Adopted Levels, Gammas

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

Q(β^-)=2366 *8*; S(n)=8543 *9*; S(p)=8287 *22*; Q(α)=−5142 *20* 2012Wa38
Note: Current evaluation has used the following Q record.
Q(β^-)=2363 *8*; S(n)=8545 *9*; S(p)=8287 *22*; Q(α)=−5152 *21* 2009AuZZ
Additional information 1.
Other reactions:
^{119}Sn(n,p): 2000Fe01, 1998Ka01.
^{120}Sn(γ,p): 1999Ga45, 1998GaZU.

^{119}In Levels

Cross Reference (XREF) Flags

A	^{119}Cd β^- decay (2.69 min)	D	^{120}Sn(d,^{3}He)
B	^{119}Cd β^- decay (2.20 min)	E	^{122}Sn(pol p,α)
C	^{119}In IT decay	F	^{238}U(^{12}C,xγ)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0[#]	9/2$^+$	2.4 min *1*	ABCDEF	%β^-=100 μ=+5.515 *10*; Q=+0.854 *7* J$^\pi$: atomic-beam magnetic resonance (1984Be40); L(d,^{3}He)=4. μ,Q: collinear fast-beam LASER spectroscopy (2005St24); μ value relative to μ=+5.5408 *2* for ^{115}In (9/2$^+$ g.s.), Q value relative to Q=0.81 for ^{115}In (9/2$^+$ g.s.) and includes the Sternheimer correction (2005St24). $T_{1/2}$: from B(t) in ^{119}In β^- decay (1976Sc30).
311.37 *3*	1/2$^-$	18.0 min *3*	ABCDE	%β^-=95.6; %IT=4.4 μ=−0.319 *5* $T_{1/2}$: from B(t) (1976Sc30). Other: 18.0 min *5* from γ(t) (1973Ra17). J$^\pi$: atomic-beam magnetic resonance (1984Be40); L(d,^{3}He)=1. μ: collinear fast-beam LASER spectroscopy (2005St24); μ value relative to μ=+5.5408 *2* for ^{115}In (9/2$^+$) (2005St24).
604.18 *7*	3/2$^-$	<1.0 ns	AB DE	J$^\pi$: L(d,^{3}He)=1, γ ray from 5/2$^+$. $T_{1/2}$: from $\gamma\gamma$(t) in ^{119}Cd β^- decay (2.69 min).
654.27[&] *7*	(3/2)$^+$	130 ns *15*	AB	μ=+0.53 *3*; Q=0.60 *2* J$^\pi$: E1 γ ray to 1/2$^-$. μ,Q: differential perturbed angular distribution of γ's following reactions (2005St24); μ value is that from original authors (2005St24). Q value relative to Q=+0.810 for ^{115}In (9/2$^+$ g.s.). $T_{1/2}$: from $\gamma\gamma$(t) in ^{119}Cd β^- decay (2.69 min).
720.60[&] *11*	(7/2$^+$)		B F	J$^\pi$: γ ray to 9/2$^+$, γ rays from 7/2$^-$ and (9/2$^-$,11/2$^-$).
788.26 *9*	1/2$^+$,3/2$^+$	2.00 ns *15*	AB	J$^\pi$: M1+E2 γ ray to 1/2$^+$,3/2$^+$; γ ray to 1/2$^-$. $T_{1/2}$: from $\gamma\gamma$(t) in ^{119}Cd β^- decay (2.69 min).
941.43 *8*	5/2$^+$		AB D	J$^\pi$: L(d,^{3}He)=2, γ ray to 9/2$^+$.
1025.02 *7*	(11/2$^+$)		B d F	XREF: d(1040). J$^\pi$: γ ray to 9/2$^+$, γ rays from (13/2$^+$) and (9/2$^-$,11/2$^-$).
1044.44 *20*	5/2$^-$		A dE	XREF: d(1040). J$^\pi$: L(d,^{3}He)=3, γ ray to 1/2$^-$.
1050.21 *8*	(5/2$^+$)		A d	XREF: d(1040). J$^\pi$: γ ray to 9/2$^+$.
1143.00[&] *11*	(11/2$^+$)		B F	J$^\pi$: log *ft*=7.2 from (11/2$^-$), γ ray to (7/2$^+$), γ ray to 9/2$^+$.
1203.71[#] *7*	(13/2$^+$)		B F	J$^\pi$: γ ray to 9/2$^+$, γ ray to (11/2$^+$).

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Adopted Levels, Gammas (continued)

^{119}In Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
			E(level): a level at 1203.7 was observed weakly populated in the (d,^{3}He) reaction with L=3.
1353.10 *17*	(9/2$^+$)	B	Jπ: log *ft*=7.4 from (11/2$^-$) and γ ray to 5/2$^+$ allows (7/2$^-$,9/2$^+$), log $f^{1u}t$=8.3 from (11/2$^-$) rules out (7/2$^-$).
1388.39 *16*	7/2$^-$	B D	Jπ: L(d,^{3}He)=3, γ ray to 9/2$^+$.
1436.44 *9*	7/2$^+$,9/2$^+$	B D	Jπ: L(d,^{3}He)=4.
1474 *5*	7/2$^+$,9/2$^+$	D	Jπ: L(d,^{3}He)=4.
1553 *5*	1/2$^-$,3/2$^-$	D	Jπ: L(d,^{3}He)=1.
1624.94 *17*	1/2,3/2,5/2	A	Jπ: log *ft*=6.72 and log $f^{1u}t$=7.9 from 3/2$^+$.
1649 *5*	3/2$^+$,5/2$^+$	D	Jπ: L(d,^{3}He)=2.
1729 *5*	1/2$^-$,3/2$^-$	D	Jπ: L(d,^{3}He)=1.
1769.97? *14*	1/2$^+$,3/2,5/2	A	Jπ: log *ft*=6.65 and log $f^{1u}t$=7.7 from 3/2$^+$, γ ray to 5/2$^+$.
1779.0[&] *10*	(15/2$^+$)	F	Jπ: γ ray to (11/2$^+$).
1806.59 *15*	1/2$^+$,3/2,5/2	A	Jπ: log *ft*=6.39 and log $f^{1u}t$=7.7 from 3/2$^+$, γ ray to 5/2$^+$.
1837 *5*	1/2$^-$,3/2$^-$	D	Jπ: L(d,^{3}He)=1.
1920.99 *8*	1/2$^+$,3/2$^+$	A	Jπ: log *ft*=5.4 from 3/2$^+$, γ ray to 1/2$^-$.
1979 *5*	7/2$^+$,9/2$^+$	D	Jπ: L(d,^{3}He)=4.
2021.35 *8*	(9/2$^-$,11/2$^-$)	B	Jπ: log *ft*=5.2 from (11/2$^-$), γ ray to 9/2$^+$.
2050 *5*	1/2$^-$,3/2$^-$	D	Jπ: L(d,^{3}He)=1.
2064.15 *18*	1/2$^+$,3/2,5/2$^-$	A	Jπ: γ rays to 1/2$^-$ and 5/2$^+$.
2104.30 *15*	(9/2,11/2,13/2$^+$)	B	Jπ: log *ft*=6.22 and log $f^{1u}t$=6.9 from (11/2$^-$), γ ray to 9/2$^+$.
2126.93 *8*	(11/2$^-$)	B	Jπ: log *ft*=5.2 from (11/2$^-$), γ ray to (13/2$^+$), γ ray to (9/2$^-$,11/2$^-$). Additional information 2.
2132.1[@] *9*	(15/2$^-$)	F	Jπ: γ ray to (13/2$^+$).
2223.3[#] *9*	(17/2$^+$)	F	
2226.5[@] *11*	(17/2$^-$)	F	Jπ: γ ray to (15/2$^-$).
2272 *5*	$^-$	D	Jπ: L(d,^{3}He)=1+3. E(level): doublet.
2286.9[@] *11*	(19/2$^-$)	F	Jπ: (M1) γ ray to (17/2$^-$), (E1) γ ray to (17/2$^+$).
2338.04 *8*	1/2$^+$,3/2$^+$	A	Jπ: log *ft*=5.1 from 3/2$^+$, γ ray to 1/2$^-$.
2343 *5*	1/2$^-$,3/2$^-$	D	Jπ: L(d,^{3}He)=1.
2359.54 *22*	(9/2,11/2)	B	Jπ: log *ft*=5.86 from (11/2$^-$), γ ray to (7/2$^+$). Additional information 3.
2367.95 *10*	1/2$^+$,3/2$^+$	A	Jπ: log *ft*=5.0 from 3/2$^+$, γ ray to 1/2$^-$.
2389.18 *11*	(9/2,11/2)	B	Jπ: log *ft*=5.2 from (11/2$^-$), γ ray to 9/2$^+$, γ ray to (13/2$^+$). Additional information 4.
2410 *5*	5/2$^-$,7/2,9/2$^+$	D	Jπ: L(d,^{3}He)=3,4.
2422.54 *18*	(9/2$^-$)	B	Jπ: log *ft*=5.3 from (11/2$^-$), γ rays to (7/2$^+$), 9/2$^+$, and (11/2$^+$). Additional information 5.
2460 *5*	5/2$^-$,7/2,9/2$^+$	D	Jπ: L(d,^{3}He)=3,4.
2487.21 *12*	(9/2$^-$,11/2$^-$,13/2$^-$)	B	Jπ: log *ft*=5.24 from (11/2$^-$).
2493.9[@] *15*	(21/2$^-$)	F	Jπ: γ ray to (19/2$^-$).
2502 *5*	1/2$^-$,3/2$^-$	D	Jπ: L(d,^{3}He)=1.
2504.9[#] *15*	(21/2$^+$)	F	Jπ: γ ray to (19/2$^-$).
2519.0[&] *15*	(19/2$^+$)	F	Jπ: γ ray to (15/2$^+$).
2520.3 *5*	(9/2,11/2,13/2$^+$)	B	Jπ: log *ft*=6.08 from (11/2$^-$), γ to 9/2$^+$.
2524.57 *12*	1/2$^+$,3/2$^+$,5/2$^+$	A	Jπ: log *ft*=5.73 from 3/2$^+$. Additional information 6.
2526.6 *5*	(9/2,11/2,13/2)	B	Jπ: log *ft*=6.17 from (11/2$^-$).
2554.40 *21*	1/2,3/2,5/2	A	Jπ: log *ft*=5.78 from 3/2$^+$.
2564.64 *17*	(11/2$^-$)	B	Jπ: log *ft*=5.7 from (11/2$^-$), γ rays to (11/2$^-$) and (13/2$^+$). Additional information 7.
2564.8 *3*	1/2$^+$,3/2$^+$,5/2$^+$	A	Jπ: log *ft*=5.66 from 3/2$^+$.
2618 *5*	7/2$^+$,9/2$^+$	D	Jπ: L(d,^{3}He)=4.

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Adopted Levels, Gammas (continued)

^{119}In Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
2656.9[#] *18*	(25/2$^+$)	240 ns *25*	F	Jπ: From γ ray (E2) to (21/2$^+$).
2667.86 *19*	1/2$^+$,3/2$^+$		A	Jπ: log *ft*=5.1 from 3/2$^+$, γ ray to 1/2$^-$.
2670 *5*	$^-$		D	E(level): doublet. Jπ: L(d,^{3}He)=1+3.
2672.19 *23*	(9/2,11/2)		B	Jπ: log *ft*=5.5 from (11/2$^-$), γ ray to 7/2$^+$,9/2$^+$. Additional information 8.
2745 *5*	7/2$^+$,9/2$^+$		D	Jπ: L(d,^{3}He)=4.
2782.9[@] *18*	(23/2$^-$)		F	Jπ: γ ray to (21/2$^-$).
2798.7 *5*	1/2$^+$,3/2$^+$,5/2$^+$		A	Jπ: log *ft*=5.6 from 3/2$^+$.
2811 *5*	1/2$^-$,3/2$^-$		D	Jπ: L(d,^{3}He)=1.
2859.60 *21*	1/2$^+$,3/2$^+$		A	Jπ: log *ft*=5.3 from 3/2$^+$, γ ray to 1/2$^-$.
2885 *5*	$^-$		D	Jπ: L(d,^{3}He)=1+3. E(level): doublet.
2927.9[@] *21*	(25/2$^-$)		F	Jπ: γ ray to (23/2$^-$).
2992.9[#] *21*	(27/2$^+$)		F	
3005 *5*	5/2$^-$,7/2,9/2$^+$		D	Jπ: L(d,^{3}He)=3,4.
3130 *5*	7/2$^+$,9/2$^+$		D	Jπ: L(d,^{3}He)=4.
3330 *5*	$^-$		D	Jπ: L(d,^{3}He)=1+3. E(level): doublet.
3452.9[#] *23*	(29/2$^+$)		F	
3526.9[@] *22*	(27/2$^-$)		F	Jπ: γ ray to (25/2$^-$).
4025.9[@] *22*	(29/2$^-$)		F	Jπ: γ ray to (27/2$^-$), γ ray to (25/2$^-$).

[†] Deduced by evaluators from least-squares fit to adopted γ-ray energies. Energies of levels involving no γ rays are from (d,^{3}He).

[‡] Assignments are are based on γ-ray multipolarities, log ft values, and systematics on similar band structures in ^{115}In and ^{117}In. Band assignments presented here are from ^{238}U(^{12}C,xγ) (2002Lu15).

[#] Band(A): $\pi g_{9/2}^{-1} \nu h_{11/2}^{2}$.

[@] Band(B): $\pi g_{9/2}^{-1} \nu h_{11/2}^{1}(\nu(d_{5/2}$ and/or $g_{7/2})^1)$.

[&] Band(C): π1/2[431] from π($g_{7/2}$ and/or $d_{5/2}$).

Adopted Levels, Gammas (continued)

γ(^{119}In)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ	α[†]	Comments
311.37	1/2⁻	311.39 *3*	100	0	9/2⁺	M4		1.529	α(K)=1.200 *17*; α(L)=0.265 *4*; α(M)=0.0544 *8*; α(N+..)=0.01033 *15* α(N)=0.00977 *14*; α(O)=0.000564 *8* B(M4)(W.u.)=8.75 *17* Additional information 9.
604.18	3/2⁻	292.9 *1*	100	311.37	1/2⁻	M1,E2		0.032 *5*	α(K)=0.028 *4*; α(L)=0.0038 *9*; α(M)=0.00075 *18*; α(N+..)=0.00014 *3* α(N)=0.00013 *3*; α(O)=8.8×10^{-6} *10*
654.27	(3/2)⁺	50.2 *1*	2.1 *2*	604.18	3/2⁻	[E1]		1.203	B(E1)(W.u.)=3.4×10^{-7} *6* α(K)=1.032 *16*; α(L)=0.1390 *21*; α(M)=0.0267 *4*; α(N+..)=0.00500 *8* α(N)=0.00472 *8*; α(O)=0.000273 *4*
		343.0 *1*	100 *9*	311.37	1/2⁻	E1		0.00574 *8*	B(E1)(W.u.)=5.1×10^{-8} *9* α=0.00574 *8*; α(K)=0.00500 *7*; α(L)=0.000599 *9*; α(M)=0.0001155 *17*; α(N+..)=2.25×10^{-5} *4* α(N)=2.10×10^{-5} *3*; α(O)=1.502×10^{-6} *21*
720.60	(7/2⁺)	720.7[@] *2*	100	0	9/2⁺				
788.26	1/2⁺,3/2⁺	134.0 *1*	100 *7*	654.27	(3/2)⁺	E2(+M1)	>1.1	0.47 *8*	α(K)=0.38 *6*; α(L)=0.079 *16*; α(M)=0.016 *4*; α(N+..)=0.0029 *6* α(N)=0.0027 *6*; α(O)=0.000126 *19* B(M1)(W.u.)<0.0015; B(E2)(W.u.)>54
		184.1 *1*	3.2 *6*	604.18	3/2⁻	[E1]		0.0309	B(E1)(W.u.)=4.4×10^{-7} *10* α(K)=0.0269 *4*; α(L)=0.00327 *5*; α(M)=0.000631 *9*; α(N+..)=0.0001222 *18* α(N)=0.0001143 *17*; α(O)=7.85×10^{-6} *11*
		476.7 *3*	12.8 *17*	311.37	1/2⁻	[E1]		0.00253 *4*	B(E1)(W.u.)=1.01×10^{-7} *18* α=0.00253 *4*; α(K)=0.00220 *4*; α(L)=0.000262 *4*; α(M)=5.05×10^{-5} *8*; α(N+..)=9.89×10^{-6} *14* α(N)=9.22×10^{-6} *13*; α(O)=6.68×10^{-7} *10*
941.43	5/2⁺	153.5 *3*	2.3 *9*	788.26	1/2⁺,3/2⁺				
		287.6 *3*	14 *4*	654.27	(3/2)⁺				
		337.6 *3*	17.4 *23*	604.18	3/2⁻				
		941.2 *1*	100 *8*	0	9/2⁺				
1025.02	(11/2⁺)	304.6[a] *4*	0.7 *3*	720.60	(7/2⁺)				
		1025.0 *1*	100 *5*	0	9/2⁺				
1044.44	5/2⁻	441.1 *7*	26 *5*	604.18	3/2⁻				
		733.0 *2*	100 *14*	311.37	1/2⁻				
1050.21	(5/2⁺)	446.2 *4*	28 *2*	604.18	3/2⁻				
		1050.2 *1*	100 *8*	0	9/2⁺				
1143.00	(11/2⁺)	422.4[@] *1*	100 *6*	720.60	(7/2⁺)				
		1142.7[@] *4*	9.7 *13*	0	9/2⁺				

$^{119}_{49}In_{70}$-4

Adopted Levels, Gammas (continued)

γ(^{119}In) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π
1203.71	(13/2$^+$)	178.6[@] *1*	6.9 *9*	1025.02	(11/2$^+$)
		1203.7[@] *1*	100 *6*	0	9/2$^+$
1353.10	(9/2$^+$)	411.5[@a] *1*	91 *6*	941.43	5/2$^+$
		633.0[@a] *2*	88 *27*	720.60	(7/2$^+$)
		1352.9[@] *2*	100 *21*	0	9/2$^+$
1388.39	7/2$^-$	363.6[@] *4*	74 *9*	1025.02	(11/2$^+$)
		667.9[@] *3*	29 *14*	720.60	(7/2$^+$)
		1388.1[@] *4*	100 *14*	0	9/2$^+$
1436.44	7/2$^+$,9/2$^+$	411.5[@] *1*	22 *3*	1025.02	(11/2$^+$)
		1436.5[@] *2*	100 *9*	0	9/2$^+$
1624.94	1/2,3/2,5/2	836.6 *2*	100 *14*	788.26	1/2$^+$,3/2$^+$
		970.6 *4*	61 *17*	654.27	(3/2)$^+$
1769.97?	1/2$^+$,3/2,5/2	828.5 *2*	62 *6*	941.43	5/2$^+$
		1115.7 *2*	100 *15*	654.27	(3/2)$^+$
1779.0	(15/2$^+$)	636[&]		1143.00	(11/2$^+$)
1806.59	1/2$^+$,3/2,5/2	864.8 *3*	39 *12*	941.43	5/2$^+$
		1018.4 *2*	100 *9*	788.26	1/2$^+$,3/2$^+$
		1152.4 *2*	70 *9*	654.27	(3/2)$^+$
1920.99	1/2$^+$,3/2$^+$	870.6 *2*	4.7 *7*	1050.21	(5/2$^+$)
		1132.6 *3*	8.4 *10*	788.26	1/2$^+$,3/2$^+$
		1267.3 *8*	0.9 *7*	654.27	(3/2)$^+$
		1316.9 *2*	81 *10*	604.18	3/2$^-$
		1609.7 *1*	100 *6*	311.37	1/2$^-$
2021.35	(9/2$^-$,11/2$^-$)	585.0[@] *1*	21.7 *15*	1436.44	7/2$^+$,9/2$^+$
		633.0[@] *2*	3.1 *18*	1388.39	7/2$^-$
		667.9[@] *3*	1.0 *6*	1353.10	(9/2$^+$)
		817.6[@] *1*	5.9 *4*	1203.71	(13/2$^+$)
		878.3[@] *3*	1.5 *3*	1143.00	(11/2$^+$)
		996.3[@] *2*	7.3 *18*	1025.02	(11/2$^+$)
		2021.3[@] *2*	100 *7*	0	9/2$^+$
2064.15	1/2$^+$,3/2,5/2$^-$	143.2 *5*	18 *7*	1920.99	1/2$^+$,3/2$^+$
		1014.0 *3*	100 *22*	1050.21	(5/2$^+$)
		1122.5 *3*	51 *11*	941.43	5/2$^+$
		1409.7 *5*	61 *17*	654.27	(3/2)$^+$
		1753.3 *5*	93 *11*	311.37	1/2$^-$
2104.30	(9/2,11/2,13/2$^+$)	2104.3[@] *2*	100	0	9/2$^+$
2126.93	(11/2$^-$)	105.6[@] *1*	34 *3*	2021.35	(9/2$^-$,11/2$^-$)
		923.2[@] *1*	71 *4*	1203.71	(13/2$^+$)

$^{119}_{49}In_{70}$-5

Adopted Levels, Gammas (continued)

γ(^{119}In) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
2126.93	(11/2⁻)	983.9[@] *2*	10 *2*	1143.00	(11/2⁺)			
		1101.9[@] *1*	100 *5*	1025.02	(11/2⁺)			
2132.1	(15/2⁻)	928[&]		1203.71	(13/2⁺)			
2223.3	(17/2⁺)	1020[&]		1203.71	(13/2⁺)			
2226.5	(17/2⁻)	94[&]		2132.1	(15/2⁻)			
2286.9	(19/2⁻)	60[&]		2226.5	(17/2⁻)	(M1)	2.21	α(K)=1.91 *3*; α(L)=0.243 *4*; α(M)=0.0473 *7*; α(N+..)=0.00928 *13* α(N)=0.00864 *13*; α(O)=0.000635 *9* Mult.: From transition-intensity balance (2002Lu15).
		64[&]		2223.3	(17/2⁺)	(E1)	0.613	α(K)=0.529 *8*; α(L)=0.0689 *10*; α(M)=0.01325 *19*; α(N+..)=0.00250 *4* α(N)=0.00236 *4*; α(O)=0.0001423 *20* Mult.: From transition-intensity balance (2002Lu15).
2338.04	1/2⁺,3/2⁺	417.1 *1*	6.4 *8*	1920.99	1/2⁺,3/2⁺			
		1287.8 *1*	33 *6*	1050.21	(5/2⁺)			
		1549.4 *5*	11 *3*	788.26	1/2⁺,3/2⁺			
		1683.9 *2*	9.1 *9*	654.27	(3/2)⁺			
		1733.8 *1*	100 *23*	604.18	3/2⁻			
		2026.6 *3*	17.3 *23*	311.37	1/2⁻			
2359.54	(9/2,11/2)	1217.1[@] *12*	6 *5*	1143.00	(11/2⁺)			
		1334.2[@] *3*	100 *28*	1025.02	(11/2⁺)			
		1639.2[@] *3*	26 *6*	720.60	(7/2⁺)			
2367.95	1/2⁺,3/2⁺	447.3 *5*	2.4 *8*	1920.99	1/2⁺,3/2⁺			
		597.9 *3*	5.6 *8*	1769.97?	1/2⁺,3/2,5/2			
		742.8 *3*	4.8 *8*	1624.94	1/2,3/2,5/2			
		1317.8 *3*	12 *4*	1050.21	(5/2⁺)			
		1426.3 *5*	3.7 *8*	941.43	5/2⁺			
		1714.0 *2*	25 *3*	654.27	(3/2)⁺			
		1763.7 *1*	100 *20*	604.18	3/2⁻			
		2056.5 *3*	24 *2*	311.37	1/2⁻			
2389.18	(9/2,11/2)	284.9[@] *2*	14.8 *19*	2104.30	(9/2,11/2,13/2⁺)			
		1035.1[@] *10*	18 *3*	1353.10	(9/2⁺)			
		1185.5[@] *2*	56 *4*	1203.71	(13/2⁺)			
		1364.1[@] *2*	100 *14*	1025.02	(11/2⁺)			
		1668.5[@] *2*	59 *5*	720.60	(7/2⁺)			
		2389.3[@] *3*	13.8 *19*	0	9/2⁺			
2422.54	(9/2⁻)	1279.5[@] *5*	5.5 *22*	1143.00	(11/2⁺)			
		1397.1[@] *10*	28 *17*	1025.02	(11/2⁺)			
		1701.9[@] *2*	62 *4*	720.60	(7/2⁺)			
		2422.6[@] *3*	100 *8*	0	9/2⁺			

$^{119}_{49}In_{70}$-6

Adopted Levels, Gammas (continued)

γ(^{119}In) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
2487.21	(9/2⁻,11/2⁻,13/2⁻)	98.0[@] *2*	11.4 *7*	2389.18	(9/2,11/2)			
		360.3[@] *2*	15.1 *22*	2126.93	(11/2⁻)			
		1344.2[@] *1*	100 *6*	1143.00	(11/2⁺)			
2493.9	(21/2⁻)	207[&]		2286.9	(19/2⁻)			
2504.9	(21/2⁺)	218[&]		2286.9	(19/2⁻)			
2519.0	(19/2⁺)	740[&]		1779.0	(15/2⁺)			
2520.3	(9/2,11/2,13/2⁺)	2520.3 *5*	100	0	9/2⁺			
2524.57	1/2⁺,3/2⁺,5/2⁺	1474.4 *1*	100 *14*	1050.21	(5/2⁺)			
		1869.4 *10*	31 *11*	654.27	(3/2)⁺			
		1920.0 *3*	22 *8*	604.18	3/2⁻			
2526.6	(9/2,11/2,13/2)	1806.0[@] *4*	100	720.60	(7/2⁺)			
2554.40	1/2,3/2,5/2	1950.2 *2*	100	604.18	3/2⁻			
2564.64	(11/2⁻)	437.7[@] *6*	20 *10*	2126.93	(11/2⁻)			
		1360.8[@] *2*	100 *15*	1203.71	(13/2⁺)			
		1539.9[@] *3*	55 *15*	1025.02	(11/2⁺)			
2564.8	1/2⁺,3/2⁺,5/2⁺	1623.0 *5*	30 *13*	941.43	5/2⁺			
		1911.0 *10*	31 *19*	654.27	(3/2)⁺			
		1960.7 *3*	100 *19*	604.18	3/2⁻			
2656.9	(25/2⁺)	152[&]		2504.9	(21/2⁺)	(E2)	0.350	α(K)=0.280 *4*; α(L)=0.0569 *8*; α(M)=0.01132 *16*; α(N+..)=0.00207 *3* α(N)=0.00197 *3*; α(O)=9.24×10⁻⁵ *13* B(E2)(W.u.)=0.62 *7* Mult.: From systematics of B(E2) in this region.
2667.86	1/2⁺,3/2⁺	2064.1 *5*	6.9 *13*	604.18	3/2⁻			
		2356.4 *2*	100 *44*	311.37	1/2⁻			
2672.19	(9/2,11/2)	1236.2[@] *10*	24 *10*	1436.44	7/2⁺,9/2⁺			
		1468.0[@] *4*	100 *24*	1203.71	(13/2⁺)			
		1528.3[@] *8*	50 *24*	1143.00	(11/2⁺)			
		2672.5[@] *3*	67 *7*	0	9/2⁺			
2782.9	(23/2⁻)	289[&]		2493.9	(21/2⁻)			
2798.7	1/2⁺,3/2⁺,5/2⁺	130.8 *4*	100	2667.86	1/2⁺,3/2⁺			
2927.9	(25/2⁻)	145[&]		2782.9	(23/2⁻)			
2992.9	(27/2⁺)	336[&]		2656.9	(25/2⁺)			
3452.9	(29/2⁺)	460[&]		2992.9	(27/2⁺)			
3526.9	(27/2⁻)	599[&]		2927.9	(25/2⁻)			
4025.9	(29/2⁻)	499[&]		3526.9	(27/2⁻)			
		1098[&]		2927.9	(25/2⁻)			

$^{119}_{49}In_{70}$-7

Adopted Levels, Gammas (continued)

$\gamma(^{119}In)$ (continued)

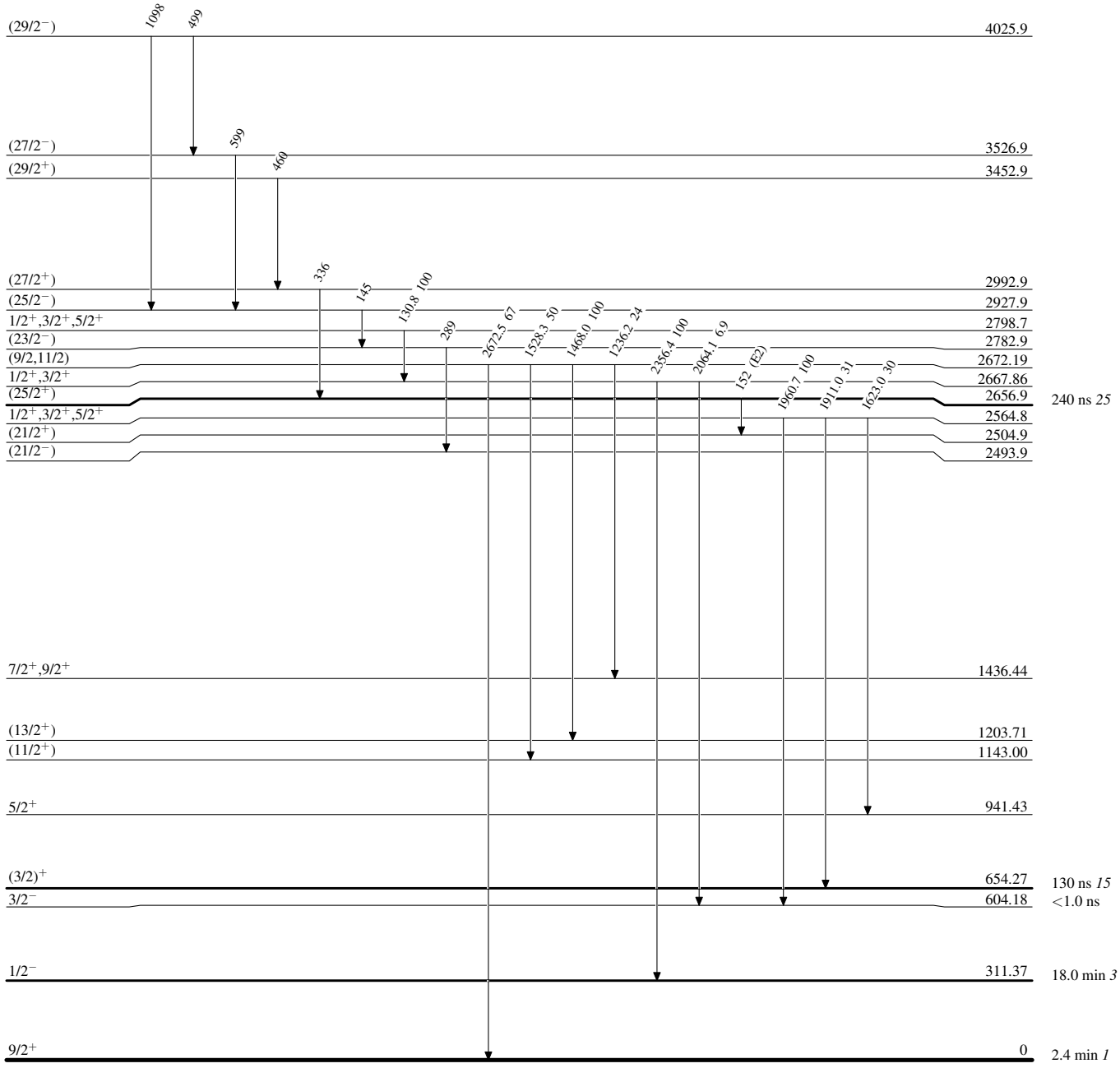
† Additional information 10.
‡ From ^{119}Cd(2.69-min) β^- decay, unless otherwise noted.
# From α(K)exp in Cd(2.69-min) β^- decay (1974Mc09).
@ From ^{119}Cd(2.20-min) β^- decay.
& From $^{238}U(^{12}C,x\gamma)$.
a Placement of transition in the level scheme is uncertain.

$^{119}_{49}In_{70}$-8

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

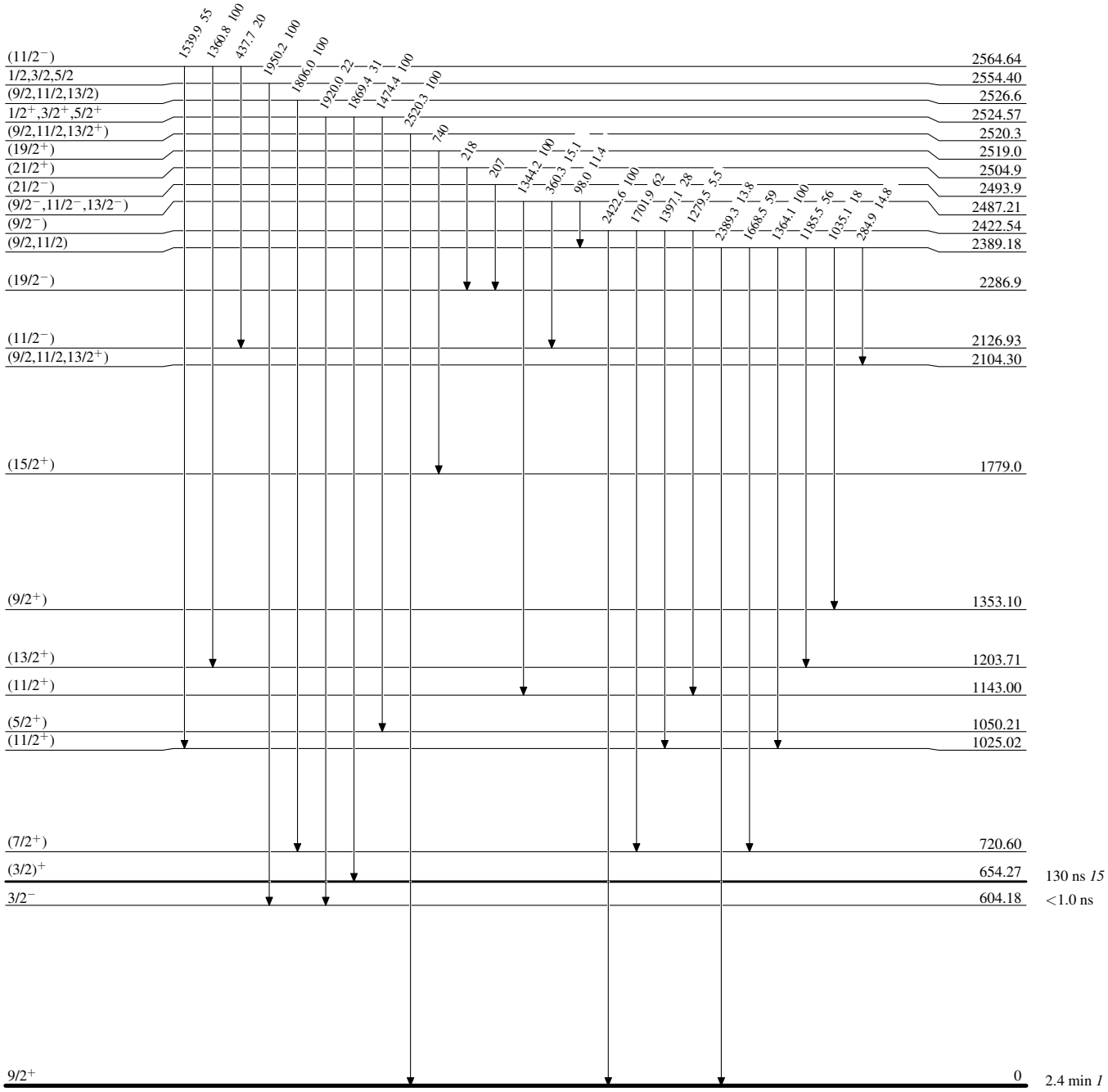


$^{119}_{49}In_{70}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

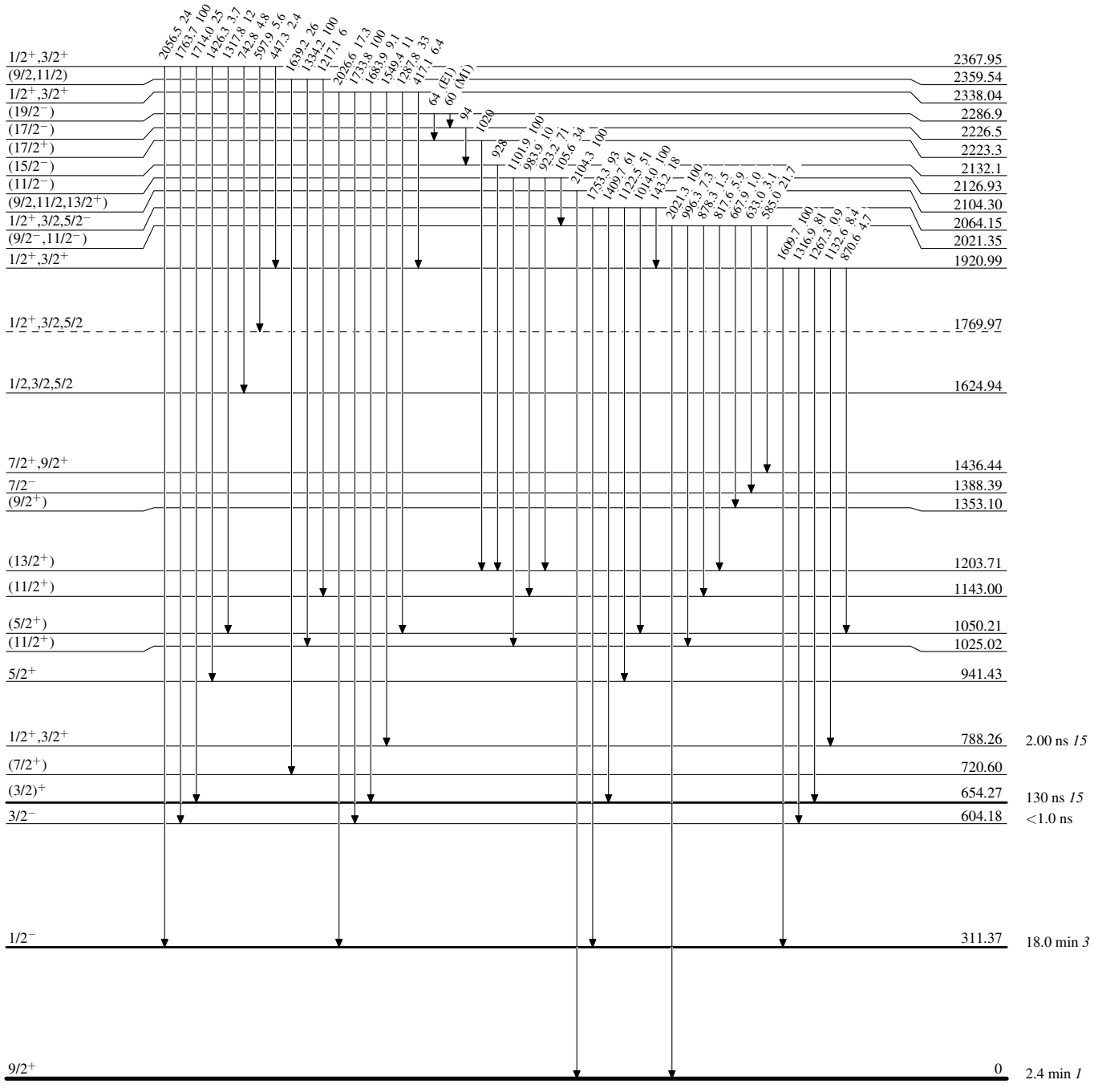


$^{119}_{49}In_{70}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{119}_{49}In_{70}$

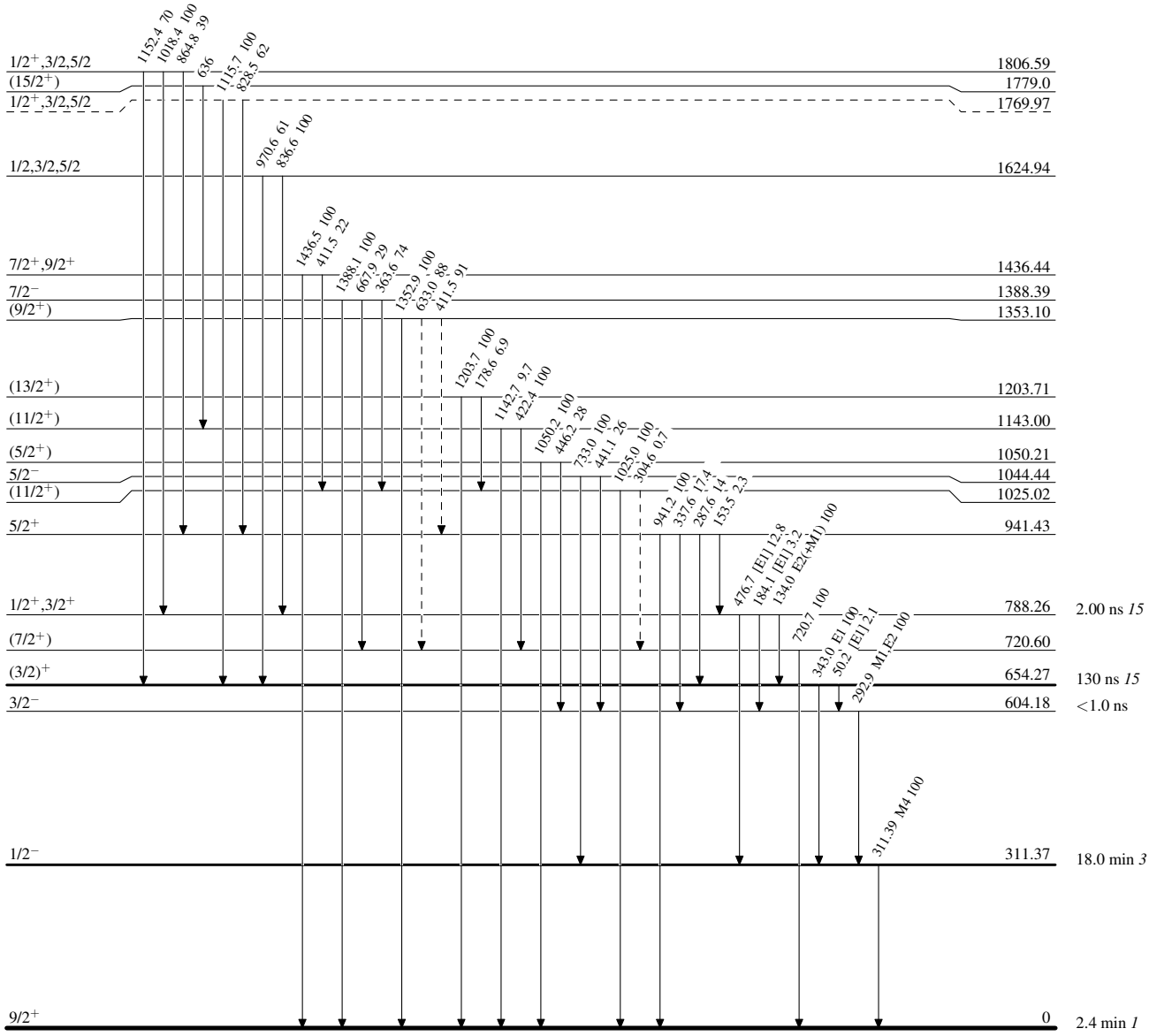
Adopted Levels, Gammas

Legend

Level Scheme (continued)

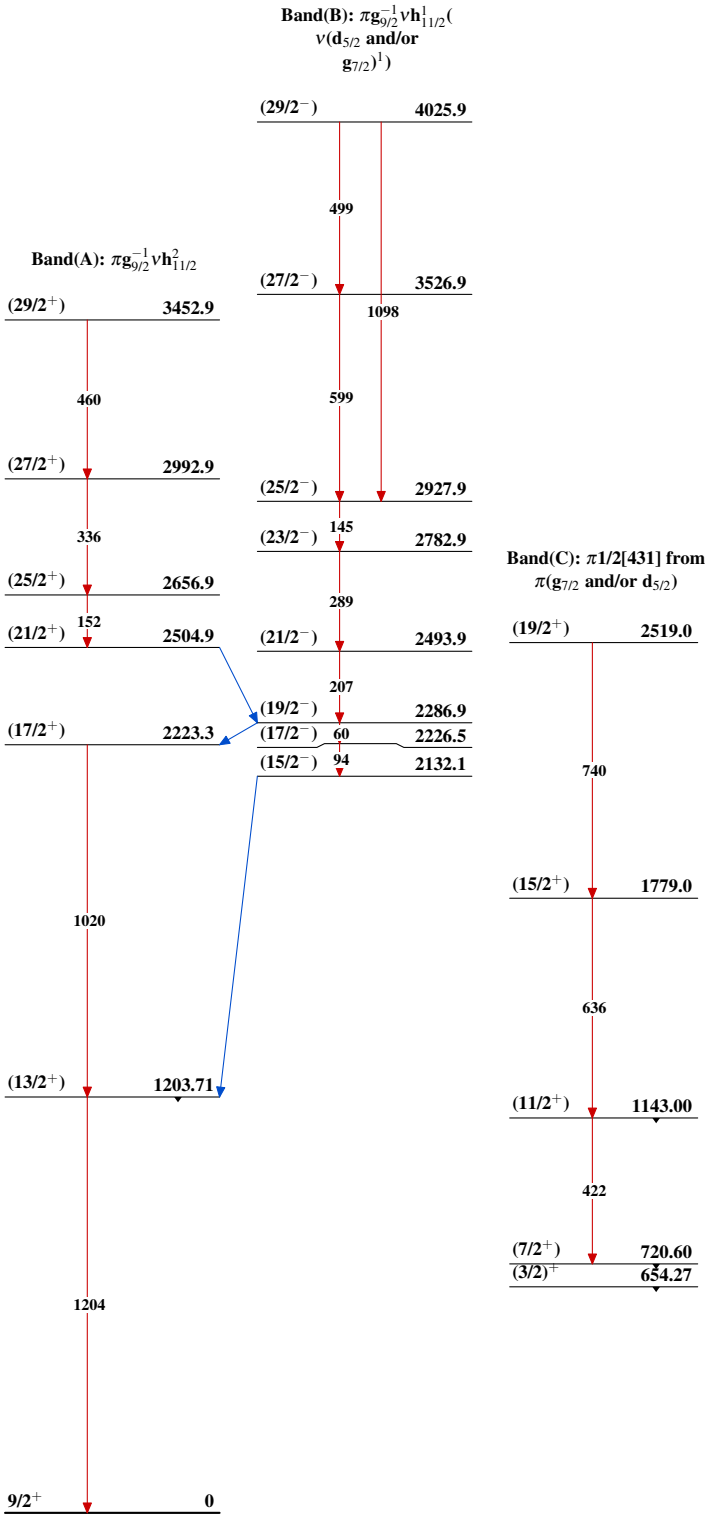
Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{119}_{49}In_{70}$

Adopted Levels, Gammas



$^{119}_{49}In_{70}$