^{123}Sb(n,γ) E=th 1973ShZZ,1980Al22

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Katakura, Z. D. Wu	NDS 109, 1655 (2008)	1-Apr-2008

1973ShZZ: measured Eγ, Iγ, $\gamma\gamma$ coin.
1980Al22: measured Eγ, Iγ, I(ce), $\gamma\gamma$ coin, $\gamma\gamma$(t).
See ENSDF for gammas.

^{124}Sb Levels

E(level)†	J$^\pi$	$T_{1/2}$	Comments
0.0	3$^-$		
10.8627 *8*	5$^+$		
36.8437 *14*	(8)$^-$		
40.8037 *7*	3$^+$,4$^+$	3.2 μs *3*	$T_{1/2}$: from (155γ)(40γ)(t) Ge(Li)-Ge(Li).
80.7639 *8*	3$^+$,4$^+$	4 ns *1*	$T_{1/2}$: from (40γ)(44γ)(t) Ge(Li)-plastic scintillator.
87.6015 *4*	4$^-$		
103.6513 *6*	2$^-$,3$^-$,4$^-$		
125.2291 *13*	6$^-$	86 ns *2*	$T_{1/2}$: from $\gamma\gamma$(t) Ge(Li)-plastic scintillator.
131.6928 *8*	(5)$^-$		
180.0509 *16*	7$^-$,8$^-$		
195.9822 *11*	4$^+$,5$^+$		
214.6031 *9*	3$^+$,4$^+$,5$^+$		
248.3691 *12*	+	0.38 ns *7*	$T_{1/2}$: from centroid shift method with Ge(Li)-plastic $\gamma\gamma$(t) system.
287.1283 *17*	3$^+$,4$^+$		
368.333 *8*			
371.823 *3*	6$^-$,7$^-$,8$^-$		
384.5335 *25*	4$^-$,5$^-$		
386.2882 *12*	2$^+$,3$^+$,4$^+$		
402.8776 *16*	3$^+$,4$^+$		
419.0624 *18*	2$^-$,3$^-$,4$^-$		
439.1716 *24*	4$^-$,5$^-$		
445.672 *3*	6$^-$		
471.2598 *19*	+		
483.9989 *21*	3$^+$,4$^+$,5$^+$		
522.6910 *17*	+		
565.1?‡ *24*			
581.916 *4*			
598.658 *4*	3$^-$,4$^-$		
612.693 *7*			
642.056 *4*	5$^-$,6,7$^-$		
642.652 *4*	4$^-$,5,6$^-$		
744.949 *6*			
757.196 *9*			
804.266 *13*			
827.064 *14*	5$^-$,6,7$^{(-)}$		
855.969 *5*	4$^-$,5		
863.003 *7*	3,4		
869.415 *7*	3$^-$,4,5$^-$		
881.1‡ *11*			
896.7‡ *9*			
905.1‡ *8*			
917.5‡ *14*			
968.0‡ *4*			
1020.948 *10*	3$^-$,4,5$^-$		

Continued on next page (footnotes at end of table)

^{123}Sb(n,γ) E=th 1973ShZZ,1980Al22 (continued)

^{124}Sb Levels (continued)

E(level)†	E(level)†	E(level)†	E(level)†	J$^{\pi}$
1031.2‡ *6*	1097.3‡ *5*	1180.7‡ *6*	1267.8‡ *12*	
1053.067 *15*	1129.2‡ *3*	1237.3‡ *5*	1285.6‡ *4*	
1059.643 *16*	1143.3‡ *5*	1242.5‡ *3*	(6467.45 *7*)	$3^+,4^+$
1067.1‡ *5*	1159.6‡ *6*	1261‡ *8*		

† From a least-squares fit to the energies of secondary γ's by 1980Al22, except noted otherwise.
‡ E(levels) are calculated by evaluators from S(n) given in 2003Au03 and energies of primary γ's given in 1973ShZZ.

γ(^{124}Sb)

E$_\gamma$[†]	I$_\gamma$[‡d]	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.[#]	α[e]	Comments
10.8630 *11*		10.8627	5$^+$	0.0	3$^-$	[M2]	2.319×10^4	α(L)=1.797×10^4; α(M)=3.93×10^3 E$_\gamma$: deduced from level scheme.
25.981[&] *3*	0.00020[@] *3*	36.8437	(8)$^-$	10.8627	5$^+$	E3	3.23×10^4	α(L)=2.477×10^4; α(M)=5.69×10^3 L1:L2:L3:M1:M2:M3=<1.0:3.1 *4*:4.1 *5*: <0.2:0.60 *7*:0.89 *10*.
29.940[&] *1*	0.087[@] *8*	40.8037	3$^+$,4$^+$	10.8627	5$^+$	E2	138.0	α(L)=108.1; α(M)=22.49 L1:L2:L3:M2:M3:N2+N3=<0.6:5.9 *3*:7.5 *4*:1.07 *11*:1.39 *4*:0.54 *14*.
34.528 *4*	0.083[a] *20*	419.0624	2$^-$,3$^-$,4$^-$	384.5335	4$^-$,5$^-$			
37.629[&] *3*	0.0176[@] *18*	125.2291	6$^-$	87.6015	4$^-$	E2	59.8	α(K)=14.68; α(L)=35.4; α(M)=7.37 L1:L2:L3=<0.10:0.223 *19*:0.36 *5*.
39.9601 *5*	1.23 *21*	80.7639	3$^+$,4$^+$	40.8037	3$^+$,4$^+$	M1	8.95	α(K)=7.69; α(L)=0.998; α(M)=0.1966 L1:L2:L3:M1=1.144 *20*:<0.10:<0.10:0.25 *6*; α(L1)exp=0.93 *16*, α(M1)exp=0.20 *6*.
40.8041 *10*	4.7 *7*	40.8037	3$^+$,4$^+$	0.0	3$^-$	E1	2.281	α(K)=1.930; α(L)=0.279; α(M)=0.0542 α(L1)exp=0.152 *23*, α(L2)exp=0.044 *11*, α(L3)exp=0.054 *8*, α(M1)exp=0.043 *8*, α(M2)exp+α(M3)exp=0.023 *5*.
44.0905 *7*	0.72 *9*	131.6928	(5)$^-$	87.6015	4$^-$	M1	6.70	α(K)=5.76; α(L)=0.747; α(M)=0.1471 α(L1)exp=0.83 *10*, α(L2)exp<0.10, α(L3)exp<0.10, α(M1)exp=0.16 *4*.
[x]51.44[a] *7*	0.011 *3*							
54.73[fb] *5*	<0.12[f]	180.0509	7$^-$,8$^-$	125.2291	6$^-$			
54.73[fb] *5*	<0.12[f]	439.1716	4$^-$,5$^-$	384.5335	4$^-$,5$^-$			
[x]67.02[a] *8*	0.065 *10*							
[x]68.72[a] *6*	0.081 *20*							
72.526 *3*	0.144 *14*	287.1283	3$^+$,4$^+$	214.6031	3$^+$,4$^+$,5$^+$	M1	1.571	α(K)=1.354; α(L)=0.1744; α(M)=0.0344; α(N+..)=0.00797 α(K)exp=1.15 *20*.
73.84[b] *8*	0.034 *7*	445.672	6$^-$	371.823	6$^-$,7$^-$,8$^-$			
80.7646 *15*	0.082 *10*	80.7639	3$^+$,4$^+$	0.0	3$^-$	[E1]	0.346	α(K)=0.298; α(L)=0.0387; α(M)=0.00755; α(N+..)=0.00166
84.972 *3*	0.078 *11*	471.2598	$^+$	386.2882	2$^+$,3$^+$,4$^+$	M1,E2	2.0 *10*	α(K)=1.4 *6*; α(L)=0.4 *4*; α(M)=0.09 *7*; α(N+..)=0.020 *15* α(K)exp=1.10 *41*.
[x]87.080 *11*	0.057 *14*							
87.6014 *4*	9.4 *3*	87.6015	4$^-$	0.0	3$^-$	M1	0.911	α(K)=0.785; α(L)=0.1011; α(M)=0.01995; α(N+..)=0.00463 α(K)exp=0.76 *3*, α(L1)exp=0.097 *7*, α(L2)exp=0.0067 *11*, α(L3)exp<0.0035 α(M1)exp=0.018 *2*.
[x]88.274 *4*	0.033 *10*							
88.3852 *6*	0.87 *3*	125.2291	6$^-$	36.8437	(8)$^-$	E2	2.57	α(K)=1.749; α(L)=0.661; α(M)=0.1358; α(N+..)=0.0292 α(K)exp=1.73 *6*, α(L1)exp=0.20 *5*, α(L2)exp=0.26 *3*, α(L3)exp=0.28 *4*, α(M1)exp=0.055 *11*, α(M2)exp+α(M3)exp=0.110 *10*.
[x]89.85[a] *7*	0.013 *3*							
[x]94.00[a] *10*	0.004 *9*							

γ(^{124}Sb) (continued)

E_γ [†]	I_γ [‡d]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [#]	α [e]	Comments
103.6512 *6*	2.80 *6*	103.6513	$2^-,3^-,4^-$	0.0	3^-	M1	0.565	α(K)=0.487; α(L)=0.0625; α(M)=0.01234; α(N+..)=0.00286 α(K)exp=0.52 *4*, α(L1)exp=0.053 *3*, α(L2)exp<0.011, α(L3)exp<0.011, α(M1)exp=0.011 *3*.
^{x}110.64 [a] *7*	0.012 *3*							
114.3679 *13*	0.060 *3*	125.2291	6^-	10.8627	5^+	[E1]	0.1297	α(K)=0.1121; α(L)=0.01417; α(M)=0.00276; α(N+..)=0.00062
119.8134 *6*	0.223 *5*	522.6910	$^+$	402.8776	$3^+,4^+$	M1	0.376	α(K)=0.324; α(L)=0.0414; α(M)=0.00818; α(N+..)=0.00190 α(K)exp=0.31 *3*.
127.0024 *23*	0.050 *4*	214.6031	$3^+,4^+,5^+$	87.6015	4^-			
^{x}129.382 *11*	0.031 *3*							
132.258 *6*	0.026 *3*	744.949		612.693				
133.8396 *19*	2.47 *4*	214.6031	$3^+,4^+,5^+$	80.7639	$3^+,4^+$	M1	0.276	α(K)=0.2379; α(L)=0.0303; α(M)=0.00598; α(N+..)=0.00139 α(K)exp=0.236 *7*, α(L1)exp=0.032 *4*, α(L2)exp<0.012, α(L3)exp<0.012.
^{x}136.50 [a] *15*	0.023 *6*							
137.9186 *13*	0.92 *2*	386.2882	$2^+,3^+,4^+$	248.3691	$^+$	M1	0.253	α(K)=0.2188; α(L)=0.0279; α(M)=0.00550; α(N+..)=0.00128 α(K)exp=0.193 *12*.
143.2076 *10*	1.23 *2*	180.0509	$7^-,8^-$	36.8437	$(8)^-$	M1	0.2282	α(K)=0.1970; α(L)=0.0251; α(M)=0.00495; α(N+..)=0.00115 α(K)exp=0.185 *6*, α(L1)exp=0.025 *5*.
155.1782 *11*	3.60 *5*	195.9822	$4^+,5^+$	40.8037	$3^+,4^+$	M1	0.1827	α(K)=0.1577; α(L)=0.02009; α(M)=0.00396; α(N+..)=0.00092 α(K)exp=0.161 *3*, α(L1)exp=0.022 *2*, α(L2)exp<0.006, α(L3)exp<0.006, α(M1)exp=0.005 *2*.
159.484 *10*	0.017 *4*	598.658	$3^-,4^-$	439.1716	$4^-,5^-$			
167.6049 *12*	2.03 *3*	248.3691	$^+$	80.7639	$3^+,4^+$	M1	0.1477	α(K)=0.1276; α(L)=0.01625; α(M)=0.00320; α(N+..)=0.00074 α(K)exp=0.124 *5*, α(L1)exp=0.020 *3*, α(L2)exp<0.010, α(L3)exp<0.010.
^{x}170.01 [a] *11*	0.012 *3*							
171.6855 *23*	0.068 *3*	386.2882	$2^+,3^+,4^+$	214.6031	$3^+,4^+,5^+$			
173.7992 *9*	0.76 *2*	214.6031	$3^+,4^+,5^+$	40.8037	$3^+,4^+$	M1	0.1338	α(K)=0.1155; α(L)=0.01471; α(M)=0.00289; α(N+..)=0.00067 α(K)exp=0.109 *8*.
179.594 *4*	0.037 *4*	598.658	$3^-,4^-$	419.0624	$2^-,3^-,4^-$			
^{x}182.16 [a] *11*	0.018 *5*							
184.128 *3*	0.056 *6*	471.2598	$^+$	287.1283	$3^+,4^+$			
185.1226 *22*	0.52 *2*	195.9822	$4^+,5^+$	10.8627	5^+	M1,E2	0.16 *5*	α(K)=0.13 *4*; α(L)=0.023 *11*; α(M)=0.0047 *23*; α(N+..)=0.0010 *5* α(K)exp=0.117 *26*.
188.282 *7*	0.037 *3*	368.333		180.0509	$7^-,8^-$			
195.623 *5*	0.079 *4*	581.916		386.2882	$2^+,3^+,4^+$			
196.870 *4*	0.16 *1*	483.9989	$3^+,4^+,5^+$	287.1283	$3^+,4^+$			
196.977 *4*	0.073 *5*	642.652	$4^-,5,6^-$	445.672	6^-			
^{x}198.021 *24*	0.025 *5*							
202.886 *3*	0.11 *1*	642.056	$5^-,6,7^-$	439.1716	$4^-,5^-$			
203.739 *3*	0.041 *4*	214.6031	$3^+,4^+,5^+$	10.8627	5^+			
206.36 *3*	0.016 *5*	287.1283	$3^+,4^+$	80.7639	$3^+,4^+$			
206.8958 *17*	0.19 *1*	402.8776	$3^+,4^+$	195.9822	$4^+,5^+$			
^{x}212.964 *6*	0.049 *5*							
213.913 *5*	0.047 *4*	855.969	$4^-,5$	642.056	$5^-,6,7^-$			

γ(^{124}Sb) (continued)

E_γ [†]	I_γ [‡d]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [e]	Comments
223.079 *6*	0.092 *10*	419.0624	$2^-,3^-,4^-$	195.9822	$4^+,5^+$			
226.44 *9*	0.027 *6*	612.693		386.2882	$2^+,3^+,4^+$			
226.78 *3*	0.046 *6*	869.415	$3^-,4,5^-$	642.652	$4^-,5,6^-$			
^{x}231.632 *4*	0.064 *5*							
246.3206 *25*	2.13 *6*	287.1283	$3^+,4^+$	40.8037	$3^+,4^+$	M1	0.0528	α(K)=0.0457; α(L)=0.00573; α(M)=0.00113; α(N+..)=0.00026 α(K)exp=0.046 *3*, α(L1)exp=0.0052 *14*.
246.586 *5*	0.188 *15*	371.823	$6^-,7^-,8^-$	125.2291	6^-			
252.834 *4*	1.70 *4*	384.5335	$4^-,5^-$	131.6928	$(5)^-$	M1,E2	0.051 *3*	α(K)=0.0436 *21*; α(L)=0.0057 *7*; α(M)=0.00111 *14*; α(N+..)=0.00026 *3* α(K)exp=0.039 *7*.
256.650 *5*	0.19 *1*	471.2598	$^+$	214.6031	$3^+,4^+,5^+$			
258.124 *10*	0.088 *8*	642.652	$4^-,5,6^-$	384.5335	$4^-,5^-$			
264.334 *10*	0.11 *1*	863.003	3,4	598.658	$3^-,4^-$			
265.631 *4*	0.99 *3*	445.672	6^-	180.0509	$7^-,8^-$	M1,E2	0.045 *3*	α(K)=0.0384 *19*; α(L)=0.0050 *7*; α(M)=0.00099 *13*; α(N+..)=0.00023 *3* α(K)exp=0.043 *3*.
269.3965 *25*	0.41 *1*	483.9989	$3^+,4^+,5^+$	214.6031	$3^+,4^+,5^+$	M1,E2	0.047 *6*	α(K)=0.040 *4*; α(L)=0.0059 *14*; α(M)=0.0012 *3*; α(N+..)=0.00026 *6* α(K)exp=0.039 *7*.
270.232 *8*	0.094 *6*	642.056	$5^-,6,7^-$	371.823	$6^-,7^-,8^-$			
270.759 *13*	0.060 *6*	869.415	$3^-,4,5^-$	598.658	$3^-,4^-$			
273.75 *7*	0.040 *10*	744.949		471.2598	$^+$			
^{x}274.32 *13*	0.020 *9*							
275.281 *3*	0.60 *2*	471.2598	$^+$	195.9822	$4^+,5^+$	M1,E2	0.044 *5*	α(K)=0.0375 *34*; α(L)=0.0055 *12*; α(M)=0.00108 *25*; α(N+..)=0.00025 *6* α(K)exp=0.032 *7*.
276.269 *6*	0.42 *1*	287.1283	$3^+,4^+$	10.8627	5^+			
288.013 *5*	0.77 *2*	483.9989	$3^+,4^+,5^+$	195.9822	$4^+,5^+$	M1,E2	0.039 *6*	α(K)=0.0328 *25*; α(L)=0.0047 *10*; α(M)=0.00094 *20*; α(N+..)=0.00021 *4* α(K)exp=0.053 *9*.
296.949 *7*	0.090 *6*	384.5335	$4^-,5^-$	87.6015	4^-			
299.218 *5*	0.131 *6*	402.8776	$3^+,4^+$	103.6513	$2^-,3^-,4^-$			
305.518 *8*	0.09 *1*	386.2882	$2^+,3^+,4^+$	80.7639	$3^+,4^+$			
313.954[g] *5*	0.67[g]	439.1716	$4^-,5^-$	125.2291	6^-	M1,E2	0.0300 *20*	α(K)=0.0255 *13*; α(L)=0.0036 *6*; α(M)=0.00071 *12*; α(N+..)=0.00016 I_γ: deduced from coincidence. α(K)exp=0.025 *3*.
313.954[g] *5*	0.68[g]	445.672	6^-	131.6928	$(5)^-$	M1,E2	0.0300 *20*	α(K)=0.0255 *13*; α(L)=0.0036 *6*; α(M)=0.00071 *12*; α(N+..)=0.00016 α(K)exp=0.025 *3*.
315.36 *5*	0.05 *2*	419.0624	$2^-,3^-,4^-$	103.6513	$2^-,3^-,4^-$			
322.116 *3*	1.52 *6*	402.8776	$3^+,4^+$	80.7639	$3^+,4^+$	M1,E2	0.0278 *17*	α(K)=0.0237 *11*; α(L)=0.0033 *5*; α(M)=0.00066 *11*; α(N+..)=0.00015 α(K)exp=0.024 *3*.
331.4592 *24*	2.13 *8*	419.0624	$2^-,3^-,4^-$	87.6015	4^-	M1,E2	0.0256 *13*	α(K)=0.0218 *8*; α(L)=0.0030 *5*; α(M)=0.00060 *9*; α(N+..)=0.00014 α(K)exp=0.019 *2*.
^{x}332.00 *3*	0.08 *2*							

γ(^{124}Sb) (continued)

E$_\gamma$ †	I$_\gamma$ ‡d	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.#	α e	Comments
334.981 3	0.82 3	371.823	6$^-$,7$^-$,8$^-$	36.8437	(8)$^-$	M1,E2	0.0248 12	α(K)=0.0212 7; α(L)=0.0029 4; α(M)=0.00058 8; α(N+..)=0.00013 α(K)exp=0.020 4.
338.301 4	0.59 3	419.0624	2$^-$,3$^-$,4$^-$	80.7639	3$^+$,4$^+$			
342.068 9	0.10 1	744.949		402.8776	3$^+$,4$^+$			
345.48 3	0.056 16	386.2882	2$^+$,3$^+$,4$^+$	40.8037	3$^+$,4$^+$			
351.567 3	1.52 6	439.1716	4$^-$,5$^-$	87.6015	4$^-$	M1,E2	0.0216 7	α(K)=0.0185 4; α(L)=0.0025 3; α(M)=0.00050 6; α(N+..)=0.00011 α(K)exp=0.016 2.
364.320 12	0.16 1	612.693		248.3691	$^+$			
384.533 8	3.03 13	384.5335	4$^-$,5$^-$	0.0	3$^-$	M1,E2	0.0168 1	α(K)=0.01438 7; α(L)=0.00194 15; α(M)=0.00038 4 α(K)exp=0.011 2.
386.288 2	0.147 12	386.2882	2$^+$,3$^+$,4$^+$	0.0	3$^-$			
390.505 9	0.266 13	471.2598	$^+$	80.7639	3$^+$,4$^+$			
392.011 11	0.132 9	402.8776	3$^+$,4$^+$	10.8627	5$^+$			
396.40 4	0.067 10	483.9989	3$^+$,4$^+$,5$^+$	87.6015	4$^-$			
398.09 3	0.087 12	612.693		214.6031	3$^+$,4$^+$,5$^+$			
^{x}400.462 18	0.132 15							
^{x}400.770 12	0.225 16							
402.878 13	0.287 14	402.8776	3$^+$,4$^+$	0.0	3$^-$			
410.280 11	0.56 3	855.969	4$^-$,5	445.672	6$^-$			
419.056 12	0.30 2	419.0624	2$^-$,3$^-$,4$^-$	0.0	3$^-$			
422.287 10	0.09 1	1020.948	3$^-$,4,5$^-$	598.658	3$^-$,4$^-$			
^{x}425.09 6	0.064 9							
430.258 13	0.27 2	869.415	3$^-$,4,5$^-$	439.1716	4$^-$,5$^-$			
430.482 21	0.24 2	471.2598	$^+$	40.8037	3$^+$,4$^+$			
^{x}430.87 3	0.11 2							
434.82 5	0.052 10	445.672	6$^-$	10.8627	5$^+$			
441.919 8	0.45 2	522.6910	$^+$	80.7639	3$^+$,4$^+$			
443.214 11	0.266 13	483.9989	3$^+$,4$^+$,5$^+$	40.8037	3$^+$,4$^+$			
443.938 9	0.223 13	863.003	3,4	419.0624	2$^-$,3$^-$,4$^-$			
450.341 22	0.11 1	869.415	3$^-$,4,5$^-$	419.0624	2$^-$,3$^-$,4$^-$			
455.244 14	0.42 2	827.064	5$^-$,6,7$^{(-)}$	371.823	6$^-$,7$^-$,8$^-$			
^{x}455.76 6	0.09 2							
^{x}456.21 6	0.10 2							
457.825 25	0.07 2	744.949		287.1283	3$^+$,4$^+$			
461.996 9	0.436 25	642.056	5$^-$,6,7$^-$	180.0509	7$^-$,8$^-$			
^{x}463.899 10	0.35 2							
466.956 11	0.52 3	598.658	3$^-$,4$^-$	131.6928	(5)$^-$			
470.052 12	0.11 1	757.196		287.1283	3$^+$,4$^+$			
473.122 9	0.59 4	483.9989	3$^+$,4$^+$,5$^+$	10.8627	5$^+$			
477.688 25	0.097 12	1059.643		581.916				
481.884 19	0.10 1	522.6910	$^+$	40.8037	3$^+$,4$^+$			
484.869 10	0.161 14	869.415	3$^-$,4,5$^-$	384.5335	4$^-$,5$^-$			
501.152 8	0.57 3	581.916		80.7639	3$^+$,4$^+$			

γ(^{124}Sb) (continued)

E_γ [†]	I_γ [‡d]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [#]	α [e]	Comments
530.349 *16*	0.11 *1*	744.949		214.6031	3+,4+,5+			
531.939 *13*	0.13 *1*	612.693		80.7639	3+,4+			
x537.23 *4*	0.086 *13*							
541.120 *24*	0.15 *2*	581.916		40.8037	3+,4+			
548.978 *22*	0.18 *1*	744.949		195.9822	4+,5+			
555.058 *7*	0.90 *5*	642.652	4−,5,6−	87.6015	4−			
561.231 *19*	0.191 *13*	757.196		195.9822	4+,5+			
x564.733 *9*	0.30 *2*							
x567.478 *17*	0.09 *1*							
571.059 *9*	0.35 *2*	581.916		10.8627	5+			
x577.26 *11*	0.08 *3*							
x583.64 *5*	0.065 *12*							
589.61 *5*	0.106 *13*	804.266		214.6031	3+,4+,5+			
x595.39 *8*	0.06 *2*							
598.666 *10*	2.27 *14*	598.658	3−,4−	0.0	3−	M1,E2	0.00564 *12*	α(K)=0.00485 *11*; α(L)=0.00059 α(K)exp=0.0038 *13*.
x610.91 *3*	0.29 *2*							
x616.474 *17*	0.135 *12*							
620.48 *3*	0.21 *2*	1059.643		439.1716	4−,5−			
634.003 *15*	0.46 *3*	1053.067		419.0624	2−,3−,4−			
636.41 *8*	0.08 *1*	1020.948	3−,4,5−	384.5335	4−,5−			
x643.885 *21*	0.13 *2*							
646.96 *5*	0.08 *2*	827.064	5−,6,7(−)	180.0509	7−,8−			
x655.72 *4*	0.11 *2*							
x657.59 *25*	0.035 *10*							
664.11 *4*	0.042 *13*	744.949		80.7639	3+,4+			
x668.433 *19*	0.12 *1*							
x670.52 *21*	0.036 *8*							
675.26 *7*	0.088 *12*	1059.643		384.5335	4−,5−			
x682.49 *4*	0.049 *5*							
x687.28 *9*	0.058 *14*							
x694.716 *25*	0.12 *2*							
695.38 *5*	0.135 *25*	827.064	5−,6,7(−)	131.6928	(5)−			
x702.04 *6*	0.078 *16*							
704.13 *3*	0.10 *1*	744.949		40.8037	3+,4+			
x706.40 *25*	0.067 *17*							
x709.331 *12*	0.21 *3*							
716.406 *18*	0.17 *2*	757.196		40.8037	3+,4+			
723.42 *3*	0.20 *3*	804.266		80.7639	3+,4+			
724.27 *3*	0.11 *2*	855.969	4−,5	131.6928	(5)−			
x735.2 *3*	0.11 *2*							
737.704 *21*	0.196 *14*	869.415	3−,4,5−	131.6928	(5)−			
x743.92 *3*	0.236 *17*							
759.38 *4*	0.115 *12*	863.003	3,4	103.6513	2−,3−,4−			

γ(^{124}Sb) (continued)

E$_\gamma$[†]	I$_\gamma$[‡d]	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$
763.481 14	0.425 27	804.266		40.8037	$3^+,4^+$
768.404 18	0.217 17	855.969	$4^-,5$	87.6015	4^-
[x]772.04 3	0.325 23				
775.445 25	0.44 3	863.003	3,4	87.6015	4^-
781.94 6	0.106 13	869.415	$3^-,4,5^-$	87.6015	4^-
[x]786.6 3	0.064 8				
[x]788.75 25	0.09 2				
[x]793.23 3	0.165 15				
[x]799.2 3	0.05 1				
[x]803.42 5	0.071 15				
[x]815.02 10	0.044 10				
[x]816.57 7	0.092 13				
[x]819.00 9	0.07 1				
[x]823.66 3	0.30 3				
[x]828.86 5	0.273 25				
[x]830.93 6	0.253 24				
[x]832.06 3	0.24 2				
[x]837.47 9	0.09 1				
[x]845.6 4	0.05 1				
[x]848.8 4	0.05 1				
[x]854.70 4	0.12 2				
[x]857.98 5	0.15 2				
863.10 5	0.074 15	863.003	3,4	0.0	3^-
[x]866.52 5	0.14 2				
869.52 7	0.14 2	869.415	$3^-,4,5^-$	0.0	3^-
[x]875.3 5	0.073 25				
[x]881.74 9	0.087 25				
889.27 4	0.16 2	1020.948	$3^-,4,5^-$	131.6928	$(5)^-$
[x]891.21 22	0.057 12				
[x]893.13 5	0.14 2				
[x]896.96 4	0.22 2				
[x]915.24 16	0.070 12				
[x]917.54 7	0.05 1				
[x]927.7 3	0.067 12				
[x]930.62 8	0.14 2				
[x]933.5[a] 11	0.064 20				
[x]935.44 12	0.07 1				
[x]937.42 23	0.06 1				
[x]941.22 13	0.108 14				
[x]942.60 11	0.14 2				
[x]950.04 7	0.135 18				
[x]953.13 11	0.07 2				
[x]957.4 4	0.036 12				
[x]969.04 5	0.17 3				
972.06 3	0.31 4	1059.643		87.6015	4^-
[x]976.58 4	0.20 3				
[x]982.03 4	0.42 5				
[x]983.97 4	0.44 5				
[x]990.25 7	0.108 14				
[x]1008.0 3	0.05 3				
[x]1012.77 5	0.23 3				
[x]1014.71 7	0.25 3				
[x]1019.32 7	0.19 5				
1020.97 6	0.18 5	1020.948	$3^-,4,5^-$	0.0	3^-
[x]1027.54 7	0.08 3				
[x]1032.8[a] 4	0.053 10				
[x]1036.3[a] 6	0.028 7				
[x]1044.0[a] 5	0.038 10				
[x]1051.9[a] 3	0.095 20				
[x]1056.68[a] 20	0.14 3				
[x]1068.6[a] 4	0.041 16				
[x]1077.7[a] 2	0.087 20				
[x]1083.9[a] 4	0.072 20				
[x]1086.8[a] 2	0.13 3				
[x]1093.5[a] 6	0.18 8				
[x]1105.8[a] 2	0.13 3				
[x]1111.9[a] 4	0.069 20				
[x]1117.2[a] 4	0.049 10				
[x]1128.2[a] 4	0.086 20				
[x]1130.8[a] 5	0.088 20				
[x]1133.5[a] 7	0.042 10				
[x]1150.9[a] 4	0.027 8				
5181.9 4	0.064 10	(6467.45)	$3^+,4^+$	1285.6	
5199.7[&] 12	0.086[@] 20	(6467.45)	$3^+,4^+$	1267.8	
5206 8	0.011 10	(6467.45)	$3^+,4^+$	1261	
5225.0 3	0.37 8	(6467.45)	$3^+,4^+$	1242.5	
5230.2 5	0.19 4	(6467.45)	$3^+,4^+$	1237.3	
5286.8 6	0.043 10	(6467.45)	$3^+,4^+$	1180.7	
5307.9[&] 6	0.12[@] 3	(6467.45)	$3^+,4^+$	1159.6	
5324.2 5	0.087 20	(6467.45)	$3^+,4^+$	1143.3	
5338.3 3	0.34 7	(6467.45)	$3^+,4^+$	1129.2	
5370.2 5	0.038 5	(6467.45)	$3^+,4^+$	1097.3	
5400.4 5	0.095 20	(6467.45)	$3^+,4^+$	1067.1	
5408.0 2	0.69 14	(6467.45)	$3^+,4^+$	1059.643	
5414.4 3	0.32 7	(6467.45)	$3^+,4^+$	1053.067	
5436.3 6	0.091 20	(6467.45)	$3^+,4^+$	1031.2	
5446.7 3	0.39 8	(6467.45)	$3^+,4^+$	1020.948	$3^-,4,5^-$
5499.5 4	0.043 10	(6467.45)	$3^+,4^+$	968.0	

$^{124}_{51}$Sb$_{73}$-8

^{123}Sb(n,γ) E=th 1973ShZZ,1980Al22 (continued)

γ(^{124}Sb) (continued)

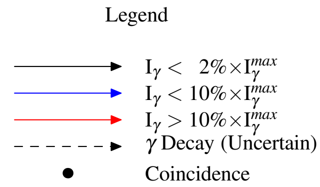
E_γ[†]	I_γ[‡d]	E_i(level)	J^π_i	E_f	J^π_f	E_γ[†]	I_γ[‡d]	E_i(level)	J^π_i	E_f	J^π_f
5550.0 *14*	0.014 *6*	(6467.45)	$3^+,4^+$	917.5		6028.3 *3*	0.35 *7*	(6467.45)	$3^+,4^+$	439.1716	$4^-,5^-$
5562.4[c] *8*		(6467.45)	$3^+,4^+$	905.1		6048.34 *22*	0.80 *16*	(6467.45)	$3^+,4^+$	419.0624	$2^-,3^-,4^-$
5570.8 *9*	0.034 *9*	(6467.45)	$3^+,4^+$	896.7		6064.3 *5*	0.074 *20*	(6467.45)	$3^+,4^+$	402.8776	$3^+,4^+$
5586.4 *11*	0.016 *5*	(6467.45)	$3^+,4^+$	881.1		6082.9 *3*	0.73 *15*	(6467.45)	$3^+,4^+$	384.5335	$4^-,5^-$
5598.3 *3*	0.23 *5*	(6467.45)	$3^+,4^+$	869.415	$3^-,4,5^-$	6180.3 *6*	0.040 *10*	(6467.45)	$3^+,4^+$	287.1283	$3^+,4^+$
5604.5 *2*	0.43 *9*	(6467.45)	$3^+,4^+$	863.003	3,4	6218.2 *12*	0.016 *5*	(6467.45)	$3^+,4^+$	248.3691	$^+$
5611.4 *4*	0.096 *20*	(6467.45)	$3^+,4^+$	855.969	$4^-,5$	6252.7 *3*	0.19 *4*	(6467.45)	$3^+,4^+$	214.6031	$3^+,4^+,5^+$
5662.9 *7*	0.019 *6*	(6467.45)	$3^+,4^+$	804.266		6335.72 *22*	0.72 *15*	(6467.45)	$3^+,4^+$	131.6928	$(5)^-$
5709.6 *10*	0.028 *10*	(6467.45)	$3^+,4^+$	757.196		6363.72 *21*	1.2 *2*	(6467.45)	$3^+,4^+$	103.6513	$2^-,3^-,4^-$
5868.80 *21*	0.95 *19*	(6467.45)	$3^+,4^+$	598.658	$3^-,4^-$	6379.69 *22*	2.1 *4*	(6467.45)	$3^+,4^+$	87.6015	4^-
5885.6[c] *3*		(6467.45)	$3^+,4^+$	581.916		6426.5 *10*	0.017 *7*	(6467.45)	$3^+,4^+$	40.8037	$3^+,4^+$
5902.4[h] *24*	0.004 *9*	(6467.45)	$3^+,4^+$	565.1?		6456.54 *22*	0.34 *7*	(6467.45)	$3^+,4^+$	10.8627	5^+
5982.9 *5*	0.044 *10*	(6467.45)	$3^+,4^+$	483.9989	$3^+,4^+,5^+$	6467.27 *21*	0.88 *18*	(6467.45)	$3^+,4^+$	0.0	3^-
5995.9 *4*	0.081 *20*	(6467.45)	$3^+,4^+$	471.2598	$^+$						

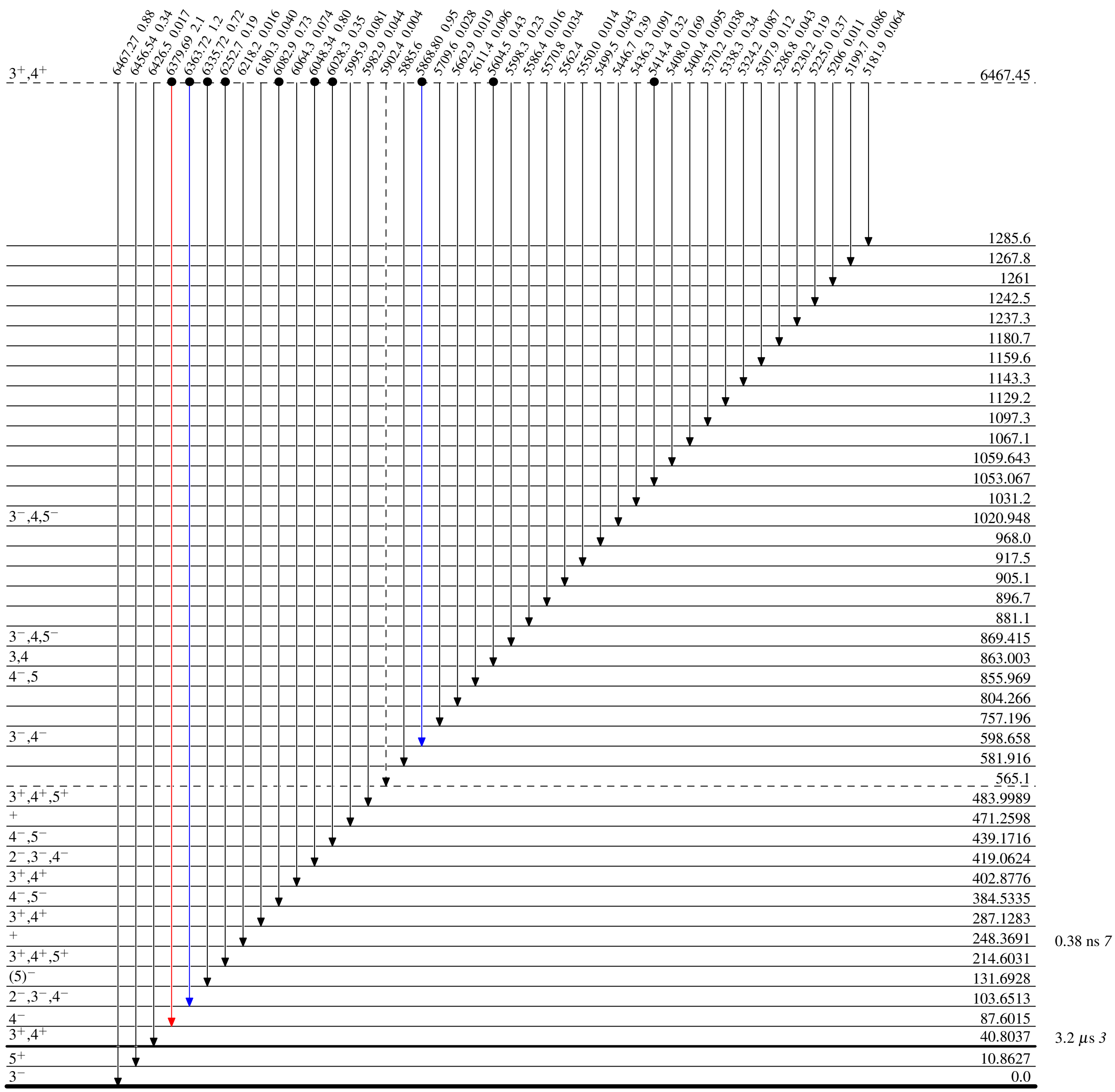
[†] Primary γ-rays from capture states are from 1973ShZZ and secondary γ-rays are from 1980Al22, except where noted otherwise.
[‡] Relative to I(252.834γ)=1.7.
[#] From 1980Al22 on the bases of α(exp) and L-, M-subshell ratios.
[@] Calculated from measured electron intensity by assuming theoretical α.
[&] Only observed in (n,ce) spectrum.
[a] From 1973ShZZ.
[b] Measured with Si(Li) spectrometer.
[c] Partially obscured by ^{121}Sb(n,γ) line.
[d] Intensity per 100 neutron captures.
[e] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[f] Multiply placed with undivided intensity.
[g] Multiply placed with intensity suitably divided.
[h] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{123}Sb(n,γ) E=th 1973ShZZ,1980Al22

Level Scheme

Intensities: Relative I_γ





$^{124}_{51}Sb_{73}$

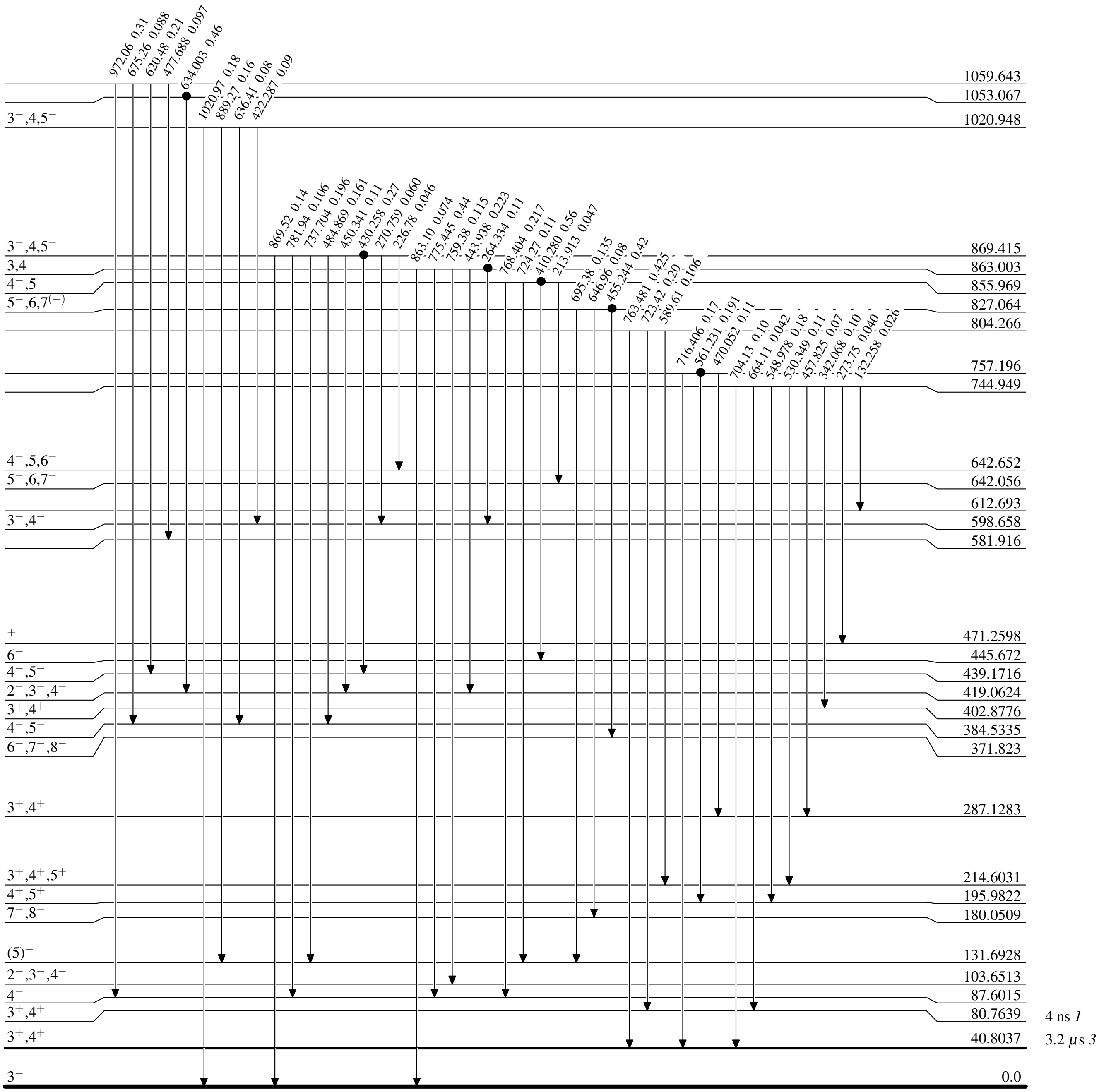
^{123}Sb(n,γ) E=th 1973ShZZ,1980Al22

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- $I_\gamma <$ 2%×I_γ^{max}
- $I_\gamma <$ 10%×I_γ^{max}
- $I_\gamma >$ 10%×I_γ^{max}
- ● Coincidence

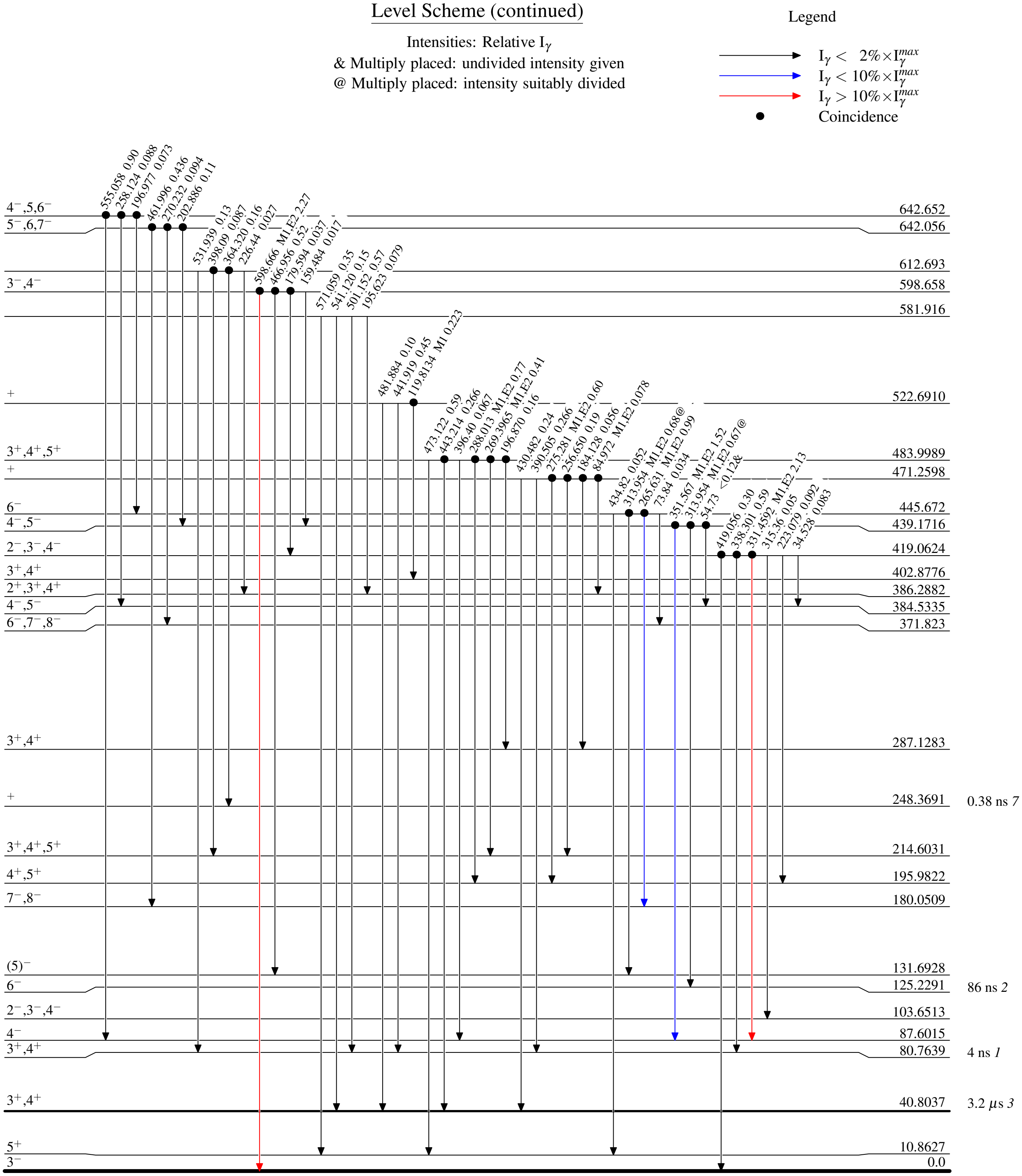


$^{124}_{51}Sb_{73}$

^{123}Sb(n,γ) E=th 1973ShZZ,1980Al22

Level Scheme (continued)

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



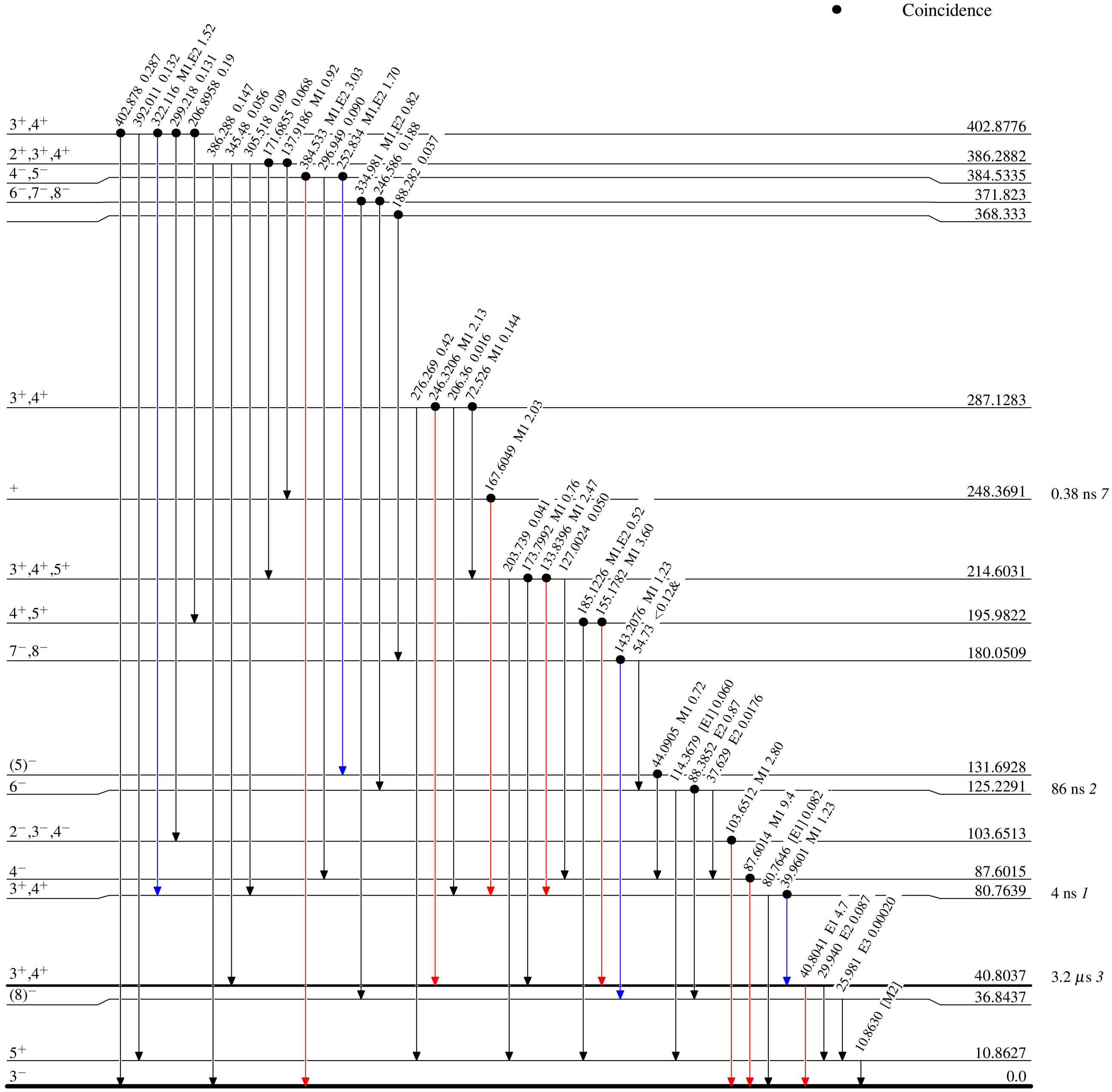
$^{124}_{51}Sb_{73}$

^{123}Sb(n,γ) E=th 1973ShZZ,1980Al22

Level Scheme (continued)

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

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



$^{124}_{51}Sb_{73}$