Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 133, 221 (2016)	1-Dec-2015

Q(β^-)=−3460 *80*; S(n)=8485 *3*; S(p)=7102.8 *5*; Q(α)=1382.8 *9* 2012Wa38

^{198}Pt can decay by double β^- decay to ^{198}Hg. Upper limits on ^{198}Pt half-life have been measured. For details, see $T_{1/2}$ comment for g.s. of ^{198}Pt In Adopted Levels for ^{198}Pt.

^{198}Hg Levels

For band configurations, see 1985Ko13, 1984Go06, 1977Gu05, 1974Pr13, and 1974Ya03.

Cross Reference (XREF) Flags

A	^{198}Au β^- decay (2.6941 d)	G	^{198}Hg(n,n′γ)	M	Coulomb excitation
B	^{198}Tl ε decay (5.3 h)	H	^{197}Au(p,γ)	N	^{200}Hg(p,t)
C	^{198}Tl ε decay (1.87 h)	I	^{197}Au(p,F)	O	^{202}Pb α decay (52.5×10^3 y)
D	^{196}Pt(α,2nγ)	J	^{198}Hg(p,p′γ),(p,p′)	P	^{198}Pt 2β^- decay
E	^{198}Pt(α,4nγ)	K	^{198}Hg(γ,γ): res fluorescence		
F	^{197}Au(^{3}He,d)	L	^{198}Hg(α,α′)		

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0[c]	0$^+$	stable	ABCDEF JKLMNOP	J$^\pi$: L=0 in ^{200}Hg(p,t); populated by favored (HF≈1) α decay from ^{202}Pb(J^π=0$^+$) (1981Na15).
411.80251[c] *17*	2$^+$	23.15 ps *28*	ABCDEF JK M P	μ=+0.76 *6* (1995Br34,2011StZZ) J$^\pi$: E2 γ to 0$^+$. $T_{1/2}$: From B(E2)=0.990 *12* (adopted in 2001Ra27). μ: Transient Field integral perturbed angular correlation(TF) and ^{199}Hg standard (1995Br34). Others: +1.0 *2* (1986Ko02, Perturbed Angular Correlation after Ion Implantation(IMPAC); ^{199}Hg standard), +0.70 *14* (1977Kr11, Recoil Into Gas or Vacuum(RIGV)). Q=+0.68 *12* or +0.84 *12* (1984Fe08,2011StZZ). Q: Coulomb Excitation Reorientation(CER). Others: +0.7 *2* or +0.8 *2* (1979Bo16, CER), +0.5 *2* (1979Ha08, Muonic x-ray Hyperfine Structure, Mu-X). $\langle r^2\rangle^{1/2}$=5.447 fm *3* (2004An14). $\langle(\beta_2)^2\rangle^{1/2}$=0.106 *2* (1986Ul02). $\Delta\langle r^2\rangle$=−0.0968 fm^2 *3* (1987Za02), relative to ^{206}Hg.
1048.51[c] *11*	4$^+$	7.2 ps *3*	BCDEF J M	μ=+1.6 *2* (1995Br34,2011StZZ). μ: TF; ^{199}Hg standard. J$^\pi$: J=4 from $\gamma\gamma(\theta)$ in ^{198}Tl ε decay (5.3 h) and π=+ from E2 γ to 2$^+$. $T_{1/2}$: From B(E2)(412-1048)=0.537 *20* in Coulomb excitation.
1087.6874 *5*	2$^+$	40.4 ps *5*	AB D F J M	J$^\pi$: E2 γ to 0$^+$. $T_{1/2}$: From B(E2)(412-1088)=0.070 *5* in Coulomb excitation.
1401.52 *23*	0$^+$		B D J N	J$^\pi$: E2 γ to 2$^+$ and E0 to 0$^+$.
1419.41 *11*	3$^+$		B D	J$^\pi$: J=3 from $\gamma\gamma(\theta)$ in ^{196}Pt(α,2nγ) and π=+ from M1+E2 γ to 2$^+$.
1548.49 *20*	(1,2$^+$)		B D	
1550	0$^+$		D N	J$^\pi$: L=0 in ^{200}Hg(p,t).
1612.44 *12*	2$^+$		B D	J$^\pi$: J=2 from $\gamma\gamma(\theta)$ in ^{198}Tl ε decay (5.3 h) and π=+ from M1+E2 γ to 2$^+$.
1635.67[d] *21*	5$^-$	62 ps *11*	BCDE J	J$^\pi$: J=5 from $\gamma(\theta)$ in ^{198}Pt(α,4nγ) and ^{196}Pt(α,2nγ); π=−

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Adopted Levels, Gammas (continued)

^{198}Hg Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				from E1 γ to 4^+.
				$T_{1/2}$: From γce(t) in ^{198}Tl ε decay (1.87 h) (1971Be09). Other: ≤100 ps (1970Du10,1970To14).
1683.38[d] *22*	7^-[@][b]	6.9 ns *2*	CDE J	μ=−0.23 *10* (2006Le06,2011StZZ)
				$T_{1/2}$: From γce(t) in ^{198}Tl ε decay (1.87h) (1970Du10, 1970To14). Others: 7.4 ns *4* (1971Be09), 6.6 ns *5* (1971Pa06), and 7.1 ns *1* (1984Go06).
				μ: IPAD. Other: −0.22 *11* (TDPAD, IPAD, 1984Go06).
1760 *15*	0^+		D F N	XREF: N(1779).
				Jπ: L=0 in ^{200}Hg(p,t), L=2 in ^{197}Au(^{3}He,d).
1815.90[c] *20*	6^+[@]	3.4 ps *3*	CDEF M	XREF: F(1820).
				$T_{1/2}$: From B(E2)(1048-1816)=0.452 *53* in Coulomb excitation.
1832.60 *17*	2^+		B D	Jπ: J=2 from γγ(θ) in ^{198}Tl ε decay (5.3 h) and π=+ from M1(+E2) γ to 2^+.
1834.90 *13*	4^+[b]		B D J	
1847.21 *13*	3^+		B D	Jπ: J=3 from γγ(θ) in ^{198}Tl ε decay (5.3 h) and π=+ from M1+E2 γ to 2^+.
1858.86 *18*	2^+		B D J	Jπ: J=2 from γγ(θ) in ^{198}Tl ε decay (5.3 h) and π=+ from M1(+E2) γ to 2^+.
1899.40 *21*	$1^+,2^+$		B D f	XREF: f(1900).
				E(level): E(level)=1900 with L=0 could correspond to 1899 and/or 1901 levels.
				Jπ: L=0 in ^{197}Au(^{3}He,d).
1901.51 *22*	(2^+)		B D f	XREF: f(1900).
				E(level): E(level)=1900 with L=0 could correspond to 1899 and/or 1901 levels.
				Jπ: J=(2) from γγ(θ) in ^{198}Tl ε decay (5.3 h) and π=(+) from (M1+E2) γ to 2^+.
1909.7 *3*	6^-		CD	Jπ: M1+E2 γ to 5^-, M1(+E2) γ to 7^-.
1910.8[d] *3*	9^-[@]	0.28 ns *5*	DE	$T_{1/2}$: From αγ(t) in ^{198}Pt(α,4nγ) (1977Gu05).
1928.61 *20*	3^-[b]		D J	
1959.91 *20*	$0^+,1,2,3,4^+$		D	
1965 *6*			D J	
1971.00 *16*	$2^+,3,4^+$		B D	Jπ: γ's to 2^+ and 4^+.
2005.35 *16*	$0^+,1,2,3,4^+$		B D J	
2048.21 *20*	$0^+,1,2,3,4^+$		B D	
2049 *6*			D J	
2059.1 *3*	6^-		CD	Jπ: γ's to 5^- and 7^-.
2070.8 *3*	$1^+,2^+$		B D F J	XREF: J(2067).
				Jπ: L=0 in ^{197}Au(^{3}He,d).
2090.76 *19*	$4^+,5^+$		D	
2109.8 *5*	$1,2^+$		B D	Jπ: γ to 0^+.
2125.3 *3*	$6^-,7^-$		CD	Jπ: M1(+E2) γ to 6^-, M1 γ to 7^-.
2132.6 *3*	$1^+,2^+$		B D F	XREF: F(2130).
				Jπ: L=0 in ^{197}Au(^{3}He,d).
2135.2 *3*	5^-[b]		D J	
2169.40 *22*	2^+		B D	Jπ: γ's to 0^+ and 4^+.
2177.6 *3*	$1,2^+$		B D J	XREF: J(2186).
				Jπ: γ to 0^+.
2202.6 *4*	$6^-,7^-$		CD	Jπ: M1 γ to 7^-, γ to 5^-.
2209.24 *14*	$1,2^+$		B D j	XREF: j(2213).
				E(level): 2213 *6* could correspond to 2209 and/or 2219.
				Jπ: γ to 0^+.
2219.4 *3*	$0^+,1,2,3,4^+$		B D j	XREF: j(2213).

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Adopted Levels, Gammas (continued)

^{198}Hg Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				E(level): 2213 could be 2209 and/or 2219.
2267.7 *3*	2^+		B D J	XREF: J(2259). Jπ: γ's to 0^+ and 4^+.
2277.22 *23*	$1^+,2,3,4,5^+$		D	
2287.26 *25*	$1,2^+$		B D J	Jπ: γ to 0^+.
2296.05 *15*	$2^+,3,4,5,6^+$		B D F	XREF: F(2300).
2320.30 *24*	$1,2^+$		B D	
2331.56 *22*	4^+		B D J	Jπ: L=4 in ^{198}Hg(p,p′).
2337.55[c] *25*	8^+[@]	79 ps *43*	DE M	$T_{1/2}$: From B(E2)(1816-2338)=0.13 *7* in Coulomb excitation.
2360.78 *14*	3^+		B D J	XREF: J(2355). Jπ: J=3 from γγ(θ) in ^{198}Tl ε decay (5.3 h) and π=+ from M1(+E2) γ to 4^+.
2400 *4*			D J	
2434.9[c] *3*	10^+[@]	1.92 ns *9*	E J	μ=−1.8 *8* (2006Le06,2011StZZ) μ: IPAD. $T_{1/2}$: Weighted average of 1.85 ns *16* (αγ(t),1977Gu05) and 1.94 ns *10* (cece(t),1985Ko13).
2450? *15*	$1^+,2^+$		F	Jπ: L=0 in ^{197}Au(^{3}He,d).
2451.89 *17*	(1,3)		B	Jπ: From γγ(θ) in ^{198}Tl ε decay (5.3 h).
2465.44 *21*	2^+		B	Jπ: γ's to 0^+ and 4^+.
2466.9[d] *4*	11^-[@]		E	
2480 *4*			F	Jπ: L=(5) in ^{197}Au(^{3}He,d).
2486.08 *16*	$1,2^+$		B	Jπ: γ to 0^+.
2487 *4*	3^-		J L	XREF: L(2486). Jπ: L=3 in ^{198}Hg(p,p′).
2515.9 *3*	$4^-,5,6,7,8^-$		CD	
2525 *3*	(3^-)[a]		L	
2535.29 *20*	3^-		D J	Jπ: L=3 in ^{198}Hg(p,p′).
2550? *15*			F	E(level): May be doublet. L=0+2 in ^{197}Au(^{3}He,d).
2564.34 *17*	$1,2^+$		B J	Jπ: γ to 0^+.
2578.1[c] *4*	12^+[@]	1.38 ns *4*	E	μ=−2.2 *10* (2006Le06,2011StZZ) $T_{1/2}$: From αγ(t) in ^{198}Pt(α,4nγ) (1977Gu05). μ: IPAD.
2600 *15*	$1^+,2^+$		F	E(level): May be doublet. L=0+2 in ^{197}Au(^{3}He,d). L=0 component gives 1^+, 2^+.
2602.45 *24*			B	
2612.5 *3*	$1,2^+$		B J	XREF: J(2618). Jπ: γ to 0^+.
2644.2 *7*	$2^+,3,4^+$		B	Jπ: γ's to 2^+ and 4^+.
2655.9 *3*	$1^-,2,3,4,5^-$		D	
2694.8 *7*	$1,2^+$		B	Jπ: γ to 0^+.
2731.2 *3*	$2^+,3,4^+$		B F	XREF: F(2730). Jπ: γ's to 2^+ and 4^+. L=0+2 in ^{197}Au(^{3}He,d).
2756?	(8^+)[#]	1.8 ps *5*	M	$T_{1/2}$: From B(E2)=0.30 *8* in Coulomb excitation.
2782.76 *20*	2^+		B F	XREF: F(2780). Jπ: γ's to 0^+ and 4^+. L=0+2 in ^{197}Au(^{3}He,d).
2816.1 *8*	$1,2^+$		B	Jπ: γ to 0^+.
2825.5 *3*	$1,2^+$		B	Jπ: γ to 0^+.
2835.49 *23*	$1,2^+$		B	Jπ: γ to 0^+.
2840 *15*			F	Jπ: L=(3,5) in ^{197}Au(^{3}He,d).
2845.1 *4*	$1,2^+$		B	Jπ: γ to 0^+.
2861.6 *6*	$1,2^+$		B	Jπ: γ to 0^+.
2868.8 *6*	$1,2^+$		B	Jπ: γ to 0^+.

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Adopted Levels, Gammas (continued)

^{198}Hg Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
2894.3 *7*	1,2$^+$		B	Jπ: γ to 0$^+$.
2926.0[c] *4*	14$^+$[@]	<120 ps	E	$T_{1/2}$: From αγ(t) in ^{198}Pt(α,4nγ) (1977Gu05).
2940 *15*			F	L=(5,6) in ^{197}Au(^{3}He,d).
2954.6 *7*	1,2$^+$		B	Jπ: γ to 0$^+$.
2975.9 *7*	1,2$^+$		B	Jπ: γ to 0$^+$.
2986.8 *8*	1,2$^+$		B	Jπ: γ to 0$^+$.
2990? *15*			F	Jπ: L=(3) in ^{197}Au(^{3}He,d).
3013.2 *3*			B	
3022.1 *10*	1,2$^+$		B	Jπ: γ to 0$^+$.
3070? *15*			F	
3095.7 *10*	1,2$^+$		B	Jπ: γ to 0$^+$.
3128.0 *7*	1,2$^+$		B	Jπ: γ to 0$^+$.
3150? *15*			F	Jπ: L=(3,5) in ^{197}Au(^{3}He,d).
3164.7 *6*	1,2$^+$		B	Jπ: γ to 0$^+$.
3200 *15*			F	Jπ: L=(5) in ^{197}Au(^{3}He,d).
3270 *15*			F	
3325.5[d] *4*	13$^-$[@]		E	
3440 *15*			F	Jπ: L=(3) in ^{197}Au(^{3}He,d).
3486.0[c] *5*	16$^+$[@]		E	
4262.5[c] *5*	18$^+$[@]		E	
4302.2?[d] *7*	(15$^-$)[&]		E	
4635.7[d] *8*	(17$^-$)[&]		E	
5284.3[c] *7*	(20$^+$)[&]		E	

[†] From least-squares fit to Eγ values.
[‡] From the γ-ray transition multipolarities and the observed decay pattern in ^{196}Pt(α,2nγ), except as noted.
[#] From γ(θ) and multiple Coulomb excitation in Coulomb excitation.
[@] From cascade of stretched E2 γ′s and band structure in ^{198}Pt(α,4nγ).
[&] From band structure in ^{198}Pt(α,4nγ).
[a] From comparison of angular distribution in ^{198}Hg(α,α′) with systematic trend for octopole vibration in even Hg nuclei.
[b] From dσ/dΩ(θ) analysis ^{198}Hg(p,p′).
[c] Band(A): ground-state rotational band.
[d] Band(B): negative-parity bands.

Adopted Levels, Gammas (continued)

γ(^{198}Hg)

For unplaced γ's, see ^{198}Tl ε decay (5.3 h), ^{198}Tl ε decay (1.87 h) and ^{196}Pt(α,2nγ).

E_i(level)	J_i^π	E_γ[#]	I_γ[#e]	E_f	J_f^π	Mult.[‡]	δ[†g]	α[f]	$I_{(\gamma+ce)}$	Comments
411.80251	2+	411.80205[&] *17*	100[&]	0.0	0+	E2[&]		0.0439		B(E2)(W.u.)=28.8 *4*
1048.51	4+	636.7 *2*	100	411.80251	2+	E2		0.01540		B(E2)↓=43 *2* B(E2)(W.u.)=10.8 *5*
1087.6874	2+	675.8836[&] *7*	100.0[&] *6*	411.80251	2+	M1+E2[&]	+1.07[&] *14*	0.0267 *20*		B(M1)(W.u.)=0.00067 *10*; B(E2)(W.u.)=0.63 *8*
		1087.6842[&] *7*	19.7[&] *2*	0.0	0+	E2[&]		0.00512		B(E2)(W.u.)=0.0216 *4*
1401.52	0+	989.7 *3*	100	411.80251	2+	E2		0.00616		
		1401.7 *8*		0.0	0+	E0			1.4 *3*	
1419.41	3+	331.6 *2*	21 *3*	1087.6874	2+					
		370.8 *3*	10.7 *16*	1048.51	4+					
		1007.6 *3*	100 *10*	411.80251	2+	M1+E2	+1.1 *+5−3*	0.0100 *16*		δ: From ^{196}Pt(α,2nγ). Other: ≈+0.04 from ^{198}Tl ε decay (5.3 h).
1548.49	(1,2+)	1136.8 *3*	100 *9*	411.80251	2+					
		1548.4 *3*	29 *6*	0.0	0+					
1612.44	2+	564.0 *3*	3.2 *6*	1048.51	4+					
		1200.6 *2*	100 *10*	411.80251	2+	M1+E2	−0.26 *2*	0.00925 *14*		δ: From ^{198}Tl ε decay (5.3 h). Other: −0.25 *14* from ^{196}Pt(α,2nγ).
		1612.5 *3*	9.9 *5*	0.0	0+					
1635.67	5−	587.2[a] *2*	100	1048.51	4+	E1[a]		0.00638		B(E1)(W.u.)=1.6×10^{-5} *3* For B(E1)(W.u.) systematics in ^{194}Hg-^{200}Hg, see 1970To14.
1683.38	7−	47.74[b] *5*	100	1635.67	5−	E2[b]		171		B(E2)(W.u.)=28.1 *10* For comparable E2 transitions in ^{194}Hg-^{200}Hg, B(E2)(W.u.)=25-33 (1970To14).
1815.90	6+	767.3[a] *2*	100	1048.51	4+	E2[a]		0.01031		B(E2)(W.u.)=9.0 *8*
1832.60	2+	745.0 *8*	1.6 *7*	1087.6874	2+					
		1420.6 *3*	100 *11*	411.80251	2+	M1(+E2)	−0.18 *3*	0.00623 *10*		
		1832.6 *3*	53 *6*	0.0	0+					
1834.90	4+	747.2[@] *4*	32[@] *6*	1087.6874	2+	E2(+M3)	−0.07 *10*	0.012 *4*		
		786.2[@] *4*	68[@] *14*	1048.51	4+	M1+E2	−0.39 *23*	0.026 *3*		
		1423.0[@] *2*	100[@] *10*	411.80251	2+					
1847.21	3+	234.8 *2*	12.8 *19*	1612.44	2+					
		759.6 *3*	42 *4*	1087.6874	2+	M1+E2	−0.56 *16*	0.0260 *22*		
		798.7 *3*	30.6 *22*	1048.51	4+					
		1435.4 *3*	100 *13*	411.80251	2+	M1(+E2)	+0.15 *5*	0.00611 *10*		
1858.86	2+	771.2 *4*	3.6 *5*	1087.6874	2+					

$^{198}_{80}Hg_{118}$-5

Adopted Levels, Gammas (continued)

γ(^{198}Hg) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#e]	E_f	J_f^π	Mult.[‡]	δ[†g]	α[f]	Comments
1858.86	2^+	810.4 *4*	4.1 *8*	1048.51	4^+				
		1447.0 *3*	100 *10*	411.80251	2^+	M1(+E2)	−0.20 *5*	0.00595 *11*	
		1859.0 *10*	18.2 *26*	0.0	0^+				
1899.40	$1^+,2^+$	497.9 *3*	9.8 *20*	1401.52	0^+				
		1487.5 *5*	15 *7*	411.80251	2^+				
		1899.3 *3*	100 *10*	0.0	0^+				
1901.51	(2^+)	853.0 *4*	5.4 *12*	1048.51	4^+				
		1489.6 *3*	100 *12*	411.80251	2^+	(M1+E2)	−0.23 *8*	0.00552 *13*	
1909.7	6^-	226.2[b] *3*	100[b] *15*	1683.38	7^-	M1(+E2)[b]	0.5[b] *+3−4*	0.68 *10*	
		274.0[b] *3*	28[b] *4*	1635.67	5^-	M1+E2	−0.9 *+3−5*	0.32 *7*	
1910.8	9^-	227.5[a] *2*	100	1683.38	7^-	E2[a]		0.253	B(E2)(W.u.)=39 *7*
1928.61	3^-	1516.8[@] *2*	100[@]	411.80251	2^+				
1959.91	$0^+,1,2,3,4^+$	1548.1[@] *2*	100[@]	411.80251	2^+				
1971.00	$2^+,3,4^+$	884.0 *5*	10 *5*	1087.6874	2^+				
		922.7 *6*	21 *4*	1048.51	4^+				
		1559.0 *3*	100 *11*	411.80251	2^+				
2005.35	$0^+,1,2,3,4^+$	1593.6 *2*	100	411.80251	2^+				
2048.21	$0^+,1,2,3,4^+$	1636.4[@] *2*	100[@]	411.80251	2^+				
2059.1	6^-	149.3[b] *3*	14[b] *5*	1909.7	6^-				
		375.9[b] *6*	71[b] *15*	1683.38	7^-				
		423.3[b] *4*	100[b] *15*	1635.67	5^-	M1+E2	−1.78 *23*	0.065 *6*	
2070.8	$1^+,2^+$	1659.1 *3*	100	411.80251	2^+				
2090.76	$4^+,5^+$	274.7[@] *4*		1815.90	6^+				
		671.3[@] *2*		1419.41	3^+				
		1042.6[@] *4*		1048.51	4^+				
2109.8	$1,2^+$	1697.3 *10*	100 *15*	411.80251	2^+				
		2109.9 *5*	45 *10*	0.0	0^+				
2125.3	$6^-,7^-$	215.6[b] *3*	28[b] *5*	1909.7	6^-	M1(+E2)[b]	+0.4[b] *+3−4*	0.81 *12*	
		441.8[b] *3*	49[b] *7*	1683.38	7^-	M1[b]		0.1272	
		489.6[b] *3*	100[b] *10*	1635.67	5^-				
2132.6	$1^+,2^+$	1045.0 *10*	7.5 *24*	1087.6874	2^+				
		1720.8 *3*	100 *10*	411.80251	2^+				
2135.2	5^-	452.2[@] *2*		1683.38	7^-				
		499.1[@] *2*		1635.67	5^-				
2169.40	2^+	336.5 *4*	17 *7*	1832.60	2^+				
		621.0 *5*	17 *7*	1548.49	$(1,2^+)$				
		1121.1[h] *4*	<31[h]	1048.51	4^+				
		1758.6 *6*	100 *15*	411.80251	2^+				
		2168.7 *5*	34 *5*	0.0	0^+				

$^{198}_{80}Hg_{118}$-6

Adopted Levels, Gammas (continued)

γ(^{198}Hg) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#e]	E_f	J_f^π	Mult.[‡]	δ[†g]	α[f]	Comments
2177.6	1,2$^+$	318.9[hi] *4*	<6[h]	1858.86	2$^+$				
		758.0 *10*	40 *10*	1419.41	3$^+$				
		1090.3 *10*	67 *26*	1087.6874	2$^+$				
		1765.8 *3*	100 *10*	411.80251	2$^+$				
		2177.7 *8*	5.6 *22*	0.0	0$^+$				
2202.6	6$^-$,7$^-$	292.7[b] *5*	5.9[b] *22*	1909.7	6$^-$				
		519.2[b] *3*	100[b] *12*	1683.38	7$^-$	M1[b]		0.0830	
		567.0[b] *5*	5.9[b] *22*	1635.67	5$^-$				
2209.24	1,2$^+$	238.3 *2*	25 *5*	1971.00	2$^+$,3,4$^+$				
		350.6[hi] *4*	<8[h]	1858.86	2$^+$				
		376.8 *5*	20 *4*	1832.60	2$^+$				
		596.8 *2*	100 *11*	1612.44	2$^+$				
		789.6 *4*	49 *5*	1419.41	3$^+$				
		1121.1[hi] *4*	<14[h]	1087.6874	2$^+$				
		1797.4 *3*	50 *7*	411.80251	2$^+$				
		2209.2 *4*	41 *4*	0.0	0$^+$				
2219.4	0$^+$,1,2,3,4$^+$	1131.7 *3*	100	1087.6874	2$^+$				
2267.7	2$^+$	1219.2 *3*	100 *9*	1048.51	4$^+$				
		1856.0 *10*	44 *10*	411.80251	2$^+$				
		2267.0 *15*	2.6 *10*	0.0	0$^+$				
2277.22	1$^+$,2,3,4,5$^+$	857.8[@] *2*	100[@]	1419.41	3$^+$				
2287.26	1,2$^+$	1875.3 *3*	100 *10*	411.80251	2$^+$				
		2287.5 *10*	66 *16*	0.0	0$^+$				
2296.05	2$^+$,3,4,5,6$^+$	325.0[h] *4*	<22[h]	1971.00	2$^+$,3,4$^+$				
		437.2 *3*	45 *11*	1858.86	2$^+$				
		449.0 *3*	29 *11*	1847.21	3$^+$				
		461.0[@] *2*		1834.90	4$^+$				
		876.8 *3*	66 *8*	1419.41	3$^+$				
		1208.7 *10*	100 *24*	1087.6874	2$^+$				
		1884.5 *10*	13 *5*	411.80251	2$^+$				
2320.30	1,2$^+$	1232.6 *3*	100 *16*	1087.6874	2$^+$				
		1908.5 *4*	68 *11*	411.80251	2$^+$				
		2319.5[hi] *5*	<74[h]	0.0	0$^+$				
2331.56	4$^+$	911.7 *5*	28 *10*	1419.41	3$^+$				
		1244.0 *3*	100 *14*	1087.6874	2$^+$				
2337.55	8$^+$	521.6[a] *2*	100	1815.90	6$^+$	E2[a]		0.0243	B(E2)(W.u.)=2.6 *15*
2360.78	3$^+$	513.6 *3*	5.5 *12*	1847.21	3$^+$				
		525.9 *3*	6.9 *9*	1834.90	4$^+$				
		941.4 *3*	13.1 *12*	1419.41	3$^+$				
		1273.1 *4*	7.6 *9*	1087.6874	2$^+$				
		1312.2 *2*	100 *11*	1048.51	4$^+$	M1(+E2)	−0.09 *3*	0.00765	

$^{198}_{80}Hg_{118}$-7

Adopted Levels, Gammas (continued)

γ(^{198}Hg) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#e]	E_f	J_f^π	Mult.[‡]	δ[†g]	α[f]	Comments
2360.78	3+	1949.1 *5*	2.5 *5*	411.80251	2+	(M1+E2)	−0.19 *4*	0.00317	
2434.9	10+	97.3[a] *2*	≈32	2337.55	8+	E2[a]		6.22 *11*	B(E2)(W.u.)≈49
		524.1[a] *2*	100	1910.8	9−	(E1)[a]		0.00806	B(E1)(W.u.)=2.2×10^{-7} *8*
2451.89	(1,3)	318.9[hi] *4*	<0.7[h]	2132.6	1+,2+				
		550.2 *4*	1.2 *4*	1901.51	(2+)				
		1363.9 *4*	3.8 *5*	1087.6874	2+				
		2040.2 *2*	100 *10*	411.80251	2+	D+Q			δ=−0.035 *25* if J^π=1+; δ=−0.19 *4* if J^π=3+ in ^{198}Tl ε decay (5.3 h).
2465.44	2+	1045.5 *10*	74 *5*	1419.41	3+				
		1416.8 *10*	53 *23*	1048.51	4+				
		2053.7 *3*	28 *4*	411.80251	2+				
		2465.4 *3*	100 *11*	0.0	0+				
2466.9	11−	556.1[a] *2*	100	1910.8	9−	E2[a]		0.0209	
2486.08	1,2+	480.8 *2*	37 *4*	2005.35	0+,1,2,3,4+				
		1066.3 *4*	19 *3*	1419.41	3+				
		1398.0 *6*	7.0 *19*	1087.6874	2+				
		2074.3 *3*	51 *6*	411.80251	2+				
		2486.2 *3*	100 *10*	0.0	0+				
2515.9	4−,5,6,7,8−	390.4[b] *3*	100[b] *13*	2125.3	6−,7−				
		456.7[@] *4*		2059.1	6−				
		606.0[b] *10*	16[b] *6*	1909.7	6−				
		832.9[b] *4*	27[b] *5*	1683.38	7−				
2535.29	3−	1447.6[@] *2*	100[@]	1087.6874	2+				
2564.34	1,2+	664.5 *6*	25 *6*	1899.40	1+,2+				
		951.7[hi] *5*	<11[h]	1612.44	2+				
		1145.0 *3*	42 *6*	1419.41	3+				
		1476.5 *10*	46 *21*	1087.6874	2+				
		2152.6 *3*	100 *10*	411.80251	2+				
		2564.3 *3*	23 *6*	0.0	0+				
2578.1	12+	143.2[a] *2*	100	2434.9	10+	E2[a]		1.313	B(E2)(W.u.)=43.0 *14* α(K)=0.363 *6*; α(L)=0.711 *11*; α(M)=0.185 *3* α(N)=0.0460 *7*; α(O)=0.00768 *12*; α(P)=4.74×10^{-5} *7*
2602.45		1515.0 *4*	7.8 *12*	1087.6874	2+				
		2190.5 *3*	100 *10*	411.80251	2+				
2612.5	1,2+	325.0[h] *4*	<42[h]	2287.26	1,2+				
		2612.6 *3*	100 *10*	0.0	0+				
2644.2	2+,3,4+	1595.6 *10*	100 *31*	1048.51	4+				
		2232.5 *8*	19 *6*	411.80251	2+				
2655.9	1−,2,3,4,5−	727.3[@] *2*	100[@]	1928.61	3−				
2694.8	1,2+	2283.0 *10*	100 *22*	411.80251	2+				
		2694.8 *8*	8.2 *16*	0.0	0+				

$^{198}_{80}Hg_{118}$-8

Adopted Levels, Gammas (continued)

γ(^{198}Hg) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#e]	E_f	J_f^π	Mult.[‡]	α[f]	Comments
2731.2	2+,3,4+	898.5 *4*	21 *10*	1832.60	2+			
		1643.5 *4*	100 *14*	1087.6874	2+			
		1682.5 *15*	16 *7*	1048.51	4+			
		2319.5[h] *5*	<49[h]	411.80251	2+			
2756?	(8+)	940.4[ci]	100	1815.90	6+	[E2][d]	0.00681	B(E2)(W.u.)=6.2 *18*
2782.76	2+	712.1 *4*	13 *5*	2070.8	1+,2+			
		1734.0 *5*	18 *4*	1048.51	4+			
		2370.9 *3*	100 *10*	411.80251	2+			
		2782.8 *4*	82 *8*	0.0	0+			
2816.1	1,2+	350.6[hi] *4*	<100[h]	2465.44	2+			
		2404.5[i] *15*	18 *8*	411.80251	2+			
		2816.1 *8*	53 *10*	0.0	0+			
2825.5	1,2+	2413.7 *3*	100 *10*	411.80251	2+			
		2825.6 *5*	35 *5*	0.0	0+			
2835.49	1,2+	503.9 *3*	40 *15*	2331.56	4+			
		2423.7 *3*	100 *15*	411.80251	2+			
		2835.5 *8*	10.0 *25*	0.0	0+			
2845.1	1,2+	2433.8 *5*	100 *20*	411.80251	2+			
		2844.3 *6*	74 *11*	0.0	0+			
2861.6	1,2+	2449.9 *8*	100 *21*	411.80251	2+			
		2861.5 *8*	70 *15*	0.0	0+			
2868.8	1,2+	2457.0 *8*	100 *17*	411.80251	2+			
		2868.8 *8*	41 *8*	0.0	0+			
2894.3	1,2+	1475.0 *10*	100 *50*	1419.41	3+			
		2894.2 *8*	23 *3*	0.0	0+			
2926.0	14+	347.9[a] *2*	100	2578.1	12+	E2[a]	0.0694	B(E2)(W.u.)>13
2954.6	1,2+	2542.7 *8*	100 *21*	411.80251	2+			
		2954.8 *10*	24 *10*	0.0	0+			
2975.9	1,2+	1074.0[i] *10*	50 *19*	1901.51	(2+)			
		2564.0 *10*	100 *38*	411.80251	2+			
		2975.9 *8*	36 *6*	0.0	0+			
2986.8	1,2+	2986.8 *8*	100	0.0	0+			
3013.2		1925.3 *5*	31 *7*	1087.6874	2+			
		2601.4 *3*	100 *10*	411.80251	2+			
3022.1	1,2+	951.7[hi] *5*	100[h] *38*	2070.8	1+,2+			
		3022.1 *10*	<34	0.0	0+			
3095.7	1,2+	3095.7 *10*	100	0.0	0+			
3128.0	1,2+	2716.0 *8*	100 *21*	411.80251	2+			
		3128.2 *10*	47 *12*	0.0	0+			
3164.7	1,2+	2753.0 *10*	100 *21*	411.80251	2+			
		3164.6 *7*	100 *17*	0.0	0+			
3325.5	13−	858.6[a] *2*	100	2466.9	11−	E2[a]	0.00818	

$^{198}_{80}Hg_{118}$-9

Adopted Levels, Gammas (continued)

γ(^{198}Hg) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#e]	E_f	J_f^π	Mult.[‡]	α[f]
3486.0	16^+	560.0[a] 2	100	2926.0	14^+	E2[a]	0.0206
4262.5	18^+	776.5[a] 2	100	3486.0	16^+	E2[a]	0.01006
4302.2?	(15^-)	976.7[a] 5	100	3325.5	13^-		
4635.7	(17^-)	333.5[a] 5	100	4302.2?	(15^-)		
5284.3	(20^+)	1021.8[a] 5	100	4262.5	18^+		

† From γγ(θ) measurements in ^{198}Tl ε decay (5.3 h) or ^{196}Pt(α,2nγ), except as noted.
‡ From α(K)exp measurements in ^{198}Tl ε decay (5.3 h) or γγ(θ) measurements in ^{196}Pt(α,2nγ), except as noted.
# From ^{198}Tl ε decay (5.3 h), except as noted.
@ From ^{196}Pt(α,2nγ).
& From ^{198}Au β^- decay (2.6941 d).
a From ^{198}Pt(α,4nγ).
b From ^{198}Tl ε decay (1.87 h).
c From Coulomb excitation.
d Assumed by evaluator on the basis of ΔJ^π between transition levels.
e Relative photon branching from each level.
f Additional information 1.
g If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
h Multiply placed with undivided intensity.
i Placement of transition in the level scheme is uncertain.

$^{198}_{80}Hg_{118}$-10

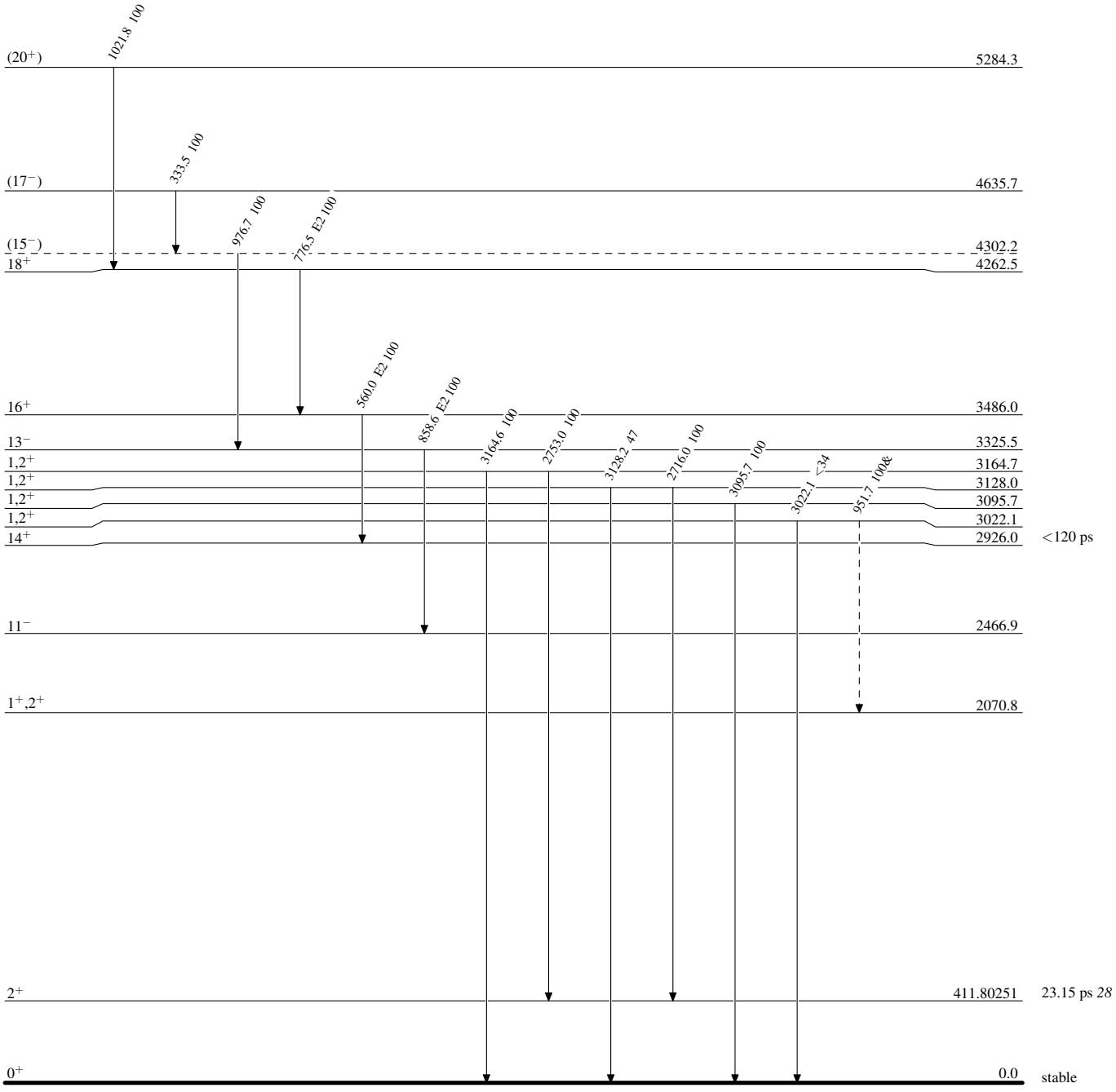
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)



$^{198}_{80}Hg_{118}$

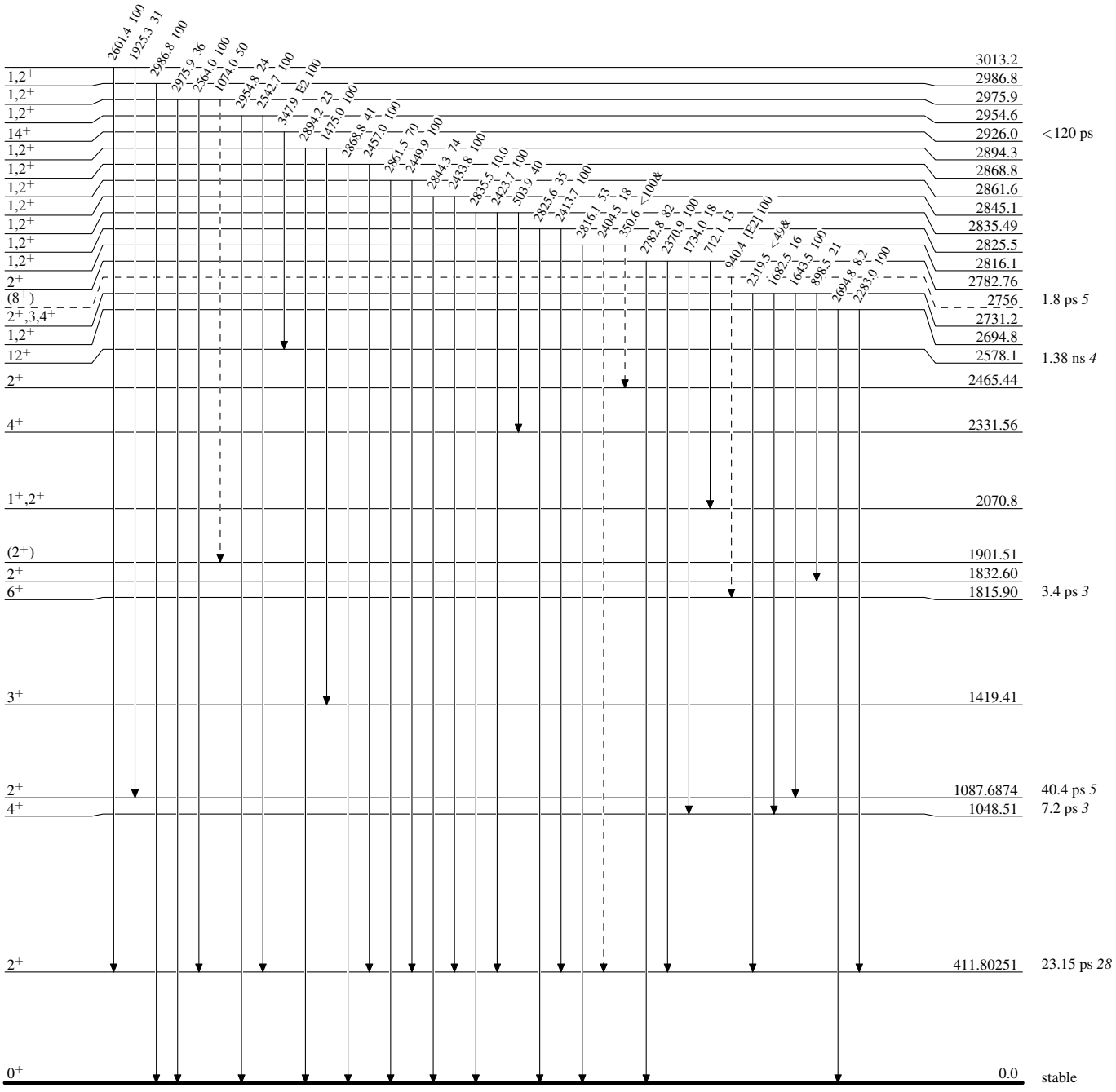
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)



$^{198}_{80}Hg_{118}$

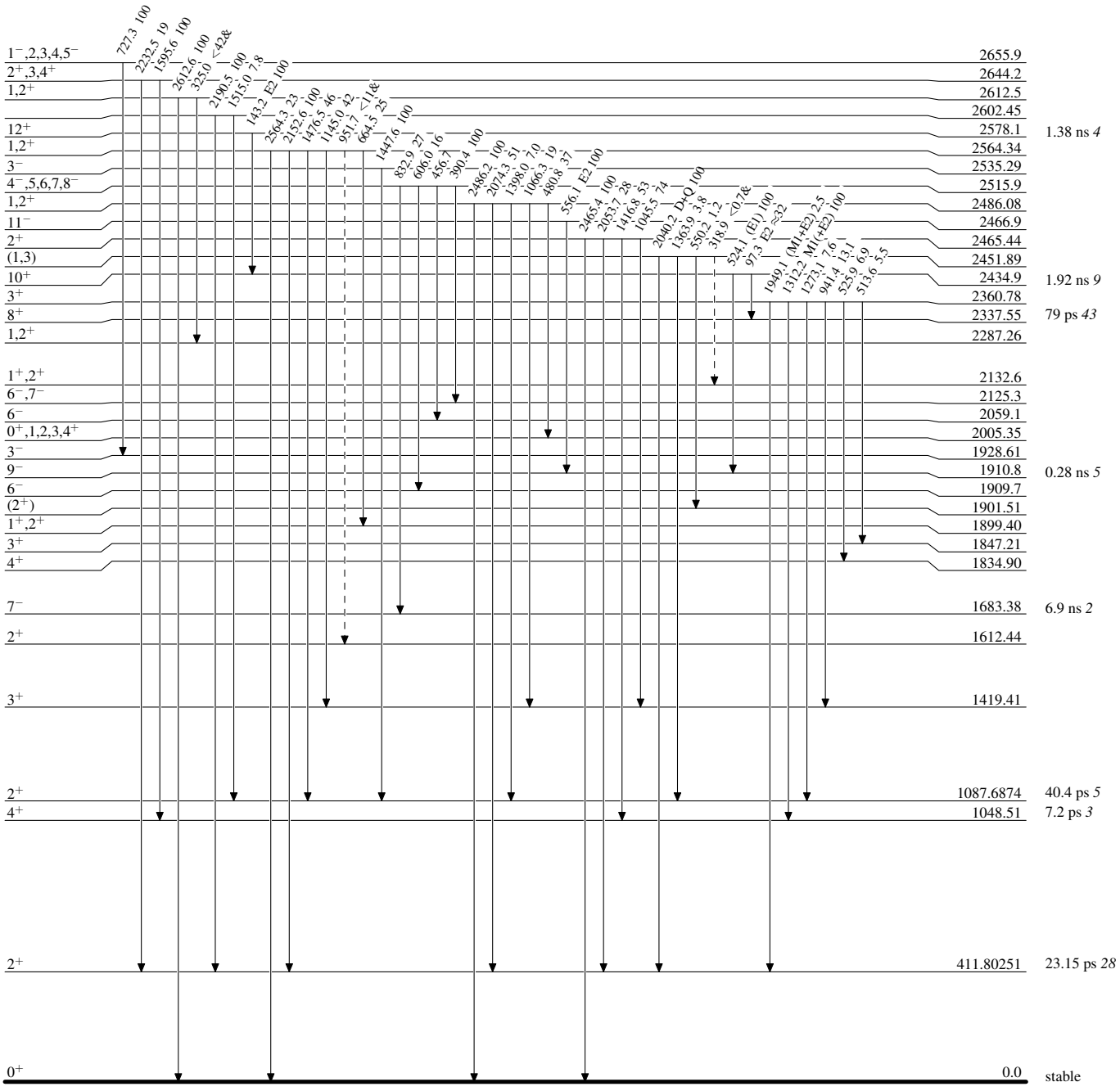
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)



$^{198}_{80}Hg_{118}$

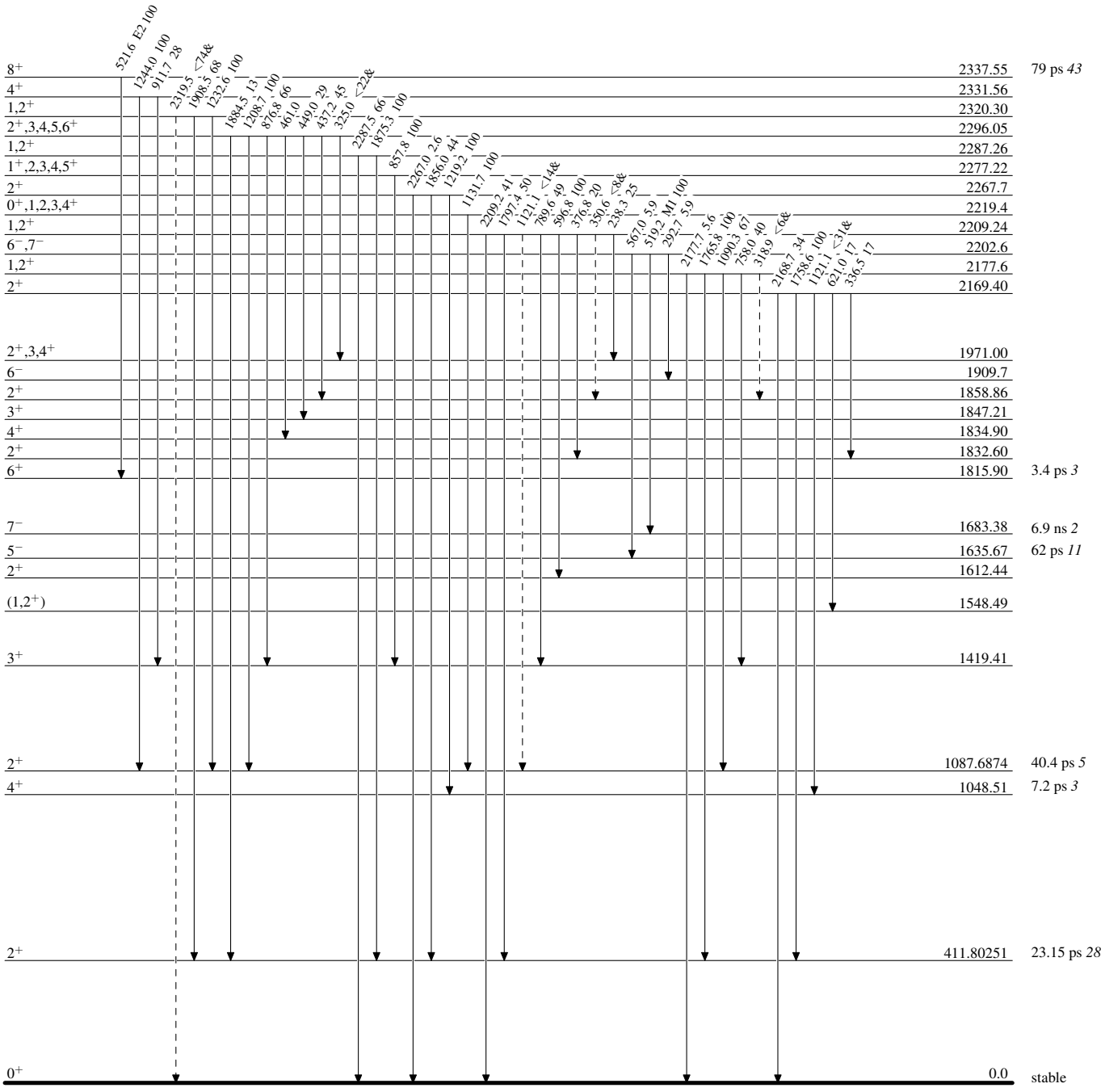
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)

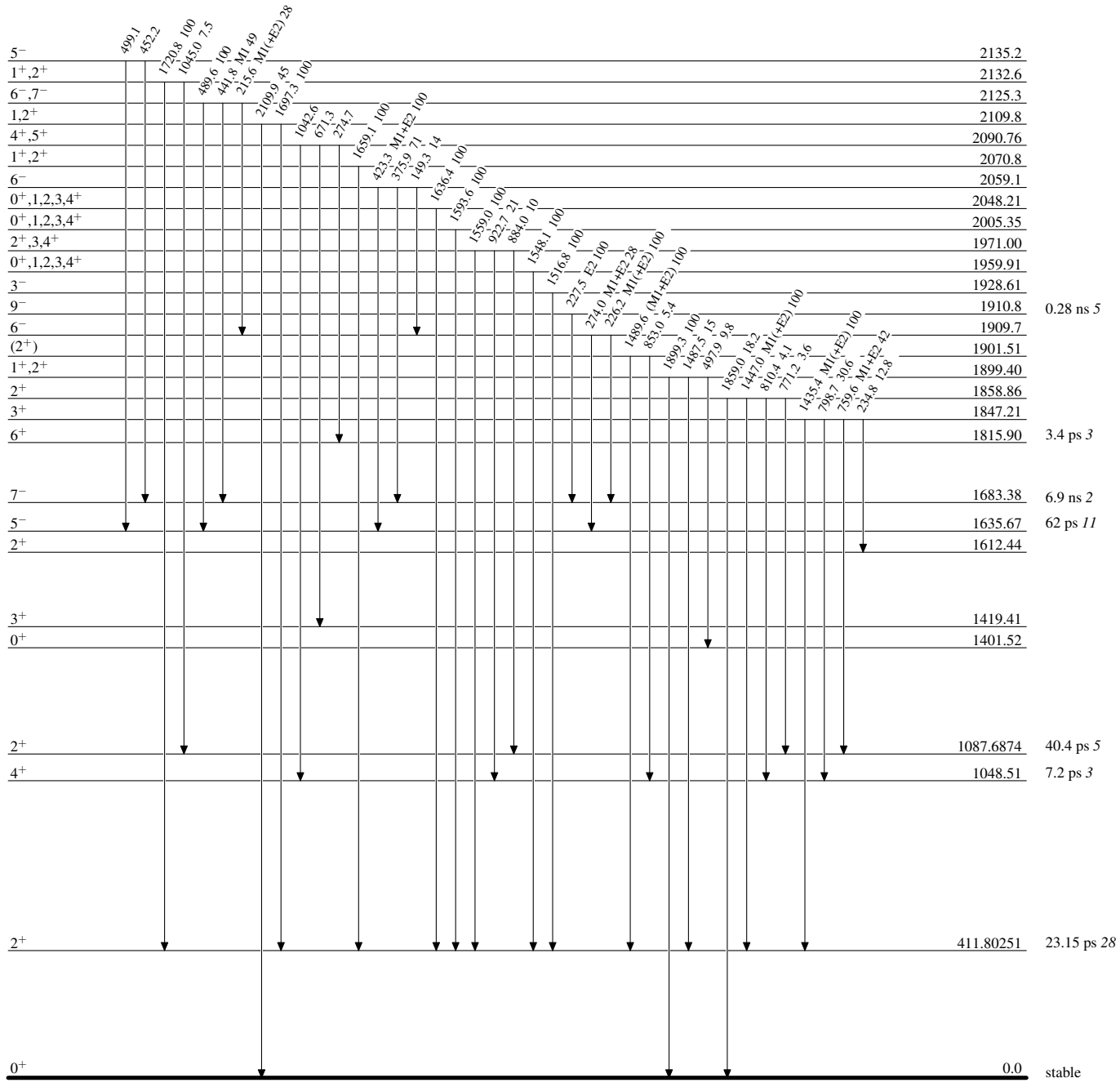


$^{198}_{80}Hg_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

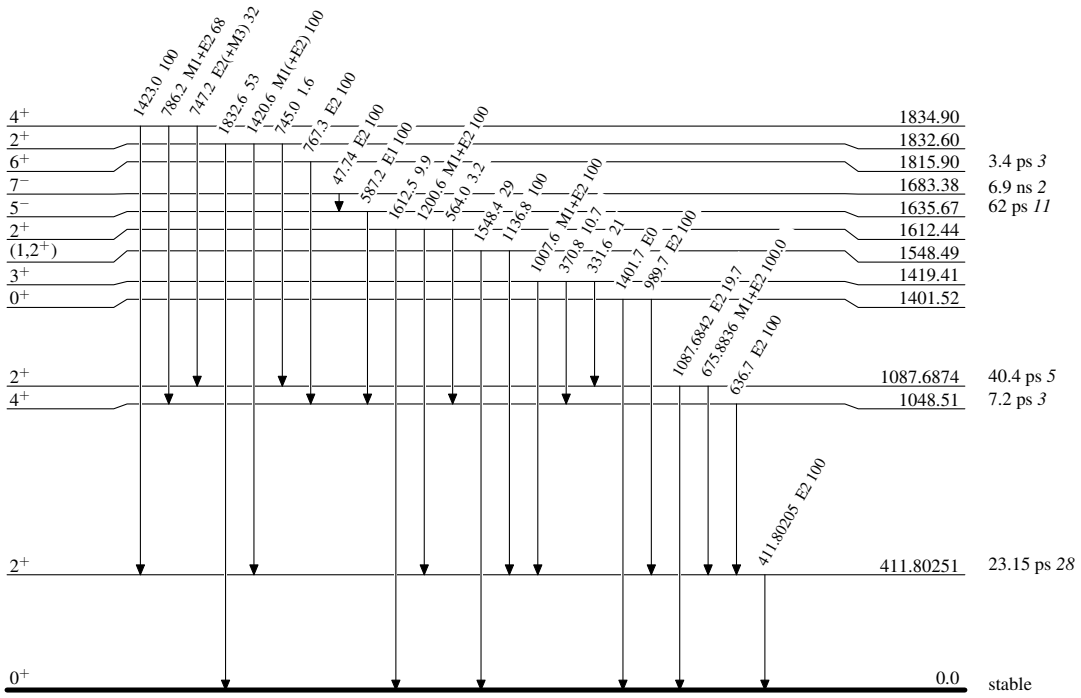


$^{198}_{80}Hg_{118}$

Adopted Levels, Gammas

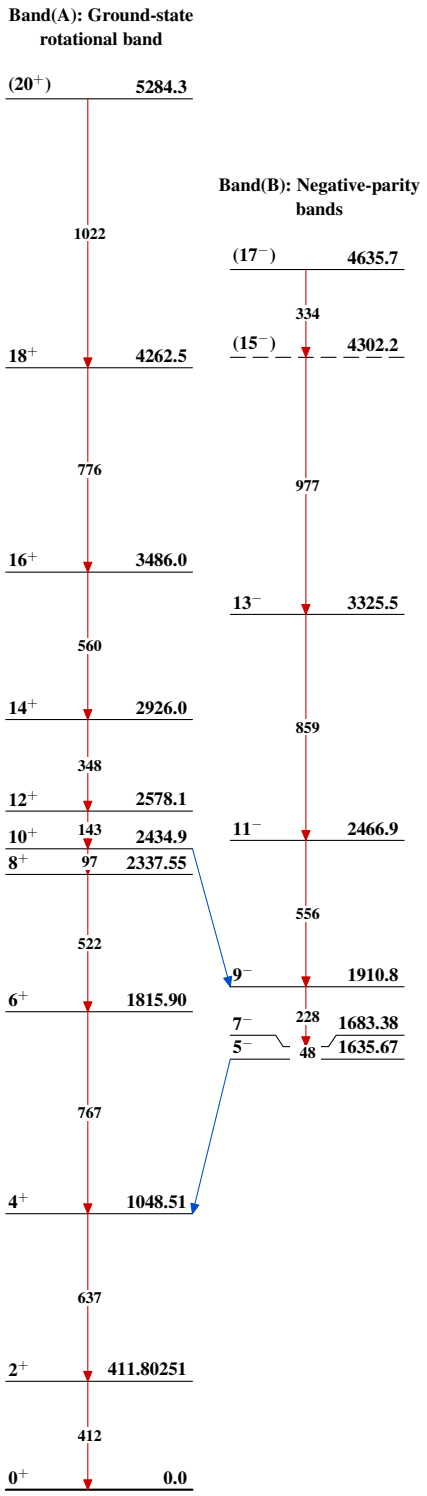
Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



$^{198}_{80}Hg_{118}$

Adopted Levels, Gammas



$^{198}_{80}Hg_{118}$