

Adopted Levels, Gammas

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

Q(β^-)=-2451 7; S(n)=9991 12; S(p)=5331 4; Q(α)=-2409 5 [2012Wa38](#)

Note: Current evaluation has used the following Q record -2451 7 9992 125332 5 -2419 6 [2003Au03](#).

Systematic survey of bands and excitations in ¹⁰⁷In-¹¹⁹In: ([1975Di12](#)).

¹¹¹In Levels

Cross Reference (XREF) Flags

A	¹⁰⁹ Ag(α ,2n γ)	F	¹¹¹ Sn ϵ decay (35.3 min)
B	¹¹⁰ Cd(p,p),(p,p') IAR	G	¹¹² Sn(d, ³ He)
C	¹¹¹ Cd(p,n)	H	¹¹⁰ Cd(³ He,d)
D	¹¹¹ Cd(p,n γ)	I	⁹⁶ Zr(¹⁹ F,4n γ)
E	¹¹¹ In IT decay (7.7 min)		

E(level) [†]	J $^\pi$ #	T _{1/2}	XREF	Comments
0.0	9/2 ⁺	2.8047 d 4	A CDEFGHI	<p>%ϵ=100 μ=+5.503 7; Q=+0.804 22 (1989Ra17) Configuration=((p,g9/2,-1). J$^\pi$: from atomic beam. Configuration=((p,g9/2,-1). T_{1/2}: from values of 2.84 d 3 (1949He06), 2.81 d 1 (1957Ma26), 2.84 d 11 (1968Li08), 2.96 d 8 (1968Sm08), 2.83 d 1 (1972Em01), 2.802 d 1 (1978La21, with quoted uncertainty divided by 3 to convert to 1σ value), 2.8071 d 15 (1980Ho17), 2.8049 d 1 (1983Wa26), 2.8048 d 1 (1986Ru09), and 2.8048 d 5 (1992Un01). Since the reduced-χ^2 for the weighted average for this set is 2.45, the data set is not consistent and the Limitation of Relative Statistical Weight, LRSW, method (1985ZiZY,1992Ra08) increases the uncertainty of the 1986Ru08 value from 0.0001 to 0.00033 to reduce its relative weight from 91% to 50%. The weighted average is then 2.8047 with an internal uncertainty of 0.00024, a reduced-χ^2 of 2.4, and in external uncertainty of 0.00037. This average is adopted along with an uncertainty of 0.0004, which corresponds to the external uncertainty and to that from the modified Bayesian method (1992Ra08). The Normalized Residual method (1992Ja06) and RAJEVAL method (1992Ra08) which adjust the uncertainties of the most discrepant values, those of 1972Em01 and 1978La21, give the same weighted average and uncertainties of 0.0004 and 0.0002, respectively. So, the adopted value does not depend on the analysis method. Other reported values: 2.84 d (1972Gu19) and 2.8048 d 5 (1982HoZY, replaced by 1992Un01).</p>
536.99 7	1/2 ⁻	7.7 min 2	A CDEFGH	<p>%IT=100 T_{1/2}: weighted av: 7.3 min 5 (1966Ma39), 8.5 min 4 (1968Sm08), 7.6 min 2 (1969Sh11). J$^\pi$: M4 γ decay to g.s. and L=1 (d,³He). J$^\pi$: L=1 (d,³He). E1 γ from 5/2⁺.</p>
802.92 7	3/2 ⁻		A CD FGH	J $^\pi$: L(³ He,d)=2, E2 γ decay to 9/2 ⁺ g.s.
1101.80@ 7	5/2 ⁺		A CD F HI	Configuration= π g _{9/2} ⁻¹ coupled to 2 ⁺ in ¹¹² Sn.
1152.85 ^e 6	11/2 ⁺	0.31 ps 7	A CD F I	J $^\pi$: M1+E2 γ to 9/2 ⁺ , member of g.s. rotational band. T _{1/2} : from 1991ViZY in (α ,2n γ).
1187.62 ^m 7	1/2 ⁺	0.14 ns 3	CD F H	T _{1/2} : from (1971Ki14) p,651 γ (t). J $^\pi$: L(³ He,d)=0.
1217.51 ^m 7	5/2 ⁺	1.2 ps +7-5	A D F H	T _{1/2} : from 1991ViZY in (α ,2n γ).

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Adopted Levels, Gammas (continued)

¹¹¹In Levels (continued)

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
1279.69 21	(5/2) ⁻	≤0.15 ns	A CD F	J ^π : E2 γ decay to 9/2 ⁺ g.s., L(³ He,d)=2. T _{1/2} : from (1974Ki02) p,743γ(t). J ^π : E2 γ to 1/2 ⁻ and excit (1976Di03).
1344.74 ^m 7	3/2 ⁺		A CD H	J ^π : L(³ He,d)=2, E1 γ to 1/2 ⁻ .
1350.6 6			F	
1401.16 ^e 10	13/2 ⁺		A D I	Configuration=πg _{9/2} ⁻¹ coupled to 2 ⁺ in ¹¹² Sn. J ^π : based on E2 and M1+E2 γ decays to 9/2 ⁺ and 11/2 ⁺ states, respectively, and excit via (α,2nγ).
1461.7 4			D	
1500.45 ^a 7	7/2 ⁺	0.31 ps 10	A CD F HI	T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : L(³ He,d)=4, strong γ from 2364 level which deexcites to 1/2 ⁻ .
1542.62 7	5/2 ⁺ ,7/2,9/2 ⁺		A CD F	J ^π : γ's to 5/2 ⁺ and 9/2 ⁺ .
1610.08 9	9/2 ⁺		A CD F	J ^π : M1 γ to 11/2 ⁺ and log ft≈5.3 from 7/2 ⁺ .
1671.23 12	(1/2,3/2,5/2) ⁻		AB D	J ^π : E2(+M1) γ to 3/2 ⁻ .
1752.60 [@] 12	(9/2 ⁺)	0.4 ps +3-1	A F I	T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : γ's to 5/2 ⁺ and 11/2 ⁺ .
1831.57 12			F	
1845.98 7			D	
1849.39 11	1/2 ⁻ ,3/2 ⁻	<0.2 ns	D	J ^π : E1 γ to 1/2 ⁺ . T _{1/2} : from (1971Ki14) p,662γ(t).
1866.84 8	1/2 ⁺ ,3/2 ⁺ ,5/2 ⁺		A D	J ^π : E2,M1 γ to 1/2 ⁺ .
1914.88 10	7/2 ⁺ ,9/2 ⁺		A F	J ^π : γ's to 5/2 ⁺ and 11/2 ⁺ .
1917.39 9	7/2 ⁺ ,9/2 ⁺		A D	J ^π : E2(+M1) γ's to 11/2 ⁺ and 5/2 ⁺ .
1919 5	3/2 ⁺ ,5/2 ⁺		H	Additional information 1. J ^π : L=2 in (³ He,d).
1935.40 11	-		A D	J ^π : E2,M1 γ to 3/2 ⁻ .
1969.63 12	-		A D	J ^π : E2(+M1) γ to 3/2 ⁻ .
1994.64 ^e 11	15/2 ⁺	0.3 ps 1	A I	Configuration=πg _{9/2} ⁻¹ coupled to 4 ⁺ in ¹¹² Sn. J ^π : based on E2 and M1+E2 γ decays to 11/2 ⁺ and 13/2 ⁺ states, respectively, and excit via (α,2nγ).
2002.62 11	5/2 ⁺ ,7/2 ⁺ ,9/2 ⁺		D	T _{1/2} : from 1991ViZY in (α,2nγ). T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : γ's to 5/2 ⁺ and 11/2 ⁺ .
2032.18 ^a 14	11/2 ⁺	0.7 ps 3	A I	T _{1/2} : from 1991ViZY in (α,2nγ).
2034.58 25	5/2 ⁻ ,7/2 ⁻		AB D	J ^π : E2(+M1) γ to 3/2 ⁻ . γ to 7/2 ⁺ ,9/2 ⁺ .
2067.01 12	(1/2,3/2,5/2) ⁻		D	J ^π : γ to 1/2 ⁻ .
2082.45 9	5/2 ⁺ ,7/2 ⁻		D	J ^π : γ to 3/2 ⁻ and 9/2 ⁺ .
2085 7	1/2 ⁺		H	Additional information 2. J ^π : L(³ He,d)=0.
2090.11 10	(5/2)		D	J ^π : γ's to 1/2 ⁺ ,1/2 ⁻ and 9/2 ⁻ .
2107.02 8	7/2 ⁺ ,9/2 ⁺		AB D F	J ^π : γ to 11/2 ⁺ state and log ft≈4.7 via 7/2 ⁺ initial state.
2112.25 10			A	
2142.07 9	(1/2 ⁺ ,3/2)		D	J ^π : γ's to 1/2 ⁺ ,1/2 ⁻ and 5/2 ⁺ .
2179.52 7	(7/2 ⁺ ,9/2 ⁺)		A D F	J ^π : log ft≈4.7 from 7/2 ⁺ parent, γ to 11/2 ⁺ .
2201.13 12			D	
2212.24 15	5/2 ⁺		F	J ^π : log ft=5.1 from 7/2 ⁺ . γ's to 1/2 ⁺ and 9/2 ⁺ .
2228.14 ^k 12	13/2 ⁺	0.28 ps 7	A I	T _{1/2} : from 1991ViZY in (α,2nγ).
2235.25 ^g 13	13/2 ⁻	0.2 ps 1	A I	T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : E1 γ-decay to 11/2 ⁺ , γ to 13/2 ⁺ , excit in (α,2nγ).
2238.5 3			D	
2246.66 18			A	
2259.43 11			D	
2264.5 4			D	
2271.81 11	(1/2 ⁺ ,3/2,5/2 ⁺)		D	J ^π : γ's to 1/2 ⁺ and 5/2 ⁺ .

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

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
2287.38 <i>l4</i>	(5/2 ⁺ ,7/2,9/2 ⁺)		D	J ^π : γ's to 5/2 ⁺ and 9/2 ⁺ .
2290.73 <i>l3</i>	7/2 ⁺ ,9/2 ⁺		D F	J ^π : log ft≈5.2 from 7/2 ⁺ . γ to 11/2 ⁺ .
2297.75 <i>l1</i>	3/2 ⁺ ,5/2 ⁺		D H	J ^π : L=2 in (³ He,d).
2311.28 <i>l7</i>			A D	
2323.32 <i>l0</i>	7/2 ⁺ ,9/2 ⁺		D F	J ^π : based on γ decay to 11/2 ⁺ state and log ft≈4.3 from 7/2 ⁺ parent.
2340.54 <i>9</i>	3/2 ⁺ ,5/2 ⁺		A D H	J ^π : L=2 in (³ He,d).
2361.60 ^{&} <i>20</i>	9/2 ⁺		I	
2364.58 <i>l6</i>	(1/2 ⁺ ,3/2,5/2 ⁻)		D	J ^π : γ's to 1/2 ⁻ and 5/2 ⁺ .
2373 <i>7</i>			H	Additional information 3.
2402.19 ⁸ <i>l5</i>	15/2 ⁻	0.6 ps 3	AB I	T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : E1 γ to 13/2 ⁺ , M1 γ to 13/2 ⁻ states.
2439.81 <i>l5</i>		0.38 ps 10	A	T _{1/2} : from 1991ViZY in (α,2nγ).
2461.74 ^e <i>l2</i>	17/2 ⁺	0.52 ps 17	AB I	T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : based on E2 and M1+E2 γ decays to 13/2 ⁺ and 15/2 ⁺ states, respectively, and excit via (α,2nγ).
2479.65 <i>l1</i>	3/2 ⁺ ,5/2 ⁺		D H	J ^π : L=2 in (³ He,d).
2529.93 <i>l3</i>	(5/2 ⁺)		A D H	J ^π : L=2+5 in (³ He,d), doublet, γ's to 9/2 ⁺ and 3/2 ⁻ .
2567.87 <i>l4</i>			D	
2580.85 [@] <i>l9</i>	(13/2 ⁺)		A I	
2582.6 <i>4</i>			A	
2589 <i>7</i>	3/2 ⁺ ,5/2 ⁺		H	Additional information 4. J ^π : L=2 in (³ He,d).
2602.57 <i>25</i>			A	
2613.87 ⁸ <i>l4</i>	17/2 ⁻		A I	J ^π : M1 γ decay to 15/2 ⁻ state and excit in (α,2nγ).
2616 <i>7</i>	1/2 ⁺		H	Additional information 5. J ^π : L=0 in (³ He,d).
2618.97 ⁸ <i>l4</i>	19/2 ⁻		I	
2620.36 <i>l3</i>	1/2 ⁺		D	J ^π : γ's to 3/2 ⁻ and 9/2 ⁺ .
2647.3 <i>3</i>			D	
2650.31 ^j <i>21</i>	15/2 ⁻		A I	
2659.4 <i>3</i>	3/2 ⁺ ,5/2 ⁺		D H	J ^π : L=2 in (³ He,d).
2675.4 <i>3</i>			D	
2688 <i>7</i>			H	Additional information 6.
2697.5 <i>4</i>	(1/2 ⁻ ,3/2,5/2 ⁻)		D	J ^π : γ's to 1/2 ⁻ and (5/2 ⁻).
2699.07 <i>23</i>			A	
2707.60 <i>20</i>	15/2 ⁺	1.1 ps 4	A I	T _{1/2} : from 1991ViZY in (α,2nγ).
2716.79 ^e <i>l4</i>	21/2 ⁺	13.7 ns 4	A I	μ=+5.27 19 (1980Le02,1989Ra17) T _{1/2} : weighted av: 14.8 ns 8 (1980Le05), 13.8 ns 5 (1978He10), 13.3 ns 4 (1981Va15). J ^π : observed E2 γ-decay only to 17/2 ⁺ state and excit via (α,2nγ). μ: other: μ=4.94 21 (1981Va15).
2724.3 <i>5</i>			D	
2742.59 ⁸ <i>l3</i>	21/2 ⁻		I	
2748.67 ^k <i>l2</i>	15/2 ⁺		A I	
2759.91 <i>21</i>			D	
2767.78 <i>25</i>	5/2 ⁺	>1.4 ps	D H	T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : L=2 in (³ He,d), γ to 9/2 ⁺ .
2769.04 ^j <i>l5</i>	17/2 ⁻		A I	J ^π : M1+E2 γ to (15/2) ⁻ , excit in (α,2nγ).
2772.32 ^a <i>l2</i>	15/2 ⁺	1.0 ps 3	A I	T _{1/2} : from 1991ViZY in (α,2nγ).
2780.16 <i>l3</i>	19/2 ⁺	1.0 ps +6-3	A I	T _{1/2} : from 1991ViZY in (α,2nγ).
2797.9 <i>5</i>			A	

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

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
2802.47 25	(5/2 ⁺ ,7/2 ⁻)		D H	J ^π : γ's to 9/2 ⁺ and 3/2 ⁻ .
2821 7	⁺		H	Additional information 7.
2826.37 14	17/2 ⁺		A HI	J ^π : L=2+4 in (³ He,d).
2830.38 & 14	13/2 ⁺		I	
2840.9 5			D h	
2861.35 16	(5/2 ⁺ ,7/2 ⁻)		D h	J ^π : γ's to 9/2 ⁺ and 3/2 ⁻ .
2886 7	1/2 ⁺		H	Additional information 8.
2892.84 23			A	J ^π : L=0 in (³ He,d).
2905.01 21	(17/2 ⁺)		A I	
2919.28 14	15/2 ⁺		A I	
2926.7 3			D	
2935.15 12			D	
2941.19 25			A	
2967.9 4			A H	
2979.60 ^j 14	19/2 ⁻		A I	
2997.9 3			D	
3015 7	1/2 ⁺		H	Additional information 9.
3024.53 ^g 14	23/2 ⁻	>1.4 ps	A I	J ^π : L=0 in (³ He,d). T _{1/2} : from 1991ViZY in (α,2nγ).
3028 7	1/2 ⁺		H	J ^π : M1+E2 to 19/2 ⁻ . Band member. Additional information 10.
3039.41 19	17/2 ⁺		I	J ^π : L=0 in (³ He,d).
3041.31 19	(5/2 ⁺ ,7/2 ⁺)		D	J ^π : γ's to 3/2 ⁺ and 9/2 ⁺ .
3043.77 15	19/2 ⁻	1.0 ps +10-3	A I	J ^π : (M1+E2) γ to (17/2) ⁻ . T _{1/2} : from 1991ViZY in (α,2nγ).
3063.94 21			D	
3071.02 21	3/2 ⁺ ,5/2 ⁺		D H	J ^π : L=2 in (³ He,d).
3104.64 22	1/2,3/2,5/2 ⁺		D H	J ^π : γ's to 1/2 ⁺ and 3/2 ⁻ .
3130.05 25	3/2 ⁺		D H	J ^π : L=2 in (³ He,d), γ to 1/2 ⁻ .
3157.62 ^j 15	21/2 ⁻		A I	
3164.2 3	3/2 ⁺ ,5/2 ⁺		D H	J ^π : L=2 in (³ He,d).
3177.9 3			D	
3195.28 ^k 11	17/2 ⁺			
3199.15 12			D	
3209.2 4			A	
3214.8 5			A	
3222.1 3			D	
3244 7	1/2 ⁺		H	Additional information 11.
3254 7	1/2 ⁺		H	Additional information 12.
3259.40 25			A	J ^π : L=0 in (³ He,d).
3266.5 3			D	
3363.36 15	(21/2 ⁻)		A I	
3388 7			H	Additional information 13.
3405.3 4			D	
3425.63 16	(19/2 ⁻)		A I	
3436.25 & 14	17/2 ⁺		I	
3453.26 ^j 17	23/2 ⁻	1.0 ps +10-3	A I	T _{1/2} : from 1991ViZY in (α,2nγ).
3461.13 ^{‡f} 12	19/2 ⁺		I	

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

E(level) [†]	J ^π #	T _{1/2}	XREF	Comments
3466.34 ^g 20	25/2 ⁻	0.52 ps 17	A I	T _{1/2} : from 1991ViZY in (α,2nγ). J ^π : M1+E2 γ to 21/2 ⁻ . Band member.
3565.58 ^k 12	19/2 ⁺		I	
3582.96 18	(23/2 ⁻)		I	
3588.63 ^{‡f} 12	21/2 ⁺		A I	
3599.94 ^a 15	19/2 ⁺		I	
3707.60 ^{‡f} 13	23/2 ⁺		I	
3865.08 19	(23/2 ⁺)		I	
3907.54 ^k 12	21/2 ⁺		I	
3911.92 ^{‡f} 14	25/2 ⁺		I	
3971.15 ^c 13	21/2 ⁺		I	
4018.96 ^j 20	25/2 ⁻		I	
4109.59 15	25/2 ⁺		I	
4125.90 ^l 15	25/2 ⁻		I	
4132.66 ^{&} 17	21/2 ⁺		I	
4204.58 ^g 19	27/2 ⁻	0.45 ps +17-10	A I	T _{1/2} : from 1991ViZY in (α,2nγ).
4283.28 ^{‡f} 15	27/2 ⁺		I	
4310.31 ^c 17	25/2 ⁺		I	
4395.37 16	23/2 ⁺		I	
4473.29 ^l 15	27/2 ⁻		I	
4501.05 ^a 25	(23/2 ⁺)		I	
4745.46 ^j 22	(27/2 ⁻)		I	
4796.51 ^{‡f} 16	29/2 ⁺		I	
4821.36 ^{&} 20	25/2 ⁺		I	
4873.28 17	27/2 ⁺		I	
4884.40 16	27/2 ⁺		I	
4917.73 ^g 20	29/2 ⁻		I	
4931.78 ^d 14	27/2 ⁺		I	
4957.06 ^c 19	29/2 ⁺		I	
4972.86 20	(23/2 ⁺)		I	
5084.84 ^l 18	29/2 ⁻		I	
5166.60 ^d 15	29/2 ⁺		I	
5331.51 ^{‡f} 17	31/2 ⁺		I	
5398.60 ^d 18	31/2 ⁺		I	
5402.14 ^l 20	31/2 ⁻		I	
5509.79 20	31/2 ⁺		I	
5586.06 ^{&} 22	29/2 ⁺		I	
5670.34 ^l 23	33/2 ⁻		I	
5677.90 ^d 21	33/2 ⁺		I	
5690.9 ^g 4	(31/2 ⁻)		I	
5783.86 22	(27/2 ⁺)		I	
5877.87 ^{‡f} 19	(33/2 ⁺)		I	
5891.50 ^c 18	(33/2 ⁺)		I	
6037.46 ^b 21	31/2 ⁺		I	
6050.80 ^d 23	35/2 ⁺		I	
6070.24 ^l 25	35/2 ⁻		I	
6432.9 ^{&} 3	(33/2 ⁺)		I	

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

E(level) [†]	J ^π #	XREF	Comments
6537.90 ^d 25	(37/2 ⁺)	I	
6700.76 ^b 23	35/2 ⁺	I	
7044.24 ^c 20	(37/2 ⁺)	I	
7175.0 ^d 3	(39/2 ⁺)	I	
7280.4 ^{&} 5	(37/2 ⁺)	I	
7605.8 ^b 3	(39/2 ⁺)	I	
7916.9 ^d 3	(41/2 ⁺)	I	
8183.2 ^{&} 5	(41/2 ⁺)	I	
8335.6 ^c 3	(41/2 ⁺)	I	
8680.9 ^d 4	(43/2 ⁺)	I	
8811.4 ^b 4	(43/2 ⁺)	I	
9213.8 ^{&} 5	(45/2 ⁺)	I	
10432.9 ^{&} 6	(49/2 ⁺)	I	
11772		B	
11868.3 ^{&} 8	(53/2 ⁺)	I	
12036		B	
12142		B	
12403		B	
12503		B	
12640		B	
12826		B	
12965		B	
13100		B	
13502.8 ^{&} 10	(57/2 ⁺)	I	
0+x ^h	(31/2 ⁻)	I	Additional information 14. E(level): x ≈5500.
390.50+x ^h 10	(33/2 ⁻)	I	
794.70+x ^h 15	(35/2 ⁻)	I	
1244.30+x ^h 18	(37/2 ⁻)	I	
1774.10+x ^h 20	(39/2 ⁻)	I	
2354.60+x ^h 23	(41/2 ⁻)	I	
0+y ⁱ	(23/2 ⁻)	I	Additional information 15.
705.70+y ⁱ 20	(27/2 ⁻)	I	
1518.90+y ⁱ 23	(31/2 ⁻)	I	
2410.60+y ⁱ 25	(35/2 ⁻)	I	
3363.0+y ⁱ 3	(39/2 ⁻)	I	
4400.1+y ⁱ 3	(43/2 ⁻)	I	
5508.4+y ⁱ 4	(47/2 ⁻)	I	
6714.5+y ⁱ 4	(51/2 ⁻)	I	
8025.0+y ⁱ 5	(55/2 ⁻)	I	
9403.1+y ⁱ 6	(59/2 ⁻)	I	
10850.1+y ⁱ 10	(63/2 ⁻)	I	

[†] From least-squares fit to E γ 's (by evaluator).

[‡] IAS.

J^π without comments are based on band assignments and syst.

@ Band(A): band 1.

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Adopted Levels, Gammas (continued)

 ^{111}In Levels (continued)

- & Band(B): band 2.
a Band(C): band 3: $\pi g_{7/2} g_{9/2}^{-2}$.
b Band(D): band 4.
c Band(E): band 5.
d Band(F): Band 6: magnetic-rotational ($\Delta J=1$) (?). Possible configuration= $((\pi g_{9/2})^{-1}(\nu h_{11/2})^{+2}(\nu g_{7/2})^{+2})$.
e Band(G): band 7.
f Band(H): Band 8: magnetic-rotational ($\Delta J=1$) (?). Possible configuration= $((\pi g_{9/2})^{-1}(\nu h_{11/2})^{+2})$.
g Band(I): band 9.
h Band(J): Band 10: magnetic-rotational ($\Delta J=1$) (?). Possible configuration= $\pi(g_{9/2} g_{9/2}^{-2})\nu(h_{11/2} g_{7/2}(d_{5/2}))$.
i Band(K): band 11: $\pi h_{11/2} g_{9/2}^{-2}$.
j Band(L): band 12.
k Band(M): cascade 1.
l Band(N): cascade 2.
m Band(O): 1/2[431] band; $\alpha=13.4, a=+2.9$.

Adopted Levels, Gammas (continued)

E _i (level)	J _i ^π	γ(¹¹¹ In)							Comments
		E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult. [‡]	δ [‡]	α [#]	
536.99	1/2 ⁻	537.22 9	100	0.0	9/2 ⁺	M4		0.146	B(M4)(W.u.)=8.68 23
802.92	3/2 ⁻	265.7 6	100	536.99	1/2 ⁻	M1		0.0360	
1101.80	5/2 ⁺	298.6 7	3.9 2	802.92	3/2 ⁻	E1			
		1101.18 24	100 4	0.0	9/2 ⁺	E2			
1152.85	11/2 ⁺	1152.98 11	100	0.0	9/2 ⁺	M1+E2	0.40 10		B(M1)(W.u.)=0.040 10; B(E2)(W.u.)=3.9 19
1187.62	1/2 ⁺	384.6 2	0.62 20	802.92	3/2 ⁻				
		650.7 1	100 4	536.99	1/2 ⁻	E1			B(E1)(W.u.)=7.5×10 ⁻⁶ 20
1217.51	5/2 ⁺	414.5 1	9.6 9	802.92	3/2 ⁻	E1			B(E1)(W.u.)=0.00030 19
		1217.4 1	100 25	0.0	9/2 ⁺	E2			B(E2)(W.u.)=5 4
1279.69	(5/2) ⁻	476.7 8	12.9 16	802.92	3/2 ⁻	E2,M1			
		742.9 8	100 7	536.99	1/2 ⁻	E2			B(E2)(W.u.)>0.47
1344.74	3/2 ⁺	127.0 3	0.75	1217.51	5/2 ⁺				
		157.1 1	5.0 13	1187.62	1/2 ⁺	E2(+M1)			
		242.7 2	100 5	1101.80	5/2 ⁺	M1(+E2)			
		808.0 1	4.2 5	536.99	1/2 ⁻	E1			
1350.6		1350.6 6	100	0.0	9/2 ⁺				
1401.16	13/2 ⁺	248.2 2	1.0 5	1152.85	11/2 ⁺	M1+(E2)	0.00 4	0.0641	
		1401.2 2	100 4	0.0	9/2 ⁺	E2			
1461.7		1461.7 4	100	0.0	9/2 ⁺				
1500.45	7/2 ⁺	398.4 2	4.9 11	1101.80	5/2 ⁺	E2,M1			
		1500.54 8	100	0.0	9/2 ⁺	M1,E2			
1542.62	5/2 ⁺ ,7/2,9/2 ⁺	325.5 7	4.7 18	1217.51	5/2 ⁺				
		441.5 10	4.3 15	1101.80	5/2 ⁺				
		1542.75 15	100 6	0.0	9/2 ⁺				
1610.08	9/2 ⁺	457.1 3	28.4 10	1152.85	11/2 ⁺	M1(+E2)			
		1610.0 1	100 5	0.0	9/2 ⁺				
1671.23	(1/2,3/2,5/2) ⁻	868.3 1	100	802.92	3/2 ⁻	E2(+M1)			
1752.60	(9/2 ⁺)	252.0 3	8 4	1500.45	7/2 ⁺				
		599.5 3	40 8	1152.85	11/2 ⁺				
		650.9 2	100 12	1101.80	5/2 ⁺	[E2]			
		1752.6 2	90 8	0.0	9/2 ⁺	[M1,E2]			
1831.57		288 1	53 26	1542.62	5/2 ⁺ ,7/2,9/2 ⁺				
		613.4 3	100 16	1217.51	5/2 ⁺				
		729.85 10	74 16	1101.80	5/2 ⁺				
1845.98		566.2 3	51 3	1279.69	(5/2) ⁻				
		744.6 2	18 2	1101.80	5/2 ⁺				
		1043.2 1	31 2	802.92	3/2 ⁻				
		1845.8 1	100 5	0.0	9/2 ⁺				
1849.39	1/2 ⁻ ,3/2 ⁻	661.7 1	100	1187.62	1/2 ⁺	E1			B(E1)(W.u.)>5.1×10 ⁻⁶
1866.84	1/2 ⁺ ,3/2 ⁺ ,5/2 ⁺	649.0 2	100 5	1217.51	5/2 ⁺				
		679.2 1	38.2 15	1187.62	1/2 ⁺	E2,M1			

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Adopted Levels, Gammas (continued)

γ(¹¹¹In) (continued)

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult. [‡]	δ [‡]	Comments
1866.84	1/2 ⁺ ,3/2 ⁺ ,5/2 ⁺	1063.7 1	47 3	802.92	3/2 ⁻			
1914.88	7/2 ⁺ ,9/2 ⁺	304.2 6	0.8 4	1610.08	9/2 ⁺			
		372.31 19	21.3 11	1542.62	5/2 ⁺ ,7/2,9/2 ⁺			
		761.97 12	74.4 25	1152.85	11/2 ⁺			
		813.8 3	2.7 6	1101.80	5/2 ⁺			
		1914.70 21	100 4	0.0	9/2 ⁺			
1917.39	7/2 ⁺ ,9/2 ⁺	374.3 1	38 3	1542.62	5/2 ⁺ ,7/2,9/2 ⁺			
		765.0 1	100 5	1152.85	11/2 ⁺	E2(+M1)		
		815.8 5	77 4	1101.80	5/2 ⁺	E2(+M1)		
1935.40	-	1132.6 1	100	802.92	3/2 ⁻	E2,M1		
1969.63	-	1166.7 1	100	802.92	3/2 ⁻	E2(+M1)		
1994.64	15/2 ⁺	593.5 2	100 12	1401.16	13/2 ⁺	M1+E2	+0.16 5	B(M1)(W.u.)=0.29 11; B(E2)(W.u.)=17 13
		841.8 2	18 6	1152.85	11/2 ⁺	E2		B(E2)(W.u.)=21 11
2002.62	5/2 ⁺ ,7/2 ⁺ ,9/2 ⁺	900.8 1	51 3	1101.80	5/2 ⁺			
		2002.4 3	100 6	0.0	9/2 ⁺			
2032.18	11/2 ⁺	422.2 5	9 5	1610.08	9/2 ⁺			
		531.8 2	100 9	1500.45	7/2 ⁺			
2034.58	5/2 ⁻ ,7/2 ⁻	533.5 4	78 22	1500.45	7/2 ⁺			
		1232.0 3	100 22	802.92	3/2 ⁻	E2(+M1)		
2067.01	(1/2,3/2,5/2 ⁻)	1264.3 4	36 9	802.92	3/2 ⁻			
		1530.5 4	100 18	536.99	1/2 ⁻			
2082.45	5/2 ⁺ ,7/2 ⁻	215.4 1	28.2 21	1866.84	1/2 ⁺ ,3/2 ⁺ ,5/2 ⁺			
		540.0 3	100 5	1542.62	5/2 ⁺ ,7/2,9/2 ⁺			
		582.5 2	67 4	1500.45	7/2 ⁺			
		865.6 3	32.6 21	1217.51	5/2 ⁺			
		980.7 5	21.7 21	1101.80	5/2 ⁺			
		1279.6 2	23.9 21	802.92	3/2 ⁻			
		2082.1 3	8.6 21	0.0	9/2 ⁺			
2090.11	(5/2)	902.6 1	100 5	1187.62	1/2 ⁺			
		1287.2 2	39 4	802.92	3/2 ⁻			
		1552.6 2	30 4	536.99	1/2 ⁻			
		2090.2 3	22 4	0.0	9/2 ⁺			
2107.02	7/2 ⁺ ,9/2 ⁺	496.8 3	13.0 21	1610.08	9/2 ⁺			
		564.34 9	60 4	1542.62	5/2 ⁺ ,7/2,9/2 ⁺			
		607.1 5	3.1 10	1500.45	7/2 ⁺			
		890.0 6	11 3	1217.51	5/2 ⁺			
		954.05 13	100 4	1152.85	11/2 ⁺			
		1006.0 4	5.7 16	1101.80	5/2 ⁺			
		2107.13 13	86 5	0.0	9/2 ⁺			
2112.25		959.4 1	100 7	1152.85	11/2 ⁺			
		2112.2 2	50 5	0.0	9/2 ⁺			
2142.07	(1/2 ⁺ ,3/2)	797.0 2	21.5 19	1344.74	3/2 ⁺			

Adopted Levels, Gammas (continued)

$E_i(\text{level})$	J_i^π	$\gamma(^{111}\text{In})$ (continued)					Comments
		E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	
2142.07	(1/2 ⁺ , 3/2)	924.3 2	5.8 19	1217.51	5/2 ⁺		
		954.9 5	13.7 19	1187.62	1/2 ⁺		
		1040.3 1	100 5	1101.80	5/2 ⁺		
2179.52	(7/2 ⁺ , 9/2 ⁺)	1605.4 2	27.4 19	536.99	1/2 ⁻		
		569.2 3	14 7	1610.08	9/2 ⁺		
		637.2 1	91 9	1542.62	5/2 ⁺ , 7/2, 9/2 ⁺		
		962.0 5	5 3	1217.51	5/2 ⁺		
		991.8 1	100 9	1187.62	1/2 ⁺		
		1026.5 1	82 9	1152.85	11/2 ⁺		
2201.13		2179.3 3	50 20	0.0	9/2 ⁺		
		529.9 4	100 2	1671.23	(1/2, 3/2, 5/2) ⁻		
2212.24	5/2 ⁺	1398.2 1	53.8 19	802.92	3/2 ⁻		
		601 1	5.7 2	1610.08	9/2 ⁺		
		669.4 4	5.7 4	1542.62	5/2 ⁺ , 7/2, 9/2 ⁺		
		995.0 6	9 4	1217.51	5/2 ⁺		
		1059.4 4	8.0 4	1152.85	11/2 ⁺		
		1110.8 3	33 5	1101.80	5/2 ⁺		
2228.14	13/2 ⁺	2212.09 22	100 9	0.0	9/2 ⁺		
		1075.2 2	100 8	1152.85	11/2 ⁺	[M1, E2]	
		2228.2 4	8 3	0.0	9/2 ⁺		
2235.25	13/2 ⁻	834.1 1	23 5	1401.16	13/2 ⁺		
		1082.5 3	100	1152.85	11/2 ⁺	E1	B(E1)(W.u.)=0.0009 5
2238.5		958.8 2	100	1279.69	(5/2) ⁻		
2246.66		636.6 2	63 13	1610.08	9/2 ⁺		
		2246.6 3	100 19	0.0	9/2 ⁺		
2259.43		192.2 2	14 5	2067.01	(1/2, 3/2, 5/2) ⁻		
		256.5 3	14 5	2002.62	5/2 ⁺ , 7/2 ⁺ , 9/2 ⁺		
		716.9 1	100 5	1542.62	5/2 ⁺ , 7/2, 9/2 ⁺		
2264.5		1461.6 4	100 5	802.92	3/2 ⁻		
2271.81	(1/2 ⁺ , 3/2, 5/2 ⁺)	204.9 1	100 5	2067.01	(1/2, 3/2, 5/2) ⁻		
		404.6 2	10.0 14	1866.84	1/2 ⁺ , 3/2 ⁺ , 5/2 ⁺		
		1054.1 2	8.5 14	1217.51	5/2 ⁺		
		1084.1 6	2.8 10	1187.62	1/2 ⁺		
		1170.2 2	54 3	1101.80	5/2 ⁺		
		1468.7 4	5.7 12	802.92	3/2 ⁻		
2287.38	(5/2 ⁺ , 7/2, 9/2 ⁺)	352.5 2	100 20	1935.40	-		
		1185.2 2	70 10	1101.80	5/2 ⁺		
		2287.0 3	100 10	0.0	9/2 ⁺		
2290.73	7/2 ⁺ , 9/2 ⁺	680.2 6	73 14	1610.08	9/2 ⁺		
		748.5 2	50 30	1542.62	5/2 ⁺ , 7/2, 9/2 ⁺		
		1137.8 3	55 7	1152.85	11/2 ⁺		
		2290.4 2	100 10	0.0	9/2 ⁺		

Adopted Levels, Gammas (continued)

$\gamma(^{111}\text{In})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ^\ddagger	Comments
2297.75	3/2 ⁺ ,5/2 ⁺	1080.0 2	48 5	1217.51	5/2 ⁺			
		1110.2 1	100 5	1187.62	1/2 ⁺			
		1195.3 6	35 5	1101.80	5/2 ⁺			
2311.28		1031.4 5	27 4	1279.69	(5/2) ⁻			
		1094.0 4	42 4	1217.51	5/2 ⁺			
		1209.4 2	38 4	1101.80	5/2 ⁺			
		1508.5 4	100	802.92	3/2 ⁻			
2323.32	7/2 ⁺ ,9/2 ⁺	1170.0 8	14 4	1152.85	11/2 ⁺			
		2323.30 10	100 7	0.0	9/2 ⁺			
2340.54	3/2 ⁺ ,5/2 ⁺	840.3 4	57 7	1500.45	7/2 ⁺			
		996.1 1	100 5	1344.74	3/2 ⁺			
		1238.4 1	57 4	1101.80	5/2 ⁺			
2361.60	9/2 ⁺	861.4 3	100 3	1500.45	7/2 ⁺	M1,E2		
2364.58	(1/2 ⁺ ,3/2,5/2 ⁻)	864.2 2	100 12	1500.45	7/2 ⁺			
		1146.9 3	44 6	1217.51	5/2 ⁺			
		1827.6 4	38 6	536.99	1/2 ⁻			
2402.19	15/2 ⁻	167.0 2	1.8 7	2235.25	13/2 ⁻	M1+E2	0.00 5	B(M1)(W.u.)=0.14 9 B(E1)(W.u.)=0.00048 25
		1001.2 2	100 7	1401.16	13/2 ⁺	E1		
2439.81		1038.3 2	100	1401.16	13/2 ⁺			
2461.74	17/2 ⁺	466.9 2	100 5	1994.64	15/2 ⁺	M1+E2	+0.06 4	B(M1)(W.u.)=0.31 11; B(E2)(W.u.)=4 6 B(E2)(W.u.)=6.6 24
		1060.5 3	35 4	1401.16	13/2 ⁺	E2		
2479.65	3/2 ⁺ ,5/2 ⁺	412.6 3	15.2 16	2067.01	(1/2,3/2,5/2 ⁻)			
		634.0 2	8 3	1845.98				
		978.9 2	8.4 16	1500.45	7/2 ⁺			
		1134.6 2	100 5	1344.74	3/2 ⁺			
		1200.5 5	18.6 16	1279.69	(5/2) ⁻			
		1262.2 3	15.2 15	1217.51	5/2 ⁺			
		1677.3 4	32.2 16	802.92	3/2 ⁻			
2529.93	(5/2 ⁺)	987.7 2	21 4	1542.62	5/2 ⁺ ,7/2,9/2 ⁺			
		1427.9 3	21 4	1101.80	5/2 ⁺			
		1726.9 2	100 5	802.92	3/2 ⁻			
		2529.4 3	33 4	0.0	9/2 ⁺			
2567.87		1166.7 1	100	1401.16	13/2 ⁺			
2580.85	(13/2 ⁺)	828.2 2	100 13	1752.60	(9/2 ⁺)	[E2]		
		1179.8 3	29 13	1401.16	13/2 ⁺			
2582.6		347.4 4	100 33	2235.25	13/2 ⁻			
		587.8 5	100 33	1994.64	15/2 ⁺			
2602.57		1201.4 4	75 25	1401.16	13/2 ⁺			
		1449.7 3	100 25	1152.85	11/2 ⁺			
2613.87	17/2 ⁻	211.7 2	100 10	2402.19	15/2 ⁻	M1+E2	+0.02 4	
		619.3 3	5.5 10	1994.64	15/2 ⁺			
		1212.6 3	1.6 6	1401.16	13/2 ⁺			

Adopted Levels, Gammas (continued)

γ(¹¹¹In) (continued)

<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[‡]</u>	<u>δ[‡]</u>	<u>Comments</u>
2618.97	19/2 ⁻	(5.0)		2613.87	17/2 ⁻	[M1,E2]		
		157.1 2	100 50	2461.74	17/2 ⁺	E1		
2620.36	1/2 ⁺	770.9 1	100 5	1849.39	1/2 ⁻ ,3/2 ⁻			
		1403.4 3	83 5	1217.51	5/2 ⁺			
		1817.4 4	56 6	802.92	3/2 ⁻			
		2620.4 3	64 5	0.0	9/2 ⁺			
2647.3		1429.8 3	100	1217.51	5/2 ⁺			
2650.31	15/2 ⁻	415.1 2	100	2235.25	13/2 ⁻	M1,E2		
		655.5 4	3.2 16	1994.64	15/2 ⁺			
2659.4	3/2 ⁺ ,5/2 ⁺	1441.9 3	77 8	1217.51	5/2 ⁺			
		1557.7 5	100 8	1101.80	5/2 ⁺			
2675.4		1573.6 3	100	1101.80	5/2 ⁺			
2697.5	(1/2 ⁻ ,3/2,5/2 ⁻)	1417.7 5	74 5	1279.69	(5/2) ⁻			
		2160.5 4	100 5	536.99	1/2 ⁻			
2699.07		1297.9 3	100 38	1401.16	13/2 ⁺			
		1546.2 3	100 38	1152.85	11/2 ⁺			
2707.60	15/2 ⁺	472.4 5	5.2 26	2235.25	13/2 ⁻			
		1306.4 2	100 8	1401.16	13/2 ⁺			
2716.79	21/2 ⁺	255.3 2	100	2461.74	17/2 ⁺	E2		B(E2)(W.u.)=1.20 4
2724.3		1444.6 4	100	1279.69	(5/2) ⁻			
2742.59	21/2 ⁻	123.5 1	100 5	2618.97	19/2 ⁻	M1,E2		
		128.8 1	2.8 3	2613.87	17/2 ⁻	[E2]		
2748.67	15/2 ⁺	520.2 2	18 9	2228.14	13/2 ⁺	[M1,E2]		
		1347.1 2	100 14	1401.16	13/2 ⁺	[M1,E2]		
		1595.6 3	50 10	1152.85	11/2 ⁺	[E2]		
2759.91		1658.1 2	100	1101.80	5/2 ⁺			
2767.78	5/2 ⁺	1580.4 3	100 10	1187.62	1/2 ⁺			
		2767.3 4	63 13	0.0	9/2 ⁺			
2769.04	17/2 ⁻	118.8 @		2650.31	15/2 ⁻	[M1,E2]		
		328.8 2	6.5 22	2439.81		[E1]		
		366.6 1	100 8	2402.19	15/2 ⁻	M1+E2	+0.07 5	
		774.1 3	26.1 22	1994.64	15/2 ⁺	[E1]		
2772.32	15/2 ⁺	740.2 2	100	2032.18	11/2 ⁺	E2		
		1371.3 2	36 7	1401.16	13/2 ⁺	[M1,E2]		
		1619.4 2	21 7	1152.85	11/2 ⁺	[E2]		
2780.16	19/2 ⁺	318.4 2	21 4	2461.74	17/2 ⁺	M1,E2		
		785.3 2	100 9	1994.64	15/2 ⁺	E2		
2797.9		685.6 4	100	2112.25				
2802.47	(5/2 ⁺ ,7/2 ⁻)	1999.2 3	100 8	802.92	3/2 ⁻			
		2803.0 4	75 8	0.0	9/2 ⁺			
2826.37	17/2 ⁺	386.7 9	11 11	2439.81		[M1,E2]		

Adopted Levels, Gammas (continued)

$\gamma(^{111}\text{In})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. ‡	δ^\ddagger	Comments
2826.37	17/2 ⁺	832.3 3	44 11	1994.64	15/2 ⁺	[M1,E2]		
		1425.2 2	100 11	1401.16	13/2 ⁺	[E2]		
2830.38	13/2 ⁺	468.9 2	40 20	2361.60	9/2 ⁺	E2		
		798.2 1	100 20	2032.18	11/2 ⁺	M1,E2		
2840.9		2038.0 5	100	802.92	3/2 ⁻			
2861.35	(5/2 ⁺ ,7/2 ⁻)	1318.8 2	90 10	1542.62	5/2 ⁺ ,7/2,9/2 ⁺			
		2057.9 4	50 10	802.92	3/2 ⁻			
		2861.4 3	100 10	0.0	9/2 ⁺			
2892.84		898.2 2	100	1994.64	15/2 ⁺			
2905.01	(17/2 ⁺)	197.4 1	100 13	2707.60	15/2 ⁺	[M1,E2]		
		502.9 4	26 9	2402.19	15/2 ⁻			
2919.28	15/2 ⁺	1518.8 3	100 30	1401.16	13/2 ⁺			
		1767.2 5	30 10	1152.85	11/2 ⁺			
2926.7		1384.1 3	100	1542.62	5/2 ⁺ ,7/2,9/2 ⁺			
2935.15		2132.2 1	100	802.92	3/2 ⁻			
2941.19		539.0 2	100	2402.19	15/2 ⁻			
2967.9		565.7 3	100	2402.19	15/2 ⁻			
2979.60	19/2 ⁻	210.4 1	100 8	2769.04	17/2 ⁻	[M1,E2]		
		360.7 1	42 4	2618.97	19/2 ⁻	M1,E2		
2997.9		1810.3 3	100	1187.62	1/2 ⁺			
3024.53	23/2 ⁻	281.7 2	100	2742.59	21/2 ⁻	M1+E2	+0.02 6	B(M1)(W.u.)<0.71; B(E2)(W.u.)<20
3039.41	17/2 ⁺	599.6 2	71 14	2439.81		[M1,E2]		
		1638.2 3	100 14	1401.16	13/2 ⁺	[E2]		
3041.31	(5/2 ⁺ ,7/2 ⁺)	1696.5 2	100 5	1344.74	3/2 ⁺			
		3041.5 4	17 4	0.0	9/2 ⁺			
3043.77	19/2 ⁻	274.8 2	100 11	2769.04	17/2 ⁻	(M1+E2)	+0.05 7	B(M1)(W.u.)=0.7 7; B(E2)(W.u.)=2.E+1 6
		429.6 2	53 6	2613.87	17/2 ⁻			
3063.94		1876.3 2	100	1187.62	1/2 ⁺			
3071.02	3/2 ⁺ ,5/2 ⁺	1969.2 2	100	1101.80	5/2 ⁺			
3104.64	1/2,3/2,5/2 ⁺	1917.2 3	100 10	1187.62	1/2 ⁺			
		2301.5 3	56 11	802.92	3/2 ⁻			
3130.05	3/2 ⁺	2327.5 4	71 7	802.92	3/2 ⁻			
		2592.8 3	100 5	536.99	1/2 ⁻			
3157.62	21/2 ⁻	177.5 2	100 8	2979.60	19/2 ⁻			
3164.2	3/2 ⁺ ,5/2 ⁺	2062.4 3	100	1101.80	5/2 ⁺			
3177.9		1898.2 2	100	1279.69	(5/2) ⁻			
3195.28	17/2 ⁺	276.1 1	33 8	2919.28	15/2 ⁺	M1,E2		
		446.5 1	100 8	2748.67	15/2 ⁺	M1,E2		
		967.2 1	42 8	2228.14	13/2 ⁺	[E2]		
		1200.8 1	50 8	1994.64	15/2 ⁺	[M1,E2]		
3199.15		2396.2 1	100	802.92	3/2 ⁻			
3209.2		807.0 3	100	2402.19	15/2 ⁻			

Adopted Levels, Gammas (continued)

γ(¹¹¹In) (continued)

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult. [‡]	δ [‡]	Comments
3214.8		498.0 4	100	2716.79	21/2 ⁺			
3222.1		2034.5 3	100	1187.62	1/2 ⁺			
3259.40		542.6 2	100	2716.79	21/2 ⁺			
3266.5		1921.7 3	100	1344.74	3/2 ⁺			
3363.36	(21/2 ⁻)	319.6 1	100 14	3043.77	19/2 ⁻	[M1,E2]		
		744.4 1	100 14	2618.97	19/2 ⁻	[M1,E2]		
3405.3		2125.6 3	100	1279.69	(5/2) ⁻			
3425.63	(19/2 ⁻)	381.8 1	33 8	3043.77	19/2 ⁻	[M1,E2]		
		806.7 2	100 8	2618.97	19/2 ⁻	(M1,E2)		
		1023.6 2	67 8	2402.19	15/2 ⁻	[E2]		
3436.25	17/2 ⁺	605.9 1	100 12	2830.38	13/2 ⁺	E2		
		663.9 1	21 6	2772.32	15/2 ⁺	M1,E2		
3453.26	23/2 ⁻	295.7 1	100 5	3157.62	21/2 ⁻	M1,E2		
		428.5 2	7.0 23	3024.53	23/2 ⁻	M1,E2		
3461.13	19/2 ⁺	421.7 3	3.1 16	3039.41	17/2 ⁺	M1,E2		
		634.8 1	12.5 16	2826.37	17/2 ⁺	M1,E2		
		999.3 1	100 5	2461.74	17/2 ⁺	M1,E2		
		1021.4 2	7.8 16	2439.81		[E2]		
		1466.2 2	12.5 16	1994.64	15/2 ⁺	E2		
3466.34	25/2 ⁻	442.0 2	100	3024.53	23/2 ⁻	M1+E2	+0.05 7	B(M1)(W.u.)=0.49 16; B(E2)(W.u.)=5 15
3565.58	19/2 ⁺	370.4 1	100 8	3195.28	17/2 ⁺	M1,E2		
		646.3 2	58 8	2919.28	15/2 ⁺	E2		
		816.5 2	25 8	2748.67	15/2 ⁺	[E2]		
		1103.7 1	67 8	2461.74	17/2 ⁺	[M1,E2]		
3582.96	(23/2 ⁻)	219.6 1	100	3363.36	(21/2 ⁻)	[M1,E2]		
3588.63	21/2 ⁺	127.4 1	100 6	3461.13	19/2 ⁺	M1,E2		
		563.9 1	17 3	3024.53	23/2 ⁻	E1		
		609.1 2	11 3	2979.60	19/2 ⁻	E1		
		762.6 4	3 3	2826.37	17/2 ⁺	[E2]		
		808.4 2	14 3	2780.16	19/2 ⁺	M1,E2		
		871.7 2	20 3	2716.79	21/2 ⁺	M1,E2		
		969.8 2	9 3	2618.97	19/2 ⁻	E1		
		1127.0 1	100 6	2461.74	17/2 ⁺	E2		
3599.94	19/2 ⁺	827.7 1	100	2772.32	15/2 ⁺	E2		
3707.60	23/2 ⁺	118.8 1	100 5	3588.63	21/2 ⁺	M1,E2		
		549.8 1	17.4 7	3157.62	21/2 ⁻	E1		
		965.0 1	65 3	2742.59	21/2 ⁻	E1		
		990.9 1	25.5 13	2716.79	21/2 ⁺	M1,E2		
3865.08	(23/2) ⁺	1084.9 2	100	2780.16	19/2 ⁺	[E2]		
3907.54	21/2 ⁺	341.8 1	58 8	3565.58	19/2 ⁺	M1,E2		
		712.4 1	75 8	3195.28	17/2 ⁺	E2		
		1127.4 1	100 8	2780.16	19/2 ⁺	M1,E2		

Adopted Levels, Gammas (continued)

γ(¹¹¹In) (continued)

<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[‡]</u>
3911.92	25/2 ⁺	204.1 1	100 5	3707.60	23/2 ⁺	M1,E2
		887.6 1	9.4 6	3024.53	23/2 ⁻	E1
3971.15	21/2 ⁺	405.6 1	100 13	3565.58	19/2 ⁺	M1,E2
		775.9 1	60 13	3195.28	17/2 ⁺	E2
		1190.8 2	40 7	2780.16	19/2 ⁺	[M1,E2]
4018.96	25/2 ⁻	565.7 1	100	3453.26	23/2 ⁻	M1,E2
4109.59	25/2 ⁺	1392.8 1	100	2716.79	21/2 ⁺	E2
4125.90	25/2 ⁻	1383.3 1	100	2742.59	21/2 ⁻	E2
4132.66	21/2 ⁺	533.2 @		3599.94	19/2 ⁺	[M1,E2]
		696.4 1	100 13	3436.25	17/2 ⁺	E2
4204.58	27/2 ⁻	738.4 3	100	3466.34	25/2 ⁻	M1,E2
4283.28	27/2 ⁺	371.3 1	100	3911.92	25/2 ⁺	M1,E2
4310.31	25/2 ⁺	339.0 5	100 4	3971.15	21/2 ⁺	E2
		402.0 6	52 4	3907.54	21/2 ⁺	E2
		445.2 2	12 4	3865.08	(23/2) ⁺	[M1,E2]
4395.37	23/2 ⁺	795.5 1	100	3599.94	19/2 ⁺	E2
4473.29	27/2 ⁻	347.4 1	17 4	4125.90	25/2 ⁻	M1,E2
		1006.9 9	74 9	3466.34	25/2 ⁻	[M1,E2]
		1448.7 1	100 13	3024.53	23/2 ⁻	E2
4501.05	(23/2 ⁺)	901.1 2	100	3599.94	19/2 ⁺	[E2]
4745.46	(27/2 ⁻)	726.5 1	100	4018.96	25/2 ⁻	[M1,E2]
4796.51	29/2 ⁺	513.2 1	100 5	4283.28	27/2 ⁺	M1,E2
		884.3 2	4.0 7	3911.92	25/2 ⁺	E2
4821.36	25/2 ⁺	688.7 1	100	4132.66	21/2 ⁺	E2
4873.28	27/2 ⁺	371.6 @		4501.05	(23/2 ⁺)	[E2]
		478.0 1	45 5	4395.37	23/2 ⁺	[E2]
		562.9 1	100 10	4310.31	25/2 ⁺	M1,E2
4884.40	27/2 ⁺	774.7 1	100	4109.59	25/2 ⁺	M1,E2
4917.73	29/2 ⁻	713.1 1	100 6	4204.58	27/2 ⁻	[M1,E2]
		1451.4 1	47 4	3466.34	25/2 ⁻	E2
4931.78	27/2 ⁺	648.4 1	72 4	4283.28	27/2 ⁺	M1,E2
		822.3 1	43 4	4109.59	25/2 ⁺	M1,E2
		1019.9 1	37 4	3911.92	25/2 ⁺	[M1,E2]
		1224.1 1	100 6	3707.60	23/2 ⁺	E2
4957.06	29/2 ⁺	646.8 1	100	4310.31	25/2 ⁺	E2
4972.86	(23/2 ⁺)	840.2 1	100	4132.66	21/2 ⁺	M1,E2
5084.84	29/2 ⁻	611.5 1	46.3 24	4473.29	27/2 ⁻	M1,E2
		880.3 1	100 7	4204.58	27/2 ⁻	M1,E2
5166.60	29/2 ⁺	234.8 1	100 5	4931.78	27/2 ⁺	M1,E2
		282.1 1	26.2 19	4884.40	27/2 ⁺	M1,E2
		369.6 @		4796.51	29/2 ⁺	[M1,E2]

Adopted Levels, Gammas (continued)

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

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [‡]
5166.60	29/2 ⁺	1254.8 1	39 7	3911.92	25/2 ⁺	E2
5331.51	31/2 ⁺	534.9 1	100 5	4796.51	29/2 ⁺	[M1,E2]
		1048.4 2	17.0 10	4283.28	27/2 ⁺	[E2]
5398.60	31/2 ⁺	232.0 1	100	5166.60	29/2 ⁺	M1,E2
5402.14	31/2 ⁻	317.3 1	100	5084.84	29/2 ⁻	M1,E2
5509.79	31/2 ⁺	636.5 1	100	4873.28	27/2 ⁺	E2
5586.06	29/2 ⁺	764.7 1	100	4821.36	25/2 ⁺	E2
5670.34	33/2 ⁻	268.2 1	100	5402.14	31/2 ⁻	M1,E2
5677.90	33/2 ⁺	279.3 1	100	5398.60	31/2 ⁺	M1,E2
5690.9	(31/2 ⁻)	773.2 3	100	4917.73	29/2 ⁻	[M1,E2]
5783.86	(27/2 ⁺)	811.0 1	100	4972.86	(23/2 ⁺)	[E2]
5877.87	(33/2 ⁺)	546.4 1	100 6	5331.51	31/2 ⁺	[M1,E2]
		921.0 6	3.3 22	4957.06	29/2 ⁺	[E2]
		1081.3 2	32.2 22	4796.51	29/2 ⁺	[E2]
5891.50	(33/2 ⁺)	559.9 1	100 6	5331.51	31/2 ⁺	[M1,E2]
		934.8 3	19.1 22	4957.06	29/2 ⁺	[E2]
		1095.0 2	32.6 22	4796.51	29/2 ⁺	[E2]
6037.46	31/2 ⁺	1080.4 1	100	4957.06	29/2 ⁺	M1,E2
6050.80	35/2 ⁺	372.9 1	100	5677.90	33/2 ⁺	M1,E2
6070.24	35/2 ⁻	399.9 1	100	5670.34	33/2 ⁻	M1,E2
6432.9	(33/2 ⁺)	846.8 2	100	5586.06	29/2 ⁺	[E2]
6537.90	(37/2 ⁺)	487.1 1	100	6050.80	35/2 ⁺	[M1,E2]
6700.76	35/2 ⁺	663.3 1	100	6037.46	31/2 ⁺	E2
7044.24	(37/2 ⁺)	1152.7 1	100 7	5891.50	(33/2 ⁺)	[E2]
		1166.7 3	47 3	5877.87	(33/2 ⁺)	[E2]
7175.0	(39/2 ⁺)	637.1 1	100	6537.90	(37/2 ⁺)	[M1,E2]
7280.4	(37/2 ⁺)	847.5 3	100	6432.9	(33/2 ⁺)	[E2]
7605.8	(39/2 ⁺)	905.0 1	100	6700.76	35/2 ⁺	[E2]
7916.9	(41/2 ⁺)	741.9 1	100	7175.0	(39/2 ⁺)	[M1,E2]
8183.2	(41/2 ⁺)	902.8 1	100	7280.4	(37/2 ⁺)	[E2]
8335.6	(41/2 ⁺)	1291.4 2	100	7044.24	(37/2 ⁺)	[E2]
8680.9	(43/2 ⁺)	764.0 2	100	7916.9	(41/2 ⁺)	[M1,E2]
8811.4	(43/2 ⁺)	1205.6 2	100	7605.8	(39/2 ⁺)	[E2]
9213.8	(45/2 ⁺)	1030.6 2	100	8183.2	(41/2 ⁺)	[E2]
10432.9	(49/2 ⁺)	1219.1 3	100	9213.8	(45/2 ⁺)	[E2]
11868.3	(53/2 ⁺)	1435.4 5	100	10432.9	(49/2 ⁺)	[E2]
13502.8	(57/2 ⁺)	1634.5 6	100	11868.3	(53/2 ⁺)	[E2]
390.50+x	(33/2 ⁻)	390.5 1	100	0+x	(31/2 ⁻)	(M1,E2)
794.70+x	(35/2 ⁻)	404.2 1	100	390.50+x	(33/2 ⁻)	(M1,E2)
1244.30+x	(37/2 ⁻)	449.6 1	100	794.70+x	(35/2 ⁻)	[M1,E2]
1774.10+x	(39/2 ⁻)	529.8 1	100	1244.30+x	(37/2 ⁻)	[M1,E2]
2354.60+x	(41/2 ⁻)	580.5 1	100	1774.10+x	(39/2 ⁻)	[M1,E2]

Adopted Levels, Gammas (continued)

γ(¹¹¹In) (continued)

<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[‡]</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[‡]</u>
705.70+y	(27/2 ⁻)	705.7 2	100	0+y	(23/2 ⁻)	(E2)	5508.4+y	(47/2 ⁻)	1108.3 2	100	4400.1+y	(43/2 ⁻)	[E2]
1518.90+y	(31/2 ⁻)	813.2 1	100	705.70+y	(27/2 ⁻)	[E2]	6714.5+y	(51/2 ⁻)	1206.1 2	100	5508.4+y	(47/2 ⁻)	[E2]
2410.60+y	(35/2 ⁻)	891.7 1	100	1518.90+y	(31/2 ⁻)	[E2]	8025.0+y	(55/2 ⁻)	1310.5 2	100	6714.5+y	(51/2 ⁻)	[E2]
3363.0+y	(39/2 ⁻)	952.4 1	100	2410.60+y	(35/2 ⁻)	[E2]	9403.1+y	(59/2 ⁻)	1378.1 4	100	8025.0+y	(55/2 ⁻)	[E2]
4400.1+y	(43/2 ⁻)	1037.1 1	100	3363.0+y	(39/2 ⁻)	[E2]	10850.1+y	(63/2 ⁻)	1447.0 7	100	9403.1+y	(59/2 ⁻)	[E2]

[†] From ε decay, ¹¹¹Cd(p,nγ) and ¹⁰⁹Ag(α,2nγ).

[‡] Mainly deduced from α(K)exp and A₂ in (α,2nγ).

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

[@] Placement of transition in the level scheme is uncertain.

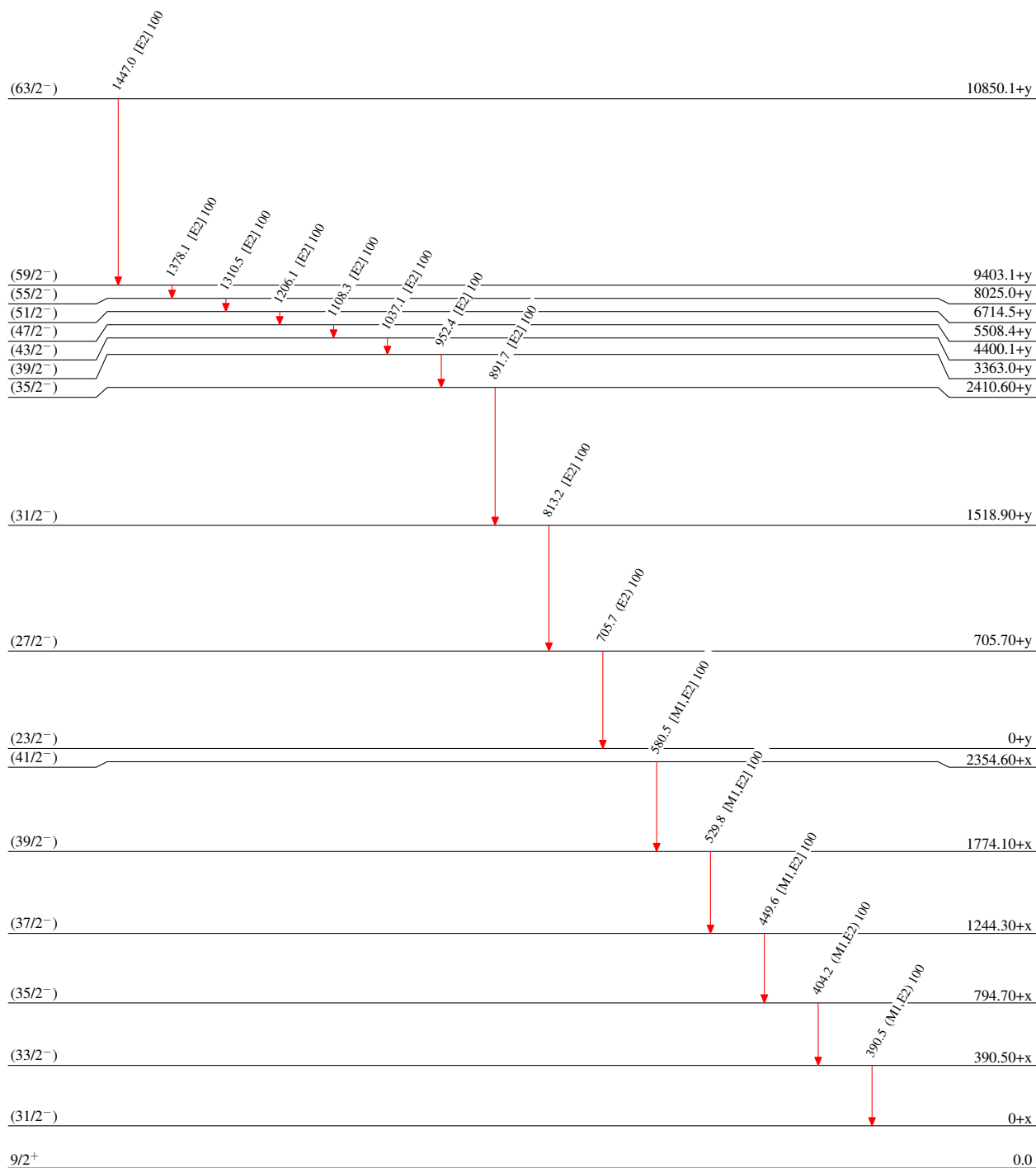
Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

Legend

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



$^{111}_{49}\text{In}_{62}$

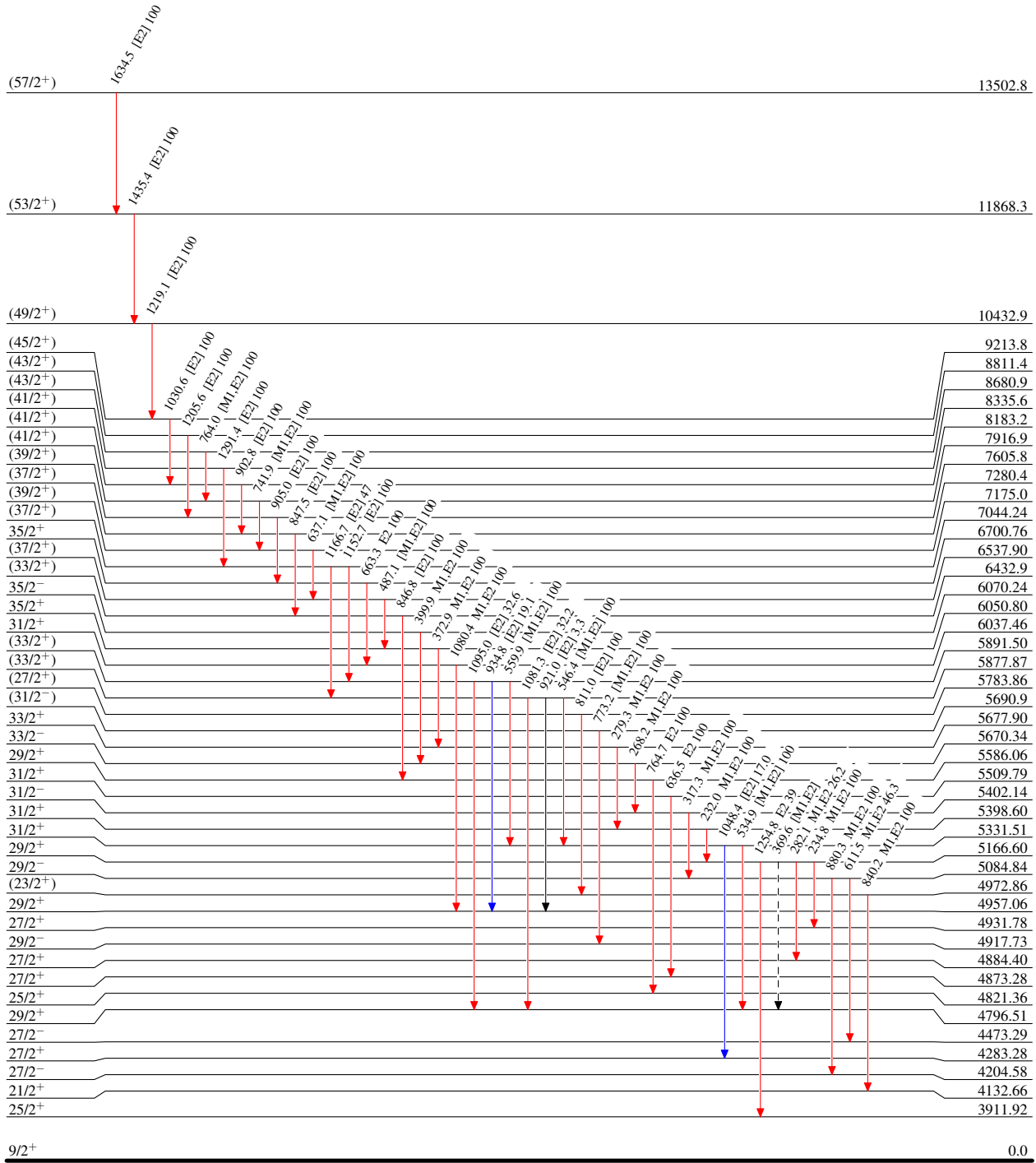
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - → γ Decay (Uncertain)



0.45 ps +17-10

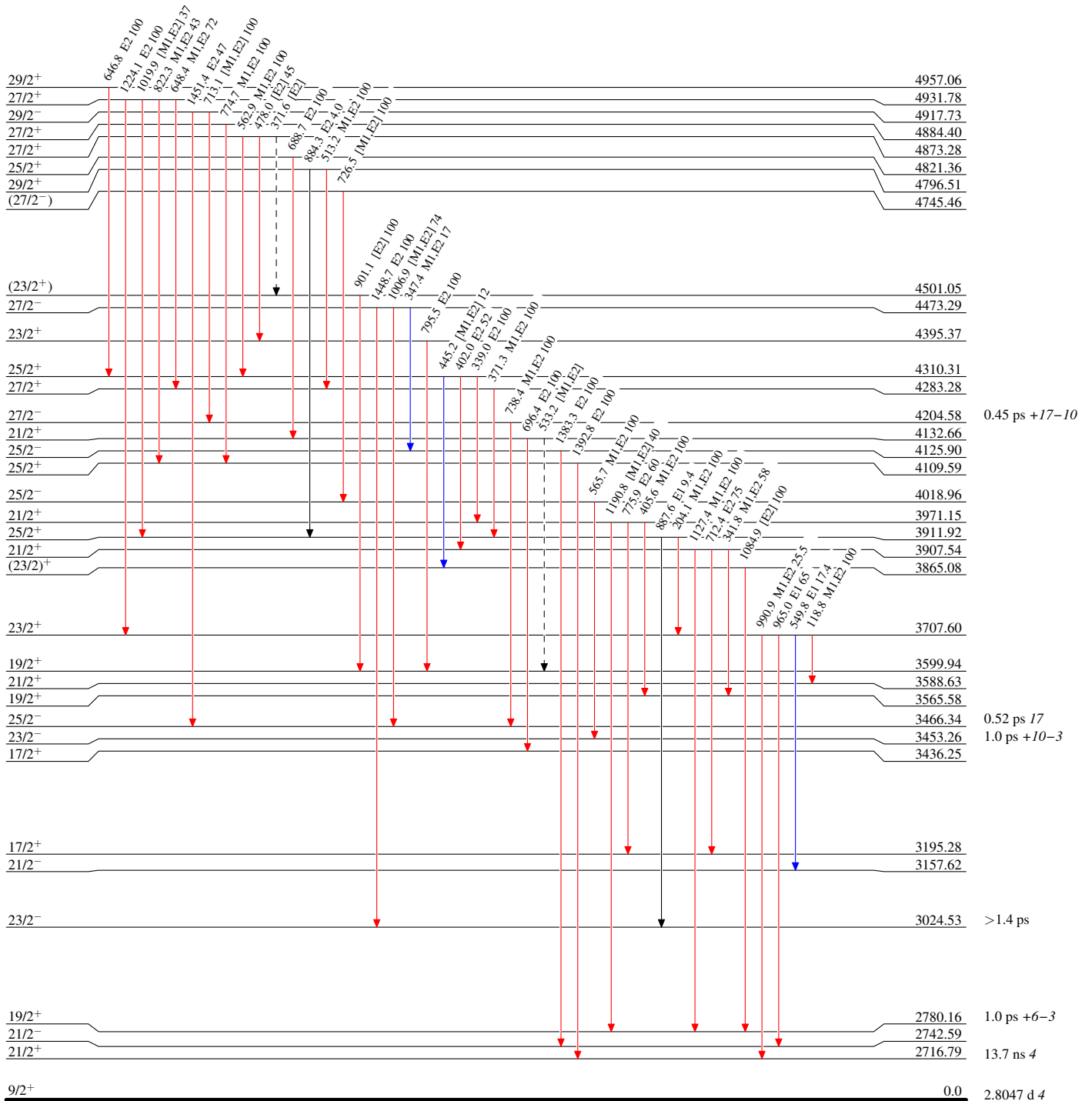
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

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



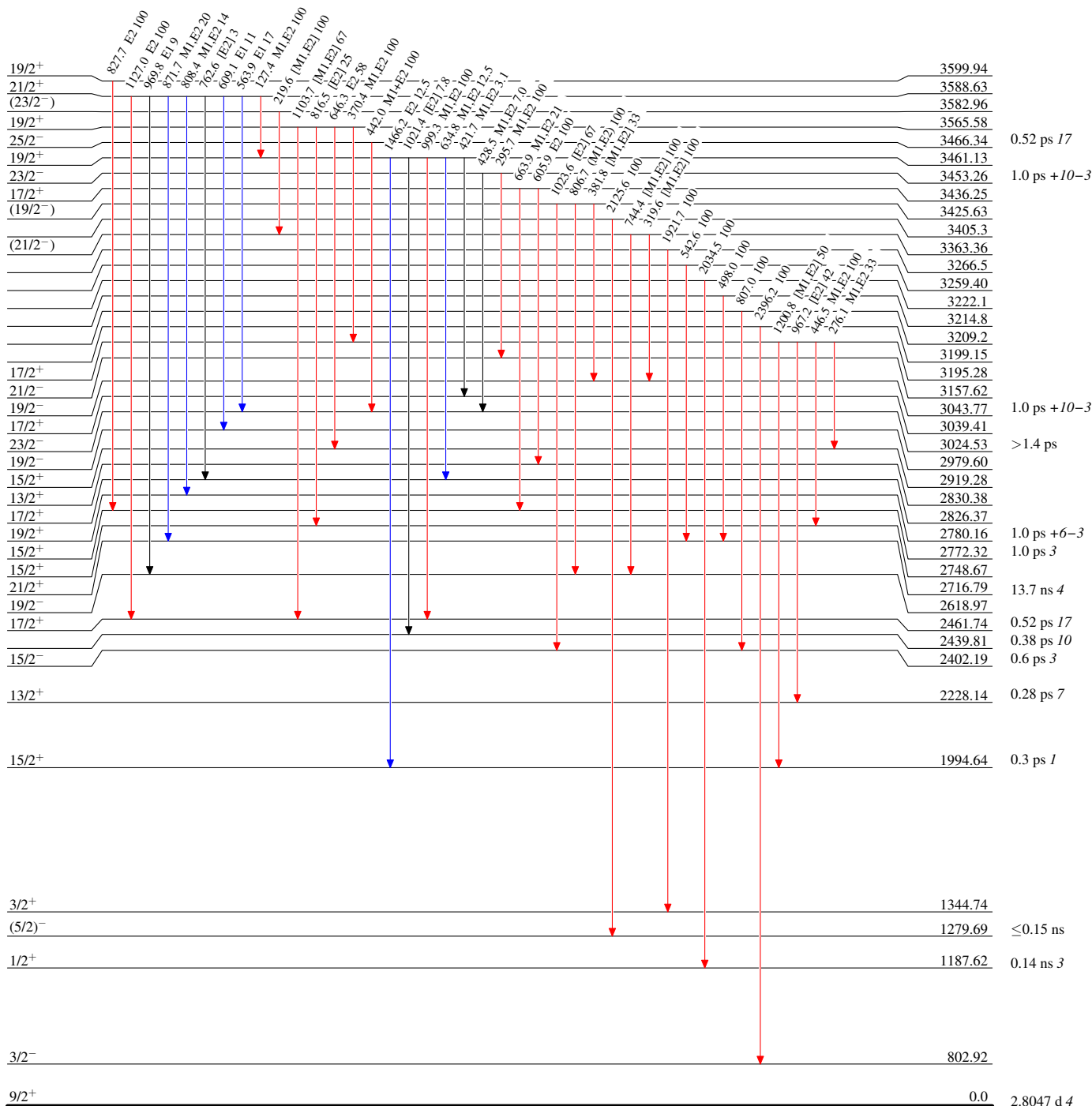
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}



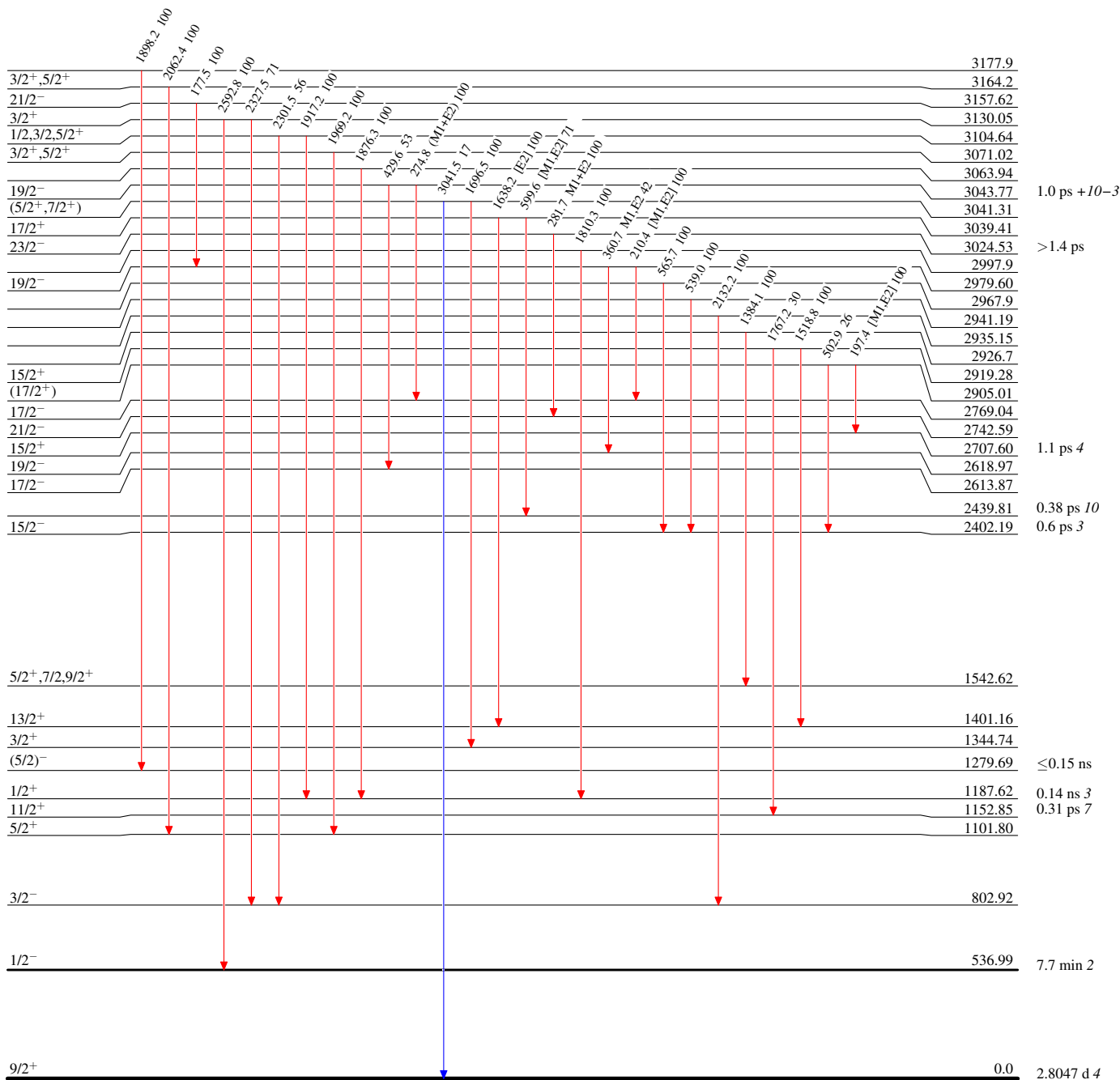
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

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



$^{111}_{49}\text{In}_{62}$

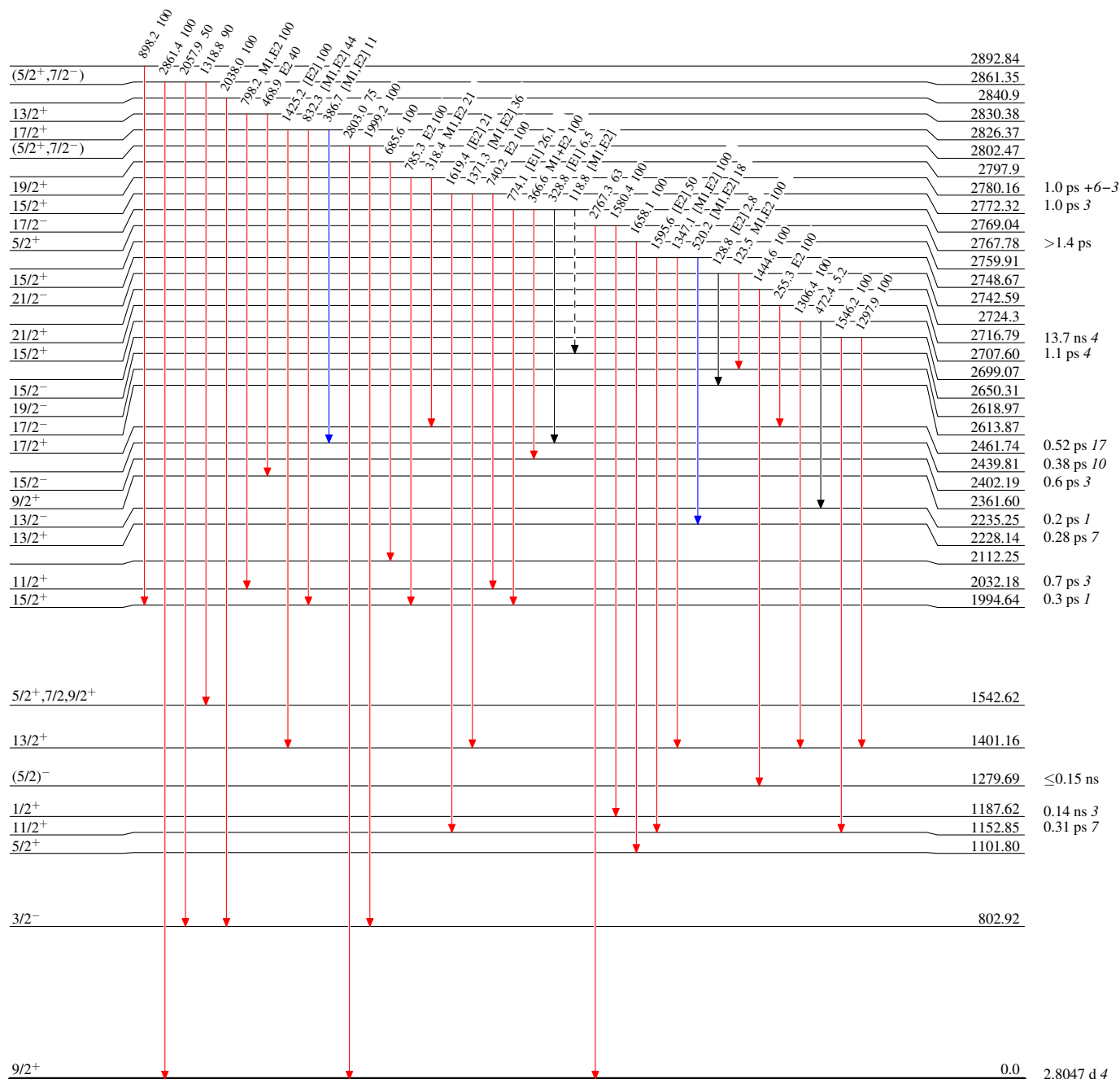
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - → γ Decay (Uncertain)



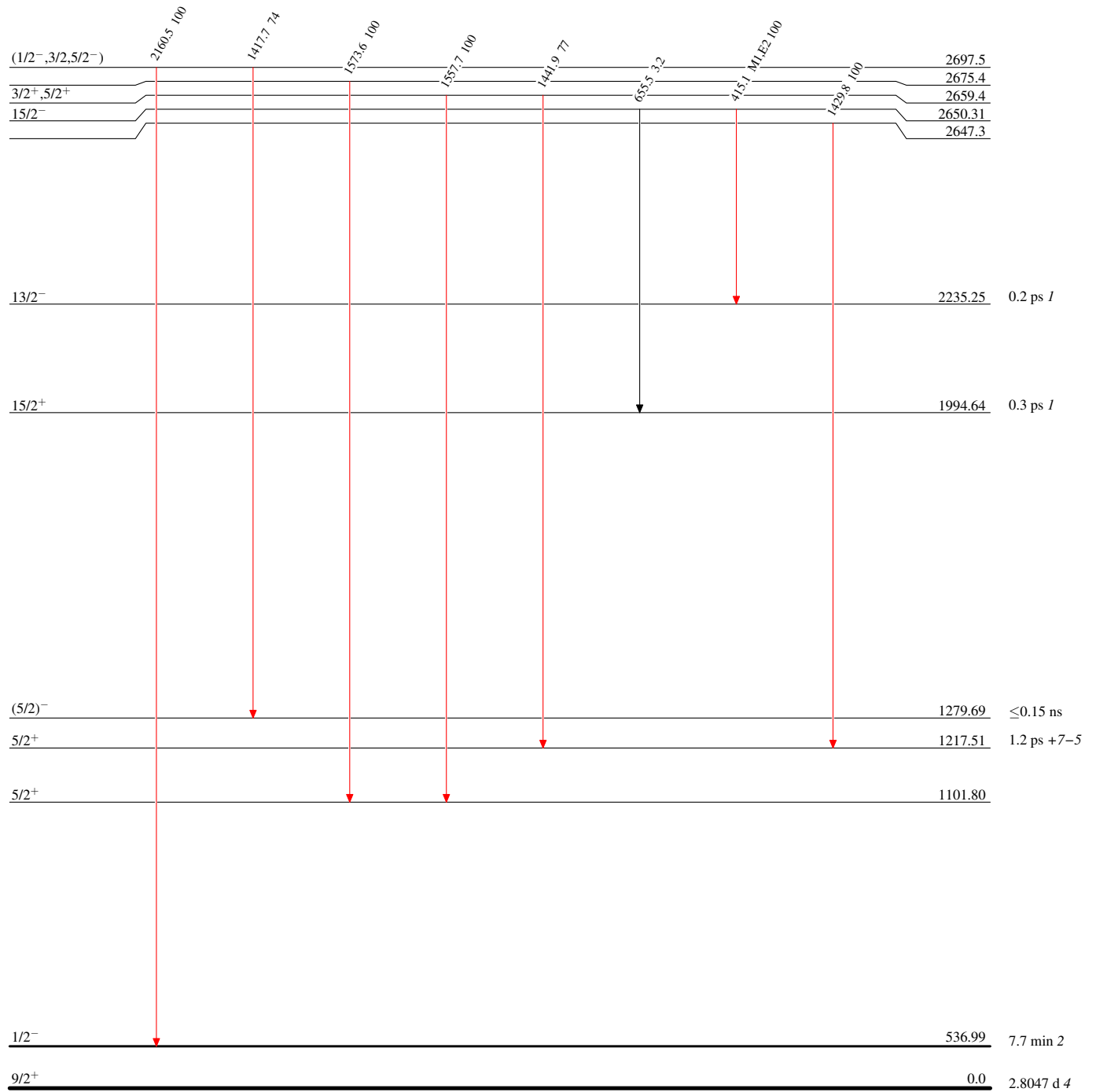
¹¹¹In₆₂

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

Intensities: Type not specified

Legend

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

 $^{111}_{49}\text{In}_{62}$

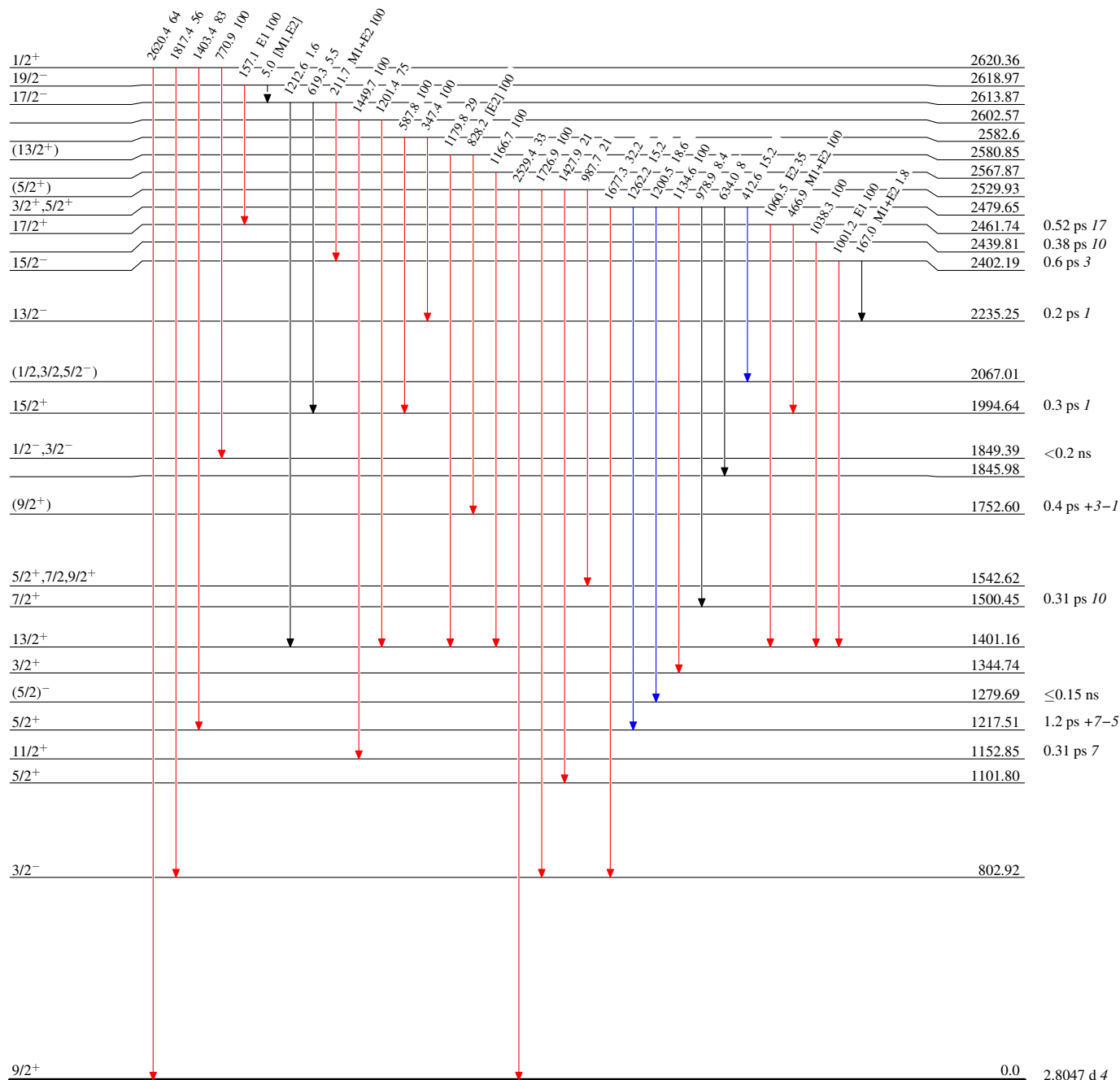
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

- ▶ I_γ < 2% × I_γ^{max}
- ▶ I_γ < 10% × I_γ^{max}
- ▶ I_γ > 10% × I_γ^{max}
- - - -▶ γ Decay (Uncertain)



¹¹¹In₆₂

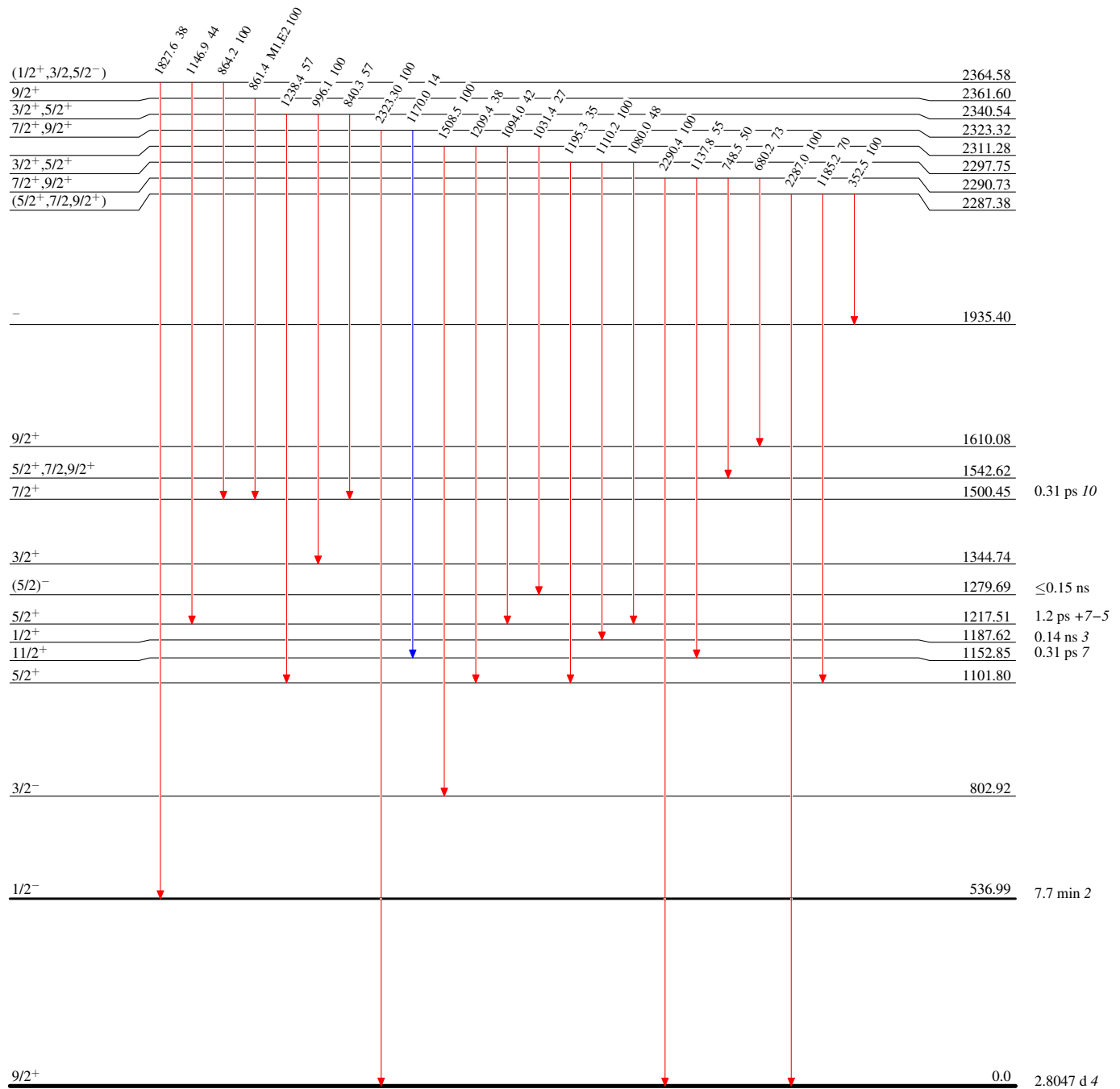
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

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



$^{111}_{49}\text{In}_{62}$

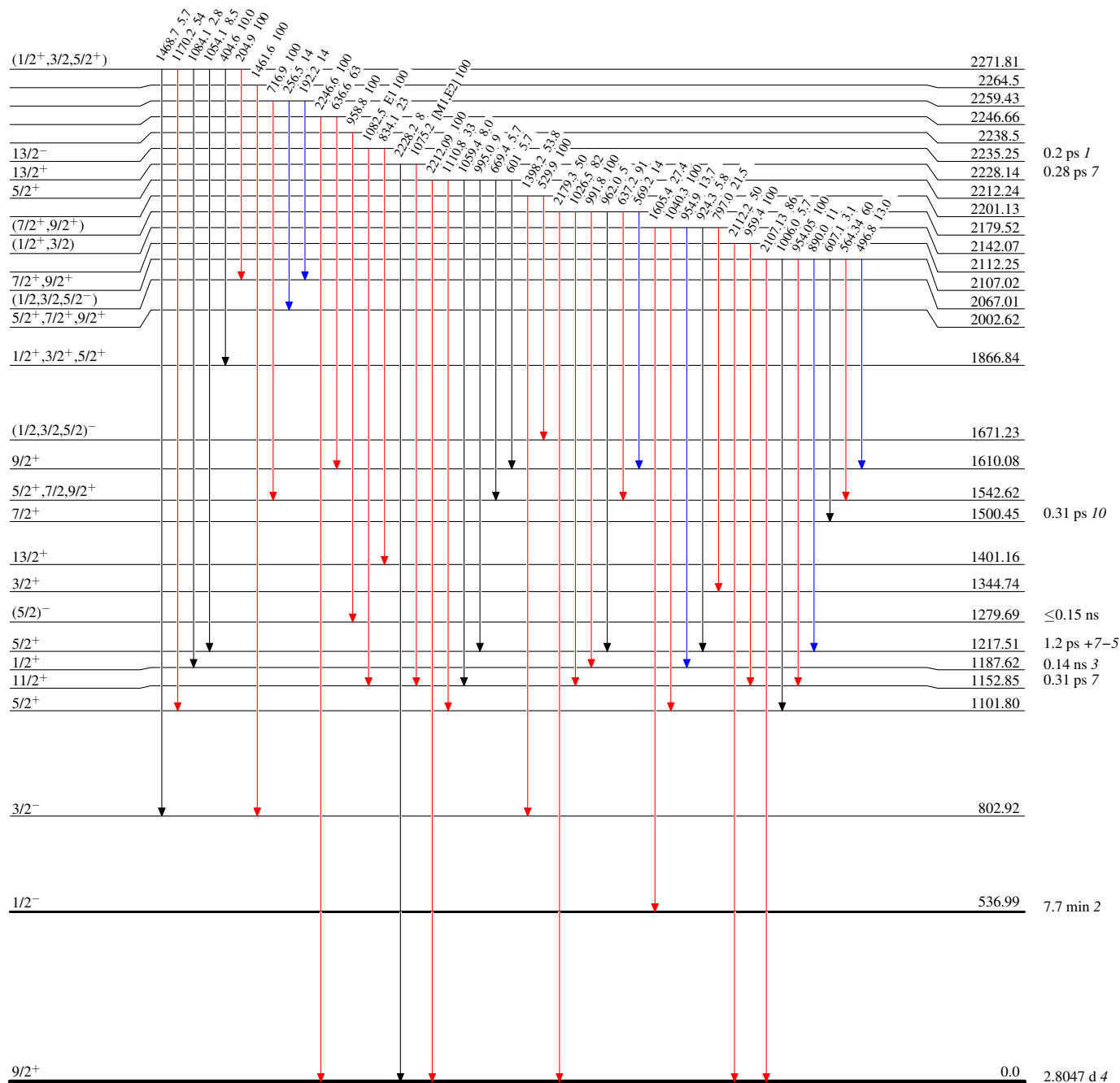
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

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



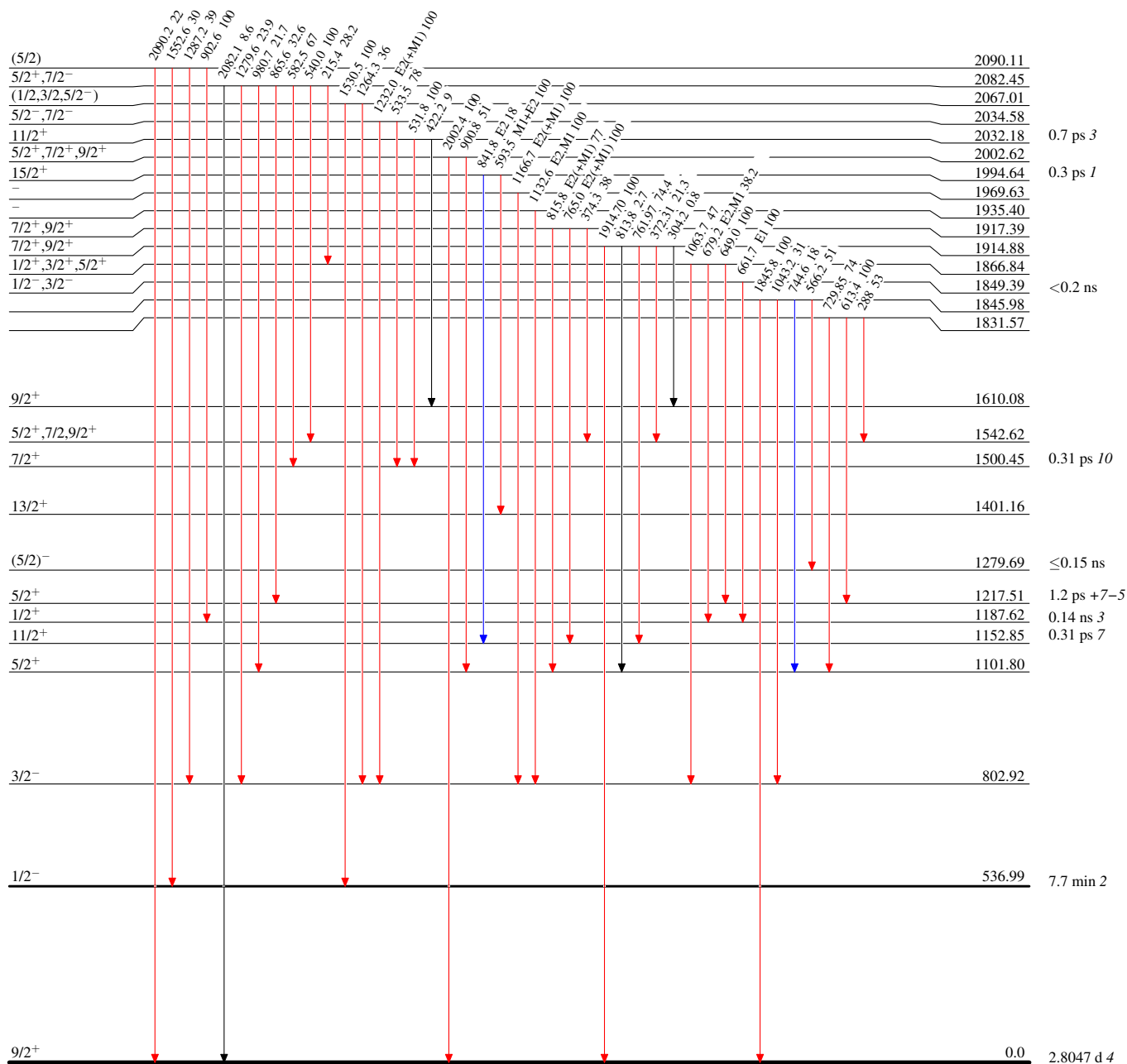
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

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



$^{111}_{49}\text{In}_{62}$

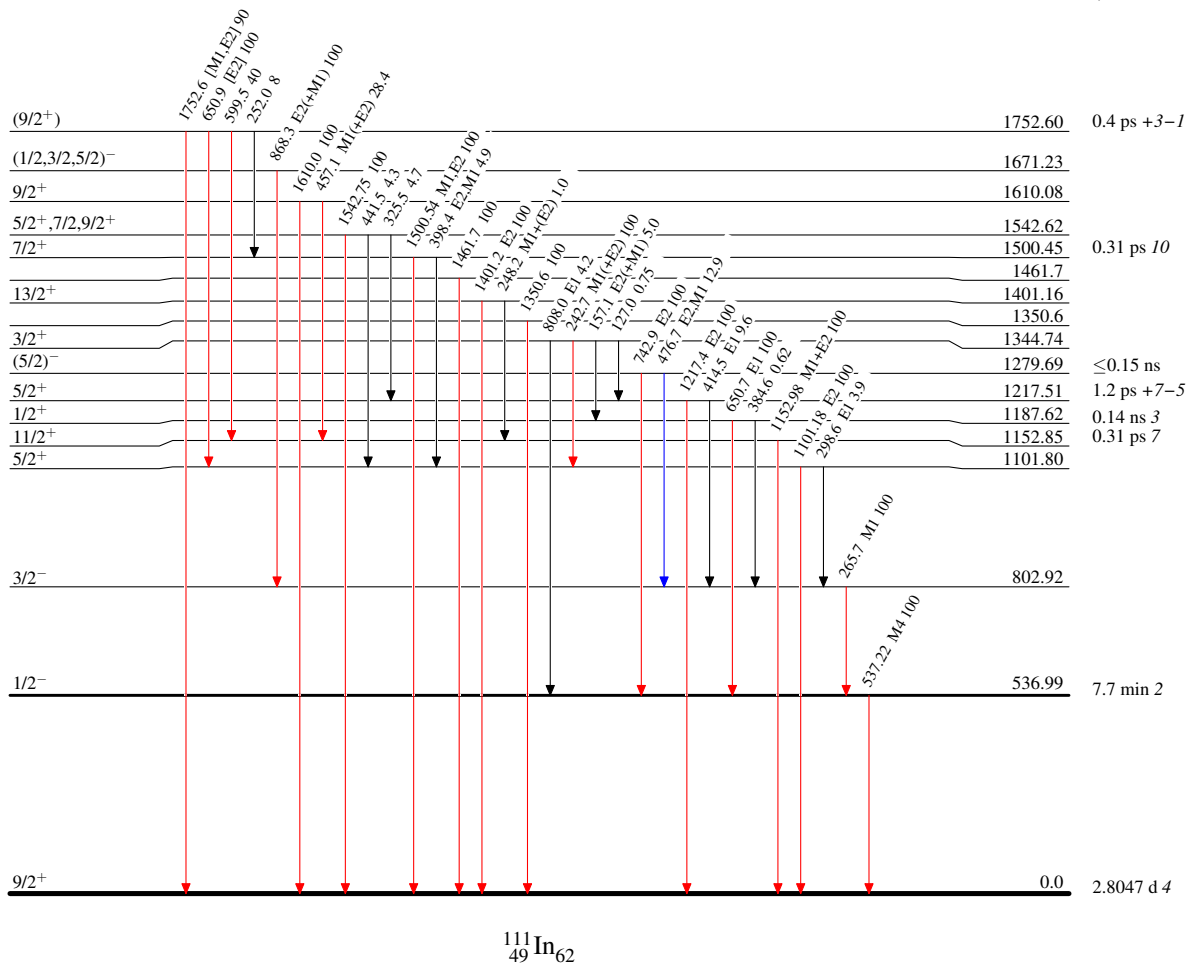
Adopted Levels, Gammas

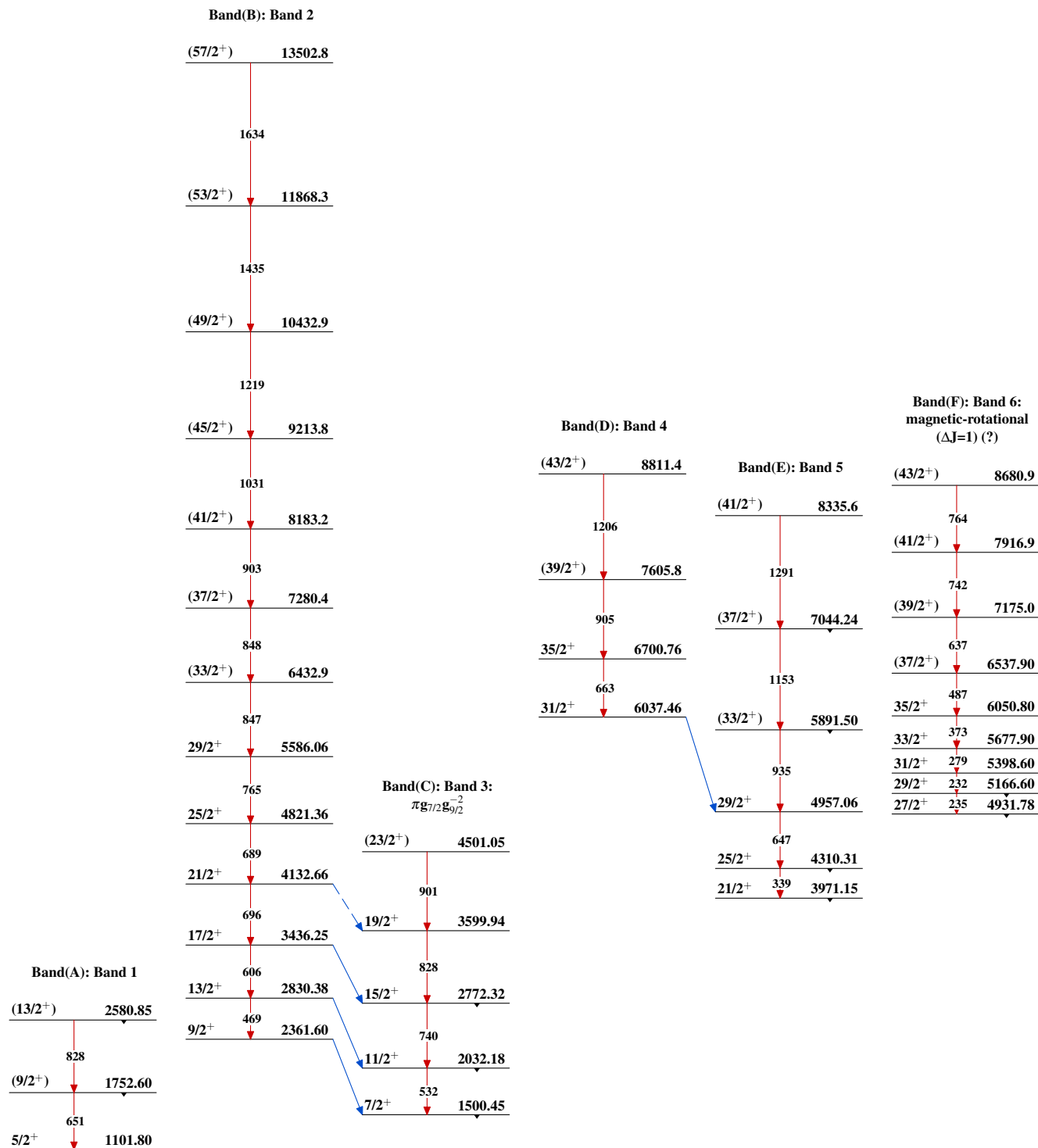
Level Scheme (continued)

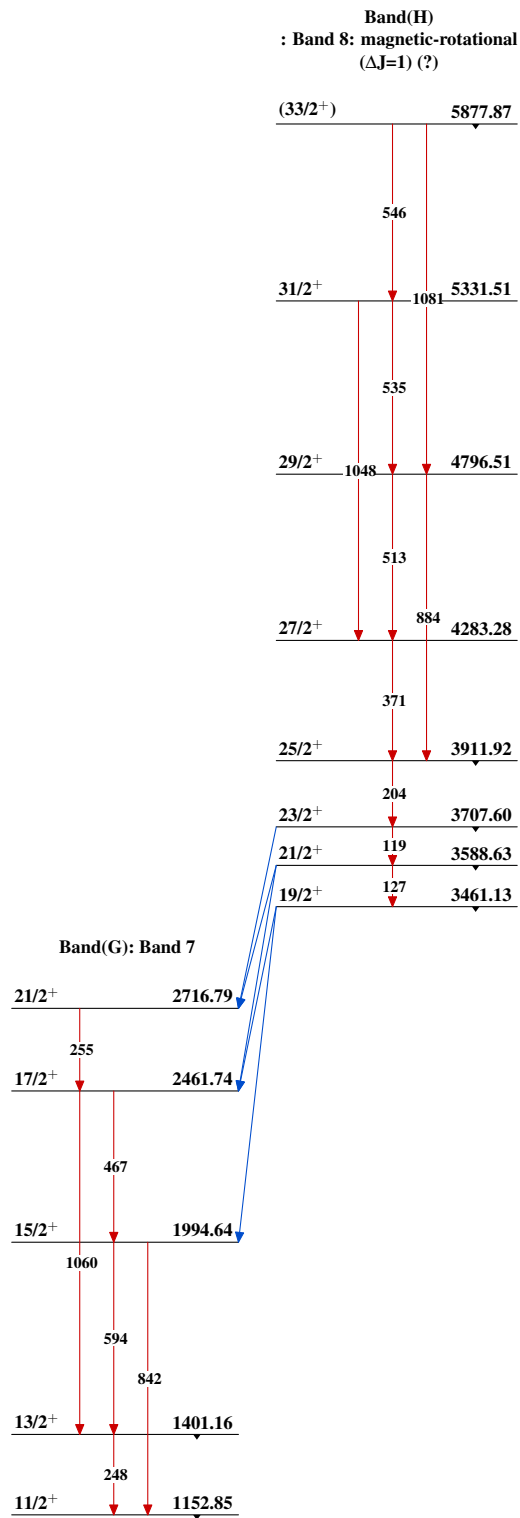
Intensities: Type not specified

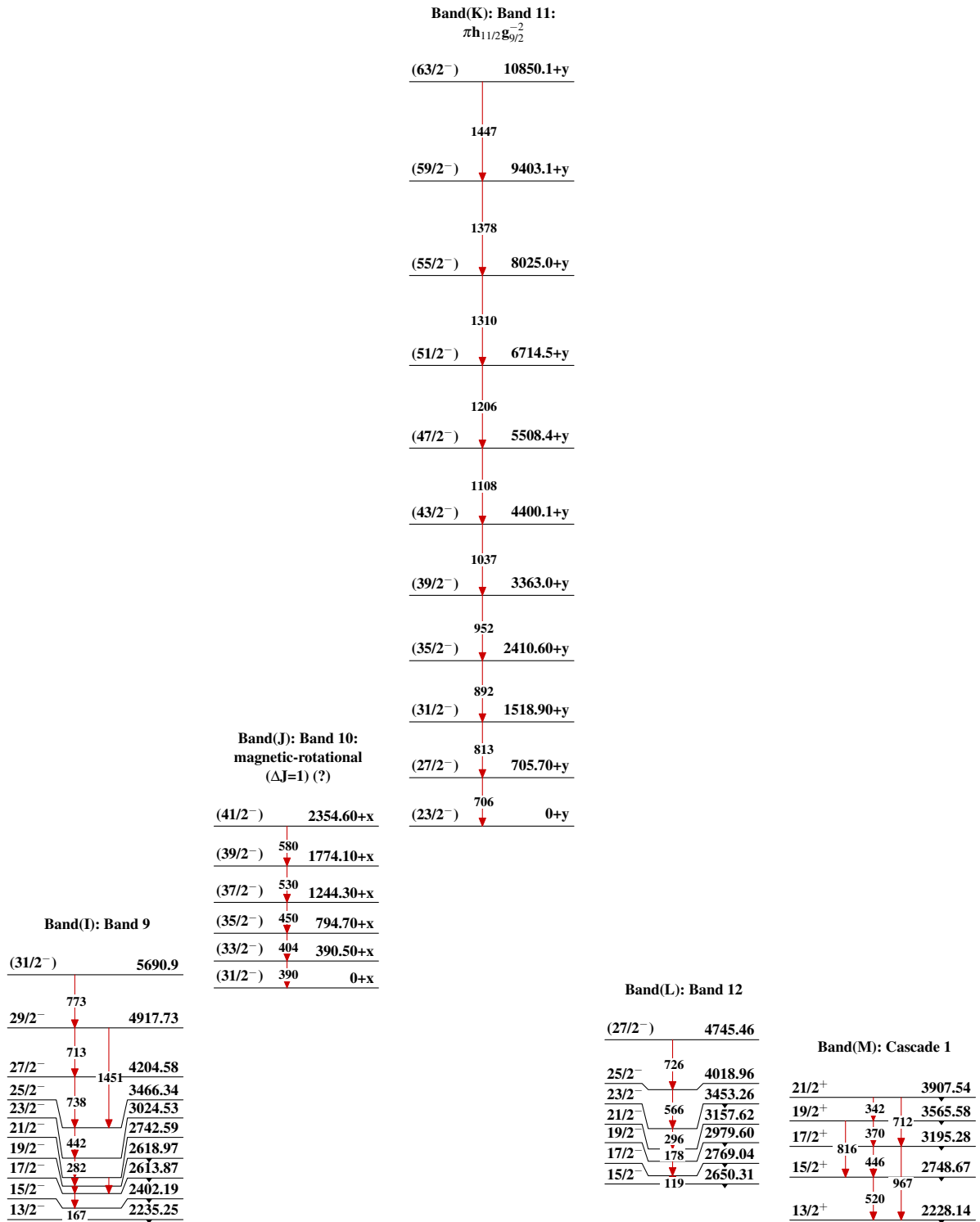
Legend

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



Adopted Levels, Gammas

Adopted Levels, Gammas (continued)

Adopted Levels, Gammas (continued)

Adopted Levels, Gammas (continued)

Band(N): Cascade 2

35/2⁻ 6070.24

400

33/2⁻ 5670.34

268

31/2⁻ 5402.14

317

29/2⁻ 5084.84

612

27/2⁻ 4473.29

347

25/2⁻ 4125.90Band(O): 1/2[431] band;
 $\alpha=13.4, a=+2.9$ 3/2⁺ 1344.745/2⁺ 1217.511/2⁺ 1187.62 $^{111}_{49}\text{In}_{62}$