^{118}Sn(n,γ) E=resonance 1978Ra16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. M. Symochko, E. Browne, J. K. Tuli	NDS 110,2945 (2009)	1-Dec-2008

1978Ra16: E=0.3-5.1 keV, semi primary γ from 11 res, secondary γ at 90°; enriched target (97%).
1973Ra17: E=46-5000 eV, semi secondary γ below 1.5 MeV.
1968Bh01: E=0.02-500 eV, semi primary γ at 90° and 135°; enriched target (97.15%).
1968Sa16: E=40-200 eV, natural target, semi primary G.
Level scheme is that proposed by 1978Ra16.

^{119}Sn Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0[&]	1/2$^+$		
23.871 *10*	3/2$^+$		
89.531[b] *15*	11/2$^-$	293.1 d *7*	$T_{1/2}$: From Adopted Levels.
787.1[b] *5*	7/2$^+$		
921.07 *25*			E(level): unresolved doublet.
1062.4[b] *10*	7/2$^-$		
1089.5[&] *3*	5/2$^+$		
1187.9[#] *3*	3/2$^+$,5/2$^+$		
1249.6 *5*	1/2$^+$		
1304.3[b] *10*	≥7/2		
1354.9 *5*	5/2$^+$		
1554.5[a] *6*	3/2$^+$,5/2$^+$		
1571.9[&] *6*	1/2,3/2,5/2$^+$		
1617.3 *8*	(1/2$^+$,3/2,5/2)		
1718.4[@] *15*	3/2$^+$,5/2$^+$		
1774.9[&] *5*	3/2$^+$,5/2$^+$		
1789.7 *20*	1/2,3/2,5/2$^+$		
1929.6[@] *20*	1/2,3/2,5/2$^+$		
1939.0[@] *6*	1/2$^+$,3/2,5/2$^+$		E(level): populated by primary 4541.8γ in authors′ drawing.
1983.0 *20*			
2003.7 *11*	1/2,3/2,5/2		
2041.0 *25*	1/2,3/2,5/2$^+$		
2130.2[#] *20*	1/2$^+$		
2845.8[@] *20*	3/2$^+$,5/2$^+$		
2881.2[a] *20*	3/2$^+$,5/2$^+$		
3011.9[@] *15*	3/2$^+$,5/2$^+$		
3047.1 *22*	≤5/2		
(6485.4 *14*)	1/2		E(level): other: 6484.6 *15* (1978Ra16).

[†] From a least-squares fit by the evaluators to E(γ′s).
[‡] From Adopted Levels.
[#] Populated by primary γ from 3/2$^-$ res.
[@] Populated by primary γ from 1/2$^+$ res.
[&] Populated by primary γ from 3/2$^-$ and 1/2$^+$ res.
[a] Populated by primary γ from 1/2 res.
[b] Not populated by primary γ from res.

^{118}Sn(n,γ) E=resonance 1978Ra16 (continued)

γ(^{119}Sn)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π
23.871	3/2+	23.871@ *10*		0	1/2+
89.531	11/2−	65.66@ *1*		23.871	3/2+
787.1	7/2+	763.0 *5*		23.871	3/2+
921.07		897.3& *3*		23.871	3/2+
		920.8& *5*		0	1/2+
1062.4	7/2−	972.9 *10*		89.531	11/2−
1089.5	5/2+	1065.6 *3*	96	23.871	3/2+
		1089.9 *15*	4	0	1/2+
1187.9	3/2+,5/2+	1164.0 *3*	82	23.871	3/2+
		1188.1 *10*	18	0	1/2+
1249.6	1/2+	1225.7 *10*	33	23.871	3/2+
		1249.7 *5*	67	0	1/2+
1304.3	≥7/2	1214.8 *10*		89.531	11/2−
1354.9	5/2+	434.2 *20*	6	921.07	
		1331.0 *5*	72	23.871	3/2+
		1354.9 *10*	22	0	1/2+
1554.5	3/2+,5/2+	465.2 *15*	10	1089.5	5/2+
		632.9 *15*	10	921.07	
		767.4 *5*	56	787.1	7/2+
		1554.5 *15*	24	0	1/2+
1571.9	1/2,3/2,5/2+	323.0 *20*	17	1249.6	1/2+
		650.6 *10*	29	921.07	
		1547.7 *10*	41	23.871	3/2+
		1572.4 *10*	13	0	1/2+
1617.3	(1/2+,3/2,5/2)	430.6 *20*	14	1187.9	3/2+,5/2+
		695.6 *15*	14	921.07	
		1593.4 *10*	72	23.871	3/2+
1718.4	3/2+,5/2+	1694.5 *15*		23.871	3/2+
1774.9	3/2+,5/2+	420.9 *20*	4	1354.9	5/2+
		855.6 *15*	25	921.07	
		987.7 *3*	25	787.1	7/2+
		1750.4 *20*	46	23.871	3/2+
1789.7	1/2,3/2,5/2+	1765.8 *20*		23.871	3/2+
1929.6	1/2,3/2,5/2+	1929.6 *20*		0	1/2+
1939.0	1/2+,3/2,5/2+	849.4 *5*	37	1089.5	5/2+
		1915.7 *20*	26	23.871	3/2+
		1939.4 *20*	37	0	1/2+
1983.0		1959.1 *20*		23.871	3/2+
2003.7	1/2,3/2,5/2	1082.6 *10*		921.07	
2041.0	1/2,3/2,5/2+	2041.0 *25*		0	1/2+
2130.2	1/2+	2130.2 *20*		0	1/2+
2845.8	3/2+,5/2+	2845.8 *20*		0	1/2+
2881.2	3/2+,5/2+	2881.2 *20*		0	1/2+
3011.9	3/2+,5/2+	2988.9 *20*	56	23.871	3/2+
		3010.9 *20*	44	0	1/2+
3047.1	≤5/2	1429.8 *20*		1617.3	(1/2+,3/2,5/2)

† From 1978Ra16, unless otherwise noted.
‡ From 1978Ra16, %photon branching from each levels. Data taken only at 90°.
# From 1968Sa16.
@ From ^{119}Sn IT decay.
& Unresolved peak.
x γ ray not placed in level scheme.

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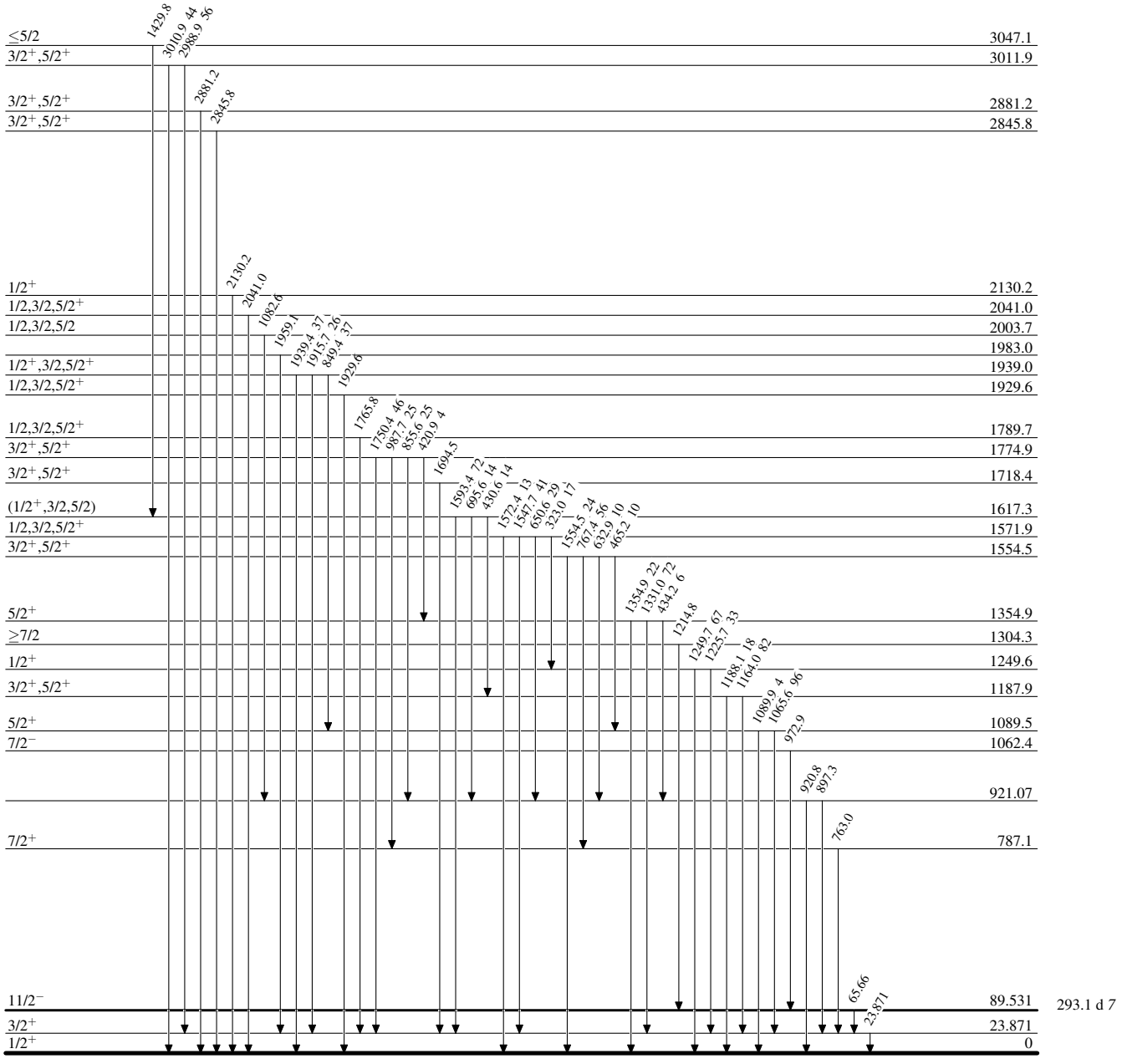
Level Scheme

Intensities: % photon branching from each level



$^{119}_{50}Sn_{69}$