

Adopted Levels, Gammas

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Jean Blachot	ENSDF	1-Mar-2009

$Q(\beta^-) = -6.25 \times 10^3$ 3; $S(n) = 1.102 \times 10^4$ 10; $S(p) = 2.46 \times 10^3$ 4; $Q(\alpha) = 1.56 \times 10^3$ 4 [2012Wa38](#)

Note: Current evaluation has used the following Q record $-6.25\text{E}+3$ 3 $1.101\text{e}+4$ 10 2450 40 1560 30 [2009AuZZ](#).

From β -strength function $\%(\beta^+) = 46$ 15 ([1972Br38](#)).

The level scheme with high J is from [1999Pa13](#). Three bands proposed by [1999Mo17](#) (15,16,17) but not given by [1999Pa13](#) were not adopted.

The following levels given by [1999Mo17](#): 2625.6, 2821.8, 2882.2, 3095.7, 3749.3, 3824.2, 3891.4, 4136.0, 4348.1, 5601.6, 5926.8, 6024.4, 6919.9, 7070.1 were not adopted. The Gammas associated to these levels are differently placed in [1999Pa13](#).

 ^{117}I LevelsCross Reference (XREF) Flags

A	^{117}Xe β^+ decay	D	^{114}Sn (^6Li , $3n\gamma$)
B	^{106}Pd (^{16}O , $p4n$)	E	^{90}Zr (^{31}P , $2n2p\gamma$)
C	^{106}Cd (^{14}N , $2p\gamma$)	F	^{103}Rh (^{18}O , $4n\gamma$)

E(level) [†]	J π [‡]	T _{1/2}	XREF	Comments
0.0 ^f	(5/2) ⁺	2.22 min 4	ABCDEF	$\% \epsilon + \% \beta^+ = 100$; $\% \beta^+ \approx 77$ $\mu = 3.1$ 2 (2001StZZ) μ : static nuclear orientation, (1986Gr06 , 1987Gr15 , 1987St20) compatible with the $\pi[402]$ 5/2 state with weak component of the $\pi[413]$ 5/2. T _{1/2} : from 1985Le10 . Others: 2.2 min 5 (1974Ha10), 2.4 min 1 (1969Ha03), 2.4 min 3 (1969Se05). Other: 1969La33 . J π : π from $\log ft = 4.8$ to (3/2) ⁺ , predominately d5/2 orbital (1999Pa13).
58.87 ^h 7	(7/2) ⁺		ABCDEF	J π : M1 γ to (5/2) ⁺ , M1 γ from (9/2) ⁺ , syst (1986Ma41).
116.71 8	(1/2) ⁺		A	J π : E2 γ to (5/2) ⁺ , M1 γ from (3/2) ⁺ .
160.56 7	(3/2) ⁺		A	J π : M1 γ to (1/2) ⁺ and to (5/2) ⁺ .
221.33 8	(3/2) ⁺		A	J π : M1 γ to (5/2) ⁺ , and syst (1986Ma41).
315.77 6	(3/2, 5/2) ⁺		A	J π : M1 γ to (3/2) ⁺ , E2 γ to (1/2) ⁺ .
353.59 ^a 11	(9/2) ⁺	12.1 ns 7	ABCDEF	J π : 9/2 ⁺ bandhead level from the 1g9/2 state (1985Pi02), M1 γ to $\pi=+$. T _{1/2} : from 1982Ga21 . Other: 17.5 ns (1993Wa21).
519.14 14	(7/2) ⁺		A	J π : from syst (1986Ma41).
567.42 22			A	
573.76 ^f 20	(9/2) ⁺		EF	
619.00 20	(9/2) ⁺		CDEF	J π : from syst (1985Pi02 , 1982Ga21).
654.2 ^a 3	(11/2) ⁺		CDEF	J π : M1 γ to (9/2) ⁺ .
660.46 15	(⁺)		A	J π : (M1) γ to (3/2) ⁺ .
661.09 14	(9/2) ⁺		A EF	J π : stretched E2 to (5/2) ⁺ . M1, E2 to (7/2) ⁺ .
677.6 ^j 4	(11/2) ⁻		EF	
695.10 17	(9/2) ⁺		EF	
715.92 ^h 21	(11/2) ⁺		EF	
971.7 ^a 3	(13/2) ⁺		EF	
1015.1 ^j 3	(15/2) ⁻		BCDEF	J π : stretched E2 to (11/2) ⁻ .
1049.87 23			A	
1084.25 23			A	
1130.0 4			A	
1174.30 ^l 18	(11/2) ⁻		EF	
1208.4 ^f 3	(13/2) ⁺		EF	
1317.0 ^a 3	(15/2) ⁺		CDEF	J π : M1 γ to (13/2) ⁺ .

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{117}I Levels (continued)

E(level) [†]	J ^π [‡]	XREF	Comments
1341.3@ 7	(13/2 ⁺)	EF	
1450.0 ^h 3	(15/2) ⁺	EF	
1485.2 ^j 3	(19/2) ⁻	EF	J ^π : stretched E2 to (15/2 ⁻).
1622.29 ^l 24	(15/2) ⁻	EF	
1684.6 ^a 4	(17/2) ⁺	CDEF	
1720.9@ 8	(15/2 ⁺)	EF	
1877.1 4		A	
1934.0 ^f 3	(17/2 ⁺)	EF	
2076.3 ^a 4	(19/2) ⁺	CDEF	
2088.1 ^j 4	(23/2) ⁻	BCDEF	J ^π : stretched E2 and syst (1985Pi02 , 1984Ke06 , 1982Ga21).
2106.5@ 5	(17/2 ⁺)	EF	
2107.4 ^l 3	(19/2) ⁻	EF	
2245.0 ^h 4	(19/2) ⁺	EF	
2263.3 ^b 6	(17/2) ⁺	EF	
2314.1& 4	(21/2) ⁺	EF	
2486.7 ^a 4	(21/2) ⁺	C EF	
2496.6 ^b 5	(19/2) ⁺	EF	
2521.4@ 8	(19/2 ⁺)	E	
2588.1& 7	(21/2) ⁻	EF	
2642.0 ^l 4	(23/2) ⁻	EF	
2695.1 ^c 7	(17/2 ⁺)	E	
2702.4 ^f 4	(21/2 ⁺)	EF	
2753.0 ^b 5	(21/2 ⁺)	EF	
2819.6 ^j 4	(27/2) ⁻	EF	
2827.6 ^c 5	(19/2 ⁺)	E	
2912.1& 8	(23/2) ⁻	EF	
2913.8 ^a 7	(23/2 ⁺)	EF	
2926.1@ 9	(21/2 ⁺)	EF	
2982.9 ^c 4	(21/2 ⁺)	EF	
3025.5 ^b 7	(23/2 ⁺)	E	
3060.6 ^h 4	(23/2 ⁺)	EF	
3184.2 ^c 4	(23/2 ⁺)	EF	
3274.2& 8	(25/2) ⁻	EF	
3324.6 ^a 8	(25/2 ⁺)	E	
3339.4 ^b 6	(25/2 ⁺)	EF	
3341.1@ 13	(23/2 ⁺)	E	
3355.1 ^l 5	(27/2) ⁻	E	
3375.7 4	(25/2 ⁺)	EF	
3424.8 ^c 4	(25/2 ⁺)	EF	
3517.5 6	(27/2 ⁺)	E	
3649.5 ^h 5	(27/2 ⁺)	EF	
3660.5 ^j 5	(31/2) ⁻	EF	
3666.4& 9	(27/2) ⁻	EF	
3682 ^b 6	(27/2 ⁺)	E	
3685.5 ^c 5	(27/2 ⁺)	E	
3711.2 ^a 8	(27/2 ⁺)	E	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{117}I Levels (continued)

E(level) [†]	J ^π [‡]	T _{1/2}	XREF	E(level) [†]	J ^π [‡]	XREF
3970.4 ^c 5	(29/2 ⁺)		EF	8091.0 ^{&} 14	(45/2 ⁻)	E
4044 ^b	(29/2 ⁺)		E	8100.1 ^a 14	(45/2 ⁺)	E
4054.7 ^l 5	(31/2 ⁻)		EF	8106.1 9	(49/2)	E
4082.3 ^{&} 9	(29/2 ⁻)		EF	8227.8 ^e 12	(51/2 ⁺)	E
4098.2 ^a 9	(29/2 ⁺)		E	8324.9 ^d 13	(51/2 ⁺)	E
4286.4 ^c 5	(31/2 ⁺)		E	8344.6 12	(51/2)	E
4331.6 ^h 6	(31/2 ⁺)		EF	8362.9 ^k 8	(51/2 ⁻)	EF
4509.9 ^a 11	(31/2 ⁺)		E	8456.0 ^g 18	(47/2 ⁺)	E
4520.1 ^{&} 10	(31/2 ⁻)		EF	8695.7 ^{&} 15	(47/2 ⁻)	E
4601.7 ^j 6	(35/2 ⁻)		BC EF	8719.4 ^a 15	(47/2 ⁺)	E
4683.4 ^c 6	(33/2 ⁺)		EF	8755.2 ^d 13	(53/2 ⁺)	E
4814.2 ^l 6	(35/2 ⁻)		EF	8805.8 ^j 7	(51/2 ⁻)	EF
4936.8 ^a 11	(33/2 ⁺)		E	8860.3 10	(51/2 ⁻)	E
4978.2 ^{&} 10	(33/2 ⁻)		EF	9082.9 ⁱ 10	(51/2 ⁻)	E
5063.8 7	(35/2 ⁺)	50 [#] ns	EF	9175.3 ^h 9	(51/2 ⁺)	E
5107.3 ^h 7	(35/2 ⁺)		EF	9185.5 ^e 13	(55/2 ⁺)	E
5397.5 ^a 11	(35/2 ⁺)		E	9263.1 14		E
5452.9 ^{&} 11	(35/2 ⁻)		E	9278.2 ^{&} 15	(49/2 ⁻)	E
5493.4 ^c 12	(37/2 ⁺)		EF	9373.1 ^a 18	(49/2 ⁺)	E
5504.7 ^d 9	(39/2 ⁺)		E	9384.2 ^k 10		E
5626.7 ^j 6	(39/2 ⁻)		EF	9444.0 ^g 15	(51/2 ⁺)	E
5667.3 ^k 6	(39/2 ⁻)		EF	9935.8 ^{&} 16	(51/2 ⁻)	E
5769.3 ^l 9	(39/2 ⁻)		E	10038.8 ^j 8	(55/2 ⁻)	EF
5877.9 ^a 12	(37/2 ⁺)		E	10133.6 14	(57/2 ⁺)	E
5939.8 ^{&} 11	(37/2 ⁻)		E	10270.2 ^e 14	(59/2 ⁺)	E
5986.8 ^h 7	(39/2 ⁺)		EF	10300.0 ⁱ 12	(55/2 ⁻)	E
6274.1 ^k 6	(43/2 ⁻)		EF	10404.3 ^h 10	(55/2 ⁺)	E
6293.6 ^d 11	(43/2 ⁺)		E	10439.1 17		E
6393.4 ^a 12	(39/2 ⁺)		E	10531.0 ^g 10	(55/2 ⁺)	E
6451.8 ^{&} 12	(39/2 ⁻)		E	10753.1 ^a 20	(53/2 ⁺)	E
6635.4 ^j 6	(43/2 ⁻)		EF	11185.6 ^e 16	(61/2 ⁺)	EF
6751.8 ⁱ 7	(43/2 ⁻)		E	11194.8 9	(59/2 ⁻)	E
6934.0 ^a 12	(41/2 ⁺)		E	11245.4 ^j 9	(59/2 ⁻)	EF
6964.8 ^h 8	(43/2 ⁺)		EF	11597.3 ⁱ 13	(59/2 ⁻)	E
6971.1 ^{&} 13	(41/2 ⁻)		E	11706.1 ^g 11	(59/2 ⁺)	E
7182.2 ^e 12	(47/2 ⁺)		E	12326.5 ^j 10	(63/2 ⁻)	E
7243.3 12			E	12971.2 ^g 12	(63/2 ⁺)	E
7332.0 ^d 12	(47/2 ⁺)		E	13522.4 ^j 12	(67/2 ⁻)	E
7348.6 ^k 7	(47/2 ⁻)		EF	14328.0 ^g 14	(67/2 ⁺)	E
7506.2 ^a 14	(43/2 ⁺)		E	15823.4 ^g 15	(71/2 ⁺)	E
7531.4 ^{&} 14	(43/2 ⁻)		E	17459.4 ^g 18	(75/2 ⁺)	E
7680.8 ^j 7	(47/2 ⁻)		EF	19224.5 ^g 21	(79/2 ⁺)	E
7891.1 ⁱ 8	(47/2 ⁻)		E	21127.5 ^g 23	(83/2 ⁺)	E
8029.3 ^h 8	(47/2 ⁺)		E			

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{117}I Levels (continued)

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

[‡] $J\pi$'s without comments are derived from band consideration and gammas multipolarities.

From [1993Wa21](#).

@ Band(A): Band 1, based on 1340, $(13/2^+)$.

& Band(B): Band 2, based on $(19/2^-)$.

^a Band(C): Band 3, based on 353, $(9/2^+)$, configuration= $\pi g9/2$, $[404]9/2^+$.

^b Band(D): Band 4, based on 2263, $(17/2^+)$.

^c Band(E): Band 5, based on 2695, $(17/2^+)$.

^d Band(F): Band 6, based on 5107, $(35/2^+)$.

^e Band(G): Band 7, based on 7182, $(47/2^+)$.

^f Band(H): Band 8, based on $5/2^+$ ground-state band, configuration= $\pi d5/2$, $[420]1/2^+$, $\alpha=+1/2$.

^g Band(I): Band 9, based on 8456, $(47/2^+)$.

^h Band(J): Band 10, based on 58, $(7/2)^+$, configuration= $\pi g7/2$, $[422]3/2^+$, $\alpha=+1/2$.

ⁱ Band(K): Band 11, based on 6751, $(43/2^-)$, configuration= $\pi h11/2$, $[550]1/2^-$.

^j Band(L): Band 12, based on 677, $(11/2)^-$, configuration= $\pi h11/2$, $[550]1/2^-$.

^k Band(M): Band 13, based on 5677, $(39/2^-)$.

^l Band(N): Band 14, based on 1174, $(11/2)^-$.

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$									
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	δ	$\alpha^\#$	Comments
58.87	(7/2) ⁺	58.8 1	100	0.0	(5/2) ⁺	M1,E2		8 5	$\alpha(\text{K})=4.3$ 13; $\alpha(\text{L})=2.7$ 23; $\alpha(\text{M})=0.6$ 5; $\alpha(\text{N})=0.11$ 10; $\alpha(\text{O})=0.010$ 8; $\alpha(\text{N}+..)=0.12$ 11
116.71	(1/2) ⁺	116.7 1	100	0.0	(5/2) ⁺	E2		1.016	$\alpha(\text{K})=0.730$ 11; $\alpha(\text{L})=0.228$ 4; $\alpha(\text{M})=0.0479$ 7; $\alpha(\text{N})=0.00928$ 14; $\alpha(\text{O})=0.000884$ 13 $\alpha(\text{N}+..)=0.01016$ 15
160.56	(3/2) ⁺	43.7 2	7.8 9	116.71	(1/2) ⁺	M1		8.19 16	$\alpha(\text{K})=7.03$ 14; $\alpha(\text{L})=0.933$ 19; $\alpha(\text{M})=0.188$ 4; $\alpha(\text{N})=0.0380$ 8; $\alpha(\text{O})=0.00443$ 9 $\alpha(\text{N}+..)=0.0424$ 9
		101.6 2	5.3 19	58.87	(7/2) ⁺	(E2)		1.66 3	$\alpha(\text{K})=1.137$ 18; $\alpha(\text{L})=0.415$ 7; $\alpha(\text{M})=0.0877$ 15; $\alpha(\text{N})=0.0169$ 3; $\alpha(\text{O})=0.00158$ 3 $\alpha(\text{N}+..)=0.0185$ 3
		160.6 1	100 10	0.0	(5/2) ⁺	M1		0.199	$\alpha(\text{K})=0.1710$ 25; $\alpha(\text{L})=0.0222$ 4; $\alpha(\text{M})=0.00447$ 7; $\alpha(\text{N})=0.000904$ 13; $\alpha(\text{O})=0.0001059$ 15 $\alpha(\text{N}+..)=0.001010$ 15
221.33	(3/2) ⁺	104.6 2	4.4 6	116.71	(1/2) ⁺	M1		0.658	$\alpha(\text{K})=0.566$ 9; $\alpha(\text{L})=0.0740$ 12; $\alpha(\text{M})=0.01492$ 23; $\alpha(\text{N})=0.00302$ 5; $\alpha(\text{O})=0.000353$ 6 $\alpha(\text{N}+..)=0.00337$ 5
		221.3 1	100 8	0.0	(5/2) ⁺	M1		0.0833	$\alpha(\text{K})=0.0718$ 10; $\alpha(\text{L})=0.00922$ 13; $\alpha(\text{M})=0.00186$ 3; $\alpha(\text{N})=0.000376$ 6; $\alpha(\text{O})=4.41 \times 10^{-5}$ 7 $\alpha(\text{N}+..)=0.000420$ 6
315.77	(3/2,5/2) ⁺	94.4 1	85 6	221.33	(3/2) ⁺	M1		0.881	$\alpha(\text{K})=0.757$ 11; $\alpha(\text{L})=0.0992$ 15; $\alpha(\text{M})=0.0200$ 3; $\alpha(\text{N})=0.00405$ 6; $\alpha(\text{O})=0.000473$ 7 $\alpha(\text{N}+..)=0.00452$ 7
		155.2 1	79 9	160.56	(3/2) ⁺	M1		0.218	$\alpha(\text{K})=0.188$ 3; $\alpha(\text{L})=0.0244$ 4; $\alpha(\text{M})=0.00491$ 7; $\alpha(\text{N})=0.000994$ 14; $\alpha(\text{O})=0.0001165$ 17 $\alpha(\text{N}+..)=0.001111$ 16
		199.1 2	24 3	116.71	(1/2) ⁺	(E2)		0.1577	$\alpha(\text{K})=0.1258$ 18; $\alpha(\text{L})=0.0255$ 4; $\alpha(\text{M})=0.00528$ 8; $\alpha(\text{N})=0.001036$ 15; $\alpha(\text{O})=0.0001060$ 16 $\alpha(\text{N}+..)=0.001142$ 17
		256.9 1	76 9	58.87	(7/2) ⁺	(M1),(E2)		0.061 6	$\alpha(\text{K})=0.051$ 4; $\alpha(\text{L})=0.0079$ 18; $\alpha(\text{M})=0.0016$ 4; $\alpha(\text{N})=0.00032$ 8; $\alpha(\text{O})=3.6 \times 10^{-5}$ 6 $\alpha(\text{N}+..)=0.00036$ 8
		315.8 1	100 9	0.0	(5/2) ⁺	(M1),(E2)		0.0334 9	$\alpha(\text{K})=0.0283$ 4; $\alpha(\text{L})=0.0041$ 6; $\alpha(\text{M})=0.00083$ 12; $\alpha(\text{N})=0.000167$ 21; $\alpha(\text{O})=1.87 \times 10^{-5}$ 16 $\alpha(\text{N}+..)=0.000185$ 23
353.59	(9/2) ⁺	294.7 1	100 8	58.87	(7/2) ⁺	M1+(E2)	0.05 5	0.0391	$\alpha(\text{K})=0.0337$ 5; $\alpha(\text{L})=0.00430$ 7; $\alpha(\text{M})=0.000865$ 13; $\alpha(\text{N})=0.000175$ 3; $\alpha(\text{O})=2.06 \times 10^{-5}$ 3 $\alpha(\text{N}+..)=0.000196$ 3
		353.6 2	14.7 15	0.0	(5/2) ⁺	[E2]		0.0239	B(E2)(W.u.)=0.001 +3-1; B(M1)(W.u.)=6.0×10 ⁻⁵ 8 $\alpha(\text{K})=0.0200$ 3; $\alpha(\text{L})=0.00313$ 5; $\alpha(\text{M})=0.000639$ 9; $\alpha(\text{N})=0.0001271$ 18; $\alpha(\text{O})=1.386 \times 10^{-5}$ 20

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{Tl})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	δ	$\alpha^\#$	Comments
									$\alpha(\text{N}+..)=0.0001409$ 20 $B(\text{E}2)(\text{W.u.})=0.031$ 5
519.14	(7/2 ⁺)	203.4 2	9.2 10	315.77	(3/2,5/2) ⁺				
		519.1 2	100 12	0.0	(5/2) ⁺				
567.42		450.7 2	100	116.71	(1/2) ⁺				
573.76	(9/2 ⁺)	515.0 2	100	58.87	(7/2) ⁺	E2		0.00788 11	$\alpha(\text{K})=0.00670$ 10; $\alpha(\text{L})=0.000948$ 14; $\alpha(\text{M})=0.000192$ 3; $\alpha(\text{N})=3.85\times 10^{-5}$ 6; $\alpha(\text{O})=4.33\times 10^{-6}$ 6
		573.7 10	28.1	0.0	(5/2) ⁺	E2		0.00588 9	$\alpha(\text{N}+..)=4.28\times 10^{-5}$ 6 $\alpha(\text{K})=0.00501$ 8; $\alpha(\text{L})=0.000693$ 11; $\alpha(\text{M})=0.0001401$ 21; $\alpha(\text{N})=2.81\times 10^{-5}$ 5; $\alpha(\text{O})=3.18\times 10^{-6}$ 5
619.00	(9/2 ⁺)	619.0 2	100	0.0	(5/2) ⁺	E2		0.00481 7	$\alpha(\text{N}+..)=3.13\times 10^{-5}$ 5 $\alpha(\text{K})=0.00411$ 6; $\alpha(\text{L})=0.000560$ 8; $\alpha(\text{M})=0.0001130$ 16; $\alpha(\text{N})=2.27\times 10^{-5}$ 4; $\alpha(\text{O})=2.58\times 10^{-6}$ 4
654.2	(11/2) ⁺	300.6 3	100	353.59	(9/2) ⁺	M1+E2	0.14 5	0.0372	$\alpha(\text{N}+..)=2.53\times 10^{-5}$ 4 $\alpha(\text{K})=0.0321$ 5; $\alpha(\text{L})=0.00411$ 7; $\alpha(\text{M})=0.000826$ 13; $\alpha(\text{N})=0.000167$ 3; $\alpha(\text{O})=1.96\times 10^{-5}$ 3
		595.2 10	25	58.87	(7/2) ⁺	E2		0.00533 8	$\alpha(\text{N}+..)=0.000187$ 3 $\alpha(\text{K})=0.00455$ 7; $\alpha(\text{L})=0.000624$ 10; $\alpha(\text{M})=0.0001262$ 19; $\alpha(\text{N})=2.53\times 10^{-5}$ 4; $\alpha(\text{O})=2.88\times 10^{-6}$ 5
660.46	(⁺)	439.2 2	100 9	221.33	(3/2) ⁺	(M1,E2)		0.0133 9	$\alpha(\text{N}+..)=2.82\times 10^{-5}$ 5 $\alpha(\text{K})=0.0114$ 9; $\alpha(\text{L})=0.001539$ 22; $\alpha(\text{M})=0.000311$ 5; $\alpha(\text{N})=6.25\times 10^{-5}$ 9; $\alpha(\text{O})=7.16\times 10^{-6}$ 23
		543.8 2	17.4 22	116.71	(1/2) ⁺				$\alpha(\text{N}+..)=6.97\times 10^{-5}$ 10
661.09	(9/2 ⁺)	602.0 2	42.5	58.87	(7/2) ⁺	M1,E2		0.0058 7	$\alpha(\text{K})=0.0050$ 7; $\alpha(\text{L})=0.00065$ 5; $\alpha(\text{M})=0.000131$ 10; $\alpha(\text{N})=2.65\times 10^{-5}$ 21; $\alpha(\text{O})=3.1\times 10^{-6}$ 3
		661.0 2	100	0.0	(5/2) ⁺	E2		0.00406 6	$\alpha(\text{N}+..)=2.96\times 10^{-5}$ 24 $\alpha(\text{K})=0.00348$ 5; $\alpha(\text{L})=0.000468$ 7; $\alpha(\text{M})=9.44\times 10^{-5}$ 14; $\alpha(\text{N})=1.90\times 10^{-5}$ 3; $\alpha(\text{O})=2.17\times 10^{-6}$ 3
677.6	(11/2) ⁻	17 1	100	661.09	(9/2 ⁺)	E1		4.5 9	$\alpha(\text{N}+..)=2.12\times 10^{-5}$ 3 $\alpha(\text{L})=3.6$ 7; $\alpha(\text{M})=0.73$ 14; $\alpha(\text{N})=0.14$ 3; $\alpha(\text{O})=0.0128$ 22; $\alpha(\text{N}+..)=0.15$ 3
		104.0 10	100	573.76	(9/2 ⁺)	E1		0.183 6	$\alpha(\text{K})=0.157$ 5; $\alpha(\text{L})=0.0205$ 7; $\alpha(\text{M})=0.00411$ 13; $\alpha(\text{N})=0.00082$ 3; $\alpha(\text{O})=9.1\times 10^{-5}$ 3
695.10	(9/2 ⁺)	695.4 2	100	0.0	(5/2) ⁺	E2		0.00358 5	$\alpha(\text{N}+..)=0.00091$ 3 $\alpha(\text{K})=0.00307$ 5; $\alpha(\text{L})=0.000409$ 6; $\alpha(\text{M})=8.25\times 10^{-5}$ 12; $\alpha(\text{N})=1.659\times 10^{-5}$ 24; $\alpha(\text{O})=1.90\times 10^{-6}$ 3
715.92	(11/2 ⁺)	657.0 2	100	58.87	(7/2) ⁺	E2		0.00413 6	$\alpha(\text{N}+..)=1.85\times 10^{-5}$ 3 $\alpha(\text{K})=0.00353$ 5; $\alpha(\text{L})=0.000476$ 7; $\alpha(\text{M})=9.60\times 10^{-5}$ 14;

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{Tl})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{$\dagger$}</u>	<u>I_{γ}^{$\dagger$}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.^{$\ddagger$}</u>	<u>α[#]</u>	<u>Comments</u>
971.7	(13/2 ⁺)	317.4 2	100	654.2	(11/2) ⁺	M1,E2	0.0329 8	$\alpha(\text{N})=1.93\times 10^{-5}$ 3; $\alpha(\text{O})=2.20\times 10^{-6}$ 3 $\alpha(\text{N}+..)=2.15\times 10^{-5}$ 3 $\alpha(\text{K})=0.0279$ 4; $\alpha(\text{L})=0.0040$ 5; $\alpha(\text{M})=0.00082$ 11; $\alpha(\text{N})=0.000164$ 21; $\alpha(\text{O})=1.84\times 10^{-5}$ 15 $\alpha(\text{N}+..)=0.000183$ 22
		617.5 10	25.9	353.59	(9/2) ⁺	E2	0.00484 7	$\alpha(\text{K})=0.00414$ 6; $\alpha(\text{L})=0.000564$ 9; $\alpha(\text{M})=0.0001138$ 17; $\alpha(\text{N})=2.29\times 10^{-5}$ 4; $\alpha(\text{O})=2.60\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.55\times 10^{-5}$ 4
1015.1	(15/2 ⁻)	337.5 3	100	677.6	(11/2) ⁻	E2	0.0276	$\alpha(\text{K})=0.0230$ 4; $\alpha(\text{L})=0.00367$ 6; $\alpha(\text{M})=0.000750$ 11; $\alpha(\text{N})=0.0001489$ 22 $\alpha(\text{O})=1.617\times 10^{-5}$ 24; $\alpha(\text{N}+..)=0.0001651$ 24
1049.87		389.7 3	40 12	660.46	(⁺)			
		733.8 3	100 20	315.77	(3/2,5/2) ⁺			
1084.25		565.1 2	41 7	519.14	(7/2 ⁺)			
		1084.3 5	100 17	0.0	(5/2) ⁺			
1130.0		776.4 3	100 13	353.59	(9/2) ⁺			
1174.30	(11/2) ⁻	479.5 2	100	695.10	(9/2) ⁺	E1	0.00309 5	$\alpha(\text{K})=0.00268$ 4; $\alpha(\text{L})=0.000329$ 5; $\alpha(\text{M})=6.57\times 10^{-5}$ 10; $\alpha(\text{N})=1.326\times 10^{-5}$ 19 $\alpha(\text{O})=1.543\times 10^{-6}$ 22; $\alpha(\text{N}+..)=1.480\times 10^{-5}$ 21
		497.0 10	66.6	677.6	(11/2) ⁻	M1,E2	0.0096 9	$\alpha(\text{K})=0.0082$ 8; $\alpha(\text{L})=0.00109$ 4; $\alpha(\text{M})=0.000220$ 7; $\alpha(\text{N})=4.43\times 10^{-5}$ 17; $\alpha(\text{O})=5.1\times 10^{-6}$ 3 $\alpha(\text{N}+..)=4.94\times 10^{-5}$ 20
		512.9 2	73.3	661.09	(9/2) ⁺	E1	0.00264 4	$\alpha(\text{K})=0.00229$ 4; $\alpha(\text{L})=0.000280$ 4; $\alpha(\text{M})=5.60\times 10^{-5}$ 8; $\alpha(\text{N})=1.131\times 10^{-5}$ 16; $\alpha(\text{O})=1.318\times 10^{-6}$ 19 $\alpha(\text{N}+..)=1.262\times 10^{-5}$ 18
1208.4	(13/2 ⁺)	634.7 2	100	573.76	(9/2) ⁺	E2	0.00451 7	$\alpha(\text{K})=0.00386$ 6; $\alpha(\text{L})=0.000523$ 8; $\alpha(\text{M})=0.0001055$ 15; $\alpha(\text{N})=2.12\times 10^{-5}$ 3; $\alpha(\text{O})=2.42\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.36\times 10^{-5}$ 4
1317.0	(15/2 ⁺)	345.2 2	100	971.7	(13/2 ⁺)	M1,E2	0.0259	$\alpha(\text{K})=0.0220$ 6; $\alpha(\text{L})=0.0031$ 3; $\alpha(\text{M})=0.00063$ 7; $\alpha(\text{N})=0.000127$ 12; $\alpha(\text{O})=1.43\times 10^{-5}$ 8 $\alpha(\text{N}+..)=0.000141$ 12
		663.0 2	27.2	654.2	(11/2) ⁺	E2	0.00403 6	$\alpha(\text{K})=0.00345$ 5; $\alpha(\text{L})=0.000464$ 7; $\alpha(\text{M})=9.37\times 10^{-5}$ 14; $\alpha(\text{N})=1.88\times 10^{-5}$ 3; $\alpha(\text{O})=2.15\times 10^{-6}$ 3 $\alpha(\text{N}+..)=2.10\times 10^{-5}$ 3
1341.3	(13/2 ⁺)	687.9 10	100	654.2	(11/2) ⁺	(M1)	0.00473 7	$\alpha(\text{K})=0.00410$ 6; $\alpha(\text{L})=0.000508$ 8; $\alpha(\text{M})=0.0001017$ 15; $\alpha(\text{N})=2.06\times 10^{-5}$ 3; $\alpha(\text{O})=2.44\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.31\times 10^{-5}$ 4
		986.5 10	100	353.59	(9/2) ⁺	(E2)	0.001578 23	$\alpha(\text{K})=0.001363$ 20; $\alpha(\text{L})=0.0001731$ 25; $\alpha(\text{M})=3.47\times 10^{-5}$ 5 $\alpha(\text{N})=7.01\times 10^{-6}$ 10; $\alpha(\text{O})=8.15\times 10^{-7}$ 12; $\alpha(\text{N}+..)=7.83\times 10^{-6}$
1450.0	(15/2) ⁺	734.0 2	100	715.92	(11/2 ⁺)	E2	0.00313 5	$\alpha(\text{K})=0.00269$ 4; $\alpha(\text{L})=0.000355$ 5; $\alpha(\text{M})=7.16\times 10^{-5}$ 10;

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
1485.2	(19/2) ⁻	470.1 2	100	1015.1	(15/2) ⁻	E2	0.01020	$\alpha(\text{N})=1.441\times 10^{-5}$ 21 $\alpha(\text{O})=1.655\times 10^{-6}$ 24; $\alpha(\text{N}+..)=1.606\times 10^{-5}$ 23 $\alpha(\text{K})=0.00864$ 13; $\alpha(\text{L})=0.001249$ 18; $\alpha(\text{M})=0.000253$ 4; $\alpha(\text{N})=5.07\times 10^{-5}$ 8; $\alpha(\text{O})=5.66\times 10^{-6}$ 8 $\alpha(\text{N}+..)=5.63\times 10^{-5}$ 8
1622.29	(15/2) ⁻	448.0 2	95.2	1174.30	(11/2) ⁻	E2	0.01171	$\alpha(\text{K})=0.00991$ 14; $\alpha(\text{L})=0.001450$ 21; $\alpha(\text{M})=0.000294$ 5; $\alpha(\text{N})=5.88\times 10^{-5}$ 9; $\alpha(\text{O})=6.55\times 10^{-6}$ 10 $\alpha(\text{N}+..)=6.54\times 10^{-5}$ 10
		607.1 2	100	1015.1	(15/2) ⁻	M1,E2	0.0057 7	$\alpha(\text{K})=0.0049$ 6; $\alpha(\text{L})=0.00064$ 5; $\alpha(\text{M})=0.000129$ 10; $\alpha(\text{N})=2.59\times 10^{-5}$ 21; $\alpha(\text{O})=3.0\times 10^{-6}$ 3 $\alpha(\text{N}+..)=2.90\times 10^{-5}$ 23
1684.6	(17/2) ⁺	367.7 2	100	1317.0	(15/2) ⁺	M1,E2	0.0216 6	$\alpha(\text{K})=0.0184$ 8; $\alpha(\text{L})=0.00258$ 17; $\alpha(\text{M})=0.00052$ 4; $\alpha(\text{N})=0.000105$ 7; $\alpha(\text{O})=1.19\times 10^{-5}$ 4 $\alpha(\text{N}+..)=0.000117$ 7
		712.9 2	47.1	971.7	(13/2) ⁺	E2	0.00336 5	$\alpha(\text{K})=0.00289$ 4; $\alpha(\text{L})=0.000383$ 6; $\alpha(\text{M})=7.72\times 10^{-5}$ 11; $\alpha(\text{N})=1.554\times 10^{-5}$ 22 $\alpha(\text{O})=1.782\times 10^{-6}$ 25; $\alpha(\text{N}+..)=1.732\times 10^{-5}$ 25
1720.9	(15/2) ⁺	379.0 10	100	1341.3	(13/2) ⁺	(M1,E2)	0.0199 7	$\alpha(\text{K})=0.0169$ 8; $\alpha(\text{L})=0.00236$ 13; $\alpha(\text{M})=0.00048$ 3; $\alpha(\text{N})=9.6\times 10^{-5}$ 6; $\alpha(\text{O})=1.088\times 10^{-5}$ 25 $\alpha(\text{N}+..)=0.000107$ 6
1877.1		1523.6 5	100 10	353.59	(9/2) ⁺			
		1561.2 5	22 3	315.77	(3/2,5/2) ⁺			
1934.0	(17/2) ⁺	725.7 2	100	1208.4	(13/2) ⁺	E2	0.00322 5	$\alpha(\text{K})=0.00276$ 4; $\alpha(\text{L})=0.000366$ 6; $\alpha(\text{M})=7.37\times 10^{-5}$ 11; $\alpha(\text{N})=1.484\times 10^{-5}$ 21 $\alpha(\text{O})=1.703\times 10^{-6}$ 24; $\alpha(\text{N}+..)=1.654\times 10^{-5}$ 24
2076.3	(19/2) ⁺	391.9 2	100	1684.6	(17/2) ⁺	M1,E2	0.0181 8	$\alpha(\text{K})=0.0154$ 9; $\alpha(\text{L})=0.00214$ 10; $\alpha(\text{M})=0.000432$ 22; $\alpha(\text{N})=8.7\times 10^{-5}$ 4; $\alpha(\text{O})=9.88\times 10^{-6}$ 15 $\alpha(\text{N}+..)=9.7\times 10^{-5}$ 4
		759.2 2	47.6	1317.0	(15/2) ⁺	E2	0.00288 4	$\alpha(\text{K})=0.00248$ 4; $\alpha(\text{L})=0.000326$ 5; $\alpha(\text{M})=6.56\times 10^{-5}$ 10; $\alpha(\text{N})=1.322\times 10^{-5}$ 19 $\alpha(\text{O})=1.520\times 10^{-6}$ 22; $\alpha(\text{N}+..)=1.474\times 10^{-5}$ 21
2088.1	(23/2) ⁻	603.0 2	100	1485.2	(19/2) ⁻	E2	0.00515 8	$\alpha(\text{K})=0.00440$ 7; $\alpha(\text{L})=0.000602$ 9; $\alpha(\text{M})=0.0001216$ 17; $\alpha(\text{N})=2.44\times 10^{-5}$ 4; $\alpha(\text{O})=2.77\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.72\times 10^{-5}$ 4
2106.5	(17/2) ⁺	385.6 10	100	1720.9	(15/2) ⁺	(M1,E2)	0.0189 8	$\alpha(\text{K})=0.0162$ 9; $\alpha(\text{L})=0.00224$ 11; $\alpha(\text{M})=0.00045$ 3; $\alpha(\text{N})=9.1\times 10^{-5}$ 5; $\alpha(\text{O})=1.035\times 10^{-5}$ 20 $\alpha(\text{N}+..)=0.000101$ 5
		764 1	100	1341.3	(13/2) ⁺			
		789 1	100	1317.0	(15/2) ⁺			

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
2107.4	(19/2) ⁻	485.0 2	100	1622.29	(15/2) ⁻	E2	0.00933 14	$\alpha(\text{K})=0.00791$ 12; $\alpha(\text{L})=0.001135$ 16; $\alpha(\text{M})=0.000230$ 4; $\alpha(\text{N})=4.61\times 10^{-5}$ 7; $\alpha(\text{O})=5.16\times 10^{-6}$ 8 $\alpha(\text{N}+..)=5.12\times 10^{-5}$ 8
		1092.4 2	28	1015.1	(15/2) ⁻	E2	0.001265 18	$\alpha(\text{K})=0.001094$ 16; $\alpha(\text{L})=0.0001375$ 20; $\alpha(\text{M})=2.76\times 10^{-5}$ 4 $\alpha(\text{N})=5.57\times 10^{-6}$ 8; $\alpha(\text{O})=6.50\times 10^{-7}$ 10; $\alpha(\text{N}+..)=6.22\times 10^{-6}$
2245.0	(19/2) ⁺	795.0 2	100	1450.0	(15/2) ⁺	E2	0.00258 4	$\alpha(\text{K})=0.00222$ 4; $\alpha(\text{L})=0.000290$ 4; $\alpha(\text{M})=5.84\times 10^{-5}$ 9; $\alpha(\text{N})=1.177\times 10^{-5}$ 17; $\alpha(\text{O})=1.356\times 10^{-6}$ 19 $\alpha(\text{N}+..)=1.312\times 10^{-5}$ 19
2263.3	(17/2) ⁺	946.0 6	100	1317.0	(15/2) ⁺	M1,E2	0.0020 3	$\alpha(\text{K})=0.00172$ 23; $\alpha(\text{L})=0.000215$ 25; $\alpha(\text{M})=4.3\times 10^{-5}$ 5; $\alpha(\text{N})=8.7\times 10^{-6}$ 10; $\alpha(\text{O})=1.02\times 10^{-6}$ 13 $\alpha(\text{N}+..)=9.7\times 10^{-6}$ 12
2314.1	(21/2) ⁺	629.5 2	100	1684.6	(17/2) ⁺	E2	0.00460 7	$\alpha(\text{K})=0.00394$ 6; $\alpha(\text{L})=0.000535$ 8; $\alpha(\text{M})=0.0001079$ 16; $\alpha(\text{N})=2.17\times 10^{-5}$ 3; $\alpha(\text{O})=2.47\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.42\times 10^{-5}$ 4
2486.7	(21/2) ⁺	410.4 2	100	2076.3	(19/2) ⁺	M1,E2	0.0160 9	$\alpha(\text{K})=0.0136$ 9; $\alpha(\text{L})=0.00187$ 6; $\alpha(\text{M})=0.000378$ 13; $\alpha(\text{N})=7.60\times 10^{-5}$ 21; $\alpha(\text{O})=8.66\times 10^{-6}$ 15 $\alpha(\text{N}+..)=8.46\times 10^{-5}$ 21
		801.3 10	86.9	1684.6	(17/2) ⁺	E2	0.00254 4	$\alpha(\text{K})=0.00218$ 4; $\alpha(\text{L})=0.000285$ 4; $\alpha(\text{M})=5.73\times 10^{-5}$ 9; $\alpha(\text{N})=1.154\times 10^{-5}$ 17; $\alpha(\text{O})=1.330\times 10^{-6}$ 19 $\alpha(\text{N}+..)=1.287\times 10^{-5}$ 19
2496.6	(19/2) ⁺	233.6 6	50	2263.3	(17/2) ⁺			
		811.7 6	100	1684.6	(17/2) ⁺			
2521.4	(19/2) ⁺	415 1	<100	2106.5	(17/2) ⁺			
		800 1	<100	1720.9	(15/2) ⁺			
2588.1	(21/2) ⁻	274.0 6	100	2314.1	(21/2) ⁺	M1,E2		
2642.0	(23/2) ⁻	535.5 3	100	2107.4	(19/2) ⁻	E2	0.00708 10	$\alpha(\text{K})=0.00603$ 9; $\alpha(\text{L})=0.000845$ 12; $\alpha(\text{M})=0.0001710$ 25; $\alpha(\text{N})=3.43\times 10^{-5}$ 5; $\alpha(\text{O})=3.87\times 10^{-6}$ 6 $\alpha(\text{N}+..)=3.82\times 10^{-5}$ 6
		553 1	<5.	2088.1	(23/2) ⁻			
		1157 1	28	1485.2	(19/2) ⁻			
2695.1	(17/2) ⁺	1723 1	100	971.7	(13/2) ⁺			
2702.4	(21/2) ⁺	768.7 3	100	1934.0	(17/2) ⁺	E2	0.00280 4	$\alpha(\text{K})=0.00241$ 4; $\alpha(\text{L})=0.000316$ 5; $\alpha(\text{M})=6.36\times 10^{-5}$ 9; $\alpha(\text{N})=1.281\times 10^{-5}$ 18; $\alpha(\text{O})=1.474\times 10^{-6}$ 21 $\alpha(\text{N}+..)=1.428\times 10^{-5}$ 20
2753.0	(21/2) ⁺	256.2 6	100	2496.6	(19/2) ⁺	M1,E2	0.062 6	$\alpha(\text{K})=0.052$ 4; $\alpha(\text{L})=0.0080$ 18; $\alpha(\text{M})=0.0016$ 4; $\alpha(\text{N})=0.00033$ 8; $\alpha(\text{O})=3.6\times 10^{-5}$ 6 $\alpha(\text{N}+..)=0.00036$ 8
		489.3 6	<32	2263.3	(17/2) ⁺			
		677.4 6	35	2076.3	(19/2) ⁺	M1,E2	0.0044 6	$\alpha(\text{K})=0.0038$ 5; $\alpha(\text{L})=0.00048$ 5; $\alpha(\text{M})=9.7\times 10^{-5}$ 9; $\alpha(\text{N})=1.96\times 10^{-5}$ 19;

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
2819.6	(27/2 ⁻)	731.6 3	100	2088.1	(23/2 ⁻)	E2	0.00316 5	$\alpha(\text{O})=2.28\times 10^{-6}$ 25 $\alpha(\text{N+..})=2.19\times 10^{-5}$ 21 $\alpha(\text{K})=0.00271$ 4; $\alpha(\text{L})=0.000358$ 5; $\alpha(\text{M})=7.22\times 10^{-5}$ 11; $\alpha(\text{N})=1.453\times 10^{-5}$ 21 $\alpha(\text{O})=1.669\times 10^{-6}$ 24; $\alpha(\text{N+..})=1.620\times 10^{-5}$ 23
2827.6	(19/2 ⁺)	132.3 6 1142.7 6	<100 <100	2695.1 (17/2 ⁺) 1684.6 (17/2) ⁺				
2912.1	(23/2 ⁻)	323.9 6	100	2588.1	(21/2 ⁻)	M1,E2	0.0310 7	$\alpha(\text{K})=0.0263$ 5; $\alpha(\text{L})=0.0038$ 5; $\alpha(\text{M})=0.00077$ 10; $\alpha(\text{N})=0.000154$ 18; $\alpha(\text{O})=1.73\times 10^{-5}$ 13 $\alpha(\text{N+..})=0.000171$ 19
2913.8	(23/2 ⁺)	598 1 427 1	6. 87	2314.1 (21/2) ⁺ 2486.7 (21/2) ⁺	M1,E2	0.0143 9		$\alpha(\text{K})=0.0122$ 9; $\alpha(\text{L})=0.00167$ 4; $\alpha(\text{M})=0.000337$ 8; $\alpha(\text{N})=6.78\times 10^{-5}$ 13; $\alpha(\text{O})=7.74\times 10^{-6}$ 20 $\alpha(\text{N+..})=7.55\times 10^{-5}$ 13
		837 1	100	2076.3 (19/2) ⁺	E2	0.00229 4		$\alpha(\text{K})=0.00197$ 3; $\alpha(\text{L})=0.000256$ 4; $\alpha(\text{M})=5.14\times 10^{-5}$ 8; $\alpha(\text{N})=1.036\times 10^{-5}$ 15; $\alpha(\text{O})=1.197\times 10^{-6}$ 18 $\alpha(\text{N+..})=1.156\times 10^{-5}$ 17
2926.1	(21/2 ⁺)	404.5 6 820 1	<100 <100	2521.4 (19/2) ⁺ 2106.5 (17/2) ⁺				
2982.9	(21/2 ⁺)	154.9 6 876.2 6 1048.7 6 1497.1 6	<100 <100 <100 <100	2827.6 (19/2) ⁺ 2107.4 (19/2) ⁻ 1934.0 (17/2) ⁺ 1485.2 (19/2) ⁻				
3025.5	(23/2 ⁺)	272.4 6 529 1	100 <40	2753.0 (21/2) ⁺ 2496.6 (19/2) ⁺				
3060.6	(23/2 ⁺)	815.5 3	100	2245.0 (19/2) ⁺	E2	0.00243 4		$\alpha(\text{K})=0.00209$ 3; $\alpha(\text{L})=0.000272$ 4; $\alpha(\text{M})=5.48\times 10^{-5}$ 8; $\alpha(\text{N})=1.104\times 10^{-5}$ 16; $\alpha(\text{O})=1.275\times 10^{-6}$ 18 $\alpha(\text{N+..})=1.232\times 10^{-5}$ 18
3184.2	(23/2 ⁺)	200.9 6 356.6 6	100 <100	2982.9 (21/2) ⁺ 2827.6 (19/2) ⁺				
3274.2	(25/2 ⁻)	362.1 6	100	2912.1 (23/2 ⁻)	M1,E2	0.0226 6		$\alpha(\text{K})=0.0192$ 7; $\alpha(\text{L})=0.00270$ 20; $\alpha(\text{M})=0.00055$ 5; $\alpha(\text{N})=0.000110$ 8; $\alpha(\text{O})=1.24\times 10^{-5}$ 5 $\alpha(\text{N+..})=0.000122$ 8
3324.6	(25/2 ⁺)	686.1 6 411 1	26 93	2588.1 (21/2 ⁻) 2913.8 (23/2) ⁺	M1,E2	0.0159 9		$\alpha(\text{K})=0.0136$ 9; $\alpha(\text{L})=0.00186$ 6; $\alpha(\text{M})=0.000376$ 13; $\alpha(\text{N})=7.56\times 10^{-5}$ 21; $\alpha(\text{O})=8.63\times 10^{-6}$ 16 $\alpha(\text{N+..})=8.43\times 10^{-5}$ 21
		838 1	100	2486.7 (21/2) ⁺	E2	0.00228 4		$\alpha(\text{K})=0.00197$ 3; $\alpha(\text{L})=0.000255$ 4; $\alpha(\text{M})=5.12\times 10^{-5}$ 8; $\alpha(\text{N})=1.033\times 10^{-5}$ 15; $\alpha(\text{O})=1.194\times 10^{-6}$ 17 $\alpha(\text{N+..})=1.152\times 10^{-5}$ 17

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
3339.4	(25/2 ⁺)	425 1	100	2913.8	(23/2 ⁺)	M1,E2	0.0145 9	$\alpha(\text{K})=0.0124$ 9; $\alpha(\text{L})=0.00169$ 4; $\alpha(\text{M})=0.000342$ 9; $\alpha(\text{N})=6.87\times 10^{-5}$ 14; $\alpha(\text{O})=7.85\times 10^{-6}$ 20 $\alpha(\text{N}+..)=7.65\times 10^{-5}$ 14
		586.6 6	11	2753.0	(21/2 ⁺)			
		852.6 6	31	2486.7	(21/2 ⁺)	E2	0.00219 3	$\alpha(\text{K})=0.00189$ 3; $\alpha(\text{L})=0.000244$ 4; $\alpha(\text{M})=4.91\times 10^{-5}$ 7; $\alpha(\text{N})=9.90\times 10^{-6}$ 14; $\alpha(\text{O})=1.145\times 10^{-6}$ 17 $\alpha(\text{N}+..)=1.105\times 10^{-5}$ 16
3341.1	(23/2 ⁺)	415 1	100	2926.1	(21/2 ⁺)			
3355.1	(27/2 ⁻)	535.3 6	<5.	2819.6	(27/2 ⁻)			
		713.1 3	100	2642.0	(23/2 ⁻)	E2	0.00336 5	$\alpha(\text{K})=0.00288$ 4; $\alpha(\text{L})=0.000383$ 6; $\alpha(\text{M})=7.72\times 10^{-5}$ 11; $\alpha(\text{N})=1.553\times 10^{-5}$ 22; $\alpha(\text{O})=1.78\times 10^{-6}$ 3 $\alpha(\text{N}+..)=1.731\times 10^{-5}$ 25
3375.7	(25/2 ⁺)	1266.5 6	<5.	2088.1	(23/2 ⁻)			
		191.3 6	8.	3184.2	(23/2 ⁺)			
		315 1	39	3060.6	(23/2 ⁺)	M1,E2	0.0336 10	$\alpha(\text{K})=0.0285$ 5; $\alpha(\text{L})=0.0041$ 6; $\alpha(\text{M})=0.00084$ 12; $\alpha(\text{N})=0.000168$ 22; $\alpha(\text{O})=1.88\times 10^{-5}$ 16 $\alpha(\text{N}+..)=0.000187$ 23
		392.8 6	12	2982.9	(21/2 ⁺)	E2	0.0173	$\alpha(\text{K})=0.01454$ 22; $\alpha(\text{L})=0.00221$ 4; $\alpha(\text{M})=0.000449$ 7; $\alpha(\text{N})=8.96\times 10^{-5}$ 14; $\alpha(\text{O})=9.86\times 10^{-6}$ 15 $\alpha(\text{N}+..)=9.94\times 10^{-5}$ 15
		673.1 6	100	2702.4	(21/2 ⁺)	E2	0.00388 6	$\alpha(\text{K})=0.00333$ 5; $\alpha(\text{L})=0.000446$ 7; $\alpha(\text{M})=8.99\times 10^{-5}$ 13; $\alpha(\text{N})=1.81\times 10^{-5}$ 3; $\alpha(\text{O})=2.07\times 10^{-6}$ 3 $\alpha(\text{N}+..)=2.02\times 10^{-5}$ 3
		1288.3 6	94	2088.1	(23/2 ⁻)	E1	0.000486 7	$\alpha(\text{K})=0.000355$ 5; $\alpha(\text{L})=4.23\times 10^{-5}$ 6; $\alpha(\text{M})=8.44\times 10^{-6}$ 12; $\alpha(\text{N})=1.709\times 10^{-6}$ 24 $\alpha(\text{O})=2.01\times 10^{-7}$ 3; $\alpha(\text{N}+..)=7.99\times 10^{-5}$ 12
3424.8	(25/2 ⁺)	240.3 6	40	3184.2	(23/2 ⁺)	M1,E2	0.075 9	$\alpha(\text{K})=0.063$ 6; $\alpha(\text{L})=0.010$ 3; $\alpha(\text{M})=0.0020$ 6; $\alpha(\text{N})=0.00040$ 11; $\alpha(\text{O})=4.4\times 10^{-5}$ 9 $\alpha(\text{N}+..)=0.00045$ 11
		441.0 6	87	2982.9	(21/2 ⁺)			
		723.8 6	100	2702.4	(21/2 ⁺)			
		782.4 6	<33	2642.0	(23/2 ⁻)			
		1337.1 6	<33	2088.1	(23/2 ⁻)			
3517.5	(27/2 ⁺)	333 1	<10	3184.2	(23/2 ⁺)			
		456.7 6	100	3060.6	(23/2 ⁺)	E2	0.01108	$\alpha(\text{K})=0.00938$ 14; $\alpha(\text{L})=0.001366$ 20; $\alpha(\text{M})=0.000277$ 4; $\alpha(\text{N})=5.54\times 10^{-5}$ 8; $\alpha(\text{O})=6.17\times 10^{-6}$ 9 $\alpha(\text{N}+..)=6.16\times 10^{-5}$ 9
3649.5	(27/2 ⁺)	588.8 3	100	3060.6	(23/2 ⁺)	E2	0.00548 8	$\alpha(\text{K})=0.00468$ 7; $\alpha(\text{L})=0.000644$ 9; $\alpha(\text{M})=0.0001301$ 19; $\alpha(\text{N})=2.61\times 10^{-5}$ 4; $\alpha(\text{O})=2.96\times 10^{-6}$ 5 $\alpha(\text{N}+..)=2.91\times 10^{-5}$ 4

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{Tl})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
3660.5	(31/2 ⁻)	841.0 3	100	2819.6	(27/2 ⁻)	E2	0.00226 4	$\alpha(\text{K})=0.00195$ 3; $\alpha(\text{L})=0.000253$ 4; $\alpha(\text{M})=5.08\times 10^{-5}$ 8; $\alpha(\text{N})=1.024\times 10^{-5}$ 15; $\alpha(\text{O})=1.183\times 10^{-6}$ 17 $\alpha(\text{N}+..)=1.142\times 10^{-5}$ 16
3666.4	(27/2 ⁻)	392.3 6	100	3274.2	(25/2 ⁻)	M1,E2	0.0181 8	$\alpha(\text{K})=0.0154$ 9; $\alpha(\text{L})=0.00213$ 10; $\alpha(\text{M})=0.000431$ 22; $\alpha(\text{N})=8.7\times 10^{-5}$ 4; $\alpha(\text{O})=9.85\times 10^{-6}$ 16 $\alpha(\text{N}+..)=9.6\times 10^{-5}$ 4
3682?	(27/2 ⁺)	754.3 6	69	2912.1	(23/2 ⁻)			
3685.5	(27/2 ⁺)	658 & 1		3025.5	(23/2 ⁺)			
		260.6 6	71	3424.8	(25/2 ⁺)	M1,E2	0.059 5	$\alpha(\text{K})=0.049$ 3; $\alpha(\text{L})=0.0076$ 17; $\alpha(\text{M})=0.0015$ 4; $\alpha(\text{N})=0.00031$ 7; $\alpha(\text{O})=3.4\times 10^{-5}$ 6 $\alpha(\text{N}+..)=0.00034$ 8
		309.6 6	45	3375.7	(25/2 ⁺)	M1,E2	0.0354 11	$\alpha(\text{K})=0.0299$ 5; $\alpha(\text{L})=0.0044$ 6; $\alpha(\text{M})=0.00089$ 13; $\alpha(\text{N})=0.000177$ 24; $\alpha(\text{O})=1.99\times 10^{-5}$ 18 $\alpha(\text{N}+..)=0.00020$ 3
		501.4 6	100	3184.2	(23/2 ⁺)	E2	0.00850 13	$\alpha(\text{K})=0.00721$ 11; $\alpha(\text{L})=0.001027$ 15; $\alpha(\text{M})=0.000208$ 3; $\alpha(\text{N})=4.17\times 10^{-5}$ 6; $\alpha(\text{O})=4.68\times 10^{-6}$ 7 $\alpha(\text{N}+..)=4.63\times 10^{-5}$ 7
3711.2	(27/2 ⁺)	386.6 @ 3	100 @	3324.6	(25/2 ⁺)	M1,E2	0.0188 8	$\alpha(\text{K})=0.0160$ 9; $\alpha(\text{L})=0.00222$ 11; $\alpha(\text{M})=0.000450$ 25; $\alpha(\text{N})=9.0\times 10^{-5}$ 5; $\alpha(\text{O})=1.027\times 10^{-5}$ 18 $\alpha(\text{N}+..)=0.000101$ 5
		797 1	83	2913.8	(23/2 ⁺)	E2	0.00257 4	$\alpha(\text{K})=0.00221$ 4; $\alpha(\text{L})=0.000288$ 5; $\alpha(\text{M})=5.80\times 10^{-5}$ 9; $\alpha(\text{N})=1.169\times 10^{-5}$ 17; $\alpha(\text{O})=1.348\times 10^{-6}$ 20 $\alpha(\text{N}+..)=1.304\times 10^{-5}$ 19
3970.4	(29/2 ⁺)	285.0 6	31	3685.5	(27/2 ⁺)	M1,E2	0.0451 25	$\alpha(\text{K})=0.0380$ 13; $\alpha(\text{L})=0.0057$ 10; $\alpha(\text{M})=0.00115$ 21; $\alpha(\text{N})=0.00023$ 4; $\alpha(\text{O})=2.6\times 10^{-5}$ 4 $\alpha(\text{N}+..)=0.00026$ 5
		545.9 6	8.	3424.8	(25/2 ⁺)			
		594.9 6	100	3375.7	(25/2 ⁺)	E2	0.00534 8	$\alpha(\text{K})=0.00456$ 7; $\alpha(\text{L})=0.000625$ 9; $\alpha(\text{M})=0.0001263$ 18; $\alpha(\text{N})=2.54\times 10^{-5}$ 4; $\alpha(\text{O})=2.88\times 10^{-6}$ 5 $\alpha(\text{N}+..)=2.82\times 10^{-5}$ 4
4044?	(29/2 ⁺)	707 & 1	100	3339.4	(25/2 ⁺)			
4054.7	(31/2 ⁻)	699.5 3	100	3355.1	(27/2 ⁻)	E2	0.00353 5	$\alpha(\text{K})=0.00302$ 5; $\alpha(\text{L})=0.000403$ 6; $\alpha(\text{M})=8.12\times 10^{-5}$ 12; $\alpha(\text{N})=1.633\times 10^{-5}$ 23; $\alpha(\text{O})=1.87\times 10^{-6}$ 3 $\alpha(\text{N}+..)=1.82\times 10^{-5}$ 3
4082.3	(29/2 ⁻)	416.2 6	100	3666.4	(27/2 ⁻)	M1,E2	0.0154 9	$\alpha(\text{K})=0.0131$ 9; $\alpha(\text{L})=0.00180$ 5; $\alpha(\text{M})=0.000363$ 11; $\alpha(\text{N})=7.29\times 10^{-5}$ 17; $\alpha(\text{O})=8.32\times 10^{-6}$ 17 $\alpha(\text{N}+..)=8.13\times 10^{-5}$ 17
		808 1	75	3274.2	(25/2 ⁻)	E2	0.00249 4	$\alpha(\text{K})=0.00214$ 3; $\alpha(\text{L})=0.000279$ 4; $\alpha(\text{M})=5.61\times 10^{-5}$ 8; $\alpha(\text{N})=1.130\times 10^{-5}$ 17;

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)							
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. ‡	$\alpha^\#$
							Comments
4098.2	(29/2 ⁺)	386.6 @ 6	100 @	3711.2 (27/2 ⁺)	M1,E2	0.0188 8	$\alpha(\text{O})=1.304\times 10^{-6}$ 19 $\alpha(\text{N}+..)=1.260\times 10^{-5}$ 18 $\alpha(\text{K})=0.0160$ 9; $\alpha(\text{L})=0.00222$ 11; $\alpha(\text{M})=0.000450$ 25; $\alpha(\text{N})=9.0\times 10^{-5}$ 5; $\alpha(\text{O})=1.027\times 10^{-5}$ 18 $\alpha(\text{N}+..)=0.000101$ 5
4286.4	(31/2 ⁺)	773.9 6 316.5 6	33 39	3324.6 (25/2 ⁺) 3970.4 (29/2 ⁺)	M1,E2	0.0332 9	$\alpha(\text{K})=0.0281$ 5; $\alpha(\text{L})=0.0041$ 6; $\alpha(\text{M})=0.00083$ 12; $\alpha(\text{N})=0.000166$ 21; $\alpha(\text{O})=1.86\times 10^{-5}$ 16 $\alpha(\text{N}+..)=0.000184$ 23
		600.9 6	33	3685.5 (27/2 ⁺)	E2	0.00520 8	$\alpha(\text{K})=0.00444$ 7; $\alpha(\text{L})=0.000608$ 9; $\alpha(\text{M})=0.0001228$ 18; $\alpha(\text{N})=2.47\times 10^{-5}$ 4; $\alpha(\text{O})=2.80\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.75\times 10^{-5}$ 4
		636.8 6	100	3649.5 (27/2 ⁺)	E2	0.00447 7	$\alpha(\text{K})=0.00382$ 6; $\alpha(\text{L})=0.000518$ 8; $\alpha(\text{M})=0.0001045$ 15; $\alpha(\text{N})=2.10\times 10^{-5}$ 3; $\alpha(\text{O})=2.39\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.34\times 10^{-5}$ 4
		768.6 6	64	3517.5 (27/2 ⁺)	E2	0.00280 4	$\alpha(\text{K})=0.00241$ 4; $\alpha(\text{L})=0.000316$ 5; $\alpha(\text{M})=6.36\times 10^{-5}$ 9; $\alpha(\text{N})=1.281\times 10^{-5}$ 19; $\alpha(\text{O})=1.474\times 10^{-6}$ 21 $\alpha(\text{N}+..)=1.428\times 10^{-5}$ 21
4331.6	(31/2 ⁺)	682.1 3	100	3649.5 (27/2 ⁺)	E2	0.00375 6	$\alpha(\text{K})=0.00322$ 5; $\alpha(\text{L})=0.000430$ 6; $\alpha(\text{M})=8.68\times 10^{-5}$ 13; $\alpha(\text{N})=1.746\times 10^{-5}$ 25; $\alpha(\text{O})=2.00\times 10^{-6}$ 3 $\alpha(\text{N}+..)=1.95\times 10^{-5}$ 3
4509.9	(31/2 ⁺)	412 1	100	4098.2 (29/2 ⁺)	M1,E2	0.0158 9	$\alpha(\text{K})=0.0135$ 9; $\alpha(\text{L})=0.00185$ 6; $\alpha(\text{M})=0.000374$ 13; $\alpha(\text{N})=7.51\times 10^{-5}$ 20; $\alpha(\text{O})=8.57\times 10^{-6}$ 16 $\alpha(\text{N}+..)=8.37\times 10^{-5}$ 21
4520.1	(31/2 ⁻)	799 1 437.6 6	71 100	3711.2 (27/2 ⁺) 4082.3 (29/2 ⁻)	M1,E2	0.0134 9	$\alpha(\text{K})=0.0115$ 9; $\alpha(\text{L})=0.001555$ 24; $\alpha(\text{M})=0.000314$ 6; $\alpha(\text{N})=6.32\times 10^{-5}$ 10; $\alpha(\text{O})=7.23\times 10^{-6}$ 23 $\alpha(\text{N}+..)=7.04\times 10^{-5}$ 11
		853 1	82	3666.4 (27/2 ⁻)	E2	0.00219 4	$\alpha(\text{K})=0.00189$ 3; $\alpha(\text{L})=0.000244$ 4; $\alpha(\text{M})=4.91\times 10^{-5}$ 7; $\alpha(\text{N})=9.89\times 10^{-6}$ 15; $\alpha(\text{O})=1.144\times 10^{-6}$ 17 $\alpha(\text{N}+..)=1.104\times 10^{-5}$ 16
4601.7	(35/2 ⁻)	941.3 3	100	3660.5 (31/2 ⁻)	E2	0.001751 25	$\alpha(\text{K})=0.001511$ 22; $\alpha(\text{L})=0.000193$ 3; $\alpha(\text{M})=3.88\times 10^{-5}$ 6 $\alpha(\text{N})=7.82\times 10^{-6}$ 11; $\alpha(\text{O})=9.08\times 10^{-7}$ 13; $\alpha(\text{N}+..)=8.73\times 10^{-6}$ 13
4683.4	(33/2 ⁺)	397.3 6	23	4286.4 (31/2 ⁺)	M1,E2	0.0174 8	$\alpha(\text{K})=0.0149$ 9; $\alpha(\text{L})=0.00205$ 8; $\alpha(\text{M})=0.000415$ 19; $\alpha(\text{N})=8.3\times 10^{-5}$ 3; $\alpha(\text{O})=9.50\times 10^{-6}$ 14 $\alpha(\text{N}+..)=9.3\times 10^{-5}$ 4
		712.9 6	100	3970.4 (29/2 ⁺)	E2	0.00336 5	$\alpha(\text{K})=0.00289$ 4; $\alpha(\text{L})=0.000383$ 6; $\alpha(\text{M})=7.72\times 10^{-5}$ 11; $\alpha(\text{N})=1.554\times 10^{-5}$

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								Comments
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	
4814.2	(35/2 ⁻)	759.1 6	100	4054.7	(31/2 ⁻)	E2	0.00289 4	22; $\alpha(\text{O})=1.78\times 10^{-6}$ 3 $\alpha(\text{N}+..)=1.732\times 10^{-5}$ 25 $\alpha(\text{K})=0.00248$ 4; $\alpha(\text{L})=0.000326$ 5; $\alpha(\text{M})=6.56\times 10^{-5}$ 10; $\alpha(\text{N})=1.322\times 10^{-5}$ 19 $\alpha(\text{O})=1.521\times 10^{-6}$ 22; $\alpha(\text{N}+..)=1.474\times 10^{-5}$ 21
4936.8	(33/2 ⁺)	426 1	87	4509.9	(31/2 ⁺)	M1,E2	0.0144 9	$\alpha(\text{K})=0.0123$ 9; $\alpha(\text{L})=0.00168$ 4; $\alpha(\text{M})=0.000339$ 8; $\alpha(\text{N})=6.82\times 10^{-5}$ 13; $\alpha(\text{O})=7.79\times 10^{-6}$ 20 $\alpha(\text{N}+..)=7.60\times 10^{-5}$ 14
		838 1	100	4098.2	(29/2 ⁺)	E2	0.00228 4	$\alpha(\text{K})=0.00197$ 3; $\alpha(\text{L})=0.000255$ 4; $\alpha(\text{M})=5.12\times 10^{-5}$ 8; $\alpha(\text{N})=1.033\times 10^{-5}$ 15; $\alpha(\text{O})=1.194\times 10^{-6}$ 17 $\alpha(\text{N}+..)=1.152\times 10^{-5}$ 17
4978.2	(33/2 ⁻)	457.9 6	95	4520.1	(31/2 ⁻)	M1,E2	0.0119 9	$\alpha(\text{K})=0.0102$ 9; $\alpha(\text{L})=0.001368$ 24; $\alpha(\text{M})=0.000276$ 5; $\alpha(\text{N})=5.56\times 10^{-5}$ 11; $\alpha(\text{O})=6.4\times 10^{-6}$ 3 $\alpha(\text{N}+..)=6.20\times 10^{-5}$ 13
		896.2 6	100	4082.3	(29/2 ⁻)	E2	0.00196 3	$\alpha(\text{K})=0.001686$ 24; $\alpha(\text{L})=0.000217$ 3; $\alpha(\text{M})=4.35\times 10^{-5}$ 7; $\alpha(\text{N})=8.78\times 10^{-6}$ 13 $\alpha(\text{O})=1.018\times 10^{-6}$ 15; $\alpha(\text{N}+..)=9.80\times 10^{-6}$ 14
5063.8	(35/2 ⁺)	380.5 6	69	4683.4	(33/2 ⁺)	M1,E2	0.0197 7	$\alpha(\text{K})=0.0168$ 8; $\alpha(\text{L})=0.00233$ 13; $\alpha(\text{M})=0.00047$ 3; $\alpha(\text{N})=9.5\times 10^{-5}$ 5; $\alpha(\text{O})=1.076\times 10^{-5}$ 23 $\alpha(\text{N}+..)=0.000106$ 6
		777.2 6	100	4286.4	(31/2 ⁺)	E2	0.00273 4	$\alpha(\text{K})=0.00234$ 4; $\alpha(\text{L})=0.000307$ 5; $\alpha(\text{M})=6.18\times 10^{-5}$ 9; $\alpha(\text{N})=1.245\times 10^{-5}$ 18; $\alpha(\text{O})=1.434\times 10^{-6}$ 21 $\alpha(\text{N}+..)=1.389\times 10^{-5}$ 20
5107.3	(35/2 ⁺)	775.7 3	100	4331.6	(31/2 ⁺)	E2	0.00274 4	$\alpha(\text{K})=0.00235$ 4; $\alpha(\text{L})=0.000309$ 5; $\alpha(\text{M})=6.21\times 10^{-5}$ 9; $\alpha(\text{N})=1.252\times 10^{-5}$ 18; $\alpha(\text{O})=1.441\times 10^{-6}$ 21 $\alpha(\text{N}+..)=1.396\times 10^{-5}$ 20
5397.5	(35/2 ⁺)	460.3 6	100	4936.8	(33/2 ⁺)	M1,E2	0.0117 9	$\alpha(\text{K})=0.0100$ 9; $\alpha(\text{L})=0.001348$ 25; $\alpha(\text{M})=0.000272$ 5; $\alpha(\text{N})=5.48\times 10^{-5}$ 11; $\alpha(\text{O})=6.3\times 10^{-6}$ 3 $\alpha(\text{N}+..)=6.11\times 10^{-5}$ 13
5452.9	(35/2 ⁻)	888.1 6 474.8 6 932.6 6	72 94 100	4509.9 (31/2 ⁺) 4978.2 (33/2 ⁻) 4520.1 (31/2 ⁻)		E2	0.00179 3	$\alpha(\text{K})=0.001542$ 22; $\alpha(\text{L})=0.000197$ 3; $\alpha(\text{M})=3.96\times 10^{-5}$ 6; $\alpha(\text{N})=7.99\times 10^{-6}$ 12; $\alpha(\text{O})=9.27\times 10^{-7}$ 13 $\alpha(\text{N}+..)=8.92\times 10^{-6}$ 13
5493.4	(37/2 ⁺)	810 1	100	4683.4	(33/2 ⁺)			
5504.7	(39/2 ⁺)	440.9 6	100	5063.8	(35/2 ⁺)	E2	0.01227	$\alpha(\text{K})=0.01037$ 15; $\alpha(\text{L})=0.001524$ 23; $\alpha(\text{M})=0.000310$ 5; $\alpha(\text{N})=6.18\times 10^{-5}$ 9; $\alpha(\text{O})=6.87\times 10^{-6}$ 10 $\alpha(\text{N}+..)=6.87\times 10^{-5}$ 10
5626.7	(39/2 ⁻)	812.1 6	1.	4814.2	(35/2 ⁻)	E2	0.00246 4	$\alpha(\text{K})=0.00211$ 3; $\alpha(\text{L})=0.000275$ 4; $\alpha(\text{M})=5.54\times 10^{-5}$ 8; $\alpha(\text{N})=1.116\times 10^{-5}$ 16;

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								Comments
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	
5626.7	(39/2 ⁻)	1025.0 3	100	4601.7	(35/2 ⁻)	E2	0.001451 21	$\alpha(\text{O})=1.288\times 10^{-6}$ 19 $\alpha(\text{N}+..)=1.245\times 10^{-5}$ 18 $\alpha(\text{K})=0.001254$ 18; $\alpha(\text{L})=0.0001586$ 23; $\alpha(\text{M})=3.18\times 10^{-5}$ 5 $\alpha(\text{N})=6.43\times 10^{-6}$ 9; $\alpha(\text{O})=7.48\times 10^{-7}$ 11; $\alpha(\text{N}+..)=7.17\times 10^{-6}$
5667.3	(39/2 ⁻)	853.1 3	89	4814.2	(35/2 ⁻)	E2	0.00219 3	$\alpha(\text{K})=0.00189$ 3; $\alpha(\text{L})=0.000244$ 4; $\alpha(\text{M})=4.90\times 10^{-5}$ 7; $\alpha(\text{N})=9.89\times 10^{-6}$ 14; $\alpha(\text{O})=1.143\times 10^{-6}$ 16 $\alpha(\text{N}+..)=1.103\times 10^{-5}$ 16
		1065.7 3	100	4601.7	(35/2 ⁻)	E2	0.001334 19	$\alpha(\text{K})=0.001153$ 17; $\alpha(\text{L})=0.0001453$ 21; $\alpha(\text{M})=2.91\times 10^{-5}$ 4 $\alpha(\text{N})=5.89\times 10^{-6}$ 9; $\alpha(\text{O})=6.86\times 10^{-7}$ 10; $\alpha(\text{N}+..)=6.57\times 10^{-6}$
5769.3	(39/2 ⁻)	955.1 6	100	4814.2	(35/2 ⁻)			
5877.9	(37/2 ⁺)	480.5 6	100	5397.5	(35/2 ⁺)			
		940.9 6	81	4936.8	(33/2 ⁺)	E2	0.001753 25	$\alpha(\text{K})=0.001512$ 22; $\alpha(\text{L})=0.000193$ 3; $\alpha(\text{M})=3.88\times 10^{-5}$ 6 $\alpha(\text{N})=7.83\times 10^{-6}$ 11; $\alpha(\text{O})=9.09\times 10^{-7}$ 13; $\alpha(\text{N}+..)=8.74\times 10^{-6}$ 13
5939.8	(37/2 ⁻)	486.7 6	55	5452.9	(35/2 ⁻)			
		961.9 6	100	4978.2	(33/2 ⁻)	E2	0.001669 24	$\alpha(\text{K})=0.001440$ 21; $\alpha(\text{L})=0.000183$ 3; $\alpha(\text{M})=3.68\times 10^{-5}$ 6 $\alpha(\text{N})=7.44\times 10^{-6}$ 11; $\alpha(\text{O})=8.64\times 10^{-7}$ 13; $\alpha(\text{N}+..)=8.30\times 10^{-6}$ 12
5986.8	(39/2 ⁺)	879.5 3	100	5107.3	(35/2 ⁺)	E2	0.00204 3	$\alpha(\text{K})=0.001760$ 25; $\alpha(\text{L})=0.000227$ 4; $\alpha(\text{M})=4.55\times 10^{-5}$ 7; $\alpha(\text{N})=9.19\times 10^{-6}$ 13 $\alpha(\text{O})=1.064\times 10^{-6}$ 15; $\alpha(\text{N}+..)=1.025\times 10^{-5}$ 15
6274.1	(43/2 ⁻)	607.0 3	100	5667.3	(39/2 ⁻)	E2	0.00506 8	$\alpha(\text{K})=0.00432$ 6; $\alpha(\text{L})=0.000591$ 9; $\alpha(\text{M})=0.0001194$ 17; $\alpha(\text{N})=2.40\times 10^{-5}$ 4; $\alpha(\text{O})=2.73\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.67\times 10^{-5}$ 4
		647.3 6	6.	5626.7	(39/2 ⁻)	E2	0.00429 6	$\alpha(\text{K})=0.00367$ 6; $\alpha(\text{L})=0.000495$ 7; $\alpha(\text{M})=0.0001000$ 15; $\alpha(\text{N})=2.01\times 10^{-5}$ 3; $\alpha(\text{O})=2.29\times 10^{-6}$ 4 $\alpha(\text{N}+..)=2.24\times 10^{-5}$ 4
6293.6	(43/2 ⁺)	788.9 6	100	5504.7	(39/2 ⁺)	E2	0.00263 4	$\alpha(\text{K})=0.00226$ 4; $\alpha(\text{L})=0.000296$ 5; $\alpha(\text{M})=5.95\times 10^{-5}$ 9; $\alpha(\text{N})=1.200\times 10^{-5}$ 17; $\alpha(\text{O})=1.382\times 10^{-6}$ 20 $\alpha(\text{N}+..)=1.338\times 10^{-5}$ 19
6393.4	(39/2 ⁺)	515 1	100	5877.9	(37/2 ⁺)			
		996.1 6	95	5397.5	(35/2 ⁺)			
6451.8	(39/2 ⁻)	998.9 6	100	5452.9	(35/2 ⁻)			
6635.4	(43/2 ⁻)	968.0 6	8.	5667.3	(39/2 ⁻)	E2	0.001646 24	$\alpha(\text{K})=0.001420$ 20; $\alpha(\text{L})=0.000181$ 3; $\alpha(\text{M})=3.63\times 10^{-5}$ 6 $\alpha(\text{N})=7.33\times 10^{-6}$ 11; $\alpha(\text{O})=8.51\times 10^{-7}$ 12; $\alpha(\text{N}+..)=8.18\times 10^{-6}$ 12
		1008.5 3	100	5626.7	(39/2 ⁻)	E2	0.001504 21	$\alpha(\text{K})=0.001299$ 19; $\alpha(\text{L})=0.0001645$ 23; $\alpha(\text{M})=3.30\times 10^{-5}$ 5 $\alpha(\text{N})=6.67\times 10^{-6}$ 10; $\alpha(\text{O})=7.76\times 10^{-7}$ 11; $\alpha(\text{N}+..)=7.44\times 10^{-6}$
6751.8	(43/2 ⁻)	1084.4 6	40	5667.3	(39/2 ⁻)			
		1125.4 6	100	5626.7	(39/2 ⁻)	E2	0.001189 17	$\alpha(\text{K})=0.001028$ 15; $\alpha(\text{L})=0.0001287$ 18; $\alpha(\text{M})=2.58\times 10^{-5}$ 4 $\alpha(\text{N})=5.22\times 10^{-6}$ 8; $\alpha(\text{O})=6.09\times 10^{-7}$ 9; $\alpha(\text{N}+..)=6.87\times 10^{-6}$
6934.0	(41/2 ⁺)	540.5 6	75	6393.4	(39/2 ⁺)			

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. ‡	$\alpha^\#$	Comments
6934.0	(41/2 ⁺)	1056.1 6	100	5877.9	(37/2 ⁺)			
6964.8	(43/2 ⁺)	978.0 3	100	5986.8	(39/2 ⁺)	E2	0.001609 23	$\alpha(\text{K})=0.001389$ 20; $\alpha(\text{L})=0.0001765$ 25; $\alpha(\text{M})=3.54\times 10^{-5}$ 5 $\alpha(\text{N})=7.16\times 10^{-6}$ 10; $\alpha(\text{O})=8.32\times 10^{-7}$ 12; $\alpha(\text{N}+..)=7.99\times 10^{-6}$
6971.1	(41/2 ⁻)	1031.3 6	100	5939.8	(37/2 ⁻)			
7182.2	(47/2 ⁺)	888.5 6	100	6293.6	(43/2 ⁺)	E2	0.00200 3	$\alpha(\text{K})=0.001719$ 25; $\alpha(\text{L})=0.000221$ 4; $\alpha(\text{M})=4.44\times 10^{-5}$ 7; $\alpha(\text{N})=8.97\times 10^{-6}$ 13 $\alpha(\text{O})=1.038\times 10^{-6}$ 15; $\alpha(\text{N}+..)=1.000\times 10^{-5}$ 14
7243.3		1576		5667.3	(39/2 ⁻)			
7332.0	(47/2 ⁺)	1038.5 6	100	6293.6	(43/2 ⁺)	E2	0.001411 20	$\alpha(\text{K})=0.001219$ 18; $\alpha(\text{L})=0.0001539$ 22; $\alpha(\text{M})=3.09\times 10^{-5}$ 5 $\alpha(\text{N})=6.24\times 10^{-6}$ 9; $\alpha(\text{O})=7.27\times 10^{-7}$ 11; $\alpha(\text{N}+..)=6.97\times 10^{-6}$
7348.6	(47/2 ⁻)	713 1	<5.	6635.4	(43/2 ⁻)			
		1074.5 3	100	6274.1	(43/2 ⁻)	E2	0.001311 19	$\alpha(\text{K})=0.001133$ 16; $\alpha(\text{L})=0.0001426$ 20; $\alpha(\text{M})=2.86\times 10^{-5}$ 4 $\alpha(\text{N})=5.78\times 10^{-6}$ 8; $\alpha(\text{O})=6.74\times 10^{-7}$ 10; $\alpha(\text{N}+..)=6.45\times 10^{-6}$
7506.2	(43/2 ⁺)	572 1	<71	6934.0	(41/2 ⁺)			
		1113 1	100	6393.4	(39/2 ⁺)			
7531.4	(43/2 ⁻)	1079.6 6	100	6451.8	(39/2 ⁻)			
7680.8	(47/2 ⁻)	1045.3 3	100	6635.4	(43/2 ⁻)	E2	0.001391 20	$\alpha(\text{K})=0.001202$ 17; $\alpha(\text{L})=0.0001517$ 22; $\alpha(\text{M})=3.04\times 10^{-5}$ 5 $\alpha(\text{N})=6.15\times 10^{-6}$ 9; $\alpha(\text{O})=7.16\times 10^{-7}$ 10; $\alpha(\text{N}+..)=6.86\times 10^{-6}$
		1407.2 6	9.	6274.1	(43/2 ⁻)	E2	0.000802 12	$\alpha(\text{K})=0.000652$ 10; $\alpha(\text{L})=8.02\times 10^{-5}$ 12; $\alpha(\text{M})=1.605\times 10^{-5}$ 23 $\alpha(\text{N})=3.25\times 10^{-6}$ 5; $\alpha(\text{O})=3.81\times 10^{-7}$ 6; $\alpha(\text{N}+..)=5.32\times 10^{-5}$
7891.1	(47/2 ⁻)	1140 1	100	6751.8	(43/2 ⁻)	E2	0.001158 17	$\alpha(\text{K})=0.001000$ 15; $\alpha(\text{L})=0.0001252$ 18; $\alpha(\text{M})=2.51\times 10^{-5}$ 4 $\alpha(\text{N})=5.07\times 10^{-6}$ 8; $\alpha(\text{O})=5.92\times 10^{-7}$ 9; $\alpha(\text{N}+..)=7.29\times 10^{-6}$
		1255.5 6	48	6635.4	(43/2 ⁻)			
8029.3	(47/2 ⁺)	1064.5 3	100	6964.8	(43/2 ⁺)	E2	0.001337 19	$\alpha(\text{K})=0.001156$ 17; $\alpha(\text{L})=0.0001456$ 21; $\alpha(\text{M})=2.92\times 10^{-5}$ 4 $\alpha(\text{N})=5.90\times 10^{-6}$ 9; $\alpha(\text{O})=6.88\times 10^{-7}$ 10; $\alpha(\text{N}+..)=6.59\times 10^{-6}$
8091.0	(45/2 ⁻)	1119.8 6	100	6971.1	(41/2 ⁻)			
8100.1	(45/2 ⁺)	594 1	<62	7506.2	(43/2 ⁺)			
		1166 1	100	6934.0	(41/2 ⁺)			
8106.1	(49/2)	757.5 6	100	7348.6	(47/2 ⁻)			
8227.8	(51/2 ⁺)	896.3 6	<50	7332.0	(47/2 ⁺)			
		1045.5 6	100	7182.2	(47/2 ⁺)	E2	0.001390 20	$\alpha(\text{K})=0.001201$ 17; $\alpha(\text{L})=0.0001516$ 22; $\alpha(\text{M})=3.04\times 10^{-5}$ 5 $\alpha(\text{N})=6.14\times 10^{-6}$ 9; $\alpha(\text{O})=7.16\times 10^{-7}$ 10; $\alpha(\text{N}+..)=6.86\times 10^{-6}$
8324.9	(51/2 ⁺)	992.6 6	100	7332.0	(47/2 ⁺)	E2	0.001557 22	$\alpha(\text{K})=0.001344$ 19; $\alpha(\text{L})=0.0001706$ 24; $\alpha(\text{M})=3.42\times 10^{-5}$ 5 $\alpha(\text{N})=6.92\times 10^{-6}$ 10; $\alpha(\text{O})=8.04\times 10^{-7}$ 12; $\alpha(\text{N}+..)=7.72\times 10^{-6}$
8344.6	(51/2)	996 1	100	7348.6	(47/2 ⁻)			
8362.9	(51/2 ⁻)	1014.3 3	100	7348.6	(47/2 ⁻)	E2	0.001485 21	$\alpha(\text{K})=0.001283$ 18; $\alpha(\text{L})=0.0001624$ 23; $\alpha(\text{M})=3.26\times 10^{-5}$ 5 $\alpha(\text{N})=6.58\times 10^{-6}$ 10; $\alpha(\text{O})=7.66\times 10^{-7}$ 11; $\alpha(\text{N}+..)=7.35\times 10^{-6}$
8695.7	(47/2 ⁻)	1164.2 6	100	7531.4	(43/2 ⁻)			
8719.4	(47/2 ⁺)	1213.2 6	100	7506.2	(43/2 ⁺)			

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{Tl})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
8755.2	(53/2 ⁺)	430.3 @ 6	100 @	8324.9	(51/2 ⁺)	M1,E2	0.0140 9	$\alpha(\text{K})=0.0120$ 9; $\alpha(\text{L})=0.00163$ 3; $\alpha(\text{M})=0.000330$ 7; $\alpha(\text{N})=6.63\times 10^{-5}$ 11; $\alpha(\text{O})=7.58\times 10^{-6}$ 21 $\alpha(\text{N}+..)=7.39\times 10^{-5}$ 12
8805.8	(51/2 ⁻)	1125.0 3	100	7680.8	(47/2 ⁻)	E2	0.001190 17	$\alpha(\text{K})=0.001028$ 15; $\alpha(\text{L})=0.0001288$ 18; $\alpha(\text{M})=2.58\times 10^{-5}$ 4 $\alpha(\text{N})=5.22\times 10^{-6}$ 8; $\alpha(\text{O})=6.09\times 10^{-7}$ 9; $\alpha(\text{N}+..)=6.86\times 10^{-6}$
		1457 6	1.	7348.6	(47/2 ⁻)	E2	0.000767 12	$\alpha(\text{K})=0.000609$ 10; $\alpha(\text{L})=7.47\times 10^{-5}$ 13; $\alpha(\text{M})=1.495\times 10^{-5}$ 25 $\alpha(\text{N})=3.03\times 10^{-6}$ 5; $\alpha(\text{O})=3.55\times 10^{-7}$ 6; $\alpha(\text{N}+..)=6.86\times 10^{-5}$
8860.3	(51/2 ⁻)	1179 1	100	7680.8	(47/2 ⁻)	E2	0.001082 16	$\alpha(\text{K})=0.000933$ 14; $\alpha(\text{L})=0.0001163$ 17; $\alpha(\text{M})=2.33\times 10^{-5}$ 4 $\alpha(\text{N})=4.71\times 10^{-6}$ 7; $\alpha(\text{O})=5.51\times 10^{-7}$ 8; $\alpha(\text{N}+..)=9.63\times 10^{-6}$
9082.9	(51/2 ⁻)	1191.8 6	100	7891.1	(47/2 ⁻)			
9175.3	(51/2 ⁺)	1146.0 3	100	8029.3	(47/2 ⁺)	E2	0.001145 16	$\alpha(\text{K})=0.000989$ 14; $\alpha(\text{L})=0.0001237$ 18; $\alpha(\text{M})=2.48\times 10^{-5}$ 4 $\alpha(\text{N})=5.01\times 10^{-6}$ 7; $\alpha(\text{O})=5.86\times 10^{-7}$ 9; $\alpha(\text{N}+..)=7.53\times 10^{-6}$
9185.5	(55/2 ⁺)	430.3 @ 6	20 @	8755.2	(53/2 ⁺)	M1,E2	0.0140 9	$\alpha(\text{K})=0.0120$ 9; $\alpha(\text{L})=0.00163$ 3; $\alpha(\text{M})=0.000330$ 7; $\alpha(\text{N})=6.63\times 10^{-5}$ 11; $\alpha(\text{O})=7.58\times 10^{-6}$ 21 $\alpha(\text{N}+..)=7.39\times 10^{-5}$ 12
		860.2 6	100	8324.9	(51/2 ⁺)	E2	0.00215 3	$\alpha(\text{K})=0.00185$ 3; $\alpha(\text{L})=0.000239$ 4; $\alpha(\text{M})=4.81\times 10^{-5}$ 7; $\alpha(\text{N})=9.69\times 10^{-6}$ 14; $\alpha(\text{O})=1.121\times 10^{-6}$ 16 $\alpha(\text{N}+..)=1.081\times 10^{-5}$ 16
		958.0 6	58	8227.8	(51/2 ⁺)	E2	0.001684 24	$\alpha(\text{K})=0.001453$ 21; $\alpha(\text{L})=0.000185$ 3; $\alpha(\text{M})=3.72\times 10^{-5}$ 6 $\alpha(\text{N})=7.51\times 10^{-6}$ 11; $\alpha(\text{O})=8.72\times 10^{-7}$ 13; $\alpha(\text{N}+..)=8.38\times 10^{-6}$ 12
9263.1		1157 1		8106.1	(49/2)			
9278.2	(49/2 ⁻)	1187.2 6	100	8091.0	(45/2 ⁻)			
9373.1	(49/2 ⁺)	1273 1	100	8100.1	(45/2 ⁺)			
9384.2		1021.3 6	100	8362.9	(51/2 ⁻)			
9444.0	(51/2 ⁺)	988 1	100	8456.0	(47/2 ⁺)			
9935.8	(51/2 ⁻)	1240.1 6	100	8695.7	(47/2 ⁻)			
10038.8	(55/2 ⁻)	1178 1	28	8860.3	(51/2 ⁻)	E2	0.001084 16	$\alpha(\text{K})=0.000934$ 14; $\alpha(\text{L})=0.0001165$ 17; $\alpha(\text{M})=2.34\times 10^{-5}$ 4 $\alpha(\text{N})=4.72\times 10^{-6}$ 7; $\alpha(\text{O})=5.52\times 10^{-7}$ 8; $\alpha(\text{N}+..)=9.55\times 10^{-6}$
		1233.1 3	100	8805.8	(51/2 ⁻)	E2	0.000993 14	$\alpha(\text{K})=0.000850$ 12; $\alpha(\text{L})=0.0001057$ 15; $\alpha(\text{M})=2.12\times 10^{-5}$ 3 $\alpha(\text{N})=4.28\times 10^{-6}$ 6; $\alpha(\text{O})=5.01\times 10^{-7}$ 7; $\alpha(\text{N}+..)=1.581\times 10^{-5}$
10133.6	(57/2 ⁺)	948.1 6	100	9185.5	(55/2 ⁺)	M1,E2	0.0020 3	$\alpha(\text{K})=0.00171$ 23; $\alpha(\text{L})=0.000214$ 25; $\alpha(\text{M})=4.3\times 10^{-5}$ 5; $\alpha(\text{N})=8.7\times 10^{-6}$ 10; $\alpha(\text{O})=1.02\times 10^{-6}$ 13 $\alpha(\text{N}+..)=9.7\times 10^{-6}$ 12
10270.2	(59/2 ⁺)	1084.7 6	100	9185.5	(55/2 ⁺)	E2	0.001285 18	$\alpha(\text{K})=0.001111$ 16; $\alpha(\text{L})=0.0001396$ 20; $\alpha(\text{M})=2.80\times 10^{-5}$ 4 $\alpha(\text{N})=5.66\times 10^{-6}$ 8; $\alpha(\text{O})=6.60\times 10^{-7}$ 10; $\alpha(\text{N}+..)=6.32\times 10^{-6}$
10300.0	(55/2 ⁻)	1217.1 6	100	9082.9	(51/2 ⁻)			
10404.3	(55/2 ⁺)	1228.6 6	100	9175.3	(51/2 ⁺)	E2	0.001000 14	$\alpha(\text{K})=0.000857$ 12; $\alpha(\text{L})=0.0001065$ 15; $\alpha(\text{M})=2.13\times 10^{-5}$ 3 $\alpha(\text{N})=4.31\times 10^{-6}$ 6; $\alpha(\text{O})=5.05\times 10^{-7}$ 7; $\alpha(\text{N}+..)=1.520\times 10^{-5}$

Adopted Levels, Gammas (continued)

$\gamma(^{117}\text{I})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
10439.1		1176 1	100	9263.1				
10531.0	(55/2 ⁺)	1087 1	<100	9444.0 (51/2 ⁺)				
		1356.2 6	<100	9175.3 (51/2 ⁺)				
10753.1	(53/2 ⁺)	1380 1	100	9373.1 (49/2 ⁺)				
11185.6	(61/2 ⁺)	915.4 6	100	10270.2 (59/2 ⁺)	M1,E2	0.0021 3		$\alpha(\text{K})=0.00185$ 25; $\alpha(\text{L})=0.00023$ 3; $\alpha(\text{M})=4.7\times 10^{-5}$ 6; $\alpha(\text{N})=9.4\times 10^{-6}$ 11; $\alpha(\text{O})=1.10\times 10^{-6}$ 14 $\alpha(\text{N}+..)=1.05\times 10^{-5}$ 13
11194.8	(59/2 ⁻)	1155.9 3	100	10038.8 (55/2 ⁻)	E2	0.001126 16		$\alpha(\text{K})=0.000972$ 14; $\alpha(\text{L})=0.0001214$ 17; $\alpha(\text{M})=2.43\times 10^{-5}$ 4 $\alpha(\text{N})=4.92\times 10^{-6}$ 7; $\alpha(\text{O})=5.75\times 10^{-7}$ 8; $\alpha(\text{N}+..)=8.02\times 10^{-6}$
11245.4	(59/2 ⁻)	1206.6 3	100	10038.8 (55/2 ⁻)	E2	0.001034 15		$\alpha(\text{K})=0.000889$ 13; $\alpha(\text{L})=0.0001107$ 16; $\alpha(\text{M})=2.22\times 10^{-5}$ 4 $\alpha(\text{N})=4.48\times 10^{-6}$ 7; $\alpha(\text{O})=5.24\times 10^{-7}$ 8; $\alpha(\text{N}+..)=1.243\times 10^{-5}$
11597.3	(59/2 ⁻)	1297.2 6	100	10300.0 (55/2 ⁻)				
11706.1	(59/2 ⁺)	1175.5 6	30	10531.0 (55/2 ⁺)				
		1301.3 6	100	10404.3 (55/2 ⁺)	E2	0.000902 13		$\alpha(\text{K})=0.000762$ 11; $\alpha(\text{L})=9.43\times 10^{-5}$ 14; $\alpha(\text{M})=1.89\times 10^{-5}$ 3; $\alpha(\text{N})=3.82\times 10^{-6}$ 6 $\alpha(\text{O})=4.48\times 10^{-7}$ 7; $\alpha(\text{N}+..)=2.68\times 10^{-5}$ 4
12326.5	(63/2 ⁻)	1081.3 6	100	11245.4 (59/2 ⁻)				
		1131 1	4.	11194.8 (59/2 ⁻)				
12971.2	(63/2 ⁺)	1265.1 6	100	11706.1 (59/2 ⁺)	E2	0.000948 14		$\alpha(\text{K})=0.000807$ 12; $\alpha(\text{L})=0.0001001$ 14; $\alpha(\text{M})=2.00\times 10^{-5}$ 3 $\alpha(\text{N})=4.05\times 10^{-6}$ 6; $\alpha(\text{O})=4.75\times 10^{-7}$ 7; $\alpha(\text{N}+..)=2.06\times 10^{-5}$
13522.4	(67/2 ⁻)	1195.9 6	100	12326.5 (63/2 ⁻)				
14328.0	(67/2 ⁺)	1356.8 6	100	12971.2 (63/2 ⁺)				
15823.4	(71/2 ⁺)	1495.4 6	100	14328.0 (67/2 ⁺)				
17459.4	(75/2 ⁺)	1636 1	100	15823.4 (71/2 ⁺)				
19224.5	(79/2 ⁺)	1765 1	100	17459.4 (75/2 ⁺)				
21127.5	(83/2 ⁺)	1903 1	100	19224.5 (79/2 ⁺)				

[†] From ¹¹⁷Xe β^+ decay, ¹⁰⁶Cd(¹⁴N,2pn), ⁹⁰Zr(³¹P,2n2p).

[‡] From DCO and polarization in ⁹⁰Zr(³¹P,2n2p) and $\alpha(\text{K})\text{exp}$ for γ only seen in ¹¹⁷Xe β^+ decay.

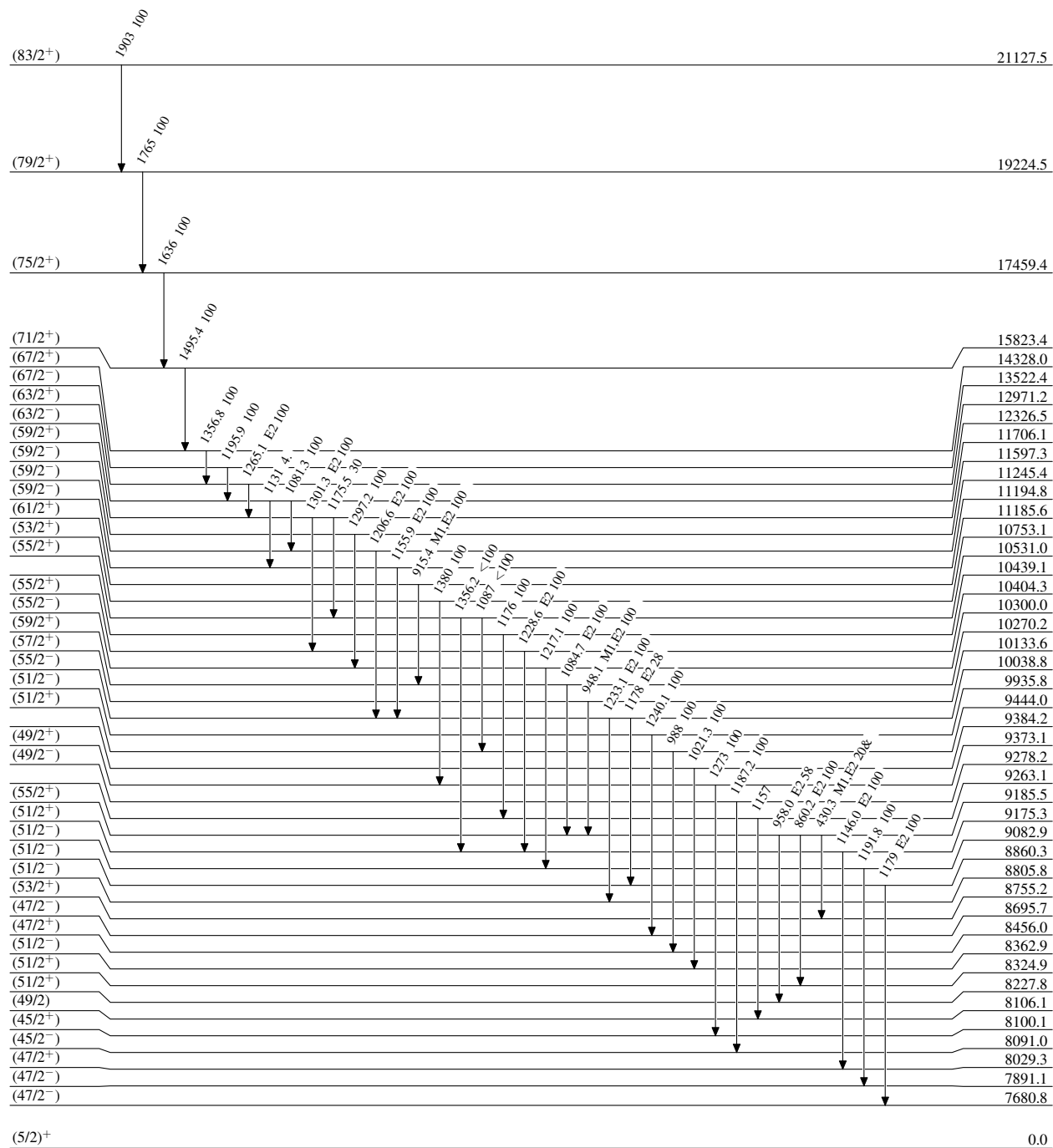
[#] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

@ Multiply placed with undivided intensity.

& Placement of transition in the level scheme is uncertain.

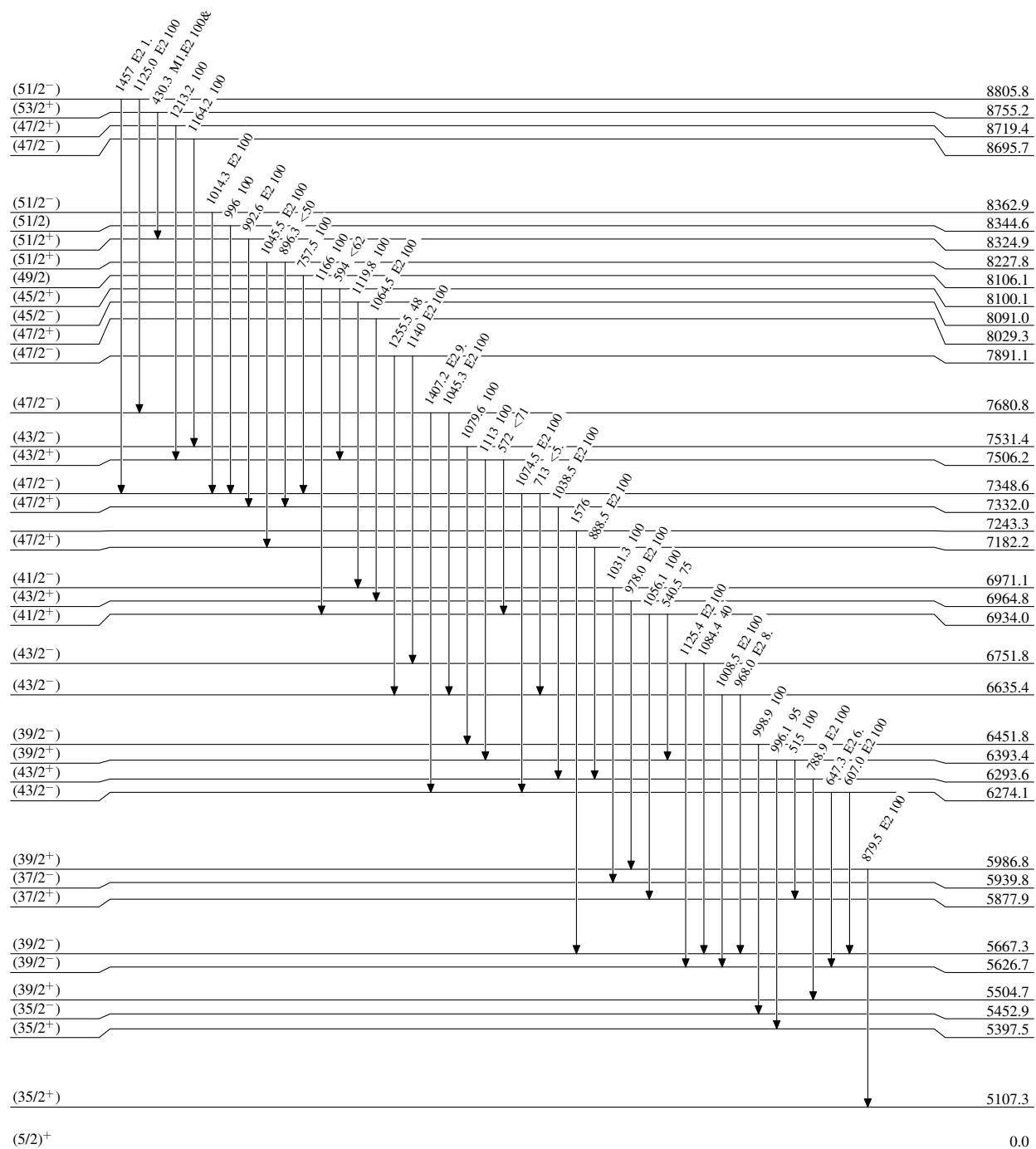
Adopted Levels, GammasLevel Scheme

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



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

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



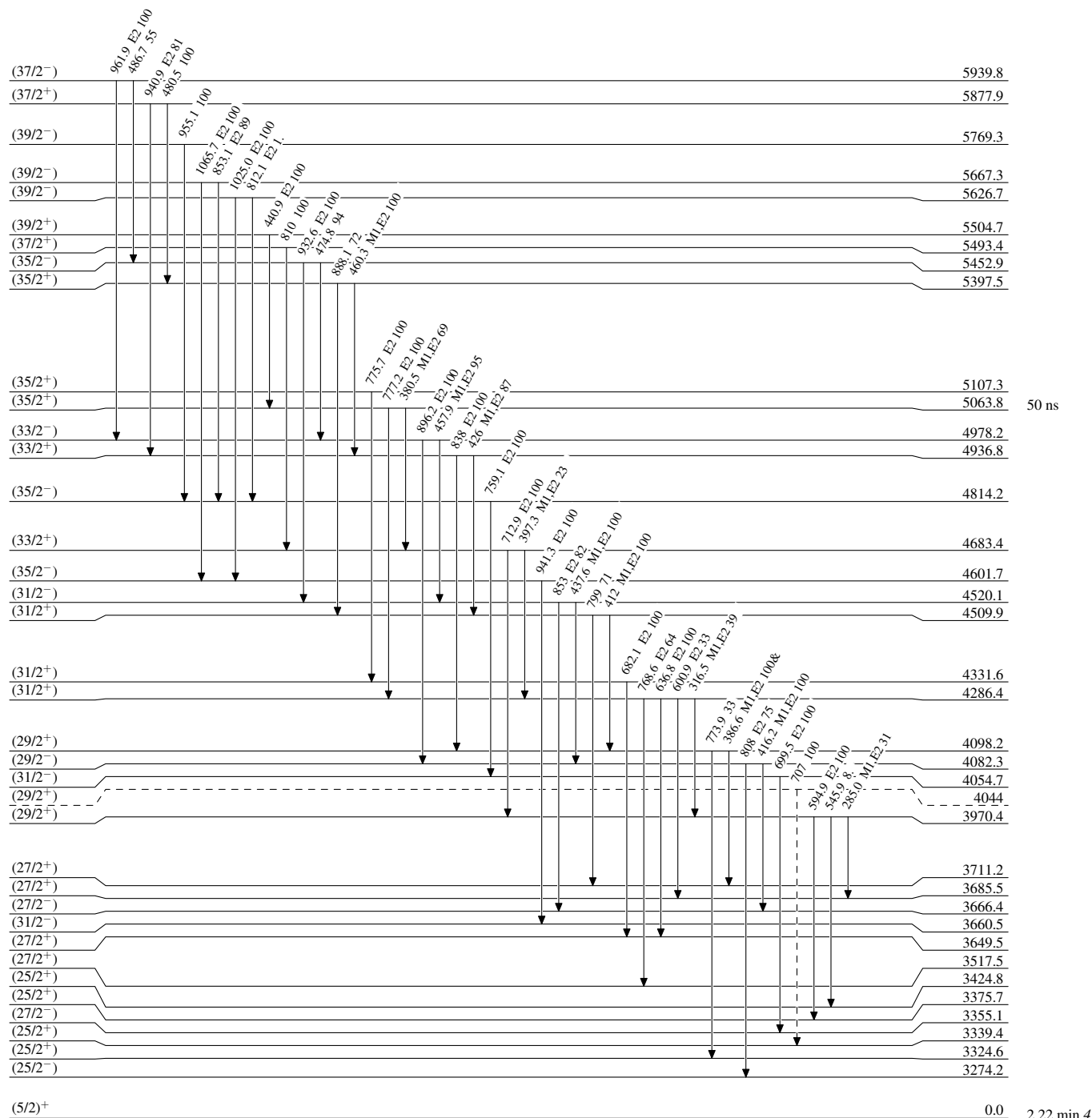
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

-----► γ Decay (Uncertain)

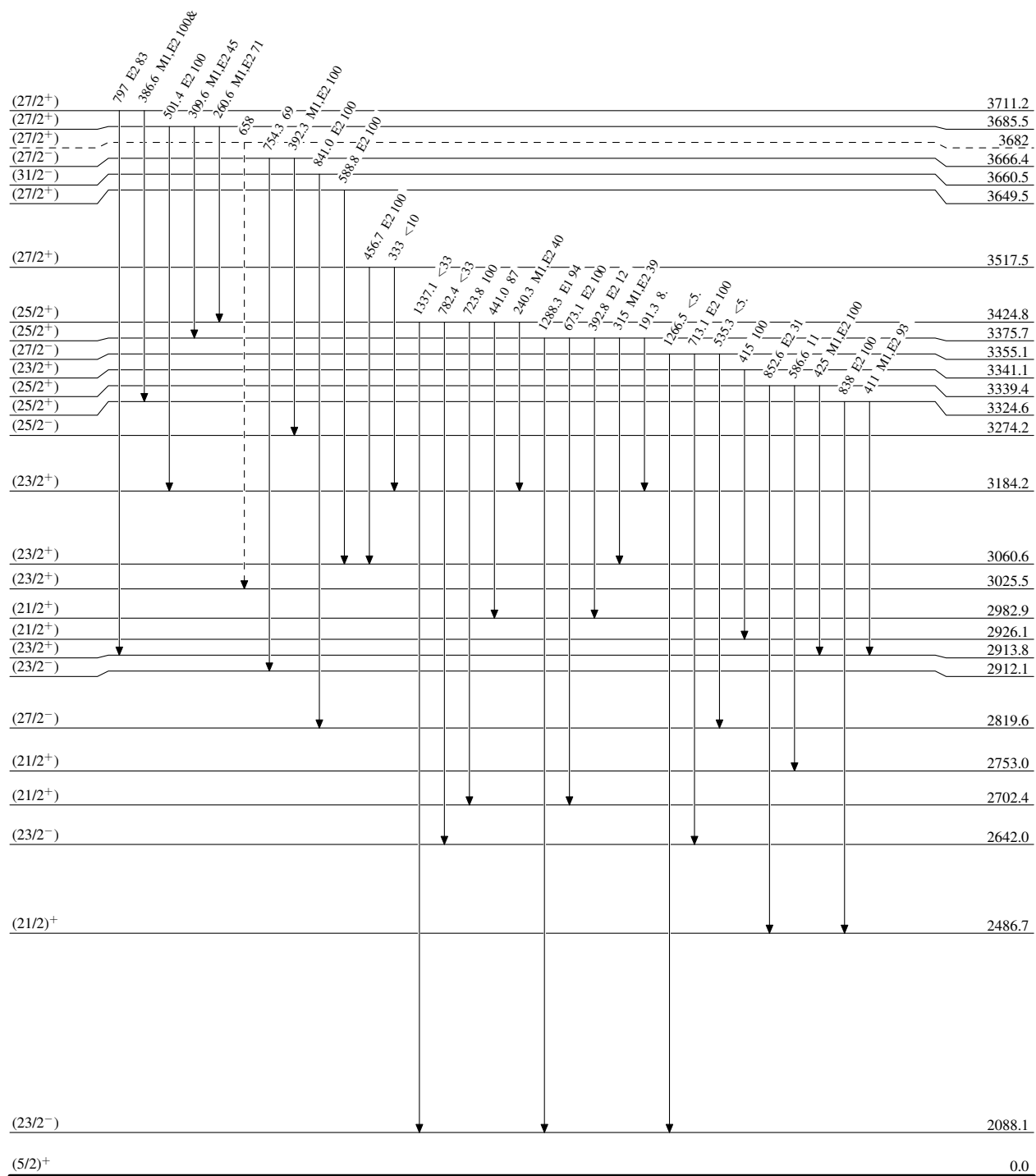


Adopted Levels, Gammas

Legend

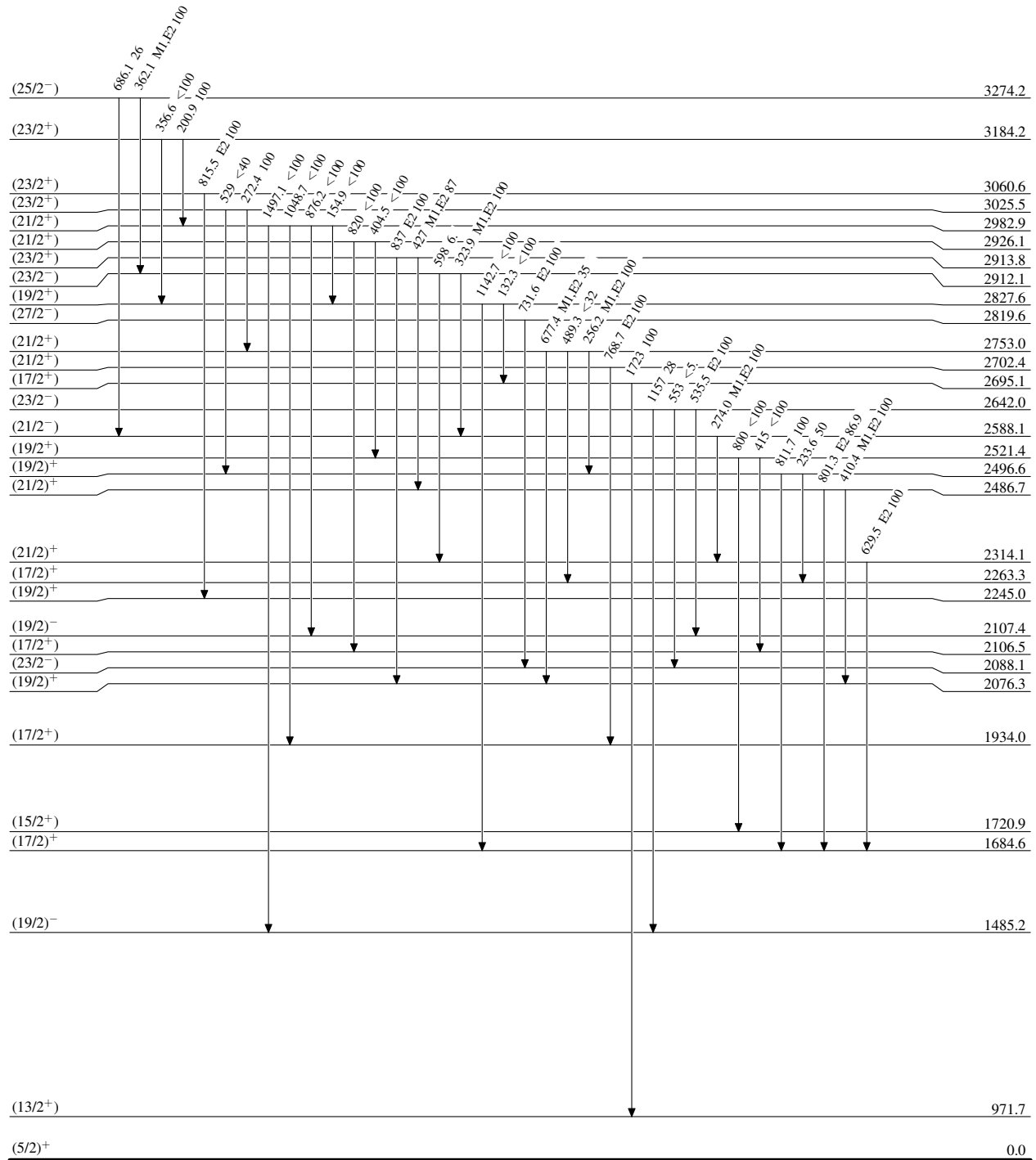
Level Scheme (continued)

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

-----► γ Decay (Uncertain)

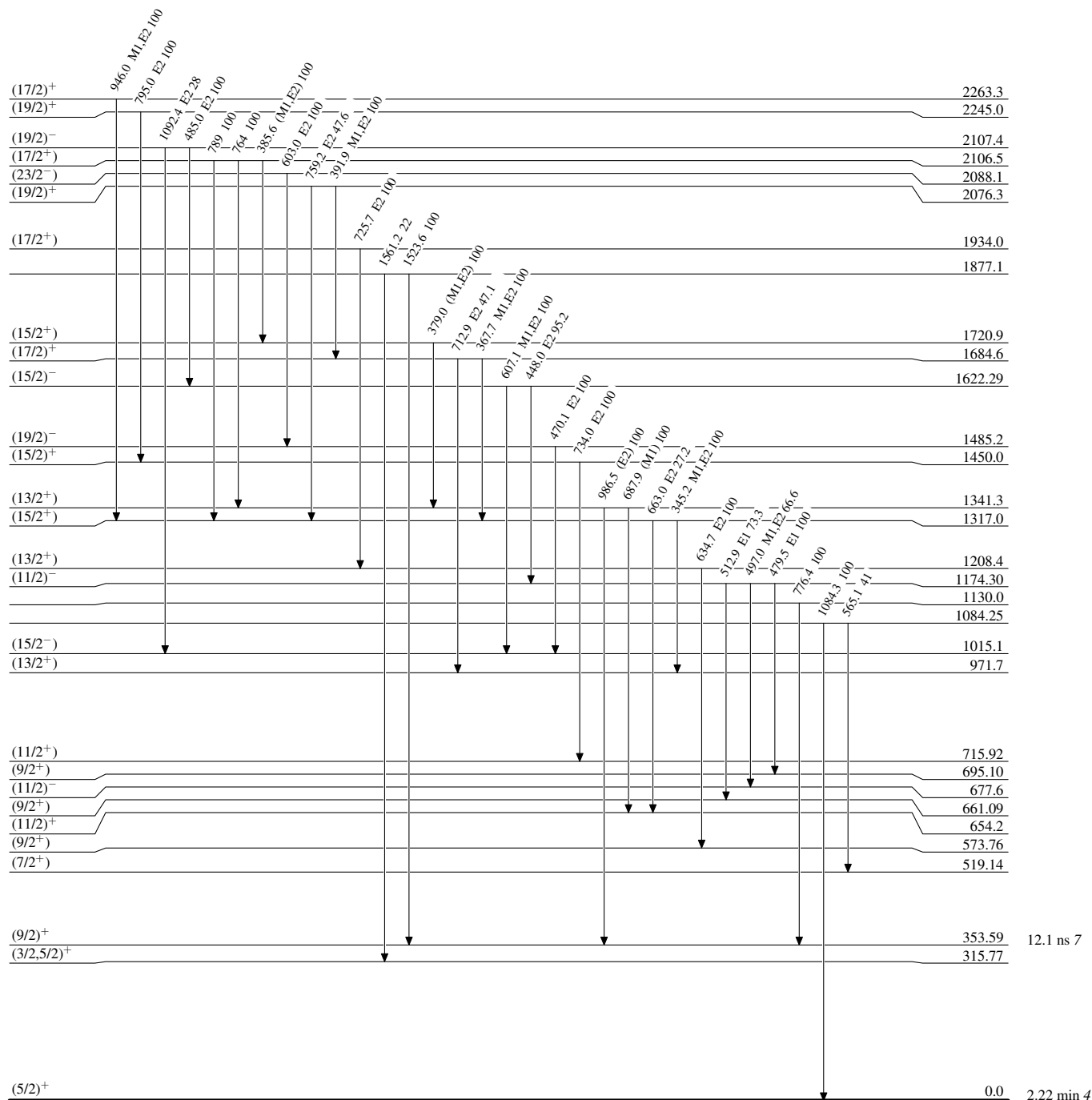
Adopted Levels, GammasLevel Scheme (continued)

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



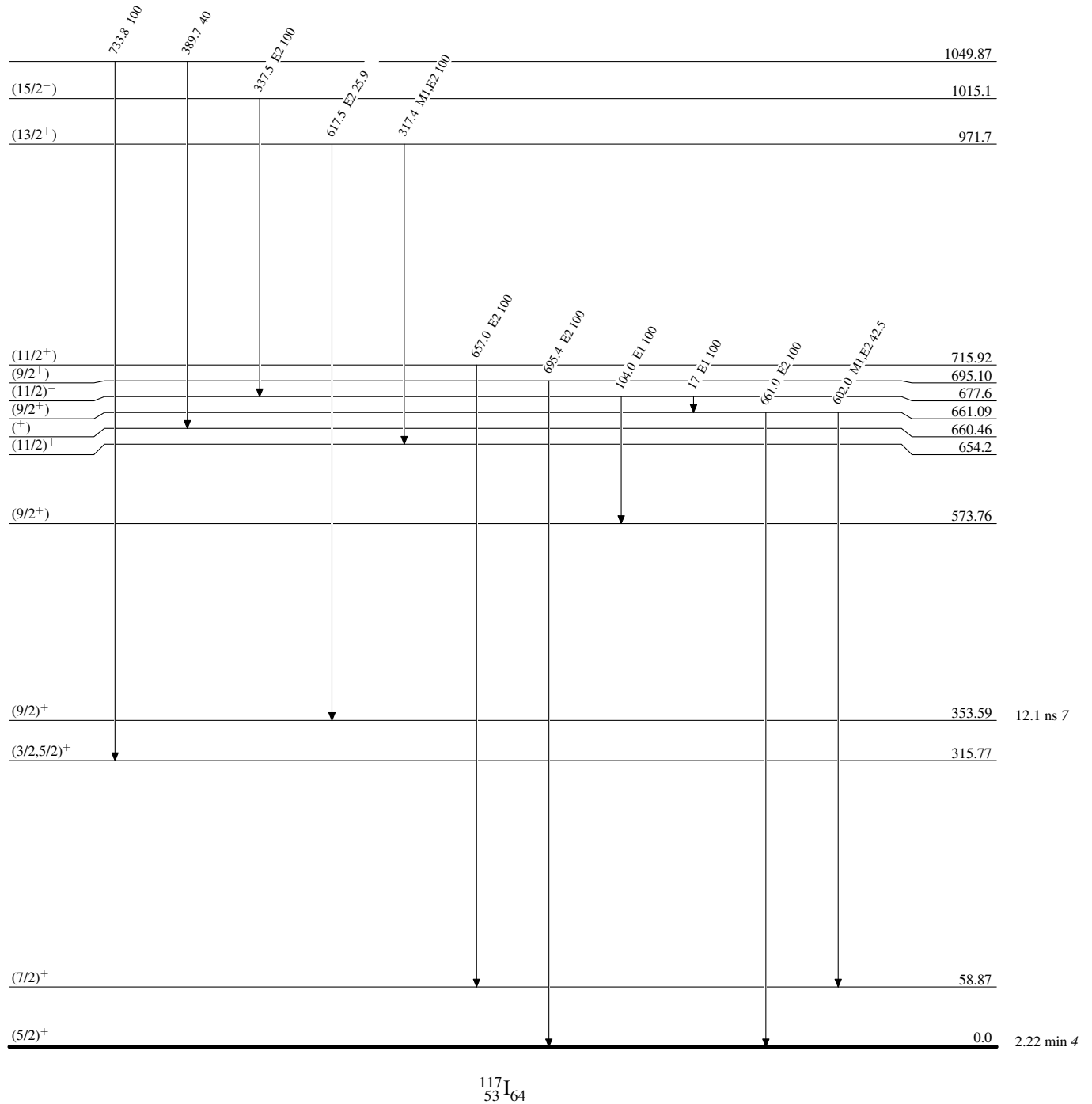
Adopted Levels, Gammas**Level Scheme (continued)**

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



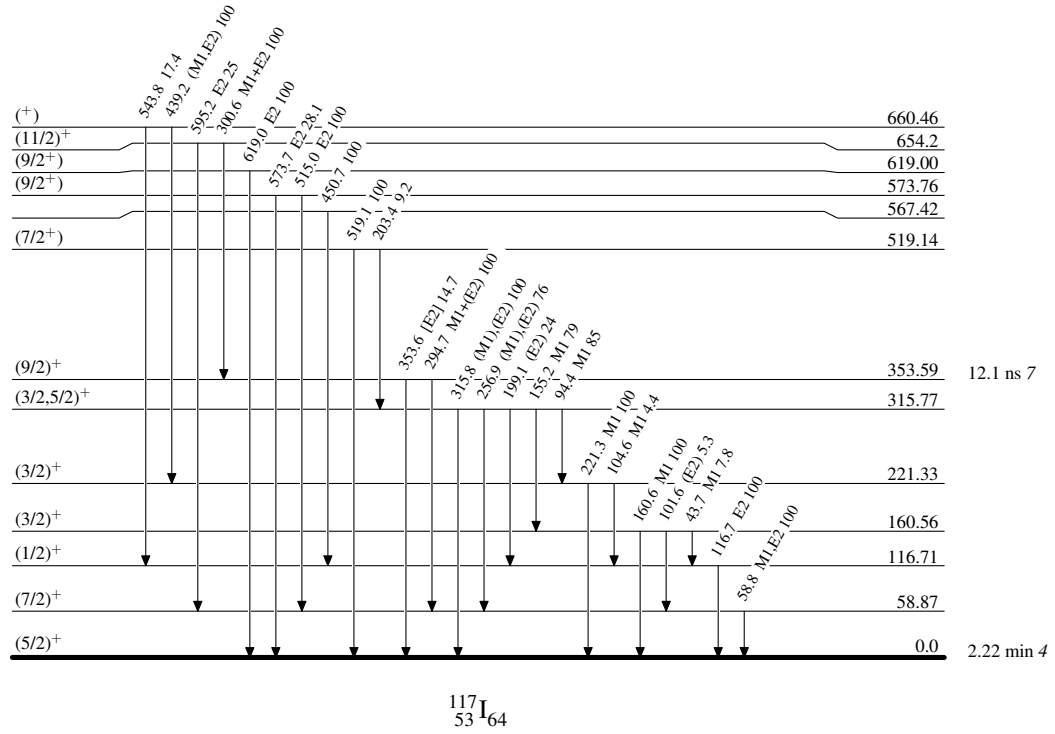
Adopted Levels, GammasLevel Scheme (continued)

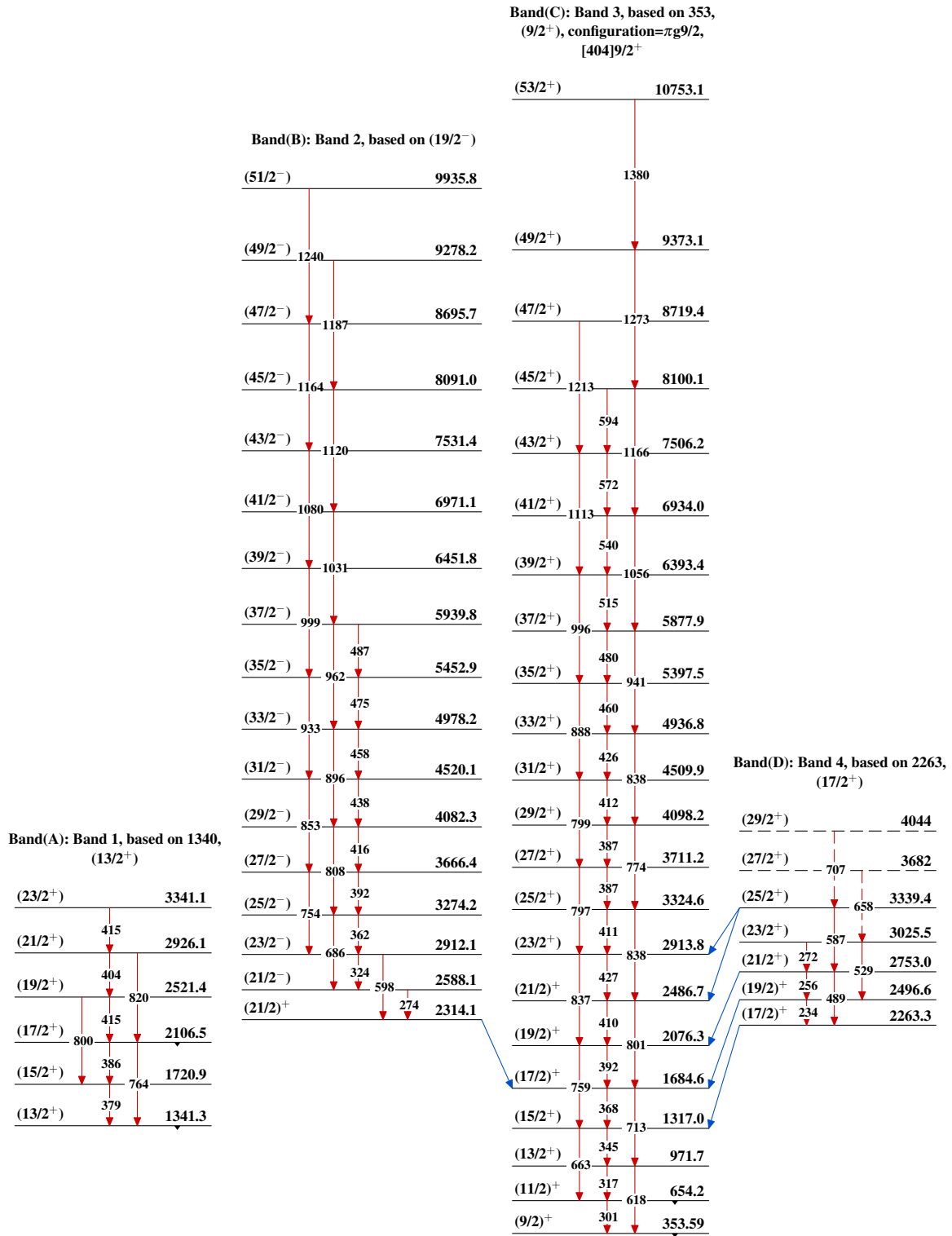
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

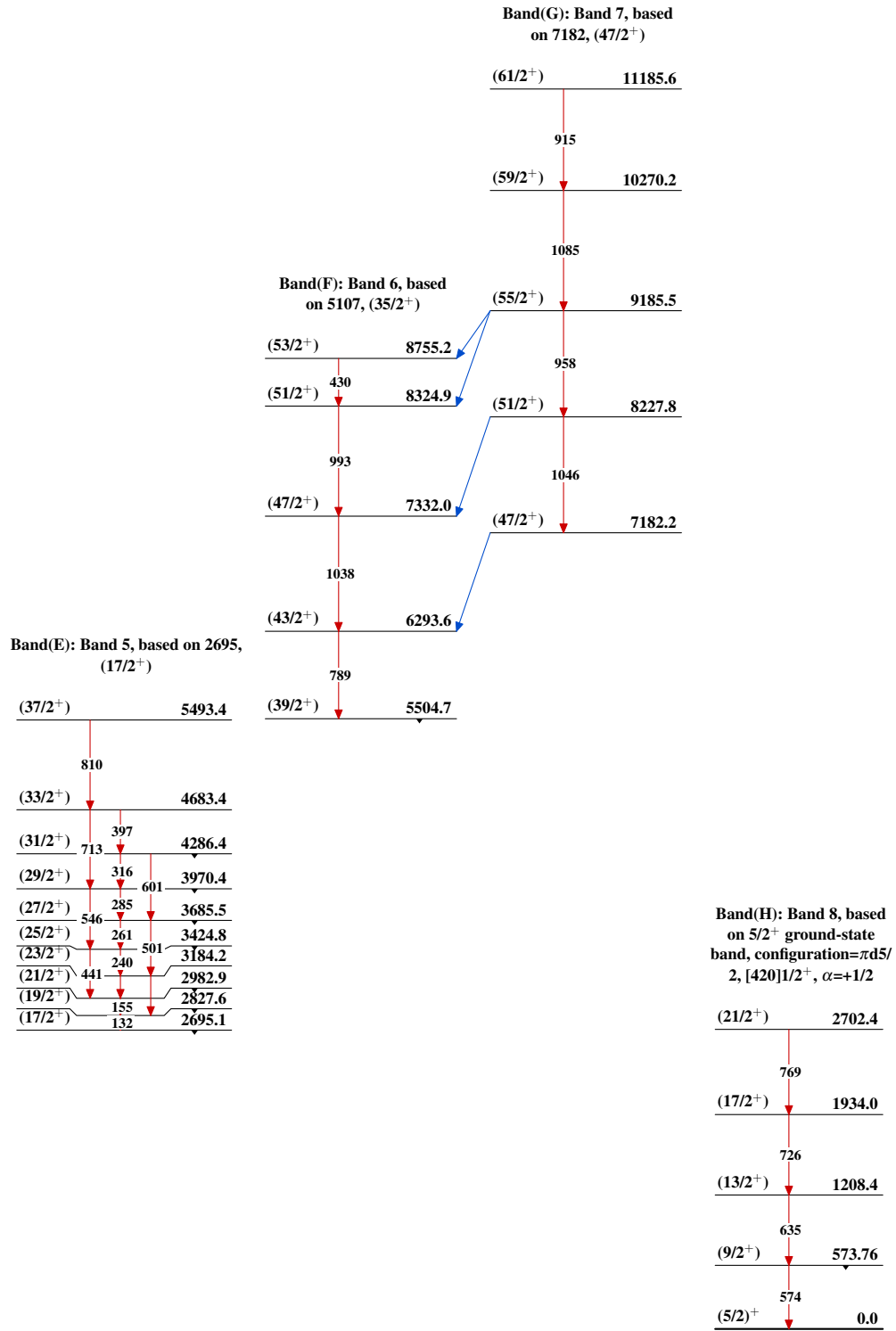


Adopted Levels, Gammas**Level Scheme (continued)**

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



Adopted Levels, Gammas

Adopted Levels, Gammas (continued)

Adopted Levels, Gammas (continued)

Band(I): Band 9, based
on 8456, (47/2⁺)

(83/2 ⁺)	21127.5
1903	
(79/2 ⁺)	19224.5
1765	
(75/2 ⁺)	17459.4
1636	
(71/2 ⁺)	15823.4
1495	
(67/2 ⁺)	14328.0
1357	
(63/2 ⁺)	12971.2
1265	
(59/2 ⁺)	11706.1
1176	
(55/2 ⁺)	10531.0
1087	
(51/2 ⁺)	9444.0
988	
(47/2 ⁺)	8456.0

Band(J): Band 10, based
on 58, (7/2⁺),
configuration= $\pi g7/2$,
[422]3/2⁺, $\alpha=+1/2$

(55/2 ⁺)	10404.3
1229	
(51/2 ⁺)	9175.3
1146	
(47/2 ⁺)	8029.3
1064	
(43/2 ⁺)	6964.8
978	
(39/2 ⁺)	5986.8
880	
(35/2 ⁺)	5107.3
776	
(31/2 ⁺)	4331.6
682	
(27/2 ⁺)	3649.5
589	
(23/2 ⁺)	3060.6
816	
(19/2 ⁺)	2245.0
795	
(15/2 ⁺)	1450.0
734	
(11/2 ⁺)	715.92
657	
(7/2 ⁺)	58.87

Band(K): Band 11, based
on 6751, (43/2⁻),
configuration= $\pi h11/2$,
[550]1/2⁻

(59/2 ⁻)	11597.3
1297	
(55/2 ⁻)	10300.0
1217	
(51/2 ⁻)	9082.9
1192	
(47/2 ⁻)	7891.1
1140	
(43/2 ⁻)	6751.8

Band(L): Band 12, based
on 677, (11/2⁻),
configuration= $\pi h11/2$,
[550]1/2⁻

(67/2 ⁻)	13522.4
1196	
(63/2 ⁻)	12326.5
1081	
(59/2 ⁻)	11245.4
1207	
(55/2 ⁻)	10038.8
1233	
(51/2 ⁻)	8805.8
1125	
(47/2 ⁻)	7680.8
1045	
(43/2 ⁻)	6635.4
1008	
(39/2 ⁻)	5626.7
1025	
(35/2 ⁻)	4601.7
941	
(31/2 ⁻)	3660.5
841	
(27/2 ⁻)	2819.6
732	
(23/2 ⁻)	2088.1
603	
(19/2 ⁻)	1485.2
470	
(15/2 ⁻)	1015.1
338	
(11/2 ⁻)	677.6

Band(M): Band 13, based
on 5677, (39/2⁻)

	9384.2
1021	
(51/2 ⁻)	8362.9
1014	
(47/2 ⁻)	7348.6
1074	
(43/2 ⁻)	6274.1
607	
(39/2 ⁻)	5667.3

Band(N): Band 14, based
on 1174, (11/2⁻)

(39/2 ⁻)	5769.3
955	
(35/2 ⁻)	4814.2
759	
(31/2 ⁻)	4054.7
700	
(27/2 ⁻)	3355.1
713	
(23/2 ⁻)	2642.0
536	
(19/2 ⁻)	2107.4
485	
(15/2 ⁻)	1622.29
448	
(11/2 ⁻)	1174.30