Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 192,1 (2023)	1-Aug-2023

Q(β^-)=−796 *12*; S(n)=7059 *29*; S(p)=4790 *6*; Q(α)=1667 *6* 2021Wa16

^{200}Tl Levels

Cross Reference (XREF) Flags

A ^{200}Tl IT decay
B ^{200}Pb ε decay
C ^{198}Pt(^{6}Li,4nγ)
D ^{198}Pt(^{7}Li,5nγ)
E ^{197}Au(^{207}Pb,Xγ)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	2$^-$	26.1 h *1*	ABCDE	%ε+%β^+=100 μ=0.04 *1* (1976Ek03,2019StZV) J$^\pi$: Atomic beam (1958Ma21); μ. T$_{1/2}$: From 1962Ja10; Others: 26.1 h *4* (1957He43) and 27 h *1* (1954Mi16). μ: Atomic beam magnetic resonance technique. Negative sign is favored by theory. Others: $\mu\leq$0.15 (1961Hu04,1961Hu08). configuration: Probable a mixture of $\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{3/2})$ and $\pi(s^{-1}_{1/2})\otimes\nu(f^{-1}_{5/2})$.
147.634 *21*	0$^-$	7.10 ns *15*	B	J$^\pi$: 147.63γ E2 to 2$^-$; log *ft* in ^{200}Pb ε decay favors J=0,1. T$_{1/2}$: From 1959Jo21; Others: 7.3 ns *3* (1960Ba05) and 8 ns *2* (1957As64). All values are from ^{200}Pb ε decay. configuration: Dominant $\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{1/2})$.
257.183 *22*	1$^-$		B	J$^\pi$: 109.54γ M1 to 0$^-$, 257.19γ M1+E2 to 2$^-$. configuration: Probable dominant $\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{1/2})$.
289.24 *5*	(2)$^-$		B	J$^\pi$: 289.24γ M1 to 2$^-$; log *ft* in ^{200}Pb ε decay favors J=2. configuration: Probable dominant $\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{3/2})$.
289.92 *3*	1$^-$		B	J$^\pi$: 142.28γ M1 to 0$^-$.
323.70 *17*	(3)$^-$		A CD	J$^\pi$: 323.7γ to 2$^-$; 217.2γ M1+E2 from 4$^-$; the absence of feeding from the 5$^+$ level at 762 keV would argue against J=4.
450.56 *4*	1$^-$		B	J$^\pi$: 302.93γ M1 to 0$^-$.
525.54 *3*	1$^-$		B	J$^\pi$: 235.62γ M1 to 1$^-$; 377.92γ to 0$^-$; log *ft* in ^{200}Pb ε decay favors J=1.
540.90 *17*	4$^-$		A CDE	J$^\pi$: 540.9γ E2 to 2$^-$; absence of ε feeding in ^{200}Pb ε decay favors J>2. configuration: Probable $\pi(d^{-1}_{3/2})\otimes\nu(f^{-1}_{5/2})$.
605.45 *4*	1$^-$		B	J$^\pi$: 605.44γ M1 to 2$^-$; 457.80γ to 0$^-$.
753.62 *24*	7$^+$	34.0 ms *10*	A CDE	%IT=100 J$^\pi$: 212.7γ E3 to 4$^-$. T$_{1/2}$: Weighted average of 34.1 ms *10* (1963De38), 33 ms *2* (1967Co20) and 37 ms *4* (1963Di10). configuration: Probably a mixture of $\pi(s^{-1}_{1/2})\otimes\nu(i^{-1}_{13/2})$ and $\pi(d^{-1}_{3/2})\otimes\nu(i^{-1}_{13/2})$.
761.98 *24*	5$^+$	397 ns *17*	CDE	J$^\pi$: 221.1γ E1 to 4$^-$. T$_{1/2}$: From 220.0γ-541.0γ(Δt) and 262.0γ-541.0γ(Δt) in 2019Ro12. Other: 0.33 μs *5* in 1972Is01.
886.1 *3*	(6)$^+$		CDE	J$^\pi$: 132.4γ M1 to 7$^+$; 357.9γ E1 from 7$^-$;
1023.6 *3*	6$^+$		CDE	J$^\pi$: 261.6γ M1(+E2) to 5$^+$; 220.4γ E1 from 7$^-$.
1173.8 *3*	(8$^+$)		CD	J$^\pi$: 287.7γ (E2) , 420.3γ M1+E2 to 7$^+$.
1244.0 *3*	7$^-$	7.0 ns *5*	CDE	J$^\pi$: 490.4γ E1 to 7$^+$; 357.9γ E1 to (6)$^+$. T$_{1/2}$: Weighted average of 6.9 ns *5* (311γ-490γ(Δt)) and 7.1 ns *5* (230γ-490γ(Δt)) and centroid-shift analysis in ^{197}Au(^{207}Pb,xγ) (2019Ro12); Other: 4.8 ns *2* from $\gamma\gamma$(t) in ^{198}Pt(^{6}Li,4nγ) (1981Kr03).

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Adopted Levels, Gammas (continued)

^{200}Tl Levels (continued)

E(level)[†]	Jπ	XREF	Comments
			configuration: $\pi(h^{-1}_{9/2})\otimes\nu(i^{-1}_{13/2})$.
1247.5[‡] *3*	(8⁻)	CDE	Jπ: 493.8γ to 7⁺; systematics of similar structures in neighboring nuclei.
1323.0[‡] *3*	(9⁻)	CDE	Jπ: 75.5γ M1 to (8⁻); The apparent ΔJ=1 band structure in ^{198}Pt(^{6}Li,4n) (1981Kr03).
1349.5 *3*	(7⁺)	CDE	Jπ: 175.6γ to (8⁺), 326.0γ to 6⁺.
1442.2[‡] *3*	(10⁻)	CDE	Jπ: 119.2γ M1(+E2) to (9⁻), 194.7γ to (8⁻); band structure.
1659.4[‡] *3*	(11⁻)	CDE	Jπ: 217.2γ M1(+E2) to (10⁻), 336.3γ E2 to (9⁻); band structure.
1716.9 *3*	(10⁺)	D	Jπ: 543.1γ (E2) to (8⁺) c.
1733.5 *3*		DE	
1876.0 *4*	(10⁺)	D	Jπ: 702.2γ (E2) to (8⁺).
1889.2[‡] *3*	(12⁻)	CDE	Jπ: 229.8γ M1(+E2) to (11⁻); 447.0γ E2 to (10⁻); band structure.
1892.6 *3*	(11⁺)	D	Jπ: 175.7γ (M1+E2) to (10⁺).
2071.8 *3*	(12⁻)	CD	Jπ: 412.4γ M1 to (11⁻), 179.2γ D to (11⁺).
2237.5[‡] *3*	(13⁻)	CDE	Jπ: 348.3γ M1+E2 to (12⁻), 578.3γ E2 to (11⁻); band structure.
2438.0 *5*	(12⁺)	D	Jπ: 562.0γ (E2) to (10⁺).
2548.2[‡] *3*	(14⁻)	CDE	Jπ: 659.0γ E2 to (12⁻), 310.7γ M1(+E2) to (13⁻); apparent ΔJ=1 band structure.
2630.4 *4*	(12⁻)	D	Jπ: 971.0γ (M1) to (11⁻).
2634.0 *5*		D	
2813.8 *4*		D	
2845.6 *3*	(14⁻)	D	Jπ: 773.8γ (E2) to (12⁻).
2886.5 *4*	(14⁺)	D	Jπ: 997.3γ (M2) to (12⁻).
2922.2 *3*	(15⁻)	DE	Jπ: 373.9γ M1+E2 to (14⁻).
3026.3[‡] *3*	(15⁻)	DE	Jπ: 478.0γ M1+E2 to (14⁻).
3114.1 *5*		D	
3220.5 *4*	(15⁺)	DE	Jπ: 982.9γ M2 to (13⁻).
3257.3 *4*	(13⁺)	DE	Jπ: 1368.1γ E1 to (12⁻).
3282.3 *3*	(16⁻)	DE	Jπ: 256.0γ M1 to (15⁻), 734.4γ E2 to (14⁻).
3313.6[#] *4*	(14⁺)	DE	Jπ: 1076.2γ E1 to (13⁻), 93.1γ to (15⁺).
3338.0[‡] *3*	(16⁻)	DE	Jπ: 415.8γ M1 to (15⁻), 789.7γ E2 to (14⁻); band assignment.
3591.6[#] *4*	(15⁺)	DE	Jπ: 278.0γ M1+E2 to (14⁺); band assignment.
3608.7 *4*	(16⁻)	DE	Jπ: 326.4γ M1+E2 to (16⁻), 686.4γ M1+E2 to (15⁻).
3665.0[‡] *4*	(17⁻)	DE	Jπ: 327.0γ to (16⁻); band assignment.
3771.4[#] *4*	(16⁺)	DE	Jπ: 179.8γ M1+E2 to (15⁺), 457.3γ to (14⁺); band assignment.
3799.7 *4*	(17⁻)	DE	Jπ: 517.4γ M1+E2 to (16⁻), 773.4γ (E2) to (15⁻).
3857.1[‡] *4*	(18⁻)	DE	Jπ: 519.1γ E2 to (16⁻), 192.0γ to (17⁻); band assignment.
3928.7[#] *4*	(17⁺)	DE	Jπ: 157.3γ M1 to (16⁺), 337.0γ to (15⁺); band assignment.
4033.0[#] *4*	(18⁺)	DE	Jπ: 104.4γ M1+E2 to (17⁺), 261.7γ (E2) to (16⁺); band assignment.
4048.8 *4*	(19⁺)	DE	Jπ: 191.5γ E1 to (18⁻).
4165.1 *5*	(20⁺)	E	Jπ: 116.3γ M1 to (19⁺).
4320.1 *5*	(20)	D	Jπ: 271.2γ D to (19⁺).
4374.5[#] *4*	(19⁺)	DE	Jπ: 341.5γ M1 to (18⁺); band assignment.
4436.6 *5*	(21⁺)	E	Jπ: 271.5γ to (20⁺).
4652.5[#] *4*	(20⁺)	DE	Jπ: 278.0γ to (19⁺), 619.5γ (E2) to (18⁺); band assignment.
4755.9 *5*	(21⁺)	D	Jπ: 435.8γ to (20); 707.2γ E2 to (19⁺).
4827.6 *5*	(21⁺)	D	Jπ: 778.8γ (E2) to (19⁺).
4872.5 *4*	(21⁺)	E	Jπ: 220.2γ M1 to (20⁺), 823.6γ to (19⁺).
4898.7[#] *4*	(21⁺)	D	Jπ: 246.2γ (M1+E2) to (20⁺); band assignment.
4943.5 *5*	(22⁺)	E	Jπ: 778.4γ to (20⁺).
5074.4 *5*	(22⁺)	E	Jπ: 909.2γ (E2) to (20⁺).
5154.5 *5*	(22,23)	E	Jπ: 211.0γ to (22⁺).
5157.8 *5*	(22⁻)	E	Jπ: 285.3γ E1 to (21⁺).
5184.2[#] *4*	(22⁺)	D	Jπ: 285.5γ (M1+E2) to (21⁺); band assignment.

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Adopted Levels, Gammas (continued)

^{200}Tl Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
5270.2 *5*	(22,23)		E	J^π: 195.8γ to (22^+).
5723.1 *5*	(23^+)		E	J^π: 850.6γ to (21^+), 452.9γ to (22,23).
5907.0 *5*	(24^-)		E	J^π: 183.8γ to (23^+), 749.3γ to (22^-).
6006.3 *7*	(26^-)	57 ns *2*	E	J^π: 99.2γ E2 to (24^-). $T_{1/2}$: From γ_1-γ_2(t) (2019Ro12) using γ_1=285.3- and 749.3-keV, and γ_2=217.1-, 229.8-, 310.8-, 311.1-, 348.2-, and 490.2-keV transitions. configuration: $\pi(h^{-1}_{11/2})\otimes\nu(i^{-3}_{13/2},f^{-1}_{5/2},p^{-1}_{3/2})$. The assignment is tentative.

[†] From a least-squares fit to Eγ.

[‡] Band(A): Band based on (8^-) state at 1247.5 keV. Probable configuration=$\pi(h^{-1}_{9/2})\otimes\nu(i^{-1}_{13/2})$.

[#] Band(B): Band based on (14^+) state at 3313.6 keV. Configuration= $\pi(h^{-1}_{9/2})\otimes\nu(i^{-2}_{13/2},(f_{5/2}/p_{3/2})^{-1})$.

Adopted Levels, Gammas (continued)

$\gamma(^{200}Tl)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ	α[c]	Comments
147.634	0^-	147.63[‡] *3*	100[‡]	0.0	2^-	E2[‡]		1.232 *17*	α(K)=0.333 *5*; α(L)=0.671 *9*; α(M)=0.1757 *25* α(N)=0.0440 *6*; α(O)=0.00762 *11*; α(P)=0.000274 *4* B(E2)(W.u.)=7.33 *17* Mult.: α(K)exp=0.30 *3*, α(L12)exp=0.41 *4*, α(L3)exp=0.27 *4*, (α(M2)exp+α(M3)exp)=0.19 *4*; L12/L3=1.58 *7* (1957As64); K/L(exp)=0.44 *4*, L12/L3(exp)=1.5 *2* and L/M(exp)=3.6 *6* (1963Wi04).
257.183	1^-	109.54[‡] *4*	10.8[‡] *15*	147.634	0^-	M1[‡]		6.62 *9*	α(K)=5.41 *8*; α(L)=0.930 *13*; α(M)=0.2174 *31* α(N)=0.0549 *8*; α(O)=0.01066 *15*; α(P)=0.001006 *14* Mult.: α(K)exp=5.7 *10*, α(L1)exp=1.09 *24*, α(L2)exp=0.109 *24*, α(M1)exp=0.23 *9*; K/L1/L2/M1(exp)=22 *2*/4.2 *7*/0.42 *7*/0.9 *3* and K/L(exp)=4.7 *8* (1963Wi04).
		257.19[‡] *3*	100[‡] *3*	0.0	2^-	M1+E2[‡]	1.22 *12*	0.347 *22*	α(K)=0.252 *20*; α(L)=0.0716 *14*; α(M)=0.01761 *29* α(N)=0.00443 *7*; α(O)=0.000817 *16*; α(P)=5.68×10^{-5} *29* Mult.: α(K)exp=0.26 *2*, α(L12)exp=0.079 *9*, α(L3)exp=0.014 *6*, α(N1)exp=0.0070 *14*; K/L(exp)=3.1 *5*, L12/L3(exp)=5.5 *23* (1963Wi04). δ: From α(K)exp and K/L(exp) using briccmixing program.
289.24	$(2)^-$	289.24[‡] *15*	100[‡]	0.0	2^-	M1[‡]		0.433 *6*	α(K)=0.355 *5*; α(L)=0.0600 *8*; α(M)=0.01400 *20* α(N)=0.00353 *5*; α(O)=0.000687 *10*; α(P)=6.49×10^{-5} *9* Mult.: α(K)exp=0.44 *15*.
289.92	1^-	32.74[‡] *3*	0.87[‡] *14*	257.183	1^-	M1[‡]		41.6 *6*	α(L)=31.8 *5*; α(M)=7.45 *11* α(N)=1.881 *27*; α(O)=0.365 *5*; α(P)=0.0345 *5* Mult.: α(L2)exp=3.0 *7*, α(M1)exp=8.2 *22*, α(M2)exp=1.6 *7*, α(M3)exp=1.4 *9*; L1/L2/M1/M2/M3(exp)= 6.3 *10*/0.66 *10*/1.8 *4*/0.35 *4*/0.3 *2* (1963Wi04).
		142.28[‡] *3*	100[‡] *5*	147.634	0^-	M1[‡]		3.14 *4*	α(K)=2.57 *4*; α(L)=0.439 *6*; α(M)=0.1026 *14* α(N)=0.0259 *4*; α(O)=0.00503 *7*; α(P)=0.000475 *7* Mult.: α(K)exp=2.74 *22*, α(L12)exp=0.56 *7*, α(M1)exp=0.135 *25*, α(N1)exp=0.044 *12*; K/L(exp)=4.8 *6* and K/L12/M1/N1(exp)=69 *4*/14.2 15/3.4 *6*/1.1 *3* (1963Wi04).
		289.92[‡] *10*	55[‡] *11*	0.0	2^-	M1[‡]		0.431 *6*	α(K)=0.353 *5*; α(L)=0.0596 *8*; α(M)=0.01391 *20* α(N)=0.00351 *5*; α(O)=0.000682 *10*; α(P)=6.45×10^{-5} *9* Mult.: α(K)exp=0.39 *9*.
323.70	$(3)^-$	323.7 *2*	100	0.0	2^-				
450.56	1^-	161.32[‡] *4*	9.1[‡] *10*	289.24	$(2)^-$	M1[‡]		2.201 *31*	α(K)=1.800 *25*; α(L)=0.307 *4*; α(M)=0.0718 *10* α(N)=0.01812 *25*; α(O)=0.00352 *5*; α(P)=0.000333 *5* Mult.: α(K)exp=1.9 *3*.
		193.39[‡] *10*	1.0[‡] *4*	257.183	1^-	[M1][‡]		1.322 *19*	α(K)=1.081 *15*; α(L)=0.1840 *26*; α(M)=0.0430 *6* α(N)=0.01085 *15*; α(O)=0.002108 *30*; α(P)=0.0001992 *28*

$^{200}_{81}Tl_{119}$-4

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
450.56	1⁻	302.93[‡] *5*	5.0[‡] *10*	147.634	0⁻	(M1)[‡]	0.382 *5*	α(K)=0.313 *4*; α(L)=0.0528 *7*; α(M)=0.01232 *17* α(N)=0.00311 *4*; α(O)=0.000604 *8*; α(P)=5.72×10^{-5} *8* Mult.: α(K)exp=0.53 *13*, α(L12)exp=0.09 *3*; K/L(exp)=5.8 *13*, K/L12(exp)=0.70 *10*/0.12 *3* (1963Wi04).
		450.56[‡] *5*	100[‡]	0.0	2⁻	M1[‡]	0.1311 *18*	α(K)=0.1077 *15*; α(L)=0.01798 *25*; α(M)=0.00419 *6* α(N)=0.001058 *15*; α(O)=0.0002055 *29*; α(P)=1.948×10^{-5} *27* Mult.: α(K)exp=0.166 *19*, α(L12)exp=0.029 *3*, α(M)exp=0.0060 *8*; K/L(exp)=5.8 *9*, L/M(exp)=4.7 *8*, K/L12/M(exp)=4.4 *5*/0.76 *8*/0.16 *2* (1963Wi04).
525.54	1⁻	235.62[‡] *4*	100[‡] *3*	289.92	1⁻	M1[‡]	0.762 *11*	α(K)=0.624 *9*; α(L)=0.1058 *15*; α(M)=0.02471 *35* α(N)=0.00624 *9*; α(O)=0.001212 *17*; α(P)=0.0001146 *16*
		268.36[‡] *3*	92[‡] *4*	257.183	1⁻	M1[‡]	0.532 *7*	α(K)=0.436 *6*; α(L)=0.0738 *10*; α(M)=0.01721 *24* α(N)=0.00435 *6*; α(O)=0.000844 *12*; α(P)=7.98×10^{-5} *11*
		377.92[‡] *5*	0.62[‡] *23*	147.634	0⁻	[M1][‡]	0.2098 *29*	α(K)=0.1721 *24*; α(L)=0.0289 *4*; α(M)=0.00674 *9* α(N)=0.001700 *24*; α(O)=0.000330 *5*; α(P)=3.13×10^{-5} *4*
		525.54[‡] *6*	9.8[‡] *8*	0.0	2⁻	[M1][‡]	0.0872 *12*	α(K)=0.0717 *10*; α(L)=0.01192 *17*; α(M)=0.00278 *4* α(N)=0.000701 *10*; α(O)=0.0001362 *19*; α(P)=1.291×10^{-5} *18*
540.90	4⁻	217.2 *2*	7.6 *11*	323.70	(3)⁻	(M1)		Mult.: A_2=−0.23 *5* and A_4=−0.12 *10* in ^{198}Pt(^{6}Li,4nγ) (1981Kr03).
		540.9 *2*	100 *15*	0.0	2⁻	E2	0.02333 *33*	α(K)=0.01703 *24*; α(L)=0.00477 *7*; α(M)=0.001173 *16* α(N)=0.000295 *4*; α(O)=5.44×10^{-5} *8*; α(P)=3.81×10^{-6} *5* Mult.: K/L=3.5 *4* in ^{200}Tl IT decay (1963Di10).
605.45	1⁻	155.29[‡][d] *10*	8[‡] *3*	450.56	1⁻	[M1][‡]	2.452 *35*	α(K)=2.005 *28*; α(L)=0.342 *5*; α(M)=0.0800 *11* α(N)=0.02020 *29*; α(O)=0.00392 *6*; α(P)=0.000371 *5*
		315.60[‡] *8*	40[‡] *6*	289.92	1⁻	(M1)[‡]	0.342 *5*	α(K)=0.280 *4*; α(L)=0.0472 *7*; α(M)=0.01101 *15* α(N)=0.00278 *4*; α(O)=0.000540 *8*; α(P)=5.11×10^{-5} *7*
		348.23[‡] *8*	28[‡] *9*	257.183	1⁻	[M1,E2][‡]	0.17 *9*	α(K)=0.13 *8*; α(L)=0.028 *8*; α(M)=0.0068 *16* α(N)=0.0017 *4*; α(O)=3.2×10^{-4} *9*; α(P)=2.6×10^{-5} *13*
		457.80[‡] *7*	21[‡] *4*	147.634	0⁻	[M1][‡]	0.1257 *18*	α(K)=0.1032 *14*; α(L)=0.01723 *24*; α(M)=0.00401 *6* α(N)=0.001013 *14*; α(O)=0.0001969 *28*; α(P)=1.866×10^{-5} *26*
		605.44[‡] *6*	100[‡] *7*	0.0	2⁻	M1[‡]	0.0602 *8*	α(K)=0.0495 *7*; α(L)=0.00819 *11*; α(M)=0.001907 *27* α(N)=0.000481 *7*; α(O)=9.36×10^{-5} *13*; α(P)=8.88×10^{-6} *12*
753.62	7⁺	212.7 *2*	100	540.90	4⁻	E3	2.77 *4*	α(K)=0.390 *6*; α(L)=1.760 *26*; α(M)=0.479 *7* α(N)=0.1209 *18*; α(O)=0.02103 *31*; α(P)=0.000851 *13* B(E3)(W.u.)=0.202 *6* Mult.: K/L=0.25 *5* in ^{200}Tl IT decay (1963Di10).
761.98	5⁺	221.1 *2*	100	540.90	4⁻	E1	0.0594 *8*	α(K)=0.0485 *7*; α(L)=0.00837 *12*; α(M)=0.001953 *28* α(N)=0.000488 *7*; α(O)=9.15×10^{-5} *13*; α(P)=7.19×10^{-6} *10* B(E1)(W.u.)=4.35×10^{-8} *19*

$^{200}_{81}Tl_{119}$-5

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
								Mult.: From α=0.06 *2* from intensity balance considerations in ^{198}Pt(^{6}Li,4nγ) (1981Kr03).
886.1	(6)$^+$	132.4 *2*	100	753.62	7$^+$	M1	3.86 *6*	α(K)=3.15 *5*; α(L)=0.540 *8*; α(M)=0.1261 *18* α(N)=0.0318 *5*; α(O)=0.00618 *9*; α(P)=0.000584 *9*
								Mult.: From intensity balance considerations in ^{198}Pt(^{6}Li,4nγ) (1981Kr03).
1023.6	6$^+$	261.6 *2*	100	761.98	5$^+$	M1(+E2)	0.37 *20*	α(K)=0.28 *19*; α(L)=0.069 *10*; α(M)=0.0169 *16* α(N)=0.0043 *4*; α(O)=0.00079 *11*; α(P)=5.9×10^{-5} *27*
								Mult.: A_2=−0.26 *3* and A_4=−0.03 *6* in ^{198}Pt(^{6}Li,4nγ) (1981Kr03).
1173.8	(8$^+$)	287.7 *2*	43 *6*	886.1	(6)$^+$	(E2)	0.1257 *18*	α(K)=0.0708 *10*; α(L)=0.0412 *6*; α(M)=0.01055 *15* α(N)=0.00265 *4*; α(O)=0.000470 *7*; α(P)=2.376×10^{-5} *34*
								Mult.: A_2=0.37 *4*; A_4=−0.14 *6* in ^{198}Pt(^{6}Li,4nγ) (1981Kr03); DCO(D+Q)=1.33 *5* and POL=+0.13 *7* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		420.3 *2*	100 *15*	753.62	7$^+$	M1+E2	0.10 *6*	α(K)=0.08 *5*; α(L)=0.016 *6*; α(M)=0.0038 *12* α(N)=9.7×10^{-4} *31*; α(O)=1.8×10^{-4} *6*; α(P)=1.5×10^{-5} *8*
								Mult.: A_2=−0.62 *9* and A_4=−0.13 *9* in ^{198}Pt(^{6}Li,4nγ) (1981Kr03); A_2=−0.66 *10*, A_4=+0.06 *16* and POL=+0.02 *3* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
1244.0	7$^-$	220.4 *2*	9.1 *8*	1023.6	6$^+$	[E1]	0.0599 *8*	α(K)=0.0489 *7*; α(L)=0.00844 *12*; α(M)=0.001969 *28* α(N)=0.000492 *7*; α(O)=9.23×10^{-5} *13*; α(P)=7.24×10^{-6} *10* B(E1)(W.u.)=1.64×10^{-7} *17* I_γ: From ^{197}Au(^{207}Pb,xγ).
		357.9 *2*	34.7 *17*	886.1	(6)$^+$	E1	0.01910 *27*	α(K)=0.01574 *22*; α(L)=0.00258 *4*; α(M)=0.000600 *8* α(N)=0.0001503 *21*; α(O)=2.85×10^{-5} *4*; α(P)=2.391×10^{-6} *34* B(E1)(W.u.)=1.46×10^{-7} *11* I_γ: From ^{197}Au(^{207}Pb,xγ).
								Mult.: From intensity balance considerations in ^{198}Pt(^{6}Li,4nγ) (1981Kr03).
		490.4 *2*	100 *3*	753.62	7$^+$	(E1)	0.00961 *13*	α(K)=0.00796 *11*; α(L)=0.001268 *18*; α(M)=0.000294 *4* α(N)=7.37×10^{-5} *10*; α(O)=1.408×10^{-5} *20*; α(P)=1.220×10^{-6} *17* B(E1)(W.u.)=1.64×10^{-7} *10* I_γ: From ^{197}Au(^{207}Pb,xγ).
								Mult.: A_2=0.35 *1* and A_4=−0.02 *2* consistent with J to J stretched dipole transition; pure E1 is suggested from unpublished ce studies reported in ^{198}Pt(^{6}Li,4nγ) (1981Kr03).
1247.5	(8$^-$)	(3.5[b] *4*)	0.7 *3*	1244.0	7$^-$			
		493.8 *2*	100 *33*	753.62	7$^+$			
1323.0	(9$^-$)	75.5 *2*	100	1247.5	(8$^-$)	(M1)	3.57 *6*	α(L)=2.73 *4*; α(M)=0.639 *10* α(N)=0.1615 *26*; α(O)=0.0313 *5*; α(P)=0.00296 *5*
1349.5	(7$^+$)	175.6 *2*		1173.8	(8$^+$)			
		326.0 *2*		1023.6	6$^+$			E_γ: From ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
1442.2	(10$^-$)	119.2[@] *2*	100[@] *5*	1323.0	(9$^-$)	M1(+E2)	4.0 *12*	α(K)=2.4 *19*; α(L)=1.2 *5*; α(M)=0.32 *15*

$^{200}_{81}Tl_{119}$-6

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
								α(N)=0.08 *4*; α(O)=0.014 *6*; α(P)=0.00073 *6* Mult.: A_2=−0.16 *3* and A_4=0.03 *5* in ^{198}Pt(^{6}Li,4nγ) (1981Kr03); DCO(D)=1.11 *3* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
1442.2	(10⁻)	194.7[@] *1*	10.6[@] *17*	1247.5	(8⁻)			α(K)=2.4 *19*; α(L)=1.2 *6*; α(M)=0.32 *15*; α(N+..)=0.09 *5* α(N)=0.08 *4*; α(O)=0.014 *6*; α(P)=0.00073 *7*
1659.4	(11⁻)	217.2[@] *2*	100[@] *5*	1442.2	(10⁻)	M1(+E2)	0.63 *32*	α(K)=0.46 *32*; α(L)=0.1299 *35*; α(M)=0.0319 *10* α(N)=0.00803 *23*; α(O)=0.00148 *4*; α(P)=1.0×10^{-4} *4* Mult.: DCO(Q)=0.42 *3*, POL=−0.06 *3* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		336.3[@] *3*	3.8[@] *5*	1323.0	(9⁻)	E2	0.0795 *11*	α(K)=0.0489 *7*; α(L)=0.02301 *33*; α(M)=0.00583 *8* α(N)=0.001464 *21*; α(O)=0.000262 *4*; α(P)=1.447×10^{-5} *21* Mult.: DCO(Q)=0.89 *13* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
1716.9	(10⁺)	543.1 *1*	100	1173.8	(8⁺)	(E2)	0.02311 *32*	α(K)=0.01688 *24*; α(L)=0.00472 *7*; α(M)=0.001159 *16* α(N)=0.000291 *4*; α(O)=5.38×10^{-5} *8*; α(P)=3.77×10^{-6} *5* Mult.: DCO(D+Q)=1.29 *9*, POL=+0.06 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
1733.5		384.0[@] *1*	100[@]	1349.5	(7⁺)			
1876.0	(10⁺)	702.2[@] *2*	15.24[@] *78*	1173.8	(8⁺)	(E2)	0.01303 *18*	α(K)=0.01001 *14*; α(L)=0.002298 *32*; α(M)=0.000555 *8* α(N)=0.0001397 *20*; α(O)=2.62×10^{-5} *4*; α(P)=2.022×10^{-6} *28* Mult.: DCO(D+Q)=0.92 *11*, POL=+0.11 *5* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
1889.2	(12⁻)	229.8[@] *1*	100[@] *4*	1659.4	(11⁻)	M1(+E2)	0.54 *28*	α(K)=0.40 *27*; α(L)=0.107 *7*; α(M)=0.0262 *4* α(N)=0.00660 *13*; α(O)=0.00122 *8*; α(P)=9.E−5 *4* Mult.: A_2=−0.21 *4* and A_4=0.08 *7* in ^{198}Pt(^{6}Li,4nγ) (1981Kr03); DCO(Q)=0.46 *1*, POL=−0.04 *2* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		447.0[@] *2*	20.6[@] *10*	1442.2	(10⁻)	E2	0.0371 *5*	α(K)=0.0256 *4*; α(L)=0.00864 *12*; α(M)=0.002150 *30* α(N)=0.000540 *8*; α(O)=9.85×10^{-5} *14*; α(P)=6.31×10^{-6} *9* Mult.: DCO(Q)=1.07 *8*, POL=+0.05 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
1892.6	(11⁺)	(16.6[b] *5*)		1876.0	(10⁺)			
		175.7[@] *1*	100[@]	1716.9	(10⁺)	(M1+E2)	1.2 *5*	α(K)=0.8 *6*; α(L)=0.28 *4*; α(M)=0.069 *13* α(N)=0.0173 *31*; α(O)=0.0032 *4*; α(P)=2.0×10^{-4} *6* Mult.: DCO(D+Q)=0.75 *12* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2071.8	(12⁻)	179.2[@] *1*	100[@] *4*	1892.6	(11⁺)	D		Mult.: DCO(D+Q)=0.82 *8* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		412.4[@] *1*	85[@] *5*	1659.4	(11⁻)	M1	0.1660 *23*	α(K)=0.1362 *19*; α(L)=0.02281 *32*; α(M)=0.00532 *7* α(N)=0.001342 *19*; α(O)=0.000261 *4*; α(P)=2.471×10^{-5} *35* Mult.: DCO(D)=0.84 *20*, POL=−0.10 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2237.5	(13⁻)	348.3[@] *1*	100[@] *2*	1889.2	(12⁻)	M1+E2	0.17 *9*	α(K)=0.13 *8*; α(L)=0.028 *8*; α(M)=0.0068 *16* α(N)=0.0017 *4*; α(O)=3.2×10^{-4} *9*; α(P)=2.6×10^{-5} *13*

$^{200}_{81}Tl_{119}$-7

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
								Mult.: A_2=−0.42 *5* and A_4 was set to zero in ^{198}Pt(^{6}Li,4nγ) (1981Kr03); A_2=−0.23 *5*, A_4=−0.01 *8*, DCO(D)=0.72 *1* and POL=−0.04 *2* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2237.5	(13$^-$)	578.3[@] *2*	26.9[@] *13*	1659.4	(11$^-$)	E2	0.01999 *28*	α(K)=0.01481 *21*; α(L)=0.00393 *6*; α(M)=0.000960 *13* α(N)=0.0002415 *34*; α(O)=4.47×10^{-5} *6*; α(P)=3.22×10^{-6} *5* Mult.: DCO(D)=1.87 *15*, POL=+0.14 *5* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2438.0	(12$^+$)	562.0[@] *3*	100[@]	1876.0	(10$^+$)	(E2)	0.02134 *30*	α(K)=0.01572 *22*; α(L)=0.00426 *6*; α(M)=0.001046 *15* α(N)=0.000263 *4*; α(O)=4.86×10^{-5} *7*; α(P)=3.46×10^{-6} *5* Mult.: DCO(D+Q)=1.20 *17* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2548.2	(14$^-$)	310.7[@] *1*	100[@]	2237.5	(13$^-$)	M1(+E2)	0.23 *13*	α(K)=0.18 *12*; α(L)=0.040 *9*; α(M)=0.0097 *18* α(N)=0.0024 *5*; α(O)=0.00046 *11*; α(P)=3.6×10^{-5} *17* Mult.: A_2=−0.23 *13* with A_4 set to zero in ^{198}Pt(^{6}Li,4nγ) (1981Kr03); DCO(Q)=0.47 *2*, POL=−0.05 *2* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		659.0[@] *1*	265.9[@] *25*	1889.2	(12$^-$)	E2	0.01494 *21*	α(K)=0.01136 *16*; α(L)=0.00272 *4*; α(M)=0.000661 *9* α(N)=0.0001662 *23*; α(O)=3.10×10^{-5} *4*; α(P)=2.346×10^{-6} *33* Mult.: A_2=+0.53 *5*, A_4=−0.02 *7*, DCO(Q)=1.02 *9* and POL=+0.14 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2630.4	(12$^-$)	971.0[@] *2*	100[@]	1659.4	(11$^-$)	(M1)	0.01775 *25*	α(K)=0.01464 *21*; α(L)=0.002388 *33*; α(M)=0.000555 *8* α(N)=0.0001400 *20*; α(O)=2.72×10^{-5} *4*; α(P)=2.59×10^{-6} *4* Mult.: POL=−0.21 *10* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2634.0		196.0[@] *1*	100[@]	2438.0	(12$^+$)			
2813.8		742.0[@] *2*	100[@]	2071.8	(12$^-$)			
2845.6	(14$^-$)	773.8[@] *2*	100[@]	2071.8	(12$^-$)	(E2)	0.01062 *15*	α(K)=0.00827 *12*; α(L)=0.001789 *25*; α(M)=0.000430 *6* α(N)=0.0001081 *15*; α(O)=2.035×10^{-5} *29*; α(P)=1.621×10^{-6} *23* Mult.: DCO(Q)=1.60 *55* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2886.5	(14$^+$)	997.3[@] *2*	100[@]	1889.2	(12$^-$)	(M2)	0.0405 *6*	α(K)=0.0327 *5*; α(L)=0.00596 *8*; α(M)=0.001407 *20* α(N)=0.000356 *5*; α(O)=6.91×10^{-5} *10*; α(P)=6.46×10^{-6} *9* Mult.: DCO(D)=1.78 *59*, POL=−0.14 *11* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
2922.2	(15$^-$)	373.9[@] *1*	100[@]	2548.2	(14$^-$)	M1+E2	0.14 *8*	α(K)=0.11 *7*; α(L)=0.023 *7*; α(M)=0.0055 *15* α(N)=0.0014 *4*; α(O)=2.6×10^{-4} *8*; α(P)=2.1×10^{-5} *11* Mult.: DCO(Q)=0.44 *4*, POL=−0.04 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3026.3	(15$^-$)	478.0[@] *1*	100[@]	2548.2	(14$^-$)	M1+E2	0.07 *4*	α(K)=0.057 *35*; α(L)=0.011 *4*; α(M)=0.0027 *9* α(N)=6.7×10^{-4} *23*; α(O)=1.3×10^{-4} *5*; α(P)=1.1×10^{-5} *6* Mult.: A_2=−0.32 *15*, A_4=+0.10 *8*, DCO(Q)=0.30 *2*, POL=−0.03 *3* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3114.1		565.9[@] *3*	100[@]	2548.2	(14$^-$)			

$^{200}_{81}Tl_{119}$-8

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
3220.5	(15$^+$)	982.9[@] *2*	100[@]	2237.5	(13$^-$)	M2	0.0421 *6*	α(K)=0.0340 *5*; α(L)=0.00621 *9*; α(M)=0.001467 *21* α(N)=0.000371 *5*; α(O)=7.20×10^{-5} *10*; α(P)=6.73×10^{-6} *9* Mult.: DCO(D)=1.82 *19*, POL=−0.17 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3257.3	(13$^+$)	1368.1[@] *2*	100[@]	1889.2	(12$^-$)	E1	1.47×10^{-3} *2*	α(K)=0.001159 *16*; α(L)=0.0001722 *24*; α(M)=3.95×10^{-5} *6* α(N)=9.94×10^{-6} *14*; α(O)=1.925×10^{-6} *27*; α(P)=1.790×10^{-7} *25*; α(IPF)=8.84×10^{-5} *12* Mult.: DCO(D)=1.03 *13*, POL=+0.06 *5* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3282.3	(16$^-$)	256.0[@] *1*	32.8[@] *25*	3026.3	(15$^-$)	M1	0.606 *9*	α(K)=0.496 *7*; α(L)=0.0840 *12*; α(M)=0.01962 *28* α(N)=0.00495 *7*; α(O)=0.000962 *14*; α(P)=9.10×10^{-5} *13* Mult.: DCO(Q)=0.47 *7*, POL=−0.15 *8* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		734.4[@] *2*	100[@] *5*	2548.2	(14$^-$)	E2	0.01185 *17*	α(K)=0.00916 *13*; α(L)=0.002045 *29*; α(M)=0.000493 *7* α(N)=0.0001239 *17*; α(O)=2.326×10^{-5} *33*; α(P)=1.824×10^{-6} *26* Mult.: DCO(Q)=0.85 *5*, POL=+0.08 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3313.6	(14$^+$)	(56.3[b] *6*)		3257.3	(13$^+$)			
		93.1[@] *3*	29[@] *7*	3220.5	(15$^+$)			
		1076.2[@] *2*	100[@] *6*	2237.5	(13$^-$)	E1	2.10×10^{-3} *3*	α(K)=0.001760 *25*; α(L)=0.000265 *4*; α(M)=6.08×10^{-5} *9* α(N)=1.529×10^{-5} *21*; α(O)=2.96×10^{-6} *4*; α(P)=2.72×10^{-7} *4* Mult.: DCO(D)=0.95 *10*,POL=+0.05 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3338.0	(16$^-$)	311.7[@] *1*	22.4[@] *19*	3026.3	(15$^-$)	(M1+E2)	0.23 *13*	α(K)=0.17 *12*; α(L)=0.040 *9*; α(M)=0.0096 *18* α(N)=0.0024 *5*; α(O)=0.00045 *11*; α(P)=3.6×10^{-5} *17* Mult.: DCO(Q)=0.39 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		415.8[@] *1*	29.2[@] *21*	2922.2	(15$^-$)	M1	0.1624 *23*	α(K)=0.1333 *19*; α(L)=0.02231 *31*; α(M)=0.00520 *7* α(N)=0.001313 *18*; α(O)=0.000255 *4*; α(P)=2.416×10^{-5} *34* Mult.: DCO(Q)=0.48 *4*, POL=−0.11 *7* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		492.4[@] *1*	13.9[@] *11*	2845.6	(14$^-$)	(E2)	0.0292 *4*	α(K)=0.02079 *29*; α(L)=0.00635 *9*; α(M)=0.001571 *22* α(N)=0.000395 *6*; α(O)=7.24×10^{-5} *10*; α(P)=4.86×10^{-6} *7* Mult.: DCO(Q)=0.86 *14* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		789.7[@] *1*	100[@] *4*	2548.2	(14$^-$)	E2	0.01018 *14*	α(K)=0.00795 *11*; α(L)=0.001700 *24*; α(M)=0.000408 *6* α(N)=0.0001026 *14*; α(O)=1.933×10^{-5} *27*; α(P)=1.549×10^{-6} *22* Mult.: A_2=+0.54 *1*, A_4=+0.04 *1*, DCO(Q)=0.85 *6*, POL=+0.15 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3591.6	(15$^+$)	278.0[@] *1*	100[@]	3313.6	(14$^+$)	M1+E2	0.31 *17*	α(K)=0.24 *16*; α(L)=0.057 *10*; α(M)=0.0138 *18* α(N)=0.0035 *5*; α(O)=0.00065 *11*; α(P)=5.0×10^{-5} *23* Mult.: DCO(D)=0.76 *5*, POL=−0.07 *5* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).

$^{200}_{81}Tl_{119}$-9

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
3608.7	(16$^-$)	326.4[@] *1*	55[@] *6*	3282.3	(16$^-$)	M1+E2	0.20 *11*	α(K)=0.15 *10*; α(L)=0.034 *9*; α(M)=0.0083 *18* α(N)=0.0021 *5*; α(O)=3.9×10^{-4} *10*; α(P)=3.1×10^{-5} *15* Mult.: DCO(Q)=0.58 *4*, POL=−0.02 *9* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		686.4[@] *1*	100[@] *10*	2922.2	(15$^-$)	M1+E2	0.029 *15*	α(K)=0.023 *13*; α(L)=0.0042 *17*; α(M)=1.0×10^{-3} *4* α(N)=2.5×10^{-4} *10*; α(O)=4.8×10^{-5} *20*; α(P)=4.3×10^{-6} *21* Mult.: DCO(Q)=0.73 *11*, POL=−0.10 *5* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3665.0	(17$^-$)	327.0[@] *2*	100[@]	3338.0	(16$^-$)			
3771.4	(16$^+$)	179.8[@] *1*	100[@] *5*	3591.6	(15$^+$)	M1+E2	1.1 *5*	α(K)=0.8 *6*; α(L)=0.254 *28*; α(M)=0.063 *10* α(N)=0.0159 *26*; α(O)=0.00290 *31*; α(P)=1.9×10^{-4} *6* Mult.: DCO(D)=1.08 *7* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		457.3[@] *8*	68[@] *3*	3313.6	(14$^+$)			
3799.7	(17$^-$)	191.0[@] *1*	[@]	3608.7	(16$^-$)	(M1)	1.368 *19*	α(K)=1.120 *16*; α(L)=0.1906 *27*; α(M)=0.0445 *6* α(N)=0.01124 *16*; α(O)=0.002183 *31*; α(P)=0.0002063 *29* Mult.: DCO(Q)=0.55 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		517.4[@] *1*	100[@] *5*	3282.3	(16$^-$)	M1+E2	0.058 *33*	α(K)=0.047 *28*; α(L)=0.0089 *35*; α(M)=0.0021 *8* α(N)=5.3×10^{-4} *20*; α(O)=1.0×10^{-4} *4*; α(P)=9.E−6 *5* Mult.: DCO(Q)=0.39 *8*, POL=−0.18 *7* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		773.4[@] *2*	43[@] *6*	3026.3	(15$^-$)	(E2)	0.01063 *15*	α(K)=0.00828 *12*; α(L)=0.001792 *25*; α(M)=0.000430 *6* α(N)=0.0001083 *15*; α(O)=2.037×10^{-5} *29*; α(P)=1.623×10^{-6} *23* Mult.: POL=+0.07 *3* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3857.1	(18$^-$)	(57.4[b] *6*)		3799.7	(17$^-$)			
		192.0[@] *2*	24.5[@] *14*	3665.0	(17$^-$)			
		519.1[@] *1*	100[@] *4*	3338.0	(16$^-$)	E2	0.0257 *4*	α(K)=0.01857 *26*; α(L)=0.00540 *8*; α(M)=0.001332 *19* α(N)=0.000335 *5*; α(O)=6.16×10^{-5} *9*; α(P)=4.23×10^{-6} *6* Mult.: DCO(Q)=0.82 *4*, POL=+0.14 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		574.7[@] *2*	9.8[@] *27*	3282.3	(16$^-$)	(E2)	0.02028 *28*	α(K)=0.01501 *21*; α(L)=0.00400 *6*; α(M)=0.000978 *14* α(N)=0.0002460 *35*; α(O)=4.55×10^{-5} *6*; α(P)=3.27×10^{-6} *5* Mult.: DCO(Q)=0.70 *11* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
3928.7	(17$^+$)	157.3[@] *1*	100[@]	3771.4	(16$^+$)	(M1)	2.364 *33*	α(K)=1.933 *27*; α(L)=0.330 *5*; α(M)=0.0771 *11* α(N)=0.01947 *27*; α(O)=0.00378 *5*; α(P)=0.000357 *5* Mult.: DCO(D)=0.91 *14* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		337.0[@] *4*	[@]	3591.6	(15$^+$)			
4033.0	(18$^+$)	104.4[@] *2*	100[@] *4*	3928.7	(17$^+$)	M1+E2	6.3 *13*	α(K)=3.4 *28*; α(L)=2.2 *11*; α(M)=0.55 *30* α(N)=0.14 *8*; α(O)=0.025 *12*; α(P)=0.001165 *20* Mult.: DCO(D)=0.99 *18* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
		261.7[@] *1*	70[@] *6*	3771.4	(16$^+$)	(E2)	0.1683 *24*	α(K)=0.0888 *12*; α(L)=0.0596 *8*; α(M)=0.01533 *22*

$^{200}_{81}Tl_{119}$-10

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
								α(N)=0.00384 *5*; α(O)=0.000680 *10*; α(P)=3.26×10^{-5} *5* Mult.: POL=+0.06 *9* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
4048.8	(19$^+$)	191.5[#] *3*	100	3857.1	(18$^-$)	E1[a]	0.0846 *12*	α(K)=0.06886 *99*; α(L)=0.01209 *18*; α(M)=0.00282 *4* α(N)=0.000705 *10*; α(O)=0.0001316 *19*; α(P)=1.011×10^{-5} *15* Mult.: Other: DCO(Q)=0.58 *1* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02), consistent with D, where 191.5γ was assigned as (M1+E2).
4165.1	(20$^+$)	116.3[#] *3*	100	4048.8	(19$^+$)	M1[a]	5.58 *9*	α(K)=4.56 *7*; α(L)=0.783 *12*; α(M)=0.1829 *29* α(N)=0.0462 *7*; α(O)=0.00897 *14*; α(P)=0.000847 *13*
4320.1	(20)	271.2[@] *3*	100[@]	4048.8	(19$^+$)	D		Mult.: DCO(Q)=0.33 *4* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
4374.5	(19$^+$)	341.5[@] *1*	100[@]	4033.0	(18$^+$)	M1	0.276 *4*	α(K)=0.2261 *32*; α(L)=0.0380 *5*; α(M)=0.00887 *12* α(N)=0.002240 *31*; α(O)=0.000435 *6*; α(P)=4.12×10^{-5} *6* Mult.: DCO(D)=0.77 *13*,POL=−0.15 *17* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
4436.6	(21$^+$)	271.5[#] *3*	100	4165.1	(20$^+$)			
4652.5	(20$^+$)	278.0[@] *1*	57[@] *9*	4374.5	(19$^+$)			
		619.5[@] *3*	100[@] *5*	4033.0	(18$^+$)	(E2)	0.01712 *24*	α(K)=0.01287 *18*; α(L)=0.00323 *5*; α(M)=0.000786 *11* α(N)=0.0001978 *28*; α(O)=3.68×10^{-5} *5*; α(P)=2.72×10^{-6} *4* Mult.: POL=+0.12 *2* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
4755.9	(21$^+$)	435.8[@] *1*	[@]	4320.1	(20)			
		707.2[@] *3*	100[@]	4048.8	(19$^+$)	E2	0.01283 *18*	α(K)=0.00987 *14*; α(L)=0.002256 *32*; α(M)=0.000545 *8* α(N)=0.0001371 *19*; α(O)=2.57×10^{-5} *4*; α(P)=1.989×10^{-6} *28* Mult.: DCO(Q)=1.44 *25*,POL=+0.05 *11* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
4827.6	(21$^+$)	778.8[@] *2*	100[@]	4048.8	(19$^+$)	(E2)	0.01048 *15*	α(K)=0.00817 *11*; α(L)=0.001760 *25*; α(M)=0.000423 *6* α(N)=0.0001064 *15*; α(O)=2.002×10^{-5} *28*; α(P)=1.598×10^{-6} *22* Mult.: DCO(Q)=1.35 *28* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
4872.5	(21$^+$)	220.2[#] *3*		4652.5	(20$^+$)	M1[a]	0.920 *13*	α(K)=0.753 *11*; α(L)=0.1278 *19*; α(M)=0.0298 *4* α(N)=0.00754 *11*; α(O)=0.001464 *21*; α(P)=0.0001384 *20*
		436.1[#] *4*		4436.6	(21$^+$)			
		707.2[#] *3*		4165.1	(20$^+$)			
		823.6[#] *3*		4048.8	(19$^+$)			
4898.7	(21$^+$)	246.2[@] *1*	100[@]	4652.5	(20$^+$)	(M1+E2)	0.44 *24*	α(K)=0.33 *23*; α(L)=0.085 *9*; α(M)=0.0207 *12* α(N)=0.00522 *31*; α(O)=0.00097 *10*; α(P)=7.1×10^{-5} *31* Mult.: DCO(D)=1.08 *22*,POL=−0.32 *14* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
4943.5	(22$^+$)	778.4[#] *3*		4165.1	(20$^+$)			
5074.4	(22$^+$)	909.3[#] *2*	100	4165.1	(20$^+$)	(E2)	0.00765 *11*	α(K)=0.00607 *8*; α(L)=0.001207 *17*; α(M)=0.000287 *4* α(N)=7.23×10^{-5} *10*; α(O)=1.370×10^{-5} *19*; α(P)=1.139×10^{-6} *16* Mult.: DCO(Q)=0.85 *7* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).

$^{200}_{81}Tl_{119}$-11

Adopted Levels, Gammas (continued)

γ(^{200}Tl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[c]	Comments
5154.5	(22,23)	(80.1[b] *7*)		5074.4	(22$^+$)			
		211.0[#] *3*	100	4943.5	(22$^+$)			
5157.8	(22$^-$)	285.3[#] *3*	100	4872.5	(21$^+$)	E1[a]	0.0322 *5*	α(K)=0.0264 *4*; α(L)=0.00444 *6*; α(M)=0.001033 *15* α(N)=0.000259 *4*; α(O)=4.88×10^{-5} *7*; α(P)=3.98×10^{-6} *6* Mult.: Other: DCO(Q)=0.40 *5*, POL=−0.06 *2* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
5184.2	(22$^+$)	285.5[@] *1*	100[@]	4898.7	(21$^+$)	(M1+E2)	0.29 *16*	α(K)=0.22 *15*; α(L)=0.052 *10*; α(M)=0.0127 *18* α(N)=0.0032 *5*; α(O)=0.00060 *11*; α(P)=4.6×10^{-5} *21* Mult.: POL=−0.08 *15* in ^{198}Pt(^{7}Li,5nγ) (2017Bh02).
5270.2	(22,23)	195.8[#] *3*		5074.4	(22$^+$)			
		(327[#])		4943.5	(22$^+$)			
5723.1	(23$^+$)	452.9[#] *2*		5270.2	(22,23)			
		648.6[#d] *3*		5074.4	(22$^+$)			
		850.6[#] *2*		4872.5	(21$^+$)			
5907.0	(24$^-$)	183.8[#] *4*		5723.1	(23$^+$)			
		749.3[#] *2*		5157.8	(22$^-$)			
		752.5[#] *3*		5154.5	(22,23)			
6006.3	(26$^-$)	99.3[#] *4*	100	5907.0	(24$^-$)	E2[a]	6.10 *14*	α(K)=0.569 *8*; α(L)=4.12 *10*; α(M)=1.084 *26* α(N)=0.271 *6*; α(O)=0.0466 *11*; α(P)=0.001461 *33* B(E2)(W.u.)=2.08 *10*

[†] From ^{198}Pt(^{6}Li,4nγ), unless otherwise stated.
[‡] From ^{200}Pb ε decay.
[#] From ^{197}Au(^{207}Pb,xγ).
[@] From ^{198}Pt(^{7}Li,5nγ).
[&] From γ(θ) and the apparent ΔJ=1 band structure in ^{198}Pt(^{6}Li,4nγ), and DCO and polarization data in ^{198}Pt(^{7}Li,5nγ), unless otherwise stated. The quoted DCO values are for 90° and 157° geometry. DCO(Q) is for gate on a ΔJ=2, quadrupole transition, DCO(D) for gate on ΔJ=1, dipole and DCO(D+Q) for gate on a ΔJ=1, D+Q (or M1+E2) transition. Typical DCO(Q) values are ≈0.5 for ΔJ=1, dipole and ≈1.0 for ΔJ=2, quadrupole transitions. Typical DCO(D) values are ≈1.0 for ΔJ=1, dipole, and ≈2.0 for ΔJ=2, quadrupole transitions. The POL values are positive for electric multipole and negative for magnetic multipole.
[a] From ^{197}Au(^{207}Pb,xγ) (2019Ro12), based on intensity balance.
[b] Deduced from level-energy difference. Existence of this transition is required from γγ-coin data (2017Bh02).
[c] Additional information 1.
[d] Placement of transition in the level scheme is uncertain.

$^{200}_{81}Tl_{119}$-12

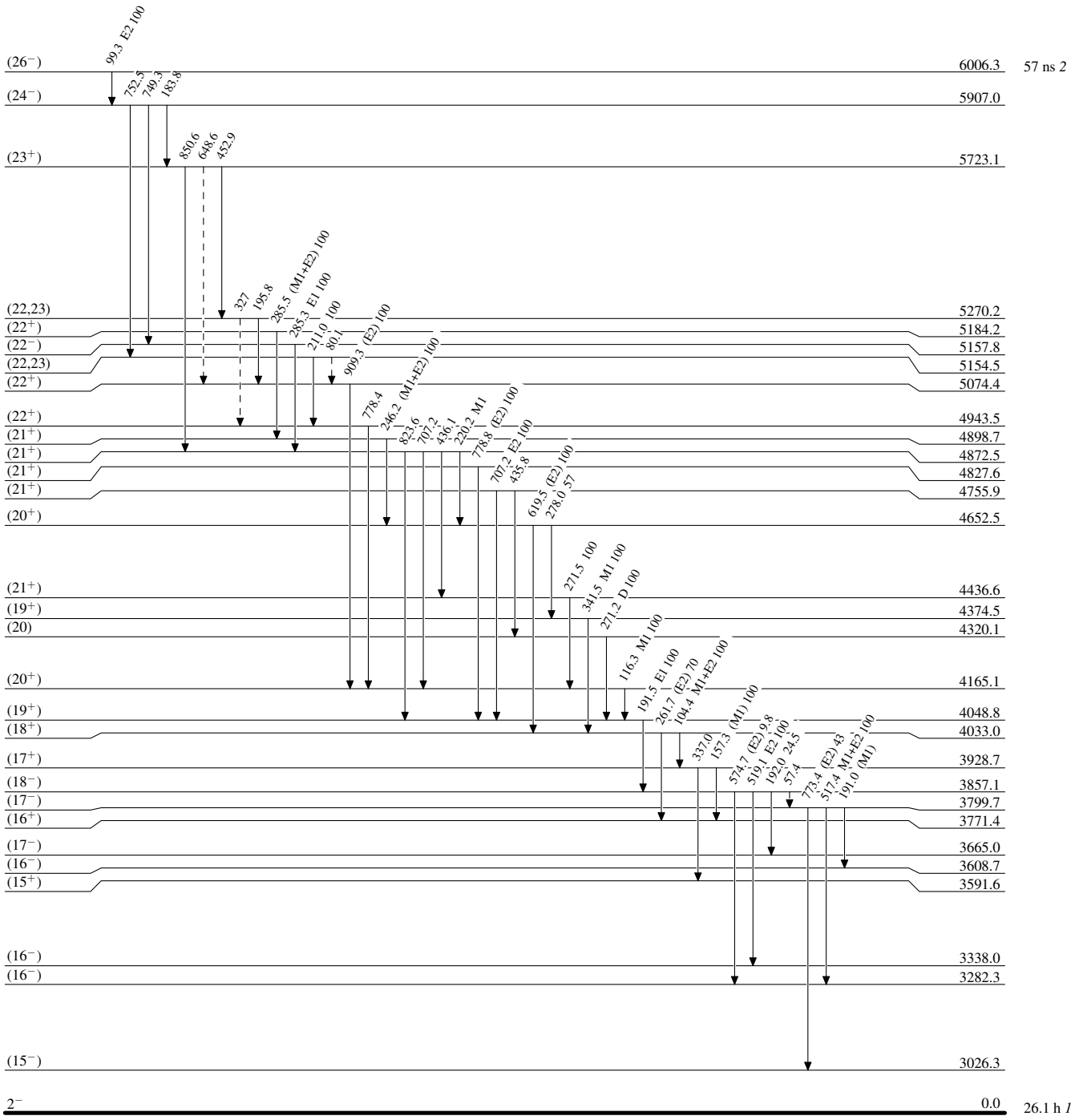
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{200}_{81}Tl_{119}$

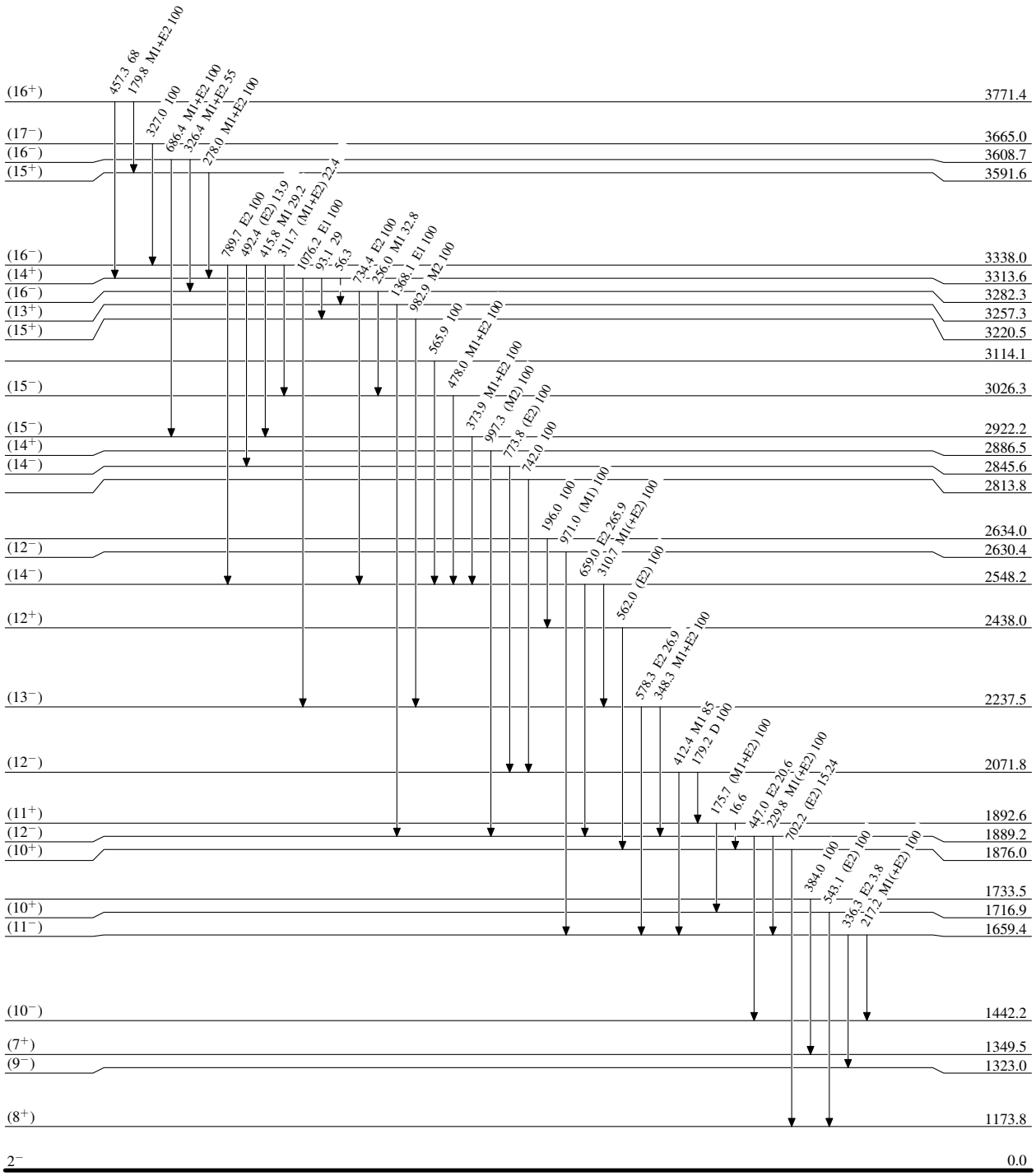
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{200}_{81}Tl_{119}$

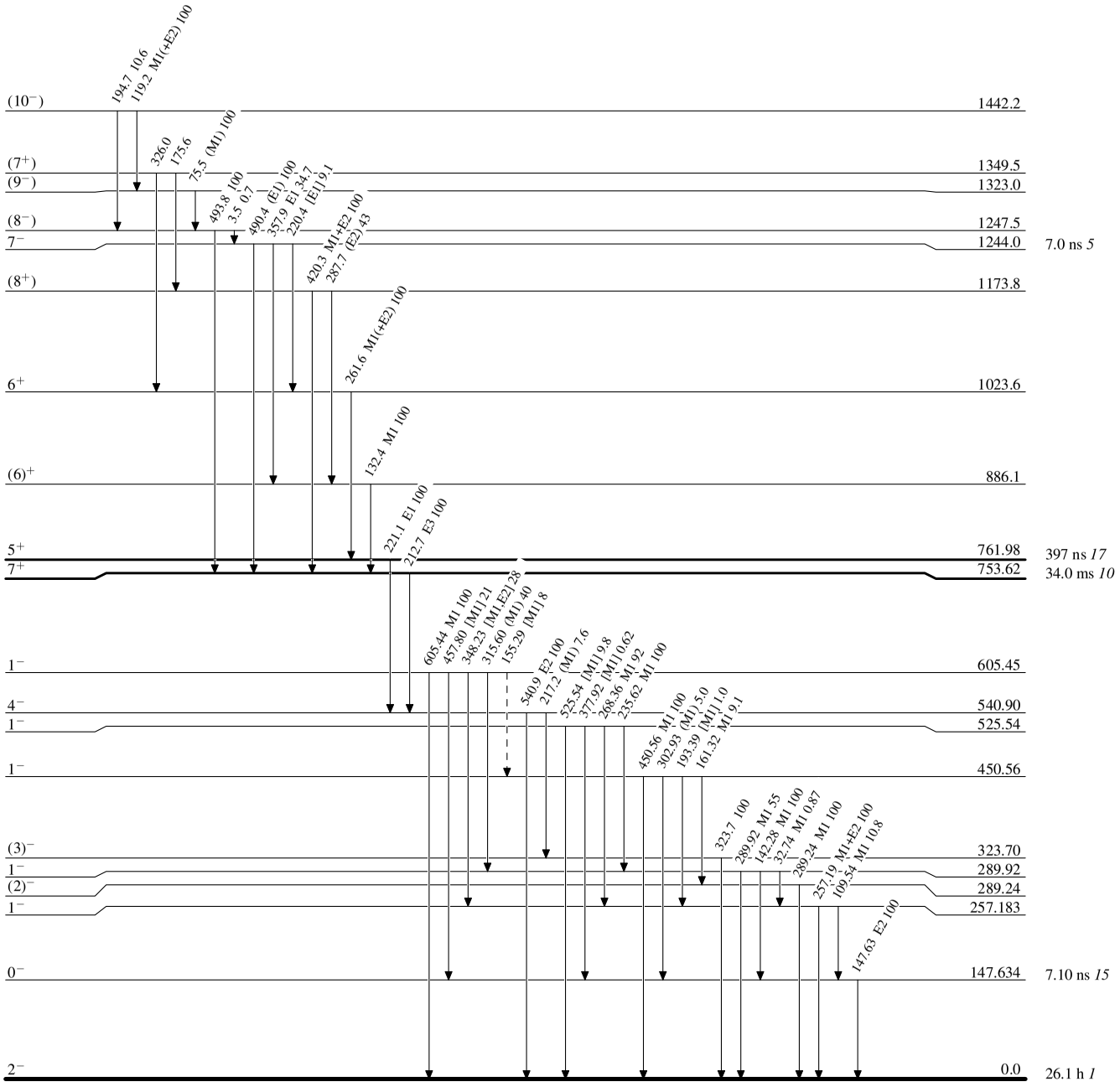
Adopted Levels, Gammas

Legend

Level Scheme (continued)

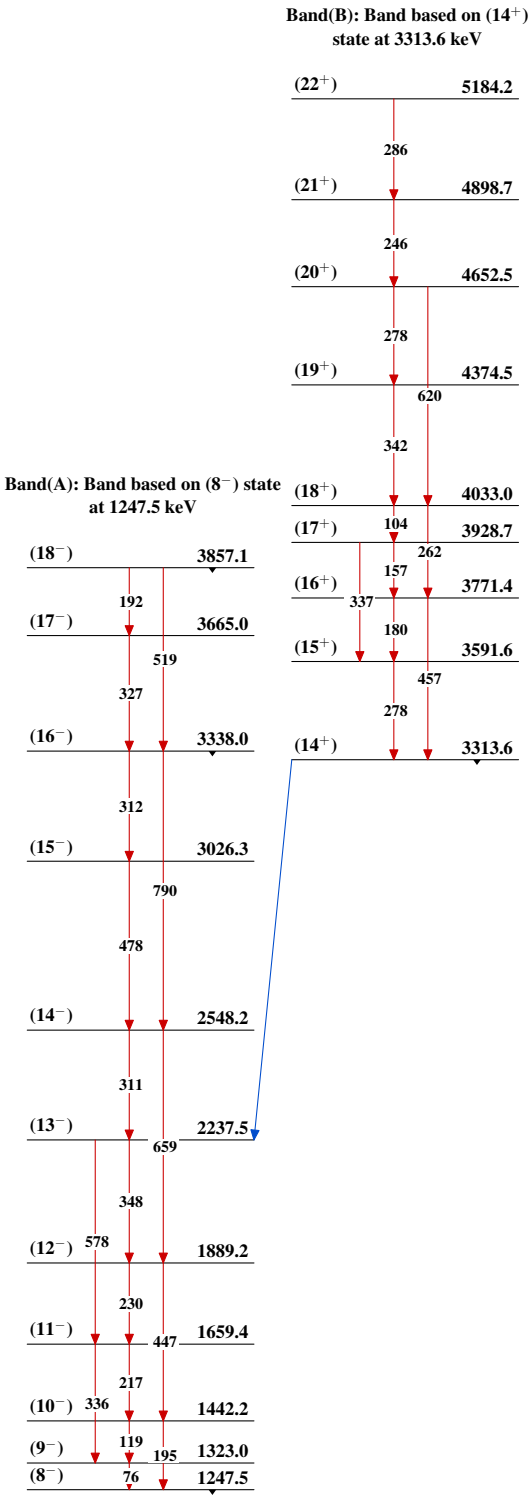
Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{200}_{81}Tl_{119}$

Adopted Levels, Gammas



$^{200}_{81}Tl_{119}$