^{126}In β^- decay (1.53 s) 1979Fo10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	H. Iimura, J. Katakura, S. Ohya	NDS 180, 1 (2022)	1-Oct-2021

Parent: ^{126}In: E=0.0; $J^\pi=3^{(+)}$; $T_{1/2}$=1.53 s *1*; Q(β^-)=8206 *11*; %β^- decay=100.0

1979Fo10: U(n,F) on-line mass separation, chem γ, ce, $\gamma\gamma$ semi.

The decay scheme is that proposed by 1979Fo10 on the basis of $\gamma\gamma$-coin and Eγ sums.

^{126}Sn Levels

E(level)†	J^π‡	$T_{1/2}$	Comments
0.0	0^+	2.18×10^5 y *10*	$T_{1/2}$: from Adopted Levels.
1141.15 *4*	2^+		
2049.73 *7*	4^+		
2110.79 *6*	$2^{(+)}$		
2130.08 *21*			
2194.21 *7*			
2256.51 *21*			
2276.85 *8*			
2370.46 *6*	$2^{(+)}$		
2471.93 *16*			
2631.03 *11*			
2636.64 *10*	$2^{(+)}$		
2712.06 *8*	$2,3,4^+$		
2742.57 *7*			
2886.41 *13*			
3246.55 *10*	$2^{(+)}$		
3300.3 *3*			
3344.83 *9*	$2^{(+)}$		
3435.0 *6*	$2^{(+)}$		
3504.5 *3*	$2^{(+)}$		
3818.0 *4*	$2^{(+)}$		
3860.3 *3*	$2,3,4^+$		
3886.54 *9*	$2^{(+)}$		
3917.3 *5*	$2,3,4^+$		
3964.19 *7*	$2^{(+)}$		
4013.97 *21*	$2,3,4^{(+)}$		
4241.00 *15*	$2^{(+)}$		
4257.1 *3*	$2^{(+)}$		
4303.27 *15*	$2^{(+)}$		
4330.9 *6*	$2^{(+)}$		
4656.5 *5*	$2^{(+)}$		
4699.5 *6*	$2^{(+)}$		
4797.1 *6*	$2^{(+)}$		

† Based on a least-squares fit to Eγ'.

‡ Spin and parity values are those given under the Adopted Levels.

^{126}In β^- decay (1.53 s) 1979Fo10 (continued)

β^- radiations

E(decay)	E(level)	Iβ^-[†‡]	Log *ft*	Comments
(3409 *11*)	4797.1	0.13 *4*	6.65 *14*	av Eβ=1436.8 *52*
(3507 *11*)	4699.5	0.10 *3*	6.82 *13*	av Eβ=1482.7 *52*
(3550 *11*)	4656.5	0.21 *3*	6.52 *7*	av Eβ=1503.0 *52*
(3875 *11*)	4330.9	0.13 *3*	6.89 *10*	av Eβ=1656.4 *52*
(3903 *11*)	4303.27	2.5 *3*	5.62 *6*	av Eβ=1669.5 *52*
(3949 *11*)	4257.1	0.33 *6*	6.52 *8*	av Eβ=1691.3 *52*
(3965 *11*)	4241.00	1.50 *20*	5.87 *6*	av Eβ=1698.9 *52*
(4192 *11*)	4013.97	0.37 *4*	6.58 *5*	av Eβ=1806.2 *52*
(4242 *11*)	3964.19	9.3 *4*	5.206 *20*	av Eβ=1829.7 *52*
(4289 *11*)	3917.3	0.38 *4*	6.62 *5*	av Eβ=1851.9 *52*
(4319 *11*)	3886.54	6.0 *6*	5.43 *5*	av Eβ=1866.4 *52*
(4346 *11*)	3860.3	0.63 *6*	6.42 *5*	av Eβ=1878.8 *52*
(4388 *11*)	3818.0	0.35 *3*	6.69 *4*	av Eβ=1898.9 *53*
(4702 *11*)	3504.5	0.49 *4*	6.68 *4*	av Eβ=2047.3 *53*
(4771 *11*)	3435.0	0.29 *4*	6.94 *6*	av Eβ=2080.3 *53*
4863 *27*	3344.83	24.2 *3*	5.049 *8*	av Eβ=2123.0 *53* E(decay): from 1987Sp09.
(4906 *11*)	3300.3	0.31 *6*	6.96 *9*	av Eβ=2144.1 *53*
(4959 *11*)	3246.55	5.4 *4*	5.74 *4*	av Eβ=2169.6 *53*
(5320 *11*)	2886.41	0.42 *8*	6.98 *9*	av Eβ=2340.4 *53*
(5463 *11*)	2742.57	2.79 *15*	6.211 *24*	av Eβ=2408.6 *53*
(5494 *11*)	2712.06	0.59 *23*	6.90 *17*	av Eβ=2423.1 *53*
(5569 *11*)	2636.64	1.62 *23*	6.48 *7*	av Eβ=2458.9 *53*
(5575 *11*)	2631.03	0.43 *4*	7.06 *4*	av Eβ=2461.5 *53*
(5734 *11*)	2471.93	0.32 *4*	7.24 *6*	av Eβ=2537.0 *53*
(5836 *11*)	2370.46	2.1 *3*	6.46 *7*	av Eβ=2585.2 *53*
(5949 *11*)	2256.51	0.25 *4*	7.42 *7*	av Eβ=2639.2 *53*
(6012 *11*)	2194.21	0.50 *4*	7.14 *4*	av Eβ=2668.8 *53*
(6076 *11*)	2130.08	0.27 *5*	7.43 *8*	av Eβ=2699.2 *53*
6049 *94*	2110.79	16.4 *11*	5.65 *3*	av Eβ=2708.3 *53* E(decay): from 1987Sp09.
(6156 *11*)	2049.73	4.0 *5*	6.28 *6*	av Eβ=2737.3 *53*
7.12×10^3 *12*	1141.15	18 *5*	5.90 *12*	av Eβ=3168.1 *53* E(decay): from 1987Sp09.

† from intensity balances at each level.
‡ Absolute intensity per 100 decays.

$\gamma(^{126}Sn)$

Iγ normalization: No β^- decay to g.s (the spin change 3^+ to 0^+). Σ(I(γ+ce) to g.s. =100.

E$_\gamma$	I$_\gamma$[#]	E$_i$(level)	E$_\gamma$	I$_\gamma$[#]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
[x]175.30[†] *25*	0.034 *10*		[x]433.31[†] *20*	0.11 *2*				
[x]212.32[†] *10*	0.13 *2*		[x]477.98[†] *25*	0.076 *20*				
[x]251.75[†] *20*	0.045 *10*		503.92 *20*	0.21 *4*	3246.55	2$^{(+)}$	2742.57	
[x]266.08[†] *15*	0.065 *15*		[x]515.79[†] *20*	0.20 *4*				
[x]323.9[†] *4*	0.053 *20*		[x]525.46[†] *15*	0.13 *2*				
[x]402.80[†] *20*	0.10 *2*		[x]595.84[†] *15*	0.13 *2*				
[x]417.90[†] *10*	0.14 *2*		631.77 *5*	1.6 *1*	2742.57		2110.79	2$^{(+)}$

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^{126}In β^- decay (1.53 s) 1979Fo10 (continued)

$\gamma(^{126}Sn)$ (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π
[x]708.03[†] *25*	0.15 *4*				
[x]717.7[†] *4*	0.13 *4*				
[x]776.85[†] *15*	0.22 *4*				
908.58 *5*	4.3 *5*	2049.73	4^+	1141.15	2^+
[x]945.18[†] *20*	0.20 *4*				
[x]957.9[†] *4*	0.11 *4*				
969.61 *5*	14.9 *10*	2110.79	$2^{(+)}$	1141.15	2^+
988.93 *20*	0.27 *5*	2130.08		1141.15	2^+
1053.06 *5*	0.50 *4*	2194.21		1141.15	2^+
1068.10 *10*	0.44 *4*	3344.83	$2^{(+)}$	2276.85	
1077.73 *15*	0.32 *4*	3964.19	$2^{(+)}$	2886.41	
1115.36 *20*	0.25 *4*	2256.51		1141.15	2^+
1135.70 *10*	2.0 *2*	2276.85		1141.15	2^+
1141.11 *5*	55.9 *40*	1141.15	2^+	0.0	0^+
1174.32 *10*	0.31 *4*	3886.54	$2^{(+)}$	2712.06	$2,3,4^+$
[x]1224.20[†] *20*	0.18 *4*				
1229.31 *5*	1.7 *1*	2370.46	$2^{(+)}$	1141.15	2^+
1250.52 *25*	0.31 *6*	3300.3		2049.73	4^+
1252.34 *10*	1.7 *1*	3964.19	$2^{(+)}$	2712.06	$2,3,4^+$
[x]1280.06[†] *15*	0.24 *3*				
1327.46 *10*	0.58 *5*	3964.19	$2^{(+)}$	2636.64	$2^{(+)}$
1330.77 *15*	0.32 *4*	2471.93		1141.15	2^+
1489.87 *10*	0.43 *4*	2631.03		1141.15	2^+
1495.4[‡] *3*	1.1[‡] *2*	2636.64	$2^{(+)}$	1141.15	2^+
[x]1507.2[†] *3*	0.15 *3*				
1570.96 *10*	2.6 *2*	2712.06	$2,3,4^+$	1141.15	2^+
1593.73 *10*	1.1 *1*	3964.19	$2^{(+)}$	2370.46	$2^{(+)}$
1601.43 *10*	1.4 *1*	2742.57		1141.15	2^+
1643.50 *20*	0.37 *4*	4013.97	$2,3,4^{(+)}$	2370.46	$2^{(+)}$
1687.20 *10*	2.2 *2*	3964.19	$2^{(+)}$	2276.85	
1745.15 *20*	0.74 *6*	2886.41		1141.15	2^+
[x]2035.17[†] *25*	0.45 *4*				
2105.31 *15*	2.0 *2*	3246.55	$2^{(+)}$	1141.15	2^+
2110.83 *10*	3.1 *2*	2110.79	$2^{(+)}$	0.0	0^+
[x]2123.33[†] *25*	0.53 *4*				
2203.54 *15*	2.2 *2*	3344.83	$2^{(+)}$	1141.15	2^+
2370.41 *15*	1.9 *2*	2370.46	$2^{(+)}$	0.0	0^+
2636.30 *20*	1.1 *1*	2636.64	$2^{(+)}$	0.0	0^+
2719.1 *3*	0.63 *6*	3860.3	$2,3,4^+$	1141.15	2^+
2745.36 *20*	0.95 *10*	3886.54	$2^{(+)}$	1141.15	2^+
2776.1 *5*	0.38 *4*	3917.3	$2,3,4^+$	1141.15	2^+
2822.9 *3*	1.0 *1*	3964.19	$2^{(+)}$	1141.15	2^+
[x]2874.0[†] *9*	0.29 *4*				
3246.61 *15*	3.2 *3*	3246.55	$2^{(+)}$	0.0	0^+
3344.61 *15*	21.6 *20*	3344.83	$2^{(+)}$	0.0	0^+
3434.9 *6*	0.29 *4*	3435.0	$2^{(+)}$	0.0	0^+
3504.4 *3*	0.49 *4*	3504.5	$2^{(+)}$	0.0	0^+
3817.9 *4*	0.35 *3*	3818.0	$2^{(+)}$	0.0	0^+
3886.82 *15*	4.7 *5*	3886.54	$2^{(+)}$	0.0	0^+
3964.20 *15*	2.4 *2*	3964.19	$2^{(+)}$	0.0	0^+

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^{126}In β^- decay (1.53 s) 1979Fo10 (continued)

$\gamma(^{126}Sn)$ (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π
4240.92 *15*	1.5 *2*	4241.00	$2^{(+)}$	0.0	0^+	4656.4 *5*	0.21 *3*	4656.5	$2^{(+)}$	0.0	0^+
4257.0 *3*	0.33 *6*	4257.1	$2^{(+)}$	0.0	0^+	4699.4 *6*	0.10 *3*	4699.5	$2^{(+)}$	0.0	0^+
4303.19 *15*	2.5 *3*	4303.27	$2^{(+)}$	0.0	0^+	4797.0 *6*	0.13 *4*	4797.1	$2^{(+)}$	0.0	0^+
4330.8 *6*	0.13 *3*	4330.9	$2^{(+)}$	0.0	0^+						

† These γ rays might follow the decay of high-spin (8^-) isomer.
‡ Doublet. The fraction of Iγ belonging to the decay of high-spin (8^-) isomer was obtained from $\gamma\gamma$-coin. (1979Fo10).
# Absolute intensity per 100 decays.
x γ ray not placed in level scheme.

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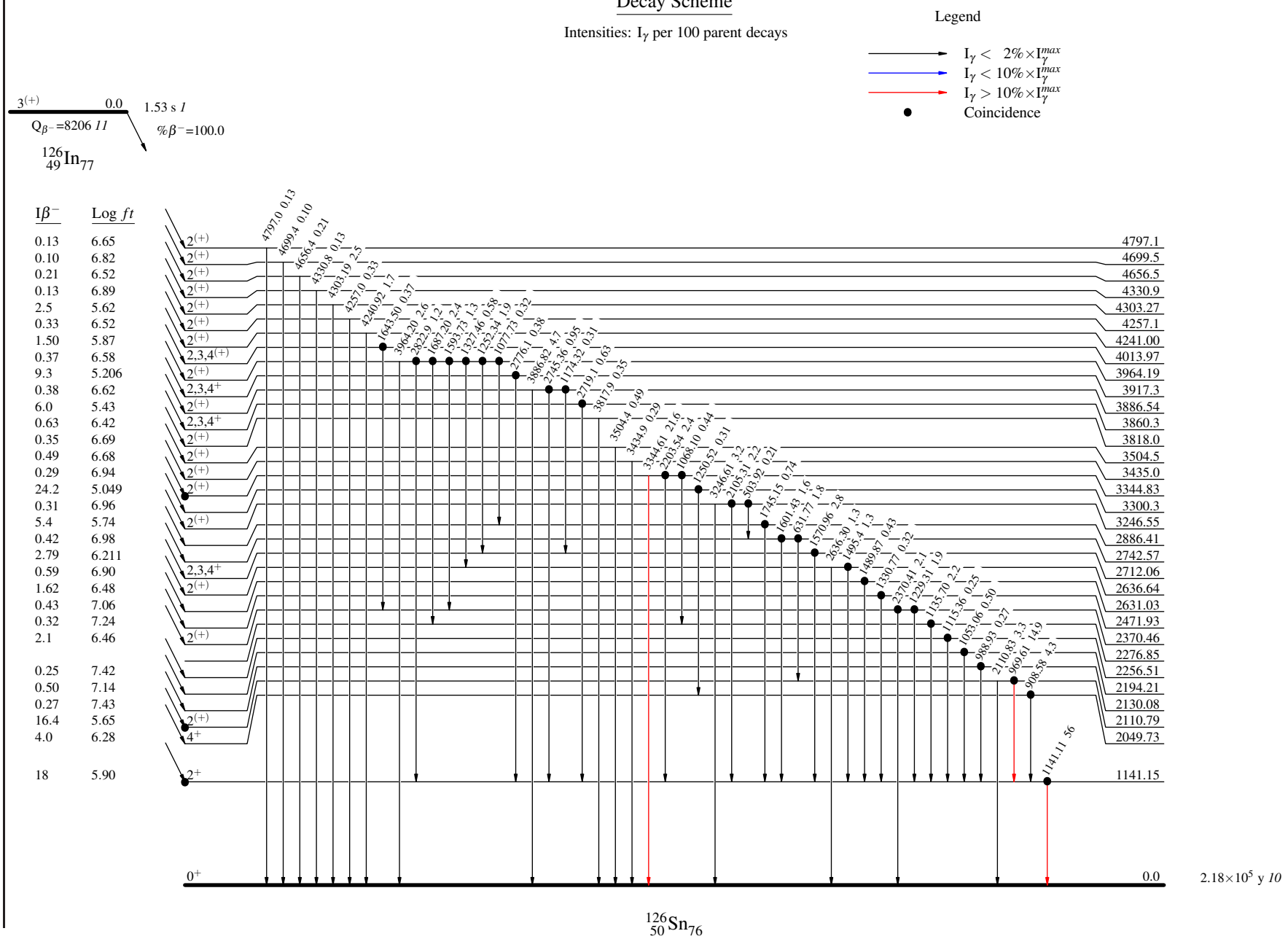
Decay Scheme

Intensities: I_γ per 100 parent decays



From ENSDF

$^{126}_{50}Sn_{76}$-5