^{115}Sn(n,γ) E=th 1991Ra01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111, 717 (2010)	1-Dec-2009

$J^\pi(^{115}Sn)=1/2^+$, So only 0^+ or 1^+ capturing states.
Previous work (1972Mc08,1978CaZO).
Measurement at "Los Alamos Omega West Reactor", Ge(Li).
Compton suppressed or pair spectrometer mode.
Enriched target (97.3).

^{116}Sn Levels

E(level)	J^π‡	E(level)	J^π‡	E(level)	J^π‡	E(level)	J^π‡
0.0	0^+	3415.9† *7*	$2,3^+$	4143.9 *5*	$1^+,2^+,3$	5667.8 *3*	
1293.605 *17*	2^+	3416.58 *6*	2^+	4162.41 *11*	2	5716.4 *3*	
1756.849 *23*	0^+	3427.98 *14*	4^-	4170.9 *4*	2^+	5767.22 *11*	
2027.50 *4*	0^+	3469.71 *9*	2^+	4190.5 *4*	$2^+,3^+,4^+$	5923.6 *3*	
2112.332 *17*	2^+	3507.31 *21*	$3,4^-,5^-$	4200.10 *14*	1	5968.5 *4*	
2225.447 *24*	2^+	3508.36 *7*	2^+	4201.53 *6*	1,2	5989.53 *9*	
2266.228 *24*	3^-	3513.6 *3*	(2^+)	4211.59 *11*	$0^+,1,2$	5995.61 *11*	
2366.11 *8*	5^-	3551.7 *5*	$2^+,3^+,4^+$	4238.50 *13*	2^+	6041.79 *24*	
2390.92 *3*	4^+	3572.89 *11*	$2^+,3$	4251.73 *10*	1	6116.59 *24*	
2529.25 *4*	4^+	3586.63 *10*	2^+	4278.38 *17*	$1,2^+$	6130.97 *17*	
2545.74 *3*	$(0)^+$	3593.84 *9*	3^+	4297.1 *5*	≤4	6152.1 *3*	
2585.61 *3*	1^+	3658.69 *6*	2^+	4308.48 *23*	$(1,2^+)$	6159.59 *8*	
2650.47 *3*	2^+	3711.91 *7*	(1)	4392.63 *8*		6198.73 *11*	
2773.55 *13*	6^-	3730.6 *4*	≤4	4411.01 *12*		6357.7 *3*	
2790.57 *4*	$(0)^+$	3742.96 *18*	$1^-,2^+,3^-$	4430.46 *22*		6373.0 *3*	
2801.35 *5*	4^+	3747.9 *4*	≤4	4480.19 *9*		6405.61 *12*	
2843.84 *5*	2^+	3776.79 *15*	1	4511.47 *16*		6428.10 *23*	
2960.07 *4*	2^+	3806.00 *17*	2^-	4548.46 *14*		6436.17 *16*	
2996.29 *4*	3^+	3836.69 *23*	≤4	4584.00 *15*		6468.61 *23*	
3016.58 *12*	$6^{(-)}$	3843.69 *19*	$2^+,3$	4649.19 *8*		6482.60 *17*	
3046.41 *10*	4^+	3851.0 *5*	$1,2^+$	4852.7 *3*		6510.57 *10*	
3088.63 *5*	2^+	3903.62 *22*	2^+	4877.18 *13*		6532.06 *21*	
3105.35 *18*	5^-	3904.91 *6*	1	4892.57 *19*		6717.26 *11*	
3157.87 *10*	$3^-,4$	3916.97 *6*	2	4925.93 *14*		6754.08 *18*	
3179.72 *6*	$2^+,3$	3945.8 *5*	$1^+,2^+,3$	4952.08 *19*		7035.05 *8*	
3194.34 *6*	$0^+,1,3$	3950.3 *3*	$1^-,2,3$	5055.57 *8*		7173.9 *4*	
3227.47 *5*	(2^+)	3952.9 *3*	2^+	5066.23 *23*		7224.7 *4*	
3228.10 *15*	2^+	4001.07 *6*	$1^{(-)}$	5174.4 *5*		7246.4 *5*	
3236.04 *6*	$0^+,1,3$	4013.16 *11*	2^+	5242.31 *22*		7325.31 *22*	
3257.81 *14*	$3^-,4,5^-$	4026.75 *22*	1	5357.9 *3*		7659.88 *16*	
3289.06 *18*	≤5	4028.5 *5*	≤4	5395.5 *3*		7692.82 *17*	
3315.04 *13*	$2^+,3^+$	4037.4 *3*	$2^+,3^+$	5474.9 *3*		(9563.56 *3*)	$0^+,1^+$
3333.81 *6*	1	4076.03 *20*	$1^+,2^+,3$	5484.26 *22*			
3344.39 *5*	2	4113.90 *6*	$1,2^+$	5493.0 *4*			
3371.44 *8*	3^+	4128.28 *20*	$1,2^+$	5562.79 *18*			

† 1991Ra01 assigned a doublet at this energy (3415.9,3416.58); however, in a later work (1994Ga14), these authors conclude that only one level is present. The evaluators note that in (d,t), L=2 is well fitted.
‡ As given by the authors.

^{115}Sn(n,γ) E=th 1991Ra01 (continued)

γ(^{116}Sn)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
99.8† 5	0.089 10	2366.11	5^-	2266.228	3^-
125.7 3	0.003 1	3469.71	2^+	3344.39	2
138.39 4	0.041 4	2529.25	4^+	2390.92	4^+
x181.96 7	0.013 2				
194.83 9	0.012 2	2996.29	3^+	2801.35	4^+
204.96 6	0.019 2	2790.57	$(0)^+$	2585.61	1^+
x235.24 6	0.052 6				
x305.7 3	0.006 2				
309.75 22	0.010 3	2960.07	2^+	2650.47	2^+
331.80 18	0.011 2	3105.35	5^-	2773.55	6^-
x333.94 10	0.019 3				
x338.4 4	0.005 1				
x342.0 3	0.009 3				
x343.9 4	0.006 2				
355.492 24	0.16 3	2112.332	2^+	1756.849	0^+
360.173 25	0.14 2	2585.61	1^+	2225.447	2^+
374.52 6	0.067 8	2960.07	2^+	2585.61	1^+
378.24 14	0.022 3	3179.72	2^+,3	2801.35	4^+
384.22 6	0.032 5	2650.47	2^+	2266.228	3^-
407.43 11	0.027 5	2773.55	6^-	2366.11	5^-
416.86‡ 4	0.39 6	2529.25	4^+	2112.332	2^+
417.4‡ 4	0.08 3	4076.03	1^+,2^+,3	3658.69	2^+
419.60 12	0.044 7	3508.36	2^+	3088.63	2^+
433.90 26	0.019 6	2545.74	$(0)^+$	2112.332	2^+
x439.32 17	0.013 4				
439.32 17	0.013 4	3952.9	2^+	3513.6	(2^+)
463.249 26	2.8 4	1756.849	0^+	1293.605	2^+
466.7 6	0.052 19	2996.29	3^+	2529.25	4^+
500.84 20	0.013 2	3344.39	2	2843.84	2^+
538.21 6	0.045 7	2650.47	2^+	2112.332	2^+
548.34 9	0.036 5	3508.36	2^+	2960.07	2^+
x558.47 12	0.015 3				
565.16 12	0.025 4	2790.57	$(0)^+$	2225.447	2^+
577.36 25	0.011 5	2843.84	2^+	2266.228	3^-
x584.98 16	0.040 7				
605.34 6	0.069 9	2996.29	3^+	2390.92	4^+
x622.68 9	0.041 6				
641.63 14	0.027 4	3227.47	(2^+)	2585.61	1^+
650.46 8	0.047 6	3016.58	$6^{(-)}$	2366.11	5^-
655.60 16	0.020 4	3046.41	4^+	2390.92	4^+
664.54 20	0.016 3	3508.36	2^+	2843.84	2^+
668.5 4	0.011 2	3469.71	2^+	2801.35	4^+
x675.6 5	0.009 3				
678.28 5	0.122 14	2790.57	$(0)^+$	2112.332	2^+
693.82 6	0.078 9	2960.07	2^+	2266.228	3^-
698.0 3	0.022 3	3227.47	(2^+)	2529.25	4^+
x706.01 8	0.079 10				
714.4†	0.005 2	3105.35	5^-	2390.92	4^+
733.89 3	2.1 4	2027.50	0^+	1293.605	2^+
738.8†	0.008 3	3105.35	5^-	2366.11	5^-
x740.18 16	0.036 5				
770.95 7	0.063 7	2996.29	3^+	2225.447	2^+
x786.36 22	0.019 4				
788.81 8	0.063 7	3179.72	2^+,3	2390.92	4^+

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^{115}Sn(n,γ) E=th 1991Ra01 (continued)

$\gamma(^{116}Sn)$ (continued)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
791.75 *6*	0.104 *11*	3157.87	3^-,4	2366.11	5^-
[x]806.66 *3*	0.32 *5*				
818.717 *22*	3.0 *3*	2112.332	2^+	1293.605	2^+
828.79 *9*	0.070 *9*	2585.61	1^+	1756.849	0^+
831.03 *10*	0.121 *14*	3416.58	2^+	2585.61	1^+
835.07 *19*	0.021 *4*	4251.73	1	3415.9	$2,3^+$
839.6[†]	0.005 *2*	3105.35	5^-	2266.228	3^-
840.14 *11*	0.044 *5*	4211.59	0^+,1,2	3371.44	3^+
857.19 *15*	0.066 *10*	3658.69	2^+	2801.35	4^+
868.04 *6*	0.108 *12*	3711.91	(1)	2843.84	2^+
[x]884.32 *8*	0.084 *11*				
891.69 *11*	0.043 *8*	3257.81	3^-,4,5^-	2366.11	5^-
[x]924.1 *4*	0.018 *12*				
931.858 *22*	2.5 *3*	2225.447	2^+	1293.605	2^+
961.3 *4*	0.09 *3*	3227.47	(2^+)	2266.228	3^-
961.9 *4*	0.05 *2*	3228.10	2^+	2266.228	3^-
972.615 *20*	3.4 *4*	2266.228	3^-	1293.605	2^+
980.42 *22*	0.021 *5*	3371.44	3^+	2390.92	4^+
1000.92 *12*	0.080 *12*	3586.63	2^+	2585.61	1^+
1002.6 *4*	0.023 *8*	3228.10	2^+	2225.447	2^+
[x]1012.9 *3*	0.045 *9*				
1022.83 *17*	0.035 *5*	3289.06	≤5	2266.228	3^-
[x]1043.70 *14*	0.037 *7*				
1060.9 *6*	0.03 *1*	3427.98	4^-	2366.11	5^-
1072.48 *8*	0.088 *10*	2366.11	5^-	1293.605	2^+
1078.14 *7*	0.15 *5*	3344.39	2	2266.228	3^-
1089.56 *14*	0.07 *3*	3315.04	$2^+,3^+$	2225.447	2^+
1097.327 *22*	0.87 *10*	2390.92	4^+	1293.605	2^+
1115.16 *5*	0.36 *5*	3227.47	(2^+)	2112.332	2^+
1119.00 *7*	0.16 *3*	3344.39	2	2225.447	2^+
1123.68 *6*	0.20 *4*	3236.04	0^+,1,3	2112.332	2^+
1136.2 *4*	0.019 *6*	4480.19		3344.39	2
1146.03 *22*	0.037 *7*	3371.44	3^+	2225.447	2^+
1150.31 *6*	0.18 *3*	3416.58	2^+	2266.228	3^-
1161.80 *14*	0.060 *10*	3427.98	4^-	2266.228	3^-
1165.15 *25*	0.058 *9*	4392.63		3227.47	(2^+)
1191.08 *17*	0.041 *9*	3776.79	1	2585.61	1^+
1200.5 *3*	0.36 *3*	3228.10	2^+	2027.50	0^+
1202.9 *3*	0.29 *4*	3315.04	$2^+,3^+$	2112.332	2^+
1210.6 *7*	0.015 *9*	4001.07	$1^{(-)}$	2790.57	$(0)^+$
1231.94 *11*	0.067 *10*	3344.39	2	2112.332	2^+
1241.08 *20*	0.058 *9*	3507.31	$3,4^-,5^-$	2266.228	3^-
1244.25 *12*	0.122 *14*	3469.71	2^+	2225.447	2^+
1252.119 *24*	0.69 *8*	2545.74	$(0)^+$	1293.605	2^+
1292.0[#] *2*	1.1 *2*	2585.61	1^+	1293.605	2^+
1293.586 *26*	30 *3*	1293.605	2^+	0.0	0^+
1303.86 *15*	0.043 *10*	4392.63		3088.63	2^+
1331.68 *10*	0.074 *11*	3088.63	2^+	1756.849	0^+
1356.851 *22*	1.6 *3*	2650.47	2^+	1293.605	2^+
1368.38 *9*	0.100 *14*	3593.84	3^+	2225.447	2^+
1396.03 *15*	0.088 *16*	3508.36	2^+	2112.332	2^+
1409.66 *17*	0.063 *13*	4200.10	1	2790.57	$(0)^+$
1433.40 *14*	0.037 *8*	3658.69	2^+	2225.447	2^+
[x]1460.67 *10*	0.064 *10*				
1474.45 *19*	0.089 *15*	3586.63	2^+	2112.332	2^+

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^{115}Sn(n,γ) E=th 1991Ra01 (continued)

γ(^{116}Sn) (continued)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
1476.75 *19*	0.091 *14*	3742.96	$1^-,2^+,3^-$	2266.228	3^-
[x]1481.4[d] *4*	0.022[db] *16*				
1481.4[d] *4*	<0.027[da]	3593.84	3^+	2112.332	2^+
1496.91 *6*	0.18 *3*	2790.57	$(0)^+$	1293.605	2^+
1507.66 *5*	0.25 *4*	2801.35	4^+	1293.605	2^+
1517.9 *3*	0.028 *5*	4308.48	$(1,2^+)$	2790.57	$(0)^+$
1546.42 *7*	0.21 *4*	3658.69	2^+	2112.332	2^+
1550.0 *3*	0.23 *8*	2843.84	2^+	1293.605	2^+
1551.3 *6*	0.13 *8*	4201.53	1,2	2650.47	2^+
1568.02 *20*	0.026 *7*	4113.90	$1,2^+$	2545.74	$(0)^+$
1576.74 *21*	0.037 *9*	4162.41	2	2585.61	1^+
[x]1584.1 *6*	0.016 *6*				
1584.1 *6*	0.016 *6*	3851.0	$1,2^+$	2266.228	3^-
1586.4 *3*	0.035 *7*	4430.46		2843.84	2^+
1616.06 *14*	0.105 *14*	4201.53	1,2	2585.61	1^+
1618.7 *6*	0.022 *8*	3843.69	$2^+,3$	2225.447	2^+
1631.0[†]	0.048 *8*	3742.96	$1^-,2^+,3^-$	2112.332	2^+
1650.74 *6*	0.19 *3*	3916.97	2	2266.228	3^-
1666.38 *7*	0.23 *3*	2960.07	2^+	1293.605	2^+
[x]1671.3 *5*	0.028 *10*				
1678.2 *3*	0.032 *7*	3903.62	2^+	2225.447	2^+
1684.6[†]	0.010 *5*	3950.3	$1^-,2,3$	2266.228	3^-
1702.68 *5*	0.32 *5*	2996.29	3^+	1293.605	2^+
1711.16 *9*	0.35 *5*	5055.57		3344.39	2
1724.6 *3*	0.037 *7*	3950.3	$1^-,2,3$	2225.447	2^+
1731.8 *4*	0.027 *7*	3843.69	$2^+,3$	2112.332	2^+
1752.72 *12*	0.103 *11*	3046.41	4^+	1293.605	2^+
1771.2 *5*	0.035 *7*	4037.4	$2^+,3^+$	2266.228	3^-
1787.54 *25*	0.037 *7*	4013.16	2^+	2225.447	2^+
1795.02 *7*	0.131 *17*	3088.63	2^+	1293.605	2^+
1860.4 *3*	0.061 *9*	4511.47		2650.47	2^+
1863.5 *4*	0.049 *9*	4392.63		2529.25	4^+
1870.8 *5*	0.036 *11*	(9563.56)	$0^+,1^+$	7692.82	
1877.36 *8*	0.23 *3*	3904.91	1	2027.50	0^+
1882.9 *7*	0.045 *14*	4411.01		2529.25	4^+
1886.12 *10*	0.24 *5*	3179.72	$2^+,3$	1293.605	2^+
1896.49 *19*	0.083 *11*	4162.41	2	2266.228	3^-
1900.72 *5*	0.44 *9*	3194.34	$0^+,1,3$	1293.605	2^+
1903.9 *3*	0.074 *11*	(9563.56)	$0^+,1^+$	7659.88	
1924.3 *6*	0.031 *13*	4190.5	$2^+,3^+,4^+$	2266.228	3^-
1926.3 *4*	0.051 *15*	4511.47		2585.61	1^+
1934.52 *21*	0.074 *22*	3228.10	2^+	1293.605	2^+
1935.46 *22*	0.114 *23*	4201.53	1,2	2266.228	3^-
1942.51 *13*	0.054 *11*	3236.04	$0^+,1,3$	1293.605	2^+
1963.67 *23*	0.058 *10*	4076.03	$1^+,2^+,3$	2112.332	2^+
[x]1972.82 *19*	0.081 *12*				
1976.06 *9*	0.19 *4*	4201.53	1,2	2225.447	2^+
2001.8 *3*	0.045 *9*	4392.63		2390.92	4^+
2021.3 *5*	0.05 *2*	3315.04	$2^+,3^+$	1293.605	2^+
2050.4 *7*	0.15 *8*	3344.39	2	1293.605	2^+
2051.5 *7*	0.22 *7*	5395.5		3344.39	2
2077.82 *10*	0.120 *17*	3371.44	3^+	1293.605	2^+
2112.313 *22*	3.4 *4*	2112.332	2^+	0.0	0^+
2122.3 *7*	0.15 *3*	3415.9	$2,3^+$	1293.605	2^+
2148.06 *6*	0.25 *4*	3904.91	1	1756.849	0^+

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^{115}Sn(n,γ) E=th 1991Ra01 (continued)

γ(^{116}Sn) (continued)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
2175.89 *13*	0.13 *2*	3469.71	2^+	1293.605	2^+
2211.72 *11*	0.13 *2*	5055.57		2843.84	2^+
2220.1 *6*	0.41 *10*	3513.6	(2^+)	1293.605	2^+
2225.4 *5*	1.1 *3*	2225.447	2^+	0.0	0^+
2244.21 *7*	0.23 *3*	4001.07	$1^{(-)}$	1756.849	0^+
2254.72 *24*	0.088 *13*	4480.19		2225.447	2^+
2258.1 *5*	0.053 *9*	3551.7	$2^+,3^+,4^+$	1293.605	2^+
[x]2271.6 *3*	0.053 *9*				
2275.6 *6*	0.037 *8*	4925.93		2650.47	2^+
2279.16 *17*	0.141 *18*	3572.89	2^+,3	1293.605	2^+
2282.4 *3*	0.067 *11*	5242.31		2960.07	2^+
2291.68 *25*	0.061 *9*	4877.18		2585.61	1^+
2301.6 *3*	0.066 *10*	4952.08		2650.47	2^+
2357.01 *6*	0.24 *3*	4113.90	$1,2^+$	1756.849	0^+
2402.2 *7*	0.084 *24*	4430.46		2027.50	0^+
2437.0 *4*	0.10 *3*	3730.6	≤4	1293.605	2^+
2449.0[†] *5*	0.040 *6*	3742.96	$1^-,2^+,3^-$	1293.605	2^+
2454.3 *4*	0.067 *25*	3747.9	≤4	1293.605	2^+
2529.2 *5*	0.054 *16*	(9563.56)	$0^+,1^+$	7035.05	
2535.9 *5*	0.035 *15*	4649.19		2112.332	2^+
2543.06 *23*	0.099 *18*	3836.69	≤4	1293.605	2^+
2549.85 *22*	0.122 *22*	3843.69	2^+,3	1293.605	2^+
2585.66 *8*	0.73 *10*	2585.61	1^+	0.0	0^+
2620.7 *6*	0.10 *4*	4649.19		2027.50	0^+
2650.4 *5*	0.12 *2*	2650.47	2^+	0.0	0^+
2652.2 *5*	0.16 *3*	3945.8	$1^+,2^+,3$	1293.605	2^+
2657.4 *7*	0.008 *4*	3950.3	$1^-,2,3$	1293.605	2^+
2707.48 *22*	0.18 *4*	4001.07	$1^{(-)}$	1293.605	2^+
2719.7 *4*	0.10 *4*	4013.16	2^+	1293.605	2^+
2734.9 *5*	0.070 *23*	4028.5	≤4	1293.605	2^+
2743.5 *4*	0.11 *4*	4037.4	$2^+,3^+$	1293.605	2^+
2754.7 *3*	0.18 *4*	4511.47		1756.849	0^+
2843.85 *7*	0.74 *10*	2843.84	2^+	0.0	0^+
2850.3 *5*	0.099 *20*	4143.9	$1^+,2^+,3$	1293.605	2^+
2868.48 *20*	0.18 *4*	4162.41	2	1293.605	2^+
2877.5 *4*	0.085 *18*	4170.9	2^+	1293.605	2^+
2896.9 *4*	0.084 *19*	4190.5	$2^+,3^+,4^+$	1293.605	2^+
2907.2 *5*	0.059 *17*	4201.53	1,2	1293.605	2^+
2918.07 *22*	0.18 *4*	4211.59	$0^+,1,2$	1293.605	2^+
2944.8[@] *3*	0.06 *2*	4238.50	2^+	1293.605	2^+
2960.06 *8*	0.45 *7*	2960.07	2^+	0.0	0^+
2977.2 *4*	0.09 *3*	5562.79		2585.61	1^+
2984.70 *23*	0.18 *3*	4278.38	$1,2^+$	1293.605	2^+
3003.5 *5*	0.075 *17*	4297.1	≤4	1293.605	2^+
3008.2 *5*	0.05 *2*	5968.5		2960.07	2^+
3015.1 *5*	0.051 *12*	4308.48	$(1,2^+)$	1293.605	2^+
3026.8 *6*	0.048 *15*	6116.59		3088.63	2^+
3088.47 *11*	0.38 *5*	3088.63	2^+	0.0	0^+
3095.1 *4*	0.11 *3*	(9563.56)	$0^+,1^+$	6468.61	
3099.3 *3*	0.15 *3*	4392.63		1293.605	2^+
3117.6 *5*	0.086 *16*	4411.01		1293.605	2^+
3127.7 *3*	0.106 *17*	(9563.56)	$0^+,1^+$	6436.17	
3132.7 *6*	0.06 *2*	5357.9		2225.447	2^+
[x]3141.4 *7*	0.063 *17*				
3157.88 *17*	0.14 *3*	(9563.56)	$0^+,1^+$	6405.61	

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^{115}Sn(n,γ) E=th 1991Ra01 (continued)

$\gamma(^{116}Sn)$ (continued)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
3186.55 *12*	0.17 *3*	4480.19		1293.605	2^+
3296.7 *4*	0.07 *3*	5562.79		2266.228	3^-
3309.4 *4*	0.09 *3*	5066.23		1756.849	0^+
3331.0 *7*	0.35 *9*	5357.9		2027.50	0^+
3333.73 *6*	1.21 *14*	3333.81	1	0.0	0^+
3351.4 *5*	0.09 *2*	6532.06		3179.72	2^+,3
3356.5 *6*	0.048 *12*	4649.19		1293.605	2^+
3393.8 *4*	0.06 *2*	6482.60		3088.63	2^+
3403.92 *11*	0.24 *3*	(9563.56)	0^+,1^+	6159.59	
3411.2 *4*	0.047 *13*	(9563.56)	0^+,1^+	6152.1	
3417.6 *5*	0.033 *12*	5174.4		1756.849	0^+
3456.68 *22*	0.10 *1*	5484.26		2027.50	0^+
3491.2 *6*	0.06 *3*	5716.4		2225.447	2^+
3500.4 *3*	0.15 *2*	5767.22		2266.228	3^-
3514.0 *5*	0.11 *3*	3513.6	(2^+)	0.0	0^+
3521.4 *7*	0.05 *2*	6482.60		2960.07	2^+
3528.8 *4*	0.06 *2*	6373.0		2843.84	2^+
3549.0 *4*	0.074 *16*	6198.73		2650.47	2^+
3554.5 *7*	0.06 *2*	5667.8		2112.332	2^+
3558.9 *5*	0.08 *2*	4852.7		1293.605	2^+
3567.9 *4*	0.07 *2*	(9563.56)	0^+,1^+	5995.61	
3574.06 *19*	0.17 *3*	(9563.56)	0^+,1^+	5989.53	
3578.1 *7*	0.026 *11*	5968.5		2390.92	4^+
3586.83 *22*	0.11 *1*	3586.63	2^+	0.0	0^+
3592.8 *3*	0.10 *1*	6436.17		2843.84	2^+
3598.4 *5*	0.076 *13*	4892.57		1293.605	2^+
3626.7 *5*	0.04 *1*	6428.10		2801.35	4^+
3632.26 *20*	0.122 *15*	4925.93		1293.605	2^+
3637.0 *4*	0.065 *12*	6428.10		2790.57	$(0)^+$
3646.6 *6*	0.02 *1*	6436.17		2790.57	$(0)^+$
3650.4 *8*	0.034 *13*	6041.79		2390.92	4^+
3658.3& *3*	0.18 *4*	4952.08		1293.605	2^+
3658.5& *3*	0.18 *4*	3658.69	2^+	0.0	0^+
3677.7 *4*	0.057 *12*	6468.61		2790.57	$(0)^+$
3712.06 *16*	0.24 *5*	3711.91	(1)	0.0	0^+
3720.5 *6*	0.07 *2*	6510.57		2790.57	$(0)^+$
3740.6 *6*	0.035 *15*	5767.22		2027.50	0^+
3764.8 *6*	0.042 *12*	5989.53		2225.447	2^+
3777.1 *3*	0.12 *2*	3776.79	1	0.0	0^+
3793.6 *6*	0.03 *1*	6754.08		2960.07	2^+
3805.95 *18*	0.12 *2*	3806.00	2^-	0.0	0^+
3811.2 *6*	0.03 *1*	5923.6		2112.332	2^+
3816.3 *3*	0.10 *3*	6041.79		2225.447	2^+
3832.3 *6*	0.04 *1*	6482.60		2650.47	2^+
3842.6 *4*	0.07 *2*	6428.10		2585.61	1^+
3848.1 *6*	0.03 *2*	(9563.56)	0^+,1^+	5716.4	
3852.0 *8*	0.04 *2*	3851.0	$1,2^+$	0.0	0^+
3855.6 *8*	0.04 *2*	5968.5		2112.332	2^+
3859.9 *8*	0.03 *2*	6510.57		2650.47	2^+
3876.8 *4*	0.060 *10*	5989.53		2112.332	2^+
3896.0 *4*	0.064 *12*	(9563.56)	0^+,1^+	5667.8	
3903.5 *4*	0.12 *2*	3903.62	2^+	0.0	0^+
3911.6 *4*	0.057 *12*	5667.8		1756.849	0^+
3926.4 *6*	0.02 *1*	6152.1		2225.447	2^+
3932.5 *4*	0.08 *2*	6198.73		2266.228	3^-

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^{115}Sn(n,γ) E=th 1991Ra01 (continued)

γ(^{116}Sn) (continued)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
3938.0 *5*	0.04 *1*	7173.9		3236.04	0^+,1,3
3947.9 *6*	0.04 *1*	5242.31		1293.605	2^+
3952.5 *4*	0.063 *11*	3952.9	2^+	0.0	0^+
3968.18 *20*	0.18 *3*	5995.61		2027.50	0^+
4000.4 *4*	0.06 *2*	(9563.56)	0^+,1^+	5562.79	
4013.4 *2*	0.35 *4*	4013.16	2^+	0.0	0^+
4026.5 *3*	0.13 *2*	4026.75	1	0.0	0^+
4064.0 *3*	0.13 *2*	5357.9		1293.605	2^+
4070.7 *5*	0.06 *2*	(9563.56)	0^+,1^+	5493.0	
4076.9 *6*	0.040 *11*	6468.61		2390.92	4^+
4092.4 *4*	0.14 *3*	6482.60		2390.92	4^+
4101.8 *3*	0.13 *2*	5395.5		1293.605	2^+
4113.9 *2*	0.17 *3*	4113.90	1,2^+	0.0	0^+
4128.2 *2*	0.26 *4*	4128.28	1,2^+	0.0	0^+
4135.8 *4*	0.13 *4*	7224.7		3088.63	2^+
4162.4 *6*	0.10 *3*	6428.10		2266.228	3^-
4170.4 *6*	0.07 *2*	4170.9	2^+	0.0	0^+
4181.5 *3*	0.15 *3*	5474.9		1293.605	2^+
4199.79 *22*	0.12 *2*	4200.10	1	0.0	0^+
4209.8 *5*	0.046 *13*	6436.17		2225.447	2^+
4237.8 *3*	0.06 *2*	4238.50	2^+	0.0	0^+
4246.1 *5*	0.043 *10*	6357.7		2112.332	2^+
4251.64 *12*	0.16 *3*	4251.73	1	0.0	0^+
4257.5 *7*	0.04 *1*	6482.60		2225.447	2^+
4268.9 *3*	0.15 *3*	5562.79		1293.605	2^+
4279.0 *4*	0.036 *11*	4278.38	1,2^+	0.0	0^+
4293.18 *15*	0.18 *3*	6405.61		2112.332	2^+
4306.74 *25*	0.13 *2*	6532.06		2225.447	2^+
4321.1 *4*	0.03 *1*	(9563.56)	0^+,1^+	5242.31	
4360.1 *5*	0.053 *12*	6116.59		1756.849	0^+
4374.15 *20*	0.16 *3*	6130.97		1756.849	0^+
4392.54 *12*	0.32 *5*	4392.63		0.0	0^+
4410.81 *16*	0.13 *4*	4411.01		0.0	0^+
4423.0 *4*	0.14 *2*	5716.4		1293.605	2^+
4431.0 *4*	0.08 *2*	4430.46		0.0	0^+
4441.68 *11*	0.28 *4*	6198.73		1756.849	0^+
4449.50 *12*	0.22 *3*	7035.05		2585.61	1^+
4473.57 *12*	0.19 *3*	5767.22		1293.605	2^+
4483.12 *23*	0.16 *3*	6510.57		2027.50	0^+
4497.3 *3*	0.048 *12*	(9563.56)	0^+,1^+	5066.23	
4511.2 *4*	0.11 *3*	4511.47		0.0	0^+
4548.28 *14*	0.17 *3*	4548.46		0.0	0^+
4584.03 *24*	0.10 *1*	4584.00		0.0	0^+
4600.4 *3*	0.07 *2*	6357.7		1756.849	0^+
4611.2 *5*	0.03 *1*	(9563.56)	0^+,1^+	4952.08	
4629.9 *3*	0.05 *1*	5923.6		1293.605	2^+
4641.5 *2*	0.09 *2*	6754.08		2112.332	2^+
4649.15 *10*	0.20 *2*	4649.19		0.0	0^+
4670.8 *6*	0.05 *2*	(9563.56)	0^+,1^+	4892.57	
4674.6 *3*	0.113 *19*	7325.31		2650.47	2^+
4685.9 *3*	0.067 *11*	(9563.56)	0^+,1^+	4877.18	
4695.85 *10*	0.65 *7*	5989.53		1293.605	2^+
4701.85 *12*	0.25 *3*	5995.61		1293.605	2^+
4712.7 *5*	0.053 *9*	6468.61		1756.849	0^+
4725.6 *3*	0.08 *2*	6482.60		1756.849	0^+
4769.4 *10*	0.09 *5*	7035.05		2266.228	3^-

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^{115}Sn(n,γ) E=th 1991Ra01 (continued)

$\gamma(^{116}Sn)$ (continued)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
4780.2 *15*	0.05 *4*	7325.31		2545.74	$(0)^+$
4809.42 *10*	0.35 *4*	7035.05		2225.447	2^+
4816.1 *3*	0.063 *9*	7659.88		2843.84	2^+
4823.0 *3*	0.05 *1*	6116.59		1293.605	2^+
4837.0 *3*	0.052 *11*	6130.97		1293.605	2^+
4852.6 *3*	0.08 *2*	4852.7		0.0	0^+
4858.2 *4*	0.068 *11*	6152.1		1293.605	2^+
4865.97 *11*	0.21 *2*	6159.59		1293.605	2^+
4876.88 *17*	0.123 *18*	4877.18		0.0	0^+
4892.54 *22*	0.075 *11*	4892.57		0.0	0^+
4905.9 *5*	0.037 *10*	6198.73		1293.605	2^+
4914.31 *13*	0.26 *2*	(9563.56)	$0^+,1^+$	4649.19	
4925.8 *2*	0.13 *2*	4925.93		0.0	0^+
4934.0 *4*	0.057 *12*	7325.31		2390.92	4^+
4959.7 *3*	0.136 *19*	6717.26		1756.849	0^+
4979.51 *18*	0.112 *16*	(9563.56)	$0^+,1^+$	4584.00	
5014.3 *4*	0.08 *2*	(9563.56)	$0^+,1^+$	4548.46	
5051.0 *5*	0.033 *8*	(9563.56)	$0^+,1^+$	4511.47	
5062.1 *8*	0.024 *6*	7173.9		2112.332	2^+
5066.2 *6*	0.03 *1*	5066.23		0.0	0^+
5079.6 *4*	0.07 *2*	6373.0		1293.605	2^+
5083.33 *17*	0.23 *3*	(9563.56)	$0^+,1^+$	4480.19	
5114.1 *3*	0.058 *11*	7659.88		2545.74	$(0)^+$
5134.2 *6*	0.03 *1*	7246.4		2112.332	2^+
5142.2 *4*	0.044 *12*	6436.17		1293.605	2^+
5152.4 *2*	0.092 *20*	(9563.56)	$0^+,1^+$	4411.01	
5170.4 *6*	0.14 *8*	(9563.56)	$0^+,1^+$	4392.63	
5172.9 *20*	0.09 *5*	5174.4		0.0	0^+
5176.4 *15*	0.033 *29*	6468.61		1293.605	2^+
5188.4 *4*	0.048 *10*	6482.60		1293.605	2^+
5216.8 *1*	0.15 *2*	6510.57		1293.605	2^+
5238.4 *6*	0.036 *8*	6532.06		1293.605	2^+
5255.5 *6*	0.024 *7*	(9563.56)	$0^+,1^+$	4308.48	$(1,2^+)$
5268.8 *4*	0.03 *1*	7659.88		2390.92	4^+
5285.4 *3*	0.060 *11*	(9563.56)	$0^+,1^+$	4278.38	$1,2^+$
5298.4 *5*	0.08 *2*	7325.31		2027.50	0^+
5311.5 *3*	0.09 *2*	(9563.56)	$0^+,1^+$	4251.73	1
5324.71 *16*	0.15 *2*	(9563.56)	$0^+,1^+$	4238.50	2^+
5352.0 *3*	0.064 *10*	(9563.56)	$0^+,1^+$	4211.59	$0^+,1,2$
5361.99 *10*	0.72 *9*	(9563.56)	$0^+,1^+$	4201.53	1,2
5401.1 *3*	0.07 *2*	(9563.56)	$0^+,1^+$	4162.41	2
5416.3 *6*	0.03 *1*	7173.9		1756.849	0^+
5423.60 *11*	0.43 *5*	6717.26		1293.605	2^+
5427.8 *7*	0.06 *2*	7692.82		2266.228	3^-
5449.46 *10*	0.40 *4*	(9563.56)	$0^+,1^+$	4113.90	$1,2^+$
5461.1 *4*	0.08 *2*	6754.08		1293.605	2^+
5467.1 *2*	0.10 *1*	7692.82		2225.447	2^+
5474.0 *5*	0.04 *1*	5474.9		0.0	0^+
5484.5 *9*	0.03 *1*	5484.26		0.0	0^+
5488.6 *20*	0.02 *1*	(9563.56)	$0^+,1^+$	4076.03	$1^+,2^+,3$
5493.1 *6*	0.051 *12*	5493.0		0.0	0^+
5525.6 *5*	0.03 *1*	(9563.56)	$0^+,1^+$	4037.4	$2^+,3^+$
5536.5 *3*	0.06 *2*	(9563.56)	$0^+,1^+$	4026.75	1
5550.39 *14*	0.23 *3*	(9563.56)	$0^+,1^+$	4013.16	2^+
5562.38 *10*	0.34 *4*	(9563.56)	$0^+,1^+$	4001.07	$1^{(-)}$
5580.6 *5*	0.05 *1*	7692.82		2112.332	2^+

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^{115}Sn(n,γ) E=th 1991Ra01 (continued)

γ(^{116}Sn) (continued)

E_γ	I_γ[c]	E_i(level)	J_i^π	E_f	J_f^π
5610.6 *7*	0.036 *9*	(9563.56)	$0^+,1^+$	3952.9	2^+
5646.48 *16*	0.11 *3*	(9563.56)	$0^+,1^+$	3916.97	2
5658.6 *3*	0.09 *3*	(9563.56)	$0^+,1^+$	3904.91	1
5659.8 *5*	0.05 *2*	(9563.56)	$0^+,1^+$	3903.62	2^+
5757.5 *4*	0.03 *1*	(9563.56)	$0^+,1^+$	3806.00	2^-
5787.0 *6*	0.04 *1*	(9563.56)	$0^+,1^+$	3776.79	1
5851.55 *23*	0.066 *10*	(9563.56)	$0^+,1^+$	3711.91	(1)
5904.84 *10*	0.46 *4*	(9563.56)	$0^+,1^+$	3658.69	2^+
5931.4 *6*	0.03 *1*	7224.7		1293.605	2^+
5952.3 *6*	0.03 *1*	7246.4		1293.605	2^+
5969.2 *6*	0.054 *9*	(9563.56)	$0^+,1^+$	3593.84	3^+
5977.6 *5*	0.05 *2*	(9563.56)	$0^+,1^+$	3586.63	2^+
6054.95 *20*	0.12 *2*	(9563.56)	$0^+,1^+$	3508.36	2^+
6093.0 *3*	0.11 *3*	(9563.56)	$0^+,1^+$	3469.71	2^+
[x]6109.3 *6*	0.03 *1*				
6146.7 *2*	0.08 *2*	(9563.56)	$0^+,1^+$	3415.9	$2,3^+$
6158.96 *24*	0.059 *10*	6159.59		0.0	0^+
6229.50 *10*	0.34 *4*	(9563.56)	$0^+,1^+$	3333.81	1
6248.4 *6*	0.03 *1*	(9563.56)	$0^+,1^+$	3315.04	$2^+,3^+$
6335.87 *11*	0.32 *5*	(9563.56)	$0^+,1^+$	3227.47	(2^+)
6475.7 *5*	0.05 *1*	(9563.56)	$0^+,1^+$	3088.63	2^+
6603.3 *11*	0.38 *5*	(9563.56)	$0^+,1^+$	2960.07	2^+
6718.9 *5*	0.03 *1*	(9563.56)	$0^+,1^+$	2843.84	2^+
6772.9 *5*	0.022 *5*	(9563.56)	$0^+,1^+$	2790.57	$(0)^+$
6913.07 *17*	0.10 *1*	(9563.56)	$0^+,1^+$	2650.47	2^+
6978.0 *3*	0.04 *1*	(9563.56)	$0^+,1^+$	2585.61	1^+
7017.55 *10*	0.23 *3*	(9563.56)	$0^+,1^+$	2545.74	$(0)^+$
7337.72 *15*	0.15 *2*	(9563.56)	$0^+,1^+$	2225.447	2^+
7450.76 *11*	0.29 *4*	(9563.56)	$0^+,1^+$	2112.332	2^+
7806.4 *5*	0.022 *3*	(9563.56)	$0^+,1^+$	1756.849	0^+
8269.56 *25*	0.045 *7*	(9563.56)	$0^+,1^+$	1293.605	2^+
9562.8 *5*	0.055 *11*	(9563.56)	$0^+,1^+$	0.0	0^+

[†] Not seen by 1991Ra01. Eγ is rounded-off value from adopted γ's. Iγ is from branching in adopted γ's.

[‡] Authors measured Eγ=416.936 *20*, Iγ=0.47 *10* for 417 doublet. Eγ is taken from β decay. Eγ=417.4 for the other member is deduced from the E(level) difference. Iγ from (n,n'γ) Iγ/Iγ(1963)=100/(47 *16*). This gives Iγ(417.4)=0.13 *6* and Iγ(416.86=0.34 *6*. These values differ from 0.08 *3* and 0.39 *6* given by 1991Ra01.

[#] Not resolved from strong 1293γ. Eγ is from E(level) difference. Existence of this transition and the Iγ value are inferred from excit (2586γ) and a comparison with calculated statistical model cross section.

[@] Authors measured Eγ=2944.66 *19* and Iγ=0.16 *3* for the doublet. The Eγ are from the E(level) difference and Iγ from (n,n'γ).

[&] Authors measured Eγ=3658.39 *10* and Iγ=0.36 *5* for the doublet. The Iγ is inferred from the measured branching in (n,n'γ).

[a] From Iγ/Iγ(1368γ)<0.224 *35*, β^- decay, one gets<0.027 for placement from 3594.

[b] From Iγ=0.036 *7* for possible doublet and Iγ deduced for placement from 3594.

[c] Intensity per 100 neutron captures.

[d] Multiply placed with intensity suitably divided.

[x] γ ray not placed in level scheme.

^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme

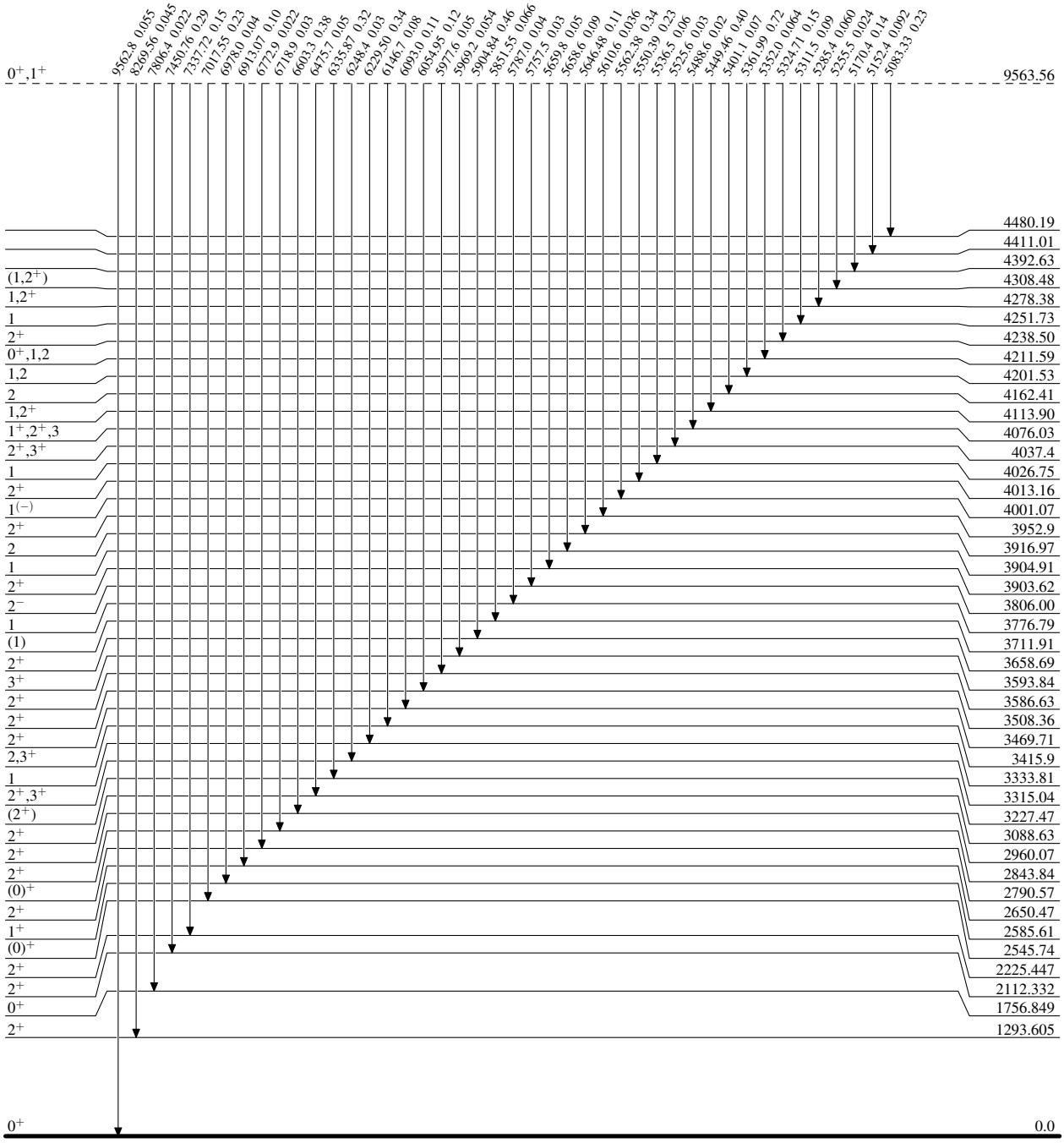
Intensities: Relative I_γ

Legend

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

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

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



$^{116}_{50}Sn_{66}$

^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

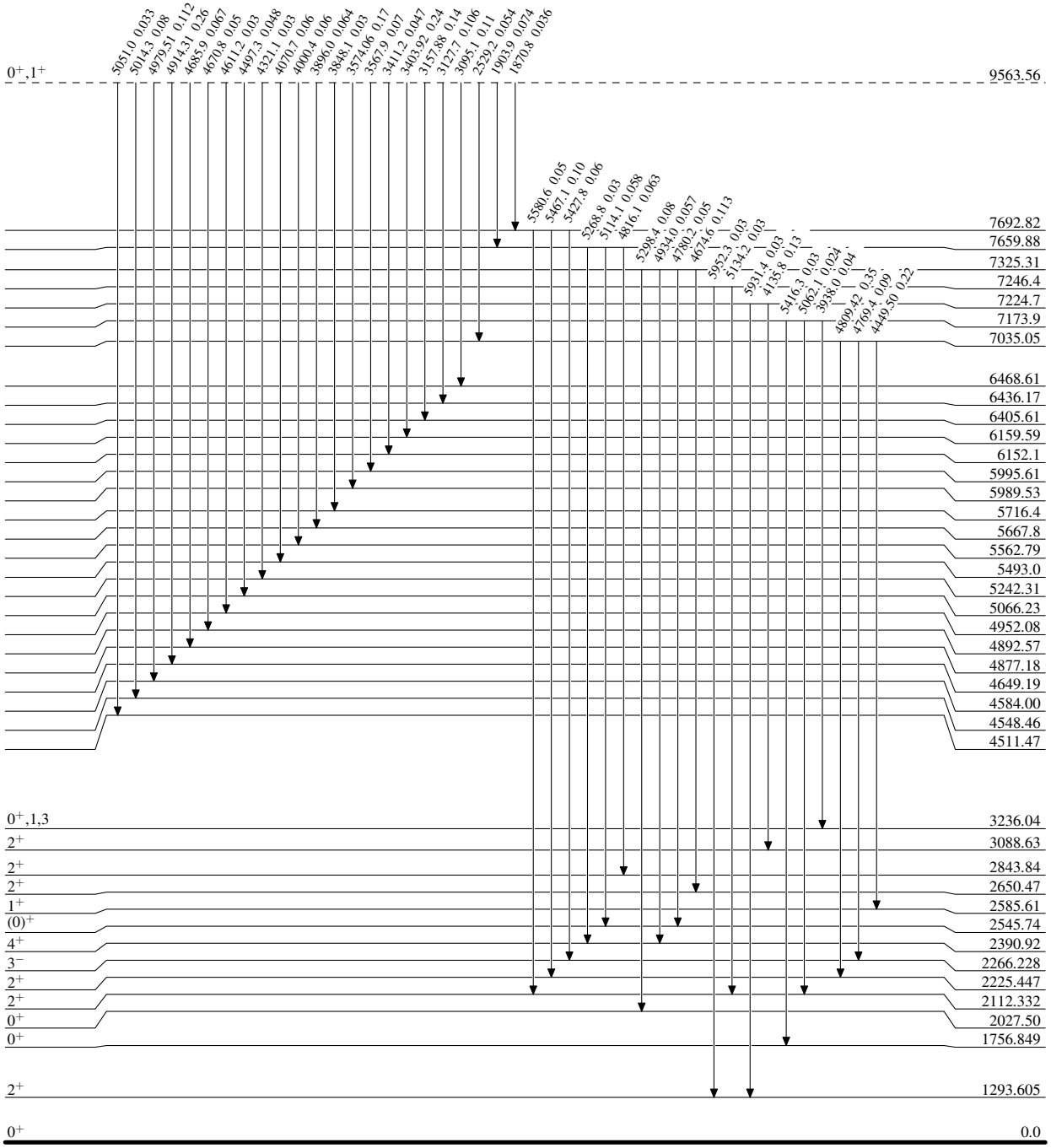
Intensities: Relative I_γ

Legend

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

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

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



$^{116}_{50}Sn_{66}$

^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

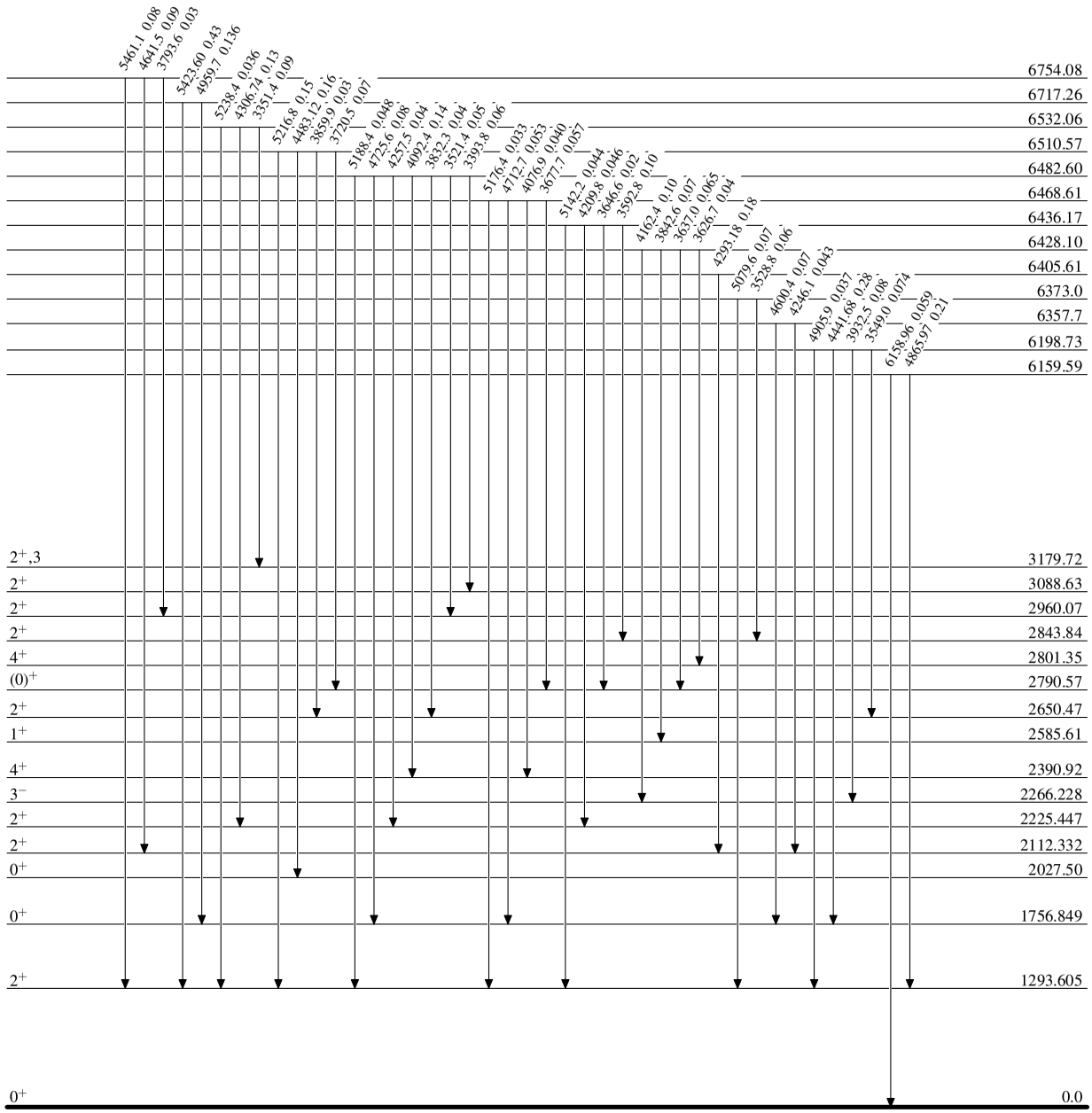
Intensities: Relative I_γ

Legend

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

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

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



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^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

Intensities: Relative I_γ

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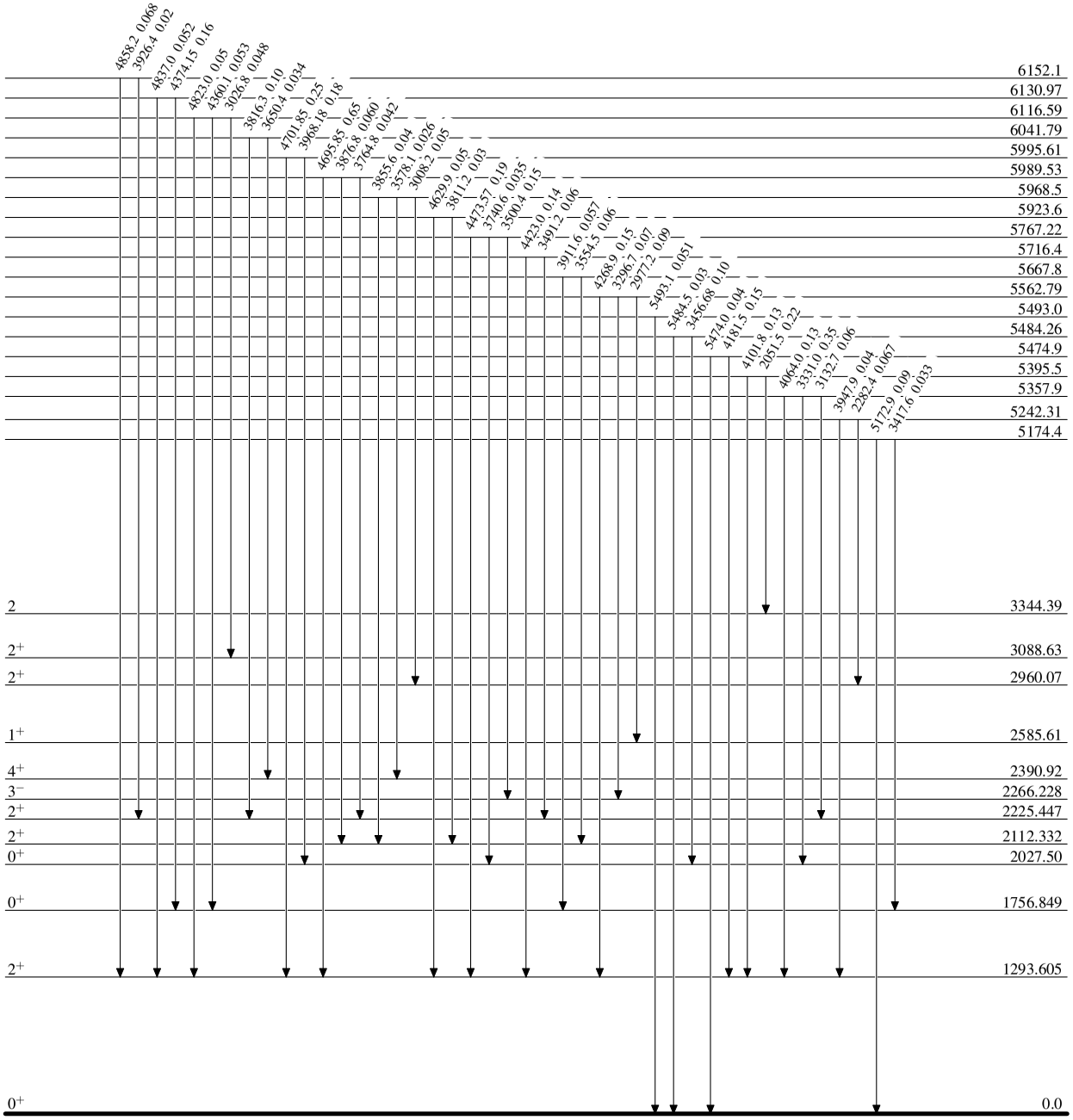

$^{116}_{50}Sn_{66}$

^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

Intensities: Relative I_γ

Legend

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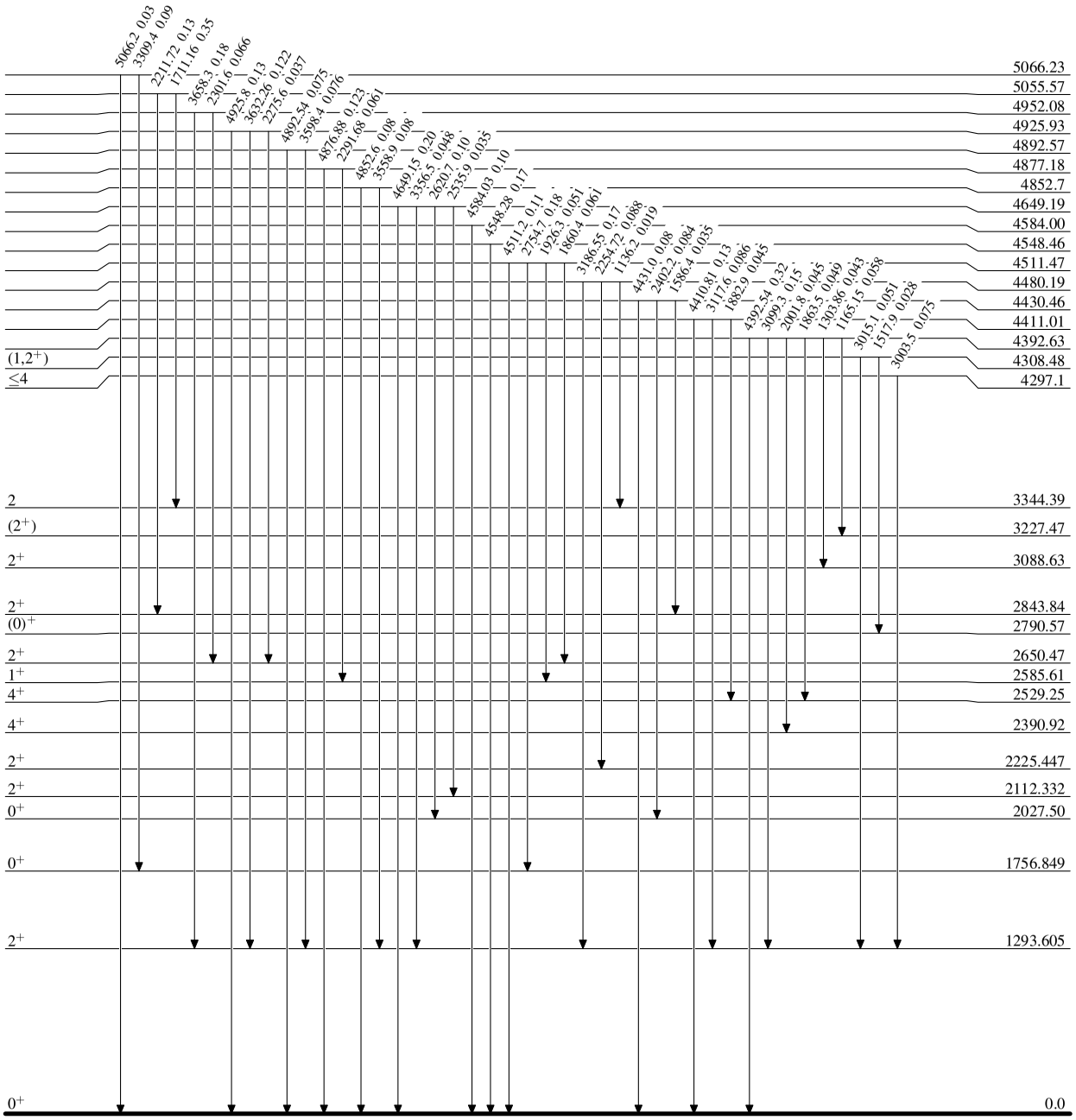
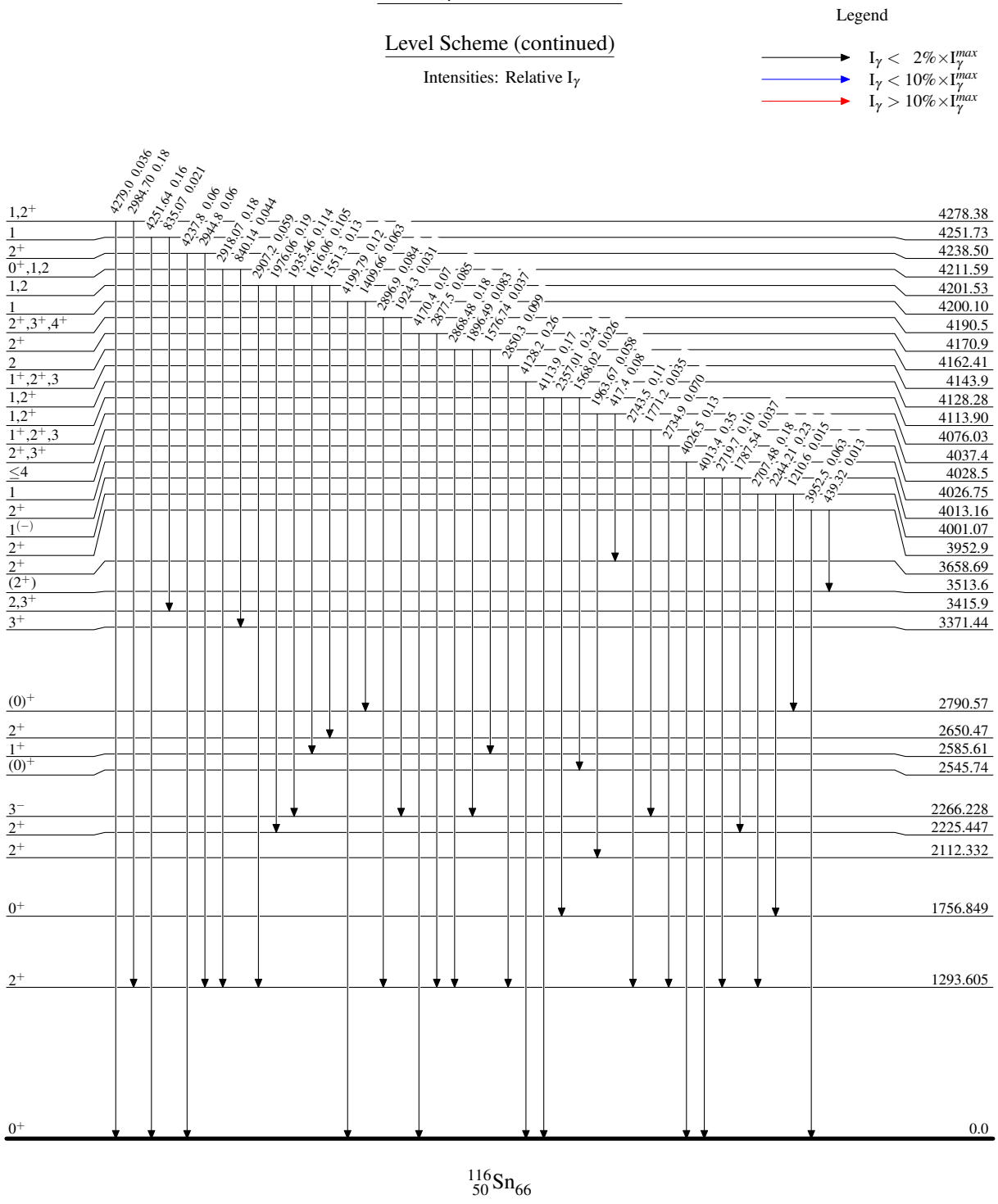


$^{116}_{50}Sn_{66}$

^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

Intensities: Relative I_γ

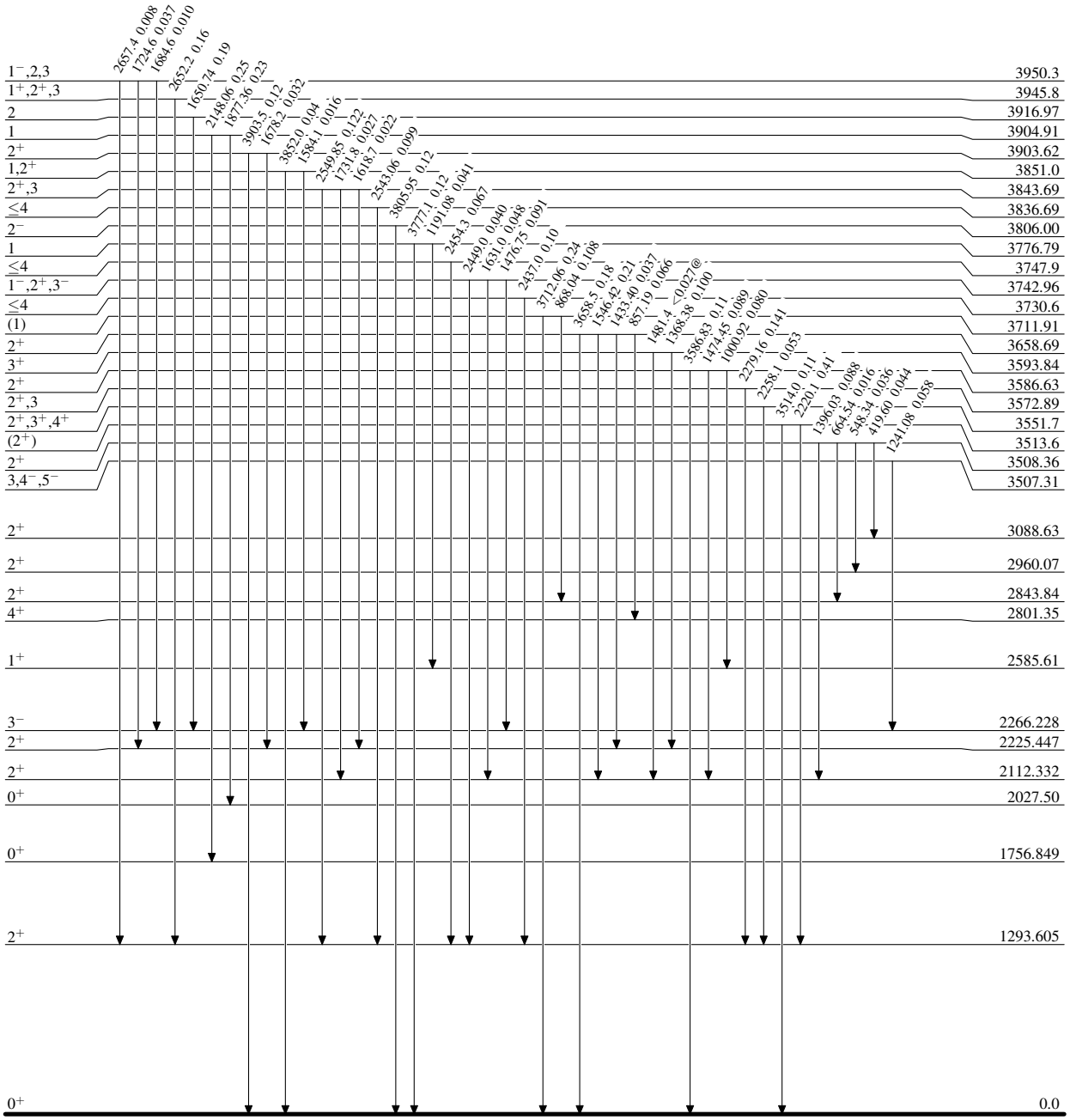


^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

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



$^{116}_{50}Sn_{66}$

^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

Legend
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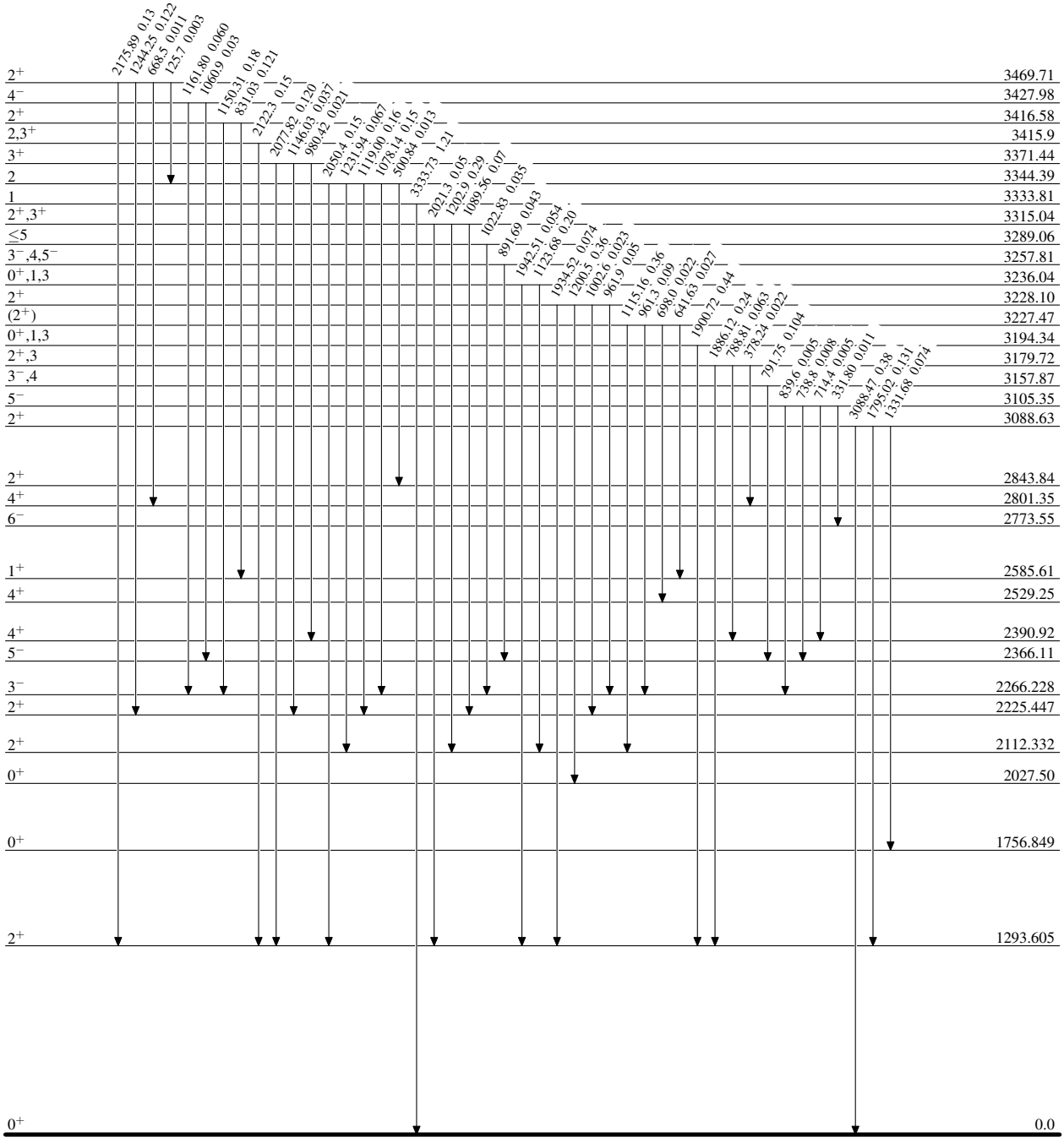

$^{116}_{50}Sn_{66}$

^{115}Sn(n,γ) E=th 1991Ra01

Level Scheme (continued)

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

Legend
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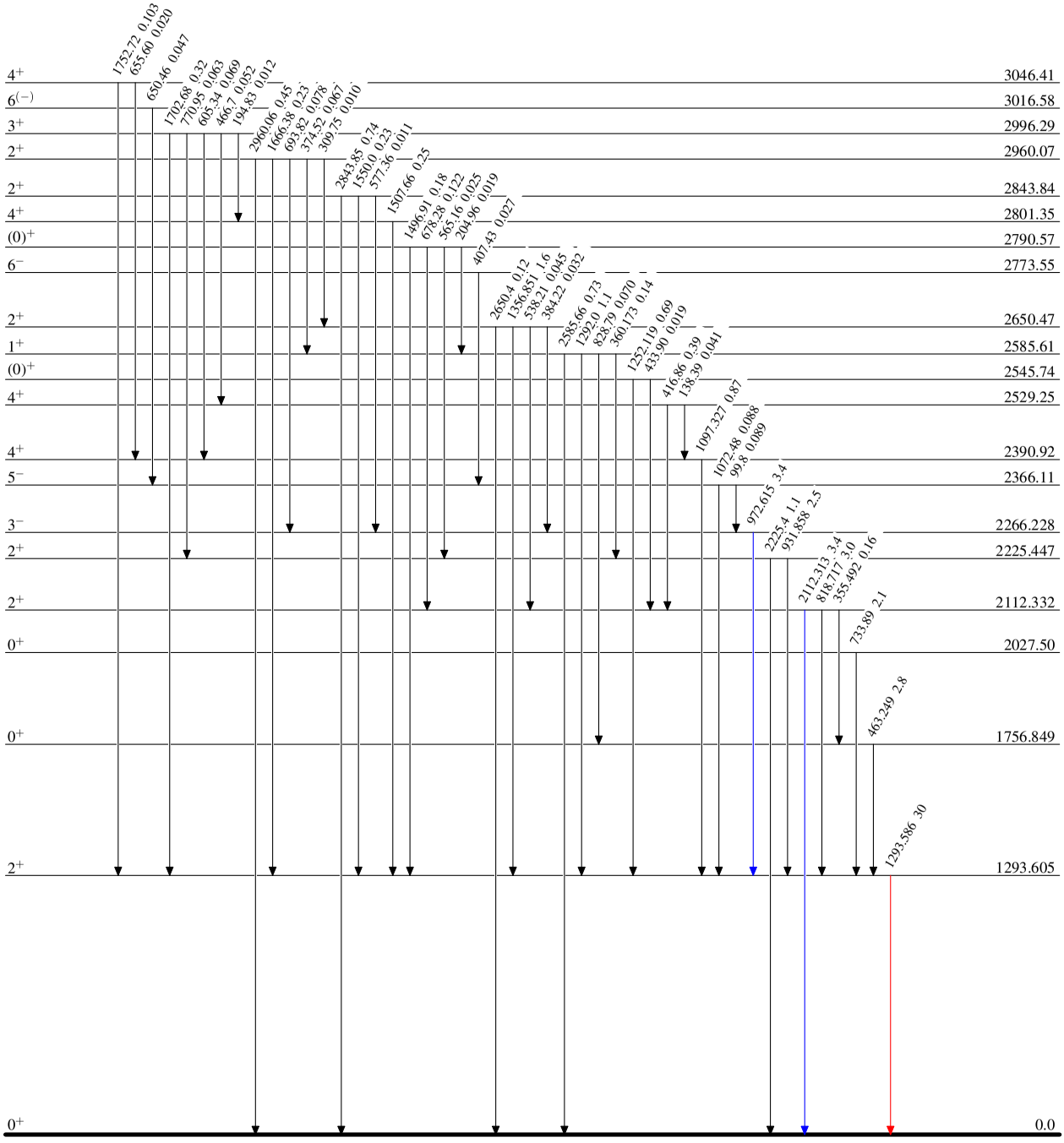

$^{116}_{50}Sn_{66}$