^{118}Sn(^{6}Li,3nγ) 1982Ga21,1994Ko13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. Ohya	NDS 111, 1619 (2010)	20-Jan-2009

1982Ga21: 118Sn(^{6}Li,3nγ) E=32 MeV; measured excitation functions, γ, $\gamma\gamma$, γ(t) and $\gamma(\theta)$; a level scheme consisting 4 band structures is proposed.
1994Ko13: 118Sn(^{6}Li,3nγ) E=33 MeV; measured γ(t).

^{121}I Levels

E(level)	J$^{\pi}$&	T$_{1/2}$[a]	Comments
0.0[†]	5/2^{+}		
132.86[†] *19*	7/2^{+}		
433.73[‡] *24*	(9/2)$^{+}$	9.6 ns *4*	T$_{1/2}$: unweighted average of of 9.4 ns *4* (1982Ga21), 9.5 ns *4* (1994Ko13) and 10.0 ns *4* from ^{121}Sb(^{3}He,3nγ) (1982Ha46).
445.50[#] *24*	(7/2)$^{+}$	<0.1 ns	T$_{1/2}$: lower upper was deduced from centroid shift in γ-rf coincidence (1994Ko13).
529.31[†] *22*	(9/2)$^{+}$		
649.91 *20*	(9/2)$^{+}$		
748.7[‡] *4*	(11/2)$^{+}$		
801.7[†] *4*	(11/2^{+})		
811.7[@] *3*	(11/2)$^{-}$	0.35 ns *20*	T$_{1/2}$: deduced from centroid shift in γ-rf coincidence (1994Ko13).
1031.3[#] *4*	(11/2)$^{+}$		
1077.3[‡] *4*	(13/2)$^{+}$		
1134.1[†] *4*	(13/2)$^{+}$		
1239.8[@] *4*	(15/2)$^{-}$		
1435.7[‡] *4*	(15/2)$^{+}$		
1575.2[†] *5*	(15/2^{+})		
1746.7[#] *5*	(15/2^{+})		
1781.0[@] *5*	(19/2)$^{-}$		
1814.3[‡] *4*	(17/2)$^{+}$		
1864.3[†] *5*	(17/2)$^{+}$		
2218.6[‡] *5*	(19/2)$^{+}$		
2377.3 *6*		9.0 μs *14*	T$_{1/2}$: from γ(t) (1982Ga21).
2426.9[@] *6*	(23/2)$^{-}$		
2729.0[†] *6*	(21/2^{+})		
3274.2[@] *7*	(27/2^{-})		

[†] Band(A): 2d$_{5/2}$ (g.s.).
[‡] Band(B): 9/2^{+}[404].
[#] Band(C): 1g$_{7/2}$.
[@] Band(D): 1h$_{11/2}$ or 1/2^{-}[550].
[&] From Adopted Levels.
[a] From centroid shift method in beam-delayed γ coin (1982Ga21,1994Ko13).

^{118}Sn(^{6}Li,3nγ) 1982Ga21,1994Ko13 (continued)

$\gamma(^{121}I)$

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
132.8 *3*	98 *10*	132.86	7/2$^+$	0.0	5/2$^+$	D(+Q)	0.00 *5*	Mult.: A_2=−0.13 *6*, A_4=−0.12 *9*.
158.7 *3*	28 *3*	2377.3		2218.6	(19/2)$^+$	D		Mult.: A_2=−0.04 *7*, A_4=−0.04 *9*.
161.7 *3*	62 *6*	811.7	(11/2)$^-$	649.91	(9/2)$^+$	(D)		Mult.: A_2=−0.14 *6*, A_4=−0.10 *8*.
204.3 *3*	2.0 *2*	649.91	(9/2)$^+$	445.50	(7/2)$^+$			
282.4 *3*	23 *2*	811.7	(11/2)$^-$	529.31	(9/2)$^+$	(D)		Mult.: A_2=−0.19 *7*, A_4=−0.12 *10*.
300.9 *3*	95 *10*	433.73	(9/2)$^+$	132.86	7/2$^+$	D+Q	+0.15 *5*	Mult.: A_2=0.00 *7*, A_4=−0.10 *9*.
314.7 *3*	100 *10*	748.7	(11/2)$^+$	433.73	(9/2)$^+$	D+Q	+0.27 *6*	Mult.: A_2=+0.14 *7*, A_4=−0.08 *9*.
328.5 *3*	54 *5*	1077.3	(13/2)$^+$	748.7	(11/2)$^+$	D+Q	+0.23 *6*	Mult.: A_2=+0.11 *7*, A_4=−0.08 *9*;
358.4 *3*	46 *5*	1435.7	(15/2)$^+$	1077.3	(13/2)$^+$	D+Q	+0.18 *5*	Mult.: A_2=+0.03 *7*, A_4=−0.12 *9*;
378.6 *3*	25 *3*	1814.3	(17/2)$^+$	1435.7	(15/2)$^+$	D+Q	+0.25 *5*	Mult.: A_2=+0.15 *8*, A_4=−0.10 *11*;
396.4 *3*	38 *4*	529.31	(9/2)$^+$	132.86	7/2$^+$	D+Q	−0.20 *5*	Mult.: A_2=−0.36 *6*, A_4=−0.04 *9*.
404.4 *3*	17 *2*	2218.6	(19/2)$^+$	1814.3	(17/2)$^+$	D+Q	+0.21 *7*	Mult.: A_2=+0.10 *9*, A_4=−0.20 *12*;
428.1 *3*	86 *9*	1239.8	(15/2)$^-$	811.7	(11/2)$^-$	Q		Mult.: A_2=+0.38 *7*, A_4=−0.13 *9*;
433.7 *3*	34 *3*	433.73	(9/2)$^+$	0.0	5/2$^+$	(Q)		Mult.: A_2=+0.15 *7*, A_4=−0.11 *9*.
445.4 *3*	34 *3*	445.50	(7/2)$^+$	0.0	5/2$^+$	D+Q	−0.78 *20*	Mult.: A_2=−0.57 *6*, A_4=−0.11 *9*.
517.0 *3*	31 *3*	649.91	(9/2)$^+$	132.86	7/2$^+$	D+Q	−1.1 *9*	Mult.: A_2=−0.53 *7*, A_4=−0.01 *12*; δ: given as −2.0<δ<−0.2 (1982Ga21).
529.4 *3*	39 *4*	529.31	(9/2)$^+$	0.0	5/2$^+$	(Q)		Mult.: A_2=+0.33 *10*, A_4=−0.04 *12*.
541.2 *3*	59 *6*	1781.0	(19/2)$^-$	1239.8	(15/2)$^-$	(Q)		Mult.: A_2=+0.35 *8*, A_4=−0.19 *10*.
585.8 *3*	21 *2*	1031.3	(11/2)$^+$	445.50	(7/2)$^+$	Q		Mult.: A_2=+0.28 *10*, A_4=−0.18 *13*.
604.8 *3*	44 *4*	1134.1	(13/2)$^+$	529.31	(9/2)$^+$			Mult.: A_2=+0.25 *8*, A_4=−0.08 *9*.
643.8 *3*	32 *3*	1077.3	(13/2)$^+$	433.73	(9/2)$^+$	Q		Mult.: A_2=+0.29 *10*, A_4=0.00 *13*.
645.9 *3*	33 *3*	2426.9	(23/2)$^-$	1781.0	(19/2)$^-$	(Q)		Mult.: A_2=+0.35 *10*, A_4=−0.20 *15*;
650.0 *3*	74 *7*	649.91	(9/2)$^+$	0.0	5/2$^+$	Q		Mult.: A_2=+0.34 *7*, A_4=−0.16 *9*.
668.8 *3*	28 *3*	801.7	(11/2$^+$)	132.86	7/2$^+$			Mult.: A_2=+0.35 *8*, A_4=−0.17 *11*.
686.9 *3*	12 *1*	1435.7	(15/2)$^+$	748.7	(11/2)$^+$	Q		Mult.: A_2=+0.27 *15*, A_4=−0.18 *19*;
715.4 *3*	21 *2*	1746.7	(15/2$^+$)	1031.3	(11/2)$^+$	(Q)		Mult.: A_2=+0.14 *8*, A_4=−0.11 *10*.
730.2 *3*	26 *3*	1864.3	(17/2)$^+$	1134.1	(13/2)$^+$	Q		Mult.: A_2=+0.75 *36*, A_4=−0.25 *37*;
737.0 *3*	16 *2*	1814.3	(17/2)$^+$	1077.3	(13/2)$^+$	Q		Mult.: A_2=+0.37 *11*, A_4=−0.09 *14*;
773.5 *3*	21 *2*	1575.2	(15/2$^+$)	801.7	(11/2$^+$)	Q		Mult.: A_2=+0.35 *10*, A_4=−0.28 *13*.
782.9 *3*	13 *1*	2218.6	(19/2)$^+$	1435.7	(15/2)$^+$	Q		Mult.: A_2=+0.29 *11*, A_4=−0.18 *15*.
847.3 *3*	19 *2*	3274.2	(27/2$^-$)	2426.9	(23/2)$^-$			
864.7 *3*	20 *2*	2729.0	(21/2$^+$)	1864.3	(17/2)$^+$	(Q)		Mult.: A_2=+0.48 *10*, A_4=−0.07 *13*.

[†] From 1982Ga21.
[‡] Deduced from $\gamma(\theta)$.

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Level Scheme

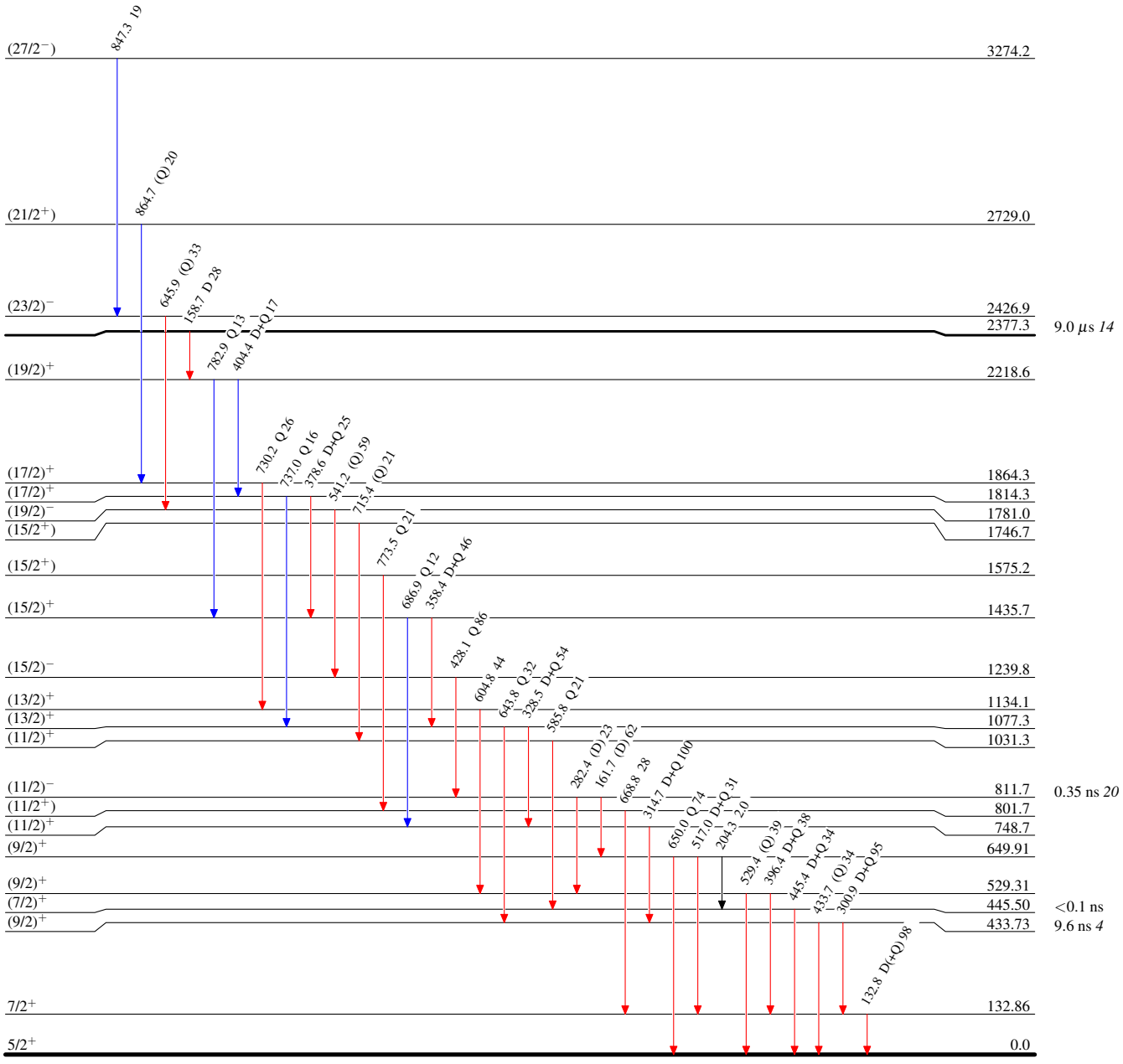
Intensities: Relative I_γ

Legend

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

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

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



$^{121}_{53}I_{68}$

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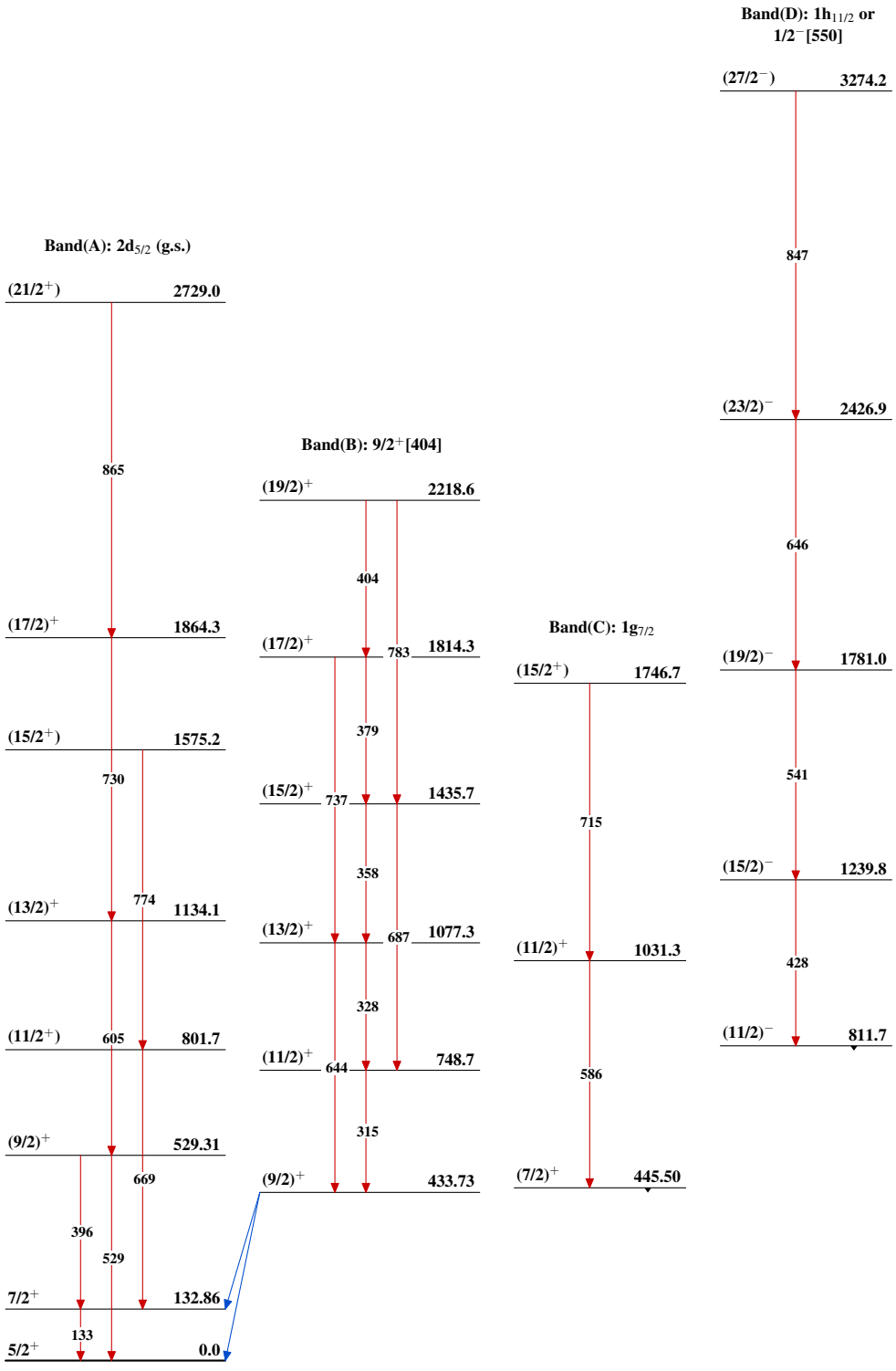

$^{121}_{53}I_{68}$