0.7 1	2881.1	(9/2$^+$)	0.0	7/2$^+$

[†] From 1974Ap01.
[‡] Theoretical conversion coefficients are calculated using BrIcc code for the multipolarity indicated.
[#] Assumed by 196Ki01 to obtain transition intensities.
[@] For absolute intensity per 100 decays, multiply by 0.38 7.
[&] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

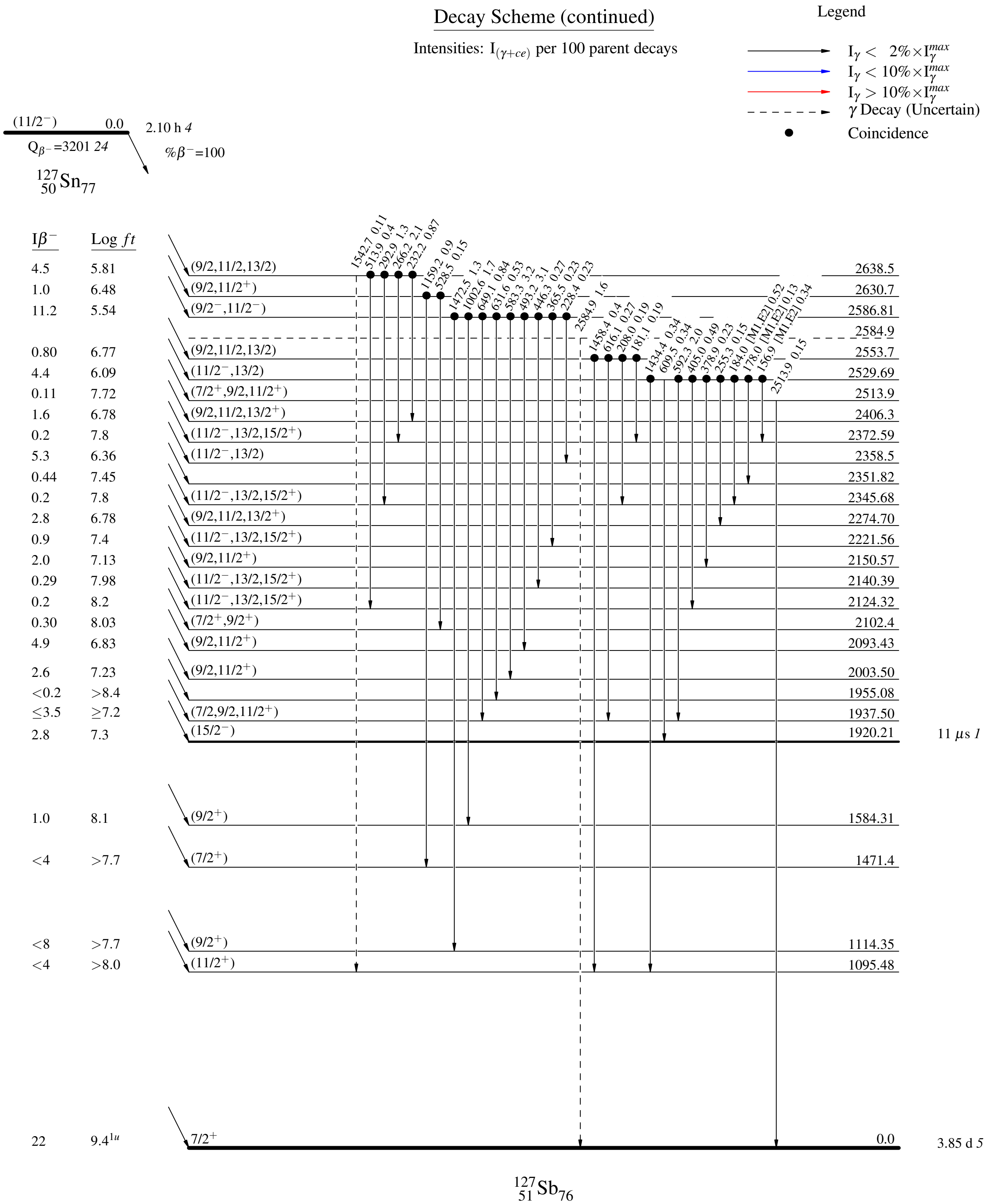
^{127}Sn β^- decay (2.10 h) 1974Ap01



^{127}Sn β^- decay (2.10 h) 1974Ap01

Decay Scheme (continued)

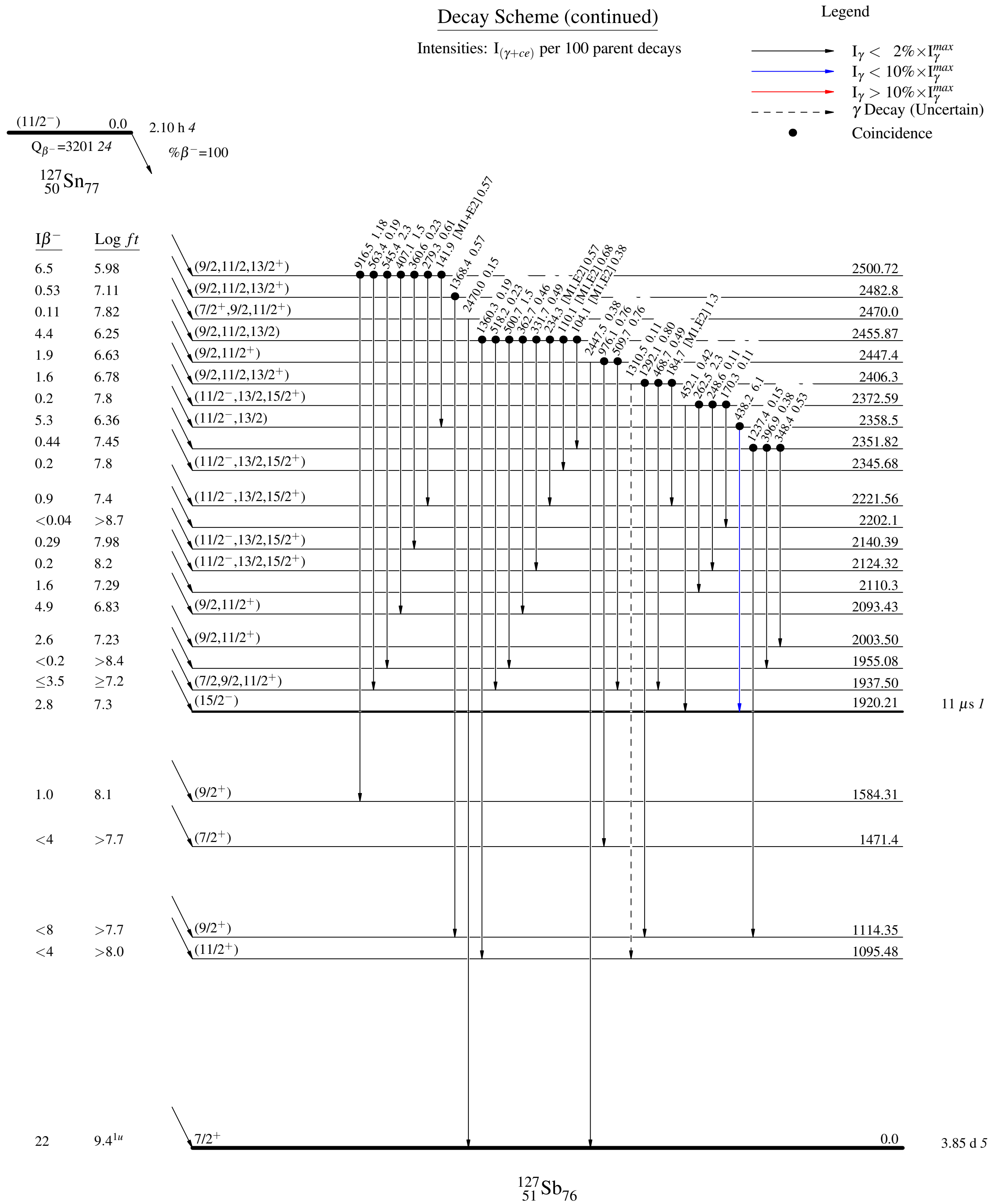
Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{127}Sn β^- decay (2.10 h) 1974Ap01

Decay Scheme (continued)

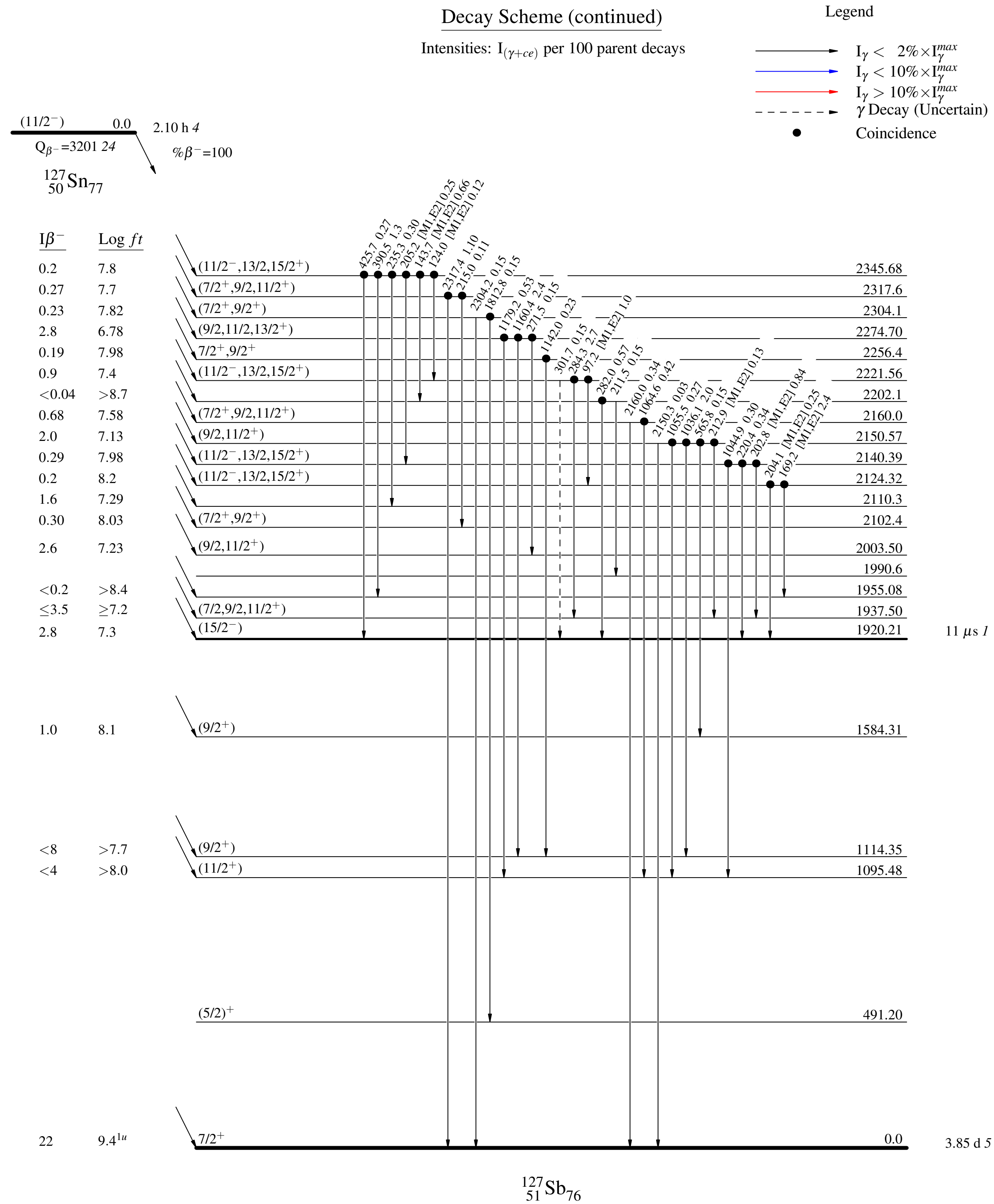
Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{127}Sn β^- decay (2.10 h) 1974Ap01

Decay Scheme (continued)

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



^{127}Sn β^- decay (2.10 h) 1974Ap01

Decay Scheme (continued)

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