

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 110,1239 (2009)	1-Feb-2008

Q(β^-)=-5103 11; S(n)=8169 15; S(p)=6758 13; Q(α)=-1374 6 [2012Wa38](#)

Note: Current evaluation has used the following Q record -5.06E+3 3 8172 156759 13-1385 9 [2003Au03](#).

¹¹¹Sn Levels

Cross Reference (XREF) Flags

A	¹¹¹ Cd(³ He,3n γ), ¹⁰⁸ Cd(α ,n γ)	E	¹¹² Sn(pol d,t)	I	⁹⁸ Mo(¹⁶ O,3n γ)
B	¹¹¹ Sb ϵ decay (75 s)	F	¹¹² Sn(p,pn γ)	J	¹⁰⁰ Mo(²⁰ Ne, α 5n γ)
C	¹¹² Sn(p,d)	G	(HI,xn γ)		
D	¹¹² Sn(³ He, $\alpha\gamma$)	H	⁹⁶ Ru(¹⁹ F,3pn γ)		

E(level) [#]	J π [†]	T _{1/2}	XREF	Comments
0.0 [@]	7/2 ⁺	35.3 min 6		% ϵ +% β^+ =100 Q=0.18 9 (1987Eb02,1989Ra17); μ =+0.608 4 J $^\pi$: from atomic beam (1974Ho17), π =+ from L=4 (p,d). T _{1/2} : weighted av: 35.0 min 5 (1949Hi10), 35 min 1 (1951Mc11), 35.5 min 8 (1967Da11), 35.8 min 8 (1969Sh11). Other: 1961Ra06 .
154.48 3	5/2 ⁺	12.5 μ s 10	ABCDE	J $^\pi$: from L=2 (pol d,t), M1+E2 γ to 7/2 ⁺ excludes 3/2 ⁺ .
254.71 4	1/2 ⁺		ABCDE	%IT=100 T _{1/2} : from (1978Ho06) γ (t) pulsed beam. Other: 18 μ s 1 (1972Br38) γ (t) pulsed beam. J $^\pi$: L=0 (pol d,t). J $^\pi$: L=2 (pol d,t) M1 γ to 1/2 ⁺ .
643.62 9	3/2 ⁺	10.0 ns 5	ABCDE	J $^\pi$: based on L=2 (pol d,t) and M1 γ to 7/2 ⁺ .
755.46 18	5/2 ⁺		ABCDE	μ =-1.26 11 (1974Br29,1989Ra17)
978.6 ^{&} 3	11/2 ⁻		A CDEFGHIJ	J $^\pi$: L=5 in (pol d,t), M2 γ to 7/2 ⁺ . E(level): The state results from the occupation of the ν h11/2 orbital coupled to the core g.s. of ¹¹⁰ Sn (1995La11) Analogs ¹¹³ Sn at 740 keV, 159- μ s, ¹¹⁵ Sn at 714 keV. T _{1/2} : from (1984Pr06). Others: 9.2 ns 10 (1974Br29), 7.9 ns 8 (1972Br38) γ (t) pulsed beam.
1032.57 9	3/2 ⁺	0.3 ns 2	ABCD	J $^\pi$: from γ decay to 1/2 ⁺ and 7/2 ⁺ .
1107 2	1/2 ⁺		C E	J $^\pi$: based on L=0 (pol d,t).
1151.74 18	3/2 ⁺ ,5/2 ⁺		ABCD	J $^\pi$: L=2 in (p,d).
1235.60 24	(9/2) ⁺		A D F	J $^\pi$: D+Q γ to g.s.
1276.69 24	7/2 ⁺		ABCD	T _{1/2} : from $\gamma\gamma$ (t) 1984Pr06 . J $^\pi$: L=4 (p,d). M1 γ to 5/2 ⁺ .
1302.1 3	5/2 ⁺ [‡]		ABCDE	
1347.85 [@] 23	11/2 ⁺	A CD F HI	J $^\pi$: E2 γ to 7/2 ⁺ g.s. Excit in (α ,n γ).	
1417 3		C		
1432 3	3/2 ⁺ ,5/2 ⁺	C	J $^\pi$: L=2 (p,d).	
1478.1 3	9/2 ⁺ [‡]	ABCDE		
1577.5 10	5/2 ⁺	DE	J $^\pi$: from σ (θ) and σ (pol).	
1693.2 4	(3/2 ⁺ ,5/2 ⁺)	ABCD	J $^\pi$: excit in (³ He,3n γ).	
1732 3	1/2 ⁺	C E	J $^\pi$: L=0 (pol d,t).	
1805 3		C		
1823.1 10	7/2 ⁺ [‡]	BCDE		
1866 3	(3/2 ⁺ ,5/2 ⁺)	C	J $^\pi$: L=(2) in (p,d).	
1890.3 14	7/2 ⁺ ,9/2 ⁺	CD	J $^\pi$: L=4 in (p,d).	
1928 3	9/2 ⁻ ,11/2 ⁻	C	J $^\pi$: L=5 (p,d).	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{111}Sn Levels (continued)

E(level)#	J^{π} †	$T_{1/2}$	XREF	Comments
1956 3	(3/2 ⁺ ,5/2 ⁺)		C	J^{π} : L=(2) (p,d).
1988.0 10			D	
1995.8 10	(3/2 ⁺ ,5/2 ⁺)		BCD	J^{π} : L=(2) in (p,d).
2030.5 20	3/2 ⁺ ‡		CDE	E(level): E=2023 3 in (p,d) is somewhat discrepant.
2062.3& 3	15/2 ⁻		A cD GHIJ	E(level): The state results from the occupation of the $\nu h_{11/2}$ orbital coupled to the 2 ⁺ of the core of ^{110}Sn (1995La11). J^{π} : stretched E2 γ to 11/2 ⁻ state and excit in (α ,n γ).
2065.1@ 3	15/2 ⁺	0.52 ns 9	A c F HI	$T_{1/2}$: $\gamma\gamma$ (t) from 1984Pr06. J^{π} : stretched E2 γ to 11/2 ⁺ and excit in (α ,n γ).
2090.1 5	(9/2 ⁺)		D	J^{π} : γ 's to 5/2 ⁺ ,11/2 ⁺ ,11/2 ⁻ .
2092 10	(1/2 ⁻ ,3/2 ⁻)		C	J^{π} : L=(1) (p,d).
2100.4 3	(13/2 ⁺)		A	J^{π} : M1+E2 γ to 11/2 ⁺ and stretched Q to (9/2).
2140 10	1/2 ⁻ ‡		C E	
2188.2 4	(11/2,13/2)		A	J^{π} : γ (θ) in (α ,n γ).
2191.6 20			CD	
2216.8 3			A C	
2257.4@ 3	(17/2 ⁺)	≥4 ns	A HI	J^{π} : M1 γ to 15/2 ⁺ . Excit. $T_{1/2}$: From 2005Wo03.
2275 5			C	
2284.5 20	(5/2 ⁺)		CDE	J^{π} : L=2 (p,d), J=5/2 from (pol d,t) for complex 2320 peak.
2312.6 20	(7/2 ⁺)		CDE	J^{π} : L=2+4 (pol d,t) and J=7/2 for L=4 component.
2363.1 4	9/2 ⁺ ,11/2 ⁺ ,13/2 ⁺		A	J^{π} : M1+E2 γ to 11/2 ⁺ .
2374 5			C	
2386.1 4	(13/2)		A	J^{π} : stretched D to 11/2 ⁺ .
2395 5			C	
2433 5			C	
2466 5	5/2 ⁺		C E	J^{π} : L=2 (p,d) (pol d,t).
2505 5	7/2 ⁺		C E	J^{π} : L=4 (p,d) (pol d,t).
2523.5 4	(15/2 ⁺)		A	J^{π} : M1+E2 γ to 15/2 ⁺ and (17/2 ⁺). Excit in (α ,n γ).
2533 5	(7/2 ⁺ ,9/2 ⁺)		C	J^{π} : L=(4) (p,d).
2544 5			C	
2600 5	(1/2 ⁻ ,3/2 ⁻)		C	J^{π} : L=(1) (p,d).
2639 5			C	
2666 5			C	
2690 5			C	
2715 5	1/2 ⁺		C	J^{π} : L=0 (p,d).
2738 5			C e	
2786 5	3/2 ⁺ ,5/2 ⁺		C e	J^{π} : L=2 (p,d).
2804 5			C	
2824 5	3/2 ⁺ ,5/2 ⁺		C e	J^{π} : L=2 (p,d).
2867 5			C e	
2910 5			C	
2983.5& 3	19/2 ⁻	0.15 ns 10	A GHIJ	$T_{1/2}$: $\gamma\gamma$ (t) from 1984Pr06. J^{π} : stretched E2 γ to 15/2 ⁻ .
3014 10	7/2 ⁺ ,9/2 ⁺		C E	J^{π} : L=4 (p,d).
3123.7 ^a 3	19/2 ⁻		A G IJ	J^{π} : M1 γ from 21/2 ⁻ and E2 γ to 15/2 ⁻ .
3228.5 4	19/2 ⁻		A GH J	
3238 10			C E	J^{π} : L=(1) (p,d), but L=4+1, J=9/2,7/2 from (pol d,t) for a complex peak at 3270 assumed by the authors to be 3238+3262.
3263 10	1/2 ⁻ ,3/2 ⁻		C E	J^{π} : L=(1) (p,d).
3306.5 ^b 3	19/2 ⁻		A GHIJ	J^{π} : Q γ to (15/2 ⁻).
3322.8 ^a 3	21/2 ⁻		A G IJ	J^{π} : M1 γ to 19/2 ⁻ . Excit.
3443 10	7/2 ⁺ ,9/2 ⁺		C	J^{π} : L=4 (p,d).
3459.2 4	23/2 ⁻		A G J	J^{π} : E2 γ to 19/2 ⁻ . Excit.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{111}Sn Levels (continued)

E(level)#	J^{π} †	$T_{1/2}$	XREF	Comments
3496 10	$1/2^-, 3/2^-$		C	J^{π} : L=1 (p,d).
3513 10			C	J^{π} : L=1+4 (p,d).
3559 10			C	J^{π} : L=1+4 (p,d).
3582 10			C	J^{π} : L=1+4 (p,d).
3620.2 ^a 3	$23/2^-$		A G IJ	J^{π} : probable M1+E2 γ to $(21/2)^-$. D+Q to $23/2^-$.
3622 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
3661 10	$1/2^-, 3/2^-$		C	J^{π} : L=1 (p,d).
3694 10	$1/2^-, 3/2^-$		C	J^{π} : L=1 (p,d).
3712 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
3758 10	$7/2^+, 9/2^+$		C	L: L=4 (p,d).
3789.0 ^a 4	$(23/2)^-$		A G IJ	J^{π} : M1 γ to $(21/2)^-$.
3815 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
3830 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
3865 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
3952 10	$(1/2^-, 3/2^-)$		C	J^{π} : L=(1) (p,d).
3955.4 ^{&} 3	$(23/2)$		I	
3971 10			C	
4011 10			C	
4029 10	$(1/2^-, 3/2^-)$		C	J^{π} : L=(1) (p,d).
4074.3 ^b 3	$23/2^-$		GHIJ	
4079 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
4130 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
4145 10			C	
4156.1 ^a 5	$25/2^-$		I	
4176 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
4192 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
4232 10	$7/2^+, 9/2^+$		C	J^{π} : L=4 (p,d).
4259 10			C	
4286 10			C	
4311 10	$1/2^-, 3/2^-$		C	J^{π} : L=1 (p,d).
4332 10	$1/2^-, 3/2^-$		C	J^{π} : L=1 (p,d).
4369 10	$(1/2^-, 3/2^-)$		C	J^{π} : L=(1) (p,d).
4393 10			C	
4416 10			C	
4446.1 ^a 4	$25/2^-$		G IJ	
4448 10			C	
4483 10			C	
4511 10			C	
4556 10	$1/2^-, 3/2^-$		C	J^{π} : L=1 (p,d).
4580 10	$1/2^-, 3/2^-$		C	J^{π} : L=1 (p,d).
4617 10			C	
4839.0 ^a 4	$27/2^-$		G IJ	
4877.2 ^b 3	$27/2^-$	0.49 ps +2-3	GHIJ	$T_{1/2}$: From 2008Ga26. $Q_t=2.93$ 10, $\beta_2=0.21$ 1.
4988.7 ^{&} 4	$(27/2)$		I	
5746.2 ^b 4	$31/2^-$	0.173 ps 14	GHIJ	$T_{1/2}$: From 2008Ga26. $Q_t=3.95$ +21-18, $\beta_2=0.28$ 2.
5766.8 ^a 4	$(29/2, 31/2)$		I	
6131.4 ^b 4	$(31/2)$		I	
6688.6 ^b 8	$35/2^-$	0.152 ps 14	GHIJ	$T_{1/2}$: From 2008Ga26. $Q_t=3.77$ +27-24, $\beta_2=0.26$ 2.
6842.8 ^a 4	$(31/2, 33/2)$		HI	
7683.9 ^b 12	$39/2^-$	0.159 ps 21	GH J	$T_{1/2}$: From 2008Ga26.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{111}Sn Levels (continued)

E(level) [#]	J^π [†]	$T_{1/2}$	XREF	Comments
8738.5 ^b 12	43/2 ⁻	0.125 ps +21-14	GH J	Q _t =3.2 3, β_2 =0.23 2. T _{1/2} : From 2008Ga26. Q _t =3.1 3, β_2 =0.22 2.
9860.3 ^b 12	47/2 ⁻	<0.14 ps	H J	T _{1/2} : From 2008Ga26.
11081.6 ^b 13	(51/2 ⁻)		HIJ	
12448.6 ^b 16	(55/2 ⁻)		H J	
13983.6 ^b 19	(59/2 ⁻)		H	
15742.6 ^b 22	(63/2 ⁻)		H	
17812.7 ^b 24	(67/2 ⁻)		H	

[†] J^π without comments are based on the γ multiplicities, decay patterns and rotational band structure.

[‡] From L and analyzing power in (pol d,t).

[#] From least-squares fit to $E\gamma$'s.

@ Band(A): γ cascade to g.s..

& Band(B): 11/2⁻ band.

^a Band(C): γ -ray cascade based on 19/2⁻.

^b Band(D): Band based on 19/2⁻. Configuration= $\nu h_{11/2} \otimes [(\pi g_{7/2})^2 (\pi g_{9/2})^{-2}]$ or $\nu h_{11/2} \otimes [\pi (g_{7/2} d_{5/2}) (g_{9/2})^{-2}]$ (both from literature).

Adopted Levels, Gammas (continued)

E _i (level)	J _i ^π	γ(¹¹¹ Sn)							Comments
		E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult. [‡]	δ [‡]	α ^b	
154.48	5/2 ⁺	154.48 3	100	0.0	7/2 ⁺	M1+E2	-0.08 6	0.17	
254.71	1/2 ⁺	100.24 3	100	154.48	5/2 ⁺	E2		1.60	B(E2)(W.u.)=0.054 5 Mult.: from intensity balance about 154 level, the placement in the level scheme requires Δ' J=2.
643.62	3/2 ⁺	389.3 3	8.5 13	254.71	1/2 ⁺	M1,E2			
		489.1 1	100 18	154.48	5/2 ⁺	M1(+E2)	+0.15 18		
		643.6 3	4.5	0.0	7/2 ⁺				
755.46	5/2 ⁺	601.0 3	15	154.48	5/2 ⁺	M1,E2			
		755.4 3	100	0.0	7/2 ⁺	M1+E2	+0.50		
978.6	11/2 ⁻	978.6 3	100	0.0	7/2 ⁺	M2			B(M2)(W.u.)=0.150 8 E _γ : from 1984Pr06 in (α,nγ). Other: 978.7 3 (1976Ma09) in (α,nγ), 978 1 (1985Az03) in (³ He,αγ), 979.6 5 (1972Br38) in IT decay.
1032.57	3/2 ⁺	777.8 3	28	254.71	1/2 ⁺				
		877.8 3	5	154.48	5/2 ⁺				
		1032.6 1	100	0.0	7/2 ⁺				
1151.74	3/2 ⁺ ,5/2 ⁺	396.2 3	7.5	755.46	5/2 ⁺				
		897.4 3	100	254.71	1/2 ⁺				
		997.1 3	81	154.48	5/2 ⁺				
		1150 @ 1		0.0	7/2 ⁺				E _γ : reported by 1972Si28 and 1974De34 (I _γ is inconsistent) but not by 1976Wi10 in ε decay. I _γ /I _γ (999)<1.6 3 from in-beam studies.
1235.60	(9/2) ⁺	1235.6 3	100	0.0	7/2 ⁺	D+Q			
1276.69	7/2 ⁺	1122.3 3	100	154.48	5/2 ⁺	M1(+E2)	-0.9 8		B(M1)(W.u.)=1.8×10 ⁻⁵ +39-12
		1276.5 4	56 8	0.0	7/2 ⁺				
1302.1	5/2 ⁺	546.7 10	3	755.46	5/2 ⁺				
		1147.6 3	100	154.48	5/2 ⁺				
1347.85	11/2 ⁺	1347.8 3	100	0.0	7/2 ⁺	E2			
1478.1	9/2 ⁺	1323.6 3	100	154.48	5/2 ⁺	E2			I _γ : from (α,nγ). I _γ (1478γ)/I _γ (1324γ)=0.87 in ε decay, and 0.52 25 in (³ He,αγ).
		1478.0 6	35 9	0.0	7/2 ⁺				
1577.5	5/2 ⁺	1423 1	100	154.48	5/2 ⁺				
1693.2	(3/2 ⁺ ,5/2 ⁺)	1538.7 4	100	154.48	5/2 ⁺				
1823.1	7/2 ⁺	1179.5 10	100	643.62	3/2 ⁺				
1890.3	7/2 ⁺ ,9/2 ⁺	1736 2		154.48	5/2 ⁺				
		1890 2		0.0	7/2 ⁺				
1988.0		1988 1	100	0.0	7/2 ⁺				
1995.8	(3/2 ⁺ ,5/2 ⁺)	1841.3 10	100	154.48	5/2 ⁺				
2030.5	3/2 ⁺	1876 2	100	154.48	5/2 ⁺				
2062.3	15/2 ⁻	1083.6 3	100	978.6	11/2 ⁻	E2		0.0011	
2065.1	15/2 ⁺	717.3 3	100	1347.85	11/2 ⁺	E2			B(E2)(W.u.)=0.18 4

Adopted Levels, Gammas (continued)

E _i (level)	J ^π _i	γ(¹¹¹ Sn) (continued)						Comments
		E _γ [†]	I _γ [†]	E _f	J ^π _f	Mult. [‡]	δ [‡]	
2090.1	(9/2 ⁺)	742 1	28 11	1347.85	11/2 ⁺			
		854 1	100 15	1235.60	(9/2) ⁺			
		1112 1	76 15	978.6	11/2 ⁻			
		1335 1	13 7	755.46	5/2 ⁺			
2100.4	(13/2) ⁺	752.5 3	&	1347.85	11/2 ⁺	M1+E2	+1.3 10	
		864.9 3	&	1235.60	(9/2) ⁺	Q		
2188.2	(11/2,13/2)	1209.6 3	100	978.6	11/2 ⁻	D+Q,Q	+1.2 12	
2191.6		1548 2	100	643.62	3/2 ⁺			
2216.8		869.0 2	91 45	1347.85	11/2 ⁺	D(+Q)		
		981.2 5	100 42	1235.60	(9/2) ⁺			
2257.4	(17/2) ⁺	192.3 2	100	2065.1	15/2 ⁺	M1(+E2)	-0.03 3	
2284.5	(5/2) ⁺	2130 2	100	154.48	5/2 ⁺			
2312.6	(7/2 ⁺)	1077 2	100	1235.60	(9/2) ⁺			
2363.1	9/2 ⁺ ,11/2 ⁺ ,13/2 ⁺	1015.2 3	100	1347.85	11/2 ⁺	M1+E2	+0.48 20	
2386.1	(13/2)	1038.2 3	100	1347.85	11/2 ⁺	D(+Q)	0.00 15	
2523.5	(15/2) ⁺	266.2 3	100 2	2257.4	(17/2) ⁺	M1+E2	-0.05 4	
		458.4 3	23.8 9	2065.1	15/2 ⁺	M1+E2		δ: -0.4 3 or +1.0 4.
2983.5	19/2 ⁻	726.0 6	1.0 2	2257.4	(17/2) ⁺			
		921.2 1	100 5	2062.3	15/2 ⁻	E2		B(E2)(W.u.)=0.18 12
3123.7	19/2 ⁻	866.5 3	12.1 ^a 24	2257.4	(17/2) ⁺			
		1058.5 5	23 ^a 4	2065.1	15/2 ⁺			
		1061.8 3	100 ^a 7	2062.3	15/2 ⁻	E2		
3228.5	19/2 ⁻	1166.0 3	100	2062.3	15/2 ⁻			
3306.5	19/2 ⁻	1244.6 3	100	2062.3	15/2 ⁻	Q		
3322.8	21/2 ⁻	199.1 3	99 [#] 3	3123.7	19/2 ⁻	M1+E2	+0.16 3	
		339.3 3	100 [#]	2983.5	19/2 ⁻	M1(+E2)	+0.03 3	
3459.2	23/2 ⁻	475.7 3	100	2983.5	19/2 ⁻	E2		
3620.2	23/2 ⁻	297.4 1	44 4	3322.8	21/2 ⁻			
		313.5 3	≈0	3306.5	19/2 ⁻			
		636.7 1	100 10	2983.5	19/2 ⁻			
		466.3 3	100	3322.8	21/2 ⁻	M1+E2	0.25 2	
3789.0	(23/2) ⁻	466.3 3	100	3322.8	21/2 ⁻			
3955.4	(23/2)	971.8 1	8.3 8	2983.5	19/2 ⁻			
4074.3	23/2 ⁻	751.6 7	7.7 23	3322.8	21/2 ⁻			
		767.9 1	100 8	3306.5	19/2 ⁻	E2		
		845.8 2	39 4	3228.5	19/2 ⁻			
		950.8 2	48 4	3123.7	19/2 ⁻			
		1090.8 1	92 8	2983.5	19/2 ⁻			
4156.1	25/2 ⁻	367.1 2	100	3789.0	(23/2) ⁻			
4446.1	25/2 ⁻	1123.3 2	100	3322.8	21/2 ⁻			
4839.0	27/2 ⁻	1218.5 2	100	3620.2	23/2 ⁻			

Adopted Levels, Gammas (continued)

$\gamma(^{111}\text{Sn})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	Comments
4877.2	27/2 ⁻	802.9 1	100 4	4074.3	23/2 ⁻	E2	B(E2)(W.u.)=93 4
		1088.6 5	5.6 11	3789.0	(23/2) ⁻		
4988.7	(27/2)	914.6 2	93 11	4074.3	23/2 ⁻		
		1033.1 2	100 11	3955.4	(23/2)		
5746.2	31/2 ⁻	869.8 5	100	4877.2	27/2 ⁻	E2	B(E2)(W.u.)=171 +13-11
		907.9 5	4.2	4839.0	27/2 ⁻		
5766.8	(29/2,31/2)	889.8 2	100 12	4877.2	27/2 ⁻		
		927.4 3	79 9	4839.0	27/2 ⁻		
6131.4	(31/2)	364.8 9	18 9	5766.8	(29/2,31/2)		
		1142.7 5	61 15	4988.7	(27/2)		
		1254.1 3	100 15	4877.2	27/2 ⁻		
6688.6	35/2 ⁻	942.4 7	100	5746.2	31/2 ⁻	E2	B(E2)(W.u.)=158 +16-14
6842.8	(31/2,33/2)	1076.0 1	100 8	5766.8	(29/2,31/2)		
		1096.7 2	79 9	5746.2	31/2 ⁻		
7683.9	39/2 ⁻	995.3 9	100	6688.6	35/2 ⁻	E2	B(E2)(W.u.)=116 +14-13
8738.5	43/2 ⁻	1054.6 1	100	7683.9	39/2 ⁻	E2	B(E2)(W.u.)=108 14
9860.3	47/2 ⁻	1121.8 2	100	8738.5	43/2 ⁻	E2	B(E2)(W.u.)>72
11081.6	(51/2 ⁻)	1221.3 3	100	9860.3	47/2 ⁻		
12448.6	(55/2 ⁻)	1367	100	11081.6	(51/2 ⁻)	Q	
13983.6	(59/2 ⁻)	1535	100	12448.6	(55/2 ⁻)	Q	
15742.6	(63/2 ⁻)	1759	100	13983.6	(59/2 ⁻)	Q	
17812.7?	(67/2 ⁻)	2070 ^c	100	15742.6	(63/2 ⁻)	Q	

[†] From ¹¹¹Sb ϵ decay and ¹¹¹Cd(³He,3n γ), (α ,n γ).

[‡] From $\alpha(\text{K})\text{exp}$ and $\gamma(\theta)$ in ¹¹¹Cd(³He,3n γ). For intraband transitions, mult are from DCO ratios (1995La11).

[#] Av of (³He,3n γ) values. $I_\gamma(199\gamma)/I_\gamma(339\gamma)=1.52$ 7 in (⁶Li,4n γ), and the 199 γ is marked by an impurity line in (α ,n γ).

[@] Existence of transition is uncertain.

[&] $I_\gamma(752\gamma)/I_\gamma(865\gamma)=0.49$ 8 for (α ,n γ) at 20 MeV. In (³He,3n γ), values are 0.66 6, 0.88 10, and 1.15 16 at E=28, 30, and 32 MeV, respectively.

^a From (³He,3n γ), (α ,n γ), (⁶Li,4n γ). Data are inconsistent. Only (⁶Li,4n γ) resolves the 1058 and 1062 γ 's, but $I_\gamma(866\gamma)/I_\gamma(1058+1062)$ values are 0.05 4, 0.08 3, 0.19 5, 0.228 24, 0.097 8, 0.099 20, and 0.20 4.

^b 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.

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

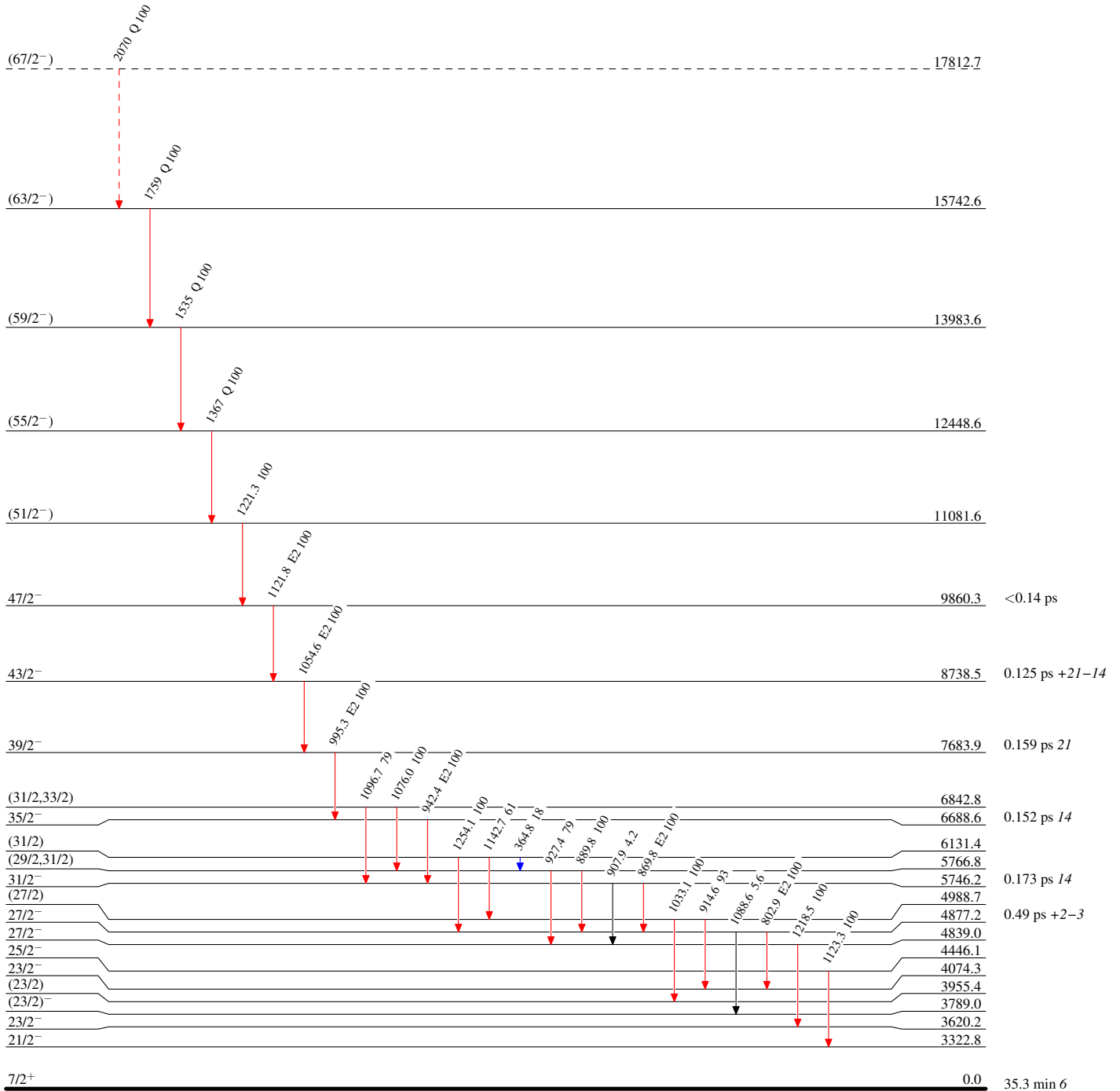
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Type not specified

- ▶ $I_\gamma < 2\% \times I_\gamma^{max}$
- ▶ $I_\gamma < 10\% \times I_\gamma^{max}$
- ▶ $I_\gamma > 10\% \times I_\gamma^{max}$
- - - -▶ γ Decay (Uncertain)



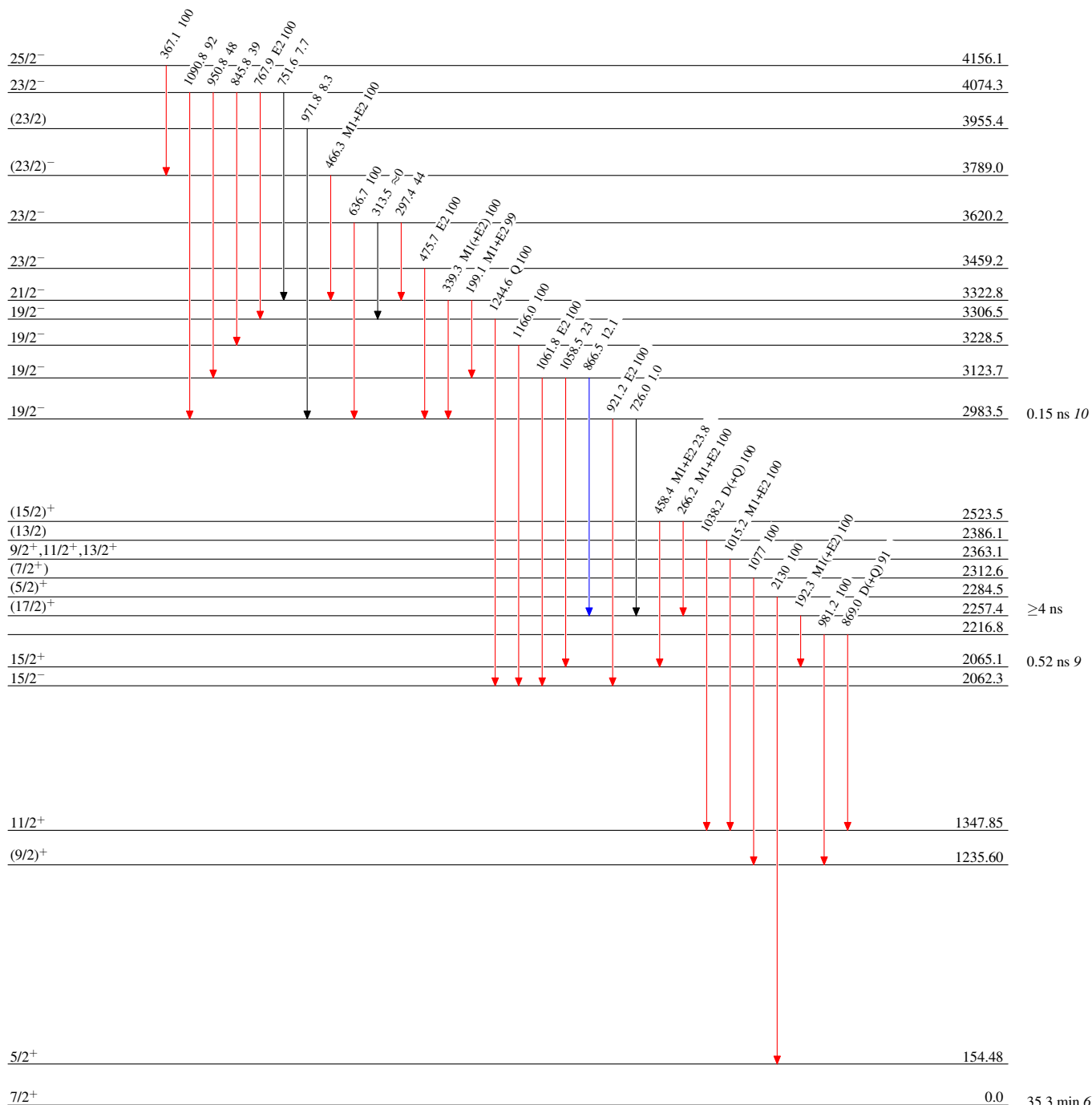
$^{111}_{50}\text{Sn}_{61}$

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Type not specified

Legend

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

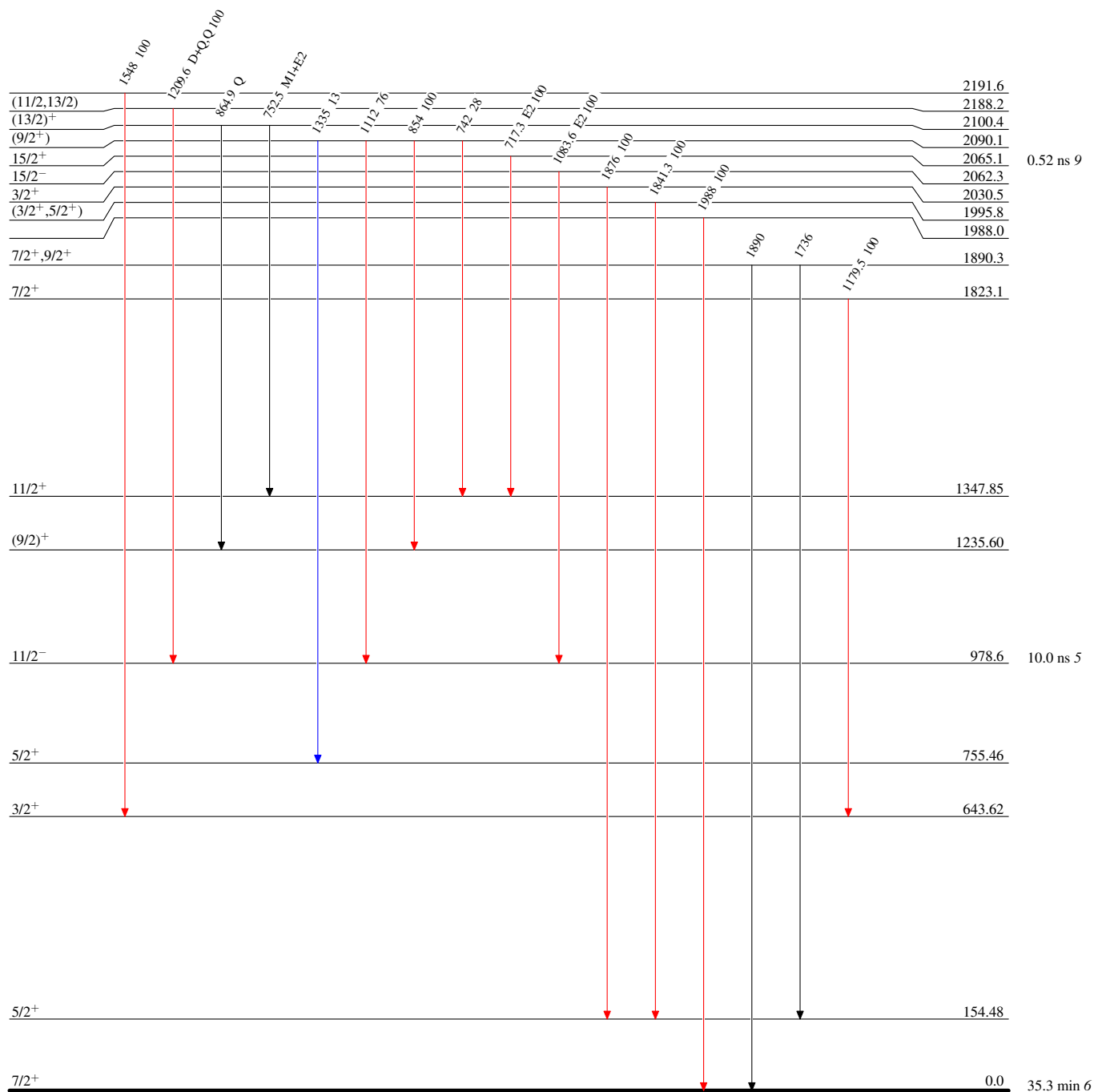


Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Type not specified

Legend

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

 $^{111}_{50}\text{Sn}_{61}$

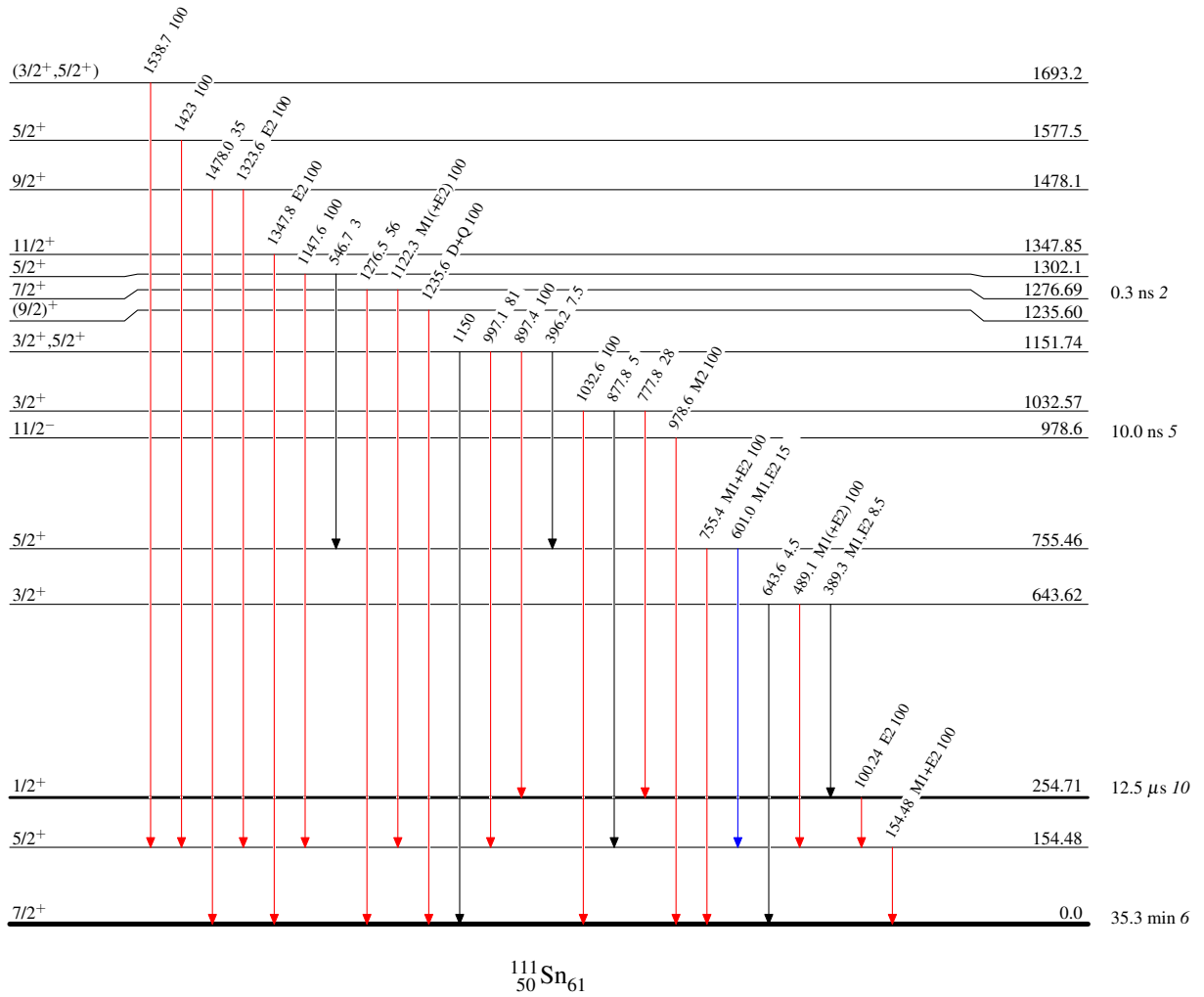
Adopted Levels, Gammas

Level Scheme (continued)

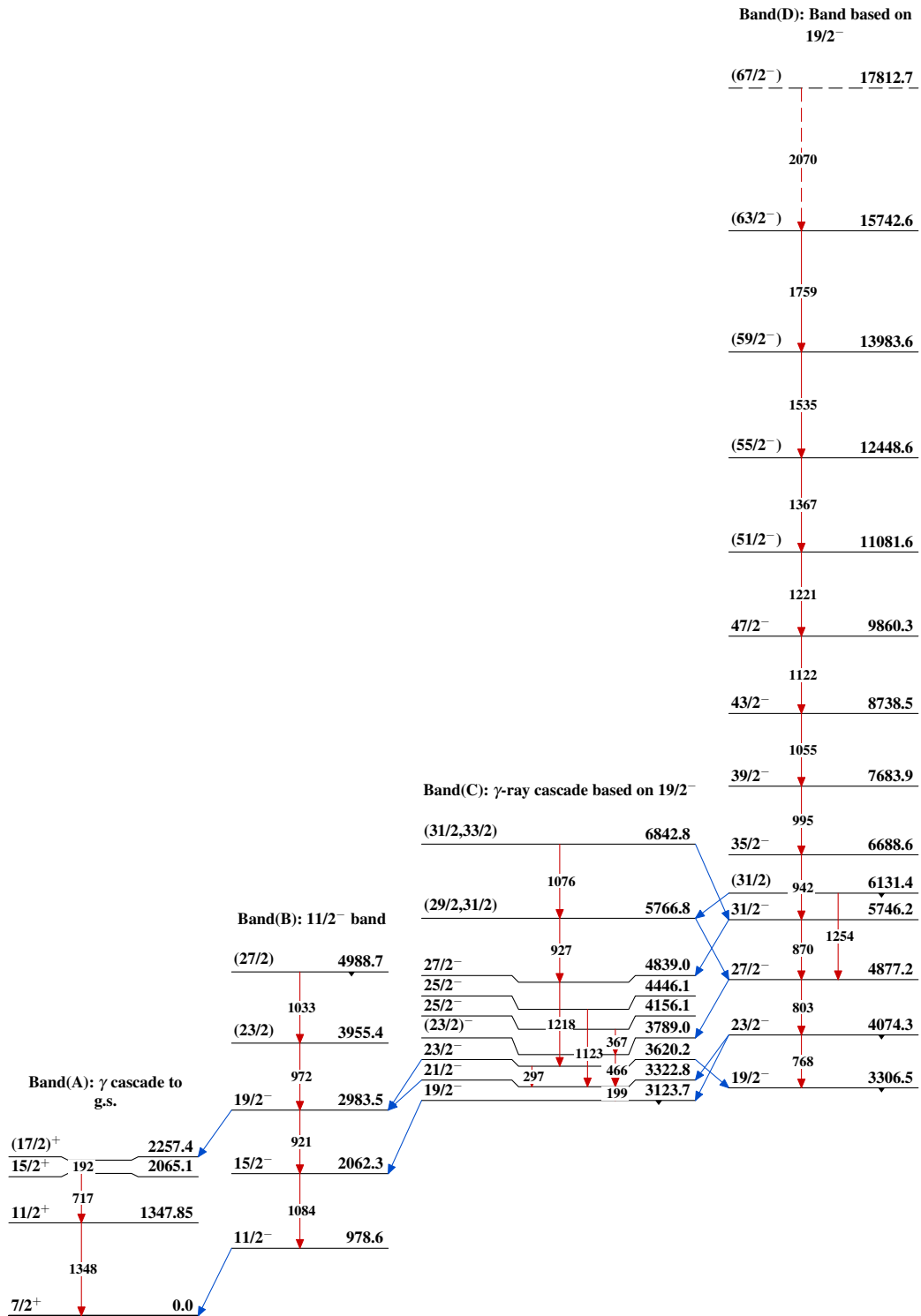
Intensities: Type not specified

Legend

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



$^{111}_{50}\text{Sn}_{61}$

Adopted Levels, Gammas $^{111}_{50}\text{Sn}_{61}$