Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112,495 (2011)	1-Jan-2010

Q(β^-)=5.42×10^3 *3*; S(n)=7.68×10^3 *4*; S(p)=1.106×10^4 *3*; Q(α)=−8.50×10^3 *3* 2012Wa38
Note: Current evaluation has used the following Q record 5418 307683 43 *11072* 31-8514 30 2009AuZZ.

^{125}In Levels

Cross Reference (XREF) Flags

A ^{125}Cd β^- decay (0.68 s)
B ^{125}Cd β^- decay (0.48 s)
C ^{125}In IT decay:5.0 ms

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
0.0	9/2$^+$	2.36 s *4*	AB	%β^-=100 μ=+5.502 *9*; Q=+0.71 *4* $T_{1/2}$: Weighted average of 2.50 s *10* (1986Go10), 2.43 s *15* (1983Sh07) and 2.33 s *4* (1974Gr29). Jπ: J from LASER spectroscopy (1987Eb02); log *ft*=4.4 to 7/2$^+$, 1362.5 level in ^{125}Sn. μ,Q: From collinear fast-beam LASER spectroscopy (1987Eb02). See also 1989Ra17 and 2005St24 compilation.
360.12 *9*	1/2$^{(-)}$	12.2 s *2*	A	%β^-=100 μ=−0.433 *4* (1987Eb02) Additional information 1. $T_{1/2}$: Weighted average of 12.2 s *3* (1986Go10), 15.1 s *11* (1983Sh07) and 12.2 s *1* (1974Gr29). Jπ: J from LASER spectroscopy (1987Eb02); π from systematics. μ: From collinear fast-beam LASER spectroscopy (1987Eb02). See also 1989Ra17 and 2005St24 compilation.
796.44 *10*	(3/2$^-$)		A	Jπ: γ to 1/2$^{(-)}$, systematics.
1027.40 *4*	(11/2$^+$)		BC	Jπ: Log *ft*=5.77 from (11/2$^-$), systematics.
1099.48 *3*	(5/2$^+$)		A	Jπ: Log *ft*=5.09 from (3/2$^+$), γ to 9/2$^+$.
1173.064 *24*	(13/2$^+$)		BC	Jπ: γ's to 9/2$^+$ and (11/2$^+$), systematics.
1219.80 *11*	(1/2,3/2,5/2$^-$)		A	Jπ: Log *ft*=5.77 from (3/2$^+$), γ to 1/2$^{(-)}$.
1563.88 *6*	(9/2,11/2,13/2$^+$)		B	Jπ: Log *ft*=6.01 from (11/2$^-$), γ to 9/2$^+$.
1577.60 *5*			B	
1588.57 *14*			A	
1810.38 *13*			A	
1909.70 *4*	(13/2$^+$)		BC	Jπ: γ to 9/2$^+$ and (13/2$^+$), log *ft*=5.29 from (11/2$^-$); systematics.
1953.1 *5*	(15/2$^+$)		C	Jπ: M1 γ to (13/2$^+$). No transition to levels with J<13/2.
1958.08 *6*			B	
1970.90 *7*			B	
2009.4 *7*	(19/2$^+$)	9.4 μs *6*	C	Jπ: E2 γ to (15/2$^+$). No transitions to levels with J< 15/2. $T_{1/2}$: From 1998FoZY.
2064.60 *5*	(9/2,11/2,13/2)		B	Jπ: Log *ft*=5.76 from (11/2$^-$).
2101.40 *8*	(9/2,11/2,13/2)		B	Jπ: Log *ft*=5.55 from (11/2$^-$).
2147.18 *10*	(5/2$^+$)		A	Jπ: Log *ft*=4.75 from (3/2$^+$), γ to 9/2$^+$.
2161.2 *9*	(23/2$^-$)	5.0 ms *15*	C	Jπ: M2 γ to (19/2$^+$); 2004Sc42 assign 25/2$^+$. This assignment, however, leads to 15/2$^-$ assignment of 1910-keV level to which relative strong beta feed is observed from (11/2$^-$) state. $T_{1/2}$: From 1998FoZY. Configuration=(π $g_{9/2}$ hole ⊗ 7$^-$ Sn Core).
2217.83 *5*	(9/2,11/2,13/2)		B	Jπ: Log *ft*=5.51 from (11/2$^-$).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{125}In Levels (continued)

E(level)[†]	Jπ	XREF	Comments
2248.50 *18*	(9/2,11/2,13/2)	B	Jπ: Log *ft*=5.73 from (11/2⁻).
2252.65 *11*	(9/2,11/2,13/2⁺)	B	Jπ: Log *ft*=5.85 *8* from (11/2⁻), γ to 9/2⁺.
2349.44 *14*	(1/2,3/2,5/2)	A	Jπ: Log *ft*=5.18 from (3/2⁺).
2378.16 *4*	(9/2,11/2,13/2)	B	Jπ: Log *ft*=5.75 from (11/2⁻).
2381.28 *11*	(1/2,3/2,5/2)	A	Jπ: Log *ft*=5.05 from (3/2⁺).
2392.594 *25*	(9/2⁻,11/2⁻)	B	Jπ: Log *ft*=5.00 from (11/2⁻), γ to 9/2⁺.
2411.48 *9*	(9/2,11/2,13/2)	B	Jπ: Log *ft*=5.81 from (11/2⁻).
2497.43 *11*	(1/2⁺,3/2⁺)	A	Jπ: Log *ft*=4.80 from (3/2⁺); γ to 1/2$^{(-)}$ and (5/2⁺).
2572.76 *6*	(9/2,11/2,13/2)	B	Jπ: Log *ft*=5.80 from (11/2⁻).
2585.08 *14*	(1/2⁺,3/2⁺,5/2⁺)	A	Jπ: Log *ft*=4.96 from (3/2⁺).
2616.37 *3*	(9/2⁻,11/2⁻)	B	Jπ: Log *ft*=4.98 from (11/2⁻), γ to 9/2⁺.
2631.58 *9*	(9/2,11/2,13/2)	B	Jπ: Log *ft*=5.79 from (11/2⁻).
2640.29 *3*	(9/2⁻,11/2⁻,13/2⁻)	B	Jπ: Log *ft*=4.92 from (11/2⁻).
2641.26 *16*	(1/2,3/2,5/2)	A	Jπ: Log *ft*=5.38 from (3/2⁺).
2641.67 *5*	(9/2⁻,11/2⁻)	B	Jπ: Log *ft*=4.55 from (11/2⁻), γ to 9/2⁺.
2802.12 *15*	(9/2⁻,11/2⁻)	B	Jπ: Log *ft*=5.00 from (11/2⁻), γ to 9/2⁺.
2818.80 *9*	(9/2,11/2,13/2)	B	Jπ: Log *ft*=5.67 from (11/2⁻).
2863.31 *20*	(9/2,11/2,13/2⁺)	B	Jπ: Log *ft*=5.61 from (11/2⁻), γ to 9/2⁺.

[†] From a least-squares fit to the adopted Eγ's.

Adopted Levels, Gammas (continued)

γ(^{125}In)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[#]	α[@]	Comments
796.44	(3/2⁻)	436.29[‡] *3*	100	360.12	1/2$^{(-)}$			
1027.40	(11/2⁺)	1027.53 *8*	100	0.0	9/2⁺			
1099.48	(5/2⁺)	302.96[‡] *15*	7.4 *6*	796.44	(3/2⁻)			
		1099.48[‡] *3*	100 *8*	0.0	9/2⁺			
1173.064	(13/2⁺)	146.38 *20*	8.7 *15*	1027.40	(11/2⁺)			
		1173.16 *3*	100 *6*	0.0	9/2⁺			
1219.80	(1/2,3/2,5/2⁻)	422.91[‡] *10*	47 *6*	796.44	(3/2⁻)			
		859.71[‡] *5*	100.0 *9*	360.12	1/2$^{(-)}$			
1563.88	(9/2,11/2,13/2⁺)	536.48 *8*	84 *9*	1027.40	(11/2⁺)			
		1563.86 *8*	100 *10*	0.0	9/2⁺			
1577.60		1577.66 *5*	100	0.0	9/2⁺			
1588.57		369.23[‡] *15*	26 *5*	1219.80	(1/2,3/2,5/2⁻)			
		792.43[‡] *20*	100 *40*	796.44	(3/2⁻)			
1810.38		1013.97[‡] *10*	100	796.44	(3/2⁻)			
1909.70	(13/2⁺)	736.65 *3*	100 *6*	1173.064	(13/2⁺)			
		1909.94 *15*	5.3 *8*	0.0	9/2⁺			
1953.1	(15/2⁺)	43.4		1909.70	(13/2⁺)	M1	5.67	α(K)=4.90 *7*; α(L)=0.628 *9*; α(M)=0.1220 *17*; α(N+..)=0.0239 *4* α(N)=0.0223 *4*; α(O)=0.001636 *23*
1958.08		1958.29 *8*	100	0.0	9/2⁺			
1970.90		1971.09 *10*	100	0.0	9/2⁺			
2009.4	(19/2⁺)	56.3		1953.1	(15/2⁺)	E2	11.99	B(E2)(W.u.)=0.221 *25* α(K)=6.67 *10*; α(L)=4.30 *6*; α(M)=0.876 *13*; α(N+..)=0.1511 *22* α(N)=0.1474 *21*; α(O)=0.00366 *6*
2064.60	(9/2,11/2,13/2)	2064.64 *5*	100	0.0	9/2⁺			
2101.40	(9/2,11/2,13/2)	191.88 *15*	100 *14*	1909.70	(13/2⁺)			
		928.40 *10*	56 *9*	1173.064	(13/2⁺)			
		2101.06 *15*	23 *6*	0.0	9/2⁺			
2147.18	(5/2⁺)	1349.9[‡] *5*	8.2 *23*	796.44	(3/2⁻)			
		2147.19[‡] *10*	100 *6*	0.0	9/2⁺			According to 1986Ho24 and 1989Hu03, 2147-keV γ-ray decays directly to the ground state, but 1987Sp09 suggest the γ-ray as decaying from 2507-keV level from Q_β measurement.
2161.2	(23/2⁻)	151.8		2009.4	(19/2⁺)	M2	1.152	B(M2)(W.u.)=0.0014 *5* α(K)=0.959 *14*; α(L)=0.1560 *22*; α(M)=0.0311 *5*; α(N+..)=0.00606 *9* α(N)=0.00567 *8*; α(O)=0.000388 *6*
2217.83	(9/2,11/2,13/2)	153.78 *20*	6 *3*	2064.60	(9/2,11/2,13/2)			

$^{125}_{49}In_{76}$-3

Adopted Levels, Gammas (continued)

γ(^{125}In) (continued)

E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π
2217.83	(9/2,11/2,13/2)	1044.72 *4*	100 *8*	1173.064	(13/2$^+$)
2248.50	(9/2,11/2,13/2)	1075.44 *25*	81 *14*	1173.064	(13/2$^+$)
		1221.09 *25*	1.0×10^2 *4*	1027.40	(11/2$^+$)
2252.65	(9/2,11/2,13/2$^+$)	281.55 *15*	68 *9*	1970.90	
		2252.80 *15*	100 *10*	0.0	9/2$^+$
2349.44	(1/2,3/2,5/2)	538.9‡ *4*	11 *3*	1810.38	
		1249.75‡ *25*	76 *14*	1099.48	(5/2$^+$)
		1552.88‡ *15*	100 *14*	796.44	(3/2$^-$)
		1989.50‡ *15*	66 *10*	360.12	1/2$^{(-)}$
2378.16	(9/2,11/2,13/2)	160.03 *15*	20 *4*	2217.83	(9/2,11/2,13/2)
		313.47 *20*	38 *8*	2064.60	(9/2,11/2,13/2)
		407.46 *8*	39 *5*	1970.90	
		1205.19 *10*	58 *9*	1173.064	(13/2$^+$)
		1351.08 *10*	100 *11*	1027.40	(11/2$^+$)
2381.28	(1/2,3/2,5/2)	1584.83‡ *5*	100 *8*	796.44	(3/2$^-$)
		2021.16‡ *15*	16 *4*	360.12	1/2$^{(-)}$
2392.594	(9/2$^-$,11/2$^-$)	1219.08 *15*	17 *4*	1173.064	(13/2$^+$)
		1364.64 *20*	10.7 *19*	1027.40	(11/2$^+$)
		2392.43 *3*	100 *8*	0.0	9/2$^+$
2411.48	(9/2,11/2,13/2)	1238.41 *8*	100	1173.064	(13/2$^+$)
2497.43	(1/2$^+$,3/2$^+$)	687.28‡ *15*	24 *3*	1810.38	
		1700.96‡ *5*	100 *7*	796.44	(3/2$^-$)
2572.76	(9/2,11/2,13/2)	1399.69 *5*	100	1173.064	(13/2$^+$)
2585.08	(1/2$^+$,3/2$^+$,5/2$^+$)	774.46‡ *20*	25 *6*	1810.38	
		996.78‡ *10*	100 *15*	1588.57	
		1364.64‡ *20*	58 *4*	1219.80	(1/2,3/2,5/2$^-$)
		1788.38‡ *20*	20 *5*	796.44	(3/2$^-$)
2616.37	(9/2$^-$,11/2$^-$)	238.97 *15*	12 *3*	2378.16	(9/2,11/2,13/2)
		1589.11 *5*	55 *5*	1027.40	(11/2$^+$)
		2616.26 *3*	100 *8*	0.0	9/2$^+$
2631.58	(9/2,11/2,13/2)	721.88 *8*	100	1909.70	(13/2$^+$)
2640.29	(9/2$^-$,11/2$^-$,13/2$^-$)	247.53 *3*	87 *9*	2392.594	(9/2$^-$,11/2$^-$)
		262.15 *3*	61 *7*	2378.16	(9/2,11/2,13/2)
		730.73 *8*	54 *6*	1909.70	(13/2$^+$)
		1467.35 *3*	100 *7*	1173.064	(13/2$^+$)
2641.26	(1/2,3/2,5/2)	1421.67 *15*	75 *20*	1219.80	(1/2,3/2,5/2$^-$)
		1844.43 *20*	100 *20*	796.44	(3/2$^-$)
2641.67	(9/2$^-$,11/2$^-$)	577.36 *15*	4.5 *7*	2064.60	(9/2,11/2,13/2)

$^{125}_{49}In_{76}$-4

Adopted Levels, Gammas (continued)

$\gamma(^{125}In)$ (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ	E_f	J_f^π
2641.67	(9/2$^-$,11/2$^-$)	683.64 *4*	17.1 *14*	1958.08	
		1064.26 *8*	18.1 *20*	1577.60	
		1613.74 *8*	100.0 *11*	1027.40	(11/2$^+$)
		2641.8 *3*	55 *6*	0.0	9/2$^+$
2802.12	(9/2$^-$,11/2$^-$)	549.3 *3*	5.9 *25*	2252.65	(9/2,11/2,13/2$^+$)
		1774.90 *20*	8.7 *16*	1027.40	(11/2$^+$)
		2801.8 *3*	100 *10*	0.0	9/2$^+$
2818.80	(9/2,11/2,13/2)	909.10 *8*	100	1909.70	(13/2$^+$)
2863.31	(9/2,11/2,13/2$^+$)	1835.88 *25*	27 *5*	1027.40	(11/2$^+$)
		2863.3 *3*	100 *15*	0.0	9/2$^+$

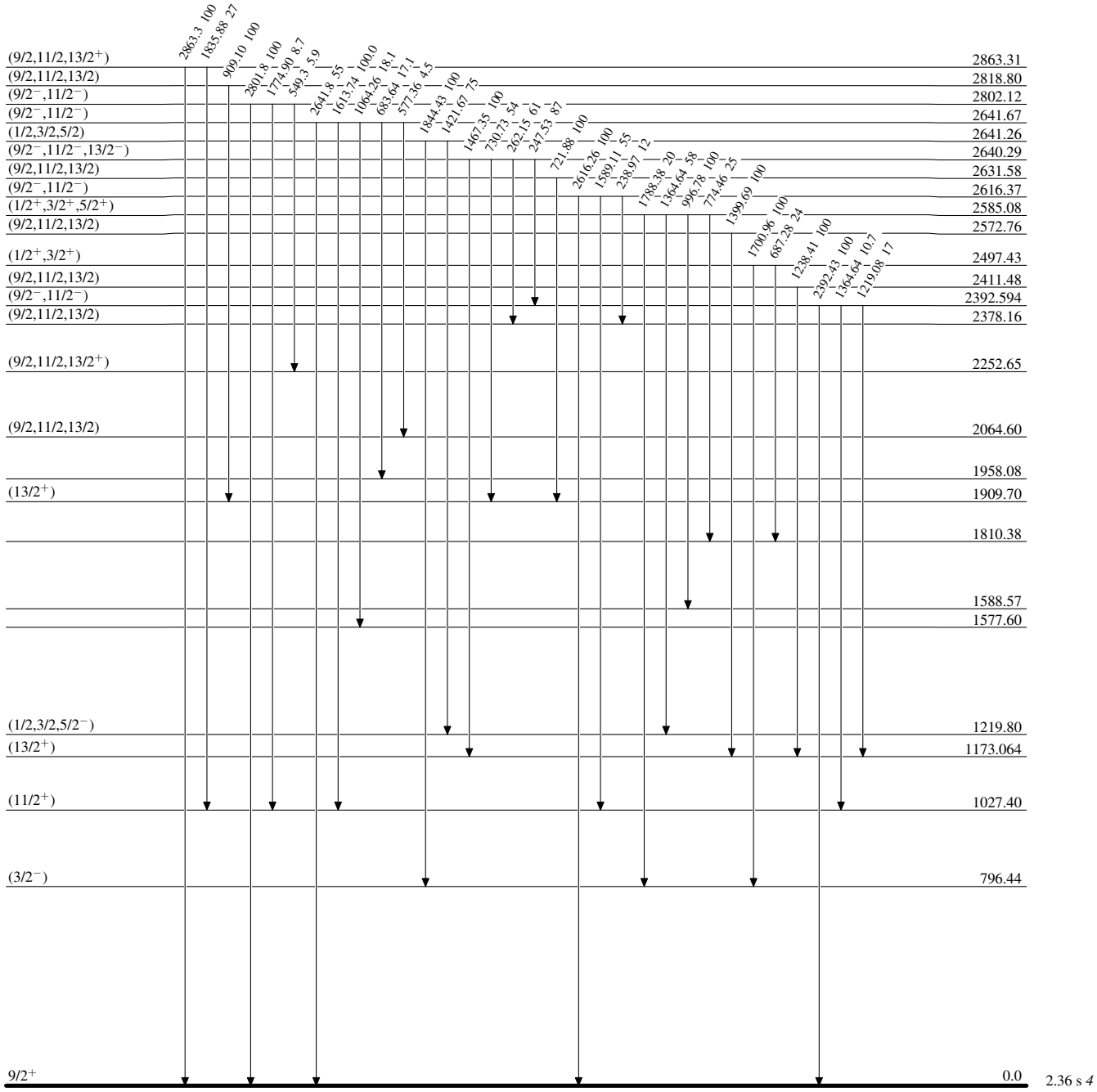
[†] From ^{125}Cd β^- decay (0.48 s), unless otherwise noted.
[‡] From ^{125}Cd β^- decay (0.65 s).
[#] From ^{125}In IT Decay.
[@] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$^{125}_{49}In_{76}$-5

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



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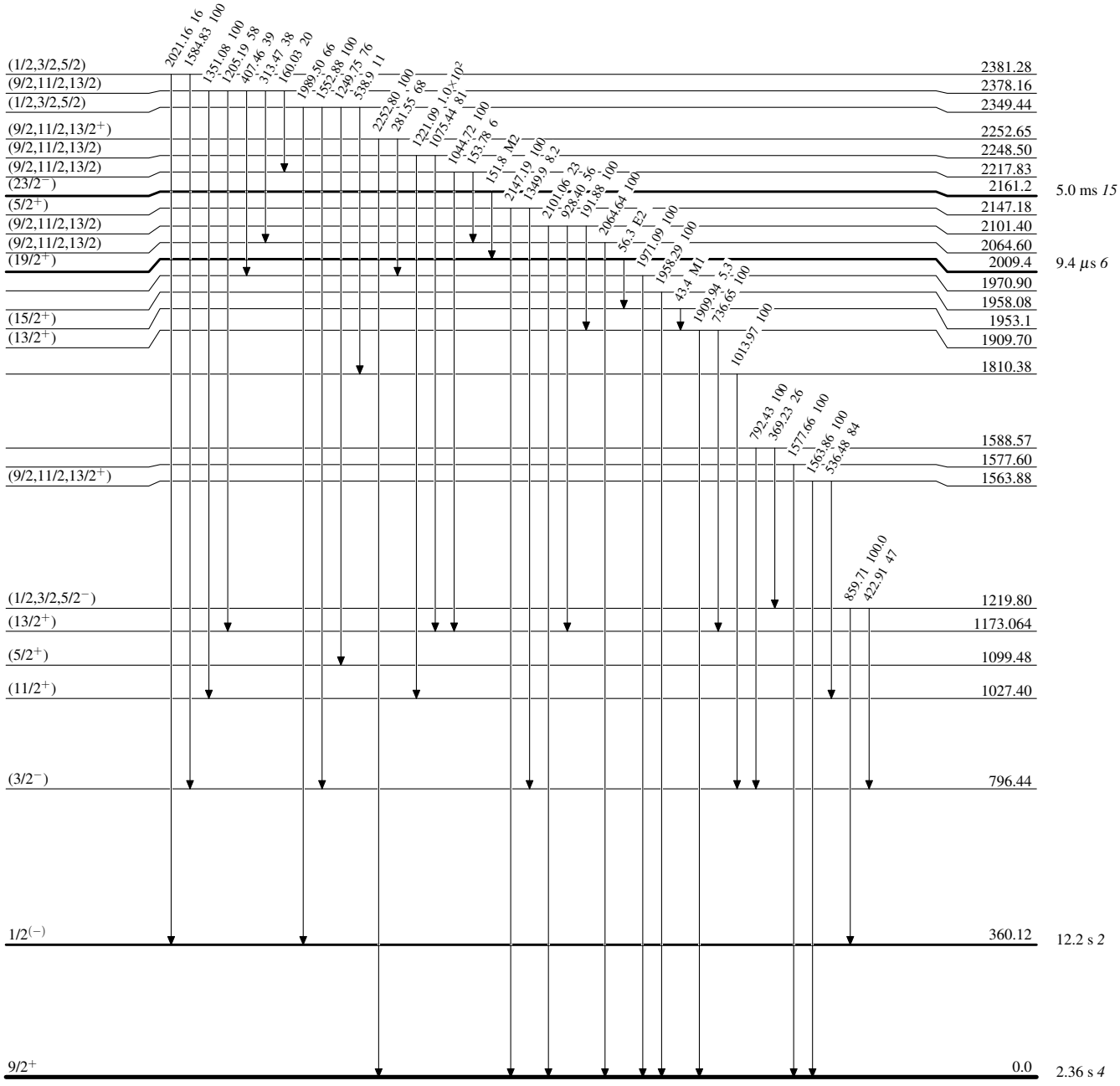
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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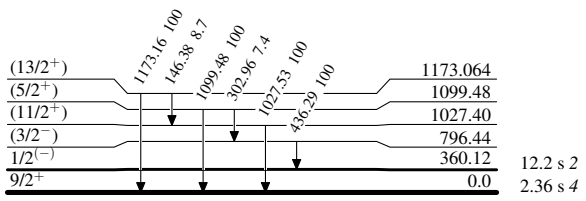
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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