

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112,495 (2011)	1-Jan-2010

$Q(\beta^-)=766.7$ 22; $S(n)=8707$ 3; $S(p)=7311$ 3; $Q(\alpha)=-4.84\times 10^3$ 3 [2012Wa38](#)

Note: Current evaluation has used the following Q record 766.7 218706.7 267307.7 26 -4839 28 [2009AuZZ](#).

Other reaction: [1992NiZZ](#); heavy ion reaction, but no data are available.

 ^{125}Sb Levels

E(A),J(A) Analog resonance, J^π from analyzing power in $^{124}\text{Sn}(\text{pol p,p})$. The uncertainties in the resonance energies are 5-20 keV.

Cross Reference (XREF) Flags

A	$^{124}\text{Sn}(\text{pol p,p})$ IAR	F	$^{126}\text{Te}(t,\alpha)$
B	$^{124}\text{Sn}(^3\text{He,d})$	G	$^{238}\text{U}(^{12}\text{C},x\gamma)$
C	$^{125}\text{Sn}\beta^-$ decay (9.52 min)	H	$^{124}\text{Sn}(^7\text{Li},\alpha 2n\gamma)$
D	$^{125}\text{Sn}\beta^-$ decay (9.64 d)	I	^{125}Sb IT decay (25 μs)
E	$^{126}\text{Te}(d,^3\text{He})$		

E(level) [†]	J^π	$T_{1/2}$	XREF	Comments
0.0	$7/2^+$	2.75856 y 25	BCDEFGHI	$\% \beta^- = 100$ $\mu = +2.63$ 4 (1989Ra17) J^π : L=4 in ($d,^3\text{He}$), ($^3\text{He,d}$), (t,α); $\Delta J=2$ -yes shape β^- feeds $11/2^-$ daughter (1959Na06,1964Ma30,1966Ma49). $T_{1/2}$: From weighted average of 1007.56 d 10 (1992Un01), 1008.1 d 8 (1983Wa26) and 1007.3 d 3 (1980Ho17)(1y=365.242 d). Others: 2.6 y 1 (1960KI04), 2.78 y 4 (1961Wy01), 2.71 y 2 (1965Fl02), 2.81 y 5 (1966La13), 2.7 y (1950Le09). μ : From nuclear magnetic resonance on oriented nuclei (1989Ra17). 1974Ca06 give measurement. See also 2005St24 compilation. Configuration= $(\pi 1g_{7/2})$.
332.06 3	$5/2^+$	156 ps 8	BCDEF	J^π : L=2 in ($^3\text{He,d}$), (t,α); M1+E2 γ to $7/2^+$. $T_{1/2}$: From $^{125}\text{Sn}\beta^-$ decay (9.52 min). Configuration= $(\pi 2d_{5/2})$.
642.97 2	$3/2^+, 5/2^{+\#}$		BC EF	J^π : L=2 in ($^3\text{He,d}$), (t,α) favors $3/2^+$.
921.67 3	$1/2^+$		BC EF	J^π : L=0 in ($^3\text{He,d}$), (t,α). Configuration= $(\pi 3s_{1/2})$.
1067.30 3	$9/2^{+\ddagger}$		D HI	J^π : M1+E2 γ to $7/2^+$.
1089.50 3	$11/2^{+\ddagger}$		D GHI	J^π : E2 γ to $7/2^+$.
1349.60 3	$7/2^+$		CD	J^π : $\text{Log } f^{\text{A}}_t = 10.38$ from $11/2^-$, M1+E2 γ to $5/2^+$.
1419.85 4	$9/2^+$		D	J^π : M1+E2 γ to $7/2^+$, 469 E1 γ from $11/2^-$.
1483.78 2	$3/2^+, 5/2^+$		BC	J^π : L=2 in ($^3\text{He,d}$).
1560 @ 5			B	
1591.57 5	$7/2^+, 9/2^+$		D	J^π : $\text{Log } ft = 10.23$ from $11/2^-$. γ to $5/2^+$.
1660 @ 20			B	
1700.69 5	$1/2^+, 3/2^+, 5/2^+$		C	J^π : γ 's to $1/2^+$ and $5/2^+$.
1736.13 3	$(3/2)^{+\#}$		BC	J^π : L=2 in ($^3\text{He,d}$); reaction strength favors $3/2^+$.
1800 @ 20	$1/2^+$		B	J^π : L=0 in ($^3\text{He,d}$).
1806.700 16	$(9/2)^+$		DEF	J^π : L=4 in ($d,^3\text{He}$), (t,α). Large C^2S in ($d,^3\text{He}$) favors $9/2^+$.

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Adopted Levels, Gammas (continued) ^{125}Sb Levels (continued)

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
1889.848 15	9/2 ⁻ , 11/2 ⁻		B D	J ^π : E1 γ to 9/2 ⁺ and 11/2 ⁺ . Large C ² S in (d, ³ He) favors 11/2 ⁻ ; however, this requires the weak gs γ to be M2.
1894 & 10			F	
1913.77 8	3/2 ⁺ , 5/2		C	J ^π : γ's to 5/2 ⁺ and 7/2 ⁺ . log ft=6.47 from 3/2 ⁺ .
1947.45 4	(3/2) ⁺ #		BC	J ^π : γ's to 1/2 ⁺ and 7/2 ⁺ . log ft=5.80 from 3/2 ⁺ . L=2 in (d, ³ He).
1971.25 20	15/2 ⁻	4.1 μs 2	HI	J ^π : M2+E3 γ to 11/2 ⁺ , E3 γ to 9/2 ⁺ .
1971.25+x 20	(19/2 ⁻)	25 μs 4	I	T _{1/2} : From ¹²⁴ Sn(⁷ Li,α2nγ). Additional information 1.
1982.84 4	11/2 ⁻		D	E(level), T _{1/2} : From 2010Re01.
1993.64 25	(15/2) ⁺		GH	J ^π : Log ft=7.28 from 11/2 ⁻ , γγ(θ) and (pol γ)γ(θ) favors 11/2 ⁻ .
2002.140 12	9/2, 11/2 ⁺		D	J ^π : E2 γ to 11/2 ⁺ .
2112.1 3	(19/2 ⁻)	28.0 μs 7	H	J ^π : Log ft=7.50 from 11/2 ⁻ , γ to 7/2 ⁺ .
2113.0 10	1/2 ⁻ , 3/2 ⁻		C EF	J ^π : E2 γ to 15/2 ⁻ .
2193.4 3	15/2 ⁺		GH	T _{1/2} : From ¹²⁴ Sn(⁷ Li,α2nγ).
2201.023 12	9/2, 11/2 ⁺		D	J ^π : L=1 in (d, ³ He), (t,α).
2217.2 3	(17/2) ⁻		H	J ^π : E2 γ from (19/2) ⁺ . γ to 11/2 ⁺ .
2227.0 4			D	J ^π : Log ft=7.90 from 11/2 ⁻ , γ to 7/2 ⁺ .
2240.72 4	9/2 ⁺		D	J ^π : M1 γ to 15/2 ⁻ , systematics.
2253.39 5	9/2, 11/2, 13/2		D	J ^π : Log ft=6.53 from 11/2 ⁻ , M1+E2 γ's to 11/2 ⁺ and 9/2 ⁺ , γγ(θ) (1971Ma01, 1980Ve04) favors 9/2.
2275.769 10	9/2, 11/2 ⁺		D	J ^π : Log ft=6.99 from 11/2 ⁻ .
2288.21 8	(11/2 ⁺)		D	J ^π : Log ft=6.49 from 11/2 ⁻ , intense γ to 7/2 ⁺ .
2299 & 10	1/2 ⁻ , 3/2 ⁻		EF	J ^π : Log ft=6.13 from 11/2 ⁻ , γγ(θ) suggests 11/2 ⁺ .
2325.0 3	(19/2) ⁺	31 ns 2	GH	J ^π : L=1 in (t,α), (d, ³ He).
2471.0 4	(23/2) ⁺	272 ns 16	GH	J ^π : E2 γ to 15/2 ⁺ . γ to (17/2) ⁻ , systematics.
2480 @ 20			B	T _{1/2} : From ¹²⁴ Sn(⁷ Li,α2nγ).
2483.8 4			G	
2488.5 5			G	
2515 & 10	1/2 ⁻ , 3/2 ⁻		F	J ^π : L=1 in (t,α).
2570 @ 20	1/2 ⁺		B	J ^π : L=0 in (³ He,d).
2636.5 5			G	
2670 @ 20	1/2 ⁺		B	J ^π : L=0 in (³ He,d).
2678 & 10	5/2 ⁻ , 7/2, 9/2 ⁺		F	J ^π : L=3,4 in (t,α).
2710 @ 20	1/2 ⁺		B	J ^π : L=0 in (³ He,d).
2780 @ 20			B	
2815.4 6			G	
2820 @ 20			B	
2890 @ 20	3/2 ⁺ , 5/2 ⁺		B	J ^π : L=2 in (³ He,d).
2917.3 5			G	
3122 & 10	7/2 ⁺ , 9/2 ⁺		F	J ^π : L=4 in (t,α).
3190 & 10	5/2 ⁻ , 7/2 ⁻		F	J ^π : L=3 in (t,α).
3399.2 6			G	
3462 & 10	1/2 ⁻ , 3/2 ⁻		F	J ^π : L=1 in (t,α).
3941.8 6			G	
4479.9 6			G	
4933.1 7			G	
5365.1 9			G	

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Adopted Levels, Gammas (continued) ^{125}Sb Levels (continued)

E(level) [†]	J ^π	XREF	Comments
15172 20	3/2 ⁺	A	IAR of 27.5-keV level in ^{125}Sn .
15379 20	1/2 ⁺	A	IAR of 215.1-keV level in ^{125}Sn .
16417 20	(5/2) ⁺	A	IAR of 1258-keV level in ^{125}Sn .
16701 20	(5/2) ⁺	A	IAR of 1540-keV level in ^{125}Sn .
17869 20	7/2 ⁻	A	IAR of 2676-keV level in ^{125}Sn .
18468 20	(3/2 ⁻)	A	IAR of 3349-keV level in ^{125}Sn .
18537 20	(3/2 ⁻)	A	IAR of 3421-keV level in ^{125}Sn .
18959 20	(1/2) ⁻	A	IAR of 3830-keV level in ^{125}Sn .
19118 20	(1/2) ⁻	A	The closest level of L=(1) is observed at 4060 keV in $^{124}\text{Sn}(\text{d},\text{p})$. Energy difference is too large.

[†] From a least-squares fit to adopted E γ 's for levels connecting with γ 's. Others from (d, ^3He), unless otherwise noted.

[‡] $\gamma\gamma(\theta)$ and (pol γ) $\gamma(\theta)$ in ^{125}Sn β^- decay (9.52 min, 9.64 d).

From L=2 in ($^3\text{He},\text{d}$), reaction strength favors 3/2⁺. Those states are considered to excite by 2d3/2 stripping, because the 332-keV level exhausts essentially all of the 2d5/2 strength in the ($^3\text{He},\text{d}$) reaction.

@ From ($^3\text{He},\text{d}$).

& From (t, α).

Adopted Levels, Gammas (continued)

$\gamma(^{125}\text{Sb})$

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. [‡]	$\delta^\ddagger$	$\alpha^@$	Comments
332.06	5/2 ⁺	331.96 6	100 1	0.0	7/2 ⁺	M1+E2	-0.24 4	0.0242	B(M1)(W.u.)=0.00356 20; B(E2)(W.u.)=1.3 5 $\alpha(\text{K})=0.0210$ 3; $\alpha(\text{L})=0.00264$ 4; $\alpha(\text{M})=0.000523$ 8; $\alpha(\text{N}+..)=0.0001108$ 17 $\alpha(\text{N})=0.0001008$ 16; $\alpha(\text{O})=9.94\times 10^{-6}$ 15 E_γ, I_γ : Weighted average of ¹²⁵ Sn β^- decay (9.64 d) and ¹²⁵ Sn β^- decay (9.52 min).
642.97	3/2 ⁺ , 5/2 ⁺	310.96 [#] 4 642.96 [#] 2	29 3 100.0 19	332.06 5/2 ⁺ 0.0 7/2 ⁺					
921.67	1/2 ⁺	278.56 [#] 15 589.61 [#] 2	12 3 100.0 21	642.97 3/2 ⁺ , 5/2 ⁺ 332.06 5/2 ⁺					
1067.30	9/2 ⁺	1067.10 5	100	0.0 7/2 ⁺		M1+E2	-0.86 18	0.00134 4	$\alpha(\text{K})=0.00117$ 4; $\alpha(\text{L})=0.000142$ 4; $\alpha(\text{M})=2.79\times 10^{-5}$ 7; $\alpha(\text{N}+..)=5.93\times 10^{-6}$ 15 $\alpha(\text{N})=5.39\times 10^{-6}$ 14; $\alpha(\text{O})=5.35\times 10^{-7}$ 14 $\alpha(\text{K})=0.000983$ 14; $\alpha(\text{L})=0.0001211$ 17; $\alpha(\text{M})=2.39\times 10^{-5}$ 4; $\alpha(\text{N}+..)=5.05\times 10^{-6}$ $\alpha(\text{N})=4.60\times 10^{-6}$ 7; $\alpha(\text{O})=4.52\times 10^{-7}$ 7
1089.50	11/2 ⁺	1089.15 10	100	0.0 7/2 ⁺		E2		0.001133 16	
1349.60	7/2 ⁺	258.25 ^{&a} 10 282.45 5 1017.50 8	<6.4 ^{&} 5.8 6 100 4	1089.50 11/2 ⁺ 1067.30 9/2 ⁺ 332.06 5/2 ⁺		M1+E2	2.1 +5-3	0.00137 3	$\alpha(\text{K})=0.001190$ 23; $\alpha(\text{L})=0.000147$ 3; $\alpha(\text{M})=2.89\times 10^{-5}$ 6; $\alpha(\text{N}+..)=6.11\times 10^{-6}$ 11 $\alpha(\text{N})=5.57\times 10^{-6}$ 10; $\alpha(\text{O})=5.48\times 10^{-7}$ 11 E_γ, I_γ : Weighted average of ¹²⁵ Sn β^- decay (9.64 d) and ¹²⁵ Sn β^- decay (9.52 min). E_γ, I_γ : Weighted average of ¹²⁵ Sn β^- decay (9.64 d) and ¹²⁵ Sn β^- decay (9.52 min).
1419.85	9/2 ⁺	1349.39 6 1087.70 10 1419.70 5	18.7 8 100 16 40.8 8	0.0 7/2 ⁺ 332.06 5/2 ⁺ 0.0 7/2 ⁺		D(+Q)	+0.01 3	0.000830 12	$\alpha(\text{K})=0.000680$ 10; $\alpha(\text{L})=8.11\times 10^{-5}$ 12; $\alpha(\text{M})=1.595\times 10^{-5}$ 23; $\alpha(\text{N}+..)=5.30\times 10^{-5}$ $\alpha(\text{N})=3.09\times 10^{-6}$ 5; $\alpha(\text{O})=3.09\times 10^{-7}$ 5; $\alpha(\text{IPF})=4.96\times 10^{-5}$ 7
1483.78	3/2 ⁺ , 5/2 ⁺	840.83 [#] 5 1151.70 [#] 8 1483.77 [#] 2	40.4 17 18.0 17 100.0 17	642.97 3/2 ⁺ , 5/2 ⁺ 332.06 5/2 ⁺ 0.0 7/2 ⁺					
1591.57	7/2 ⁺ , 9/2 ⁺	524.30 5 1259.35 10 1591.4 2	31 3 100 6 81 6	1067.30 9/2 ⁺ 332.06 5/2 ⁺ 0.0 7/2 ⁺					
1700.69	1/2 ⁺ , 3/2, 5/2 ⁺	779.5 [#] 3	13 4	921.67 1/2 ⁺					

Adopted Levels, Gammas (continued)

$\gamma(^{125}\text{Sb})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. [‡]	$\delta^\ddagger$	$\alpha^@$	Comments
1700.69	1/2 ⁺ , 3/2 ⁺ , 5/2 ⁺	1057.77 [#] 21	18 4	642.97	3/2 ⁺ , 5/2 ⁺				
		1368.61 [#] 4	100 3	332.06	5/2 ⁺				
1736.13	(3/2) ⁺	386.52 [#] 3	14.3 4	1349.60	7/2 ⁺				
		1093.27 [#] 14	5.2 4	642.97	3/2 ⁺ , 5/2 ⁺				
		1404.06 [#] 2	100.0 10	332.06	5/2 ⁺				
		1736.07 [#] 7	4.4 3	0.0	7/2 ⁺				
1806.700	(9/2) ⁺	386.6 2	3.3 7	1419.85	9/2 ⁺				
		1806.690 16	100.0 20	0.0	7/2 ⁺				
1889.848	9/2 ⁻ , 11/2 ⁻	469.85 5	34.7 7	1419.85	9/2 ⁺	E1(+M2)	+0.010 24	0.00292 6	$\alpha(\text{K})=0.00254$ 5; $\alpha(\text{L})=0.000307$ 6; $\alpha(\text{M})=6.03\times 10^{-5}$ 12; $\alpha(\text{N}+..)=1.274\times 10^{-5}$ 25
		800.28 5	24.9 5	1089.50	11/2 ⁺	E1(+M2)	0.18 +11-8	0.0011 3	$\alpha(\text{N})=1.160\times 10^{-5}$ 22; $\alpha(\text{O})=1.138\times 10^{-6}$ 22 $\alpha(\text{K})=0.0010$ 3; $\alpha(\text{L})=0.00012$ 4; $\alpha(\text{M})=2.3\times 10^{-5}$ 7; $\alpha(\text{N}+..)=4.8\times 10^{-6}$ 15
		822.48 5	100.0 20	1067.30	9/2 ⁺	E1		0.000849 12	$\alpha(\text{N})=4.4\times 10^{-6}$ 13; $\alpha(\text{O})=4.4\times 10^{-7}$ 13 $\alpha(\text{K})=0.000740$ 11; $\alpha(\text{L})=8.79\times 10^{-5}$ 13; $\alpha(\text{M})=1.727\times 10^{-5}$ 25; $\alpha(\text{N}+..)=3.66\times 10^{-6}$ $\alpha(\text{N})=3.33\times 10^{-6}$ 5; $\alpha(\text{O})=3.30\times 10^{-7}$ 5
		1557.3 1	0.095 23	332.06	5/2 ⁺				
		1889.884 16	1.7 1	0.0	7/2 ⁺				
1913.77	3/2 ⁺ , 5/2	430.03 [#] 14	63 16	1483.78	3/2 ⁺ , 5/2 ⁺				
		1581.96 [#] 20	53 11	332.06	5/2 ⁺				
		1913.66 [#] 10	100 11	0.0	7/2 ⁺				
1947.45	(3/2) ⁺	1025.46 22	12 5	921.67	1/2 ⁺				
		1304.42 [#] 10	11 3	642.97	3/2 ⁺ , 5/2 ⁺				
		1615.38 [#] 3	100 3	332.06	5/2 ⁺				
		1947.50 [#] 13	13 3	0.0	7/2 ⁺				
1971.25	15/2 ⁻	881.8 3	63.8 8	1089.50	11/2 ⁺	E3(+M2)	≥ 0.75	0.0045 6	$\alpha(\text{K})=0.0039$ 6; $\alpha(\text{L})=0.00053$ 5; $\alpha(\text{M})=0.000104$ 10; $\alpha(\text{N}+..)=2.20\times 10^{-5}$ 22
		904.0 3	100.0 25	1067.30	9/2 ⁺	E3		0.00372 6	$\alpha(\text{N})=2.01\times 10^{-5}$ 20; $\alpha(\text{O})=1.94\times 10^{-6}$ 22 B(M2)(W.u.) ≤ 0.00015 ; B(E3)(W.u.) ≥ 0.10 Mult., δ : From ¹²⁴ Sn(⁷ Li, α 2n γ). $\alpha(\text{K})=0.00317$ 5; $\alpha(\text{L})=0.000442$ 7; $\alpha(\text{M})=8.80\times 10^{-5}$ 13; $\alpha(\text{N}+..)=1.84\times 10^{-5}$ 3

Adopted Levels, Gammas (continued)

$\gamma(^{125}\text{Sb})$ (continued)									
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. [‡]	$\delta^\ddagger$	$\alpha^@$	Comments
1982.84	11/2 ⁻	563.0 2 893.40 5	0.38 5 7.04 23	1419.85 1089.50	9/2 ⁺ 11/2 ⁺	D+Q	0.29 17	0.0011 5	$\alpha(\text{N})=1.684\times 10^{-5}$ 24; $\alpha(\text{O})=1.601\times 10^{-6}$ 23 B(E3)(W.u.)=0.395 23 Mult.: From $^{124}\text{Sn}(^7\text{Li},\alpha 2n\gamma)$. $\alpha(\text{K})=0.0010$ 4; $\alpha(\text{L})=0.00012$ 6; $\alpha(\text{M})=2.3\times 10^{-5}$ 11; $\alpha(\text{N}+..)=4.8\times 10^{-6}$ 22 $\alpha(\text{N})=4.4\times 10^{-6}$ 20; $\alpha(\text{O})=4.4\times 10^{-7}$ 20 Mult., δ : From $\gamma\gamma(\theta)$ (1980Ve04). Other: $\delta=0.3$ +9-6 (1977Kr13). $\alpha(\text{K})=0.000600$ 9; $\alpha(\text{L})=7.11\times 10^{-5}$ 11; $\alpha(\text{M})=1.395\times 10^{-5}$ 21; $\alpha(\text{N}+..)=2.96\times 10^{-6}$ 5 $\alpha(\text{N})=2.69\times 10^{-6}$ 4; $\alpha(\text{O})=2.67\times 10^{-7}$ 4
1993.64	(15/2) ⁺	1982.5 2 904.1 3	0.077 23 100	0.0 1089.50	7/2 ⁺ 11/2 ⁺	E2		0.001712 24	$\alpha(\text{K})=0.001482$ 21; $\alpha(\text{L})=0.000186$ 3; $\alpha(\text{M})=3.67\times 10^{-5}$ 6; $\alpha(\text{N}+..)=7.75\times 10^{-6}$ 11 $\alpha(\text{N})=7.06\times 10^{-6}$ 10; $\alpha(\text{O})=6.89\times 10^{-7}$ 10 E_γ : Weighted average of $^{238}\text{U}(^{12}\text{C},\text{X}\gamma)$ and $^{124}\text{Sn}(^7\text{Li},\alpha 2n\gamma)$. Mult.: From $^{124}\text{Sn}(^7\text{Li},\alpha 2n\gamma)$.
2002.140	9/2,11/2 ⁺	652.6 1 912.0 ^a 5 934.63 5	2.12 5 0.35 10 10.86 20	1349.60 1089.50 1067.30	7/2 ⁺ 11/2 ⁺ 9/2 ⁺				
2112.1	(19/2 ⁻)	2002.134 12 140.9 3	100.0 20 100	0.0 1971.25	7/2 ⁺ 15/2 ⁻	E2		0.490 8	$\alpha(\text{K})=0.379$ 6; $\alpha(\text{L})=0.0892$ 15; $\alpha(\text{M})=0.0182$ 3; $\alpha(\text{N}+..)=0.00363$ 6 $\alpha(\text{N})=0.00336$ 6; $\alpha(\text{O})=0.000267$ 5 B(E2)(W.u.)=0.00658 19 Mult.: From $^{124}\text{Sn}(^7\text{Li},\alpha 2n\gamma)$.
2113.0	1/2 ⁻ ,3/2 ⁻	2113 [#] 1	100	0.0	7/2 ⁺				
2193.4	15/2 ⁺	1103.7 5	100	1089.50	11/2 ⁺				E_γ : Weighted average of $^{238}\text{U}(^{12}\text{C},\text{X}\gamma)$ and $^{124}\text{Sn}(^7\text{Li},\alpha 2n\gamma)$.
2201.023	9/2,11/2 ⁺	311.3 1 1111.4 1	22.5 25 35 5	1889.848 1089.50	9/2 ⁻ ,11/2 ⁻ 11/2 ⁺				
2217.2	(17/2) ⁻	2201.002 12 105.1 3 246.1 3	100 5 28.9 24 100 4	0.0 2112.1 1971.25	7/2 ⁺ (19/2 ⁻) 15/2 ⁻	M1		0.0524	$\alpha(\text{K})=0.0453$ 7; $\alpha(\text{L})=0.00570$ 9; $\alpha(\text{M})=0.001128$ 17; $\alpha(\text{N}+..)=0.000239$ 4 $\alpha(\text{N})=0.000218$ 4; $\alpha(\text{O})=2.16\times 10^{-5}$ 3 Mult.: From $^{124}\text{Sn}(^7\text{Li},\alpha 2n\gamma)$.
2227.0		1137.5 5	≈ 100	1089.50	11/2 ⁺				

Adopted Levels, Gammas (continued)

$\gamma(^{125}\text{Sb})$ (continued)									
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. [‡]	$\delta^\ddagger$	$\alpha^@$	Comments
2227.0		2227.0 5	≈ 70	0.0	7/2 ⁺				
2240.72	9/2 ⁺	258.25 ^{&a} 10	$< 7.7^\&$	1982.84	11/2 ⁻				
		350.95 5	100.0 18	1889.848	9/2 ⁻ , 11/2 ⁻	D+Q	0.42 3		
		434.13 10	9.2 7	1806.700	(9/2) ⁺				
		890.5 ^a 5	3.3 7	1349.60	7/2 ⁺				
		1151.23 5	43.4 7	1089.50	11/2 ⁺	M1+E2	2.1 +12-10	0.00105 6	$\alpha(\text{K})=0.00091\ 6$; $\alpha(\text{L})=0.000111\ 6$; $\alpha(\text{M})=2.20\times 10^{-5}\ 12$; $\alpha(\text{N}+..)=6.92\times 10^{-6}\ 19$
		1173.30 5	68.8 15	1067.30	9/2 ⁺	M1+E2	≥ 1.1	0.00102 5	$\alpha(\text{N})=4.23\times 10^{-6}\ 22$; $\alpha(\text{O})=4.19\times 10^{-7}\ 24$; $\alpha(\text{IPF})=2.27\times 10^{-6}\ 8$ $\alpha(\text{K})=0.00088\ 5$; $\alpha(\text{L})=0.000107\ 5$; $\alpha(\text{M})=2.12\times 10^{-5}\ 10$; $\alpha(\text{N}+..)=8.37\times 10^{-6}\ 15$ $\alpha(\text{N})=4.08\times 10^{-6}\ 19$; $\alpha(\text{O})=4.04\times 10^{-7}\ 20$; $\alpha(\text{IPF})=3.88\times 10^{-6}\ 12$
2253.39	9/2, 11/2, 13/2	270.60 5	100.0 18	1982.84	11/2 ⁻				
		363.5 2	2.7 5	1889.848	9/2 ⁻ , 11/2 ⁻				
		903.5 ^a 5	12 3	1349.60	7/2 ⁺				
		1163.84 5	29.1 18	1089.50	11/2 ⁺				
2275.769	9/2, 11/2 ⁺	684.0 2	5.9 11	1591.57	7/2 ⁺ , 9/2 ⁺				
		1186.15 15	4.8 5	1089.50	11/2 ⁺				
		1208.4 2	4.3 11	1067.30	9/2 ⁺				
		2275.748 10	100.0 21	0.0	7/2 ⁺				
2288.21	(11/2 ⁺)	286.2 2	2.2 4	2002.140	9/2, 11/2 ⁺				
		1198.70 15	5.8 4	1089.50	11/2 ⁺				
		1220.88 10	100.0 22	1067.30	9/2 ⁺	M1+E2	≥ 9.9	0.000901 13	$\alpha(\text{K})=0.000774\ 11$; $\alpha(\text{L})=9.44\times 10^{-5}\ 14$; $\alpha(\text{M})=1.86\times 10^{-5}\ 3$; $\alpha(\text{N}+..)=1.349\times 10^{-5}\ 1$ $\alpha(\text{N})=3.59\times 10^{-6}\ 5$; $\alpha(\text{O})=3.54\times 10^{-7}\ 5$; $\alpha(\text{IPF})=9.55\times 10^{-6}\ 14$
2325.0	(19/2 ⁺)	107.9 3	55 3	2217.2	(17/2) ⁻	[E1]		0.152	B(E1)(W.u.)= $1.50\times 10^{-6}\ 14$
		131.59 17	55 3	2193.4	15/2 ⁺	E2		0.624	E_γ : From $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$. $\alpha(\text{K})=0.476\ 7$; $\alpha(\text{L})=0.1185\ 18$; $\alpha(\text{M})=0.0243\ 4$; $\alpha(\text{N}+..)=0.00481\ 8$ $\alpha(\text{N})=0.00446\ 7$; $\alpha(\text{O})=0.000350\ 6$ B(E2)(W.u.)= $2.68\ 25$ E_γ : Weighted average of $^{238}\text{U}(^{12}\text{C}, X\gamma)$ and $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$. I_γ : From $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$. Mult.: From $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$.

Adopted Levels, Gammas (continued)

$\gamma(^{125}\text{Sb})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. [‡]	$\alpha^@$	Comments
2325.0	(19/2) ⁺	331.36 24	100 5	1993.64	(15/2) ⁺	(E2)	0.0269	$\alpha(\text{K})=0.0226$ 4; $\alpha(\text{L})=0.00345$ 5; $\alpha(\text{M})=0.000690$ 10; $\alpha(\text{N}+..)=0.0001422$ 21 $\alpha(\text{N})=0.0001304$ 19; $\alpha(\text{O})=1.178 \times 10^{-5}$ 17 $\text{B}(\text{E}2)(\text{W.u.})=0.048$ 5 E_γ : Weighted average of $^{238}\text{U}(^{12}\text{C}, \text{X}\gamma)$ and $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$. I_γ : From $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$. Mult.: M1 or E2 from $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$. Placement in the level scheme requires $\Delta J=2$.
2471.0	(23/2) ⁺	146.02 19	100	2325.0	(19/2) ⁺	E2	0.432	$\alpha(\text{K})=0.336$ 5; $\alpha(\text{L})=0.0770$ 12; $\alpha(\text{M})=0.01573$ 24; $\alpha(\text{N}+..)=0.00313$ 5 $\alpha(\text{N})=0.00290$ 5; $\alpha(\text{O})=0.000232$ 4 $\text{B}(\text{E}2)(\text{W.u.})=0.59$ 4 E_γ : Weighted average of $^{238}\text{U}(^{12}\text{C}, \text{X}\gamma)$ and $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$. Mult.: From $^{124}\text{Sn}(^7\text{Li}, \alpha 2n\gamma)$.
2483.8		490.2 3	100	1993.64	(15/2) ⁺			
2488.5		295.1 4	100	2193.4	15/2 ⁺			
2636.5		152.7 3	100	2483.8				
2815.4		331.6	100	2483.8				
2917.3		446.3 3	100	2471.0	(23/2) ⁺			
3399.2		481.8 3	100	2917.3				
3941.8		542.5 3	100 33	3399.2				
		1024.7 5	22 8	2917.3				
4479.9		538.1 4	1.0×10 ⁻² 3	3941.8				
		1080.5 5	60 20	3399.2				
4933.1		452.9 5	100 25	4479.9				
		991.5 5	38 15	3941.8				
5365.1		432.0 5	100	4933.1				

[†] From $^{125}\text{Sn} \beta^-$ decay (9.64 d), unless otherwise noted.

[‡] From $\gamma\gamma(\theta)$, (pol γ) $\gamma(\theta)$ in $^{125}\text{Sn} \beta^-$ decay (9.52 min, 9.64 d).

From $^{125}\text{Sn} \beta^-$ decay (9.52 min).

@ 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.

& Multiply placed with undivided intensity.

^a Placement of transition in the level scheme is uncertain.

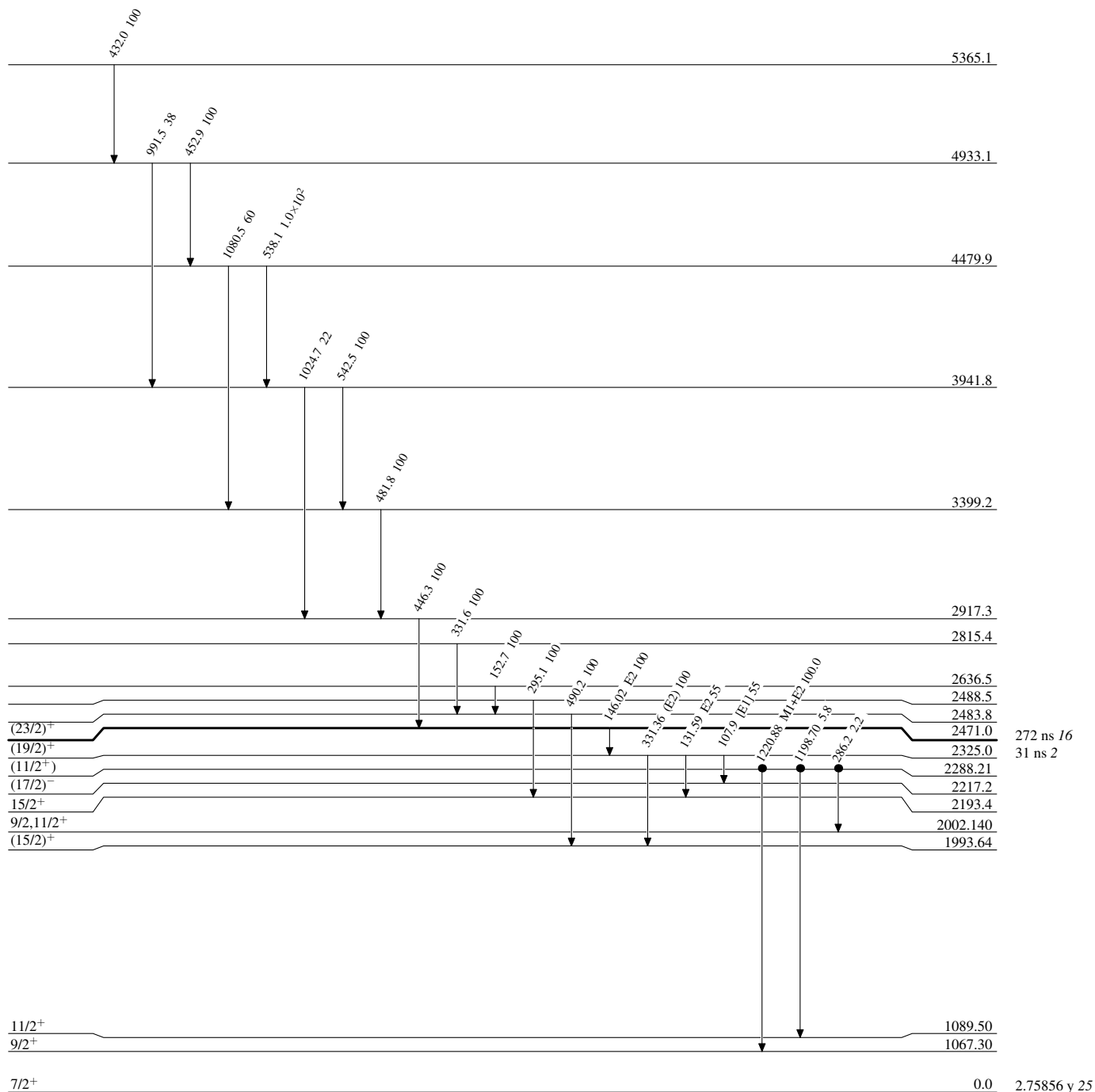
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

● Coincidence



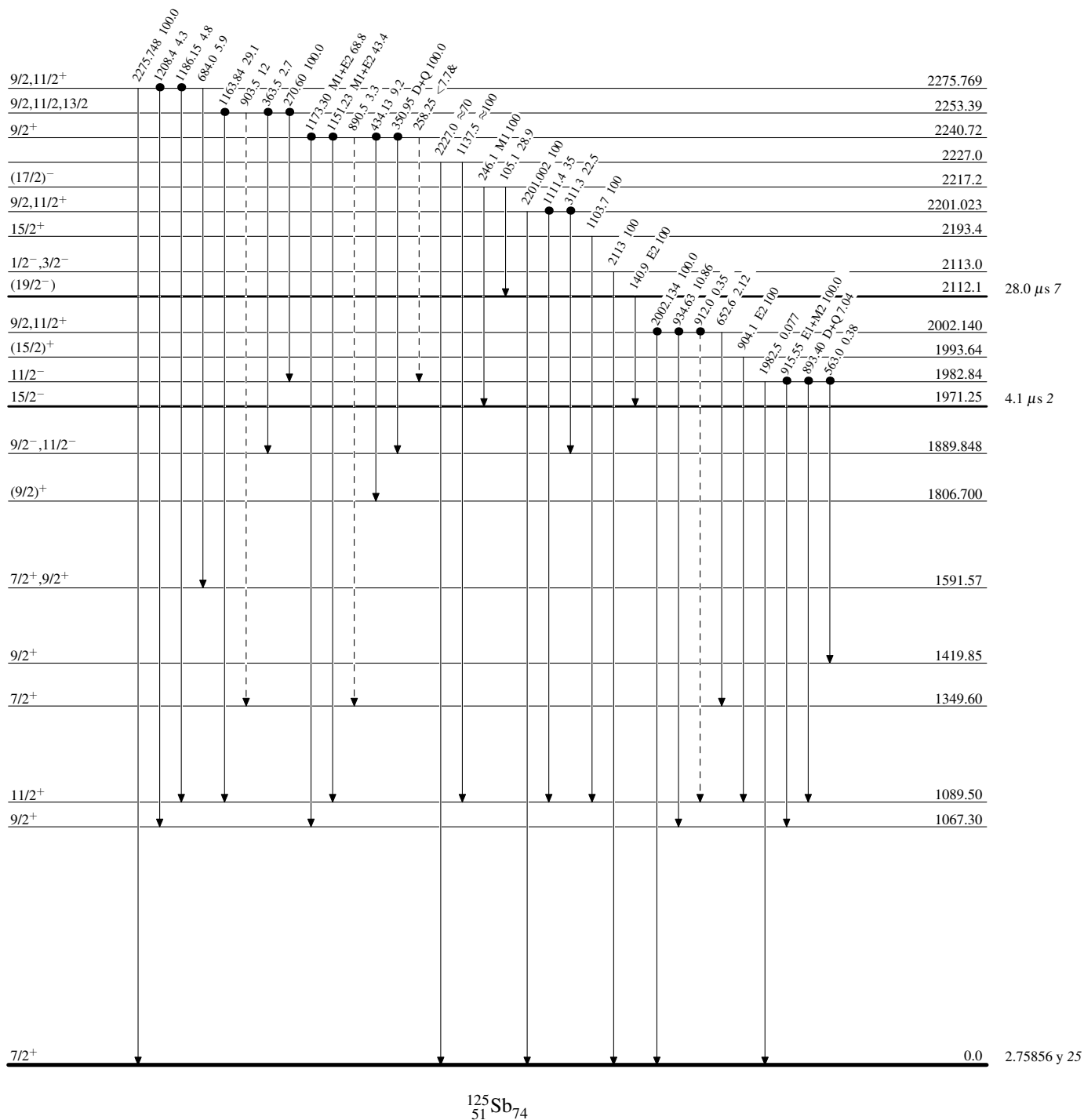
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

-----► γ Decay (Uncertain)
● Coincidence



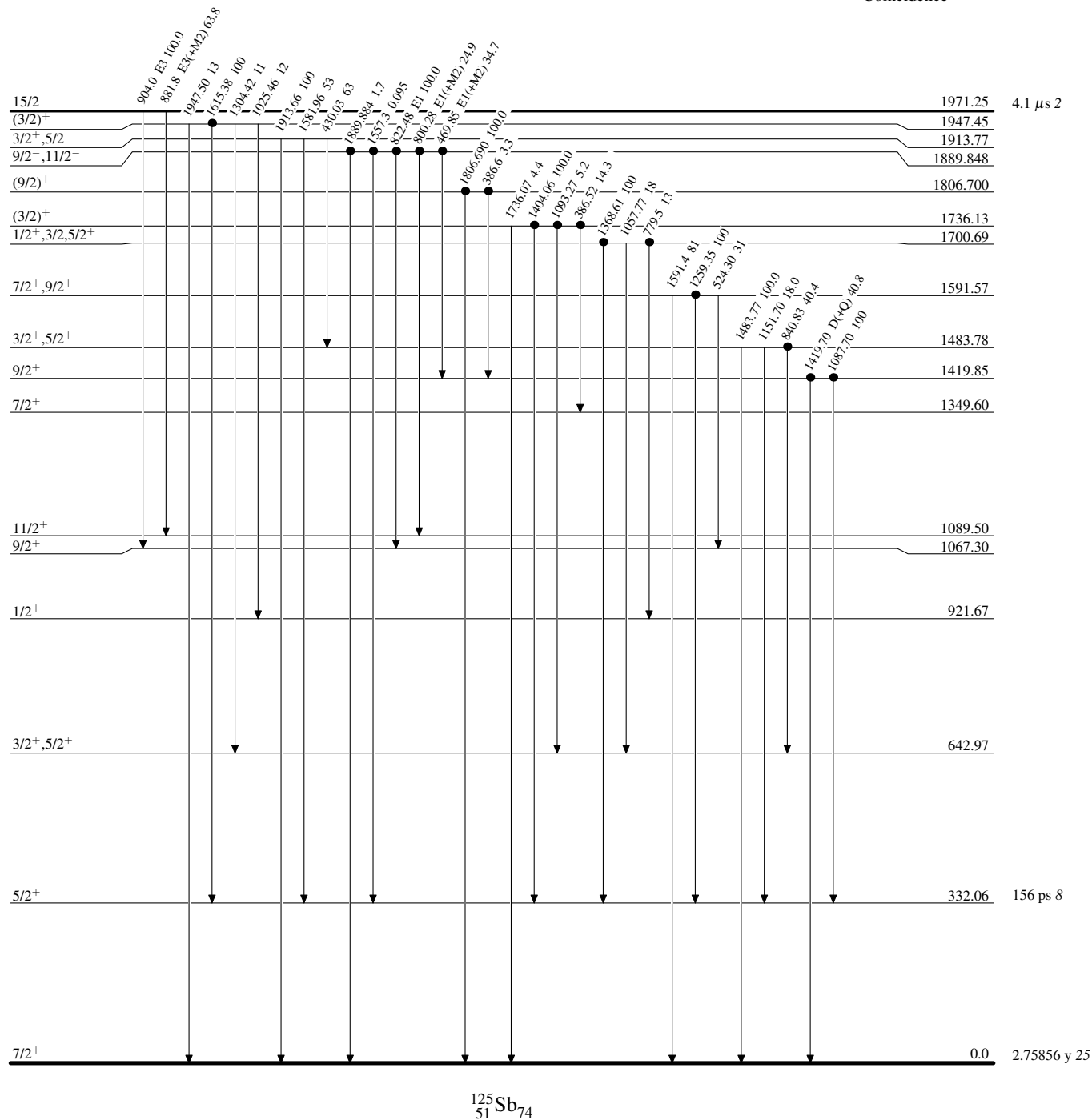
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

● Coincidence



Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

-----► γ Decay (Uncertain)
● Coincidence

