Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. A. Rodionov and S. Sakharov, Balraj Singh	NDS 104,497 (2005)	10-Feb-2005

Q(β^-)=−1.25×10^3 *5*; S(n)=8.03×10^3 *5*; S(p)=4.33×10^3 *4*; Q(α)=−2.2×10^2 *4* 2012Wa38
Note: Current evaluation has used the following Q record −1270 40 *8040* 50 *4350* 40 −230 40 2003Au03.

^{132}La Levels

Cross Reference (XREF) Flags

A	^{132}La IT decay (24.3 min)	E	^{122}Sn(^{14}N,4nγ) E=60 MeV
B	^{132}Ce ε decay (3.51 h)	F	^{122}Sn(^{14}N,4nγ) E=70 MeV
C	^{100}Mo(^{36}S,p3nγ)	G	^{123}Sb(^{13}C,4nγ)
D	^{122}Sn(^{14}N,4nγ) E=45 MeV		

E(level)†	J$^\pi$‡	T$_{1/2}$	XREF	Comments
0.0[d]	2$^-$	4.8 h *2*	AB E	%ε+%β^+=100 J$^\pi$: atomic beam magnetic resonance (1973In04); first-forbidden unique β transition to 0$^+$. T$_{1/2}$: from 1960Wa03. Others: 4.2 h *1* (1960Gr16), 1965Ge03, 1964Fr05, 1963La03, 1951Gr14.
135.36[d] *5*	3$^-$		AB E	J$^\pi$: M1+E2 γ to 2$^-$, M3 γ from 6$^-$.
155.372 *21*	(2)$^+$		B	J$^\pi$: E1 γ to 2$^-$; M1 γ from 1$^+$; γ to 3$^-$.
182.073 *21*	1$^+$	0.83 ns *11*	B	J$^\pi$: log *ft*=5.0 from 0$^+$; E1 γ to 2$^-$. T$_{1/2}$: from $\gamma\gamma$(t) in ε decay.
188.20[c] *11*	6$^-$	24.3 min *5*	A CDE G	%IT=76; %ε+%β^+=24 J$^\pi$: atomic beam magnetic resonance (1973In04); E4 γ to 2$^-$. T$_{1/2}$: from 1969Ge11. %IT, %ε+%β^+: estimated by 1972Ha41.
216.859 *23*	2$^+$		B	J$^\pi$: E1 γ to 3$^-$; M1+E2 γ from 1$^+$.
231.8[d] *4*	(4$^-$)		E	J$^\pi$: γ to 3$^-$.
279.14 *4*	1$^+$		B	J$^\pi$: log *ft*=6.5 from 0$^+$; E1 γ to 2$^-$.
357.21[c] *16*	(7)$^-$		CDE	J$^\pi$: ΔJ=1, M1 γ to 6$^-$.
359.06 *4*	1$^+$,2$^+$		B	J$^\pi$: M1+E2 γ's to 1$^+$ and 2$^+$.
361.3[d] *4*	(5$^-$)		E	J$^\pi$: γ to 6$^-$.
390.79 *18*	(7)$^-$		CDE	J$^\pi$: ΔJ=1, M1 γ to 6$^-$.
406.87 *3*	1$^+$		B	J$^\pi$: log *ft*=5.8 from 0$^+$; M1+E2 γ to 2$^+$.
485.05 *3*	1$^+$		B	J$^\pi$: log *ft*=5.9 from 0$^+$; M1+E2 γ to 2$^+$.
508.17 *17*	6$^+$		CDE	J$^\pi$: ΔJ=1 γ to (7)$^-$; ΔJ=0, E1 γ to 6$^-$.
521.9[e] *3*	(6$^-$)		E	J$^\pi$: γ's to 6$^-$, and (7)$^-$.
523.83 *4*	1$^+$		B	J$^\pi$: log *ft*=6.4 from 0$^+$; E1 γ to 2$^-$.
584.33[c] *18*	(8$^-$)		CDE	J$^\pi$: ΔJ=1 γ to 7$^-$, γ to 6$^-$.
603.3[d] *6*	(6$^-$)		E	J$^\pi$: γ to (5$^-$).
606.747 *24*	1$^+$		B	J$^\pi$: log *ft*=5.8 from 0$^+$; M1,E2 γ to 1$^+$.
622.9 *4*			E	J$^\pi$: γ to (7)$^-$.
648.33 *4*	1$^+$		B	J$^\pi$: log *ft*=6.1 from 0$^+$; M1,E2 γ to 2$^+$.
669.55 *17*	(7)$^+$		CDE G	J$^\pi$: ΔJ=0, E1 γ to (7)$^-$; E1 γ to 6$^-$.
707.4 *4*	(8)$^+$		C E	J$^\pi$: ΔJ=1, E1 γ to (7)$^-$.
731.77 *3*	1$^+$		B	J$^\pi$: log *ft*=6.0 from 0$^+$; M1,E2 γ to 1$^+$.
751.9[e] *4*	(7$^-$)		E	J$^\pi$: γ to 6$^-$.
774.5[@] *4*	(9$^+$)		CDEFG	J$^\pi$: ΔJ=1 γ to 8$^+$.
775.3 *5*			E	J$^\pi$: γ to (6$^-$).
820.03 *5*	1$^{(+)}$		B	J$^\pi$: log *ft*=6.4 from 0$^+$; γ to 2$^-$; (M1,E2) γ to 1$^+$.

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Adopted Levels, Gammas (continued)

^{132}La Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
873.04[c] *21*	(9⁻)		CDE	Jπ: ΔJ=(2) γ to (7)⁻; γ to (8⁻).
935.6[@] *5*	(10⁺)		CDEFG	Jπ: ΔJ=1, M1 γ to (9⁺).
1018.9 *7*			E	
1165.6[e] *5*	(9⁻)		E	Jπ: γ to (7⁻).
1229.3[&] *5*	(11⁺)		CDEFG	Jπ: ΔJ=1, M1 γ (10⁺); γ to (9⁺).
1253.3[c] *3*	(10⁻)		CDE	Jπ: ΔJ=1 γ to (9⁻); γ to (8⁻).
1283.0 *4*			E	Jπ: γ to (9⁻).
1523.1[@] *5*	(12⁺)		DEFG	Jπ: ΔJ=1 γ to (11⁺); γ to (10⁺).
1557.8[b] *5*	(11⁺)		EFG	Jπ: ΔJ=1 γ to (10⁺); γ to (9⁺).
1572.0[c] *5*	(11⁻)		E	Jπ: γ to (9⁻).
1722.6[e] *8*	(11⁻)		E	Jπ: γ to (9⁻).
1915.3[&] *5*	(13⁺)		DEFG	Jπ: ΔJ=1 γ to (12⁺); γ to (11⁺).
1917.9[a] *5*	(12⁺)		EFG	Jπ: ΔJ=1 γ to (11⁺).
2083.3? *6*			E	Jπ: possible γ to (10⁻).
2100.0[c] *7*	(12⁻)		E	
2170.6[e] *9*	(12⁻)		E	Jπ: γ to (11⁻).
2298.0[b] *5*	(13⁺)	0.73[#] ps	EFG	Jπ: ΔJ=1 γ to (12⁺); γ to (11⁺).
2300.9[@] *5*	(14⁺)		DEFG	Jπ: ΔJ=1 γ to (13⁺); γ to (12⁺).
2390.6[e] *9*	(13⁻)		E	Jπ: γ to (11⁻).
2407.5[g] *14*	(11⁺)		F	Jπ: γ to (11⁺).
2413.0[c] *7*	(13⁻)		E	Jπ: γ to (11⁻).
2664.7[f] *12*	(12⁺)		F	Jπ: γ to (12⁺).
2700.9[a] *5*	(14⁺)	0.80[#] ps	EFG	Jπ: ΔJ=1 γ to (13⁺); γ to (12⁺).
2754.5[&] *5*	(15⁺)		DEFG	Jπ: ΔJ=(1) γ to (14⁺); γ to (13⁺).
2774.6 *10*			E	Jπ: γ to (12⁻).
2906.8[g] *12*	(13⁺)		EF	Jπ: γ's to (12⁺) and (13⁺).
2910.6[e] *10*	(14⁻)		E	Jπ: γ to (13⁻).
3127.8[b] *5*	(15⁺)		FG	Jπ: γ's to (14⁺) and (13⁺).
3160.6[e] *10*	(15⁻)		E	Jπ: γ to (13⁻).
3165.9[f] *12*	(14⁺)		EF	Jπ: γ to (14⁺).
3206.7[@] *5*	(16⁺)	0.54[#] ps	EFG	Jπ: ΔJ=1 γ to (15⁺); γ to (14⁺).
3388.0[c] *9*	(15⁻)		E	Jπ: γ to (13⁻).
3471.2[g] *13*	(15⁺)		F	Jπ: γ's to (14⁺) and (15⁺).
3616.6[a] *5*	(16⁺)		FG	Jπ: γ's to (14⁺) and (15⁺).
3713.2[&] *6*	(17⁺)	0.44[#] ps	EFG	Jπ: ΔJ=1 γ to (16⁺); γ to (15⁺).
3828.3[f] *14*	(16⁺)		F	Jπ: γ's to (14⁺) and (15⁺).
4035.6[e] *12*	(17⁻)		E	Jπ: γ to (15⁻).
4201.0[@] *6*	(18⁺)	0.38[#] ps	EFG	Jπ: γ's to (16⁺) and (17⁺).
4212.6[g] *14*	(17⁺)		F	Jπ: γ's to (15⁺) and (16⁺).
4643.5[f] *15*	(18⁺)		F	Jπ: γ's to (16⁺) and (17⁺).
4759.3[&] *6*	(19⁺)	0.53[#] ps	EFG	Jπ: γ's to (17⁺) and (18⁺).
5216.6[@] *7*	(20⁺)		FG	Jπ: γ to (18⁺).

[†] From least-squares fit to Eγ's.
[‡] For high-spin states (J>4), the assignments are based on band associations, systematics of neighboring isotones, and multipolarity assignments for selected transitions.
[#] Tentative value from DSAM measurement of 2004Gr06.
[@] Band(A): $\pi h_{11/2}\nu h^{-1}_{11/2}$, α=0.

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Adopted Levels, Gammas (continued)

^{132}La Levels (continued)

[&] Band(a): $\pi h_{11/2}\nu h^{-1}_{11/2}$, α=1.
[a] Band(B): Chiral doublet structure of $\pi h_{11/2}\nu h^{-1}_{11/2}$, α=0.
[b] Band(b): Chiral doublet structure of $\pi h_{11/2}\nu h^{-1}_{11/2}$, α=1.
[c] Band(C): $\pi g_{7/2}\nu h_{11/2}$. Probable 3/2[422] ($g_{7/2}$) orbital.
[d] Band(D): g.s. Band.
[e] Band(E): Band based on (6^-).
[f] Band(F): band based on (12^+), α=0.
[g] Band(f): band based on (11^+), α=1.

Adopted Levels, Gammas (continued)

$\gamma(^{132}La)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[@]	Comments
135.36	3^-	135.25 *20*	100	0.0	2^-	M1+E2	0.21 *3*	0.476	α(K)= 0.4018 *11*; α(L)= 0.0583 *14*; α(M)= 0.0121 *3*; α(N+..)=0.00333 *8*
155.372	$(2)^+$	20.00 *5*	0.081 *15*	135.36	3^-	[E1]		3.42	α(L)= 2.68; α(M)= 0.556
		155.37 *4*	100 *5*	0.0	2^-	E1		0.0698	α(K)= 0.0598; α(L)=0.00795; α(M)=0.00163; α(N+..)=0.00044
182.073	1^+	26.65 *5*	0.28 *3*	155.372	$(2)^+$	M1+E2	0.024 *3*	8.04	α(L)= 6.31 *5*; α(M)= 1.304 *12* B(M1)(W.u.)=0.0037 *7*; B(E2)(W.u.)=1.9 *6*
		182.11 *3*	100	0.0	2^-	E1		0.0451	α(K)= 0.0387; α(L)=0.00510; α(M)=0.00105; α(N+..)=0.00028 B(E1)(W.u.)=4.9×10^{-5} *7*
188.20	6^-	52.8 *1*	13.5 *10*	135.36	3^-	M3		1770	α(K)= 573; α(L)= 941; α(M)= 230.2; α(N+..)= 71.6 B(M3)(W.u.)=0.024 *3*
		188.5 *3*	100	0.0	2^-	E4		8.38	α(K)= 2.63; α(L)= 4.60; α(M)= 1.074; α(N+..)= 0.292 B(E4)(W.u.)=0.98 *9*
216.859	2^+	34.71 *5*	7.2 *8*	182.073	1^+	M1+E2	0.028 *11*	3.65 *9*	α(L)= 2.86 *7*; α(M)= 0.592 *15*
		61.49 *5*	3.8 *4*	155.372	$(2)^+$	M1+E2	0.06 *3*	4.49 *4*	α(K)= 3.815 *4*; α(L)= 0.537 *24*; α(M)= 0.112 *6*; α(N+..)= 0.0307 *14*
		81.53 *7*	≤0.23	135.36	3^-	E1		0.415	α(K)= 0.353; α(L)= 0.0496; α(M)=0.01017; α(N+..)=0.00266
		216.83 *4*	100 *5*	0.0	2^-	E1		0.0281	α(K)=0.02417; α(L)=0.00315; α(M)=0.00065; α(N+..)=0.00017
231.8	(4^-)	96.0 *5*		135.36	3^-				
279.14	1^+	62.27 *6*	5.2 *4*	216.859	2^+	M1+E2	0.05 *3*	4.32 *3*	α(K)= 3.677 *3*; α(L)= 0.512 *19*; α(M)= 0.106 *5*; α(N+..)= 0.0293 *11*
		123.66 *9*	4.0 *4*	155.372	$(2)^+$	M1+E2	0.4 *3*	0.65 *7*	α(K)= 0.530 *25*; α(L)= 0.09 *4*; α(M)= 0.020 *8*; α(N+..)= 0.0053 *19*
		279.12 *7*	100 *12*	0.0	2^-	E1		0.01440	α(K)=0.01239; α(L)=0.00160; α(M)=0.00033
357.21	$(7)^-$	169.15 *20*	100	188.20	6^-	M1		0.251	α(K)= 0.2136; α(L)= 0.0286; α(M)=0.00591; α(N+..)=0.00163
359.06	$1^+,2^+$	142.18 *8*	100 *8*	216.859	2^+	M1+E2	0.23 *5*	0.414	α(K)= 0.3496 *15*; α(L)= 0.0509 *20*; α(M)= 0.0106 *5*; α(N+..)=0.00291 *11*
		176.84 *7*	39.1 *21*	182.073	1^+	M1+E2	0.8 *4*	0.241 *13*	α(K)= 0.195 *4*; α(L)= 0.036 *8*; α(M)= 0.0077 *16*; α(N+..)= 0.0021 *4*
361.3	(5^-)	129.0 *5*		231.8	(4^-)				
		173.0 *5*		188.20	6^-				
390.79	$(7)^-$	(33.6)	2	357.21	$(7)^-$	[M1]		3.95	E_γ: from level-energy difference.
		202.55 *20*	100 *6*	188.20	6^-	M1		0.153	
406.87	1^+	47.73 *6*	2.9 *3*	359.06	$1^+,2^+$	[M1]		9.37	α(K)= 7.99; α(L)= 1.086; α(M)= 0.2257
		127.72 *9*	3.5 *3*	279.14	1^+	M1+E2	0.4 *3*	0.59 *6*	α(K)= 0.483 *21*; α(L)= 0.08 *3*; α(M)= 0.018 *7*; α(N+..)= 0.0048 *16*
		190.04 *5*	100 *5*	216.859	2^+	M1+E2	0.28 *4*	0.1844	α(K)=0.15635 *12*; α(L)= 0.0222 *4*; α(M)=0.00461 *9*; α(N+..)=0.00127
		224.68 *10*	6.7 *9*	182.073	1^+	M1,E2		0.119 *3*	
		251.46 *4*	84 *6*	155.372	$(2)^+$	M1+E2	0.50 *5*	0.08495	α(K)=0.07169 *23*; α(L)=0.01048 *13*; α(M)=0.00218 *3*; α(N+..)=0.00060
485.05	1^+	78.2 *1*	≤0.5	406.87	1^+	M1,E2			

$^{132}_{57}La_{75}$-4

Adopted Levels, Gammas (continued)

γ(^{132}La) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
485.05	1^+	205.80 *8*	6.0 *6*	279.14	1^+	M1,E2	0.155 *8*	
		268.13 *5*	20.3 *20*	216.859	2^+	M1,E2	0.070 *2*	
		303.12 *4*	90 *7*	182.073	1^+	M1,E2	0.049 *3*	E_γ: level-energy difference=302.97 *3*.
		329.64 *4*	100 *7*	155.372	$(2)^+$	M1+E2	0.038 *3*	
508.17	6^+	117.1 *5*	10 *4*	390.79	$(7)^-$			
		150.9 *2*	42 *12*	357.21	$(7)^-$	D		
		319.9 *2*	100 *10*	188.20	6^-	E1		
521.9	(6^-)	131.0 *5*		390.79	$(7)^-$			
		160.0 *5*		361.3	(5^-)			
		165.0 *5*		357.21	$(7)^-$			
		334.0 *5*		188.20	6^-			
523.83	1^+	368.51 *5*	100 *7*	155.372	$(2)^+$	M1,E2	0.028 *3*	
		523.78 *4*	37 *5*	0.0	2^-	E1		
584.33	(8^-)	193[&]		390.79	$(7)^-$			
		227.15 *20*	100 *4*	357.21	$(7)^-$	D		
		396.0 *2*	31 *5*	188.20	6^-			
603.3	(6^-)	242.0 *5*		361.3	(5^-)			
606.747	1^+	199.78 *5*	5.9 *6*	406.87	1^+	M1,E2	0.17 *1*	
		327.69 *8*	3.1 *11*	279.14	1^+			
		389.83 *5*	8.6 *11*	216.859	2^+	M1,E2	0.024 *3*	
		424.67 *3*	52 *4*	182.073	1^+	M1,E2	0.019 *3*	
		451.44 *3*	100 *7*	155.372	$(2)^+$	M1,E2	0.017 *2*	
		606.73 *7*	6.9 *11*	0.0	2^-			
622.9		232.0 *5*		390.79	$(7)^-$			
648.33	1^+	369.15 *5*	14 *4*	279.14	1^+			
		431.49 *4*	100 *8*	216.859	2^+	M1,E2	0.018 *3*	
		466.26 *8*	24 *8*	182.073	1^+			
		492.95 *9*	32 *8*	155.372	$(2)^+$			
669.55	$(7)^+$	161.2 *2*	33 *6*	508.17	6^+	(M1)	0.28	
		278.8 *2*	100 *6*	390.79	$(7)^-$	E1		
		312.2 *3*	34 *4*	357.21	$(7)^-$	E1		
		481.6 *2*	36 *3*	188.20	6^-	E1		
707.4	$(8)^+$	(37.9)	≈270	669.55	$(7)^+$	[M1]	2.68	E_γ: from level-energy difference.
		350.2 *3*	100 *9*	357.21	$(7)^-$	E1		
731.77	1^+	83.43 *6*	≤1.2	648.33	1^+	M1,E2		
		125.19 *9*	2.0 *8*	606.747	1^+			
		246.90 *7*	18.5 *23*	485.05	1^+	M1,E2	0.089 *1*	
		324.82 *7*	12.3 *16*	406.87	1^+	M1,E2	0.040 *3*	
		514.8 *1*	27 *7*	216.859	2^+			
		576.38 *3*	100 *8*	155.372	$(2)^+$	M1,E2		
		731.68 *8*	6.9 *11*	0.0	2^-			

$^{132}_{57}La_{75}$-5

Adopted Levels, Gammas (continued)

γ(^{132}La) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
751.9	(7⁻)	230.0 *5*		521.9	(6⁻)			
		564.0 *5*		188.20	6⁻			
774.5	(9⁺)	67.1 *2*	100	707.4	(8)⁺	(M1)		Mult.: dipole from γγ(θ)(DCO); intensity balance suggests M1.
775.3		253.0 *5*		521.9	(6⁻)			
820.03	1(+)	88.20 *7*	≤6	731.77	1⁺	(M1,E2)		
		296.00 *12*	52 *16*	523.83	1⁺			
		460.94 *6*	100 *40*	359.06	1⁺,2⁺			
		820.34 *10*	60 *8*	0.0	2⁻			E_γ: level-energy difference=820.02 *5*.
873.04	(9⁻)	250.0 *5*		622.9				
		288.7 *2*	39 *13*	584.33	(8⁻)			
		516.0 *2*	100 *10*	357.21	(7)⁻	(Q)		
935.6	(10⁺)	161.1 *2*	100	774.5	(9⁺)	M1	0.287	α(K)= 0.2447; α(L)= 0.0328; α(M)=0.00679; α(N+..)=0.00188
1018.9		396.0 *5*		622.9				
1165.6	(9⁻)	390.0 *5*		775.3				
		414.0 *5*		751.9	(7⁻)			
1229.3	(11⁺)	293.6 *2*	100 *5*	935.6	(10⁺)	M1	0.0568	α(K)= 0.0484; α(L)=0.00639; α(M)=0.00132; α(N+..)=0.00036
		454.5 *4*	7 *2*	774.5	(9⁺)			
1253.3	(10⁻)	380.4 *2*	25 *3*	873.04	(9⁻)	D+Q		
		668.4 *4*	100 *17*	584.33	(8⁻)			
1283.0		410.0 *5*		873.04	(9⁻)			
		660.0 *5*		622.9				
1523.1	(12⁺)	293.7 *2*	100 *30*	1229.3	(11⁺)	D+Q		
		587.7 *3*	32.4 *10*	935.6	(10⁺)			
1557.8	(11⁺)	622.0 *3*	100 *4*	935.6	(10⁺)	D+Q		
		783.3 *3*	9 *5*	774.5	(9⁺)			
1572.0	(11⁻)	289.0 *5*		1283.0				
		699.0 *5*		873.04	(9⁻)			
1722.6	(11⁻)	557.0 *5*		1165.6	(9⁻)			
1915.3	(13⁺)	392.4 *2*	100 *3*	1523.1	(12⁺)	D+Q		
		686.1 *3*	30 *2*	1229.3	(11⁺)			I_γ: other: 11 *4* in (^{14}N,4nγ) E=45 MeV.
1917.9	(12⁺)	360.1 *3*	55.4 *14*	1557.8	(11⁺)			
		688.6 *3*	100 *3*	1229.3	(11⁺)	D+Q		
2083.3?		830.0[&] *5*		1253.3	(10⁻)			
2100.0	(12⁻)	817.0 *5*		1283.0				
2170.6	(12⁻)	448.0 *5*		1722.6	(11⁻)			
2298.0	(13⁺)	380.0 *3*	38.9 *19*	1917.9	(12⁺)			
		740.2 *3*	22.2 *19*	1557.8	(11⁺)			
		774.7 *3*	100 *4*	1523.1	(12⁺)	D+Q		
		1068		1229.3	(11⁺)			E_γ: reported only in (^{14}N,4nγ) E=70 MeV (2004Gr06).
2300.9	(14⁺)	386.1 *6*	100 *3*	1915.3	(13⁺)	D+Q		
		777.9 *3*	85 *4*	1523.1	(12⁺)	Q		I_γ: intensity may be too high in view of <8 in (^{14}N,4nγ) E=45 MeV; and

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Adopted Levels, Gammas (continued)

γ(^{132}La) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	Comments
							intensity much weaker than that for 386γ as in level-scheme figure of 2003Ku12 in (^{14}N,4nγ) E=60 MeV.
2390.6	(13$^-$)	668.0 *5*		1722.6	(11$^-$)		
2407.5	(11$^+$)	1178		1229.3	(11$^+$)		
2413.0	(13$^-$)	841.0 *5*		1572.0	(11$^-$)		
2664.7	(12$^+$)	257[&]		2407.5	(11$^+$)		
		1142		1523.1	(12$^+$)		
2700.9	(14$^+$)	402.7 *3*	50.9 *19*	2298.0	(13$^+$)		
		783.0 *3*	35.9 *19*	1917.9	(12$^+$)		
		785.5 *3*	100 *4*	1915.3	(13$^+$)	D+Q	
2754.5	(15$^+$)	453.6 *3*	100 *3*	2300.9	(14$^+$)	(D+Q)	
		839.2 *3*	71.7 *24*	1915.3	(13$^+$)		
2774.6		604.0 *5*		2170.6	(12$^-$)		
2906.8	(13$^+$)	242		2664.7	(12$^+$)		
		991[#]		1915.3	(13$^+$)		
2910.6	(14$^-$)	520.0 *5*		2390.6	(13$^-$)		
3127.8	(15$^+$)	426.9 *3*	>100	2700.9	(14$^+$)		
		827.0 *3*	100 *10*	2300.9	(14$^+$)		
		829.8 *3*	>50	2298.0	(13$^+$)		
3160.6	(15$^-$)	770.0 *5*		2390.6	(13$^-$)		
3165.9	(14$^+$)	259[#]		2906.8	(13$^+$)		
		501		2664.7	(12$^+$)		
		865		2300.9	(14$^+$)		
3206.7	(16$^+$)	451.9 *3*	77.1 *25*	2754.5	(15$^+$)	(D+Q)	
		906.0 *3*	100 *3*	2300.9	(14$^+$)		
3388.0	(15$^-$)	975.0 *5*		2413.0	(13$^-$)		
3471.2	(15$^+$)	305		3165.9	(14$^+$)		
		564		2906.8	(13$^+$)		
		718		2754.5	(15$^+$)		
3616.6	(16$^+$)	862.2 *3*	100 *6*	2754.5	(15$^+$)		
		915.6 *3*	88 *6*	2700.9	(14$^+$)		
3713.2	(17$^+$)	506.3 *3*	86.3 *20*	3206.7	(16$^+$)	D+Q	
		958.8 *3*	100 *4*	2754.5	(15$^+$)		
3828.3	(16$^+$)	357		3471.2	(15$^+$)		
		662		3165.9	(14$^+$)		
4035.6	(17$^-$)	875.0 *5*		3160.6	(15$^-$)		
4201.0	(18$^+$)	487.5 *3*	43.2 *23*	3713.2	(17$^+$)		
		994.3 *3*	100 *5*	3206.7	(16$^+$)		
4212.6	(17$^+$)	384		3828.3	(16$^+$)		
		742		3471.2	(15$^+$)		
4643.5	(18$^+$)	431		4212.6	(17$^+$)		

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Adopted Levels, Gammas (continued)

$\gamma(^{132}La)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Comments
4643.5	(18^+)	815		3828.3	(16^+)	
4759.3	(19^+)	558.0 *3*	54 *4*	4201.0	(18^+)	
		1046.3 *3*	100 *4*	3713.2	(17^+)	
5216.6	(20^+)	1015.6 *3*	100	4201.0	(18^+)	E_γ: 1019 in (^{14}N,4nγ) E=70 MeV (2004Gr06).

† Weighted averages from available data. Eγ values from ^{122}Sn(^{14}N,4nγ) E=60 MeV are quoted in the paper only to nearest keV, thus are not used in averaging. The intensities are relative photon branching from each level.

‡ From ce data for γ's from low-spin states populated in ^{132}La it decay and ε decay. For γ's from high-spin states, the mult assignments are from $\gamma(\theta)$ data in (^{14}N,4nγ) E=45 MeV; $\gamma\gamma(\theta)$ and γ(pol) in (^{36}S,p3nγ); and $\gamma\gamma(\theta)$ in (^{13}C,4nγ). The mixing ratios for ΔJ=1 transitions are deduced by 2002St13 as ≈0.1 for intraband and ≈−0.3 for interband transitions.

Ordering of the 259-991 cascade is adopted from (^{14}N,4nγ) E=70 MeV reaction (2004Gr06). Reversed ordering was suggested in 2003Ku12.

@ 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.

& Placement of transition in the level scheme is uncertain.

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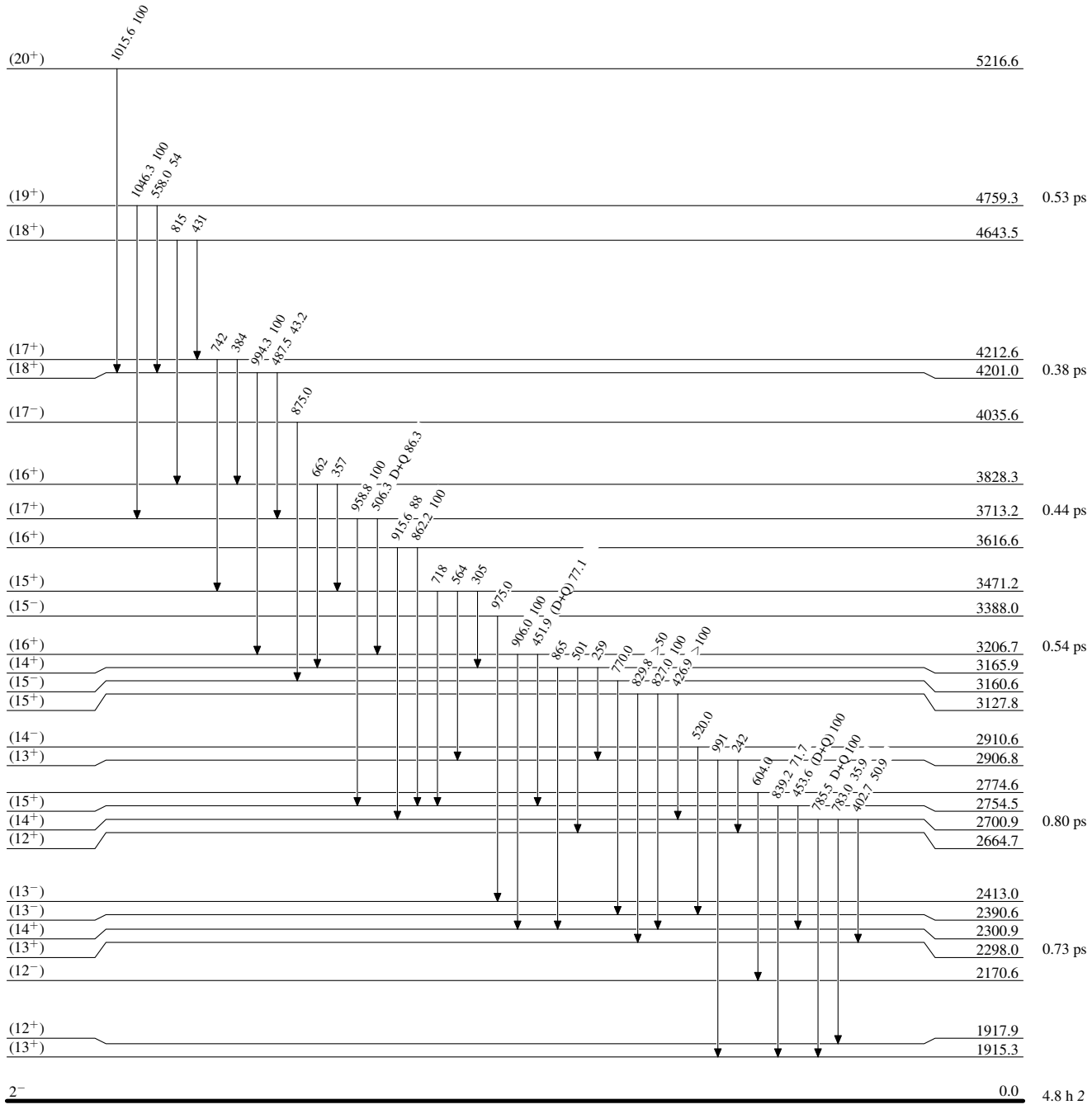
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



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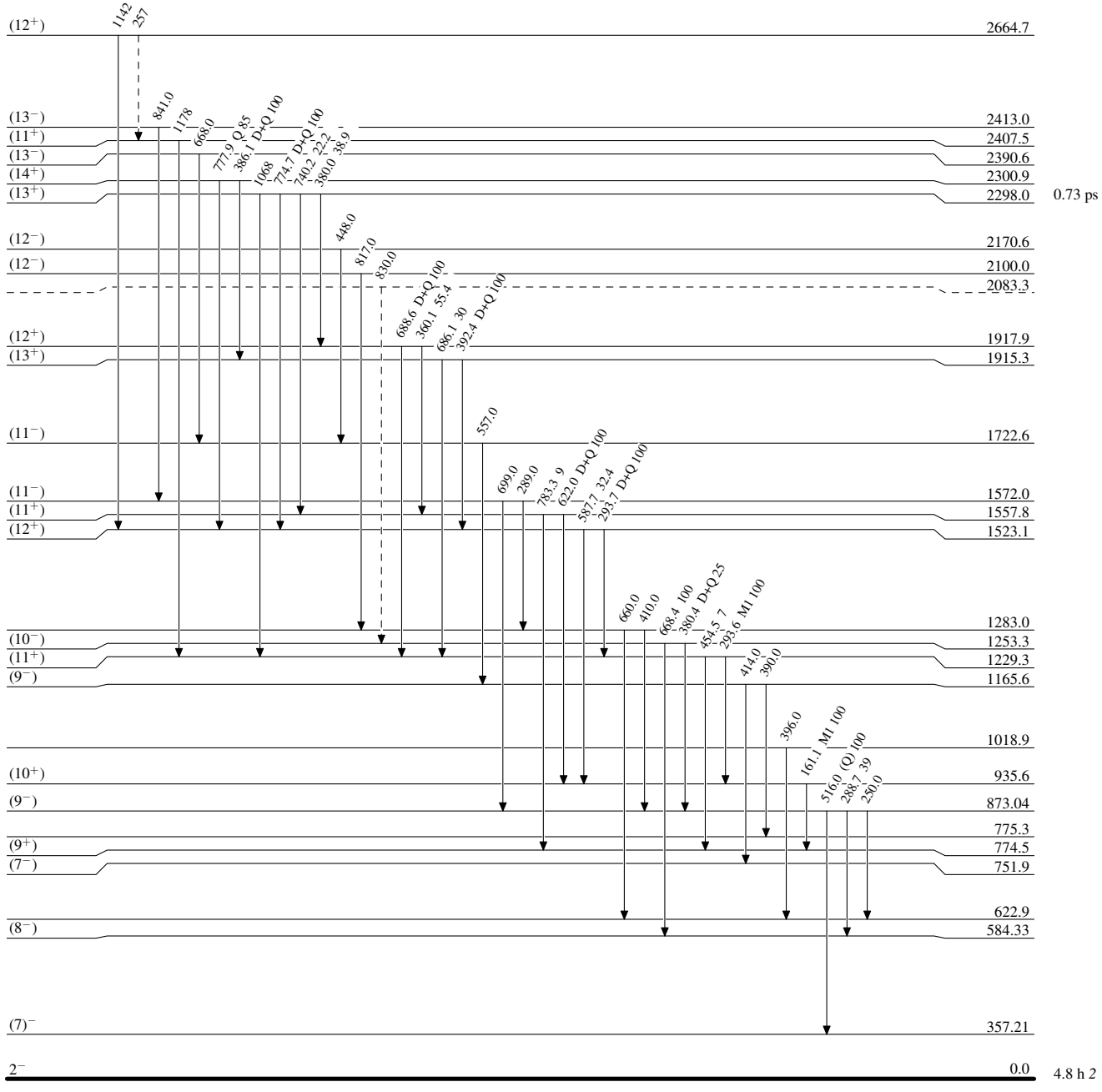
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



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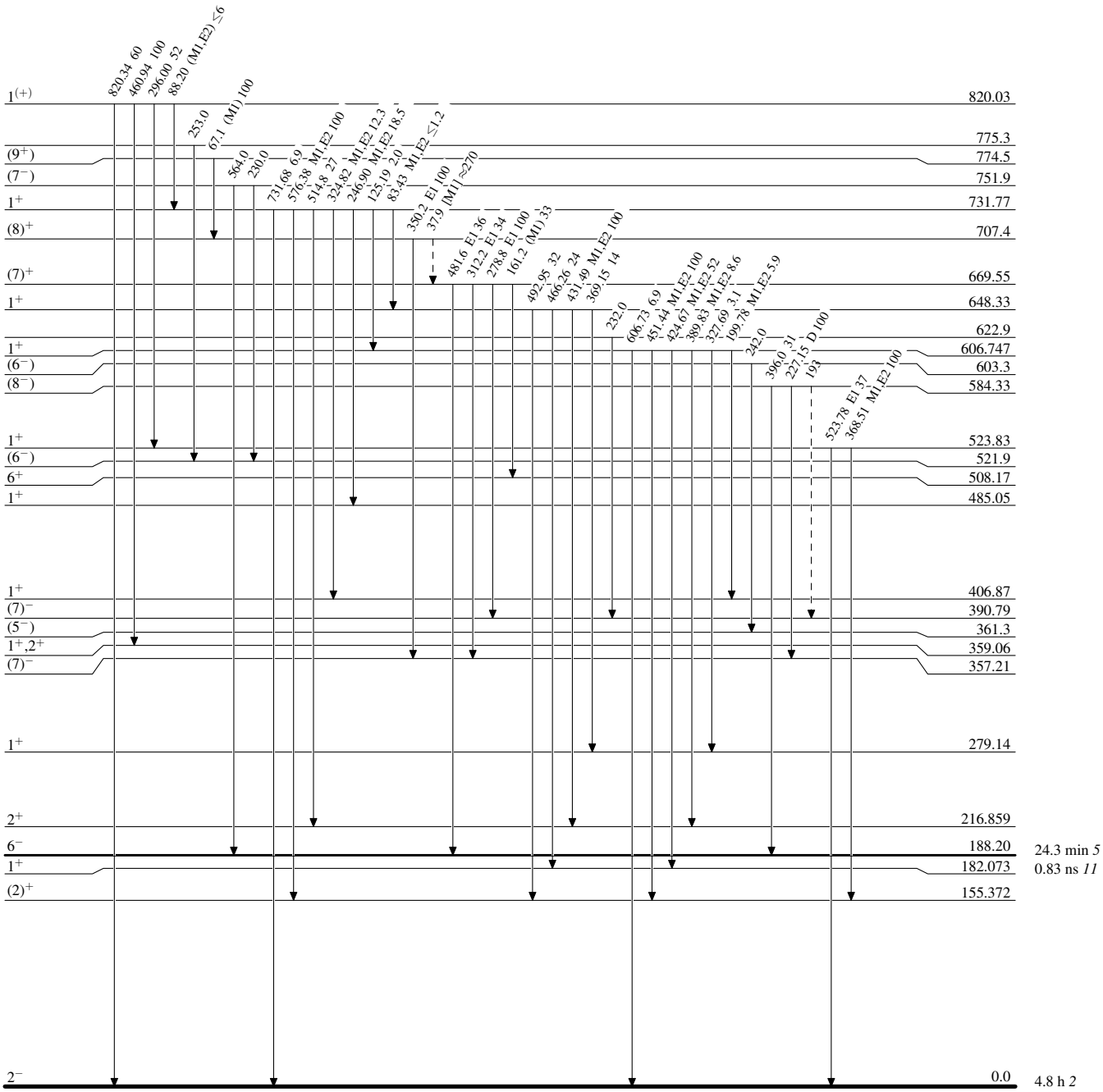
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



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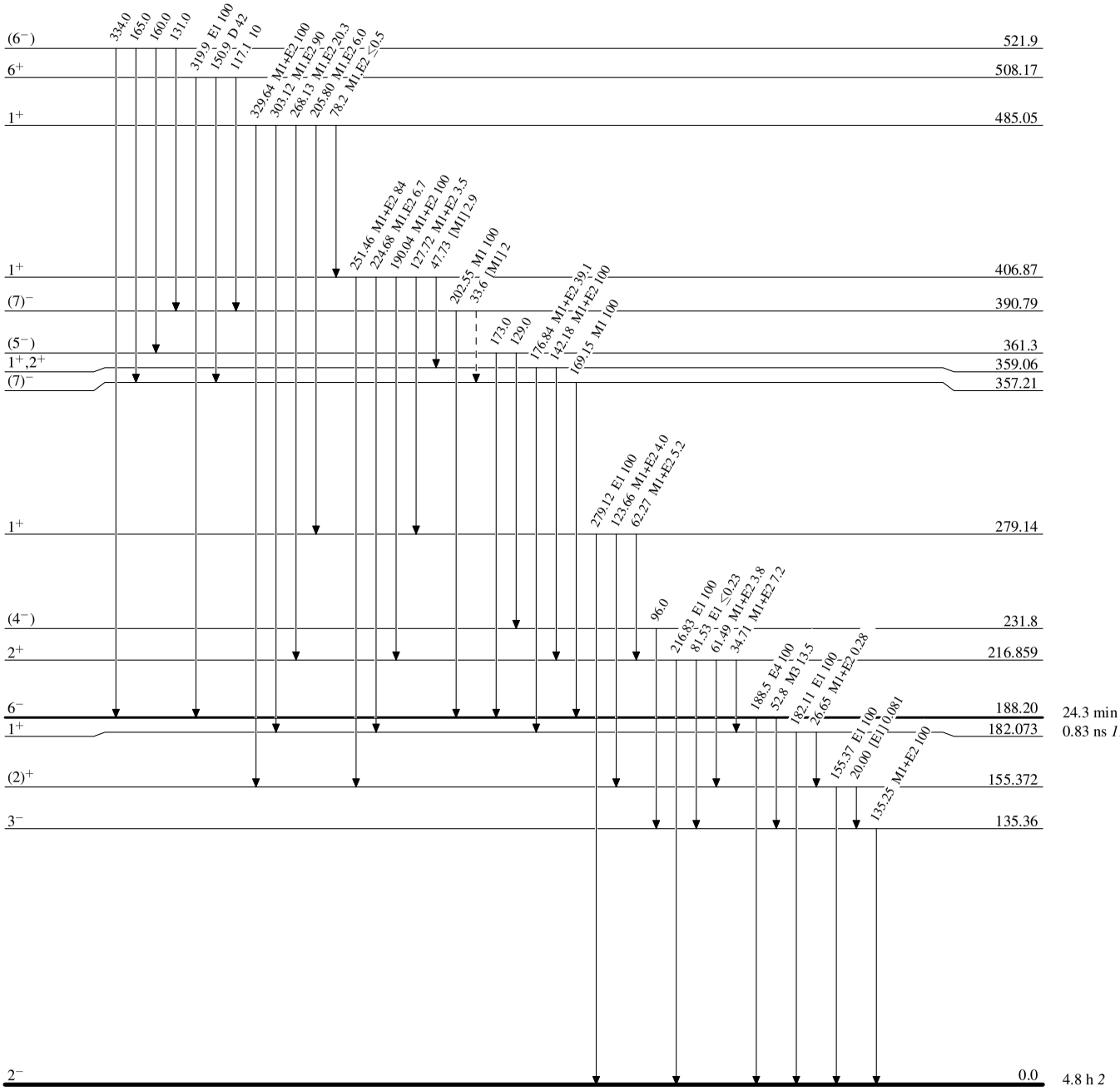
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



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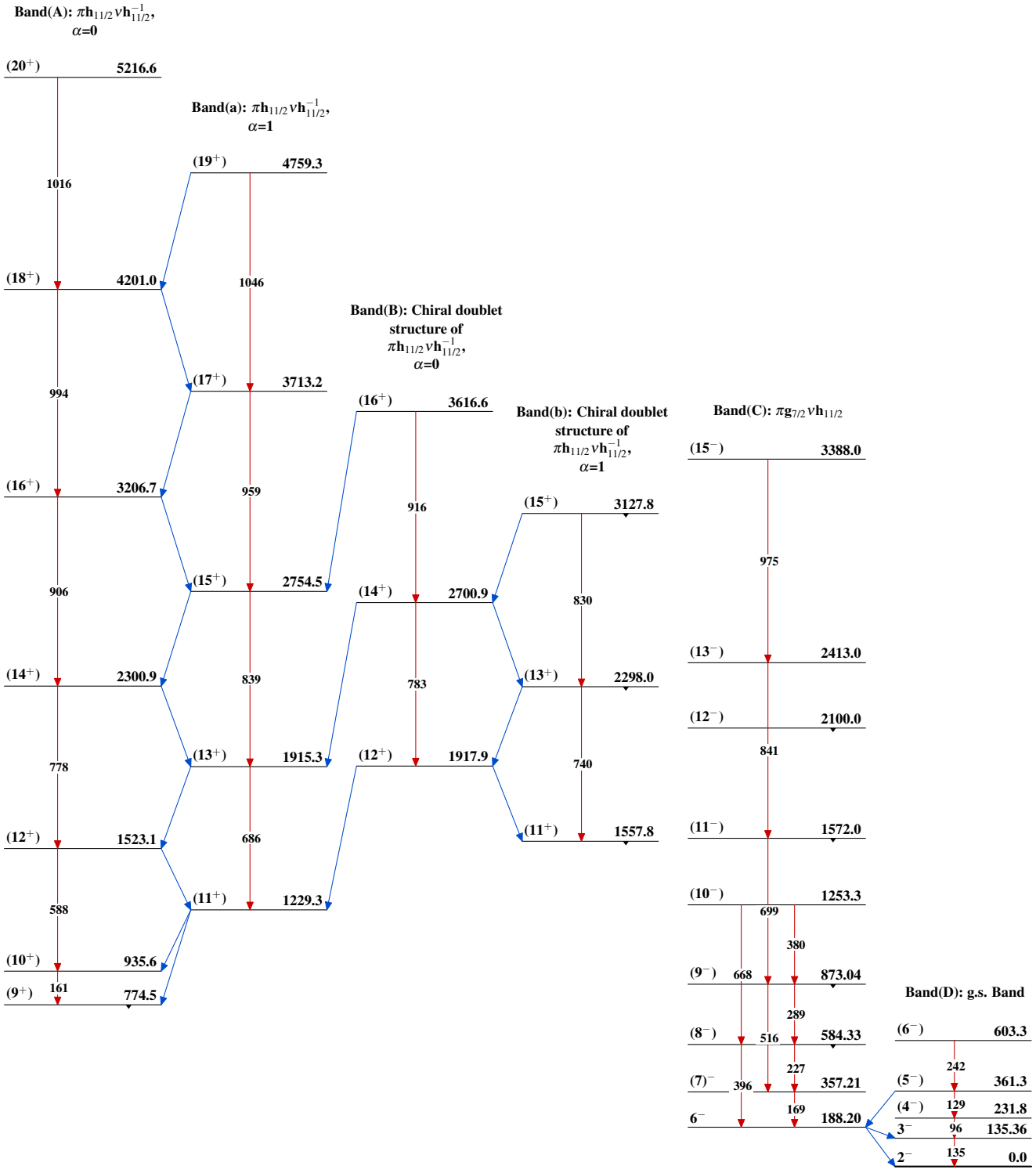
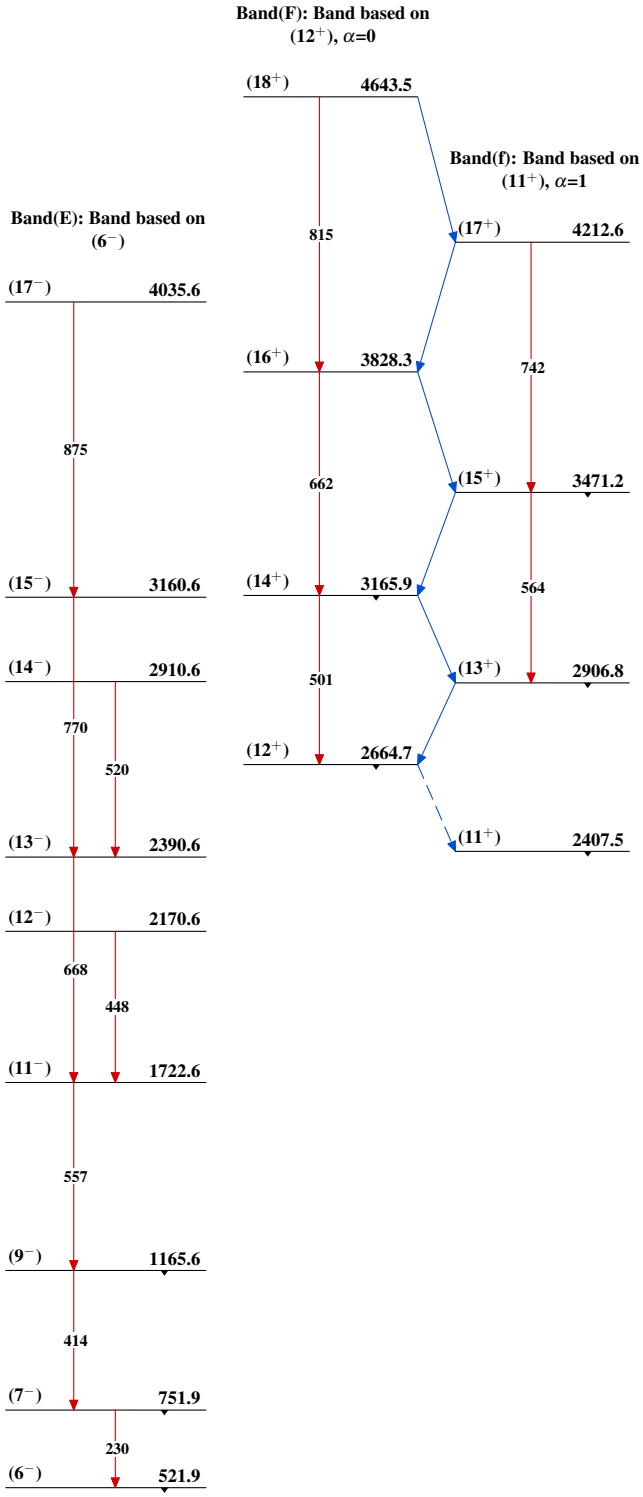
Adopted Levels, Gammas



Adopted Levels, Gammas (continued)



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