Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Achterberg, O. A. Capurro, G. V. Marti	NDS 110,1473 (2009)	31-May-2008

Q(β^-)=−1.152×10^4 *syst*; S(n)=1.160×10^4 *8*; S(p)=2060 *15*; Q(α)=6577 *3* 2012Wa38
Note: Current evaluation has used the following Q record −11560 syst 11610 *80* 2056 18 *6577* 5 2003Au03.
ΔQ(β)(est)=110 keV (2003Au03).
Q(β^+)=6010 *60* keV (2003Au03).
Theory references:
1972Fa11, calculation of deformation energy surfaces.
1987Be06, shape coexistence studies, PES calculations.
1993Na05, low-spin shape coexistence, reflection asymmetric WS model.
1994Pa29,1994Yo05,1996He02,1996Ta01, discussion of applicability of relativistic mean-field approach in studies of nuclear shapes, binding energies, deformation parameters.

^{178}Hg Levels

Level scheme based on α-γ correlations, $\gamma\gamma$ coincidences, and intensity balances (2000Ko48,2000Ko01,1997Ca16).

Cross Reference (XREF) Flags

A ^{182}Pb α decay
B (HI,xnγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[#]	0$^+$	266.5 ms *24*	AB	%ε+%β^+≈30; %α≈70 This level decays to the ^{174}Pt g.s. by an unhindered α transition, with Eα=6429 *3* keV, weighted average of 6425 *15* keV (1971Ha03), 6425 *15* keV (1976HoZD), 6430 *6* keV (1979Ha10), 6428 *9* keV (1996Pa01), 6429 *4* keV (2000Ko01), 6429 *5* keV (2004GoZZ). T$_{1/2}$: Average from 0.283 *23* (2004GoZZ), 0.269 *3* (2002Ro17), 0.262 *4* (2000Ko01), 0.287 *23* (1996Pa01), 0.250 *25* (1991Se01), 0.26 *3* (1979Ha10), 0.26 *3* (1976HoZD). J$^\pi$: g.s. of even-even nucleus. %α: ≈60 to ≈80 from systematics, based on b$_\alpha$≈84% (1971Ha03), and b$_\alpha$≈50% (1979Ha10). The quoted value is consistent with calculations in 1998Ak04, which yield 70<%α≤100.
558.00[#] *20*	2$^+$		B	
1012.4[#] *3*	4$^+$		B	
1346.9[#] *4*	6$^+$		B	
1357.8 *6*	(3$^-$)		B	
1447.2 *6*	3$^-$		B	
1743.5[#] *5*	8$^+$		B	
1851.4 *8*	(4$^-$)		B	
1990.2 *5*	5$^-$		B	
2157.0 *8*	(5$^-$)		B	
2201.2[#] *7*	10$^+$		B	
2215.3 *8*	(6$^-$)		B	
2388.6[@] *6*	7$^-$		B	Band head for negative-parity band 2.
2711.6[#] *8*	12$^+$		B	
2730.0[@] *7*	9$^-$		B	
3117.7[@] *8*	11$^-$		B	

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Adopted Levels, Gammas (continued)

^{178}Hg Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
3265.2[#] 9	14+	B	3980.4[@] 12	(15−)	B	4971.9[@] 17	(19−)	B
3539.1[@] 10	13−	B	4454.4[@] 14	(17−)	B	5090.3[#] 16	(20+)	B
3853.8[#] 11	16+	B	4469.3[#] 14	(18+)	B	5534.5[@] 18	(21−)	B

† The level energies are from a least-squares adjustment to the adopted γ-ray energies.
‡ From (HI,xnγ).
# Band(A): π=+ gs band. Prolate deformed yrast sequence. Levels connected by stretched E2 transitions (2000Ko48,2000Ko01,1999Ca16).
@ Band(B): π=+ band. Interpreted as an octupole−vibration based rotational band with levels connected by stretched E2 transitions (200Ko48,2000Ko01).

γ(^{178}Hg)

For relative γ-ray intensities, see (HI,xnγ) dataset.

E_i(level)	J^π_i	E_γ†	I_γ	E_f	J^π_f	Mult.#	α‡
558.00	2+	558.0[@] 2		0.0	0+	E2	0.0208
1012.4	4+	454.4[@] 2		558.00	2+	E2	0.0341
1346.9	6+	334.5[@] 2		1012.4	4+	E2	0.0775
1357.8	(3−)	799.7 6		558.00	2+	(E1)	0.00348
1447.2	3−	889.1 6		558.00	2+	E1	0.00286
1743.5	8+	396.6[@] 4		1346.9	6+	E2	0.0485
1851.4	(4−)	839.0 8		1012.4	4+	(E1)	0.00318
1990.2	5−	542.8 8	31 9	1447.2	3−	E2	0.0221
		632.2 8	59 10	1357.8	(3−)	E2	0.01564
		644.0[a] 8	<15	1346.9	6+	(E1)	0.00530
		978.2 6	100	1012.4	4+	E1	0.00240
2157.0	(5−)	799.1 8		1357.8	(3−)	(E2)	0.00947
2201.2	10+	457.7[@] 4		1743.5	8+	E2	0.0335
2215.3	(6−)	363.9 8	100 5	1851.4	(4−)	(E2)	0.0612 10
		868.4 8	<50	1346.9	6+	(E1)	0.00298
2388.6	7−	231.5 8	15 4	2157.0	(5−)	(E2)	0.239 5
		398.4 4	100	1990.2	5−	E2	0.0479
		644.9 8	17 4	1743.5	8+	E1	0.00529
		1041.0[a] 8	<7	1346.9	6+	(E1)	0.00214
2711.6	12+	510.4[@] 4		2201.2	10+	E2	0.0256
2730.0	9−	341.4[&] 4		2388.6	7−	E2	0.0732
3117.7	11−	387.7[&] 4		2730.0	9−	E2	0.0515
3265.2	14+	553.6[@] 4		2711.6	12+	E2	0.0211
3539.1	13−	421.4[&] 6		3117.7	11−	E2	0.0414
3853.8	16+	588.6[@] 6		3265.2	14+	E2	0.0184
3980.4	(15−)	441.3[&] 6		3539.1	13−	(E2)	0.0367
4454.4	(17−)	474.0[&] 8		3980.4	(15−)	(E2)	0.0307
4469.3	(18+)	615.5[@] 8		3853.8	16+	(E2)	0.01660
4971.9	(19−)	517.5[&] 8		4454.4	(17−)	(E2)	0.0248

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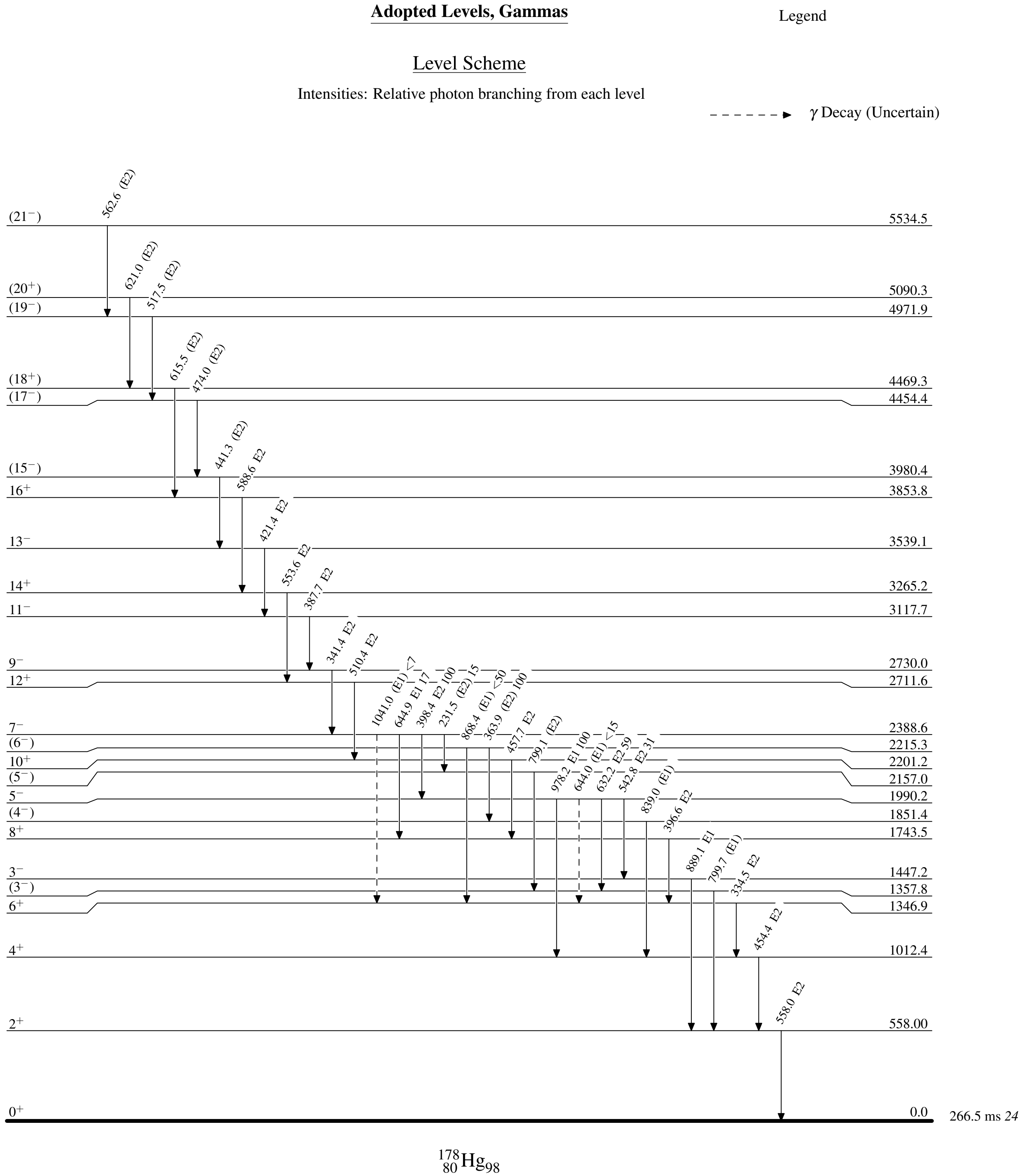
Adopted Levels, Gammas (continued)

$\gamma(^{178}Hg)$ (continued)

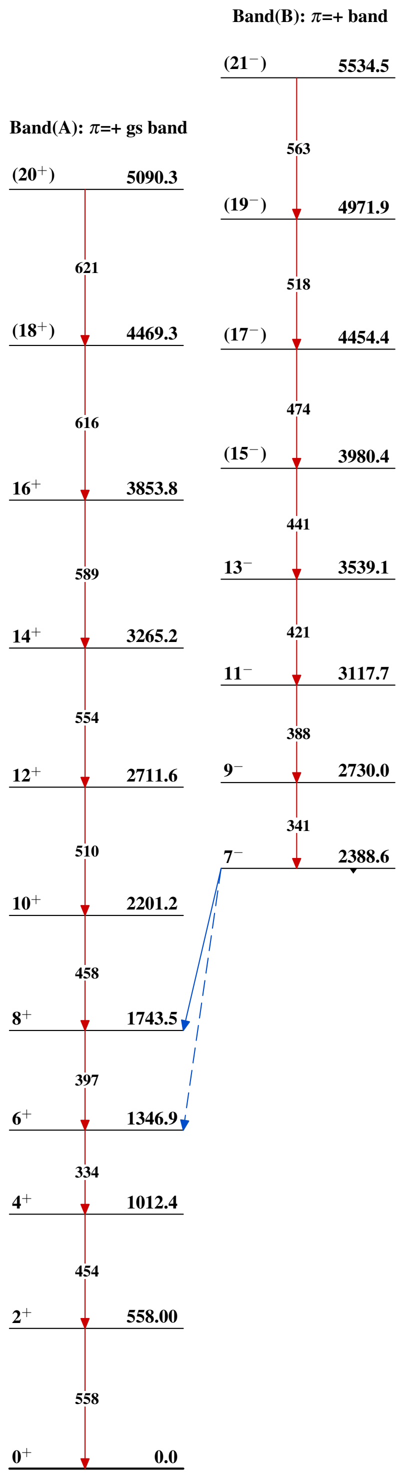
E_i(level)	J^π_i	E_γ [†]	E_f	J^π_f	Mult. [#]	α [‡]
5090.3	(20+)	621.0[@] *8*	4469.3	(18+)	(E2)	0.01627
5534.5	(21−)	562.6[&] *8*	4971.9	(19−)	(E2)	0.0204

[†] From (HI,xnγ). Energy uncertainties estimated by the evaluators, based on the range assumed in 2000Ko48, each depending on its experimental γ-ray intensity.
[‡] Theoretical total internal conversion coefficient for the assumed multipolarity.
[#] Multipolarities from measured angular distributions and directional correlations (2000Ko48,1997Ca16) (see (HI,xnγ) dataset).
[@] Connects levels in g.s. Band 1.
[&] Connects levels in Band 2.
[a] Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas



Adopted Levels, Gammas



$^{178}_{80}Hg_{98}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 126, 151 (2015)	1-Feb-2015

Q(β^-)=−10990 *60*; S(n)=11400 *30*; S(p)=2551 *17*; Q(α)=6258.4 *24* 2012Wa38
S(2n)=20077 *17*; S(2p)=2831 *16*; Q(εp)=4729 *15* (2012Wa38).
α: Additional information 1.

^{180}Hg Levels

Cross Reference (XREF) Flags

A	^{180}Tl ε decay (1.09 s)	E	^{144}Sm(^{39}K,p2nγ)
B	^{184}Pb α decay (490 ms)	F	^{147}Sm(^{36}Ar,3nγ)
C	^{92}Zr(^{90}Zr,2nγ)	G	^{90}Zr(^{90}Zr,γ)
D	^{94}Mo(^{88}Sr,2nγ)		

E(level)[†]	J$^\pi$	T$_{1/2}$[&]	XREF	Comments
0.0[‡]	0$^+$	2.59 s *1*	ABCDEF	%ε+%β^+=52 *2*; %α=48 *2* T$_{1/2}$: weighted average of 2.60 s *1* (2013KoZR), 2.59 s *2* (2000Ko48), 2.6 s *8* (1996Pa01), 2.56 s *2* (1993Wa03), 2.6 s *3* (1986Si19), 3.0 s *3* (1977Hu05), and 2.9 s *3* (1970Hu18). Other: 5.9 s *8* (1968De01). %α: weighted average of 48 *2* (1999To11), 47 *5* (1986Si19), and 49 *5* (1982HeZM).
419.8 *4*	0$^+$		A F	J$^\pi$: E0 420 transition to 0$^+$.
434.24[‡] *11*	2$^+$	12 ps *2*	A CDEF	J$^\pi$: E2 434γ to 0$^+$, band member. T$_{1/2}$: from range of 10 ps<T$_{1/2}$<14 ps in ^{94}Mo(^{88}Sr,2nγ).
601.60 *13*	2$^+$		A F	J$^\pi$: large E0 component in 167γ to 2$^+$. E(level): The relative order of the 602γ-797γ cascade is reversed in ^{92}Zr(^{90}Zr,2nγ) giving a level at 797.2 rather than at 601.6. The evaluator adopts the ε decay ordering since Iγ(602γ)>Iγ(797γ) in that decay. The Iγ data from ^{92}Zr(^{90}Zr,2nγ) are consistent with this order.
706.27[‡] *14*	4$^+$	19.5 ps *8*	A CDEF	J$^\pi$: E2 272γ to 2$^+$, band member.
1032.21[‡] *17*	6$^+$	8.8 ps *4*	A CDEF	J$^\pi$: E2 326γ to 4$^+$, band member.
1091.5 *4*	(2$^+$,1)		A	J$^\pi$: 672γ to 0$^+$; systematics and non observation of a transition to the g.s. favor J^π=2$^+$.
1175.6 *10*			C	
1204.00 *20*			A	
1223.77 *15*	(3$^-$,4$^+$)		A	J$^\pi$: 622γ to 2$^+$, 573γ from 5$^{(-)}$.
1399.38 *16*	(3$^-$)		A C	J$^\pi$: 798γ to 2$^+$, E2 398γ from 5$^{(-)}$.
1437.2[‡] *6*	8$^+$	2.29 ps *21*	CDEF	J$^\pi$: E2 404.5γ to 6$^+$, band member.
1468.79 *15*	(3$^-$,4$^+$)		A	J$^\pi$: 1035γ to 2$^+$, 329γ from 5$^{(-)}$.
1504.34 *22*	(6$^+$)		A C	J$^\pi$: (E2) 798γ to 4$^+$.
1663.1 *5*			A	
1797.48[#] *16*	5$^{(-)}$		A CD	J$^\pi$: ΔJ=1, D 765γ to 6$^+$, ΔJ=1, D 1091γ to 4$^+$; π=− is suggested by 2000Ko48 based on decay pattern and theoretical comparisons.
1840.5 *5*			A	
1869.3 *4*			C	
1914.0[‡] *6*	10$^+$		CDEF	J$^\pi$: E2 477γ to 8$^+$, band member.
2022.10 *17*			A	
2041.89[#] *25*	7$^{(-)}$		CD	J$^\pi$: E2 244γ to 5$^{(-)}$, D 605γ to 8$^+$, band member.
2057.3 *7*	(6$^+$)		C	J$^\pi$: (E2) 620γ to 8$^+$, population intensity.
2068.7[@] *5*	(6)		C	J$^\pi$: ΔJ=0, D+Q 1036γ to 6$^+$.
2322.9 *5*	(8$^+$)		C	J$^\pi$: E2 819γ to (6$^+$).

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Adopted Levels, Gammas (continued)

^{180}Hg Levels (continued)

E(level)†	J$^\pi$	T$_{1/2}$&	XREF	Comments
2348.74 *16*	(4,5$^-$)		A	J$^\pi$: 551γ to 5$^{(-)}$, 949γ to (3$^-$), direct ε+β^+ feeding from (5$^-$) parent.
2359.1# *3*	9$^{(-)}$	7.1 ps *8*	CD	J$^\pi$: E2 317γ to 7$^{(-)}$, band member.
2368.8 *9*			C	
2371.5@ *4*	(8)		C	J$^\pi$: E2 302γ to (6), band member.
2456.3‡ *6*	12$^+$		C E	J$^\pi$: E2 542γ to 10$^+$, band member.
2487.76 *24*			A	
2524.0 *8*	(8$^+$)		C	J$^\pi$: 466γ to (6$^+$), 610γ to 10$^+$.
2741.3@ *6*	(10)		C	J$^\pi$: E2 370γ to (8), band member.
2748.8# *4*	11$^{(-)}$		CD	J$^\pi$: E2 390γ to 9$^{(-)}$, band member.
3041.2 *12*	(10$^+$)		C	J$^\pi$: 517γ to (8$^+$).
3055.7‡ *6*	14$^+$		C E	J$^\pi$: E2 599γ to 12$^+$, band member.
3161.6@ *7*	(12)		C	J$^\pi$: E2 420γ to (10), band member.
3199.6# *11*	13$^{(-)}$		C	J$^\pi$: E2 451γ to 11$^{(-)}$, band member.
3616.5@ *8*	(14)		C	J$^\pi$: E2 455γ to (12), band member.
3688.6# *11*	15$^{(-)}$		C	J$^\pi$: E2 489γ to 13$^{(-)}$, band member.
3704.5‡ *7*	16$^+$		C E	J$^\pi$: E2 645γ to 14$^+$, band member.
4106.5@ *11*	(16)		C	J$^\pi$: 490γ to (14), band member.
4194.7# *12*	17$^{(-)}$		C	J$^\pi$: E2 506γ to 15$^{(-)}$, band member.
4388.5‡ *8*	18$^+$		C	J$^\pi$: E2 684γ to 16$^+$, band member.
4627.4?@ *14*	(18)		C	J$^\pi$: 521γ to (16), band member.
4733.9# *14*	(19$^-$)		C	J$^\pi$: 539γ to 17$^{(-)}$, band member.
5091.5‡ *12*	(20$^+$)		C	J$^\pi$: 703γ to 18$^+$, band member.
5309.6?# *17*	(21$^-$)		C	J$^\pi$: 576γ to (19$^-$), band member.
5803.4?‡ *14*	(22$^+$)		C	J$^\pi$: 712γ to (20$^+$), band member.

† From a least squares fit to Eγ by evaluator.
‡ Band(A): g.s. band.
# Band(B): 5$^{(-)}$ band.
@ Band(C): (6) band.
& From Recoil Distance Doppler-Shift measurements in ^{94}Mo(^{88}Sr,2nγ).

$\gamma(^{180}Hg)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	$I_{(\gamma+ce)}$	Comments
419.8	0^+	420 *3*		0.0	0^+	E0[#]		100	Mult.: K/L=5.8 *25* (2011Pa24).
434.24	2^+	434.24[@] *12*	100	0.0	0^+	E2[#]	0.0383		α(K)=0.0266 *4*; α(L)=0.00885 *13*; α(M)=0.00220 *3*; α(N)=0.000547 *8*; α(O)=9.66×10^{-5} *14* α(P)=3.51×10^{-6} *5* B(E2)(W.u.)=49 *9* Mult.: K/L=3.0 *8* (2011Pa24).
601.60	2^+	167.0[&] *2*	13.6[&] *8*	434.24	2^+	E0(+M1,E2)[#]	3.5 *4*		α(K)=0.9 *7*; α(L)=0.31 *6*; α(M)=0.076 *18*; α(N)=0.019 *5*; α(O)=0.0034 *6*; α(P)=0.00012 *9* α: deduced from I(γ+ce) in ^{180}Tl ε decay (1.09 s). Mult.: K/L=6.6 *20* (2011Pa24).
		181.8[&] *5*	0.66[&] *4*	419.8	0^+	[E2]	0.545 *10*		α(K)=0.213 *4*; α(L)=0.249 *5*; α(M)=0.0646 *12*; α(N)=0.0160 *3*; α(O)=0.00270 *5* α(P)=2.66×10^{-5} *5*
		601.6[&] *2*	100[&] *5*	0.0	0^+	[E2]	0.01748		α(K)=0.01317 *19*; α(L)=0.00328 *5*; α(M)=0.000796 *12*; α(N)=0.000199 *3*; α(O)=3.58×10^{-5} *5* α(P)=1.748×10^{-6} *25*
706.27	4^+	104.7[&] *5*	2.6[&] *7*	601.60	2^+	[E2]	4.57 *12*		α(K)=0.597 *9*; α(L)=2.97 *8*; α(M)=0.778 *21*; α(N)=0.193 *6*; α(O)=0.0320 *9* α(P)=0.0001041 *20* B(E2)(W.u.)=7.7×10^{2} *22* I_γ: calculated in ^{180}Tl ε decay from relative branching of 105γ and 272γ and conversion coefficient. Iγ leads to rather large B(E2) strength.
		272.32[@] *16*	100[&] *6*	434.24	2^+	E2[#]	0.1427		α(K)=0.0798 *12*; α(L)=0.0474 *7*; α(M)=0.01208 *18*; α(N)=0.00300 *5*; α(O)=0.000515 *8* α(P)=1.018×10^{-5} *15* B(E2)(W.u.)=249 *24* Mult.: K/L=2.0 *3* (2011Pa24).
1032.21	6^+	325.96[@] *9*	100	706.27	4^+	E2[#]	0.0835		α(K)=0.0517 *8*; α(L)=0.0240 *4*; α(M)=0.00606 *9*; α(N)=0.001508 *22*; α(O)=0.000261 *4* α(P)=6.70×10^{-6} *10* B(E2)(W.u.)=267 *13* Mult.: K/L=2.5 *4* (2011Pa24).
1091.5	$(2^+,1)$	657.3[&] *5*	100[&] *20*	434.24	2^+				
		671.6[&] *5*	79[&] *4*	419.8	0^+				
1175.6		741.4 *8*	100	434.24	2^+				
1204.00		498.1[&] *5*	37[&] *6*	706.27	4^+				
		602.4[&] *5*	43[&] *6*	601.60	2^+				
		769.7[&] *2*	100[&] *6*	434.24	2^+				

$^{180}_{80}Hg_{100}$-3

Adopted Levels, Gammas (continued)

$\gamma(^{180}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
1223.77	$(3^-,4^+)$	517.4[&] *2*	18.4[&] *22*	706.27	4^+			
		622.0[&] *2*	100[&] *5*	601.60	2^+			
		789.4[&] *2*	56[&] *6*	434.24	2^+			
1399.38	(3^-)	692.9[@] *2*	53[&] *4*	706.27	4^+	[E1]	0.00459	α(K)=0.00383 *6*; α(L)=0.000587 *9*; α(M)=0.0001349 *19*; α(N)=3.37×10^{-5} *5*; α(O)=6.30×10^{-6} *9* α(P)=4.58×10^{-7} *7*
		797.7[&] *2*	100[&] *40*	601.60	2^+	[E1]	0.00350	α(K)=0.00292 *4*; α(L)=0.000444 *7*; α(M)=0.0001019 *15*; α(N)=2.54×10^{-5} *4*; α(O)=4.77×10^{-6} *7* α(P)=3.52×10^{-7} *5*
1437.2	8^+	404.5 *1*	100	1032.21	6^+	E2	0.0460	α(K)=0.0312 *5*; α(L)=0.01121 *16*; α(M)=0.00279 *4*; α(N)=0.000696 *10*; α(O)=0.0001223 *18* α(P)=4.11×10^{-6} *6* B(E2)(W.u.)=3.6×10^{2} *4*
1468.79	$(3^-,4^+)$	867.1[&] *2*	25 *3*	601.60	2^+			
		1034.6[&] *2*	100 *11*	434.24	2^+			
1504.34	(6^+)	472.5[&] *5*	22[&] *4*	1032.21	6^+			
		797.98[@] *18*	100[&] *40*	706.27	4^+	(E2)	0.00950	α(K)=0.00747 *11*; α(L)=0.001551 *22*; α(M)=0.000370 *6*; α(N)=9.25×10^{-5} *13* α(O)=1.695×10^{-5} *24*; α(P)=9.87×10^{-7} *14*
1663.1		1228.9[&] *5*	100	434.24	2^+			
1797.48	$5^{(-)}$	328.6[&] *2*	90[&] *60*	1468.79	$(3^-,4^+)$			
		398.24[@] *18*	100[&] *7*	1399.38	(3^-)	E2	0.0480	α(K)=0.0323 *5*; α(L)=0.01181 *17*; α(M)=0.00295 *5*; α(N)=0.000734 *11*; α(O)=0.0001289 *19* α(P)=4.25×10^{-6} *6*
		573.4[&] *2*	55[&] *7*	1223.77	$(3^-,4^+)$			
		765.3[@] *4*	52 *3*	1032.21	6^+	[E1]	0.00379	α(K)=0.00316 *5*; α(L)=0.000481 *7*; α(M)=0.0001106 *16*; α(N)=2.76×10^{-5} *4*; α(O)=5.18×10^{-6} *8* α(P)=3.80×10^{-7} *6*
		1091.22[@] *18*	79 *3*	706.27	4^+	[E1]	0.00197	α(K)=0.001650 *24*; α(L)=0.000246 *4*; α(M)=5.63×10^{-5} *8*; α(N)=1.405×10^{-5} *20*; α(O)=2.65×10^{-6} *4* α(P)=2.00×10^{-7} *3*
1840.5		1134.2[&] *5*	100	706.27	4^+			
1869.3		837.5 *4*	100	1032.21	6^+	(D)		
1914.0	10^+	476.8 *1*	100	1437.2	8^+	E2	0.0303	α(K)=0.0216 *3*; α(L)=0.00656 *10*; α(M)=0.001616 *23*; α(N)=0.000403 *6*; α(O)=7.16×10^{-5} *10* α(P)=2.86×10^{-6} *4*
2022.10		553.0[&] *2*	32[&] *4*	1468.79	$(3^-,4^+)$			
		798.1[&] *2*	100[&] *7*	1223.77	$(3^-,4^+)$			

$^{180}_{80}Hg_{100}$-4

$\gamma(^{180}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
2022.10		1316.5[&] *2*	42.4[&] *22*	706.27	4^+			
2041.89	$7^{(-)}$	244.4 *2*	100 *5*	1797.48	$5^{(-)}$	E2	0.201	α(K)=0.1039 *15*; α(L)=0.0727 *11*; α(M)=0.0186 *3*; α(N)=0.00463 *7*; α(O)=0.000790 *12* α(P)=1.314×10^{-5} *19*
		604.7 *4*	81 *7*	1437.2	8^+	[E1]	0.00601	α(K)=0.00501 *7*; α(L)=0.000776 *11*; α(M)=0.000179 *3*; α(N)=4.45×10^{-5} *7*; α(O)=8.32×10^{-6} *12* α(P)=5.95×10^{-7} *9*
		1010[a] *1*	<28	1032.21	6^+	[E1]	0.00226	α(K)=0.00189 *3*; α(L)=0.000283 *4*; α(M)=6.49×10^{-5} *10*; α(N)=1.621×10^{-5} *23*; α(O)=3.05×10^{-6} *5* α(P)=2.30×10^{-7} *4*
2057.3	(6^+)	620.1 *4*	100	1437.2	8^+	(E2)	0.01633	α(K)=0.01237 *18*; α(L)=0.00301 *5*; α(M)=0.000729 *11*; α(N)=0.000182 *3*; α(O)=3.29×10^{-5} *5* α(P)=1.642×10^{-6} *23*
2068.7	(6)	563.6 *8*	83 *22*	1504.34	(6^+)			
		1036.0 *8*	100 *22*	1032.21	6^+	D+Q		
2322.9	(8^+)	818.6 *4*	100	1504.34	(6^+)	E2	0.00902	α(K)=0.00711 *10*; α(L)=0.001457 *21*; α(M)=0.000347 *5*; α(N)=8.67×10^{-5} *13* α(O)=1.592×10^{-5} *23*; α(P)=9.39×10^{-7} *14*
2348.74	$(4,5^-)$	326.8[&] *2*	58[&] *9*	2022.10				
		551.1[&] *2*	31[&] *4*	1797.48	$5^{(-)}$			
		880.3[&] *2*	52[&] *4*	1468.79	$(3^-,4^+)$			
		948.9[&] *2*	36[&] *11*	1399.38	(3^-)			
		1125.1[&] *2*	100[&] *5*	1223.77	$(3^-,4^+)$			
2359.1	$9^{(-)}$	317.2 *2*	100	2041.89	$7^{(-)}$	E2	0.0903	α(K)=0.0551 *8*; α(L)=0.0265 *4*; α(M)=0.00671 *10*; α(N)=0.001670 *24*; α(O)=0.000289 *5* α(P)=7.13×10^{-6} *10* B(E2)(W.u.)=3.8×10^2 *5*
2368.8		499.5 *8*	100	1869.3				
2371.5	(8)	302.4 *4*	83 *14*	2068.7	(6)	E2	0.1040	α(K)=0.0619 *9*; α(L)=0.0317 *5*; α(M)=0.00804 *12*; α(N)=0.00200 *3*; α(O)=0.000345 *6* α(P)=7.97×10^{-6} *12*
		502.6 *4*	100 *17*	1869.3				
		934.0[a] *8*	<34	1437.2	8^+			
2456.3	12^+	542.3 *1*	100	1914.0	10^+	E2	0.0222	α(K)=0.01637 *23*; α(L)=0.00443 *7*; α(M)=0.001082 *16*; α(N)=0.000270 *4*; α(O)=4.84×10^{-5} *7* α(P)=2.17×10^{-6} *3*
2487.76		1455.4[&] *5*	38 *6*	1032.21	6^+			
		1781.5[&] *2*	100 *19*	706.27	4^+			
2524.0	(8^+)	466.4 *8*	100 *35*	2057.3	(6^+)			
		610.2 *8*	75 *15*	1914.0	10^+			
2741.3	(10)	369.8 *4*	100	2371.5	(8)	E2	0.0586	α(K)=0.0384 *6*; α(L)=0.01526 *23*; α(M)=0.00382 *6*; α(N)=0.000952 *14*;

$\gamma(^{180}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
								α(O)=0.0001664 *25* α(P)=5.02×10^{-6} *8*
2748.8	$11^{(-)}$	389.7 *2*	100	2359.1	$9^{(-)}$	E2	0.0508	α(K)=0.0340 *5*; α(L)=0.01272 *18*; α(M)=0.00318 *5*; α(N)=0.000792 *12*; α(O)=0.0001388 *20* α(P)=4.46×10^{-6} *7*
3041.2	(10^+)	517.2 *8*	100	2524.0	(8^+)			
3055.7	14^+	599.4 *2*	100	2456.3	12^+	E2	0.01762	α(K)=0.01327 *19*; α(L)=0.00331 *5*; α(M)=0.000804 *12*; α(N)=0.000201 *3*; α(O)=3.62×10^{-5} *5* α(P)=1.761×10^{-6} *25*
3161.6	(12)	420.3 *4*	100	2741.3	(10)	E2	0.0416	α(K)=0.0286 *4*; α(L)=0.00986 *15*; α(M)=0.00245 *4*; α(N)=0.000611 *9*; α(O)=0.0001076 *16* α(P)=3.77×10^{-6} *6*
3199.6	$13^{(-)}$	450.8	100	2748.8	$11^{(-)}$	E2	0.0348	α(K)=0.0245 *4*; α(L)=0.00784 *11*; α(M)=0.00194 *3*; α(N)=0.000483 *7*; α(O)=8.56×10^{-5} *12* α(P)=3.23×10^{-6} *5*
3616.5	(14)	454.9 *4*	100	3161.6	(12)	E2	0.0340	α(K)=0.0240 *4*; α(L)=0.00761 *11*; α(M)=0.00188 *3*; α(N)=0.000469 *7*; α(O)=8.31×10^{-5} *12* α(P)=3.17×10^{-6} *5*
3688.6	$15^{(-)}$	489.0 *4*	100	3199.6	$13^{(-)}$	E2	0.0284	α(K)=0.0204 *3*; α(L)=0.00606 *9*; α(M)=0.001491 *22*; α(N)=0.000372 *6*; α(O)=6.62×10^{-5} *10* α(P)=2.71×10^{-6} *4*
3704.5	16^+	648.8 *4*	100	3055.7	14^+	E2	0.01477	α(K)=0.01128 *16*; α(L)=0.00266 *4*; α(M)=0.000642 *9*; α(N)=0.0001604 *23*; α(O)=2.91×10^{-5} *4* α(P)=1.496×10^{-6} *21*
4106.5	(16)	490.0 *8*	100	3616.5	(14)			
4194.7	$17^{(-)}$	506.1 *4*	100	3688.6	$15^{(-)}$	E2	0.0262	α(K)=0.0190 *3*; α(L)=0.00545 *8*; α(M)=0.001338 *19*; α(N)=0.000334 *5*; α(O)=5.95×10^{-5} *9* α(P)=2.52×10^{-6} *4*
4388.5	18^+	684.0 *4*	100	3704.5	16^+	E2	0.01316	α(K)=0.01014 *15*; α(L)=0.00231 *4*; α(M)=0.000555 *8*; α(N)=0.0001387 *20*; α(O)=2.52×10^{-5} *4* α(P)=1.343×10^{-6} *19*
4627.4?	(18)	520.9[a] *8*	100	4106.5	(16)			
4733.9	(19^-)	539.2 *8*	100	4194.7	$17^{(-)}$			
5091.5	(20^+)	703.0 *8*	100	4388.5	18^+			
5309.6?	(21^-)	575.7[a] *8*	100	4733.9	(19^-)			
5803.4?	(22^+)	711.9[a] *8*	100	5091.5	(20^+)			

† From $^{92}Zr(^{90}Zr,2n\gamma)$, except where noted.

‡ From angular distribution coefficients and/or angular anisotropy coefficients in $^{92}Zr(^{90}Zr,2n\gamma)$, except where noted. Q transitions are taken as stretched E2.

$^{180}_{80}Hg_{100}$-9

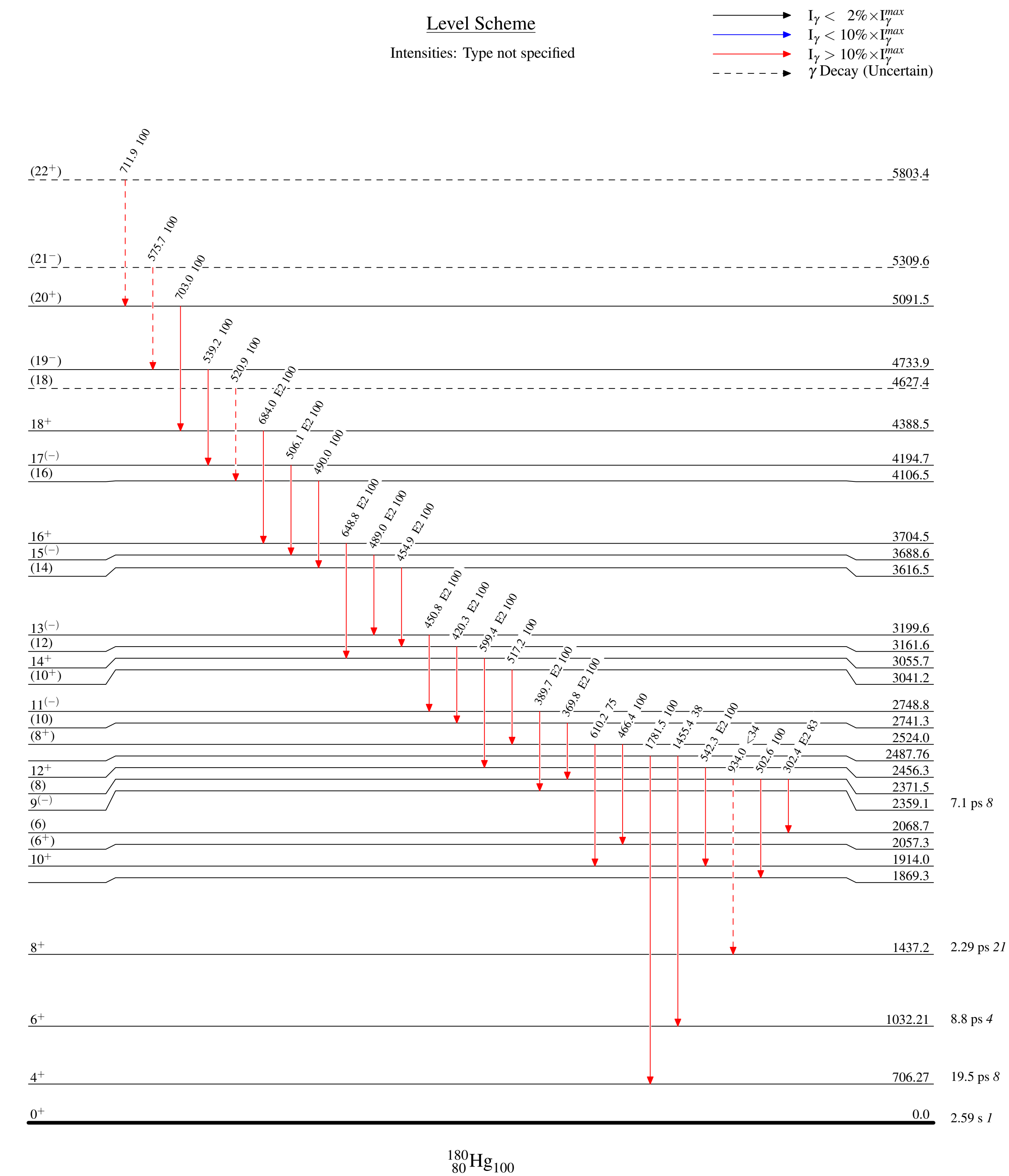
Adopted Levels, Gammas (continued)

γ(^{180}Hg) (continued)

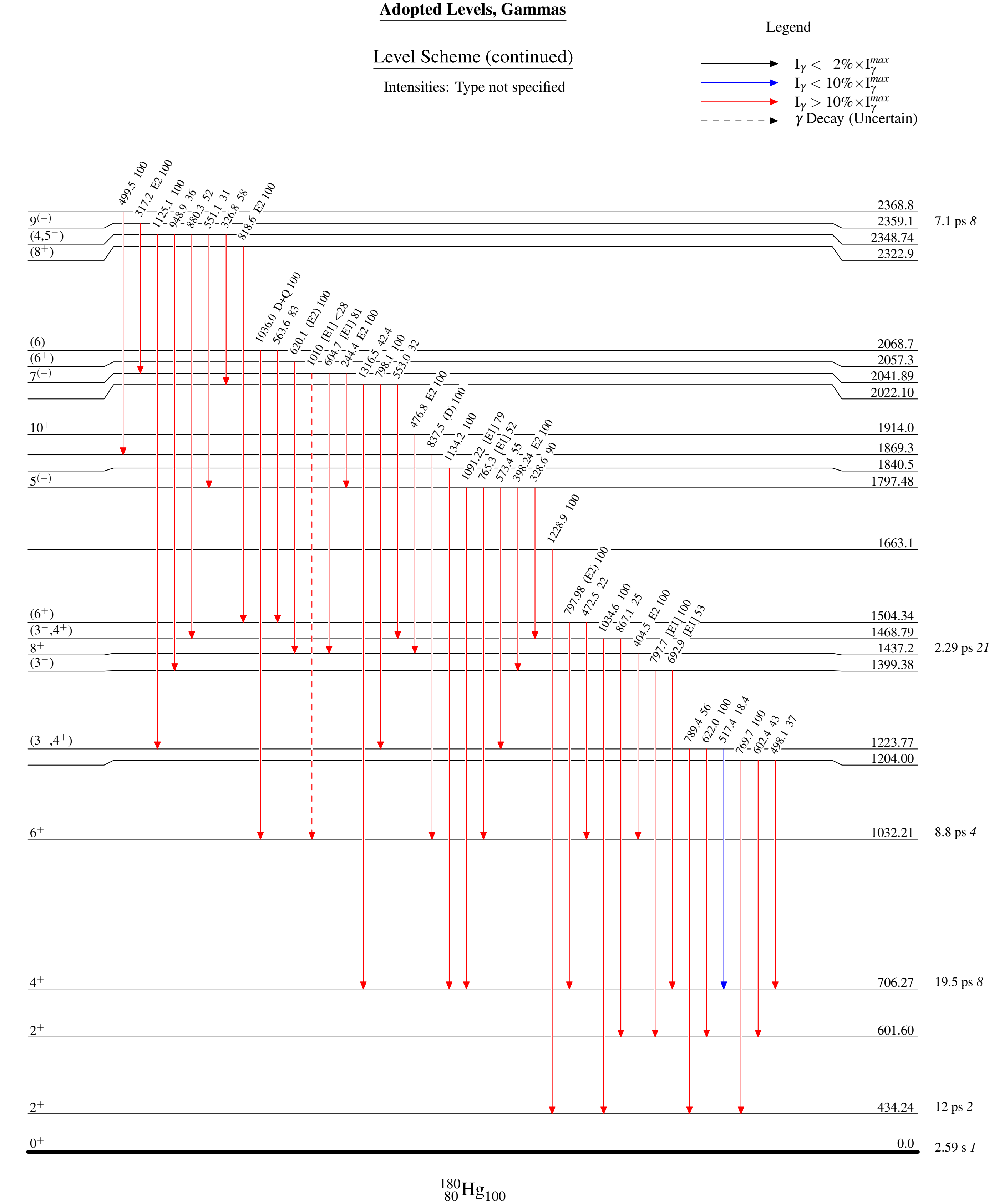
[#] From K/L ratio in ^{147}Sm(^{36}Ar,3nγ).
[@] Weighted average of ^{180}Tl ε decay (1.09 s) and ^{92}Zr(^{90}Zr,2nγ).
[&] From ^{180}Tl ε decay (1.09 s).
[a] Placement of transition in the level scheme is uncertain.

$^{180}_{80}$Hg$_{100}$-7

Adopted Levels, Gammas



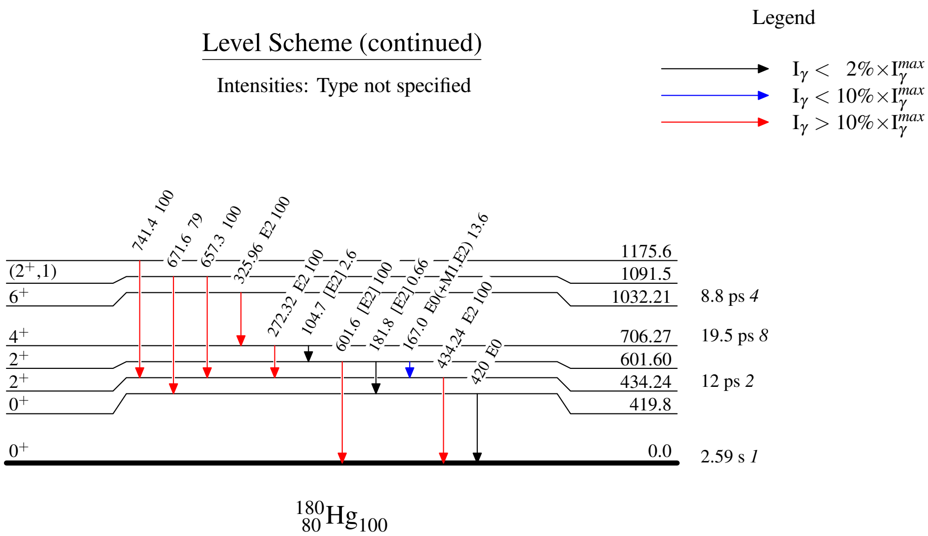
Adopted Levels, Gammas



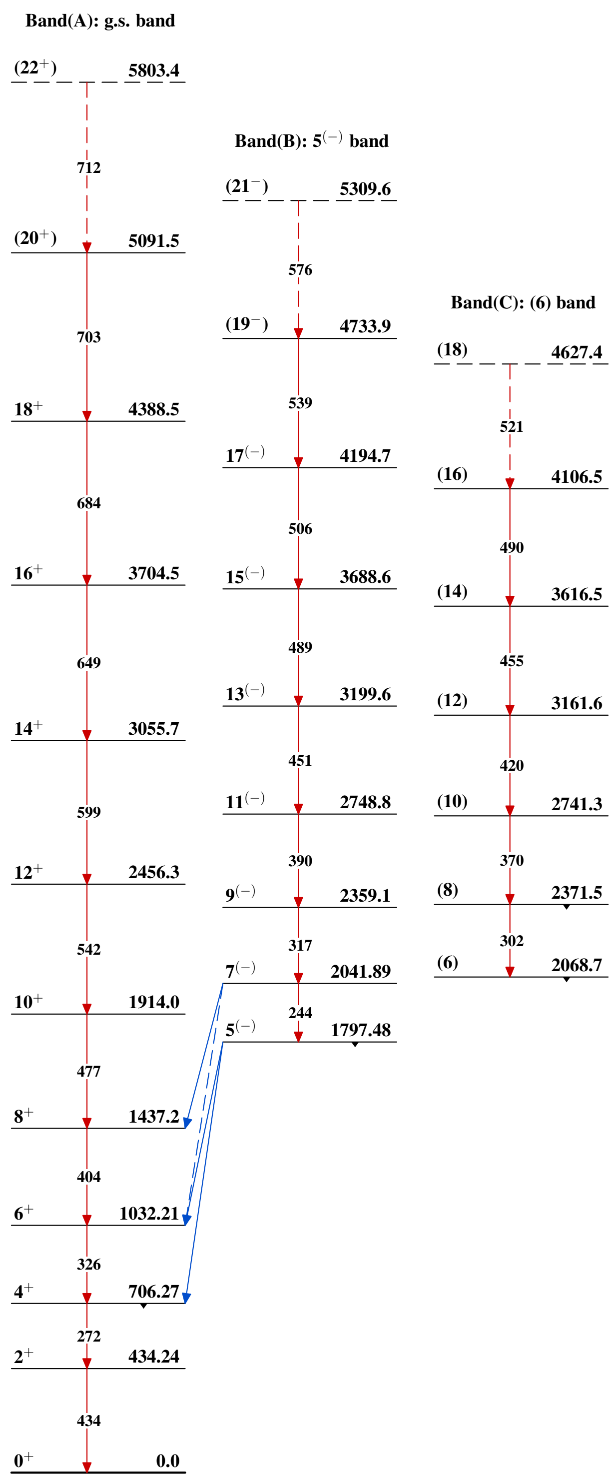
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas



$^{180}_{80}Hg_{100}$

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$^\pi$=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). $<r^2>^{1/2}$=5.447 fm *3* (2004An14). $<(\beta_2)^2>^{1/2}$=0.106 *2* (1986Ul02). $\Delta<r^2>$=−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=−

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{198}Hg Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	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). J^{π}: 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	J^{π}: J=2 from $\gamma\gamma(\theta)$ 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	J^{π}: J=3 from $\gamma\gamma(\theta)$ in ^{198}Tl ε decay (5.3 h) and π=+ from M1+E2 γ to 2$^+$.
1858.86 *18*	2$^+$		B D J	J^{π}: J=2 from $\gamma\gamma(\theta)$ 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. J^{π}: 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. J^{π}: J=(2) from $\gamma\gamma(\theta)$ in ^{198}Tl ε decay (5.3 h) and π=(+) from (M1+E2) γ to 2$^+$.
1909.7 *3*	6$^-$		CD	J^{π}: M1+E2 γ to 5$^-$, M1(+E2) γ to 7$^-$.
1910.8[d] *3*	9$^-$[@]	0.28 ns *5*	DE	$T_{1/2}$: From $\alpha\gamma$(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	J^{π}: 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	J^{π}: γ's to 5$^-$ and 7$^-$.
2070.8 *3*	1$^+$,2$^+$		B D F J	XREF: J(2067). J^{π}: L=0 in ^{197}Au(^{3}He,d).
2090.76 *19*	4$^+$,5$^+$		D	
2109.8 *5*	1,2$^+$		B D	J^{π}: γ to 0$^+$.
2125.3 *3*	6$^-$,7$^-$		CD	J^{π}: M1(+E2) γ to 6$^-$, M1 γ to 7$^-$.
2132.6 *3*	1$^+$,2$^+$		B D F	XREF: F(2130). J^{π}: L=0 in ^{197}Au(^{3}He,d).
2135.2 *3*	5$^-$[b]		D J	
2169.40 *22*	2$^+$		B D	J^{π}: γ's to 0$^+$ and 4$^+$.
2177.6 *3*	1,2$^+$		B D J	XREF: J(2186). J^{π}: γ to 0$^+$.
2202.6 *4*	6$^-$,7$^-$		CD	J^{π}: 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. J^{π}: 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)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				E(level): 2213 could be 2209 and/or 2219.
2267.7 *3*	2^+		B D J	XREF: J(2259). J^{π}: γ's to 0^+ and 4^+.
2277.22 *23*	$1^+,2,3,4,5^+$		D	
2287.26 *25*	$1,2^+$		B D J	J^{π}: 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	J^{π}: 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). J^{π}: J=3 from $\gamma\gamma(\theta)$ 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* ($\alpha\gamma$(t),1977Gu05) and 1.94 ns *10* (cece(t),1985Ko13).
2450? *15*	$1^+,2^+$		F	J^{π}: L=0 in ^{197}Au(^{3}He,d).
2451.89 *17*	(1,3)		B	J^{π}: From $\gamma\gamma(\theta)$ in ^{198}Tl ε decay (5.3 h).
2465.44 *21*	2^+		B	J^{π}: γ's to 0^+ and 4^+.
2466.9[d] *4*	11^-[@]		E	
2480 *4*			F	J^{π}: L=(5) in ^{197}Au(^{3}He,d).
2486.08 *16*	$1,2^+$		B	J^{π}: γ to 0^+.
2487 *4*	3^-		J L	XREF: L(2486). J^{π}: 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	J^{π}: 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	J^{π}: γ to 0^+.
2578.1[c] *4*	12^+[@]	1.38 ns *4*	E	μ=−2.2 *10* (2006Le06,2011StZZ) $T_{1/2}$: From $\alpha\gamma$(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). J^{π}: γ to 0^+.
2644.2 *7*	$2^+,3,4^+$		B	J^{π}: γ's to 2^+ and 4^+.
2655.9 *3*	$1^-,2,3,4,5^-$		D	
2694.8 *7*	$1,2^+$		B	J^{π}: γ to 0^+.
2731.2 *3*	$2^+,3,4^+$		B F	XREF: F(2730). J^{π}: 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). J^{π}: γ's to 0^+ and 4^+. L=0+2 in ^{197}Au(^{3}He,d).
2816.1 *8*	$1,2^+$		B	J^{π}: γ to 0^+.
2825.5 *3*	$1,2^+$		B	J^{π}: γ to 0^+.
2835.49 *23*	$1,2^+$		B	J^{π}: γ to 0^+.
2840 *15*			F	J^{π}: L=(3,5) in ^{197}Au(^{3}He,d).
2845.1 *4*	$1,2^+$		B	J^{π}: γ to 0^+.
2861.6 *6*	$1,2^+$		B	J^{π}: γ to 0^+.
2868.8 *6*	$1,2^+$		B	J^{π}: γ to 0^+.

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Adopted Levels, Gammas (continued)

^{198}Hg Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	XREF	Comments
2894.3 *7*	1,2$^+$		B	J$^{\pi}$: γ to 0$^+$.
2926.0[c] *4*	14$^+$[@]	<120 ps	E	$T_{1/2}$: From $\alpha\gamma$(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	J$^{\pi}$: γ to 0$^+$.
2975.9 *7*	1,2$^+$		B	J$^{\pi}$: γ to 0$^+$.
2986.8 *8*	1,2$^+$		B	J$^{\pi}$: γ to 0$^+$.
2990? *15*			F	J$^{\pi}$: L=(3) in ^{197}Au(^{3}He,d).
3013.2 *3*			B	
3022.1 *10*	1,2$^+$		B	J$^{\pi}$: γ to 0$^+$.
3070? *15*			F	
3095.7 *10*	1,2$^+$		B	J$^{\pi}$: γ to 0$^+$.
3128.0 *7*	1,2$^+$		B	J$^{\pi}$: γ to 0$^+$.
3150? *15*			F	J$^{\pi}$: L=(3,5) in ^{197}Au(^{3}He,d).
3164.7 *6*	1,2$^+$		B	J$^{\pi}$: γ to 0$^+$.
3200 *15*			F	J$^{\pi}$: L=(5) in ^{197}Au(^{3}He,d).
3270 *15*			F	
3325.5[d] *4*	13$^-$[@]		E	
3440 *15*			F	J$^{\pi}$: 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 $\gamma(\theta)$ 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/d$\Omega(\theta)$ analysis ^{198}Hg(p,p$'$).
[c] Band(A): ground-state rotational band.
[d] Band(B): negative-parity bands.

$\gamma(^{198}Hg)$

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^π_i	E_γ[#]	I_γ[#e]	E_f	J^π_f	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+					

γ(^{198}Hg) (continued)

E_i(level)	J^π_i	E_γ[#]	I_γ[#e]	E_f	J^π_f	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^+				

Adopted Levels, Gammas (continued)

$\gamma(^{198}Hg)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[#]	I_{γ}[#e]	E_f	J^{π}_f	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

$\gamma(^{198}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[#]	I_γ[#e]	E_f	J^π_f	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 $J^\pi=1^+$; δ=−0.19 *4* if $J^\pi=3^+$ 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^π_i	E_γ[#]	I_γ[#e]	E_f	J^π_f	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

$\gamma(^{198}$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 $\gamma\gamma(\theta)$ 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 $\gamma\gamma(\theta)$ 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.

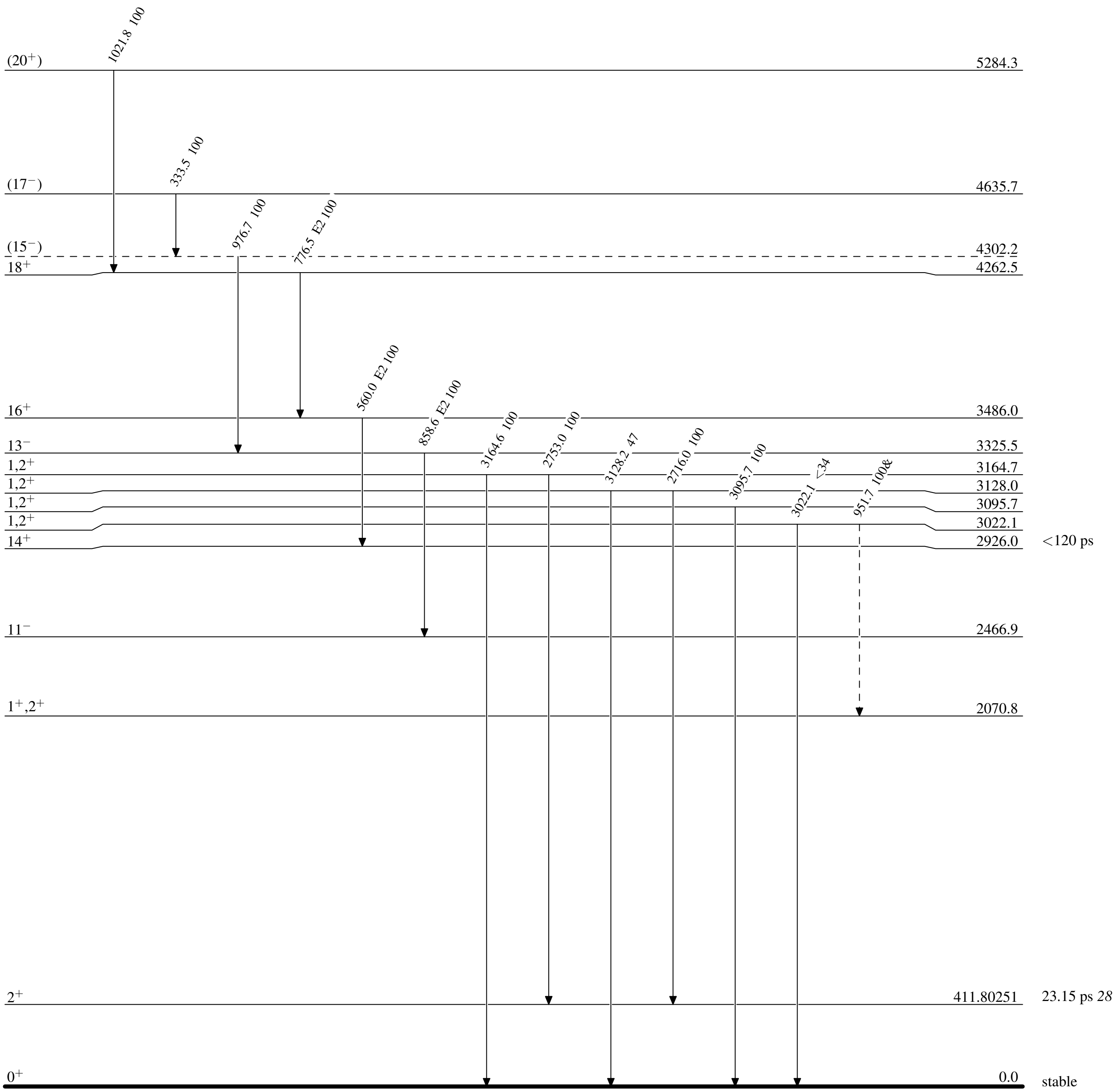
Adopted Levels, Gammas

Level Scheme

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

Legend

γ Decay (Uncertain)



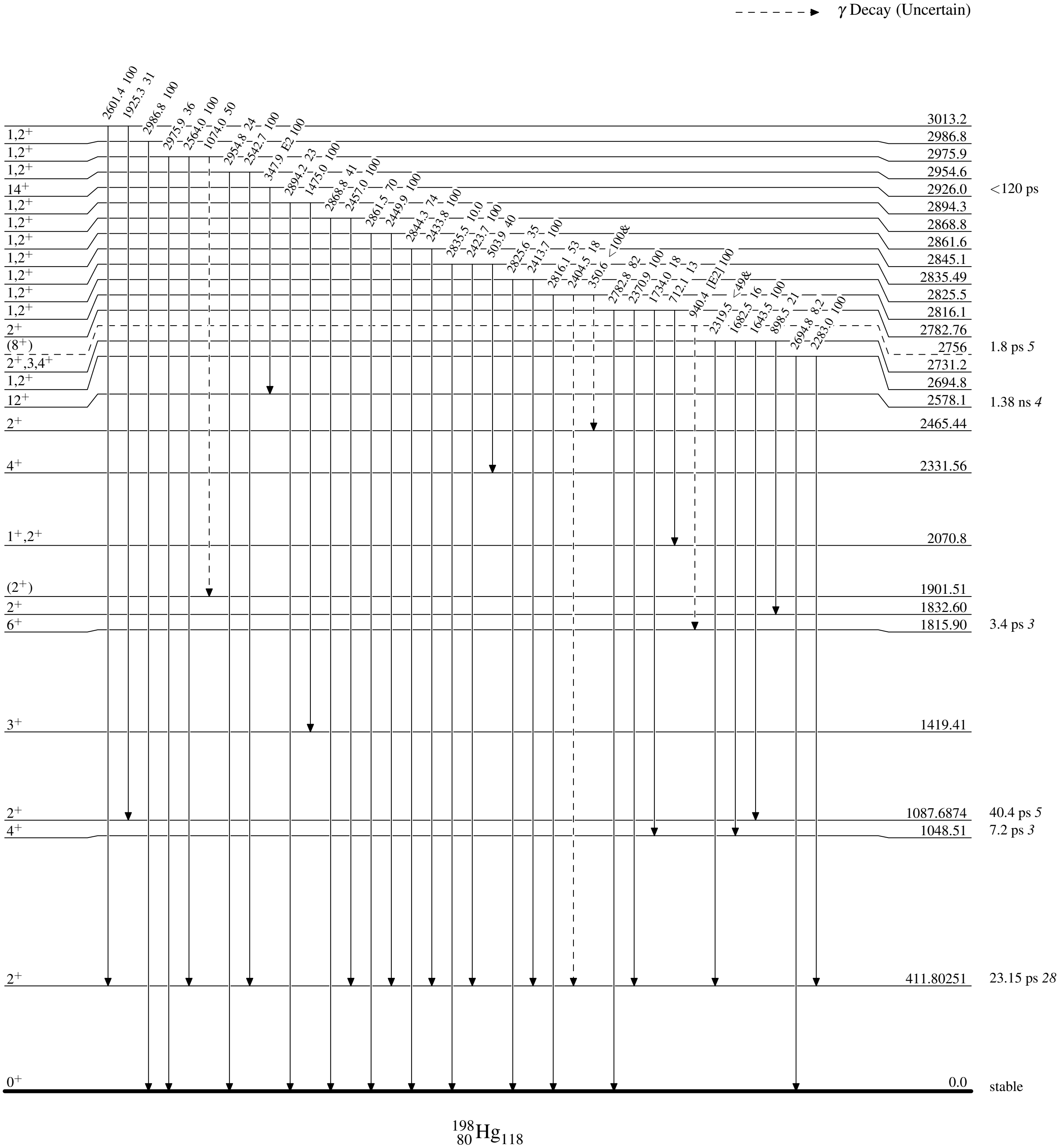
$^{198}_{80}Hg_{118}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

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



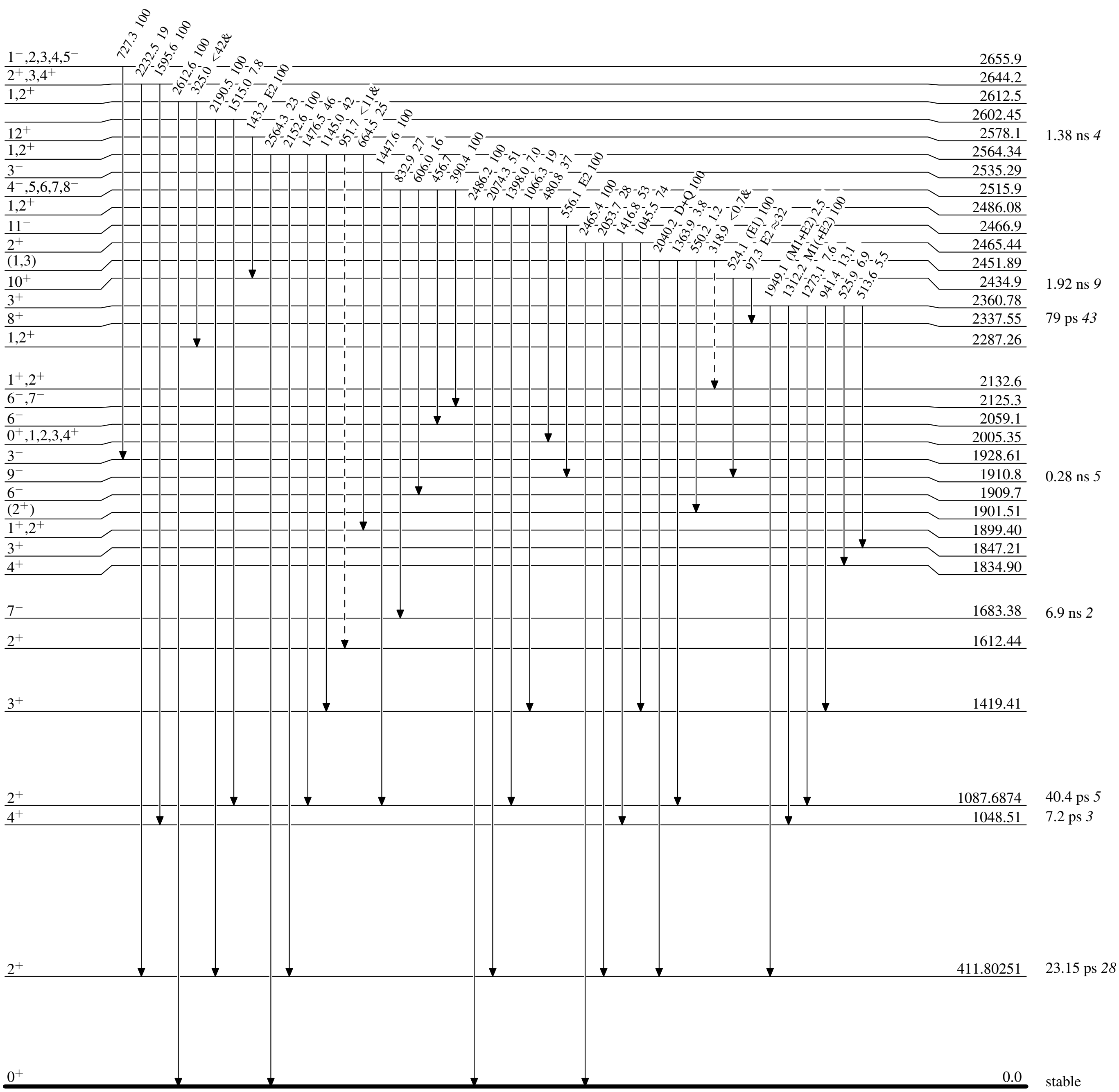
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)

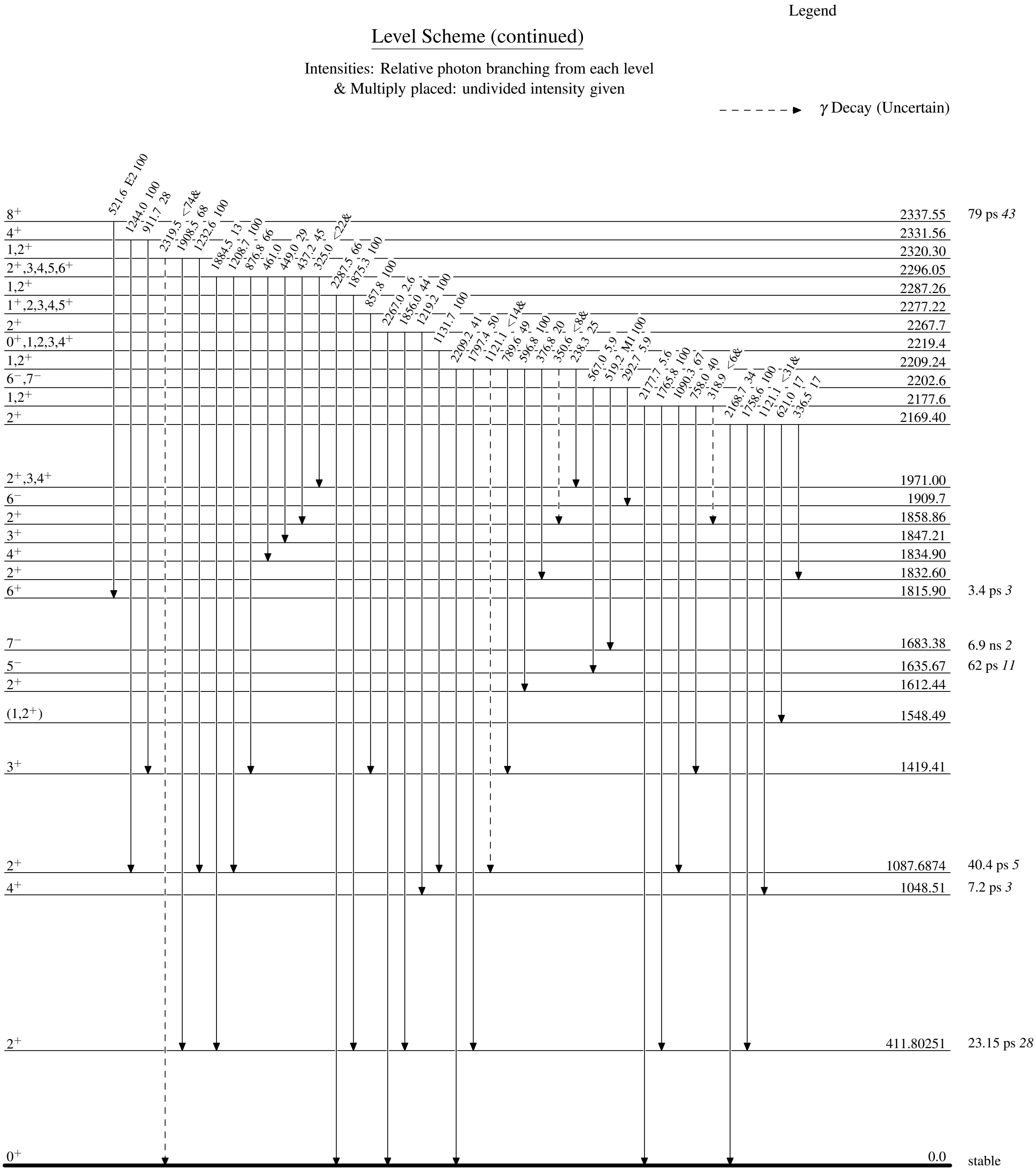


$^{198}_{80}Hg_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

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

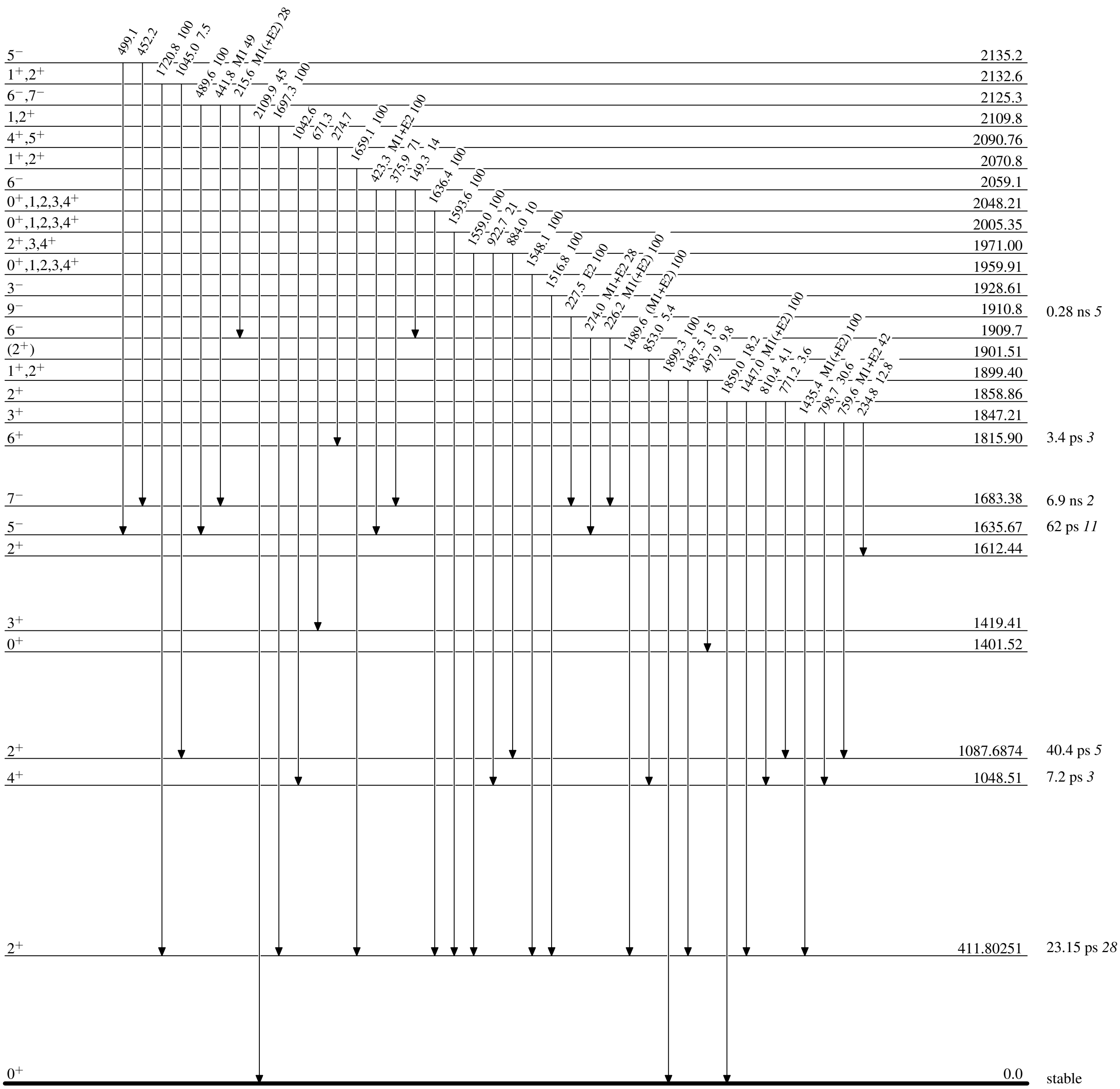


$^{198}_{80}Hg_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

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

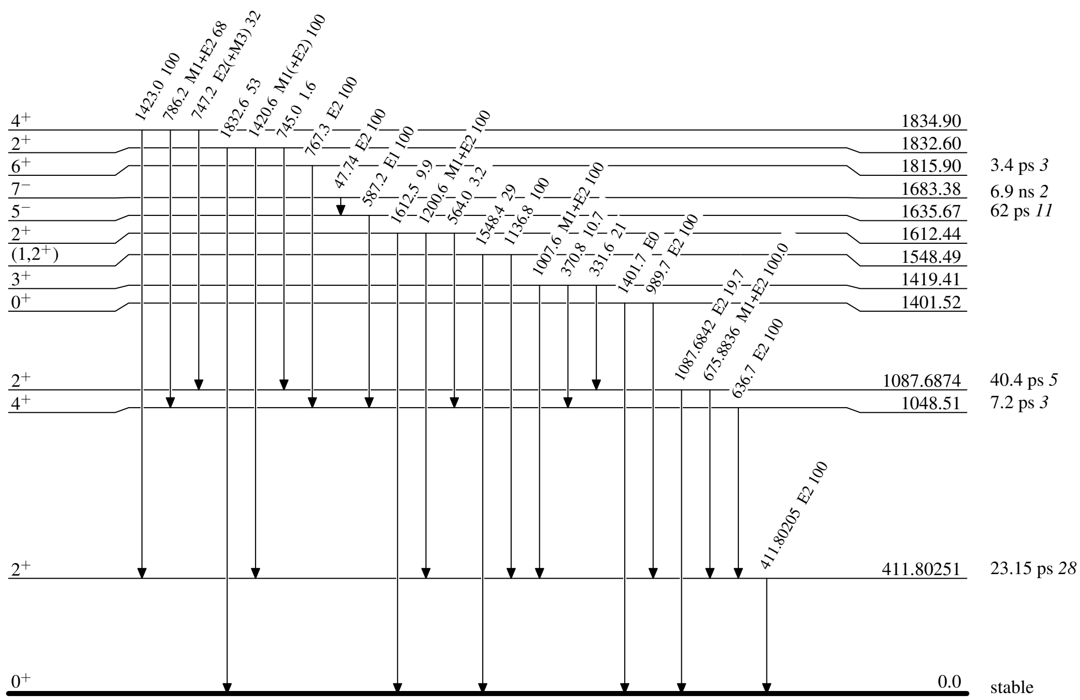


$^{198}_{80}Hg_{118}$

Adopted Levels, Gammas

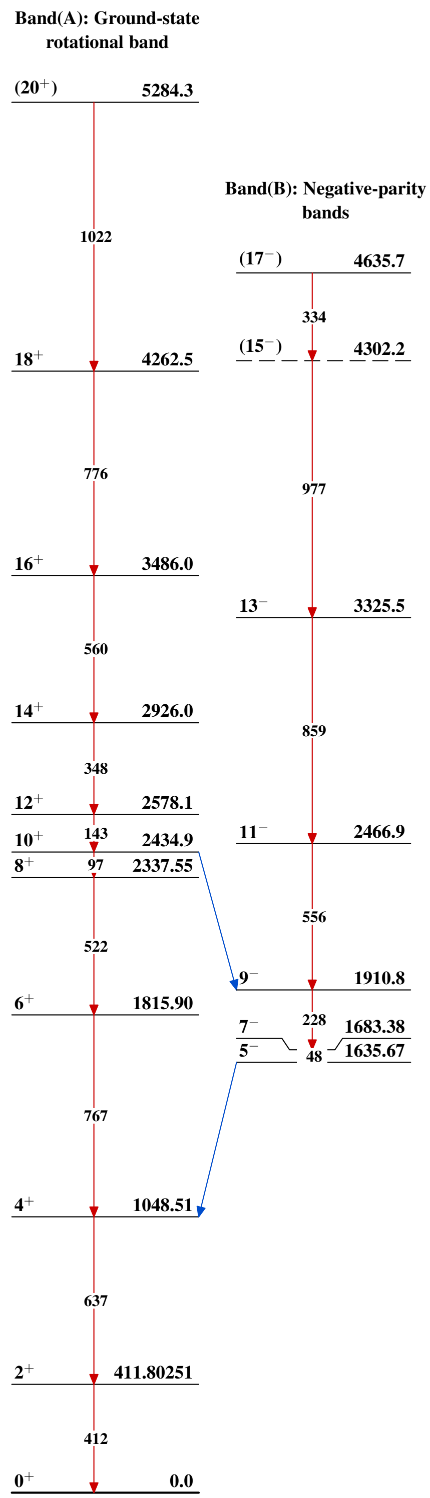
Level Scheme (continued)

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



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

Adopted Levels, Gammas



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

Adopted Levels, Gammas

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

Q(β^-)=−2456 *6*; S(n)=8028.52 *11*; S(p)=7698.5 *6*; Q(α)=716.4 *7* 2021Wa16

^{200}Hg Levels

Cross Reference (XREF) Flags

A	^{200}Au β^- decay (48.4 min)	G	^{199}Hg(n,γ) E=th:secondary	M	^{200}Hg(d,d′)
B	^{200}Au β^- decay (18.7 h)	H	^{199}Hg(n,γ) E=33.5 eV res	N	^{200}Hg(α,α′)
C	^{200}Tl ε decay	I	^{199}Hg(n,γ) E=129.7 eV res	O	^{198}Pt(α,2nγ)
D	Coulomb excitation	J	^{199}Hg(n,γ) E=175.1 eV res	P	^{198}Pt(^{9}Be,α3nγ)
E	^{200}Hg(n,n′γ)	K	^{200}Hg(p,p′)	Q	^{203}Tl(μ,xnγ)
F	^{199}Hg(n,γ) E=th:primary	L	^{202}Hg(p,t)	R	Muonic atom

E(level)[†]	J$^\pi$[&]	T$_{1/2}$	XREF	Comments
0.0[a]	0$^+$	stable	ABCDEFGHIJKLMNOPQR	
367.943[a] *9*	2$^+$	46.4 ps *4*	ABCDEFGHIJKLMNOPQR	B(E2)↑=0.853 *7* (1980Sp05) Q=+1.11 *11* μ=+0.65 *5* J$^\pi$: 367.942γ E2 to 0$^+$; L(d,d′)=2. T$_{1/2}$: From Coulomb excitation, using B(E2)↑=0.853 *7* (1980Sp05). Other: 44 ps *3* from $\gamma\gamma(\Delta t)$ in 2019Ol05. B(E2)↑: Others: 0.853 *15* in 1979Bo16, 0.95 *11* in 1970Ka09 and 0.855 in 1981Gu07. Q: Recommended by 2021StZZ, based on +1.11 *11* and +0.96 *11* in 1979Bo16. Other: +1.07 *19* in 1980Sp05. μ: Recommended by 2020StZV based on g=+0.326 *26* in 1995Br34 (transient field integral perturbed angular correlations). Others: g=0.40 *7* (1974Do01, but revised in 1986Ko02), g=0.31 *8* (1970Ka09, but revised in 1986Ko02), g=0.29 *6* in 1986Ko02, normalized to g=0.52 for 2$^+$ state in ^{198}Hg.
947.243[a] *12*	4$^+$	3.21 ps *14*	ABCDE GHIJKLM OPQ	B(E2)↑=0.477 *21* μ=1.02 *17* XREF: K(950). J$^\pi$: 579.300γ E2 to 2$^+$; L(d,d′)=4. T$_{1/2}$: From B(E2)↑=0.477 *21*. Other: 6 ps *3* from $\gamma\gamma(\Delta t)$ in 2019Ol05. B(E2)↑: Weighted average of 0.466 *47* (1979Bo16) and 0.479 *23* (1981Gu07). μ: Recommended by 2021StZZ based on g=+0.254 *43* in 1995Br34 (transient field integral perturbed angular correlations).
1029.348 *9*	0$^+$	8 ps *4*	A CDEFGHIJKLM	XREF: K(1028). J$^\pi$: 1029.348γ E0 to 0$^+$, 661.36γ E2 to 2$^+$; L(d,d′)=2 from J$^\pi$=2$^+$. T$_{1/2}$: From $\gamma\gamma(\Delta t)$ in 2019Ol05.
1254.101 *9*	2$^+$	3.5 ps *7*	A CDEFGHIJKLM	B(E2)↑=0.0080 *15* (1979Bo16) XREF: F(1257.1)H(1253.0)I(1253.0)J(1253.0)K(1256). J$^\pi$: 1254.14γ E2 to 0$^+$, 306.863γ to 4$^+$; L(d,d′)=2. T$_{1/2}$: From B(E2)↑=0.0080 *15* (1979Bo16). Other: 8 ps *6* from $\gamma\gamma(\Delta t)$ in 2019Ol05. B(E2)↑: Other: B(E2)(2$^+$ to 2$^+$)=0.015 *3* (1979Bo16).
1353.4[‡] *7*			L	
1503.5[‡] *5*			L	

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Adopted Levels, Gammas (continued)

^{200}Hg Levels (continued)

E(level)[†]	J^{π}[&]	$T_{1/2}$	XREF	Comments
1515.178 *9*	0^+		A C E G KLM	XREF: K(1516)M(1516.1). J^{π}: 485.830γ E0 to 0^+; 1147.20γ E2 to 2^+; L(d,d′)=2 from $J^{\pi}=2^+$.
1570.279 *10*	1^+		A C EFGHIJ	J^{π}: 540.948γ and 1570.45γ M1 to 0^+.
1573.667 *10*	2^+		A CDEFGHIJKLM Q	XREF: F(1575.3)H(1572.8)I(1572.8)J(1572.8). J^{π}: 1205.75γ M1+E2 to 2^+, 626.62γ to 4^+, 1573.6γ to 0^+; L(d,d′)=2.
1593.428 *10*	2^+		A C EFGHIJ L	XREF: F(1594.9)H(1592.4)I(1592.4)J(1592.4). J^{π}: 564.19γ to 0^+, 646.44γ to 4^+, 1225.44γ M1+E2(+E0) to 2^+.
1619.7[‡] *10*			L	
1628.8 *12*			HIJ	
1630.900 *10*	1^+		A C EFGHIJ	XREF: F(1632.0)H(1630.3)I(1630.3)J(1630.3). J^{π}: 1630.7γ M1 to 0^+, 1262.96γ M1+E2 to 2^+.
1641.447 *10*	2^+		A C EFGHIJ L	XREF: H(1640.5)I(1640.5)J(1640.5). J^{π}: 1273.43γ M1+E2 to 2^+; 612.12γ E2 to 0^+; 694.14γ to 4^+.
1659.010 *13*	3^+		A C E G KLM	XREF: K(1660). J^{π}: From 711.70γ M1(+E2) to 4^+, 1291.1γ M1(+E2) to 2^+ and 1610.9γ from 1^+. However, $J^{\pi}=4^+$ from p′(θ) in ^{200}Hg(p,p′) and L(d,d′)=4.
1706.73[a] *9*	6^+	0.70 ps *6*	B DE KLM OPQ	B(E2)↑=0.46 *4* (1981Gu07) J^{π}: 759.5γ E2 to 4^+; p′(θ) in ^{200}Hg(p,p′); L(d,d′)=2 from $J^{\pi}=4^+$; band structure. $T_{1/2}$: From B(E2)↑=0.46 *4* in Coulomb excitation.
1718.307 *9*	1^+		A C EFGHIJ	XREF: F(1719.4)H(1716.0)I(1716.0)J(1716.0). J^{π}: 1718.6γ M1 to 0^+, 1350.35γ M1+E2 to 2^+.
1730.929 *10*	2^+		A C EFGHIJkLM	XREF: F(1733.4)H(1732)I(1732)J(1732)k(1734). J^{π}: From 701.56γ (E2) to 0^+, 783.71γ E2 to 4^+; L(d,d′)=2.
1734.345 *10*	3^+		A C E G k	XREF: k(1734). J^{π}: 787.10γ M1+E2 to 4^+ and 1366.8γ M1(+E2) to 2^+.
1775.566 *11*	3^+		C E GHIJ L	J^{π}: 521.41γ M1+E2 to 2^+; 828.27γ M1+E2 to 4^+.
1845.779 *10*	3^+		C E G	J^{π}: 898.56γ M1+E2 to 4^+, 275.497γ to 1^+.
1851.49[c] *10*	5^-		B DE KLM OPQ	XREF: K(1855). J^{π}: 904.2γ E1 to 4^+; L(d,d′)=5; band assignment.
1856.784 *10*	0^+		A C E GHIJ L	XREF: H(1857.8)I(1857.8)J(1857.8). J^{π}: 1856.784γ E0 to 0^+, 1488.5γ E2 to 2^+; L(p,t)=0.
1882.861 *10*	2^+		A C E G LM	J^{π}: 251.696γ M1+E2 to 1^+; 936.1γ (E2) to 4^+; L(d,d′)=2.
1919.4[‡] *12*			L	
1962.62[c] *10*	7^-		B DE HI LM OP	XREF: L(1961.9). J^{π}: 110.7γ E2 to 5^- and 255.8γ E1 to 6^+; L(d,d′)=2 from $J^{\pi}=5^-$.
1965 *4*			J	
1972.281 *11*	$(2)^+$		A C E GHIJ L	J^{π}: 1604.50γ M1+E2 to 2^+, 313.23γ to 3^+, 341.375γ to 1^+; direct beta feeding in ^{200}Au β^- decay ($J^{\pi}=(1^-)$) favors J=1,2.
1974.339 *11*	$(3)^+$		C E G KL	XREF: L(1978.4). J^{π}: 1027.1γ M1(+E2) to 4^+; 243.4γ to 2^+.
1979.9[#] *6*	$(2)^+$		M	J^{π}: L(d,d′)=2.
2000.9 *6*			L	
2048.92[b] *21*	6^-		KL OP	J^{π}: 197.4γ M1 to 5^- and 342.3γ E1 to 6^+; band assignment.
2061.257 *10*	1^+		A C EFGHIJ L	XREF: H(2060.1)I(2060.1)J(2060.1). J^{π}: 546.1γ M1 to 0^+, 1693.13γ M1+E2 to 2^+.
2074.335 *16*	$(2)^+$		E GHIJ LM	XREF: H(2075.7)I(2075.7)J(2075.7). J^{π}: 340.03γ to 3^+; 1706.6γ to 2^+; L(d,d′)=2.
2100[#] *1*	$(2)^+$		LM	XREF: L(2099.0). J^{π}: L(d,d′)=2.
2114.357 *13*	3^+		C E G	J^{π}: 483.3γ to 1^+, 1167.1γ to M1(+E2) 4^+.
2116.549 *12*	0^+		E GHIJ L	XREF: H(2117.3)I(2117.3)J(2117.3).

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Adopted Levels, Gammas (continued)

^{200}Hg Levels (continued)

E(level)[†]	J^{π}[&]	$T_{1/2}$	XREF	Comments
				J^{π}: 2116.549γ E0 to 0^+.
2126.859 *11*	2^+		C E GHIJ l	XREF: H(2126.1)I(2126.1)J(2126.1)l(2127.3). J^{π}: 1180.5γ to 4^+; 408.6γ M1 to 1^+.
2127.934 *12*	$(2,3)^+$		E G l	XREF: l(2127.3). J^{π}: 409.63γ to 1^+; 1180.4γ to 4^+.
2135.40[b] *18*	8^-		OP	J^{π}: 86.5γ to 6^-; 172.8γ M1 to 7^-; band assignment.
2143.80[c] *13*	9^-	1.07 ns *4*	B L OP	J^{π}: 181.0γ E2 to 7^-. $T_{1/2}$: From 497γ-181γ(Δt) in 1970To14.
2151.35 *10*	3^-		C E KLM	XREF: K(2150). J^{π}: p′(θ) in ^{200}Hg(p,p′); L(d,d′)=3.
2180.1[‡] *3*			L	
2189.477 *13*	1^+		FGHIJKL	XREF: F(2187.7)H(2188.8)I(2188.8)J(2188.8)K(2184)L(2190.8). J^{π}: 2188.7γ M1 to 0^+; 935.45γ E2+M1 to 2^+; p′(θ) in ^{200}Hg(p,p′).
2222.7[‡] *2*			L	
2229.274 *13*	1^+		C FGHIJKL	XREF: F(2228.9)J(2227.8)K(2230). J^{π}: 713.9γ to 0^+, 975.15γ M1+E2 to 2^+; p′(θ) in ^{200}Hg(p,p′).
2238.51 *22*	(3)		C E	J^{π}: 1870.6γ to 2^+; non observation in res n-capture ($J^{\pi}=0^-$ and 1^-) favors J=3.
2246.446 *13*	$(1,2)^+$		E GHIJ L	J^{π}: 272.109γ to $(3)^+$, 676.2γ M1(+E2) to 1^+, L(p,t) consistent with 0^+.
2258.1[‡] *5*			L	
2274.229 *13*	$(2)^+$		C EFGHIJ LM	XREF: F(2276.0)H(2275.7)I(2275.7)J(2275.7)M(2275). J^{π}: 1906.2γ (E2) to 2^+; 759.30γ to 0^+; L(d,d′)=2.
2284.36 *23*	5^-,6,7^-		O	J^{π}: 321.8γ to 7^-; 432.8γ to 5^-.
2288.93 *4*	2^+		C EFGHIJKL	XREF: F(2289.5)J(2290.0). J^{π}: 2289.6γ to 0^+; 1341.7γ (E2) to 4^+, 1921γ (M1) to 2^+.
2296.341 *23*	1^+		C EFGHIJ M	XREF: H(2295.3)I(2295.3)J(2295.3). J^{π}: 2296.3γ M1 to 0^+; L(d,d′)=2 from $J^{\pi}=2^+$.
2297.5 *14*	$(1,2)^-$		F L	XREF: L(2298.6). J^{π}: 5731.8γ primary M1,E2 from 0^- in ^{199}Hg(n,γ)E=th:primary.
2298.5 *3*	5^-,6,7^-		OP	J^{π}: 335.9γ to 7^- and 447.0γ to 5^-.
2307.8[‡] *2*			L	
2321.6 *2*	$(2)^+$		LM	XREF: M(2319). J^{π}: L(d,d′)=2.
2331.778 *12*	2^+		C E G L	J^{π}: 475.08γ to 0^+; 1385.0γ (E2) to 4^+; however (0^+) in ^{202}Hg(p,t).
2343.594 *20*	1^+,2^+,3^+		C EFG L	XREF: F(2345.5). J^{π}: 1975.8γ M1(+E2) to 2^+; 498.81γ to 3^+; Non observation in res n-capture ($J^{\pi}=0^-$ and 1^-) favors J=3.
2370.043 *12*	1^+		C EFGHIJ	XREF: H(2369.8)I(2369.8)J(2369.8). J^{π}: 2370.0γ M1 to 0^+, 710.93γ to 3^+; γγ(θ) in 1989Ah01.
2377.15 *22*	$(7)^-$		KLM O	XREF: K(2379). J^{π}: 241.8γ to 8^-; 328.3γ to 6^-; L(d,d′)=2 from $J^{\pi}=5^-$.
2388.68 *4*	$(1,2,3)^+$		C G L	J^{π}: 2020.6γ M1+E2 to 2^+.
2408.8 *5*			O	
2411.830 *16*	$(2)^+$		GHIJKLM	XREF: K(2416)L(2414.1)M(2415.2). J^{π}: 677.5γ to 3^+; 896.7γ to 0^+; L(d,d′)=2.
2442.7? *3*	1^-		G	J^{π}: 2442.6γ E1 to 0^+.
2461.83 *4*	(1^+)		FGHIJ L	XREF: F(2463.7)H(2462.5)I(2462.5)J(2462.5)L(2463.7). J^{π}: 1432.2γ (M1) to 0^+; 2093.6γ to 2^+.
2475.2[‡] *1*	0^+		L	J^{π}: From t(θ) in 2013Be21.

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Adopted Levels, Gammas (continued)

^{200}Hg Levels (continued)

E(level)[†]	Jπ[&]	$T_{1/2}$	XREF	Comments
2480.3[‡] *1*	(2)$^+$		KLM	XREF: K(2481). Jπ: L(d,d′)=2.
2485.7[‡] *2*			L	
2491.430 *16*	(2)$^+$		GHIJ L	XREF: H(2490.6)I(2490.6)J(2490.6). Jπ: 634.66γ to 0$^+$; 757.0γ to 3$^+$; 2123.9γ (E2) to 2$^+$.
2514.0[‡] *4*			KL	XREF: K(2515).
2522.70[b] *25*	10$^-$		OP	Jπ: 378.9 M1+E2 to 9$^-$, 387.3 E2 to 8$^-$.
2524.6[‡] *7*			L	
2548.1[‡] *2*			L	
2565.6[‡] *1*	(2)$^+$		HIJKLM	XREF: H(2563.0)I(2563.0)J(2563.0). Jπ: L(d,d′)=2.
2590.79 *14*	1$^-$		G	Jπ: 2590.5γ E1 to 0$^+$.
2597.1 *3*	(9)		OP	Jπ: 461.7γ to 8$^-$; relative population of this level in ^{198}Pt(^{9}Be,α3nγ).
2610.42[‡] *10*	3$^-$	25.1 ps *24*	D KLMN	B(E3)↑=0.41 *4* (1991Li03) XREF: K(2611)M(2612.1). Jπ: 2609γ (E3) to 0$^+$; p′(θ) in ^{200}Hg(p,p′); L(d,d′)=3. $T_{1/2}$: Using B(E3)↑=0.41 *4* and by assuming that Eγ=2609 keV *3* is the only depopulating transition.
2621.1[‡] *6*			kL	XREF: k(2630).
2639.929 *17*	1$^+$		FGHIJk	XREF: k(2630). Jπ: 2639.9γ M1 to 0$^+$, 2271.5γ M1+E2 to 2$^+$; γγ(θ) in 1989Ah01.
2641.57[c] *16*	11$^-$		B L OP	XREF: L(2643.7). Jπ: 497.8γ E2 to 9$^-$; band structure.
2661.9[‡] *1*	3$^-$		KLM	XREF: K(2659)M(2663.9). Jπ: L(d,d′)=3.
2680.1 *3*	8$^+$	0.19 ps *4*	D L OP	B(E2)↑=0.38 *8* (1981Gu07) Jπ: 973.6γ E2 to 6$^+$; band structure. $T_{1/2}$: From B(E2)↑=0.38 *8* in (1981Gu07).
2691.59 *3*	(1,2)$^+$		fGhij LM	XREF: f(2693.4)h(2693.2)i(2693.2)j(2693.2). Jπ: 1121.4γ (M1) to 1$^+$; 957.2γ to 3$^+$; L(d,d′)=2.
2697.137 *19*	(1,2)$^+$		fGhij L	XREF: f(2693.4)h(2693.2)i(2693.2)j(2693.2). Jπ: 467.86γ (M1) to 1$^+$; 1442.5γ to 2$^+$; t(θ) in 2013Be21 excludes 0$^+$.
2701.366 *25*	2$^+$		GHIJ M	Jπ: 1042.4γ M1 to 3$^+$; 1754.6γ to 4$^+$, 331.3γ to 1$^+$; feeding from n-capture (J^π=1$^-$) resonance state; L(d,d′)=2.
2715.4[‡] *5*			L	
2729.9[‡] *4*	3$^-$		LM	XREF: M(2731.6). Jπ: L(d,d′)=3.
2736.8[‡] *2*	2$^+$		LM	XREF: M(2741). Jπ: L(d,d′)=2.
2763.097 *18*	(1,2)$^+$		GHIJ L	XREF: H(2761.8)I(2761.8)J(2761.8). Jπ: 2764.0γ to 0$^+$; 1121.4γ M1 to 2$^+$.
2773.5[‡] *4*	3$^-$		LM	XREF: M(2775). Jπ: L(d,d′)=3.
2786.7[‡] *23*			L	
2794.16 *3*	(1,2)$^+$		GHIJKLM	XREF: K(2800). Jπ: 2794.5γ to 0$^+$; 1163.5γ M1(+E2) to 1$^+$; L(d,d′)=2.
2832.3 *25*	(1$^-$)		HIJKL	XREF: H(2833.6)I(2833.6)J(2833.6)K(2837)L(2828.2). Jπ: p′(θ) in ^{200}Hg(p,p′) (1991Ho07).

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Adopted Levels, Gammas (continued)

^{200}Hg Levels (continued)

E(level)†	Jπ&	XREF	Comments
2841.9‡ 2	3−	LM	XREF: M(2844.5). Jπ: L(d,d′)=3.
2847.51 9	1−	G	Jπ: 2847.3γ E1 to 0+.
2853.05 13	(1,2)+	GHIJ	XREF: H(2856.0)I(2856.0)J(2856.0). Jπ: 2485.3γ E2+M1 to 2+, 738.5γ to 3+, 2853.8γ to 0+.
2862.3 5	(1,2)+	GHIJ LM	XREF: H(2861.5)I(2861.5)J(2861.5)M(2865.2). Jπ: 2862.4γ to 0+; L(d,d′)=2.
2877.90 5	1+	FGHIJ l	XREF: F(2879.6)H(2879.2)I(2879.2)J(2879.2)l(2880.6). Jπ: 546.1γ (M1) to 2+; 903.5γ to 3+; direct feeding by E1 primary 5150.1γ in ^{199}Hg(n,γ)E=th:primary.
2883.5# 5	3−	lM	XREF: l(2880.6). Jπ: L(d,d′)=3.
2893.3 10	(1,2)−	F	Jπ: 5134.7γ primary M1,E2 from 0− in ^{199}Hg(n,γ)E=th:primary.
2907.3# 5	(2)+	H LM	XREF: H(2902)L(2907.6). Jπ: L(d,d′)=2.
2937.55 13	1+,2+	GHIJ M	XREF: H(2940)I(2940)J(2940). Jπ: 1054.7γ M1 to 2+; 1422.4γ and 2937.2γ to 0+; L(d,d′)=2.
2953# 1	(2)+	HIJK M	XREF: H(2949.9)I(2949.9)J(2949.9)K(2948). Jπ: L(d,d′)=2.
2959.93 11	1−	G M	Jπ: 2960.2γ E1 to 0+ and 1366.8γ to 2+.
2978.213 21	1+	FGHIJ	XREF: F(2979.5)H(2979.3)I(2979.3)J(2979.3). Jπ: 851.36γ M1+E2 to 2+, 1408.0γ E2+M1 to 1+, 1121.4γ (M1) to 0+; direct feeding by primary E1 5050.3γ in ^{199}Hg(n,γ)E=th:primary.
2995.2# 8	(2)+	K M	XREF: K(2989). Jπ: L(d,d′)=2.
3029.2@ 21		HIJ	
3043.1@ 7		HIJ	
3053.32 8	1+	FGHIJ	XREF: F(3055.0)H(3055.6)I(3055.6)J(3055.6). Jπ: 1322.4γ M1 to 2+, 1538.2γ to 0+; direct feeding by primary E1 4974.7γ in ^{199}Hg(n,γ)E=th:primary.
3062.6 10	(2)+	HIJK M	XREF: H(3063.9)I(3063.9)J(3063.9)K(3061)M(3063.2). Jπ: L(d,d′)=2.
3073.823 25	1+	FGHIJ M	XREF: F(3075.5)H(3076.3)I(3076.3)J(3076.3). Jπ: 1503.2γ E2(+M1) to 1+, 3074.2γ (M1) to 0+; direct feeding by primary E1 4954.2γ in ^{199}Hg(n,γ)E=th:primary.
3104.9# 5	(2)+	HIJK M	XREF: H(3106)I(3106)J(3106)K(3097). Jπ: L(d,d′)=2.
3120.9d 3	10+	OP	Jπ: 977.1γ (E1) to 9−, 94.2γ E2 from 12+ level.
3123.0b 4	12−	OP	Jπ: 600.3γ E2 to 10−; band structure.
3131.4# 5	(2)+	HIJ M	XREF: H(3132.4)I(3132.4)J(3132.4). Jπ: L(d,d′)=2.
3142# 5	3−	M	Jπ: L(d,d′)=3.
3171.1# 5	3−	K M	XREF: K(3169). Jπ: L(d,d′)=3.
3181.4@ 9	(2)+	HIJ M	XREF: M(3182). Jπ: L(d,d′)=2.
3186.34 3	1+	FG	XREF: F(3187.3). Jπ: 1476.6γ M1+E2 to 1+, 3185.8γ (M1) to 0+; direct feeding by primary E1 4842.4γ in ^{199}Hg(n,γ)E=th:primary.
3199.9@ 21		HIJ	
3212.7# 9	3−	M	Jπ: L(d,d′)=3.

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Adopted Levels, Gammas (continued)

^{200}Hg Levels (continued)

E(level)[†]	J^{π}[&]	$T_{1/2}$	XREF	Comments
3215.2[d] 3	12^{+}	1.0 ns 3	OP	J^{π}: 573.5γ E1 to 11^{-}; band structure. $T_{1/2}$: from 397γ-498γ(Δt) centroid-shift method in 2021Su02.
3216.84 19	$(2)^{+}$		FGHIJ	XREF: F(3217.9)H(3220)I(3220)J(3220). J^{π}: 1557.7γ M1+E2 to 3^{+}, 1100.3γ to 0^{+}.
3228.6 14	$(1)^{+}$		F HIJ M	XREF: F(3230.0)M(3225). J^{π}: 4799.7γ (E1) primary from 0^{-} in ^{199}Hg(n,γ); L(d,d′)=2.
3242[#] 2	3^{-}		M	J^{π}: L(d,d′)=3.
3259.1[@] 18	$(2)^{+}$		HIJ M	XREF: M(3256.1). J^{π}: L(d,d′)=2.
3269.43 15	1^{+}		FGHIJ	XREF: F(3270.8)H(3272.2)I(3272.2)J(3272.2). J^{π}: 2901.3γ E2(+M1) to 2^{+}, 3269.4γ (M1) to 0^{+}; direct feeding by primary E1 4758.9γ in ^{199}Hg(n,γ)E=th:primary.
3288.93 10	1^{+}		FGHIJ	XREF: F(3290.5)H(3291.8)I(3291.8)J(3291.8). J^{π}: 1557.7γ M1(+E2) to 2^{+}, 3288.9γ (M1) to 0^{+}; direct feeding by primary E1 4739.2γ in ^{199}Hg(n,γ)E=th:primary.
3304[#] 1	3^{-}		M	J^{π}: L(d,d′)=3.
3324[@] 6	$(2)^{+}$		HIJ M	J^{π}: L(d,d′)=2.
3339.1[@] 11			HIJ	
3353.05 13	1^{+}		FGHIJ	XREF: H(3354.1)I(3354.1)J(3354.1). J^{π}: 1163.5γ M1+E2 to 1^{+}, 1838.1γ to 0^{+}; direct feeding by primary E1 4675.5γ in ^{199}Hg(n,γ)E=th:primary.
3371.3[@] 13	$(2)^{+}$		HIJ M	XREF: M(3372.1). J^{π}: L(d,d′)=2.
3387.1[@] 22	$(2)^{+}$		HIJ M	XREF: M(3384.2). J^{π}: L(d,d′)=2.
3398.1[c] 4	13^{-}		P	J^{π}: 756.6γ E2 to 11^{-}; band structure.
3402.7[@] 22	$(0)^{+}$		HIJ M	XREF: M(3404). J^{π}: L(d,d′)=2 from $J^{\pi}=2^{+}$.
3414.7[@] 9	$(2)^{+}$		HIJ M	XREF: M(3411). J^{π}: L(d,d′)=2.
3420.8[#] 7	3^{-}		M	J^{π}: L(d,d′)=3.
3434[#] 1	3^{-}		M	J^{π}: L(d,d′)=3.
3443? 6			HIJ	
3452.98 8	$(1)^{+}$		FG	XREF: F(3454.3). J^{π}: 1811.2γ to 2^{+}, 2432.7γ to 0^{+}; direct feeding by primary E1 4575.4γ in ^{199}Hg(n,γ)E=th:primary.
3460.3[@] 18			HIJ	
3477? 4			HIJ	
3492.45 10	1^{+}		FG	XREF: F(3491.9). J^{π}: 2462.6γ to 0^{+}; 901.69γ to 1^{-}; direct feeding by primary E1 4537.8γ in ^{199}Hg(n,γ)E=th:primary.
3513.0[@] 18	$(2)^{+}$		HIJ M	J^{π}: L(d,d′)=2.
3529[#] 9	$(3)^{-}$		M	J^{π}: L(d,d′)=3.
3537.4 19			HIJ	
3541[#] 1	$(3)^{-}$		M	J^{π}: L(d,d′)=3.
3547[#] 1	$(2)^{+}$		M	J^{π}: L(d,d′)=2.
3555.7 17			HIJ	
3559[#] 1	$(3)^{-}$		M	J^{π}: L(d,d′)=3.
3569.5 16	1^{+}		FG M	XREF: F(3570.9)M(3567.7). J^{π}: L(d,d′)=2 from $J^{\pi}=2^{+}$; direct feeding by primary E1 4458.8γ in ^{199}Hg(n,γ)E=th:primary.

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Adopted Levels, Gammas (continued)

^{200}Hg Levels (continued)

E(level)[†]	J$^{\pi}$[&]	XREF	Comments
3576.6[@] 16		HIJ	
3584.9[#] 9	(2)$^{+}$	HIJ M	XREF: H(3588)I(3588)J(3588). J$^{\pi}$: L(d,d′)=2.
3606[#] 1	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3611.8[d] 4	14^{+}	OP	J$^{\pi}$: 396.5γ E2 to 12^{+}; band structure.
3619[#] 1	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3637[#] 1	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3644.3[@] 8		HIJ	
3655.06 5	(1)$^{+}$	FGHIJ	XREF: F(3657.4)H(3658.6)I(3658.6)J(3658.6). J$^{\pi}$: 1163.5γ (M1+E2) to (1,2)$^{+}$, 1879.3γ to 3^{+}, 2139.7γ to 0^{+}; direct feeding by primary E1 4372.3γ in ^{199}Hg(n,γ)E=th:primary.
3673.0 5	14^{+}	P	J$^{\pi}$: 457.8γ E2 to 12^{+}.
3676[#] 1	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3684.8 14		HIJ	
3695[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3702?[#] 1	(2)$^{+}$	HIJ M	XREF: H(3702.6)I(3702.6)J(3702.6). J$^{\pi}$: L(d,d′)=2.
3710[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3722[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3732[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3743[#] 1	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3764[#] 1	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3774[#] 1	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3782 5		HIJ	
3790[#] 2	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3797[#] 2	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3808[#] 1	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3826.7 13	(2)$^{+}$	HIJ M	J$^{\pi}$: L(d,d′)=2.
3840[#] 1	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3872.9 4	(14^{+})	P	J$^{\pi}$: 261.1γ (M1) to 14^{+} and 474.8γ (E1) to 13^{-}.
3892[#] 2	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3899[#] 2	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3918[#] 2	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3930[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
3961[#] 2	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3984[#] 2	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
3990[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
4000[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
4018[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
4025.3[b] 7	14^{-}	P	J$^{\pi}$: 902.3γ E2 to 12^{-}; band structure.
4027[#] 3	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
4094.6 5	(15)	P	J$^{\pi}$: 482.9γ to 14^{+}.
4114[#] 3	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
4122[#] 3	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
4134[#] 3	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.
4142[#] 2	(3)$^{-}$	M	J$^{\pi}$: L(d,d′)=3.
4159[#] 3	(2)$^{+}$	M	J$^{\pi}$: L(d,d′)=2.

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Adopted Levels, Gammas (continued)

^{200}Hg Levels (continued)

E(level)[†]	J^{π}[&]	XREF	Comments
4196.0[d] *5*	16^+	P	J^{π}: 584.2γ E2 to 14^+; band structure.
4296.6 *5*	16^+	P	J^{π}: 684.9γ E2 to 14^+.
4443.9[c] *4*	15^-	P	J^{π}: 1045.9γ E2 to 13^-; band structure.
4541.1 *4*	16^+	P	J^{π}: 345.1γ M1 to 16^+; 929.2γ E2 to 14^+.
4919.1[d] *5*	18^+	P	J^{π}: 622.6γ E2 and 723.0γ E2 to 16^+; band structure.
4928.2 *7*	$(17,18^+)$	P	J^{π}: 631.6γ to 16^+ level.
5181.6 *5*	18^+	P	J^{π}: 885.0γ E2 and 985.7γ E2 to 16^+.
5260.0[c] *5*	(17^-)	P	J^{π}: 718.7γ (E1) to 16^+, 816.4γ to 15^-; band structure.
5344.2 *6*	18^+	P	J^{π}: 803.1γ E2 to 16^+.
5568.3[c] *5*	(19^-)	P	J^{π}: 308.3γ E2 to (17^-).
5661.6 *4*	(1^-)	R	
5915.8[d] *6*	20^+	P	J^{π}: 996.7γ E2 to 18^+; band structure.
6162.2[c] *6*	(21^-)	P	J^{π}: 593.9γ E2 to (19^-).

[†] From a least-squares fit to Eγ, unless otherwise stated.
[‡] From ^{202}Hg(p,t).
[#] From ^{200}Hg(d,d′).
[@] From ^{199}Hg(n,γ)E=175.1 eV res.
[&] From deduced γ-ray transition multipolarities and decay pattern, unless otherwise stated.
[a] Band(A): g.s. band.
[b] Band(B): $\nu(p_{3/2}^{-1},i_{13/2}^{-1})$ band (σ=0).
[c] Band(C): $\nu(p_{3/2}^{-1},i_{13/2}^{-1})$ band (σ=1) at low spin and configuration=$\nu(p_{3/2}^{-1},i_{13/2}^{-3})$ at high spin.
[d] Band(D): $\nu(i_{13/2}^{-2})$ band.

Adopted Levels, Gammas (continued)

$\gamma(^{200}Hg)$

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult. [‡]	δ [†]	α [d]	Comments
367.943	2^+	367.942 *10*	100	0.0	0^+	E2		0.0594 *8*	α(K)=0.0388 *5*; α(L)=0.01553 *22*; α(M)=0.00389 *5* α(N)=0.000970 *14*; α(O)=0.0001694 *24*; α(P)=5.08×10^{-6} *7* B(E2)(W.u.)=24.56 *22* Mult.: α(K)exp=0.0395 *8* (1961Le17), 0.0402 *14* (1962Ja10), 0.0400 *25* (1962Va10) and α(K)exp=0.036 *7* (1974Br02); $\gamma(\theta)$ in 1981He10.
947.243	4^+	579.300 *17*	100	367.943	2^+	E2		0.01905 *27*	α(K)=0.01424 *20*; α(L)=0.00365 *5*; α(M)=0.000888 *12* α(N)=0.0002217 *31*; α(O)=3.99×10^{-5} *6*; α(P)=1.891×10^{-6} *26* B(E2)(W.u.)=38.2 *17* Mult.: α(K)exp=0.014 *4* (1974Br02) and 0.016 *2* (1965Sa02); $\gamma\gamma(\theta)$ in 1971Ha09,1965Sa02,1989Ah01.
1029.348	0^+	661.36 *3*	100	367.943	2^+	E2		0.01416 *20*	α(K)=0.01085 *15*; α(L)=0.002524 *35*; α(M)=0.000609 *9* α(N)=0.0001520 *21*; α(O)=2.76×10^{-5} *4*; α(P)=1.439×10^{-6} *20* B(E2)(W.u.)=8 *4* Mult.: α(K)exp=0.0102 *14* (1974Br02) and 0.023 *6* (1965Sa02); $\gamma\gamma(\theta)$ in 1971Ha09,1989Ah01.
		(1029.348 *9*)		0.0	0^+	E0			E_γ: From level energy. Mult.: From 1987Su15; ce(K)(1029.3)/ce(K)(886.2)=0.028 *3* (1987Su15).
1254.101	2^+	224.750 *6*	0.37 *4*	1029.348	0^+	[E2]		0.264 *4*	α(K)=0.1276 *18*; α(L)=0.1021 *14*; α(M)=0.0263 *4* α(N)=0.00653 *9*; α(O)=0.001109 *16*; α(P)=1.603×10^{-5} *22* B(E2)(W.u.)=10.2 *24*
		306.863 *11*	0.24 *3*	947.243	4^+	[E2]		0.0996 *14*	α(K)=0.0597 *8*; α(L)=0.0300 *4*; α(M)=0.00760 *11* α(N)=0.001892 *26*; α(O)=0.000327 *5*; α(P)=7.70×10^{-6} *11* B(E2)(W.u.)=1.4 *4*
		886.20 *4*	100 *8*	367.943	2^+	E2+M1	−1.79 *17*	0.0108 *5*	α(K)=0.0087 *4*; α(L)=0.00158 *6*; α(M)=0.000370 *15* α(N)=9.3×10^{-5} *4*; α(O)=1.73×10^{-5} *7*; α(P)=1.18×10^{-6} *6* B(M1)(W.u.)=0.0015 *4*; B(E2)(W.u.)=2.2 *5* Mult.: From α(K)exp=0.0093 *3* (1987Su15) and 0.0081 *11* (1974Br02); $\gamma\gamma(\theta)$ in 2011Be36, 1989Ah01 and 1971Ha09. δ: From δ=−1.72 *12* (2011Be36), −2.20 *+16−5* (1989Ah01) and 2.8 *+13−8* (1971Ha09) using $\gamma\gamma(\theta)$, and α(K)exp=0.0093 *3* (1987Su15) and 0.0081 *11* (1974Br02), and the briccmixing program.
		1254.14 *10*	45 *4*	0.0	0^+	E2		0.00391 *5*	α(K)=0.00318 *4*; α(L)=0.000552 *8*; α(M)=0.0001290 *18* α(N)=3.23×10^{-5} *5*; α(O)=6.02×10^{-6} *8*; α(P)=4.15×10^{-7} *6*; α(IPF)=9.75×10^{-6} *14* B(E2)(W.u.)=0.23 *5* Mult.: α(K)exp=0.0033 *7* (1974Br02) and 0.0033 *11* in ^{200}Tl ε decay; A_2=0.27 *5* (1984Kh02).
1515.178	0^+	(485.830 *13*)		1029.348	0^+	E0			E_γ: From level energy differences.

$^{200}_{80}Hg_{120}$-9

$\gamma(^{200}$Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ[†]	α[d]	Comments
									Mult.: From 1987Su15; ce(K)(485.6)/ce(K)(886.2)=0.046 *5* (1987Su15).
1515.178	0^+	1147.20 *8*	100	367.943	2^+	E2		0.00463 *6*	α(K)=0.00375 *5*; α(L)=0.000668 *9*; α(M)=0.0001568 *22* α(N)=3.92×10^{-5} *5*; α(O)=7.30×10^{-6} *10*; α(P)=4.91×10^{-7} *7*; α(IPF)=9.74×10^{-7} *14* Mult.: α(K)exp=0.0041 *6* (1974Br02); $\gamma\gamma(\theta)$ in 1989Ah01.
		(1515.178 *9*)		0.0	0^+	E0			E_γ: From level energy. Mult.: From 1987Su15; ce(K)(1515.0)/ce(K)(886.2)=0.068 *3* (1987Su15).
1570.279	1^+	316.176 *8*	1.20 *8*	1254.101	2^+	M1(+E2)		0.20 *11*	α(K)=0.16 *10*; α(L)=0.035 *8*; α(M)=0.0084 *16* α(N)=0.0021 *4*; α(O)=0.00038 *9*; α(P)=2.2×10^{-5} *15* Mult.: α(K)exp=0.33 *15* (1974Br02).
		540.948 *16*	10.5 *7*	1029.348	0^+	M1		0.0745 *10*	α(K)=0.0614 *9*; α(L)=0.01008 *14*; α(M)=0.002340 *33* α(N)=0.000587 *8*; α(O)=0.0001111 *16*; α(P)=8.57×10^{-6} *12* Mult.: α(K)exp=0.064 *10* (1974Br02).
		1202.35 *7*	40 *4*	367.943	2^+	M1+E2	−0.43 *4*	0.00873 *18*	α(K)=0.00721 *15*; α(L)=0.001162 *23*; α(M)=0.000269 *5* α(N)=6.75×10^{-5} *13*; α(O)=1.277×10^{-5} *26*; α(P)=9.87×10^{-7} *21*; α(IPF)=6.66×10^{-6} *12* Mult.: From α(K)exp=0.0071 *13* (1974Br02); $\gamma\gamma(\theta)$ (2011Be36,1989Ah01). δ: From 2011Be36. Other: +0.16 *5* (1989Ah01).
		1570.45 *15*	100 *11*	0.0	0^+	M1		0.00501 *7*	α(K)=0.00404 *6*; α(L)=0.000641 *9*; α(M)=0.0001483 *21* α(N)=3.72×10^{-5} *5*; α(O)=7.05×10^{-6} *10*; α(P)=5.52×10^{-7} *8*; α(IPF)=0.0001423 *20* Mult.: α(K)exp=0.0030 *4* (1974Br02).
1573.667	2^+	319.566 *15*	0.20 *3*	1254.101	2^+	(M1+E2)		0.20 *11*	α(K)=0.15 *10*; α(L)=0.034 *8*; α(M)=0.0081 *16* α(N)=0.0020 *4*; α(O)=0.00037 *9*; α(P)=2.1×10^{-5} *14* Mult.: α(K)exp=0.31 *21* (1987Su15).
		544.21 *7*	0.24 *5*	1029.348	0^+				
		626.52 *10*	0.32 *10*	947.243	4^+				
		1205.75 *7*	100 *10*	367.943	2^+	M1+E2	+0.252 *19*	0.00917 *14*	α(K)=0.00758 *11*; α(L)=0.001217 *18*; α(M)=0.000282 *4* α(N)=7.06×10^{-5} *10*; α(O)=1.338×10^{-5} *20*; α(P)=1.040×10^{-6} *16*; α(IPF)=7.43×10^{-6} *11* Mult.: From α(K)exp=0.0077 *17* (1987Su15), 0.0088 *17* (1974Br02) and 0.0065 *7* (1965Sa02); $\gamma\gamma(\theta)$ in 2011Be36,1989Ah01,1971Ha09,1957Li39. δ: From +0.26 *2* (2011Be36), +0.31 *3* (1989Ah01), −0.27 *+2−3* (1971Ha09) and −0.24 *1* (1957Li39) using $\gamma\gamma(\theta)$, and α(K)exp=0.0077 *17* (1987Su15), 0.0088 *17* (1974Br02) and the briccmixing program. The sign of δ is from 2011Be36.
		1573.6[#] *10*	0.17[#] *9*	0.0	0^+	[E2]		0.00264 *4*	α(K)=0.002105 *30*; α(L)=0.000346 *5*; α(M)=8.03×10^{-5} *11*

$^{200}_{80}$Hg$_{120}$-10

Adopted Levels, Gammas (continued)

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	δ†	α[d]	Comments
									α(N)=2.009×10^{-5} *28*; α(O)=3.77×10^{-6} *5*; α(P)=2.73×10^{-7} *4*; α(IPF)=8.93×10^{-5} *13*
1593.428	2$^+$	339.40	0.60 *30*	1254.101	2$^+$	M1(+E0)			Mult.: α(K)exp=0.20 *8* (1987Su15).
		564.19 *5*	0.50[c] *5*	1029.348	0$^+$				
		646.17 *7*	0.25[c] *5*	947.243	4$^+$				
		1225.44 *8*	100 *8*	367.943	2$^+$	M1+E2(+E0)	−2.48 *+16−32*	0.00479 *15*	α(K)=0.00391 *13*; α(L)=0.000667 *19*; α(M)=0.000156 *4* α(N)=3.90×10^{-5} *11*; α(O)=7.30×10^{-6} *21*; α(P)=5.18×10^{-7} *18*; α(IPF)=7.06×10^{-6} *15* Mult.: From α(K)exp=0.0043 *6* (1965Sa02), 0.0078 *10* (1974Br02) and 0.0068 *14* (1987Su15); $\gamma\gamma(\theta)$ (2011Be36,1989Ah01,1971Ha09). δ: From 1989Ah01. Others: 2.2 *+3−4* (1971Ha09) and −0.09 *15* (2011Be36).
		1593.18 *18*	1.1[c] *7*	0.0	0$^+$				E_γ: From ^{200}Au β^- decay (48.4 min).
1630.900	1$^+$	115.714 *9*	2.2 *6*	1515.178	0$^+$				
		376.79 *2*	0.35 *8*	1254.101	2$^+$				
		601.48 *5*	0.42 *8*	1029.348	0$^+$				
		1262.96 *8*	100 *9*	367.943	2$^+$	M1+E2	+0.12 *5*	0.00838 *13*	α(K)=0.00692 *11*; α(L)=0.001108 *17*; α(M)=0.000256 *4* α(N)=6.42×10^{-5} *10*; α(O)=1.218×10^{-5} *19*; α(P)=9.50×10^{-7} *15*; α(IPF)=1.796×10^{-5} *27* Mult.: α(K)exp=0.0062 *7* in 1974Br02 and $\gamma\gamma(\theta)$ in 2011Be36,1989Ah01. δ: From $\gamma\gamma(\theta)$ in 2011Be36. Other: +0.053 *33* in 1989Ah01.
		1630.7 *4*	8.6 *19*	0.0	0$^+$	(M1)		0.00461 *6*	α(K)=0.00367 *5*; α(L)=0.000583 *8*; α(M)=0.0001347 *19* α(N)=3.38×10^{-5} *5*; α(O)=6.41×10^{-6} *9*; α(P)=5.02×10^{-7} *7*; α(IPF)=0.0001767 *25* Mult.: α(K)exp>0.0018 (1974Br02).
1641.447	2$^+$	387.345 *9*	4.8 *3*	1254.101	2$^+$	M1(+E0)			α(K)=0.1486 *21*; α(L)=0.0246 *4*; α(M)=0.00572 *8*; α(N+..)=0.001728 *25* α(N)=0.001436 *21*; α(O)=0.000272 *4*; α(P)=2.09×10^{-5} *3* Mult.: α(K)exp=0.18 *2* (1987Su15) and 0.12 *2* in ^{200}Tl ε decay.
		612.12 *3*	7.5 *6*	1029.348	0$^+$	E2		0.01681 *24*	α(K)=0.01271 *18*; α(L)=0.00312 *4*; α(M)=0.000757 *11* α(N)=0.0001890 *26*; α(O)=3.41×10^{-5} *5*; α(P)=1.686×10^{-6} *24* Mult.: α(K)exp=0.011 *3* in ^{200}Tl ε decay.
		694.14 *5*	1.6 *3*	947.243	4$^+$				
		1273.43 *10*	100 *9*	367.943	2$^+$	M1(+E2)	+0.02 *3*	0.00828 *12*	α(K)=0.00683 *10*; α(L)=0.001093 *15*; α(M)=0.0002527

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f	Mult.[‡]	δ[†]	α[d]	Comments
									35 α(N)=6.33×10^{-5} *9*; α(O)=1.201×10^{-5} *17*; α(P)=9.38×10^{-7} *13*; α(IPF)=2.032×10^{-5} *29* Mult.: α(K)exp=0.0040 *9* (1987Su15) and 0.0058 *8* (1974Br02); $\gamma\gamma(\theta)$ in 2011Be36,1989Ah01,1971Ha09. δ: From $\gamma\gamma(\theta)$ in 2011Be36. Others: +0.047 *+29−30* in 1989Ah01 and −0.01 *4* in 1971Ha09.
1659.010	3$^+$	404.94 *4*	1.8 *3*	1254.101	2$^+$				
		711.70 *5*	45 *6*	947.243	4$^+$	M1(+E2)		0.024 *12*	α(K)=0.020 *10*; α(L)=0.0035 *14*; α(M)=8.2×10^{-4} *32* α(N)=2.0×10^{-4} *8*; α(O)=3.8×10^{-5} *16*; α(P)=2.7×10^{-6} *15* I_{γ}: From ^{200}Tl ε decay. Mult.: From $\gamma(\theta)$ in ^{200}Hg(n,n′) and α(K)exp=0.030 *5* in ^{200}Tl ε decay.
		1291.11[#] *11*	100[#] *9*	367.943	2$^+$	M1(+E2)		0.0059 *21*	α(K)=0.0048 *18*; α(L)=7.9×10^{-4} *27*; α(M)=1.8×10^{-4} *6* α(N)=4.6×10^{-5} *15*; α(O)=8.6×10^{-6} *30*; α(P)=6.5×10^{-7} *26*; α(IPF)=2.0×10^{-5} *5* Mult.: From $\gamma(\theta)$ in ^{200}Hg(n,n′).
1706.73	6$^+$	759.50[a] *10*	100[a]	947.243	4$^+$	E2		0.01053 *15*	B(E2)(W.u.)=46 *4* α(K)=0.00823 *12*; α(L)=0.001757 *25*; α(M)=0.000420 *6* α(N)=0.0001050 *15*; α(O)=1.920×10^{-5} *27*; α(P)=1.089×10^{-6} *15* Mult.: $\gamma(\theta)$ in ^{198}Pt(α,2nγ) and DCO in ^{198}Pt(^{9}Be,α3nγ).
1718.307	1$^+$	76.857 *4*	9.1 *26*	1641.447	2$^+$				
		144.639 *10*	4.8 *7*	1573.667	2$^+$				
		148.026 *4*	4.1 *4*	1570.279	1$^+$				
		203.135 *7*	2.44 *26*	1515.178	0$^+$	M1		1.058 *15*	α(K)=0.868 *12*; α(L)=0.1460 *20*; α(M)=0.0340 *5* α(N)=0.00852 *12*; α(O)=0.001612 *23*; α(P)=0.0001234 *17* Mult.: α(K)exp=0.76 *22* (1974Br02).
		464.214 *12*	5.7 *4*	1254.101	2$^+$	E2+M1		0.07 *4*	α(K)=0.057 *34*; α(L)=0.011 *4*; α(M)=0.0026 *9* α(N)=6.6×10^{-4} *22*; α(O)=1.2×10^{-4} *4*; α(P)=8.E−6 *5* Mult.: α(K)exp=0.05 (1974Br02).
		688.94 *3*	40 *3*	1029.348	0$^+$	M1		0.0397 *6*	α(K)=0.0327 *5*; α(L)=0.00533 *7*; α(M)=0.001237 *17* α(N)=0.000310 *4*; α(O)=5.87×10^{-5} *8*; α(P)=4.54×10^{-6} *6* Mult.: α(K)exp=0.033 *3* (1974Br02) and 0.038 *7* in ^{200}Tl ε decay.
		1350.35[#] *16*	45[#] *4*	367.943	2$^+$	M1+E2	+0.035 *31*	0.00716 *10*	α(K)=0.00589 *8*; α(L)=0.000940 *13*; α(M)=0.0002174 *31* α(N)=5.45×10^{-5} *8*; α(O)=1.034×10^{-5} *15*; α(P)=8.08×10^{-7} *11*; α(IPF)=4.16×10^{-5} *6*

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.‡	δ†	α[d]	Comments
									α(K)=0.00589 *8*; α(L)=0.000940 *13*; α(M)=0.0002174 *31* α(N)=5.45×10^{-5} *8*; α(O)=1.034×10^{-5} *15*; α(P)=8.08×10^{-7} *11*; α(IPF)=4.16×10^{-5} *6* Mult.: α(K)exp=0.0054 *10* (1974Br02); $\gamma\gamma(\theta)$ in 2011Be36 and 1989Ah01. δ: From δ=+0.03 *5* (2011Be36) and −0.036 *24* (1989Ah01) using $\gamma\gamma(\theta)$, and α(K)exp=0.0054 *10* (1974Br02), and the briccmixing program. The sign of δ is from 2011Be36.
1718.307	1^+	1718.35# *14*	100# *8*	0.0	0^+	M1		0.00411 *6*	α(K)=0.00322 *5*; α(L)=0.000511 *7*; α(M)=0.0001180 *17* α(N)=2.96×10^{-5} *4*; α(O)=5.61×10^{-6} *8*; α(P)=4.40×10^{-7} *6*; α(IPF)=0.0002294 *32* Mult.: α(K)exp>0.0027 (1974Br02) and α(K)exp=0.0034 *5* in ^{200}Tl ε decay.
1730.929	2^+	137.50 *2*	2.22	1593.428	2^+				
		160.659 *11*	0.39	1570.279	1^+				
		215.743 *13*	0.33 *8*	1515.178	0^+				
		476.815 *13*	10.8 *7*	1254.101	2^+	E2+M1(+E0)		0.07 *4*	α(K)=0.054 *32*; α(L)=0.010 *4*; α(M)=0.0024 *8* α(N)=6.1×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=7.E−6 *5* Mult.: α(K)exp=0.022 *5* (1987Su15).
		701.56 *3*	46 *4*	1029.348	0^+	(E2)		0.01246 *17*	α(K)=0.00963 *13*; α(L)=0.002156 *30*; α(M)=0.000518 *7* α(N)=0.0001295 *18*; α(O)=2.357×10^{-5} *33*; α(P)=1.276×10^{-6} *18* Mult.: α(K)exp<0.01 (1974Br02).
		783.71 *4*	16.7 *13*	947.243	4^+	E2		0.00986 *14*	α(K)=0.00774 *11*; α(L)=0.001623 *23*; α(M)=0.000388 *5* α(N)=9.68×10^{-5} *14*; α(O)=1.773×10^{-5} *25*; α(P)=1.023×10^{-6} *14* Mult.: $\gamma\gamma(\theta)$ in 2011Be36.
		1363.2 *2*	100 *12*	367.943	2^+	M1+E2	−0.32 *10*	0.00666 *23*	α(K)=0.00548 *19*; α(L)=0.000876 *29*; α(M)=0.000203 *7* α(N)=5.08×10^{-5} *17*; α(O)=9.63×10^{-6} *32*; α(P)=7.49×10^{-7} *27*; α(IPF)=4.44×10^{-5} *12* Mult.: α(K)exp=0.0064 *13* (1974Br02), 0.0056 *9* (1987Su15) and 0.0050 *8* (1965Sa02); $\gamma\gamma(\theta)$ in 2011Be36, 1989Ah01 and 1971Ha09. δ: From δ=−0.38 *15* (2011Be36) and −0.32 *+6−10* (1989Ah01) using $\gamma\gamma(\theta)$, and α(K)exp=0.0050 *8* (1965Sa02) and 0.0056 *9* (1987Su15), and the briccmixing program. The sign of δ is from 2011Be36. Other: 1.0 *+2−5* from $\gamma\gamma(\theta)$ in 1971Ha09.
1734.345	3^+	140.898 *12*	16 *5*	1593.428	2^+				
		160.659 *11*	≈2.26	1573.667	2^+				
		480.24 *3*	7.1 *8*	1254.101	2^+				

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult. ‡	δ †	α d	Comments
1734.345	3^+	787.10 *4*	100 *10*	947.243	4^+	M1+E2	+0.08 *4*	0.0280 *4*	α(K)=0.02314 *35*; α(L)=0.00376 *6*; α(M)=0.000870 *13* α(N)=0.0002182 *32*; α(O)=4.13×10^{-5} *6*; α(P)=3.20×10^{-6} *5* Mult.: From $\gamma\gamma(\theta)$ in 2011Be36 and $\gamma(\theta)$ in ^{200}Hg(n,n′γ); α(K)exp=0.020 *4* (1965Sa02). δ: From $\gamma\gamma(\theta)$ in 2011Be36.
		1366.8# *7*	85# *25*	367.943	2^+	M1(+E2)		0.0051 *18*	α(K)=0.0042 *15*; α(L)=6.9×10^{-4} *23*; α(M)=1.6×10^{-4} *5* α(N)=4.0×10^{-5} *13*; α(O)=7.5×10^{-6} *25*; α(P)=5.7×10^{-7} *22*; α(IPF)=3.8×10^{-5} *9* Mult.: From ^{200}Hg(n,n′γ) and α(K)exp=0.0050 *8* (1965Sa02).
1775.566	3^+	116.51# *15*	1.1# *3*	1659.010	3^+				α(K)=2.3 *19*; α(L)=1.3 *6*; α(M)=0.32 *16*; α(N+..)=0.09 *5* α(N)=0.08 *4*; α(O)=0.014 *6*; α(P)=0.0003 *3*
		144.639 *10*	23 *4*	1630.900	1^+	[E2]		1.264 *18*	α(K)=0.355 *5*; α(L)=0.680 *10*; α(M)=0.1771 *25* α(N)=0.0440 *6*; α(O)=0.00735 *10*; α(P)=4.63×10^{-5} *6*
		182.17# *20*	0.48# *16*	1593.428	2^+	M1+E2	1.9 *4*	0.74 *8*	α(K)=0.42 *9*; α(L)=0.236 *6*; α(M)=0.0601 *18* α(N)=0.0150 *4*; α(O)=0.00257 *6*; α(P)=5.7×10^{-5} *13* Mult.,δ: From α(K)exp=0.42 *17* in 1974Br02.
		201.91 *2*	0.8 *3*	1573.667	2^+				
		521.41 *7*	2.7 *8*	1254.101	2^+	M1+E2	1.0 *+7−4*	0.053 *14*	α(K)=0.043 *12*; α(L)=0.0080 *15*; α(M)=0.00190 *33* α(N)=0.00048 *8*; α(O)=8.8×10^{-5} *17*; α(P)=5.9×10^{-6} *17* Mult.,δ: From α(K)exp=0.043 *12* in 1974Br02.
		828.27 *4*	100 *6*	947.243	4^+	M1+E2	−0.04 *3*	0.02466 *35*	α(K)=0.02037 *29*; α(L)=0.00330 *5*; α(M)=0.000764 *11* α(N)=0.0001916 *27*; α(O)=3.63×10^{-5} *5*; α(P)=2.82×10^{-6} *4* I_γ: From ^{200}Tl ε decay. Mult.,δ: From $\gamma\gamma(\theta)$ in 2011Be36. Others ($\gamma\gamma(\theta)$): −0.043 *52* (1989Ah01), +0.07 (1965Sa02), 0.10 *2* (1971Ha09) and 1.0 *1* (1957Li39); α(K)exp=0.020 *5* (1974Br02) and 0.025 *3* (1965Sa02).
		1407.64# *11*	13.4# *12*	367.943	2^+	M1+E2	0.44 *+3−5*	0.00594 *13*	α(K)=0.00487 *11*; α(L)=0.000779 *17*; α(M)=0.000180 *4* α(N)=4.52×10^{-5} *10*; α(O)=8.56×10^{-6} *18*; α(P)=6.64×10^{-7} *15*; α(IPF)=5.93×10^{-5} *11* Mult.,δ: From $\gamma\gamma(\theta)$ in 1971Ha09; Other: α(K)exp=0.0030 *6* (1965Sa02).
1845.779	3^+	186.771 *13*	1.9 *7*	1659.010	3^+	E2+M1		0.9 *4*	α(K)=0.6 *4*; α(L)=0.203 *19*; α(M)=0.050 *7* α(N)=0.0125 *17*; α(O)=0.00222 *18*; α(P)=9.E−5 *7* Mult.: From A_2=0.31 *23* (1984Kh02), ΔJ=0 transition.
		252.356 *7*	15.8 *12*	1593.428	2^+				
		272.109 *8*	5.6 *28*	1573.667	2^+	(M1)		0.471 *7*	α(K)=0.387 *5*; α(L)=0.0647 *9*; α(M)=0.01504 *21* α(N)=0.00377 *5*; α(O)=0.0007140 *99*; α(P)=5.47×10^{-5} *8*

Adopted Levels, Gammas (continued)

γ(^{200}Hg) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[†]	α[d]	Comments
									I_γ: From ^{200}Tl ε decay. Mult.: α(K)exp=0.60 in 1974Br02.
1845.779	3^+	275.497 *12*	2.3 *4*	1570.279	1^+				
		591.66 *3*	47 *4*	1254.101	2^+	(M1+E2)		0.039 *20*	α(K)=0.031 *17*; α(L)=0.0057 *23*; α(M)=0.0013 *5* α(N)=3.4×10^{-4} *13*; α(O)=6.3×10^{-5} *25*; α(P)=4.3×10^{-6} *25* Mult.: α(K)exp=0.027 in 1974Br02.
		898.56 *7*	100 *9*	947.243	4^+	M1+E2	−0.07 *4*	0.01997 *29*	α(K)=0.01650 *24*; α(L)=0.00267 *4*; α(M)=0.000618 *9* α(N)=0.0001549 *23*; α(O)=2.94×10^{-5} *4*; α(P)=2.279×10^{-6} *34* I_γ: From ^{200}Tl ε decay. Mult.,δ: From $\gamma\gamma(\theta)$ in 2011Be36. Others: α(K)exp=0.0080 *32* (1974Br02) and 0.0070 *14* (1965Sa02).
		1477.78[#] *14*	24.5[#] *21*	367.943	2^+	[M1]		0.00577 *8*	α(K)=0.00470 *7*; α(L)=0.000748 *10*; α(M)=0.0001730 *24* α(N)=4.34×10^{-5} *6*; α(O)=8.22×10^{-6} *12*; α(P)=6.44×10^{-7} *9*; α(IPF)=9.43×10^{-5} *13*
1851.49	5^-	904.23[a] *12*	100[a]	947.243	4^+	E1		0.00277 *4*	α(K)=0.002316 *32*; α(L)=0.000349 *5*; α(M)=8.00×10^{-5} *11* α(N)=1.997×10^{-5} *28*; α(O)=3.75×10^{-6} *5*; α(P)=2.80×10^{-7} *4* Mult.: From α(K)exp<0.004 (1972Cu07) and $\gamma(\theta)$ in ^{198}Pt(α,2nγ) and DCO in ^{198}Pt(^{9}Be,α3nγ).
1856.784	0^+	138.471 *16*	≈4.0	1718.307	1^+				
		225.885 *6*	6.5 *4*	1630.900	1^+	M1		0.788 *11*	α(K)=0.646 *9*; α(L)=0.1084 *15*; α(M)=0.02523 *35* α(N)=0.00633 *9*; α(O)=0.001198 *17*; α(P)=9.17×10^{-5} *13* Mult.: α(K)exp=0.63 *20* (1974Br02).
		286.518 *13*	0.70 *11*	1570.279	1^+				
		(341.606 *14*)		1515.178	0^+	E0			E_γ: From level energy differences. Mult.: From 1987Su15; ce(K)(341.8)/ce(K)(886.2)=0.06 *2* (1987Su15).
		602.73 *7*	1.8 *4*	1254.101	2^+				
		(827.436 *14*)		1029.348	0^+	E0			E_γ: From level energy differences. Mult.: From 1987Su15; ce(K)(827.4)/ce(K)(886.2)=0.028 *10* (1987Su15).
		1488.5 *4*	100 *20*	367.943	2^+	E2		0.00289 *4*	α(K)=0.002328 *33*; α(L)=0.000387 *5*; α(M)=8.99×10^{-5} *13* α(N)=2.250×10^{-5} *32*; α(O)=4.22×10^{-6} *6*; α(P)=3.03×10^{-7} *4*; α(IPF)=6.14×10^{-5} *9* Mult.: α(K)exp=0.0028 *10* in 1974Br02; $\gamma\gamma(\theta)$ in 1989Ah01.
		(1856.784 *10*)		0.0	0^+	E0			E_γ: From level energy differences. Mult.: From 1987Su15; ce(K)(1857.4)/ce(K)(886.2)=0.19 *1* (1987Su15).
1882.861	2^+	148.500 *6*	1.9 *4*	1734.345	3^+				
		151.932 *5*	3.1 *6*	1730.929	2^+				
		164.544 *6*	4.3 *4*	1718.307	1^+				

γ(^{200}Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ[†]	α[d]	Comments
1882.861	2^+	241.425 *10*	0.78 *20*	1641.447	2^+				
		251.969 *7*	8.0 *6*	1630.900	1^+	M1+E2	0.38 *21*	0.53 *5*	α(K)=0.43 *5*; α(L)=0.0780 *23*; α(M)=0.0183 *4* α(N)=0.00460 *10*; α(O)=0.000860 *27*; α(P)=6.1×10^{-5} *7* Mult.,δ: α(K)exp=0.43 *5* in ^{200}Tl ε decay.
		289.425 *9*	14.4 *9*	1593.428	2^+	M1+E2	0.62 *12*	0.320 *22*	α(K)=0.255 *20*; α(L)=0.0498 *15*; α(M)=0.01181 *30* α(N)=0.00296 *8*; α(O)=0.000548 *17*; α(P)=3.58×10^{-5} *29* Mult.,δ: α(K)exp=0.37 *10* in 1974Br02 and 0.25 *2* in ^{200}Tl ε decay.
		309.209 *8*	6.1 *4*	1573.667	2^+	M1+E2	0.35 *23*	0.307 *34*	α(K)=0.250 *31*; α(L)=0.0437 *24*; α(M)=0.0102 *5* α(N)=0.00256 *12*; α(O)=0.000482 *27*; α(P)=3.5×10^{-5} *4* Mult.,δ: α(K)exp=0.25 *3* (^{200}Tl ε decay).
		312.613 *13*	0.89 *11*	1570.279	1^+				
		628.80 *3*	20.9 *16*	1254.101	2^+	M1(+E2)	≤0.3	0.0489 *16*	α(K)=0.0403 *13*; α(L)=0.00662 *19*; α(M)=0.00154 *4* α(N)=0.000385 *11*; α(O)=7.29×10^{-5} *20*; α(P)=5.60×10^{-6} *19* Mult.,δ: α(K)exp=0.037 *10* (1974Br02) and 0.044 *12* (1965Sa02).
		936.1[#] *4*	1.5[#] *8*	947.243	4^+	(E2)		0.00688 *10*	α(K)=0.00550 *8*; α(L)=0.001057 *15*; α(M)=0.0002500 *35* α(N)=6.25×10^{-5} *9*; α(O)=1.154×10^{-5} *16*; α(P)=7.23×10^{-7} *10* Mult.: From α(K)exp=0.0094 in 1974Br02.
		1514.90[#] *10*	100[#] *7*	367.943	2^+	M1+E2(+E0)	+0.10 *4*	0.00542 *8*	α(K)=0.00440 *6*; α(L)=0.000699 *10*; α(M)=0.0001617 *24* α(N)=4.05×10^{-5} *6*; α(O)=7.69×10^{-6} *11*; α(P)=6.02×10^{-7} *9*; α(IPF)=0.0001121 *16* Mult.: From α(K)exp=0.0070 *17* in 1974Br02 and 0.0042 *5* (1965Sa02); $\gamma\gamma(\theta)$ in 2011Be36,1989Ah01,1971Ha09,1965Sa02. δ: From $\gamma\gamma(\theta)$ in 2011Be36; Others: −0.14 *4* in 1971Ha09, −0.25 in 1965Sa02 and +0.120 *+43−47* in 1989Ah01.
1962.62	7^-	111.12[a] *12*	2.6[a] *8*	1851.49	5^-	E2		3.58 *5*	α(K)=0.560 *8*; α(L)=2.257 *34*; α(M)=0.590 *9* α(N)=0.1463 *22*; α(O)=0.0243 *4*; α(P)=8.93×10^{-5} *13* Mult.: $\gamma(\theta)$ in ^{198}Pt(α,2nγ).
		255.87[a] *8*	100[a] *8*	1706.73	6^+	E1		0.0405 *6*	α(K)=0.0333 *5*; α(L)=0.00558 *8*; α(M)=0.001295 *18* α(N)=0.000322 *5*; α(O)=5.89×10^{-5} *8*; α(P)=3.68×10^{-6} *5* Mult.: $\gamma(\theta)$ in ^{198}Pt(α,2nγ); α(K)exp=0.033 *23* (1972Cu07).
1972.281	$(2)^+$	241.356 *12*	0.42 *15*	1730.929	2^+				
		253.991 *15*	0.33 *10*	1718.307	1^+				
		313.23 *3*	0.33 *8*	1659.010	3^+				

$^{200}_{80}$Hg$_{120}$-16

Adopted Levels, Gammas (continued)

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ[†]	α[d]	Comments
1972.281	$(2)^+$	330.84 *3*	≈0.50	1641.447	2^+				
		341.375 *12*	1.75 *14*	1630.900	1^+				
		398.63 *2*	1.83 *25*	1573.667	2^+				
		718.04 *10*	4.2 *11*	1254.101	2^+				
		1604.50[#] *14*	100[#] *8*	367.943	2^+	M1+E2	+0.15 *4*	0.00473 *7*	α(K)=0.00379 *6*; α(L)=0.000602 *9*; α(M)=0.0001390 *21* α(N)=3.48×10^{-5} *5*; α(O)=6.61×10^{-6} *10*; α(P)=5.18×10^{-7} *8*; α(IPF)=0.0001602 *24* Mult.: From α(K)exp=0.0032 *8* in 1974Br02 and 0.007 *3* (1965Sa02); $\gamma\gamma(\theta)$ in 2011Be36 and 1989Ah01. δ: From $\gamma\gamma(\theta)$ in 2011Be36; Other: +0.87 *+18−14* in 1989Ah01.
1974.339	$(3)^+$	243.411 *7*	19.2 *15*	1730.929	2^+				
		720.21 *5*	60 *5*	1254.101	2^+				
		1027.11[#] *20*	100[#] *30*	947.243	4^+	M1(+E2)		0.010 *4*	α(K)=0.008 *4*; α(L)=0.0014 *5*; α(M)=3.2×10^{-4} *12* α(N)=8.0×10^{-5} *30*; α(O)=1.5×10^{-5} *6*; α(P)=1.1×10^{-6} *5* Mult.: $\gamma(\theta)$ in ^{200}Hg(n,n$'\gamma$).
2048.92	6^-	197.4[@] *5*	11.3[@] *18*	1851.49	5^-	M1		1.146 *18*	α(K)=0.940 *15*; α(L)=0.1582 *25*; α(M)=0.0368 *6* α(N)=0.00923 *15*; α(O)=0.001747 *27*; α(P)=0.0001337 *21* Mult.: $\gamma\gamma(\theta)$ in ^{198}Pt(^{9}Be,α3nγ).
		342.3[@] *3*	100[@] *8*	1706.73	6^+	E1		0.02046 *29*	α(K)=0.01688 *24*; α(L)=0.00275 *4*; α(M)=0.000637 *9* α(N)=0.0001584 *22*; α(O)=2.93×10^{-5} *4*; α(P)=1.925×10^{-6} *27* Mult.: $\gamma\gamma(\theta)$ in ^{198}Pt(^{9}Be,α3nγ); α(K)exp<0.02 (1977Gu05).
2061.257	1^+	204.477 *8*	0.14 *1*	1856.784	0^+				
		330.303 *16*	0.07 *1*	1730.929	2^+				
		342.939 *12*	0.24 *2*	1718.307	1^+				
		419.828 *10*	1.10 *7*	1641.447	2^+	M1		0.1458 *20*	α(K)=0.1199 *17*; α(L)=0.01984 *28*; α(M)=0.00461 *6* α(N)=0.001156 *16*; α(O)=0.0002187 *31*; α(P)=1.682×10^{-5} *24* Mult.: From α(K)exp=0.12 *3* in 1974Br02.
		430.368 *10*	2.85 *18*	1630.900	1^+	M1		0.1364 *19*	α(K)=0.1123 *16*; α(L)=0.01856 *26*; α(M)=0.00431 *6* α(N)=0.001081 *15*; α(O)=0.0002046 *29*; α(P)=1.574×10^{-5} *22* Mult.: From α(K)exp=0.13 *3* in 1974Br02.
		467.86 *2*	1.00 *6*	1593.428	2^+	M1		0.1093 *15*	α(K)=0.0900 *13*; α(L)=0.01484 *21*; α(M)=0.00344 *5* α(N)=0.000864 *12*; α(O)=0.0001636 *23*; α(P)=1.259×10^{-5} *18* Mult.: From α(K)exp=0.14 *4* in 1974Br02.
		487.56 *2*	1.10 *8*	1573.667	2^+	M1(+E2)		0.063 *35*	α(K)=0.051 *30*; α(L)=0.010 *4*; α(M)=0.0023 *8* α(N)=5.7×10^{-4} *20*; α(O)=1.1×10^{-4} *4*; α(P)=7.E−6 *4* Mult.: From α(K)exp>0.048 in 1974Br02.
		490.95 *2*	0.70 *4*	1570.279	1^+	E2+M1	≈1.2	≈0.0561	α(K)≈0.0444; α(L)≈0.00888; α(M)≈0.002110 α(N)≈0.000528; α(O)≈9.75×10^{-5}; α(P)≈6.12×10^{-6} Mult.,δ: From α(K)exp=0.044 in 1974Br02.

$^{200}_{80}Hg_{120}$-17

Adopted Levels, Gammas (continued)

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. ‡	δ †	α d	Comments
2061.257	1+	546.10 2	0.43 3	1515.178	0+	M1		0.0727 10	α(K)=0.0599 8; α(L)=0.00983 14; α(M)=0.002282 32 α(N)=0.000572 8; α(O)=0.0001083 15; α(P)=8.36×10^{-6} 12 Mult.: From α(K)exp=0.094 35 in 1974Br02.
		807.20 5	1.73 12	1254.101	2+	M1(+E2)	0.6 6	0.022 6	α(K)=0.018 5; α(L)=0.0030 7; α(M)=0.00070 15 α(N)=0.00017 4; α(O)=3.3×10^{-5} 7; α(P)=2.5×10^{-6} 7 Mult.,δ: From α(K)exp=0.018 5 in 1974Br02.
		1693.13 14	100 10	367.943	2+	M1+E2	−0.03 2	0.00424 6	α(K)=0.00334 5; α(L)=0.000530 7; α(M)=0.0001224 17 α(N)=3.07×10^{-5} 4; α(O)=5.82×10^{-6} 8; α(P)=4.57×10^{-7} 6; α(IPF)=0.0002137 30 Mult.: From α(K)exp=0.0031 4 in 1974Br02; γγ(θ) in 2011Be36 and 1989Ah01. δ: From γγ(θ) in 2011Be36; Other: +0.003 13 in 1989Ah01.
2074.335	(2)+	340.03 2	1.18 13	1734.345	3+				
		343.38 2	0.92 13	1730.929	2+				
		1706.6 3	100 16	367.943	2+				
2114.357	3+	268.49 f 3	≈3.00	1845.779	3+				
		338.75 2	21.0 17	1775.566	3+				
		380.03 2	10.0 13	1734.345	3+				
		383.437 11	32 3	1730.929	2+				
		483.34 9	≈7	1630.900	1+				
		520.91 5	21 4	1593.428	2+				
		1167.1 # 3	100 # 33	947.243	4+	M1(+E2)		0.0074 29	α(K)=0.0061 24; α(L)=1.0×10^{-3} 4; α(M)=2.3×10^{-4} 8 α(N)=5.8×10^{-5} 21; α(O)=1.1×10^{-5} 4; α(P)=8.2×10^{-7} 35; α(IPF)=2.4×10^{-6} 6 Mult.: α(K)exp=0.013 4 in ^{200}Tl ε decay.
		1746.40 # 18	54 # 6	367.943	2+	M1(+E2)		0.0031 9	α(K)=0.0024 7; α(L)=3.9×10^{-4} 10; α(M)=8.9×10^{-5} 24 α(N)=2.2×10^{-5} 6; α(O)=4.2×10^{-6} 12; α(P)=3.2×10^{-7} 10; α(IPF)=0.00020 5 Mult.: α(K)exp=0.0055 13 in ^{200}Tl ε decay.
2116.549	0+	398.249 9	100 5	1718.307	1+	M1		0.1678 23	α(K)=0.1380 19; α(L)=0.02287 32; α(M)=0.00531 7 α(N)=0.001332 19; α(O)=0.0002522 35; α(P)=1.938×10^{-5} 27 Mult.: α(K)exp=0.21 4 (1974Br02).
		475.08 4	2.7 5	1641.447	2+				
		485.62 2	65 5	1630.900	1+	(M1)		0.0990 14	α(K)=0.0815 11; α(L)=0.01343 19; α(M)=0.00312 4 α(N)=0.000782 11; α(O)=0.0001481 21; α(P)=1.140×10^{-5} 16 Mult.: α(K)exp>0.056 (1974Br02).
		2116.549 12		0.0	0+	E0			E_γ: From level energy. Mult.: From 1987Su15; ce(K)(2116.8)/ce(K)(886.2)=0.035 3 (1987Su15).
2126.859	2+	281.08 2	1.48 30	1845.779	3+				

$^{200}_{80}Hg_{120}$-18

Adopted Levels, Gammas (continued)

$\gamma(^{200}$Hg) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$^\pi_f$	Mult.[‡]	δ[†]	α[d]	Comments
2126.859	2$^+$	351.27 *2*	5.7 *10*	1775.566	3$^+$				
		392.524 *17*	2.2 *3*	1734.345	3$^+$				
		395.97 *4*	1.1 *3*	1730.929	2$^+$				
		408.556 *10*	24 *3*	1718.307	1$^+$	M1		0.1567 *22*	α(K)=0.1289 *18*; α(L)=0.02135 *30*; α(M)=0.00496 *7* α(N)=0.001244 *17*; α(O)=0.0002354 *33*; α(P)=1.810×10^{-5} *25* Mult.: α(K)exp=0.18 *5* (1974Br02).
		467.86 *2*	30 *3*	1659.010	3$^+$	(M1)		0.1093 *15*	α(K)=0.0900 *13*; α(L)=0.01484 *21*; α(M)=0.00344 *5* α(N)=0.000864 *12*; α(O)=0.0001636 *23*; α(P)=1.259×10^{-5} *18*
		485.36 *2*	18 *2*	1641.447	2$^+$				
		495.93 *2*	43 *19*	1630.900	1$^+$	M1		0.0937 *13*	α(K)=0.0772 *11*; α(L)=0.01270 *18*; α(M)=0.00295 *4* α(N)=0.000739 *10*; α(O)=0.0001400 *20*; α(P)=1.078×10^{-5} *15* Mult.: α(K)exp=0.061 (1974Br02).
		533.48 *2*	24 *10*	1593.428	2$^+$	M1		0.0773 *11*	α(K)=0.0637 *9*; α(L)=0.01046 *15*; α(M)=0.002428 *34* α(N)=0.000609 *9*; α(O)=0.0001153 *16*; α(P)=8.89×10^{-6} *12* Mult.: α(K)exp>0.13 (1974Br02).
		553.18 *2*	27 *3*	1573.667	2$^+$	M1		0.0703 *10*	α(K)=0.0579 *8*; α(L)=0.00950 *13*; α(M)=0.002205 *31* α(N)=0.000553 *8*; α(O)=0.0001047 *15*; α(P)=8.08×10^{-6} *11* Mult.: α(K)exp=0.056 *20* (1974Br02).
		556.58 *2*	52 *19*	1570.279	1$^+$	M1(+E2)	≈0.4	≈0.0625	α(K)≈0.0513; α(L)≈0.00863; α(M)≈0.002008 α(N)≈0.000503; α(O)≈9.50×10^{-5}; α(P)≈7.13×10^{-6} I$_\gamma$: From ^{200}Tl ε decay. Mult.: α(K)exp=0.050 *13* (1974Br02). δ: From $\gamma\gamma(\theta)$ (1974Br02).
		872.93 *14*	38 *10*	1254.101	2$^+$				I$_\gamma$: From ^{200}Tl ε decay.
		1180.5[#] *3*	62[#] *19*	947.243	4$^+$				
		1759.15[#] *14*	100[#] *10*	367.943	2$^+$	M1(+E2)		0.0031 *8*	α(K)=0.0024 *7*; α(L)=3.8×10^{-4} *10*; α(M)=8.8×10^{-5} *24* α(N)=2.2×10^{-5} *6*; α(O)=4.2×10^{-6} *11*; α(P)=3.2×10^{-7} *10*; α(IPF)=0.00021 *5* Mult.: α(K)exp=0.0030 *6* in ^{200}Tl ε decay.
2127.934	(2,3)$^+$	352.353 *12*	4.9 *6*	1775.566	3$^+$				
		397.01 *2*	2.9 *4*	1730.929	2$^+$				
		409.63 *3*	1.6 *3*	1718.307	1$^+$				
		468.93 *2*	6.4 *13*	1659.010	3$^+$				
		486.44 *7*	1.5 *6*	1641.447	2$^+$				
		534.48 *3*	3.1 *6*	1593.428	2$^+$				
		1180.4 *4*	18 *7*	947.243	4$^+$				
		1759.3 *3*	100 *10*	367.943	2$^+$				
2135.40	8$^-$	86.5 *3*		2048.92	6$^-$				E$_\gamma$: From ^{198}Pt(^{9}Be,α3nγ). Mult.: $\gamma\gamma(\theta)$ in ^{198}Pt(^{9}Be,α3nγ).
		172.8[&] *2*	100[&] *7*	1962.62	7$^-$	M1		1.666 *24*	α(K)=1.366 *20*; α(L)=0.2302 *33*; α(M)=0.0536 *8*

Adopted Levels, Gammas (continued)

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ [†]	I_γ [†]	E_f	J^π_f	Mult. [‡]	δ [†]	α [d]	Comments
									α(N)=0.01344 *19*; α(O)=0.00254 *4*; α(P)=0.0001945 *28* Mult.: $\gamma\gamma(\theta)$ in ^{198}Pt(^{9}Be,α3nγ); α(K)exp=1.8 *4* (1977Gu05).
2143.80	9^-	181.18 [a] *8*	100 [a]	1962.62	7^-	E2		0.552 *8*	B(E2)(W.u.)=25.1 *10* α(K)=0.2146 *30*; α(L)=0.253 *4*; α(M)=0.0655 *9* α(N)=0.01627 *23*; α(O)=0.00274 *4*; α(P)=2.68×10^{-5} *4* Mult.: $\gamma\gamma(\theta)$ in ^{198}Pt(^{9}Be,α3nγ); α(L)exp=0.017 *4* (1972Cu07).
2151.35	3^-	1783.4 [b] *1*	100 [b]	367.943	2^+	D			Mult.: A_2=−0.31 *8* in 1984Kh02.
2189.477	1^+	306.618 *11*	4.2 *4*	1882.861	2^+				
		332.67 *4*	1.2 *4*	1856.784	0^+				
		455.13 *4*	2.6 *4*	1734.345	3^+				
		471.19 *3*	3.3 *5*	1718.307	1^+				
		558.61 *5*	3.5 *7*	1630.900	1^+				
		596.06 *3*	10.0 *12*	1593.428	2^+				
		615.82 *10*	≈11.4	1573.667	2^+				
		674.29 *7*	6.3 *19*	1515.178	0^+				
		935.45 *8*	49 *7*	1254.101	2^+	E2+M1		0.012 *6*	α(K)=0.010 *5*; α(L)=0.0017 *7*; α(M)=4.0×10^{-4} *15* α(N)=1.0×10^{-4} *4*; α(O)=1.9×10^{-5} *7*; α(P)=1.4×10^{-6} *7* Mult.: α(K)exp=0.0094 (1974Br02).
		1822.3 *7*	49 *19*	367.943	2^+				
		2188.7 *6*	100 *21*	0.0	0^+	M1		0.00266 *4*	α(K)=0.001757 *25*; α(L)=0.000277 *4*; α(M)=6.39×10^{-5} *9* α(N)=1.602×10^{-5} *22*; α(O)=3.04×10^{-6} *4*; α(P)=2.396×10^{-7} *34*; α(IPF)=0.000547 *8* Mult.: α(K)exp=0.0032 *10* (1974Br02).
2229.274	1^+	346.406 *14*	3.5 *4*	1882.861	2^+				
		453.60 *16*	≈1.30	1775.566	3^+				
		587.88 *4*	5.0 *7*	1641.447	2^+				
		598.35 *3*	12.2 *11*	1630.900	1^+	M1(+E2)		0.037 *20*	α(K)=0.030 *17*; α(L)=0.0055 *22*; α(M)=0.0013 *5* α(N)=3.3×10^{-4} *12*; α(O)=6.1×10^{-5} *24*; α(P)=4.2×10^{-6} *24* Mult.: α(K)exp>0.025 (1974Br02).
		635.86 *16*	≈2.59	1593.428	2^+				
		655.59 *5*	5.9 *9*	1573.667	2^+				
		659.01 *3*	27 *3*	1570.279	1^+				
		713.94 *10*	4.8 *9*	1515.178	0^+				
		975.15 *7*	100 *9*	1254.101	2^+	M1+E2	0.8 *+6−4*	0.0124 *27*	α(K)=0.0102 *23*; α(L)=0.00170 *33*; α(M)=0.00039 *7* α(N)=9.9×10^{-5} *19*; α(O)=1.9×10^{-5} *4*; α(P)=1.39×10^{-6} *32* Mult.,δ: From α(K)exp=0.0100 *23* (1974Br02).
		1861.0 *5*	10 *4*	367.943	2^+				I_γ: From ^{200}Tl ε decay.
		2229.0 *10*	4.4 *22*	0.0	0^+				I_γ: From ^{200}Tl ε decay.
2238.51	(3)	1870.56 [#] *22*	100 [#]	367.943	2^+				

Adopted Levels, Gammas (continued)

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ[†]	α[d]	Comments
2246.446	(1,2)$^+$	272.109 *8*	12.8 *9*	1974.339	(3)$^+$				
		363.72 *8*	1.6 *6*	1882.861	2$^+$				
		615.54 *4*	32 *7*	1630.900	1$^+$				
		652.91 *8*	8.2 *16*	1593.428	2$^+$				
		676.15 *3*	100 *8*	1570.279	1$^+$	M1(+E2)	≤1.2	0.033 *8*	α(K)=0.027 *7*; α(L)=0.0047 *10*; α(M)=0.00108 *21* α(N)=0.00027 *5*; α(O)=5.1×10^{-5} *11*; α(P)=3.8×10^{-6} *10* Mult.,δ: α(K)exp=0.029 *9* (1974Br02).
		992.35 *17*	53 *7*	1254.101	2$^+$				
		1879.3 *3*	≈47	367.943	2$^+$				
		2246[f] *2*		0.0	0$^+$				
2274.229	(2)$^+$	299.887 *12*	1.61 *25*	1974.339	(3)$^+$				
		301.963 *13*	1.25 *20*	1972.281	(2)$^+$				
		428.45 *3*	2.3 *3*	1845.779	3$^+$				
		498.63 *4*	3.2 *4*	1775.566	3$^+$				
		632.85 *5*	3.4 *7*	1641.447	2$^+$				
		643.29 *4*	11.1 *13*	1630.900	1$^+$				
		700.17 *15*	4.8 *18*	1573.667	2$^+$				
		703.82 *5*	22 *3*	1570.279	1$^+$				
		759.30 *11*	6.1 *11*	1515.178	0$^+$				
		1906.30[#] *18*	100[#] *9*	367.943	2$^+$	(E2)		2.02×10^{-3} *3*	α(K)=0.001488 *21*; α(L)=0.0002366 *33*; α(M)=5.47×10^{-5} *8* α(N)=1.368×10^{-5} *19*; α(O)=2.58×10^{-6} *4*; α(P)=1.925×10^{-7} *27*; α(IPF)=0.0002248 *31* Mult.: α(K)exp=0.0011 (1974Br02).
		2274.0[#] *6*	15[#] *4*	0.0	0$^+$				
2284.36	5$^-$,6,7$^-$	321.8[&] *3*	83[&] *33*	1962.62	7$^-$				
		432.8[&] *3*	100[&] *17*	1851.49	5$^-$				
2288.93	2$^+$	695.72 *20*	3.8	1593.428	2$^+$				
		718.55 *13*	8 *3*	1570.279	1$^+$				
		1034.9 *10*	18	1254.101	2$^+$				
		1341.7 *5*	66 *20*	947.243	4$^+$	(E2)		0.00346 *5*	α(K)=0.00281 *4*; α(L)=0.000479 *7*; α(M)=0.0001117 *16* α(N)=2.79×10^{-5} *4*; α(O)=5.22×10^{-6} *7*; α(P)=3.66×10^{-7} *5*; α(IPF)=2.354×10^{-5} *34* Mult.: α(K)=0.0038 *15* (1965Sa02).
		1921.1 *3*	100 *12*	367.943	2$^+$	(M1)		0.00330 *5*	α(K)=0.002435 *34*; α(L)=0.000385 *5*; α(M)=8.89×10^{-5} *12* α(N)=2.228×10^{-5} *31*; α(O)=4.23×10^{-6} *6*; α(P)=3.32×10^{-7} *5*; α(IPF)=0.000363 *5* I_γ: From ^{200}Tl ε decay. Mult.: α(K)=0.0011 *4* in ^{200}Tl ε decay.

$^{200}_{80}Hg_{120}$-21

Adopted Levels, Gammas (continued)

γ(^{200}Hg) (continued)

E$_i$(level)	J$_i^\pi$	E$_\gamma$ †	I$_\gamma$ †	E$_f$	J$_f^\pi$	Mult. ‡	α d	Comments
2288.93	2+	2289.6 7	≈34	0.0	0+			
2296.341	1+	439.52 4	0.84 21	1856.784	0+			
		577.98 6	2.1 7	1718.307	1+			
		722.2 5	2.1	1573.667	2+			
		780.96 11	3.0 7	1515.178	0+			
		1042.4 3	19 5	1254.101	2+	M1	0.01372 19	α(K)=0.01134 16; α(L)=0.001824 26; α(M)=0.000422 6 α(N)=0.0001059 15; α(O)=2.007×10^{-5} 28; α(P)=1.562×10^{-6} 22 Mult.: α(K)exp=0.012 (1974Br02).
		1266.9 6	25	1029.348	0+			
		1928.2 3	20 6	367.943	2+			
		2296.3 3	100 11	0.0	0+	M1	2.50×10^{-3} 4	α(K)=0.001559 22; α(L)=0.0002453 34; α(M)=5.66×10^{-5} 8 α(N)=1.419×10^{-5} 20; α(O)=2.69×10^{-6} 4; α(P)=2.124×10^{-7} 30; α(IPF)=0.000621 9 Mult.: α(K)exp=0.0015 5 (1974Br02).
2298.5	5−,6,7−	335.9& 3	100& 12	1962.62	7−			
		447.0& 4	47& 18	1851.49	5−			
2331.778	2+	203.832 12	1.0 3	2127.934	(2,3)+			
		270.530 12	1.17 23	2061.257	1+			
		359.48 4	1.2 3	1972.281	(2)+			
		448.91 2	18.2 15	1882.861	2+			
		475.08 4	1.7 3	1856.784	0+			
		597.41 4	5.2 8	1734.345	3+			
		600.82 4	6.2 7	1730.929	2+			
		613.55 5	4.2 8	1718.307	1+			
		690.28 6	10.0 25	1641.447	2+			
		738.5 2	≈4.2	1593.428	2+			
		761.43 12	10 4	1570.279	1+			
		1385.0 3	100 20	947.243	4+	(E2)	0.00327 5	α(K)=0.00265 4; α(L)=0.000448 6; α(M)=0.0001045 15 α(N)=2.61×10^{-5} 4; α(O)=4.89×10^{-6} 7; α(P)=3.45×10^{-7} 5; α(IPF)=3.31×10^{-5} 5 Mult.: α(K)exp=0.0040 10 (1974Br02).
		1963.5 4	43 10	367.943	2+			
2343.594	1+,2+,3+	460.76 5	2.3 6	1882.861	2+			
		497.81 2	22.1 15	1845.779	3+			
		568.04 7	3.3 10	1775.566	3+			
		1975.8 3	100 21	367.943	2+	M1(+E2)	0.0025 6	α(K)=0.0018 4; α(L)=0.00029 7; α(M)=6.7×10^{-5} 16 α(N)=1.7×10^{-5} 4; α(O)=3.2×10^{-6} 8; α(P)=2.5×10^{-7} 6; α(IPF)=0.00033 7 Mult.: α(K)exp=0.0038 16 (1974Br02).
2370.043	1+	308.801 11	0.18 2	2061.257	1+			

$\gamma(^{200}$Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ[†]	α[d]	Comments
2370.043	1^+	397.765 *14*	0.38 *5*	1972.281	$(2)^+$				
		487.12 *3*	0.68 *8*	1882.861	2^+				
		635.86 *16*	≈0.18	1734.345	3^+				
		639.11 *4*	1.04 *9*	1730.929	2^+				
		651.4 *3*	0.25 *8*	1718.307	1^+				
		710.93 *12*	0.27 *12*	1659.010	3^+				
		728.45 *7*	1.05 *10*	1641.447	2^+				
		739.05 *16*	0.53 *17*	1630.900	1^+				
		796.41 *6*	2.17 *18*	1573.667	2^+	M1		0.0273 *4*	α(K)=0.02254 *32*; α(L)=0.00366 *5*; α(M)=0.000847 *12* α(N)=0.0002124 *30*; α(O)=4.02×10^{-5} *6*; α(P)=3.12×10^{-6} *4* Mult.: α(K)exp=0.029 *8* (1974Br02).
		799.90 *18*	0.74 *22*	1570.279	1^+				
		1116[f] *1*	≈0.52	1254.101	2^+				
		2002.1 *2*	100 *10*	367.943	2^+	M1(+E2)	−0.014 *19*	0.00307 *4*	α(K)=0.002196 *31*; α(L)=0.000347 *5*; α(M)=8.01×10^{-5} *11* α(N)=2.007×10^{-5} *28*; α(O)=3.81×10^{-6} *5*; α(P)=3.00×10^{-7} *4*; α(IPF)=0.000418 *6* Mult.: α(K)exp=0.0018 *3* (1974Br02); $\gamma\gamma(\theta)$ (1989Ah01). δ: From $\gamma\gamma(\theta)$ in 1989Ah01.
		2370.0 *3*	4.3 *9*	0.0	0^+	M1		2.41×10^{-3} *3*	α(K)=0.001441 *20*; α(L)=0.0002265 *32*; α(M)=5.23×10^{-5} *7* α(N)=1.311×10^{-5} *18*; α(O)=2.488×10^{-6} *35*; α(P)=1.962×10^{-7} *27*; α(IPF)=0.000671 *9* Mult.: α(K)exp=0.0012.
2377.15	$(7)^-$	241.8[&] *3*	40[&] *20*	2135.40	8^-				
		328.3[&] *3*	60[&] *20*	2048.92	6^-				
		414.4[&] *3*	100[&] *20*	1962.62	7^-				
2388.68	$(1,2,3)^+$	414.41[f] *7*	1.2	1974.339	$(3)^+$				
		747.30 *9*	11.2 *21*	1641.447	2^+				
		818.33 *11*	19 *3*	1570.279	1^+				
		2020.5[#] *7*	100[#] *12*	367.943	2^+	M1+E2		0.0025 *6*	α(K)=0.0017 *4*; α(L)=0.00028 *6*; α(M)=6.4×10^{-5} *15* α(N)=1.6×10^{-5} *4*; α(O)=3.0×10^{-6} *7*; α(P)=2.3×10^{-7} *6*; α(IPF)=0.00035 *8* Mult.: α(K)exp=0.0018 (1974Br02).
2408.8		446.2 *4*	100	1962.62	7^-				
2411.830	$(2)^+$	182.53 *3*	3.5	2229.274	1^+				

$^{200}_{80}$Hg$_{120}$-23

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	α d	Comments
2411.830	(2)+	283.88 *3*	2.0 *6*	2127.934	(2,3)+			
		337.51 *2*	2.5 *5*	2074.335	(2)+			
		437.56 f *13*	3.0 *12*	1974.339	(3)+			
		439.52 *4*	4.0 *10*	1972.281	(2)+			
		566.15 *5*	13.0 *20*	1845.779	3+			
		677.45 *7*	28 *4*	1734.345	3+			
		780.96 *11*	14 *4*	1630.900	1+			
		818.33 *11*	32 *6*	1593.428	2+			
		896.7 *2*	10.00	1515.178	0+			
		1158.3 *7*	55 *20*	1254.101	2+			
		2044.2 *5*	100 *30*	367.943	2+			
2442.7?	1−	2442.6 *3*	100	0.0	0+	E1	1.34×10^{-3} *2*	α(K)=0.000429 *6*; α(L)=6.19×10^{-5} *9*; α(M)=1.411×10^{-5} *20* α(N)=3.53×10^{-6} *5*; α(O)=6.68×10^{-7} *9*; α(P)=5.28×10^{-8} *7*; α(IPF)=0.000831 *12* Mult.: α(K)exp=0.0002 (1974Br02).
2461.83	(1+)	743.52 *8*	12.6 *17*	1718.307	1+			
		1432.2 *2*	95 *19*	1029.348	0+	(M1)	0.00621 *9*	α(K)=0.00508 *7*; α(L)=0.000810 *11*; α(M)=0.0001873 *26* α(N)=4.69×10^{-5} *7*; α(O)=8.91×10^{-6} *12*; α(P)=6.97×10^{-7} *10*; α(IPF)=7.37×10^{-5} *10* Mult.: α(K)exp=0.0040 (1974Br02).
		2093.6 *4*	100 *21*	367.943	2+			
		2462.6 *15*	45 *19*	0.0	0+			
2491.430	(2)+	301.963 *13*	1.7 *3*	2189.477	1+			
		517.14 *7*	3.6 *10*	1974.339	(3)+			
		634.66 *10*	4.1 *12*	1856.784	0+			
		757.01 *6*	29 *3*	1734.345	3+			
		860.6 *2*	12 *4*	1630.900	1+			
		917.9 *3*	19 *5*	1573.667	2+			
		1237.1		1254.101	2+			
		2123.9 *7*	100 *21*	367.943	2+	(E2)	1.80×10^{-3} *3*	α(K)=0.001225 *17*; α(L)=0.0001919 *27*; α(M)=4.43×10^{-5} *6* α(N)=1.108×10^{-5} *16*; α(O)=2.090×10^{-6} *29*; α(P)=1.582×10^{-7} *22*; α(IPF)=0.000324 *5* Mult.: α(K)exp=0.0012 (1974Br02).
2522.70	10−	378.9@ *3*	16.9@ *16*	2143.80	9−	M1+E2	0.12 *7*	α(K)=0.10 *6*; α(L)=0.020 *6*; α(M)=0.0048 *13* α(N)=0.00120 *33*; α(O)=2.2×10^{-4} *7*; α(P)=1.3×10^{-5} *9* Mult.: $\gamma\gamma(\theta)$ in ^{198}Pt(^{9}Be,α3nγ).
		387.3@ *3*	100@ *10*	2135.40	8−	E2	0.0517 *7*	α(K)=0.0345 *5*; α(L)=0.01300 *19*; α(M)=0.00325 *5* α(N)=0.000809 *12*; α(O)=0.0001418 *20*; α(P)=4.53×10^{-6} *6* Mult.: $\gamma\gamma(\theta)$ in ^{198}Pt(^{9}Be,α3nγ); α(K)exp=0.045 *7* (1977Gu05).
2590.79	1−	2590.5 *3*	100	0.0	0+	E1	1.39×10^{-3} *2*	α(K)=0.000391 *5*; α(L)=5.63×10^{-5} *8*; α(M)=1.283×10^{-5} *18*

$^{200}_{80}Hg_{120}$-24

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ[†]	α[d]	Comments
									α(N)=3.21×10^{-6} *4*; α(O)=6.08×10^{-7} *9*; α(P)=4.81×10^{-8} *7*; α(IPF)=0.000921 *13* Mult.: α(K)exp<0.0002 (1974Br02).
2597.1	(9)	461.7[@] *3*	100[@]	2135.40	8$^-$				
2610.42	3$^-$	2610.4 *1*	100	0.0	0$^+$	(E3)		2.24×10^{-3} *3*	α(K)=0.001539 *22*; α(L)=0.000256 *4*; α(M)=5.95×10^{-5} *8* α(N)=1.490×10^{-5} *21*; α(O)=2.81×10^{-6} *4*; α(P)=2.076×10^{-7} *29*; α(IPF)=0.000371 *5* B(E3)(W.u.)=24.6 *24* E_γ: From level energy. Mult.: From Coulomb excitation.
2639.929	1$^+$	148.500 *6*	0.52 *12*	2491.430	(2)$^+$				
		757.01 *6*	3.7 *4*	1882.861	2$^+$				
		905.3 *4*	≈1.8	1734.345	3$^+$				
		1008.7 *4*	≈3.0	1630.900	1$^+$				
		1385.0 *3*	18 *4*	1254.101	2$^+$				
		1610.9 *6*	7.3 *24*	1029.348	0$^+$				
		2271.5 *4*	58 *9*	367.943	2$^+$	M1+E2	−0.43 *+6−5*	0.00240 *4*	α(K)=0.001521 *28*; α(L)=0.000239 *4*; α(M)=5.52×10^{-5} *10* α(N)=1.383×10^{-5} *26*; α(O)=2.62×10^{-6} *5*; α(P)=2.06×10^{-7} *4*; α(IPF)=0.000571 *11* Mult.: α(K)exp=0.0011 *2* (1974Br02); $\gamma\gamma(\theta)$ (1989Ah01). δ: $\gamma\gamma(\theta)$ in 1989Ah01.
		2639.9 *2*	100 *12*	0.0	0$^+$	M1		2.17×10^{-3} *3*	α(K)=0.001101 *15*; α(L)=0.0001726 *24*; α(M)=3.98×10^{-5} *6* α(N)=9.99×10^{-6} *14*; α(O)=1.896×10^{-6} *27*; α(P)=1.498×10^{-7} *21*; α(IPF)=0.000849 *12* Mult.: α(K)exp=0.00105 *15* (1974Br02).
2641.57	11$^-$	497.77[a] *10*	100[a]	2143.80	9$^-$	E2		0.0272 *4*	α(K)=0.01967 *28*; α(L)=0.00573 *8*; α(M)=0.001409 *20* α(N)=0.000352 *5*; α(O)=6.27×10^{-5} *9*; α(P)=2.61×10^{-6} *4* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ); α(K)exp=0.021 *4* (1972Cu07) decay (18.7 h).
2680.1	8$^+$	716.8[@] *5*	18[@] *6*	1962.62	7$^-$	[E1]		0.00430 *6*	α(K)=0.00358 *5*; α(L)=0.000548 *8*; α(M)=0.0001260 *18* α(N)=3.14×10^{-5} *4*; α(O)=5.89×10^{-6} *8*; α(P)=4.29×10^{-7} *6* B(E1)(W.u.)=0.00043 *16*
		973.6[@] *3*	100[@] *14*	1706.73	6$^+$	E2		0.00636 *9*	α(K)=0.00510 *7*; α(L)=0.000965 *14*; α(M)=0.0002278 *32* α(N)=5.70×10^{-5} *8*; α(O)=1.053×10^{-5} *15*; α(P)=6.71×10^{-7} *9*

$^{200}_{80}$Hg$_{120}$-25

$\gamma(^{200}$Hg) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	α[d]	Comments
								α(K)=0.00510 *7*; α(L)=0.000965 *14*; α(M)=0.0002278 *32* α(N)=5.70×10^{-5} *8*; α(O)=1.053×10^{-5} *15*; α(P)=6.71×10^{-7} *9* B(E2)(W.u.)=41 *9* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
2691.59	(1,2)$^+$	321.55 *3*	1.7 *3*	2370.043	1$^+$			
		563.63 *9*	3.1 *11*	2127.934	(2,3)$^+$			
		957.19 *13*	25 *5*	1734.345	3$^+$			
		1121.4 *2*	71 *20*	1570.279	1$^+$	(M1)	0.01139 *16*	α(K)=0.00943 *13*; α(L)=0.001513 *21*; α(M)=0.000350 *5* α(N)=8.77×10^{-5} *12*; α(O)=1.664×10^{-5} *23*; α(P)=1.297×10^{-6} *18*; α(IPF)=6.63×10^{-7} *11* Mult.: α(K)exp=0.012 *4* (1974Br02).
		2323.5 *4*	100 *25*	367.943	2$^+$			
2697.137	(1,2)$^+$	308.47 *4*	1.8 *7*	2388.68	(1,2,3)$^+$			
		467.86[e] *2*	100[e]	2229.274	1$^+$	(M1)	0.1093 *15*	α(K)=0.0900 *13*; α(L)=0.01484 *21*; α(M)=0.00344 *5* α(N)=0.000864 *12*; α(O)=0.0001636 *23*; α(P)=1.259×10^{-5} *18* Mult.: α(K)exp=0.14 *4* (1974Br02).
		635.86 *16*	≈9	2061.257	1$^+$			
		1181.9[f]		1515.178	0$^+$			
		1442.5 *10*	≈61	1254.101	2$^+$			
		1667.8[f]		1029.348	0$^+$			
2701.366	2$^+$	331.34 *3*	1.9 *5*	2370.043	1$^+$			
		472.12 *8*	2.7 *8*	2229.274	1$^+$			
		573.41 *4*	10.4 *15*	2127.934	(2,3)$^+$			
		586.98 *12*	3.5 *15*	2114.357	3$^+$			
		1042.4 *3*	69 *19*	1659.010	3$^+$	M1	0.01372 *19*	α(K)=0.01134 *16*; α(L)=0.001824 *26*; α(M)=0.000422 *6* α(N)=0.0001059 *15*; α(O)=2.007×10^{-5} *28*; α(P)=1.562×10^{-6} *22* Mult.: α(K)exp=0.012 (1974Br02).
		1059.6 *2*	77 *19*	1641.447	2$^+$	(E2)		Mult.: α(K)exp<0.009 (1974Br02).
		1070.0 *4*	15.4	1630.900	1$^+$			
		1447.5 *7*	73 *23*	1254.101	2$^+$			
		1754.6 *7*	100 *42*	947.243	4$^+$			
2763.097	(1,2)$^+$	271.68 *2*	2.4 *4*	2491.430	(2)$^+$			
		351.27 *2*	12.4 *16*	2411.830	(2)$^+$			
		466.72 *3*	4.0 *10*	2296.341	1$^+$			
		788.77 *6*	45 *6*	1974.339	(3)$^+$			
		1121.4 *2*	100 *28*	1641.447	2$^+$	M1	0.01139 *16*	α(K)=0.00943 *13*; α(L)=0.001513 *21*; α(M)=0.000350 *5* α(N)=8.77×10^{-5} *12*; α(O)=1.664×10^{-5} *23*; α(P)=1.297×10^{-6} *18*; α(IPF)=6.63×10^{-7} *11* Mult.: α(K)exp=0.012 *4* (1974Br02).
		1192.9 *6*	32	1570.279	1$^+$			

$^{200}_{80}$Hg$_{120}$-26

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J^π_i	E_γ [†]	I_γ [†]	E_f	J^π_f	Mult. [‡]	α [d]	Comments
2763.097	$(1,2)^+$	1733.7 [f] *10*	40	1029.348	0^+			
		2764.0 *15*	72	0.0	0^+			
2794.16	$(1,2)^+$	497.81 *2*	30.7 *21*	2296.341	1^+			
		505.23 *3*	5.0 *9*	2288.93	2^+			
		733.4 *3*	15 *4*	2061.257	1^+			
		911.5 *6*	29 *11*	1882.861	2^+			
		1059.6 *2*	71 *18*	1734.345	3^+			
		1163.5 *3*	100 *21*	1630.900	1^+	M1(+E2)	0.0074 *29*	α(K)=0.0061 *25*; α(L)=1.0×10^{-3} *4*; α(M)=2.4×10^{-4} *8* α(N)=5.9×10^{-5} *21*; α(O)=1.1×10^{-5} *4*; α(P)=8.3×10^{-7} *35*; α(IPF)=2.2×10^{-6} *6* Mult.: α(K)exp=0.0078 (1974Br02).
		2794.5 *4*	86 *29*	0.0	0^+			
2847.51	1^-	404.94 *4*	≤1.4	2442.7?	1^-			
		458.80 *9*	1.7 *6*	2388.68	$(1,2,3)^+$			
		558.61 *5*	3.6 *7*	2288.93	2^+			
		573.41 *4*	6.4 *10*	2274.229	$(2)^+$			
		733.40 *3*	10 *3*	2114.357	3^+			
		2847.3 *6*	100 *21*	0.0	0^+	E1	1.47×10^{-3} *2*	α(K)=0.000337 *5*; α(L)=4.84×10^{-5} *7*; α(M)=1.103×10^{-5} *15* α(N)=2.76×10^{-6} *4*; α(O)=5.23×10^{-7} *7*; α(P)=4.15×10^{-8} *6*; α(IPF)=0.001066 *15* Mult.: α(K)exp<0.0003 (1974Br02).
2853.05	$(1,2)^+$	738.5 *2*	13	2114.357	3^+			
		996.5 *7*	30	1856.784	0^+			
		1337.4 *15*	90	1515.178	0^+			
		2485.3 *15*	100 *35*	367.943	2^+	E2+M1	0.00194 *34*	α(K)=0.00110 *18*; α(L)=0.000172 *29*; α(M)=4.0×10^{-5} *7* α(N)=9.9×10^{-6} *17*; α(O)=1.88×10^{-6} *33*; α(P)=1.47×10^{-7} *28*; α(IPF)=0.00062 *13* Mult.: α(K)exp=0.0011 (1974Br02).
		2853.8 *10*	70	0.0	0^+			
2862.3	$(1,2)^+$	573.41 *4*	4.7 *7*	2288.93	2^+			
		615.82 *10*	8.5	2246.446	$(1,2)^+$			
		1347.1 *5*	100 *41*	1515.178	0^+			
		2862.4 *15*	8.6	0.0	0^+			
2877.90	1^+	546.10 *2*	10.6 *8*	2331.778	2^+	(M1)		Mult.: α(K)exp=0.094 *35* (1974Br02).
		588.96 *6*	2.5 *5*	2288.93	2^+			
		631.50 *9*	2.1 *6*	2246.446	$(1,2)^+$			
		749.9 *2*	2.7 *10*	2127.934	$(2,3)^+$			
		903.5 *2*	6	1974.339	$(3)^+$			
		905.3 *4*	9	1972.281	$(2)^+$			
		1247.3 *3*	51 *11*	1630.900	1^+			
		1283.9 *7*	15	1593.428	2^+			

$^{200}_{80}Hg_{120}$-27

$\gamma(^{200}$Hg) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	δ†	α[d]	Comments
2877.90	1^+	1623.5 *3*	100 *21*	1254.101	2^+				
2937.55	$1^+,2^+$	1054.7 *4*	24 *10*	1882.861	2^+	M1		0.01331 *19*	α(K)=0.01101 *15*; α(L)=0.001770 *25*; α(M)=0.000410 *6* α(N)=0.0001027 *14*; α(O)=1.947×10^{-5} *27*; α(P)=1.516×10^{-6} *21* Mult.: α(K)exp=0.019 (1974Br02).
		1081.3 *3*	17 *5*	1856.784	0^+				
		1366.8 *7*	43	1570.279	1^+				
		1422.4 *3*	36 *12*	1515.178	0^+				
		2569.1 *5*	100 *21*	367.943	2^+				α(K)=0.000870 *12*; α(L)=0.0001336 *19*; α(M)=3.07×10^{-5} *4* α(N)=7.69×10^{-6} *11*; α(O)=1.454×10^{-6} *20*; α(P)=1.121×10^{-7} *16*; α(IPF)=0.000531 *7* α(K)exp<0.0003 (1974Br02).
		2937.2 *10*	36	0.0	0^+				
2959.93	1^-	468.73 *3*	3	2491.430	$(2)^+$				
		1366.8 *7*	19	1593.428	2^+				
		2960.2 *3*	100 *16*	0.0	0^+	E1		1.50×10^{-3} *2*	α(K)=0.000317 *4*; α(L)=4.55×10^{-5} *6*; α(M)=1.038×10^{-5} *15* α(N)=2.59×10^{-6} *4*; α(O)=4.92×10^{-7} *7*; α(P)=3.91×10^{-8} *5*; α(IPF)=0.001128 *16* Mult.: α(K)exp<0.00013 (1974Br02).
2978.213	1^+	281.08 *2*	0.16 *3*	2697.137	$(1,2)^+$				
		516.35 *3*	0.84 *12*	2461.83	(1^+)				
		608.22 *9*	0.59 *22*	2370.043	1^+				
		634.66 *10*	0.53 *16*	2343.594	$1^+,2^+,3^+$				
		681.87 *8*	1.2 *3*	2296.341	1^+				
		748.84 *10*	1.5 *3*	2229.274	1^+				
		788.77 *6*	3.5 *5*	2189.477	1^+				
		851.36 *4*	28.4 *22*	2126.859	2^+	M1+E2		0.016 *7*	α(K)=0.013 *6*; α(L)=0.0022 *9*; α(M)=5.1×10^{-4} *20* α(N)=1.3×10^{-4} *5*; α(O)=2.4×10^{-5} *10*; α(P)=1.7×10^{-6} *9* Mult.: α(K)exp=0.016 *3* (1974Br02).
		861.71 *12*	3.0 *6*	2116.549	0^+				
		1121.4 *2*	7.8 *22*	1856.784	0^+	(M1)		0.01139 *16*	α(K)=0.00943 *13*; α(L)=0.001513 *21*; α(M)=0.000350 *5* α(N)=8.77×10^{-5} *12*; α(O)=1.664×10^{-5} *23*; α(P)=1.297×10^{-6} *18*; α(IPF)=6.63×10^{-7} *11* Mult.: α(K)exp=0.012 *4* (1974Br02).
		1247.3 *3*	10.6 *22*	1730.929	2^+				
		1337.4 *15*	≤6	1641.447	2^+				
		1347.1 *5*	≤18	1630.900	1^+				

$^{200}_{80}Hg_{120}$-28

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[†]	α[d]	Comments
2978.213	1^+	1408.0 *2*	100 *13*	1570.279	1^+	E2+M1	+1.44 *+21−10*	0.00425 *20*	α(K)=0.00346 *16*; α(L)=0.000568 *25*; α(M)=0.000132 *6* α(N)=3.30×10^{-5} *14*; α(O)=6.21×10^{-6} *27*; α(P)=4.63×10^{-7} *23*; α(IPF)=4.68×10^{-5} *15* Mult.,δ: From $\gamma\gamma(\theta)$ in 1989Ah01.
		1462.5 *15*	5.9 *19*	1515.178	0^+				
		2611.0 *7*	9.4 *19*	367.943	2^+				
		2978.5 *6*	9.4 *19*	0.0	0^+				
3053.32	1^+	721.0[f] *8*	5.7	2331.778	2^+				
		823.95 *14*	12 *4*	2229.274	1^+				
		1081.3 *3*	20 *6*	1972.281	$(2)^+$				
		1318.0 *6*	54 *17*	1734.345	3^+				
		1322.4 *3*	100 *26*	1730.929	2^+	M1		0.00754 *11*	α(K)=0.00621 *9*; α(L)=0.000992 *14*; α(M)=0.0002295 *32* α(N)=5.75×10^{-5} *8*; α(O)=1.091×10^{-5} *15*; α(P)=8.53×10^{-7} *12*; α(IPF)=3.27×10^{-5} *5* Mult.: α(K)exp=0.007 (1974Br02).
		1422.4 *3*	43 *14*	1630.900	1^+				
		1479.6[f] *15*	29	1573.667	2^+				
		1538.2 *5*	57 *17*	1515.178	0^+				
		1799.2 *5*	94 *28*	1254.101	2^+				
3073.823	1^+	376.68 *2*	3.1 *8*	2697.137	$(1,2)^+$				
		685.19 *12*	3.1 *9*	2388.68	$(1,2,3)^+$				
		703.82 *5*	19 *3*	2370.043	1^+				
		784.9 *3*	3.7	2288.93	2^+				
		1432.2 *2*	62 *12*	1641.447	2^+				
		1442.5 *10*	15.4	1630.900	1^+				
		1503.2 *4*	100 *20*	1570.279	1^+	E2(+M1)		0.0042 *13*	α(K)=0.0034 *11*; α(L)=5.5×10^{-4} *17*; α(M)=1.3×10^{-4} *4* α(N)=3.2×10^{-5} *10*; α(O)=6.0×10^{-6} *19*; α(P)=4.6×10^{-7} *16*; α(IPF)=8.6×10^{-5} *20* Mult.: α(K)exp=0.0018 (1974Br02).
		2044.2 *5*	31 *9*	1029.348	0^+				
		3074.2 *6*	77 *15*	0.0	0^+	(M1)		2.02×10^{-3} *3*	α(K)=0.000755 *11*; α(L)=0.0001178 *17*; α(M)=2.72×10^{-5} *4* α(N)=6.81×10^{-6} *10*; α(O)=1.294×10^{-6} *18*; α(P)=1.024×10^{-7} *14*; α(IPF)=0.001112 *16* Mult.: α(K)exp=0.00058 *25* (1974Br02).
3120.9	10^+	523.8[@] *3*	23.1[@] *20*	2597.1	(9)	D			Mult.: From DCO in ^{198}Pt(^{9}Be,α3nγ).

$^{200}_{80}Hg_{120}$-29

Adopted Levels, Gammas (continued)

γ(^{200}Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α[d]	Comments
3120.9	10^+	977.1[@] *3*	100[@] *8*	2143.80	9^-	(E1)	2.40×10^{-3} *3*	α(K)=0.002011 *28*; α(L)=0.000301 *4*; α(M)=6.91×10^{-5} *10* α(N)=1.725×10^{-5} *24*; α(O)=3.24×10^{-6} *5*; α(P)=2.435×10^{-7} *34* Mult.: From DCO in ^{198}Pt(^{9}Be,α3nγ). Note, that Mult=M1+E2 is given in ^{198}Pt(α,2nγ) based on $\gamma(\theta)$ (1981He10).
3123.0	12^-	600.3[@] *3*	100[@]	2522.70	10^-	E2	0.01756 *25*	α(K)=0.01323 *19*; α(L)=0.00330 *5*; α(M)=0.000801 *11* α(N)=0.0001999 *28*; α(O)=3.61×10^{-5} *5*; α(P)=1.756×10^{-6} *25* Mult.: From DCO in ^{198}Pt(^{9}Be,α3nγ); $\gamma(\theta)$ in ^{198}Pt(α,2nγ).
3186.34	1^+	308.47 *4*	≤0.10	2877.90	1^+			
		423.24 *3*	0.57 *8*	2763.097	$(1,2)^+$			
		724.78 *10*	0.70 *20*	2461.83	(1^+)			
		743.52 *8*	1.77 *23*	2442.7?	1^-			
		797.4 *2*	1.1 *4*	2388.68	$(1,2,3)^+$			
		854.2 *2*	2.0 *7*	2331.778	2^+			
		890.0[f] *5*	1.3	2296.341	1^+			
		957.19 *13*	2.9 *5*	2229.274	1^+			
		996.5 *7*	2.0 *8*	2189.477	1^+			
		1467.6 *3*	31 *5*	1718.307	1^+	M1+E2	0.0044 *15*	α(K)=0.0036 *12*; α(L)=5.8×10^{-4} *18*; α(M)=1.3×10^{-4} *4* α(N)=3.4×10^{-5} *10*; α(O)=6.4×10^{-6} *20*; α(P)=4.8×10^{-7} *17*; α(IPF)=7.2×10^{-5} *17* Mult.: α(K)exp=0.0036 *10* (1974Br02).
		2818.6 *3*	40 *4*	367.943	2^+	E2(+M1)	0.00181 *28*	α(K)=0.000836 *99*; α(L)=0.000129 *17*; α(M)=3.0×10^{-5} *4* α(N)=7.5×10^{-6} *10*; α(O)=1.41×10^{-6} *19*; α(P)=1.11×10^{-7} *16*; α(IPF)=0.00080 *16* Mult.: α(K)exp=0.00063 *15* (1974Br02).
		3185.8 *4*	100 *10*	0.0	0^+	(M1)	2.00×10^{-3} *3*	α(K)=0.000691 *10*; α(L)=0.0001078 *15*; α(M)=2.486×10^{-5} *35* α(N)=6.23×10^{-6} *9*; α(O)=1.183×10^{-6} *17*; α(P)=9.37×10^{-8} *13*; α(IPF)=0.001172 *16* Mult.: α(K)exp=0.00072 *10* (1974Br02).
3215.2	12^+	94.2[@] *5*	4.5[@] *20*	3120.9	10^+	E2	7.14 *19*	α(K)=0.625 *9*; α(L)=4.88 *14*; α(M)=1.28 *4* α(N)=0.316 *9*; α(O)=0.0524 *15*; α(P)=0.0001383 *28* B(E2)(W.u.)=36 *16* Mult.: From α(tot) in 1999Go21.
		573.5[@] *3*	100[@] *5*	2641.57	11^-	E1	0.00670 *9*	α(K)=0.00557 *8*; α(L)=0.000867 *12*; α(M)=0.0001996 *28* α(N)=4.98×10^{-5} *7*; α(O)=9.29×10^{-6} *13*; α(P)=6.60×10^{-7} *9* B(E1)(W.u.)=7.6×10^{-7} *25* Mult.: From α(K)exp=0.008 *3* (1977Gu05); DCO in ^{198}Pt(^{9}Be,α3nγ) and $\gamma(\theta)$ in ^{198}Pt(α,2nγ).
3216.84	$(2)^+$	453.60 *16*	≤0.7	2763.097	$(1,2)^+$			
		1100.3 *5*	7.53	2116.549	0^+			

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[d]	Comments
3216.84	$(2)^+$	1557.7 *3*	100 *20*	1659.010	3^+	M1+E2	0.0039 *12*	α(K)=0.0031 *10*; α(L)=5.0×10^{-4} *15*; α(M)=1.17×10^{-4} *35* α(N)=2.9×10^{-5} *9*; α(O)=5.5×10^{-6} *17*; α(P)=4.2×10^{-7} *14*; α(IPF)=0.000110 *26* Mult.: α(K)exp=0.0037 (1974Br02).
		1623.5 *3*	67 *14*	1593.428	2^+			
		3216.9 *8*	93 *19*	0.0	0^+	(E2)	1.51×10^{-3} *2*	α(K)=0.000582 *8*; α(L)=8.77×10^{-5} *12*; α(M)=2.012×10^{-5} *28* α(N)=5.03×10^{-6} *7*; α(O)=9.54×10^{-7} *13*; α(P)=7.48×10^{-8} *10*; α(IPF)=0.000814 *11* Mult.: α(K)exp=0.00058 *20* (1974Br02).
3269.43	1^+	568.04 *7*	0.9 *3*	2701.366	2^+			
		980.2 *5*	6.4	2288.93	2^+			
		1022.5[f] *4*	5.0	2246.446	$(1,2)^+$			
		1294.6 *6*	12	1974.339	$(3)^+$			
		1538.2 *5*	14 *4*	1730.929	2^+			
		1610.9 *6*	17 *6*	1659.010	3^+			
		1638.3 *5*	25 *6*	1630.900	1^+			
		1676.3 *3*	21 *6*	1593.428	2^+			
		1699.1 *10*	7	1570.279	1^+			
		1754.6 *7*	19 *8*	1515.178	0^+			
		2240.6 *7*	21 *6*	1029.348	0^+			
		2901.3 *3*	100 *10*	367.943	2^+	E2(+M1)	0.00179 *27*	α(K)=0.00079 *9*; α(L)=0.000121 *15*; α(M)=2.79×10^{-5} *35* α(N)=7.0×10^{-6} *9*; α(O)=1.33×10^{-6} *17*; α(P)=1.04×10^{-7} *14*; α(IPF)=0.00085 *17* Mult.: α(K)exp=0.00067 *10* (1974Br02).
		3269.4 *6*	48 *10*	0.0	0^+	(M1)	2.00×10^{-3} *3*	α(K)=0.000648 *9*; α(L)=0.0001011 *14*; α(M)=2.330×10^{-5} *33* α(N)=5.84×10^{-6} *8*; α(O)=1.109×10^{-6} *16*; α(P)=8.79×10^{-8} *12*; α(IPF)=0.001218 *17* Mult.: α(K)exp=0.0010 *3* (1974Br02).
3288.93	1^+	797.4 *2*	≤1	2491.430	$(2)^+$			
		945.4 *3*	1.8 *6*	2343.594	$1^+,2^+,3^+$			
		957.19 *13*	2.7 *5*	2331.778	2^+			
		1042.4 *3*	5.6 *16*	2246.446	$(1,2)^+$			
		1059.6 *2*	6.3 *16*	2229.274	1^+			
		1172.8 *5*	3.1 *13*	2116.549	0^+			
		1432.2 *2*	12.5 *25*	1856.784	0^+			
		1557.7 *3*	31 *6*	1730.929	2^+	M1(+E2)	0.0039 *12*	α(K)=0.0031 *10*; α(L)=5.0×10^{-4} *15*; α(M)=1.17×10^{-4} *35* α(N)=2.9×10^{-5} *9*; α(O)=5.5×10^{-6} *17*; α(P)=4.2×10^{-7} *14*; α(IPF)=0.000110 *26* Mult.: α(K)exp=0.0037 (1974Br02).
		1647.2 *3*	5.9 *19*	1641.447	2^+			
		1658.2 *3*	4.4 *16*	1630.900	1^+			

$^{200}_{80}Hg_{120}$-31

Adopted Levels, Gammas (continued)

$\gamma(^{200}Hg)$ (continued)

E_i(level)	J_i^{π}	E_{γ}[†]	I_{γ}[†]	E_f	J_f^{π}	Mult.[‡]	α[d]	Comments
3288.93	1^+	1715.2[f] *10*	3	1573.667	2^+			
		2259.5 *5*	18 *4*	1029.348	0^+	(M1)	0.00255 *4*	α(K)=0.001623 *23*; α(L)=0.000255 *4*; α(M)=5.90×10^{-5} *8* α(N)=1.478×10^{-5} *21*; α(O)=2.81×10^{-6} *4*; α(P)=2.212×10^{-7} *31*; α(IPF)=0.000596 *8* Mult.: α(K)exp=0.0013 *3* (1974Br02).
		2921.1 *3*	50 *5*	367.943	2^+	E2(+M1)	0.00179 *27*	α(K)=0.00077 *8*; α(L)=0.000119 *15*; α(M)=2.75×10^{-5} *34* α(N)=6.9×10^{-6} *9*; α(O)=1.31×10^{-6} *17*; α(P)=1.03×10^{-7} *14*; α(IPF)=0.00086 *17* Mult.: α(K)exp=0.00064 *17* (1974Br02).
		3288.9 *4*	100 *13*	0.0	0^+	(M1)	2.00×10^{-3} *3*	α(K)=0.000639 *9*; α(L)=9.96×10^{-5} *14*; α(M)=2.296×10^{-5} *32* α(N)=5.75×10^{-6} *8*; α(O)=1.093×10^{-6} *15*; α(P)=8.66×10^{-8} *12*; α(IPF)=0.001228 *17* Mult.: α(K)exp=0.00078 *12* (1974Br02).
3353.05	1^+	415.50 *3*	1.10 *15*	2937.55	$1^+,2^+$			
		762.10 *19*	4	2590.79	1^-			
		1163.5 *3*	34 *7*	2189.477	1^+	M1+E2	0.0074 *29*	α(K)=0.0061 *25*; α(L)=1.0×10^{-3} *4*; α(M)=2.4×10^{-4} *8* α(N)=5.9×10^{-5} *21*; α(O)=1.1×10^{-5} *4*; α(P)=8.3×10^{-7} *35*; α(IPF)=2.2×10^{-6} *6* Mult.: α(K)exp=0.0078 (1974Br02).
		1711.7 *5*	59 *15*	1641.447	2^+			
		1722.2 *6*	100 *26*	1630.900	1^+			
		1783.3 *10*	18	1570.279	1^+			
		1838.1 *15*	18	1515.178	0^+			
		2323.5 *4*	≤43	1029.348	0^+			
3398.1	13^-	756.6[@] *3*	100[@]	2641.57	11^-	E2	0.01062 *15*	α(K)=0.00829 *12*; α(L)=0.001774 *25*; α(M)=0.000424 *6* α(N)=0.0001060 *15*; α(O)=1.938×10^{-5} *27*; α(P)=1.097×10^{-6} *15* Mult.: From DCO in ^{198}Pt(^{9}Be,α3nγ).
3452.98	$(1)^+$	399.65 *5*	0.49 *20*	3053.32	1^+			
		599.93 *11*	1.1 *5*	2853.05	$(1,2)^+$			
		755.92 *18*	2.2 *10*	2697.137	$(1,2)^+$			
		761.43 *12*	7 *3*	2691.59	$(1,2)^+$			
		1010.2 *5*	10	2442.7?	1^-			
		1722.2 *6*	100	1730.929	2^+			
		1811.2 *4*	37 *7*	1641.447	2^+			
		1822.3 *7*	≤26	1630.900	1^+			
		2423.7 *7*	39 *12*	1029.348	0^+			
3492.45	1^+	532.53 *6*	5.8 *16*	2959.93	1^-			
		644.93 *5*	12.1 *21*	2847.51	1^-			
		901.69 *17*	32	2590.79	1^-			
		2462.6 *15*	100	1029.348	0^+			

$^{200}_{80}Hg_{120}$-32

$\gamma(^{200}$Hg) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	α[d]	Comments
3611.8	14^+	396.5@ *3*	100@	3215.2	12^+	E2	0.0485 *7*	α(K)=0.0327 *5*; α(L)=0.01199 *17*; α(M)=0.00299 *4* α(N)=0.000746 *11*; α(O)=0.0001309 *19*; α(P)=4.29×10^{-6} *6* Mult.: α(K)exp=0.046 *7* (1977Gu05) and DCO in ^{198}Pt(^{9}Be,α3nγ).
3655.06	$(1)^+$	468.73 *3*	5.8 *16*	3186.34	1^+			
		860.6 *2*	≤9.8	2794.16	$(1,2)^+$			
		1163.5 *3*	56 *12*	2491.430	$(2)^+$	(M1+E2)	0.0074 *29*	α(K)=0.0061 *25*; α(L)=1.0×10^{-3} *4*; α(M)=2.4×10^{-4} *8* α(N)=5.9×10^{-5} *21*; α(O)=1.1×10^{-5} *4*; α(P)=8.3×10^{-7} *35*; α(IPF)=2.2×10^{-6} *6* Mult.: α(K)exp=0.0078 (1974Br02).
		1192.9 *6*	16	2461.83	(1^+)			
		1538.2 *5*	40 *12*	2116.549	0^+			
		1681.1 *15*	38	1974.339	$(3)^+$			
		1771.9 *7*	58 *24*	1882.861	2^+			
		1879.3 *3*	24	1775.566	3^+			
		2139.7 *3*	100 *20*	1515.178	0^+			
		2625.5 *7*	52 *16*	1029.348	0^+			
3673.0	14^+	457.8@ *3*	100@	3215.2	12^+	E2	0.0335 *5*	α(K)=0.02363 *33*; α(L)=0.00746 *11*; α(M)=0.001844 *26* α(N)=0.000460 *7*; α(O)=8.15×10^{-5} *12*; α(P)=3.13×10^{-6} *4* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
3872.9	(14^+)	261.1@ *3*	100@ *12*	3611.8	14^+	(M1)	0.528 *8*	α(K)=0.433 *6*; α(L)=0.0725 *10*; α(M)=0.01686 *24* α(N)=0.00423 *6*; α(O)=0.000800 *11*; α(P)=6.13×10^{-5} *9* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		474.8@ *5*	18@ *4*	3398.1	13^-	(E1)	0.00993 *14*	α(K)=0.00823 *12*; α(L)=0.001302 *18*; α(M)=0.000300 *4* α(N)=7.49×10^{-5} *11*; α(O)=1.392×10^{-5} *20*; α(P)=9.64×10^{-7} *14* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
4025.3	14^-	902.3@ *5*	100@	3123.0	12^-	E2	0.00740 *10*	α(K)=0.00589 *8*; α(L)=0.001152 *16*; α(M)=0.000273 *4* α(N)=6.82×10^{-5} *10*; α(O)=1.258×10^{-5} *18*; α(P)=7.76×10^{-7} *11* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
4094.6	(15)	221.7@ *5*	18@ *7*	3872.9	(14^+)			
		482.9@ *5*	100@ *15*	3611.8	14^+			
4196.0	16^+	584.2@ *3*	100@ *8*	3611.8	14^+	E2	0.01868 *26*	α(K)=0.01400 *20*; α(L)=0.00356 *5*; α(M)=0.000867 *12* α(N)=0.0002163 *30*; α(O)=3.89×10^{-5} *5*; α(P)=1.858×10^{-6} *26* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
4296.6	16^+	423.7@ *5*	15@ *3*	3872.9	(14^+)			
		684.9@ *3*	100@ *16*	3611.8	14^+	E2	0.01312 *18*	α(K)=0.01011 *14*; α(L)=0.002298 *32*; α(M)=0.000553 *8* α(N)=0.0001382 *19*; α(O)=2.512×10^{-5} *35*; α(P)=1.340×10^{-6} *19* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).

$^{200}_{80}$Hg$_{120}$-33

γ(^{200}Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α[d]	Comments
4443.9	15^-	1045.9[@] 3	100[@]	3398.1	13^-	E2	0.00553 8	α(K)=0.00446 6; α(L)=0.000820 11; α(M)=0.0001930 27 α(N)=4.83×10^{-5} 7; α(O)=8.95×10^{-6} 13; α(P)=5.85×10^{-7} 8 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
4541.1	16^+	345.1[@] 5	13[@] 4	4196.0	16^+	M1	0.247 4	α(K)=0.2027 29; α(L)=0.0337 5; α(M)=0.00784 11 α(N)=0.001965 29; α(O)=0.000372 5; α(P)=2.86×10^{-5} 4 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		446.4[@] 5	6[@] 3	4094.6	(15)			
		929.2[@] 3	100[@] 14	3611.8	14^+	E2	0.00698 10	α(K)=0.00557 8; α(L)=0.001075 15; α(M)=0.000254 4 α(N)=6.36×10^{-5} 9; α(O)=1.174×10^{-5} 16; α(P)=7.34×10^{-7} 10 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
4919.1	18^+	622.6[@] 5	25[@] 5	4296.6	16^+	E2	0.01618 23	α(K)=0.01227 17; α(L)=0.00298 4; α(M)=0.000721 10 α(N)=0.0001801 26; α(O)=3.25×10^{-5} 5; α(P)=1.628×10^{-6} 23 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		723.0[@] 3	100[@] 8	4196.0	16^+	E2	0.01169 16	α(K)=0.00907 13; α(L)=0.001993 28; α(M)=0.000478 7 α(N)=0.0001195 17; α(O)=2.179×10^{-5} 31; α(P)=1.201×10^{-6} 17 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
4928.2	(17,18^+)	631.6[@] 5	100[@]	4296.6	16^+			
5181.6	18^+	885.0[@] 5	100[@] 22	4296.6	16^+	E2	0.00769 11	α(K)=0.00612 9; α(L)=0.001206 17; α(M)=0.000286 4 α(N)=7.15×10^{-5} 10; α(O)=1.317×10^{-5} 19; α(P)=8.06×10^{-7} 11 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		985.7[@] 5	93[@] 19	4196.0	16^+	E2	0.00621 9	α(K)=0.00498 7; α(L)=0.000938 13; α(M)=0.0002213 31 α(N)=5.53×10^{-5} 8; α(O)=1.024×10^{-5} 14; α(P)=6.55×10^{-7} 9 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
5260.0	(17^-)	718.7[@] 5	100[@] 17	4541.1	16^+	(E1)	0.00427 6	α(K)=0.00357 5; α(L)=0.000545 8; α(M)=0.0001253 18 α(N)=3.13×10^{-5} 4; α(O)=5.86×10^{-6} 8; α(P)=4.27×10^{-7} 6 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		816.4[@] 5	13[@] 6	4443.9	15^-			
5344.2	18^+	803.1[@] 5	100[@]	4541.1	16^+	E2	0.00938 13	α(K)=0.00738 10; α(L)=0.001527 22; α(M)=0.000364 5 α(N)=9.10×10^{-5} 13; α(O)=1.669×10^{-5} 24; α(P)=9.75×10^{-7} 14 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
5568.3	(19^-)	224.0[@] 5	65[@] 20	5344.2	18^+	(E1)	0.0560 8	α(K)=0.0458 7; α(L)=0.00780 12; α(M)=0.001812 27 α(N)=0.000450 7; α(O)=8.21×10^{-5} 12; α(P)=4.99×10^{-6} 7 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		308.3[@] 5	100[@] 25	5260.0	(17^-)	E2	0.0982 15	α(K)=0.0590 9; α(L)=0.0295 5; α(M)=0.00747 11 α(N)=0.001859 28; α(O)=0.000321 5; α(P)=7.62×10^{-6} 11 Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).

$^{200}_{80}$Hg$_{120}$-34

γ(^{200}Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α[d]	Comments
5568.3	(19⁻)	386.8[@] *5*	10[@] *5*	5181.6	18⁺	(E1)	0.01552 *22*	α(K)=0.01283 *18*; α(L)=0.002067 *30*; α(M)=0.000478 *7* α(N)=0.0001190 *17*; α(O)=2.203×10^{-5} *32*; α(P)=1.480×10^{-6} *21* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		649.1[@] *5*	20[@] *8*	4919.1	18⁺	(E1)	0.00522 *7*	α(K)=0.00435 *6*; α(L)=0.000670 *9*; α(M)=0.0001542 *22* α(N)=3.85×10^{-5} *5*; α(O)=7.19×10^{-6} *10*; α(P)=5.18×10^{-7} *7* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
5915.8	20⁺	996.7[@] *5*	100[@]	4919.1	18⁺	E2	0.00608 *9*	α(K)=0.00488 *7*; α(L)=0.000914 *13*; α(M)=0.0002157 *30* α(N)=5.39×10^{-5} *8*; α(O)=9.98×10^{-6} *14*; α(P)=6.41×10^{-7} *9* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
6162.2	(21⁻)	246.4[@] *5*	50[@] *25*	5915.8	20⁺	(E1)	0.0444 *7*	α(K)=0.0364 *5*; α(L)=0.00613 *9*; α(M)=0.001423 *21* α(N)=0.000354 *5*; α(O)=6.47×10^{-5} *10*; α(P)=4.01×10^{-6} *6* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).
		593.9[@] *5*	10×10^1[@] *4*	5568.3	(19⁻)	E2	0.01800 *25*	α(K)=0.01352 *19*; α(L)=0.00340 *5*; α(M)=0.000826 *12* α(N)=0.0002062 *29*; α(O)=3.72×10^{-5} *5*; α(P)=1.795×10^{-6} *25* Mult.: DCO in ^{198}Pt(^{9}Be,α3nγ).

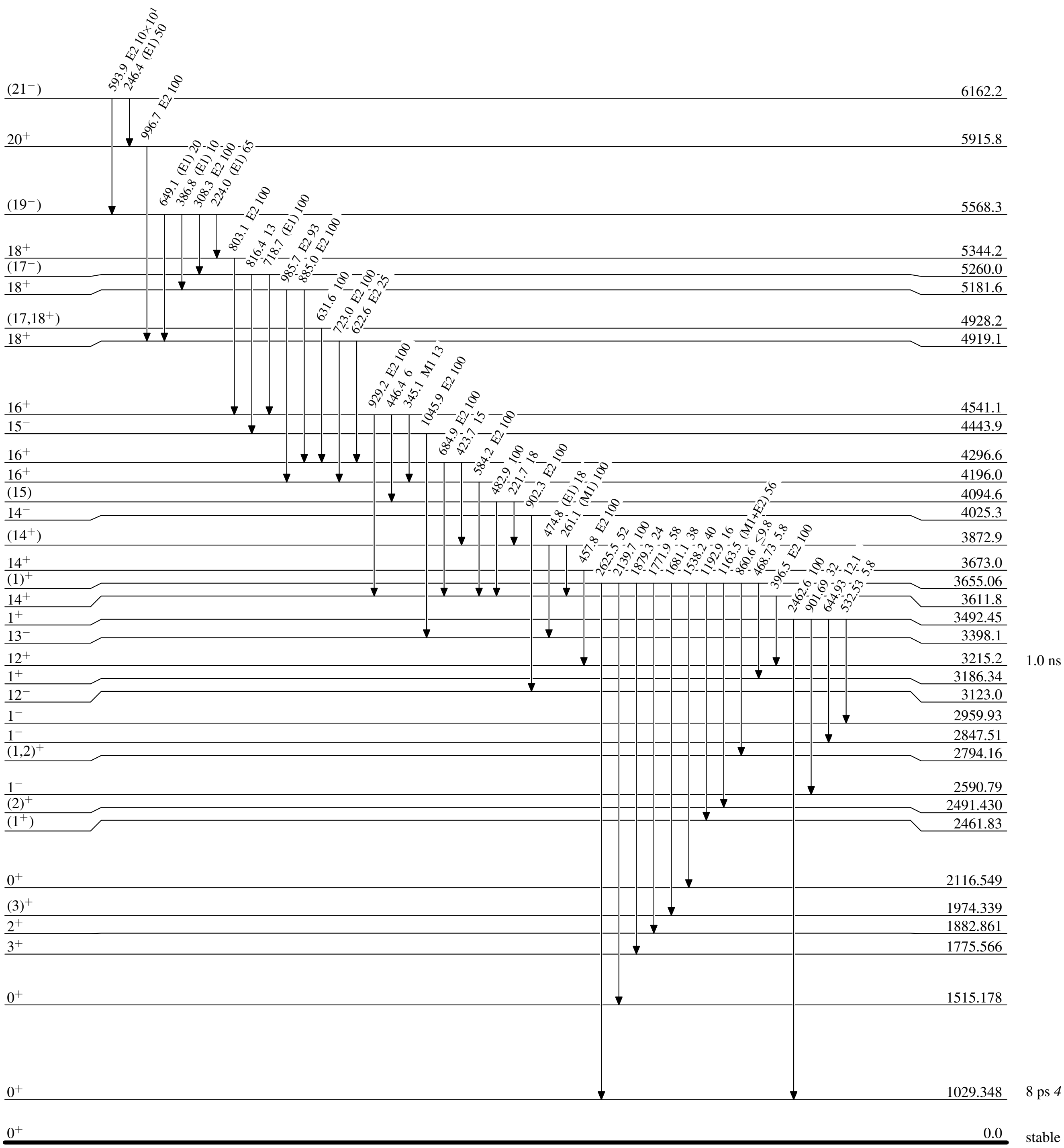
[†] From ^{199}Hg(n,γ) E=th:secondary, unless otherwise stated.
[‡] From ^{199}Hg(n,γ) E=th:secondary and ^{200}Tl ε decay, based on α(K)exp and $\gamma\gamma(\theta)$, unless otherwise stated.
[#] From ^{200}Tl ε decay.
[@] From ^{198}Pt(^{9}Be,α3nγ).
[&] From ^{198}Pt(α,2nγ).
[a] From ^{200}Au β^- decay (18.7 h).
[b] From ^{200}Hg(n,n′γ).
[c] From ^{200}Au β^- decay (48.4 min).
[d] Additional information 1.
[e] Multiply placed with undivided intensity.
[f] Placement of transition in the level scheme is uncertain.

$^{200}_{80}$Hg$_{120}$-35

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{200}_{80}Hg_{120}$

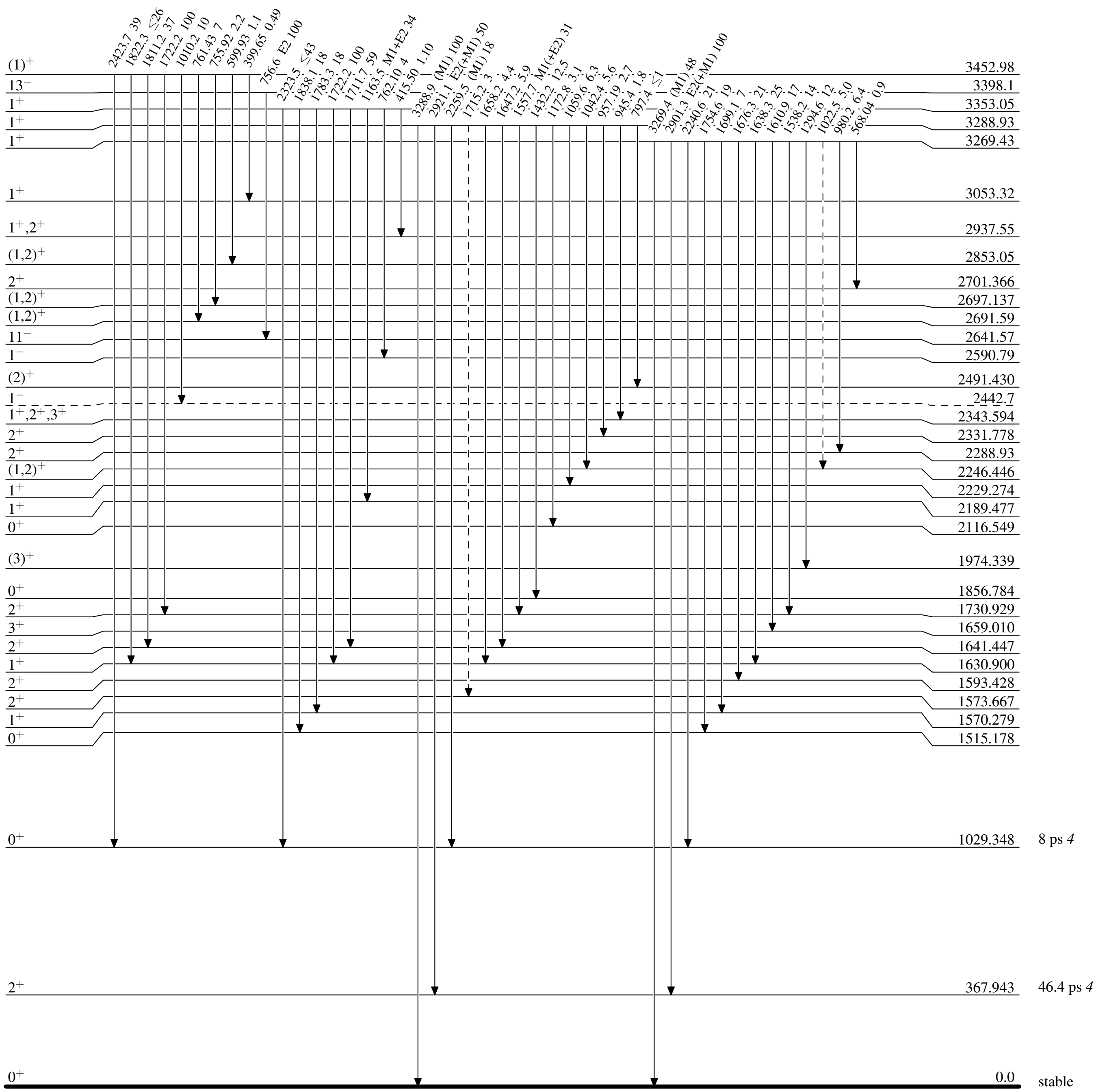
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{200}_{80}Hg_{120}$

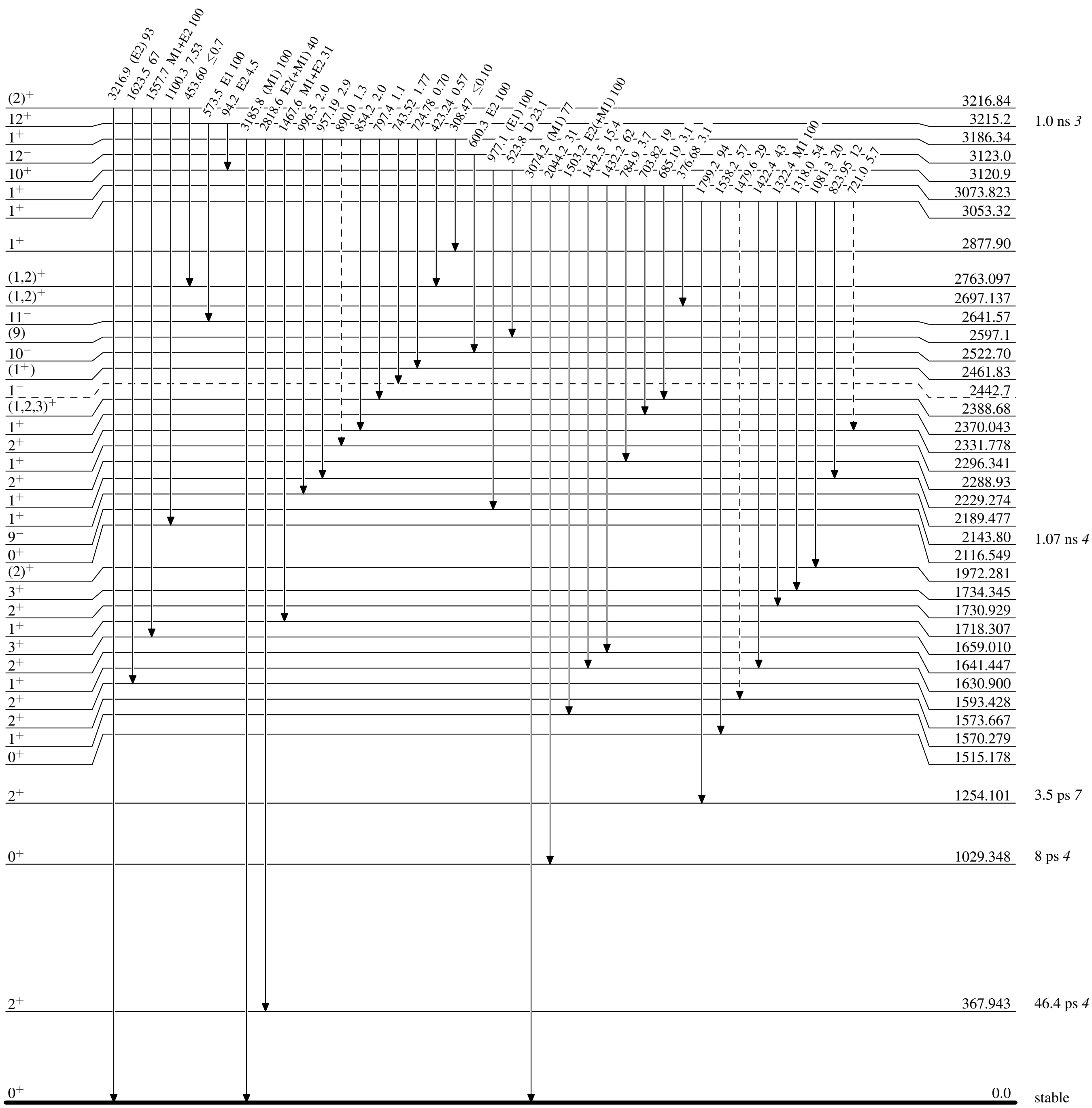
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

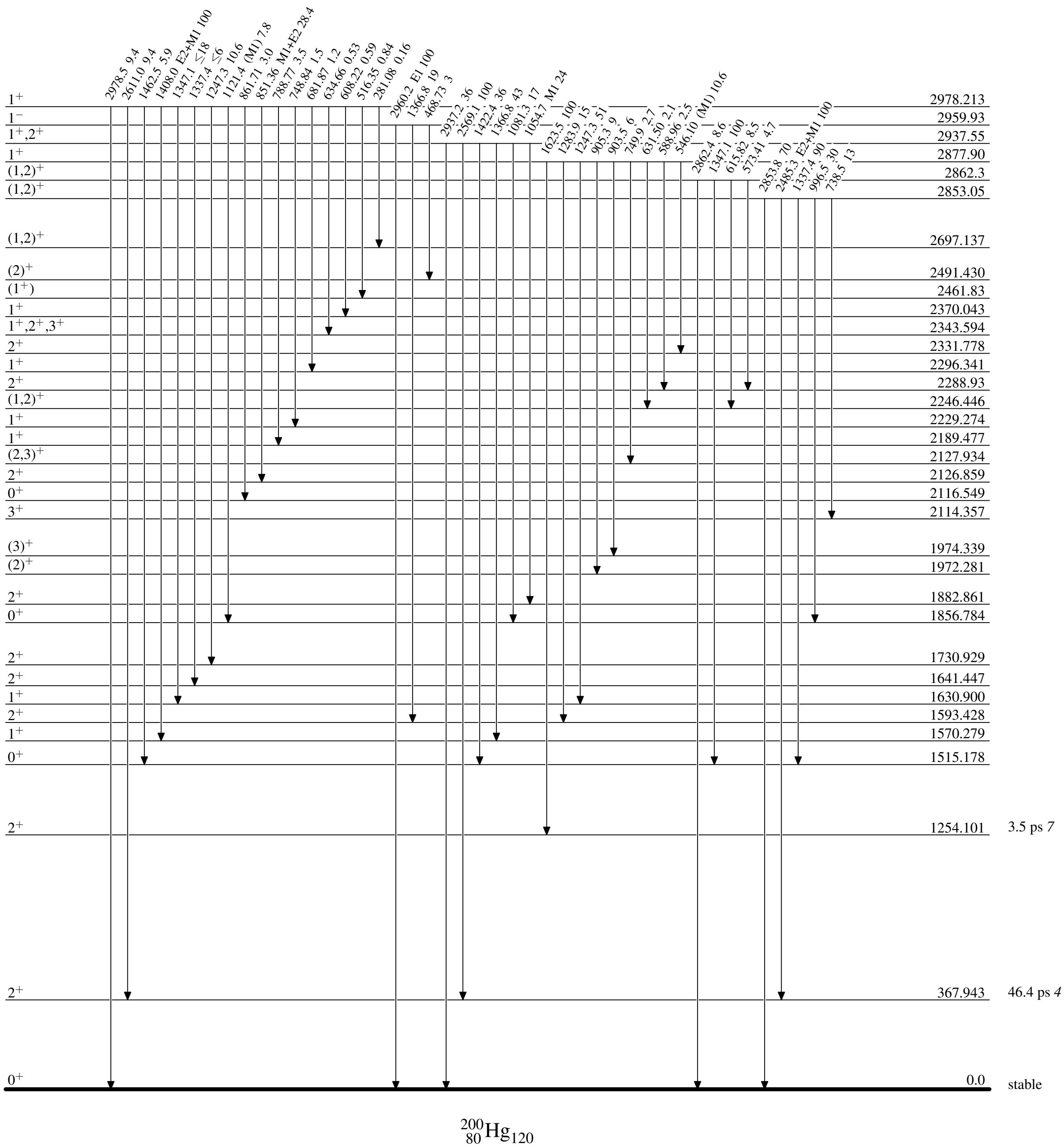


$^{200}_{80}Hg_{120}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



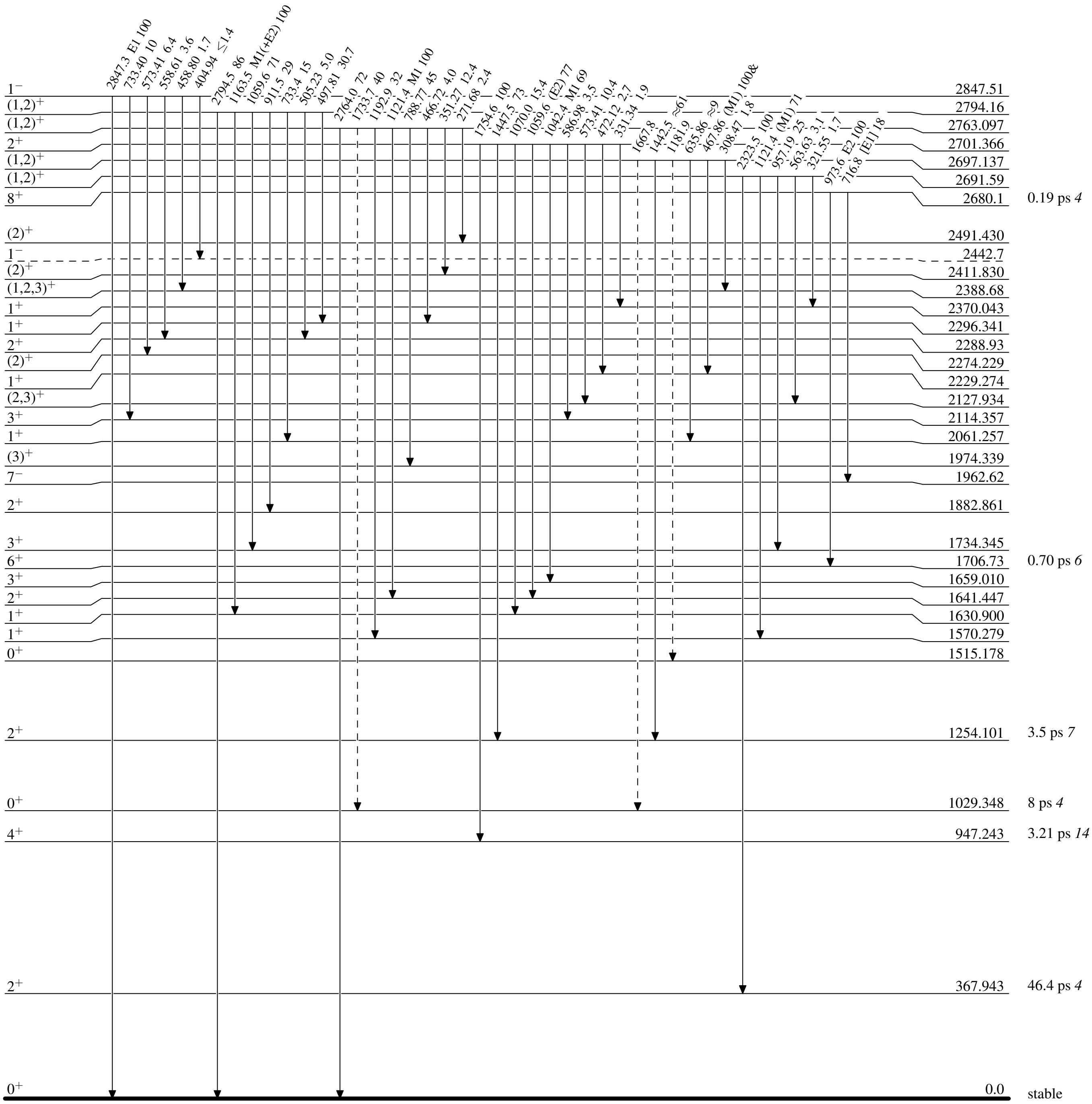
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

γ Decay (Uncertain)



$^{200}_{80}Hg_{120}$

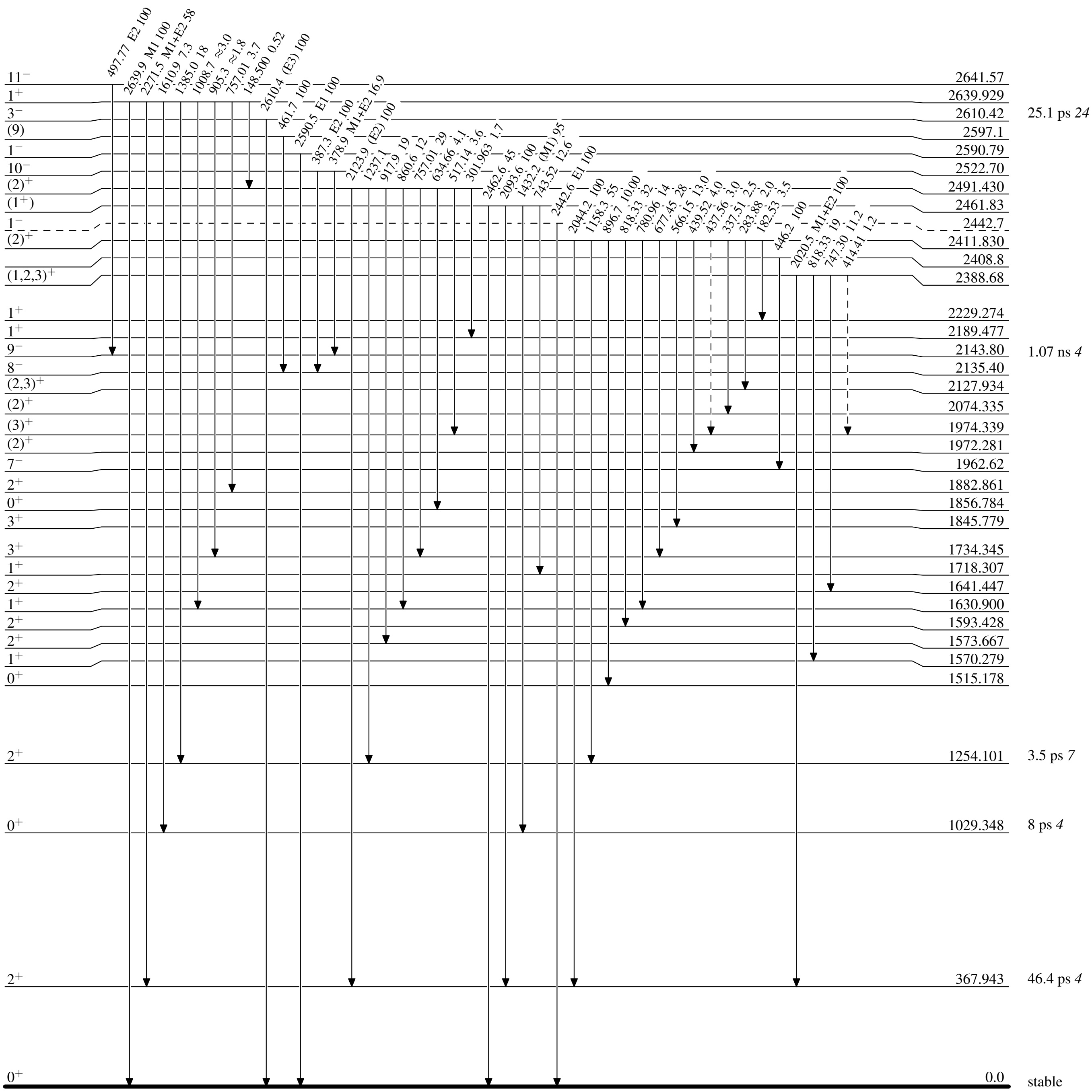
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)



$^{200}_{80}Hg_{120}$

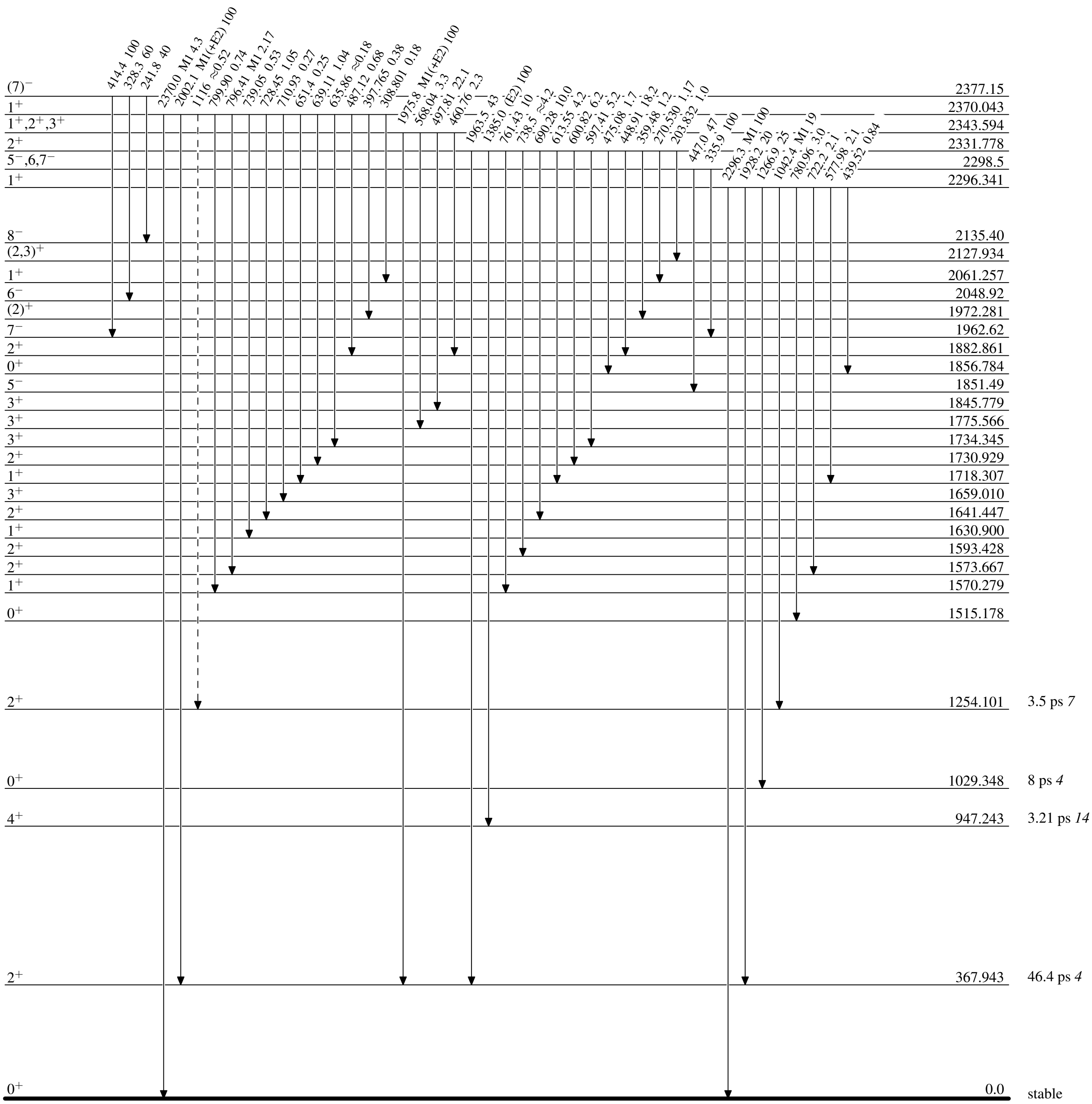
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)



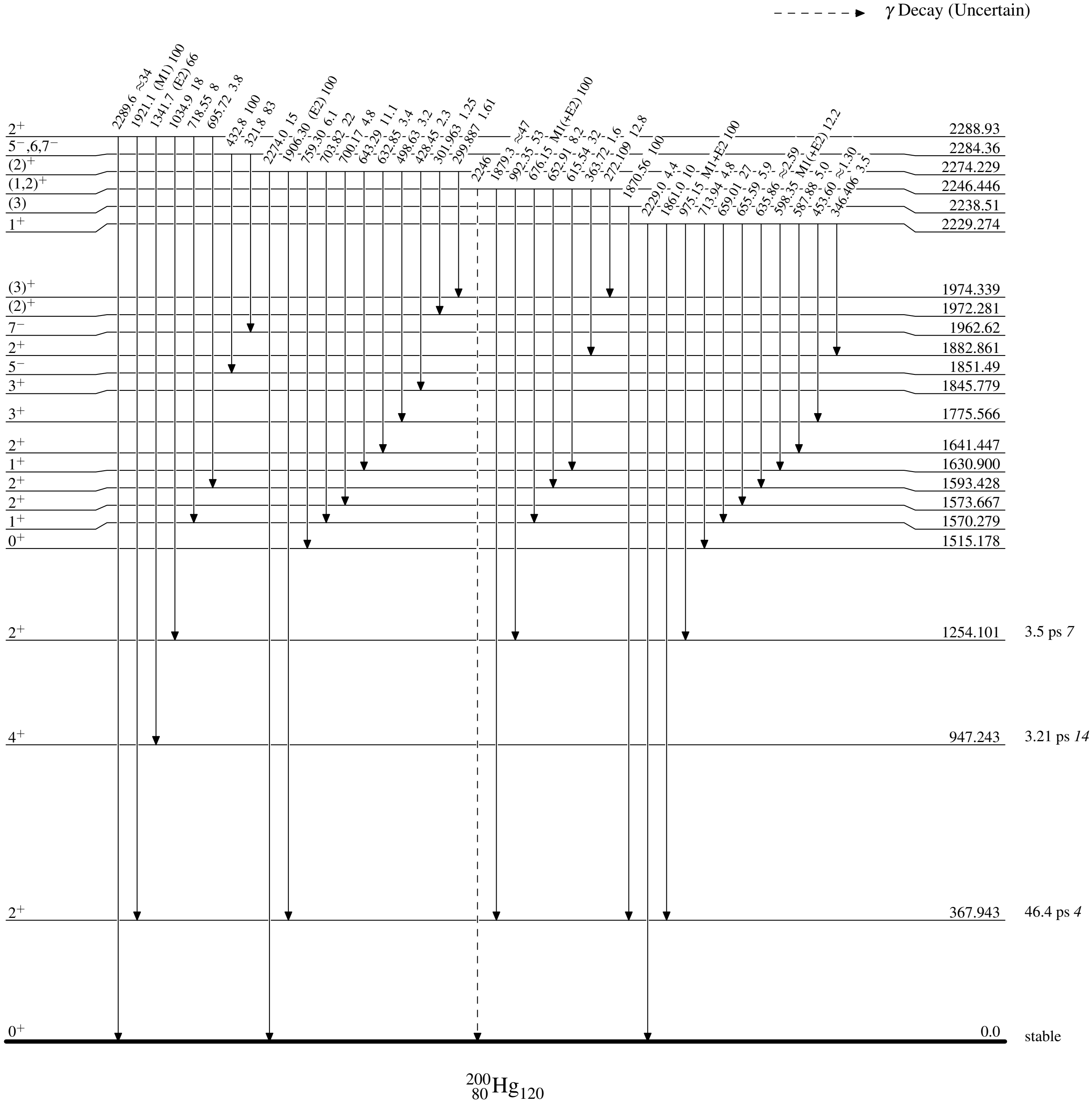
$^{200}_{80}Hg_{120}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

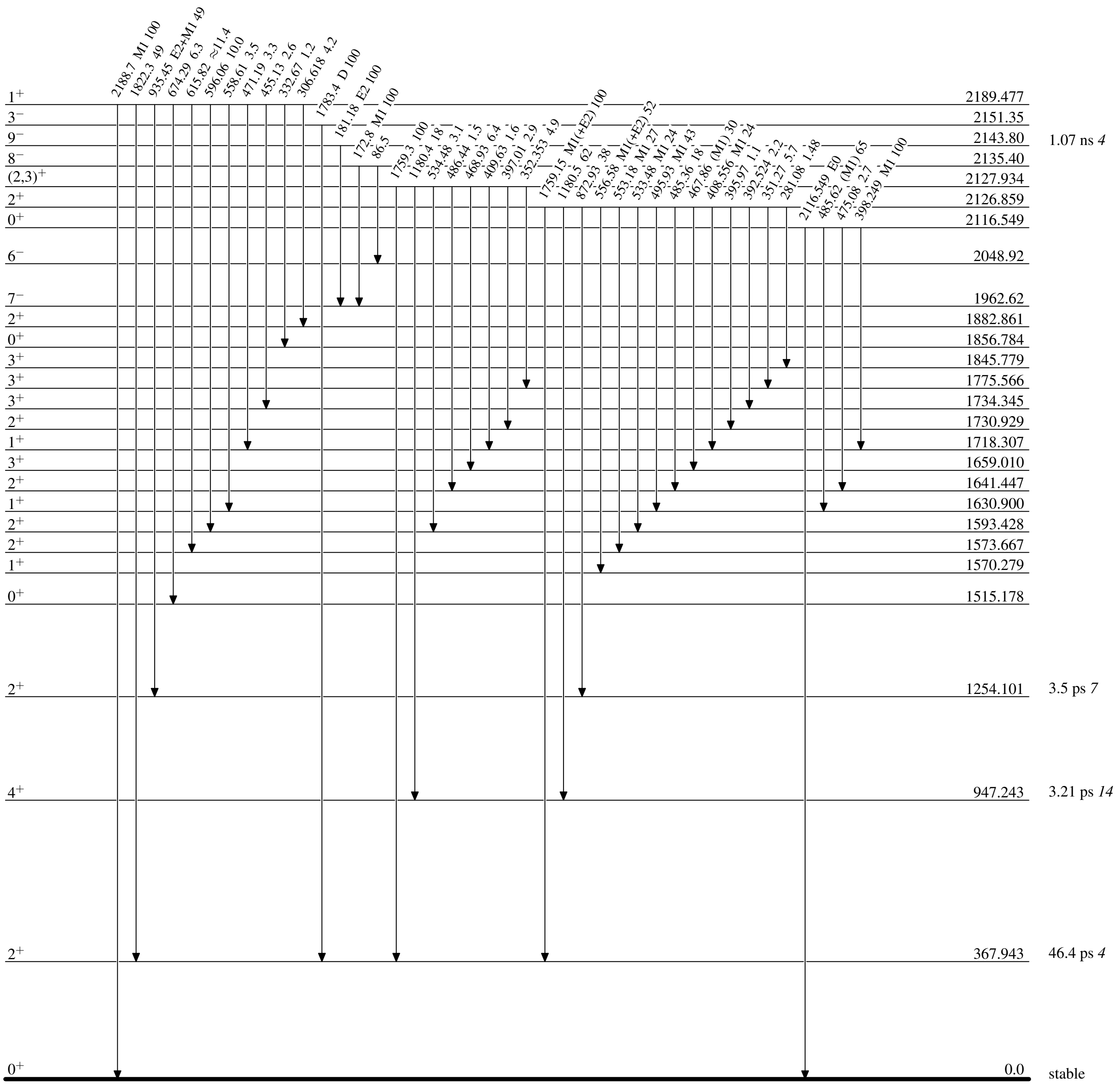
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



Adopted Levels, Gammas

Level Scheme (continued)

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



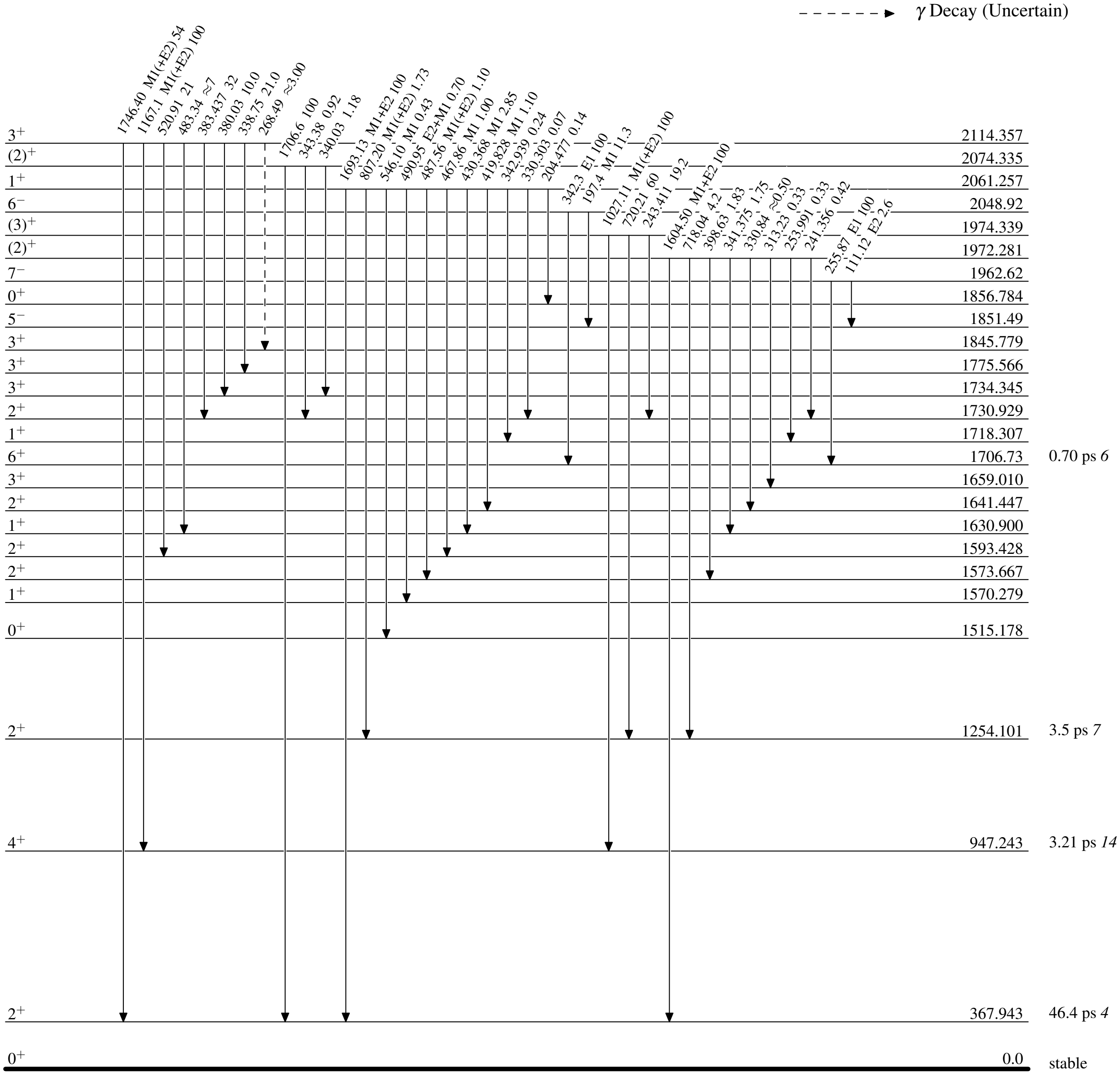
$^{200}_{80}Hg_{120}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

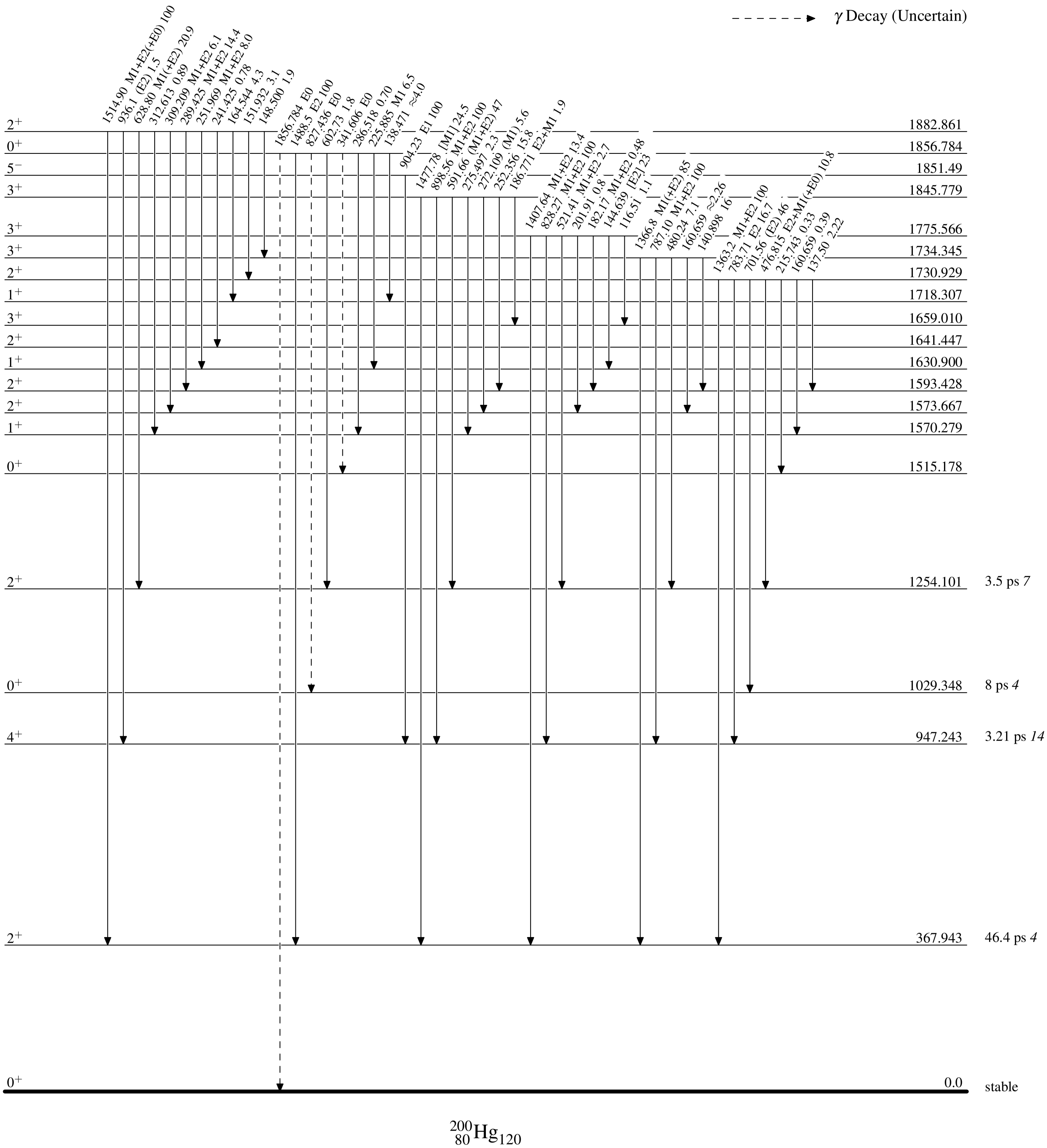


$^{200}_{80}Hg_{120}$

Adopted Levels, Gammas

Level Scheme (continued)

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



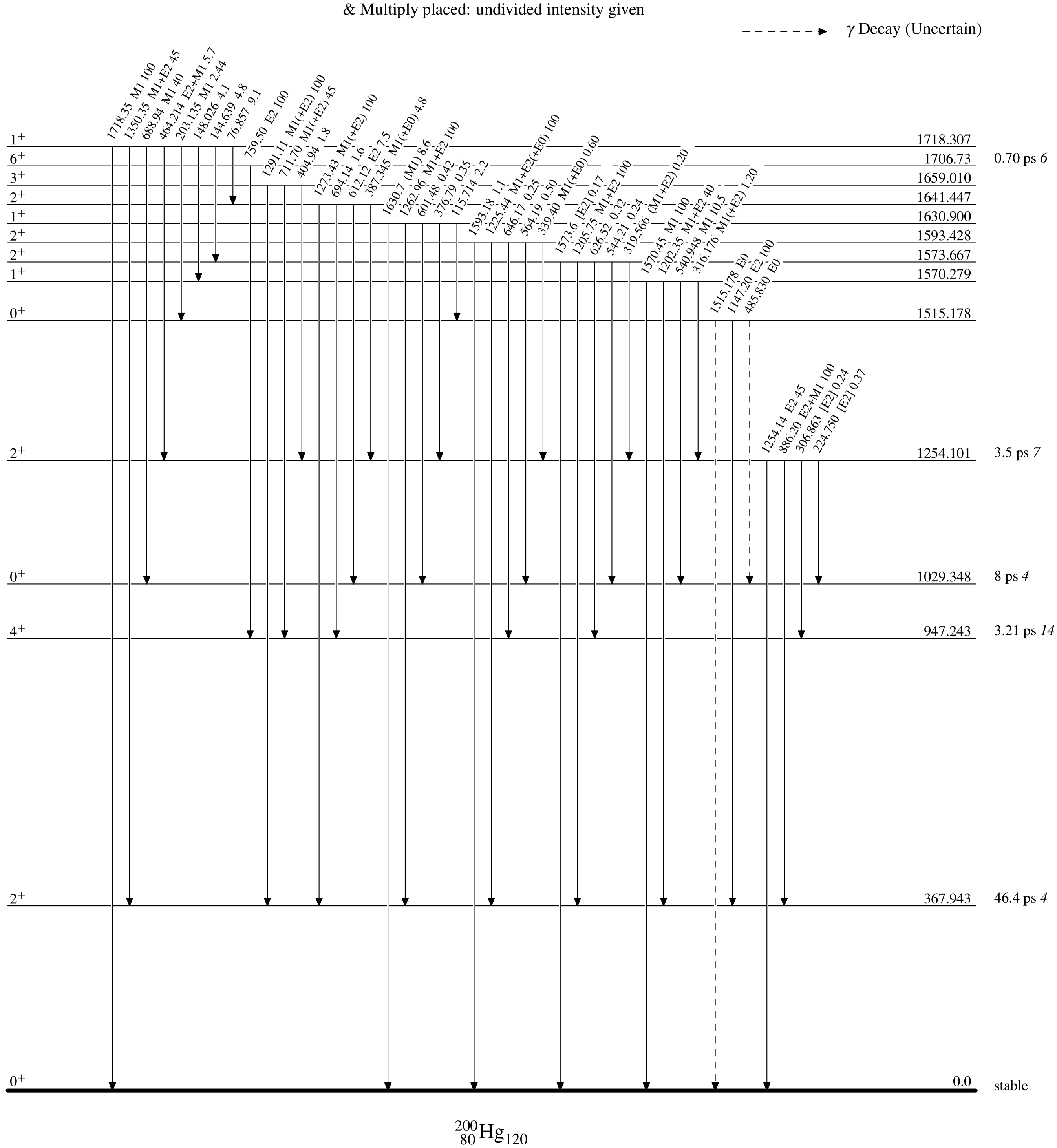
$^{200}_{80}Hg_{120}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

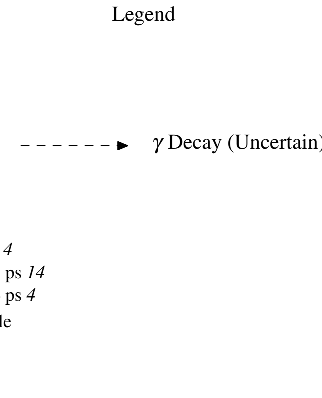


$^{200}_{80}Hg_{120}$

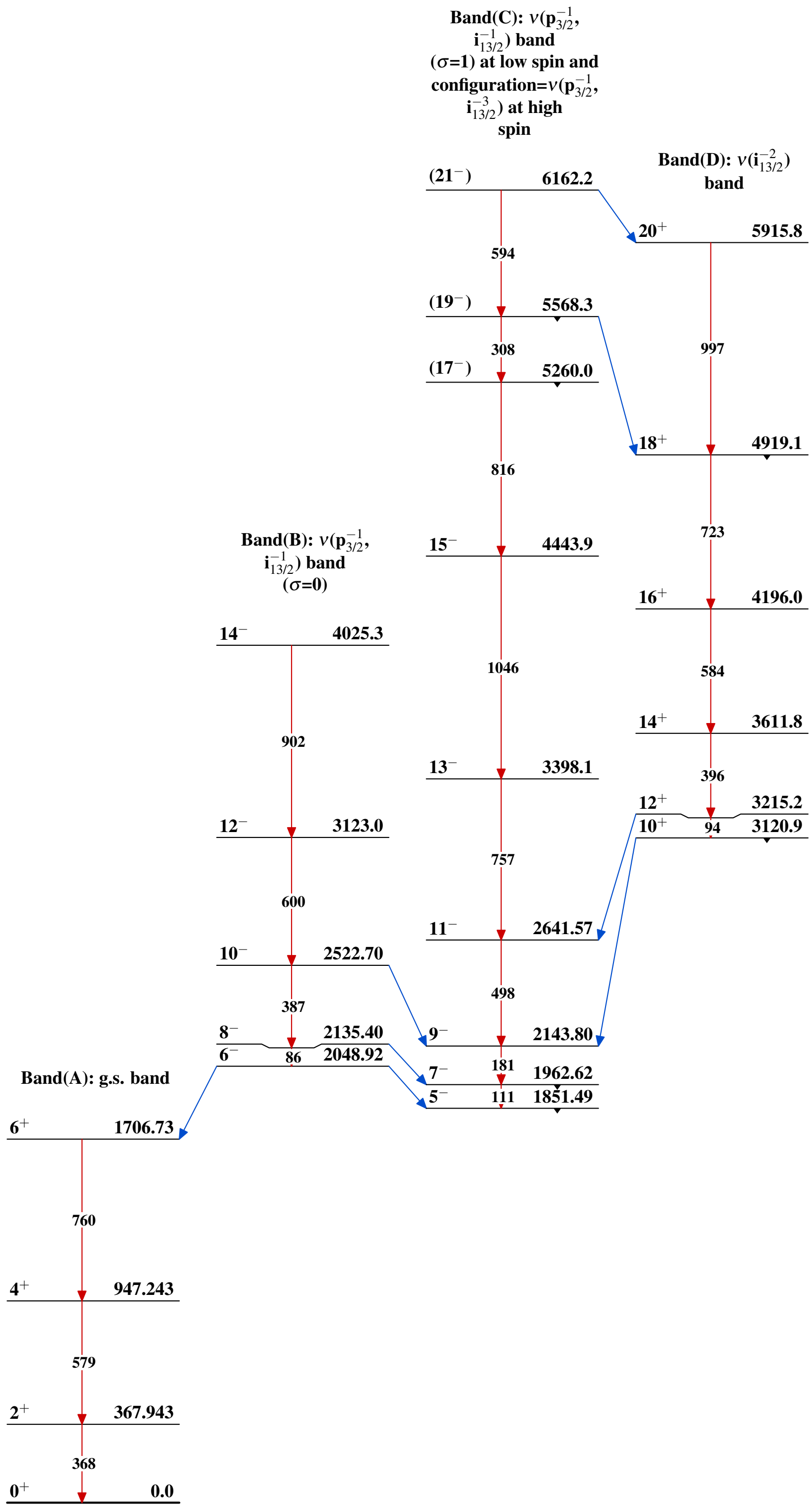
Adopted Levels, Gammas

Level Scheme (continued)

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



Adopted Levels, Gammas



$^{200}_{80}Hg_{120}$

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

Q(β^-)=−1364.9 *18*; S(n)=7754.10 *20*; S(p)=8234 *3*; Q(α)=133.8 *22* 2021Wa16

^{202}Hg Levels

Cross Reference (XREF) Flags

A	^{202}Au β^- decay	F	^{201}Hg(n,γ) E=70.9 eV res	K	^{202}Hg(d,pnγ)
B	^{202}Tl ε decay	G	^{201}Hg(n,γ) E=210.3 eV res	L	^{202}Hg(d,d′)
C	^{197}Au(HI,xγ)	H	^{202}Hg(γ,γ')	M	^{203}Tl(μ^-,nγ)
D	^{201}Hg(n,γ) E=thermal	I	^{202}Hg(n,n′γ)	N	^{204}Hg(p,t)
E	^{201}Hg(n,γ) E=43 eV res	J	^{202}Hg(p,p′)	O	Coulomb excitation

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[‡]	0$^+$	stable	ABCDEFGHIJKLMNO	$\delta\nu$(^{202}Hg,^{198}Hg)=−10100 MHz *180* (2021Da01). δ<r^2>(^{202}Hg,^{198}Hg)=+0.197 fm^2 *3*(stat) *14*(syst) (2021Da01).
439.564[‡] *10*	2$^+$	27.35 ps *23*	ABCDEFGHIJKLMNO	μ=+0.78 *6* Q=1.01 *13* XREF: L(446). J$^\pi$: 439.56γ E2 to 0$^+$; L(p,t)=2. T$_{1/2}$: From B(E2)↑=0.608 *5*. Other: 24 ps *5* (1955Me35) in ^{202}Hg(γ,γ'). B(E2)↑=0.608 *5*, weighted average of B(E2)↑=0.616 *9* (1979Bo16) and 0.605 *5* (1980Sp05). Other: B(E2)↑=0.65 *8* (1970Ka09). μ: From g=+0.392 *31* in 1995Br34,2020StZV using the transient field perturbed angular correlation technique. Others: g=0.37 *4* (1990Ba40), 0.44 *9* (1986Ko02), 0.51 *14* (1970Ka09) and 0.50 *10* (1974Do01). Q: From 1980Sp05,2021StZZ. Other: 0.32 *14* (1979Bo16). Both values were deduced using the reorientation effect in Coulomb excitation technique. The agreement between 1980Sp05 and 1979Bo16 is poor, but the former value is recommended by the evaluator.
959.89 *5*	2$^+$	13.5 ps *28*	ABCDEFG IJK MNO	J$^\pi$: 960.1γ E2 to 0$^+$; L(p,t)=2. B(E2)↑(0$^+$ to 2$^+_2$)=0.0035 *10* and B(E2)↑(2$^+_1$ to 2$^+_2$)=0.053 *18* (1979Bo16). T$_{1/2}$: Weighted average of 11 ps *4* from B(E2)↑ in 1979Bo16 and 16 ps *4* from B(E2,520.13γ)(e^{2}b^2) in 1985Ag01. Others: 28.6 ps *26* from B(E2,960.1γ)(W.u.) and 29 ps *5* from B(E2,520.13γ)(W.u.) in 2019Ke01.
1119.91[‡] *10*	4$^+$	2.05 ps *3*	CDEF IJK MNO	μ=1.36 *27* J$^\pi$: 680.4γ E2 to 2$^+$. B(E2)↑(2$^+_1$ to 4$^+_1$)=0.34 *1* (1979Bo16). T$_{1/2}$: Weighted average of 2.05 ps *4* (2019Ke01), 2.11 ps *19* (1985Ag01) and 2.03 ps *6* (1979Bo16). Values determined from the B(E2) data. μ: From g=+0.341 *68* in 1995Br34,2020StZV using the transient field perturbed angular correlation technique.
1182.24 *6*	2$^+$	11 ps +*4*−*7*	CDEFG I K MNO	J$^\pi$: 129.2γ from 4$^+$, 222.2γ M1+E2 to 2$^+$, 1182.4γ to 0$^+$. T$_{1/2}$: Weighted average of 11 ps +*2*−*10* from B(E2,742.8γ)(W.u.) and 11 ps +*8*−*11* from B(E2,222.2γ)(W.u.) in 2019Ke01.
1296.5?[a] *6*			EFG	
1311.54 *7*	4$^+$	5.7 ps *5*	CD IJKlMNO	XREF: l(1332). J$^\pi$: L(p,t)=4, 351.6γ (E2) to 2$^+$.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{202}Hg Levels (continued)

E(level)[†]	J^{π}	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: Weighted average of 5.4 ps *7* from B(E2,351.6γ)(W.u.) and 5.9 ps *6* from B(E2,872.0γ)(W.u.) in 2019Ke01.
1347.89 *8*	$(1^+,2^+)$		A DEFG I lMNO	XREF: l(1332). J^{π}: 908.4γ (M1+E2) to 2^+; strong γ-ray feeding from $1^-,2^-$ thermal capture state in (n,γ);
1389.58 *8*	2^+	8.0 ps *29*	DEFG IJ NO	XREF: J(1385). J^{π}: 1389.5γ (E2) to 0^+, 950.0γ (E2+M1), ΔJ=0 to 2^+. $T_{1/2}$: From B(E2,1389.5γ)(W.u.)=0.013 *1* in 2019Ke01.
1411.35 *12*	0^+		A I N	J^{π}: L(p,t)=0; 971.85γ (E2) to 2^+.
1457.5[a] *17*			EFG	
1508.8[a] *10*			EFG	
1524.3[a] *12*			EFG	
1561.96 *9*	$3^{(+)}$		D I N	XREF: N(1564.6). J^{π}: 602γ D to 2^+, 250γ D to 4^+, 379.7γ D,E2 to 2^+; no γ to 0^+.
1564.78 *8*	0^+		A DEFG I NO	J^{π}: 1125γ to 2^+, L(p,t)=0.
1575.48 *12*	(2^+)	2.1 ps *6*	DEFG IJ NO	XREF: E(1576.4)F(1576.4)G(1576.0)J(1574). J^{π}: 456.3γ to 4^+; 615.6γ (E2),ΔJ=0 to 2^+. $T_{1/2}$: From B(E2,1135.6γ)(W.u.)=0.47 *2* in 2019Ke01. Other: 1.1 ps *4* from B(E2,615.6γ)(W.u.)=17 *6* in 2019Ke01.
1624.02 *10*	(4^+)		I K N	J^{π}: 312γ (E2),ΔJ=0 to 4^+; 1184.5γ (E2) to 2^+; no γ to 0^+.
1643.67 *10*	0^+		A DEFG IJ MNO	XREF: E(1642.4)F(1642.4)G(1641.5)J(1644)M(1644.1). J^{π}: L(p,t)=0; p(θ) in ^{202}Hg(p,p′).
1655.8[b] *13*	(0^+)		N	J^{π}: From t(θ) in ^{204}Hg(p,t) (2013Be21).
1678.24 *13*	2^+		DEFG I N	XREF: E(1677.1)F(1677.1)G(1676.7). J^{π}: 718.3γ M1+E2, ΔJ=0 to 2^+, 496.2γ (M1+E2) to 2^+.
1724.80 *11*	(4^+)		EFG I K N	XREF: E(1722.5)F(1722.5)G(1722.1). J^{π}: 413.1γ M1+E2 to 4^+; 542.6γ (E2) to 2^+.
1745.99 *8*	$1,2^+$		A DEF I N	XREF: E(1747.8)F(1747.8)N(1748.2). J^{π}: 1306.37γ to 2^+, 1746.4γ to 0^+; possible direct feeding in ^{202}Au β^- decay [$J^{\pi}=(1^-)$].
1778.9[b] *6*	(0^+)		N	J^{π}: From t(θ) in ^{204}Hg(p,t) (2013Be21).
1788.39 *25*	2^+		DEFG	XREF: E(1787)F(1787)G(1786). J^{π}: 1789.0γ to 0^+; 476.5γ to 4^+.
1794.05 *20*	2^+	0.09 ps *5*	DEFG Ij NO	XREF: E(1792.9)F(1792.9)G(1792.5)j(1798). J^{π}: L(p,t)=2; 1354.8γ M1+E2 to 2^+, 1794.4γ to 0^+. $T_{1/2}$: From B(E2,833γ)(W.u.)=6 3 in 2019Ke01. Other: 0.08 ps *6* from B(E2,1794.4γ)(W.u.)=0.13 *6* in 2019Ke01.
1800.9[a] *19*			EFG j	XREF: j(1798).
1823.50 *12*	$(2)^+$	0.27 ps *10*	DEFG IJ NO	XREF: E(1822.7)F(1822.7)G(1822.1)J(1824). J^{π}: 1384.0γ (E2+M1) to 2^+, 1823.1γ to 0^+. $T_{1/2}$: From B(E2,1823.1γ)(W.u.)=0.052 *3* in 2019Ke01.
1852.26 *17*	2^+		A DEFG IJ	XREF: A(1851.7). J^{π}: 1412γ (E2+M1),ΔJ=0 to 2^+; 732.3γ to 4^+, 1853.0γ to 0^+.
1861.7 *3*	(3)		DEF I N	XREF: E(1863.0)F(1863.0). J^{π}: 549.7γ D (not ΔJ=0) to 4^+; 472.5γ to 2^+.
1903.1[b] *4*			EFG N	XREF: E(1901.3)F(1901.3)G(1900.9).
1915.0[a] *11*			EFG	
1959.43 *20*	$1,2^+$		A DEFG I	J^{π}: 1519.6γ to 2^+, 1959.4γ to 0^+.
1965.62[@] *12*	5^-		C IJK M O	J^{π}: 654γ (E1) to 4^+, p(θ) in ^{202}Hg(p,p′).
1966.00 *16*	2^+		DEFG I NO	J^{π}: 554.8γ to 0^+, 653.7γ to 4^+.
1988.82[‡] *22*	6^+	0.647 ps *3*	C K NO	J^{π}: 868.9γ E2 to 4^+. $T_{1/2}$: From B(E2,868.9γ)(W.u.)=24.9 *1* in 2019Ke01. Other: 0.65 ps *6* from B(E2,868.9γ)=0.175 e^{2}b^2 *15* in 1985Ag01.

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Adopted Levels, Gammas (continued)

^{202}Hg Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
1991.8[a] *17*			EFG J	XREF: J(1995).
2059.8[@] *5*	(7^-)	10.4 ns *4*	C N	J^π: 84.2γ to 5^-; systematics in neighboring nuclei. $T_{1/2}$: From 164γ-440γ(Δt) and the centroid-shift analysis (2021Su02).
2071.27 *10*	$(2)^+$		DEFG IJ N	XREF: J(2067). J^π: L(p,t)=2; 1631.7γ to 2^+.
2096.1[a] *8*			E G	
2111.8[b] *1*			N	
2126.38 *15*	$(1,2)^+$		DEF I N	XREF: E(2128.7)F(2128.7). J^π: 1687γ M1+E2 to 2^+; 564γ to (3^+); t(θ) in ^{204}Hg(p,t) (2013Be21) suggests $J^\pi=(0^+)$.
2133.91 *14*			IJ MNO	
2142.5[a] *18*			EFG	
2155.6[b] *2*			N	
2161.87 *20*			DEFG I M	
2196.3[b] *4*			EFG N	
2205.3[b] *3*			N	
2223.1[@] *7*	(9^-)	1.4 ns *3*	C	$T_{1/2}$: From 404γ-164γ(Δt) and the centroid-shift analysis (2021Su02). J^π: 163.3γ to (7^-).
2223.5[b] *1*			EFG J N	XREF: J(2215).
2249.70 *23*	(2^+)		EFG I K N	J^π: 524.9γ to 4^+; feeding from $J^\pi=1^-$, 2^- neutron resonance capture state.
2280.16 *12*	$(1^+,2)$		D N	J^π: 1840.4γ to 2^+; 718.3γ to 3^+; feeding from $J^\pi=1^-,2^-$ neutron capture state.
2283.6[a] *23*			EFG j	XREF: j(2289).
2292.1 *3*			efg Ij n	XREF: e(2295.4)f(2295.4)g(2295.0)j(2289)n(2294.7). J^π: 902.5γ (E2) to 2^+.
2293.20 *15*	(4^+)	0.042 ps *11*	efg Ij nO	XREF: e(2295.4)f(2295.4)g(2295.0)j(2289)n(2294.7). J^π: 669.3γ to (4^+); 1853.5γ to 2^+; J>3 from excitation function in ^{202}Hg(n,n′γ). $T_{1/2}$: From B(E2,1853.5γ)(W.u.)=3.40 *5* in 2019Ke01.
2309.2 *4*	(3^-)		DEFG I N	XREF: E(2310.9)F(2310.9)G(2310.5). J^π: 1869.6γ to 2^+; J>3 from excitation function in ^{202}Hg(n,n′γ); feeding from $J^\pi=1^-,2^-$ neutron capture state.
2323.27 *10*			D I N	
2339.29? *31*	$(1^+,2^+)$		EFG N	XREF: N(2342.1). J^π: 991.4γ to $(1^+,2^+)$; feeding from $J^\pi=1^-,2^-$ neutron resonance capture state; observation in Coulomb Excitation.
2356.83 *18*	3^-		D IJ NO	J^π: From p(θ) in ^{202}Hg(p,p′); J>3 from excitation function in ^{202}Hg(n,n′γ); 1045γ to 4^+, 1917.2γ to 2^+; population in Coulomb Excitation.
2367.4[a] *20*			EFG	
2371.9[b] *2*			N	
2415.4[b] *8*			EFG N	XREF: E(2417.4)F(2417.4)G(2417.0).
2427.5[b] *8*			EFG N	XREF: E(2428.5)F(2428.5)G(2428.1).
2441.1[b] *2*			N	
2454.9 *10*			EFG O	XREF: E(2456.8)F(2456.8)G(2456.4).
2461.7[b] *2*			J N	XREF: J(2466).
2473.4[b] *4*			EFG N	
2516.5 *3*	(2^+)		EFG I NO	XREF: E(2515)F(2515)G(2515)N(2515.6).

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Adopted Levels, Gammas (continued)

^{202}Hg Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				J^π: 2516.5γ to 0^+.
2523[&] 4			J	
2550.3[b] 2			EFG N	
2560.1[b] 2	(4^+)		J N	XREF: J(2564). J^π: From p(θ) in ^{202}Hg(p,p′).
2570.7[b] 10	(0^+)		EFG N	XREF: E(2568.1)F(2568.1)G(2567.7). J^π: From t(θ) in ^{204}Hg(p,t) (2013Be21).
2584.6[b] 5			N	
2598.5[b] 2	0^+		N	J^π: From t(θ) in ^{204}Hg(p,t) (2013Be21).
2605.0[b] 4			J N	XREF: J(2610).
2639.1[b] 15			N	
2652.9[b] 3			N	
2675.7[b] 3			N	
2681.0 10	(2^+)	0.29 ps 3	O	J^π: 2681γ to 0^+. $T_{1/2}$: From B(E2,2681γ)(W.u.)=0.20 2 in 2019Ke01.
2685.7[b] 5	(0^+)		N	J^π: From t(θ) in ^{204}Hg(p,t) (2013Be21).
2706.8 5	3^-	≤23.3 ps	EFG J NO	XREF: E(2705)F(2705)G(2705)J(2710)N(2708.5). J^π: From $\alpha(\theta)$ in Coulomb Excitation; p(θ) in ^{202}Hg(p,p′). $T_{1/2}$: Upper limit from B(E3)(W.u.)=21 1 in 2019Ke01. Other: <20.7 ps an upper limit from B(E3)↑=0.42 4 in 1991Li03. B(E3)↑=0.42 4 from Coulomb Excitation (1991Li03).
2731.4[b] 3			EFG N	XREF: E(2729)F(2729)G(2728).
2748.2[b] 3			N	
2755.0[b] 3			E G J N	XREF: E(2751.6)G(2751.2)J(2752).
2781.7[b] 3			N	
2814.7[b] 6			N	
2821.2[@] 9	(11^-)		C	J^π: 598.1γ to (9^-).
2824.8[b] 3			N	
2831[a] 4			EFG	XREF: G(2830).
2847.8[b] 4			EFG N	XREF: E(2845.5)F(2845.5)G(2845.1).
2858.1[a] 24			EFG	
2872.2[b] 4			N	
2882.4[b] 5			N	
2897[a] 3			EFG	
2906.2[b] 18			EFG N	XREF: E(2908.9)F(2908.9)G(2908.5).
2923.8[b] 4			EFG J N	XREF: E(2918.3)F(2918.3)G(2917.9)J(2923).
2934.0[b] 8			N	
2950.7[a] 17			EFG	
2970.1[a] 10			EFG	
2997.5[a] 8			EFG	
3017.9[a] 6			EFG	
3028[a] 3			EFG J	XREF: G(3027)J(3026).
3058.8[a] 22			EFG	
3059[&] 4	5^-		J	J^π: From p(θ) in ^{202}Hg(p,p′).
3080.2[a] 21			EFG J	XREF: J(3087).
3118[&] 4			J	
3164.1 7	3^-		J O	XREF: J(3166). J^π: From p(θ) in ^{202}Hg(p,p′); population in Coulomb Excitation.

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Adopted Levels, Gammas (continued)

^{202}Hg Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
3179[a] *3*			EFG	
3200.1[a] *14*			EFG	
3222.5[a] *13*			EFG	
3254.3[a] *21*			EFG	
3264[&] *4*			J	
3295[a] *4*			EFG J	XREF: J(3299).
3311.0[a] *21*			EFG	
3350.4[a] *13*			EFG	
3416[a] *3*			EFG	
3481[a] *3*			EFG	
3514.0[#] *10*	(12^+)		C	J^π: 692.8γ to (11^-); systematics of similar structures in neighboring nuclei. configuration: Probable $\nu(i^{-2}_{13/2})$.
3605.9[a] *17*			EFG	
3777.3[@] *10*	(13^-)		C	J^π: 956.1γ to (11^-).
3918.3[#] *11*			C	
4156.4[@] *11*			C	
4493.9[@] *13*			C	
4648.0[#] *13*			C	
4924 *5*	1^-	0.30 eV *5*	H	J^π: 4924γ E1 to 0^+; excitation in ^{202}Hg(γ,γ'). $T_{1/2}$: From 1974Te01 in ^{202}Hg(γ,γ').
5490.3[#] *14*			C	
5710.3[#] *14*			C	
6339.3[#] *15*			C	
7126.9[#] *16*			C	
7663.5[#] *17*			C	

† From a least-square fit to Eγ, unless otherwise stated.
‡ Band(A): Ground-state band.
# Seq.(B): γ-ray cascade based on the (12^+) state.
@ Seq.(C): γ-ray cascade based on the 5^- state.
& From ^{202}Hg(p,p′).
a From ^{201}Hg(n,γ) E=43 eV res.
b From ^{204}Hg(p,t).

$\gamma(^{202}Hg)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[&]	Comments
439.564	2^+	439.56 *1*	100	0.0	0^+	E2		0.0371 *5*	α(K)=0.0259 *4*; α(L)=0.00851 *12*; α(M)=0.002108 *30* α(N)=0.000526 *7*; α(O)=9.29×10^{-5} *13*; α(P)=3.42×10^{-6} *5* B(E2)(W.u.)=17.27 *15* E_γ,I_γ: From 1975Co19 in ^{202}Tl ε decay. Mult.: From K/L(exp)=2.6 and (L1+L2)/L3(exp)=3.5 (1953Be79), and α(K)exp=0.03, α(exp)=0.041, α(L1)exp=0.0078, α(L2)exp=0.0011, α(L3)exp=0.0025 (1957Ha97).
959.89	2^+	520.13 *7*	100 *1*	439.564	2^+	M1+E2	+0.9 *1*	0.0566 *34*	α(K)=0.0456 *29*; α(L)=0.0084 *4*; α(M)=0.00198 *8* α(N)=0.000497 *21*; α(O)=9.3×10^{-5} *4*; α(P)=6.3×10^{-6} *4* B(M1)(W.u.)=0.0054 *13*; B(E2)(W.u.)=5.9 *14* E_γ: From 1975Co19 in ^{202}Tl ε decay. I_γ: From 2019Ke01 in Coulomb Excitation. Mult.,δ: From 520γ-439$\gamma(\theta)$ in 1973BeYM [A_2=−0.27 *3*, A_4=+0.13 *5*]; Other: A_2=0.11 *1*, A_4=0.012 *16* from $\gamma(\theta)$ in 2019Ke01, consistent with ΔJ=0.
		960.1 *1*	13.5 *4*	0.0	0^+	E2		0.00654 *9*	α(K)=0.00524 *7*; α(L)=0.000996 *14*; α(M)=0.0002354 *33* α(N)=5.89×10^{-5} *8*; α(O)=1.088×10^{-5} *15*; α(P)=6.89×10^{-7} *10* B(E2)(W.u.)=0.083 *17* E_γ: From 1989Ga07 in ^{202}Hg(n,n′γ). I_γ: Weighted average of 11.7 *12* (1984Ta09) in ^{202}Tl ε decay, 13.0 *14* (1975Br02) in ^{201}Hg(n,γ) E=thermal, 14.9 *12* (1989Ga07) in ^{202}Hg(n,n′γ) and 14.0 *3* (2019Ke01), 13.0 *5* (1979Bo16), and 15.4 *18* (1985Ag01) in Coulomb Excitation. Mult.: α(K)exp(439γ)/α(K)exp(961γ)=5.5 *7* (1965Le04).
1119.91	4^+	680.4 *1*	100	439.564	2^+	E2		0.01331 *19*	α(K)=0.01024 *14*; α(L)=0.002339 *33*; α(M)=0.000563 *8* α(N)=0.0001407 *20*; α(O)=2.56×10^{-5} *4*; α(P)=1.358×10^{-6} *19* B(E2)(W.u.)=26.5 *4* Mult.: A_2=0.30 *3* (1989Ga07), A_2=0.16 *2*, A_4=−0.01 *13* (2019Ke01).
1182.24	2^+	222.2 *1*	100[‡] *4*	959.89	2^+	M1+E2	−0.13 *3*	0.815 *12*	α(K)=0.667 *10*; α(L)=0.1134 *16*; α(M)=0.0264 *4* α(N)=0.00663 *9*; α(O)=0.001252 *18*; α(P)=9.47×10^{-5} *15* B(M1)(W.u.)=0.07 *+5−3*; B(E2)(W.u.)=9 *+7−5* Mult.,δ: A_2=0.12 *2*, A_4=−0.007 *22* (2019Ke01); Other: A_2=0.40 *3* (1989Ga07), ΔJ=0 transition.
		742.8 *1*	51.4[‡] *11*	439.564	2^+	M1+E2	2.1 *4*	0.0150 *16*	α(K)=0.0120 *13*; α(L)=0.00233 *19*; α(M)=0.00055 *4* α(N)=0.000138 *11*; α(O)=2.55×10^{-5} *20*; α(P)=1.62×10^{-6} *19* B(M1)(W.u.)=0.00019 *+14−9*; B(E2)(W.u.)=0.55 *+36−21* I_γ: Others: 60 *9* (1989Ga07), 50 *5* (1975Br02), 36 (1984Sc19). Mult.,δ: A_2=0.21 *4*, A_4=−0.039 *54* (2019Ke01); Other: A_2=0.44 *2* (1989Ga07), ΔJ=0 transition.
		1182.4[@] *4*	11.3[@] *28*	0.0	0^+	[E2]		0.00437 *6*	α(K)=0.00355 *5*; α(L)=0.000626 *9*; α(M)=0.0001467 *21*

$^{202}_{80}Hg_{122}$-6

$\gamma(^{202}$Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
								α(N)=3.67×10^{-5} *5*; α(O)=6.83×10^{-6} *10*; α(P)=4.64×10^{-7} *7*; α(IPF)=2.69×10^{-6} *5* B(E2)(W.u.)=0.015 *+10−7*
1311.54	4$^+$	129.8[#] *5*	13.9[#] *21*	1182.24	2$^+$	[E2]	1.92 *4*	α(K)=0.439 *7*; α(L)=1.108 *25*; α(M)=0.289 *7* α(N)=0.0717 *16*; α(O)=0.01195 *27*; α(P)=6.04×10^{-5} *10* I_γ: Others: 20 (1984Sc19) and 17 *8* (2019Ke01). B(E2)(W.u.)=2637 *403* using the adopted $T_{1/2}$, Iγ and α is anomalously high and violates RUL.
		351.6 *1*	100[‡] *4*	959.89	2$^+$	(E2)	0.0674 *9*	α(K)=0.0432 *6*; α(L)=0.01824 *26*; α(M)=0.00458 *6* α(N)=0.001142 *16*; α(O)=0.0001988 *28*; α(P)=5.63×10^{-6} *8* B(E2)(W.u.)=130 *13* Mult.: A_2=0.34 *3* (1989Ga07).
		872.0 *1*	54 *3*	439.564	2$^+$	[E2]	0.00793 *11*	α(K)=0.00629 *9*; α(L)=0.001249 *17*; α(M)=0.000297 *4* α(N)=7.41×10^{-5} *10*; α(O)=1.365×10^{-5} *19*; α(P)=8.30×10^{-7} *12* B(E2)(W.u.)=0.75 *8* I_γ: Weighted average of 51 *6* (2019Ke01), 59 *6* (1975Br02), 50 *4* (1989Ga07) and 58 *5* (2021Su02). Other: 62 (1984Sc19).
1347.89	(1$^+$,2$^+$)	388.0 *1*	50 *6*	959.89	2$^+$	(M1+E2)	0.12 *6*	α(K)=0.09 *6*; α(L)=0.019 *6*; α(M)=0.0045 *12* α(N)=0.00112 *31*; α(O)=2.1×10^{-4} *6*; α(P)=1.3×10^{-5} *8* Mult.: A_2=0.08 *6* (1989Ga07).
		908.4 *1*	100 *6*	439.564	2$^+$	(M1+E2)	0.013 *6*	α(K)=0.011 *5*; α(L)=0.0019 *7*; α(M)=4.4×10^{-4} *17* α(N)=1.1×10^{-4} *4*; α(O)=2.0×10^{-5} *8*; α(P)=1.5×10^{-6} *7* Mult.: A_2=0.03 *7* (1989Ga07).
1389.58	2$^+$	207.3 *2*	9.6 *21*	1182.24	2$^+$	[M1,E2]	0.67 *33*	α(K)=0.49 *33*; α(L)=0.1403 *32*; α(M)=0.0345 *24* α(N)=0.0086 *6*; α(O)=0.001536 *26*; α(P)=7.E−5 *5* B(M1)(W.u.)=0.018 *7* if M1, B(E2)(W.u.)=157 *66* if E2.
		429.8 *2*	32 *7*	959.89	2$^+$	(E2+M1)	0.09 *5*	α(K)=0.07 *4*; α(L)=0.014 *5*; α(M)=0.0033 *10* α(N)=8.3×10^{-4} *26*; α(O)=1.5×10^{-4} *5*; α(P)=1.0×10^{-5} *6* Mult.: A_2=0.28 *11* (1989Ga07), ΔJ=0 transition. B(M1)(W.u.)=0.0067 *27* if M1, B(E2)(W.u.)=14 *6* if E2.
		950.0 *1*	100 *7*	439.564	2$^+$	(E2+M1)	0.012 *5*	α(K)=0.010 *5*; α(L)=0.0017 *6*; α(M)=3.9×10^{-4} *15* α(N)=1.0×10^{-4} *4*; α(O)=1.8×10^{-5} *7*; α(P)=1.3×10^{-6} *6* Mult.: A_2=0.14 *4* (1989Ga07), ΔJ=0 transition. B(M1)(W.u.)=0.0020 *7* if M1, B(E2)(W.u.)=0.80 *29* if E2.
		1389.5 *2*	11 *4*	0.0	0$^+$	(E2)	0.00325 *5*	α(K)=0.00264 *4*; α(L)=0.000445 *6*; α(M)=0.0001037 *15* α(N)=2.60×10^{-5} *4*; α(O)=4.86×10^{-6} *7*; α(P)=3.43×10^{-7} *5*; α(IPF)=3.42×10^{-5} *5* B(E2)(W.u.)=0.013 *7* Mult.: A_2=0.52 *17* (1989Ga07).
1411.35	0$^+$	971.85 *13*	100	439.564	2$^+$	(E2)	0.00638 *9*	α(K)=0.00512 *7*; α(L)=0.000969 *14*; α(M)=0.0002288 *32*

$^{202}_{80}$Hg$_{122}$-7

Adopted Levels, Gammas (continued)

γ(^{202}Hg) (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f	Mult.	α[&]	Comments
								α(N)=5.72×10^{-5} *8*; α(O)=1.058×10^{-5} *15*; α(P)=6.73×10^{-7} *9* E_{γ}: From ^{202}Au β^- decay. Mult.: A_2=0.02 *21* (1989Ga07).
1508.8		549.8 *9*	100	959.89	2$^+$			E_{γ},I_{γ}: From ^{201}Hg(n,γ) E=43 eV res.
1561.96	3$^{(+)}$	172.1 *4*	33 *16*	1389.58	2$^+$	D		Mult.: A_2=−0.52 *12* (1989Ga07).
		250.6 *2*	39 *12*	1311.54	4$^+$	D		Mult.: A_2=−0.31 *20* (1989Ga07).
		379.7 *1*	66 *13*	1182.24	2$^+$	D,E2		Mult.: A_2=0.12 *11* (1989Ga07).
		442.3 *8*	≈40	1119.91	4$^+$			
		602.1 *2*	100 *16*	959.89	2$^+$	D		Mult.: A_2=−0.25 *8* (1989Ga07).
		1122[@] *1*	≈10[@]	439.564	2$^+$			
1564.78	0$^+$	1125.20 *8*	100	439.564	2$^+$	(E2)	0.00480 *7*	α(K)=0.00389 *5*; α(L)=0.000697 *10*; α(M)=0.0001637 *23* α(N)=4.09×10^{-5} *6*; α(O)=7.61×10^{-6} *11*; α(P)=5.09×10^{-7} *7*; α(IPF)=4.45×10^{-7} *6* E_{γ}: From ^{202}Au β^- decay. Mult.: A_2=0.03 *11* (1989Ga07).
1575.48	(2$^+$)	185.8[@] *4*	33[@]	1389.58	2$^+$	[M1,E2]	0.9 *4*	α(K)=0.7 *5*; α(L)=0.207 *20*; α(M)=0.051 *8* α(N)=0.0128 *18*; α(O)=0.00227 *20*; α(P)=9.E−5 *7* B(M1)(W.u.)=0.12 *4* if M1; B(E2)(W.u.)=1337 *475* if E2 using the adopted $T_{1/2}$, Iγ and α is anomalously high and violates RUL.
		227.2[@] *6*	46[@]	1347.89	(1$^+$,2$^+$)	(M1+E2)	0.51 *26*	α(K)=0.38 *26*; α(L)=0.102 *5*; α(M)=0.0250 *4* α(N)=0.00624 *10*; α(O)=0.00112 *6*; α(P)=5.E−5 *4* Mult.: A_2=−0.05 *20* (1989Ga07). B(M1)(W.u.)=0.09 *3* if M1; B(E2)(W.u.)=680 *240* if E2 using the adopted $T_{1/2}$, Iγ and α is anomalously high and violates RUL.
		393.3[@] *4*	46[@] *18*	1182.24	2$^+$	[M1,E2]	0.11 *6*	α(K)=0.09 *5*; α(L)=0.018 *6*; α(M)=0.0043 *12* α(N)=0.00107 *31*; α(O)=2.0×10^{-4} *6*; α(P)=1.2×10^{-5} *8* B(M1)(W.u.)=0.018 *8* if M1, B(E2)(W.u.)=43 *20* if E2.
		456.3[@] *3*	63[@] *9*	1119.91	4$^+$	[E2]	0.0338 *5*	α(K)=0.02380 *34*; α(L)=0.00754 *11*; α(M)=0.001864 *26* α(N)=0.000465 *7*; α(O)=8.23×10^{-5} *12*; α(P)=3.15×10^{-6} *4* B(E2)(W.u.)=28 *9*
		615.6[@] *2*	89[@] *18*	959.89	2$^+$	(E2)	0.01660 *23*	α(K)=0.01256 *18*; α(L)=0.00307 *4*; α(M)=0.000745 *10* α(N)=0.0001859 *26*; α(O)=3.36×10^{-5} *5*; α(P)=1.667×10^{-6} *23* B(E2)(W.u.)=9 *3* Mult.: A_2=0.23 *8* (1989Ga07).
		1135.6[@] *2*	100[@] *35*	439.564	2$^+$	(E2+M1)	0.0079 *32*	α(K)=0.0065 *27*; α(L)=0.0011 *4*; α(M)=2.5×10^{-4} *9* α(N)=6.3×10^{-5} *22*; α(O)=1.2×10^{-5} *4*; α(P)=9.E−7 *4*; α(IPF)=8.9×10^{-7} *24* Mult.: A_2=0.67 *27* (1989Ga07). B(M1)(W.u.)=0.0016 *7* if M1, B(E2)(W.u.)=0.46 *19* if E2.
1624.02	(4$^+$)	312.5 *1*	100 *16*	1311.54	4$^+$	(E2)	0.0944 *13*	α(K)=0.0572 *8*; α(L)=0.0280 *4*; α(M)=0.00710 *10*

$^{202}_{80}$Hg$_{122}$-8

Adopted Levels, Gammas (continued)

$\gamma(^{202}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
								α(N)=0.001766 *25*; α(O)=0.000305 *4*; α(P)=7.38×10^{-6} *10* Mult.: A_2=0.33 *9* (1989Ga07).
1624.02	(4$^+$)	1184.5 *2*	98 *18*	439.564	2$^+$	(E2)	0.00435 *6*	α(K)=0.00354 *5*; α(L)=0.000624 *9*; α(M)=0.0001461 *20* α(N)=3.65×10^{-5} *5*; α(O)=6.81×10^{-6} *10*; α(P)=4.62×10^{-7} *6*; α(IPF)=2.83×10^{-6} *4* Mult.: A_2=0.35 *6* (1989Ga07).
1643.67	0$^+$	1204.1 *1*	100	439.564	2$^+$	(E2)	0.00422 *6*	α(K)=0.00343 *5*; α(L)=0.000602 *8*; α(M)=0.0001410 *20* α(N)=3.53×10^{-5} *5*; α(O)=6.57×10^{-6} *9*; α(P)=4.48×10^{-7} *6*; α(IPF)=4.37×10^{-6} *6* Mult.: A_2=−0.02 *7* (1989Ga07).
1678.24	2$^+$	288.4[@] *5*	31[@]	1389.58	2$^+$			
		496.2[@] *2*	14[@] *3*	1182.24	2$^+$	(M1+E2)	0.060 *33*	α(K)=0.048 *29*; α(L)=0.0092 *34*; α(M)=0.0022 *8* α(N)=5.5×10^{-4} *19*; α(O)=1.0×10^{-4} *4*; α(P)=7.E−6 *4* Mult.: A_2=0.05 *18* (1989Ga07).
		718.3[@] *3*	100[@] *10*	959.89	2$^+$	(E2+M1)	0.024 *12*	α(K)=0.019 *10*; α(L)=0.0034 *14*; α(M)=8.0×10^{-4} *31* α(N)=2.0×10^{-4} *8*; α(O)=3.7×10^{-5} *15*; α(P)=2.6×10^{-6} *14* Mult.: A_2=0.14 *5* (1989Ga07), ΔJ=0.
		1238.8[@] *3*	80[@] *8*	439.564	2$^+$	(E2+M1)	0.0064 *24*	α(K)=0.0053 *20*; α(L)=8.7×10^{-4} *30*; α(M)=2.0×10^{-4} *7* α(N)=5.1×10^{-5} *17*; α(O)=9.5×10^{-6} *34*; α(P)=7.2×10^{-7} *29*; α(IPF)=1.06×10^{-5} *27* Mult.: A_2=0.17 *8* (1989Ga07), ΔJ=0.
1724.80	(4$^+$)	413.1 *2*	27 *8*	1311.54	4$^+$	(E2+M1)	0.10 *5*	α(K)=0.08 *5*; α(L)=0.016 *5*; α(M)=0.0037 *11* α(N)=9.3×10^{-4} *28*; α(O)=1.7×10^{-4} *6*; α(P)=1.1×10^{-5} *7* Mult.: A_2=0.68 *31* (1989Ga07).
		542.6 *1*	100 *10*	1182.24	2$^+$	(E2)	0.02217 *31*	α(K)=0.01635 *23*; α(L)=0.00442 *6*; α(M)=0.001080 *15* α(N)=0.000269 *4*; α(O)=4.83×10^{-5} *7*; α(P)=2.170×10^{-6} *30* Mult.: A_2=0.42 *23* (1989Ga07).
1745.99	1,2$^+$	786.0 *4*	23 *4*	959.89	2$^+$			E_γ,I_γ: From 1984Cr01 in ^{202}Au β^- decay.
		1306.37 *8*	100 *3*	439.564	2$^+$			E_γ,I_γ: From 1984Cr01 in ^{202}Au β^- decay.
		1746.4 *5*	3.2 *11*	0.0	0$^+$			E_γ,I_γ: From 1984Cr01 in ^{202}Au β^- decay.
1788.39	2$^+$	476.5[@] *3*	100[@] *30*	1311.54	4$^+$			
		1789.0[@] *4*	99[@] *11*	0.0	0$^+$			
1794.05	2$^+$	611.3[@] *5*	≈3[@]	1182.24	2$^+$	[M1,E2]	0.036 *19*	α(K)=0.029 *16*; α(L)=0.0052 *21*; α(M)=0.0012 *5* α(N)=3.1×10^{-4} *12*; α(O)=5.7×10^{-5} *23*; α(P)=4.0×10^{-6} *23* B(M1)(W.u.)=0.029 *22* if M1, B(E2)(W.u.)=29 *21* if E2.
		833	3.0 *6*	959.89	2$^+$	[E2]	0.00870 *12*	α(K)=0.00687 *10*; α(L)=0.001396 *20*; α(M)=0.000332 *5* α(N)=8.30×10^{-5} *12*; α(O)=1.525×10^{-5} *21*; α(P)=9.07×10^{-7} *13* B(E2)(W.u.)=6 *4* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.

$^{202}_{80}Hg_{122}$-9

Adopted Levels, Gammas (continued)

γ(^{202}Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	δ	α[&]	Comments
1794.05	2^+	1354.8[@] *3*	100[@] *9*	439.564	2^+	M1+E2	0.06 *4*	0.00709 *10*	α(K)=0.00584 *8*; α(L)=0.000931 *13*; α(M)=0.0002153 *31* α(N)=5.40×10^{-5} *8*; α(O)=1.024×10^{-5} *15*; α(P)=8.00×10^{-7} *12*; α(IPF)=4.31×10^{-5} *6* B(M1)(W.u.)=0.09 *5*; B(E2)(W.u.)=0.064 *+9−7* Mult.,δ: A_2=0.23 *2*, A_4=0.028 *25* (2019Ke01); A_2=0.40 *8* (1989Ga07).
		1794.4[@] *6*	2.8[@] *13*	0.0	0^+	[E2]		2.18×10^{-3} *3*	α(K)=0.001660 *23*; α(L)=0.000266 *4*; α(M)=6.16×10^{-5} *9* α(N)=1.542×10^{-5} *22*; α(O)=2.90×10^{-6} *4*; α(P)=2.149×10^{-7} *30*; α(IPF)=0.0001756 *25* B(E2)(W.u.)=0.12 *9*
1823.50	$(2)^+$	77.1[@] *4*	3.5[@]	1745.99	$1,2^+$	[D,E2]			B(M1)(W.u.)=3.1 *13* if M1; B(E2)(W.u.)=1.6×10^5 *6* if E2, both using the adopted $T_{1/2}$, Iγ and α are anomalously high and violates RUL.
		247.4[@a] *11*	2.1[@]	1575.48	(2^+)	[M1,E2]		0.40 *21*	α(K)=0.30 *20*; α(L)=0.077 *8*; α(M)=0.0187 *10* α(N)=0.00466 *27*; α(O)=0.00084 *9*; α(P)=4.2×10^{-5} *29* B(M1)(W.u.)=0.060 *26* if M1, B(E2)(W.u.)=359 *156* if E2.
		434.0[@a] *8*	≈5.3[@]	1389.58	2^+	[M1,E2]		0.09 *5*	α(K)=0.07 *4*; α(L)=0.014 *5*; α(M)=0.0032 *10* α(N)=8.0×10^{-4} *25*; α(O)=1.5×10^{-4} *5*; α(P)=9.E−6 *6* B(M1)(W.u.)=0.028 *17* if M1, B(E2)(W.u.)=55 *34* if E2.
		476.5[@] *3*	12[@] *4*	1347.89	$(1^+,2^+)$	[M1,E2]		0.07 *4*	α(K)=0.054 *32*; α(L)=0.010 *4*; α(M)=0.0024 *8* α(N)=6.1×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=7.E−6 *5* B(M1)(W.u.)=0.048 *24* if M1, B(E2)(W.u.)=78 *39* if E2.
		640.9[@] *3*	14.7[@] *14*	1182.24	2^+	[E2,M1]		0.032 *16*	α(K)=0.026 *14*; α(L)=0.0046 *19*; α(M)=0.0011 *4* α(N)=2.7×10^{-4} *10*; α(O)=5.1×10^{-5} *20*; α(P)=3.5×10^{-6} *20* B(M1)(W.u.)=0.024 *10* if M1, B(E2)(W.u.)=22 *9* if E2.
		863.3[@] *3*	39[@] *4*	959.89	2^+	(E2+M1)		0.015 *7*	α(K)=0.012 *6*; α(L)=0.0021 *8*; α(M)=5.0×10^{-4} *19* α(N)=1.2×10^{-4} *5*; α(O)=2.3×10^{-5} *9*; α(P)=1.7×10^{-6} *8* Mult.: A_2=0.18 *10* (1989Ga07). B(M1)(W.u.)=0.026 *10* if M1, B(E2)(W.u.)=13 *5* if E2.

$\gamma(^{202}$Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
1823.50	(2)$^+$	1384.0[@] 3	100[@] 19	439.564	2$^+$	(E2+M1)	0.0050 17	α(K)=0.0041 14; α(L)=6.7×10^{-4} 22; α(M)=1.5×10^{-4} 5 α(N)=3.9×10^{-5} 13; α(O)=7.3×10^{-6} 24; α(P)=5.5×10^{-7} 21; α(IPF)=4.3×10^{-5} 11 Mult.: A_2=0.29 5 (1989Ga07). B(M1)(W.u.)=0.016 6 if M1, B(E2)(W.u.)=3.1 12 if E2.
		1823.1[@] 3	7.9[@] 28	0.0	0$^+$	[E2]	2.14×10^{-3} 3	α(K)=0.001613 23; α(L)=0.000258 4; α(M)=5.97×10^{-5} 8 α(N)=1.494×10^{-5} 21; α(O)=2.81×10^{-6} 4; α(P)=2.088×10^{-7} 29; α(IPF)=0.0001879 26 B(E2)(W.u.)=0.06 3
1852.26	2$^+$	173.4[@a] 4	2.8[@]	1678.24	2$^+$			
		541.1[@a] 3	6.1[@] 17	1311.54	4$^+$			
		732.3[@] 5	≈4[@]	1119.91	4$^+$			
		892.0[@] 3	18[@] 3	959.89	2$^+$			
		1412.3[@] 3	100[@] 10	439.564	2$^+$	(E2+M1)	0.0048 16	α(K)=0.0039 14; α(L)=6.3×10^{-4} 20; α(M)=1.5×10^{-4} 5 α(N)=3.7×10^{-5} 12; α(O)=7.0×10^{-6} 23; α(P)=5.3×10^{-7} 19; α(IPF)=5.3×10^{-5} 13 Mult.: A_2=0.23 8 (1989Ga07).
		1853.0[@] 4	46[@] 12	0.0	0$^+$	[E2]		
1861.7	(3)	472.5[@] 4	41[@] 14	1389.58	2$^+$			
		549.7[@] 10	100[@] 25	1311.54	4$^+$	D		Mult.: A_2=−0.14 7.
1959.43	1,2$^+$	611.3[@] 5	≈40[@]	1347.89	(1$^+$,2$^+$)			
		999.7[@] 4	26[@] 8	959.89	2$^+$			
		1519.6[@] 6	100[@] 30	439.564	2$^+$			
		1959.4[@] 3	80[@] 20	0.0	0$^+$			
1965.62	5$^-$	654.1 1	100 10	1311.54	4$^+$	(E1)	0.00514 7	α(K)=0.00428 6; α(L)=0.000660 9; α(M)=0.0001518 21 α(N)=3.79×10^{-5} 5; α(O)=7.08×10^{-6} 10; α(P)=5.11×10^{-7} 7 Mult.: A_2=−0.27 5; A_2=−0.12 6 (1984Sc19), A_2=−0.27 5 (1989Ga07).
		845.1 5	≈21	1119.91	4$^+$			E_γ: From 2021Su02 in ^{197}Au(HI,xγ). I_γ: From 1984Sc19 in ^{202}Hg(d,pnγ).
1966.00	2$^+$	104.5[@] 4	5.8[@]	1861.7	(3)			
		113.1[@] 4	1.4[@]	1852.26	2$^+$			
		400.4[@] 8	≈2.5[@]	1564.78	0$^+$			
		554.8 2	32 8	1411.35	0$^+$			
		653.7[@] 6	≈7.8[@]	1311.54	4$^+$	[E2]	0.01453 21	α(K)=0.01111 16; α(L)=0.00260 4; α(M)=0.000629 9 α(N)=0.0001570 22; α(O)=2.85×10^{-5} 4; α(P)=1.473×10^{-6} 21

$^{202}_{80}$Hg$_{122}$-11

$\gamma(^{202}Hg)$ (continued)

E_i(level)	J_i^{π}	E_{γ}†	I_{γ}†	E_f	J_f^{π}	Mult.	α&	Comments
1966.00	2^+	783.0@ *8*	8@ *3*	1182.24	2^+			
		1526.7@ *3*	100@ *11*	439.564	2^+	D		Mult.: A_2=−0.35 *12* (1989Ga07).
1988.82	6^+	868.9 *2*	100	1119.91	4^+	E2	0.00798 *11*	α(K)=0.00634 *9*; α(L)=0.001260 *18*; α(M)=0.000299 *4* α(N)=7.48×10^{-5} *10*; α(O)=1.377×10^{-5} *19*; α(P)=8.35×10^{-7} *12* B(E2)(W.u.)=24.89 *12* E_{γ}: From 1985Ag01 in Coulomb Excitation. Mult.: From $\gamma(\theta)$ in Coulomb Excitation (1985Ag01).
2059.8	(7^-)	(70.7# *11*)	63# *14*	1988.82	6^+	[E1]	0.2183 *99*	α(L)=0.167 *8*; α(M)=0.0394 *18* α(N)=0.0097 *4*; α(O)=0.00168 *8*; α(P)=7.34×10^{-5} *29* B(E1)(W.u.)=3.8×10^{-6} *11* E_{γ}: From level-energy difference. 2021Su02 give 70.6 keV.
		94.2# *5*	100# *19*	1965.62	5^-	[E2]	7.14 *19*	α(K)=0.625 *9*; α(L)=4.88 *14*; α(M)=1.28 *4* α(N)=0.316 *9*; α(O)=0.0524 *15*; α(P)=0.0001383 *28* B(E2)(W.u.)=11.7 *7*
2071.27	$(2)^+$	1631.7 *1*	100	439.564	2^+			
2126.38	$(1,2)^+$	380.0@ *3*	30@ *3*	1745.99	$1,2^+$			
		549.7@ *10*	28@ *7*	1575.48	(2^+)			
		564.5@ *3*	13@ *4*	1561.96	$3^{(+)}$			
		944.6@ *6*	17@ *6*	1182.24	2^+			
		1166.9@ *3*	18@ *4*	959.89	2^+			
		1686.7@ *3*	100@ *10*	439.564	2^+	M1+E2	0.0033 *10*	α(K)=0.0026 *8*; α(L)=4.2×10^{-4} *12*; α(M)=9.7×10^{-5} *27* α(N)=2.4×10^{-5} *7*; α(O)=4.6×10^{-6} *13*; α(P)=3.5×10^{-7} *11*; α(IPF)=0.00017 *4* Mult.: A_2=0.85 *29*.
2133.91		1014.0 *1*	100	1119.91	4^+			E_{γ}: Other: 1015.2 keV *5* in Coulomb Excitation.
2161.87		1722.3 *2*	100	439.564	2^+			
2223.1	(9^-)	163.3# *5*	100#	2059.8	(7^-)	[E2]	0.803 *14*	α(K)=0.273 *4*; α(L)=0.397 *8*; α(M)=0.1032 *20* α(N)=0.0256 *5*; α(O)=0.00430 *8*; α(P)=3.45×10^{-5} *5* B(E2)(W.u.)=27 *6*
2249.70	(2^+)	524.9 *2*	100	1724.80	(4^+)			
2280.16	$(1^+,2)$	320.3@ *7*	4@	1959.43	$1,2^+$			
		456.3@ *3*	11.0@ *18*	1823.50	$(2)^+$			
		486.1@ *4*	3.1@ *9*	1794.05	2^+			
		602.1@ *2*	26@ *3*	1678.24	2^+			
		718.3@ *3*	43@ *4*	1561.96	$3^{(+)}$			
		1097.8@ *3*	68@ *3*	1182.24	2^+			

$^{202}_{80}Hg_{122}$-12

Adopted Levels, Gammas (continued)

$\gamma(^{202}Hg)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
2280.16	$(1^+,2)$	1320.5[@] *3*	55[@] *21*	959.89	2^+			
		1840.4[@] *3*	100[@] *10*	439.564	2^+			
2292.1		902.5 *3*	100	1389.58	2^+	(E2)	0.00740 *10*	α(K)=0.00589 *8*; α(L)=0.001151 *16*; α(M)=0.000273 *4* α(N)=6.82×10^{-5} *10*; α(O)=1.258×10^{-5} *18*; α(P)=7.76×10^{-7} *11* Mult.: A_2=0.35 *40* (1989Ga07).
2293.20	(4^+)	669.3 *2*	100 *27*	1624.02	(4^+)	[M1,E2]	0.028 *14*	α(K)=0.023 *12*; α(L)=0.0041 *17*; α(M)=1.0×10^{-3} *4* α(N)=2.4×10^{-4} *9*; α(O)=4.5×10^{-5} *18*; α(P)=3.2×10^{-6} *17* B(M1)(W.u.)=1.0 *3* if M1; B(E2)(W.u.)=851 *268* if E2 using the adopted $T_{1/2}$, Iγ and α seems anomalously high.
		1853.5 *2*	66 *23*	439.564	2^+	[E2]	2.09×10^{-3} *3*	α(K)=0.001566 *22*; α(L)=0.0002499 *35*; α(M)=5.78×10^{-5} *8* α(N)=1.446×10^{-5} *20*; α(O)=2.72×10^{-6} *4*; α(P)=2.026×10^{-7} *28*; α(IPF)=0.0002013 *28* B(E2)(W.u.)=3.4 *13*
2309.2	(3^-)	1869.6 *4*	100	439.564	2^+			
2323.27		1883.7 *1*	100	439.564	2^+			
2339.29?	$(1^+,2^+)$	991.4[a] *3*	100	1347.89	$(1^+,2^+)$			E_γ: Unplaced in ^{202}Hg(n,n′γ) and in Coulomb Excitation. Placed in 1997Sc07, based on the (n,n′γ) threshold which shows that this γ must deexcite a level at <2.5 MeV.
2356.83	3^-	1045	30.5 *27*	1311.54	4^+	[E1]	2.13×10^{-3} *3*	α(K)=0.001782 *25*; α(L)=0.000266 *4*; α(M)=6.09×10^{-5} *9* α(N)=1.522×10^{-5} *21*; α(O)=2.86×10^{-6} *4*; α(P)=2.162×10^{-7} *30* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.
		1174	30.5 *24*	1182.24	2^+	[E1]	1.74×10^{-3} *2*	α(K)=0.001451 *20*; α(L)=0.0002151 *30*; α(M)=4.93×10^{-5} *7* α(N)=1.230×10^{-5} *17*; α(O)=2.319×10^{-6} *32*; α(P)=1.765×10^{-7} *25*; α(IPF)=9.30×10^{-6} *13* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.
		1397.3 *4*	75[‡] *5*	959.89	2^+	[E1]	1.39×10^{-3} *2*	α(K)=0.001074 *15*; α(L)=0.0001579 *22*; α(M)=3.61×10^{-5} *5* α(N)=9.02×10^{-6} *13*; α(O)=1.703×10^{-6} *24*; α(P)=1.312×10^{-7} *18*; α(IPF)=0.0001073 *15* E_γ: From 1989Ga07 in ^{202}Hg(n,n′γ).
		1917.2 *2*	100[‡] *4*	439.564	2^+	[E1]	1.23×10^{-3} *2*	α(K)=0.000634 *9*; α(L)=9.21×10^{-5} *13*; α(M)=2.103×10^{-5} *29* α(N)=5.25×10^{-6} *7*; α(O)=9.94×10^{-7} *14*; α(P)=7.78×10^{-8} *11*; α(IPF)=0.000475 *7* E_γ: From 1989Ga07 in ^{202}Hg(n,n′γ).
		2357		0.0	0^+	[E3]	0.00257 *4*	α(K)=0.001875 *26*; α(L)=0.000318 *4*; α(M)=7.42×10^{-5} *10* α(N)=1.859×10^{-5} *26*; α(O)=3.50×10^{-6} *5*; α(P)=2.54×10^{-7} *4*; α(IPF)=0.000278 *4* E_γ: From 2019Ke01 in Coulomb Excitation. B(E3)(W.u.)=2.5 1 in Coulomb Excitation (2019Ke01).
2454.9		1495	100	959.89	2^+			E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.

$^{202}_{80}Hg_{122}$-13

Adopted Levels, Gammas (continued)

$\gamma(^{202}Hg)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	α[&]	Comments
2516.5	(2^+)	2516.5 *3*	100	0.0	0^+	[E2]	1.59×10^{-3} *2*	α(K)=0.000903 *13*; α(L)=0.0001389 *19*; α(M)=3.20×10^{-5} *4* α(N)=8.00×10^{-6} *11*; α(O)=1.512×10^{-6} *21*; α(P)=1.164×10^{-7} *16*; α(IPF)=0.000507 *7*
2681.0	(2^+)	2681	100	0.0	0^+	[E2]	1.55×10^{-3} *2*	α(K)=0.000806 *11*; α(L)=0.0001232 *17*; α(M)=2.83×10^{-5} *4* α(N)=7.09×10^{-6} *10*; α(O)=1.342×10^{-6} *19*; α(P)=1.038×10^{-7} *15*; α(IPF)=0.000582 *8* B(E2)(W.u.)=0.200 *21* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.
2706.8	3^-	914	5.0 *6*	1794.05	2^+	[E1]	0.00271 *4*	α(K)=0.002271 *32*; α(L)=0.000342 *5*; α(M)=7.84×10^{-5} *11* α(N)=1.956×10^{-5} *27*; α(O)=3.68×10^{-6} *5*; α(P)=2.74×10^{-7} *4* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.
		1524	15.3 *12*	1182.24	2^+	[E1]	1.29×10^{-3} *2*	α(K)=0.000927 *13*; α(L)=0.0001359 *19*; α(M)=3.11×10^{-5} *4* α(N)=7.76×10^{-6} *11*; α(O)=1.466×10^{-6} *21*; α(P)=1.135×10^{-7} *16*; α(IPF)=0.0001904 *27* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.
		1747	100.0 *21*	959.89	2^+	(E1)	1.23×10^{-3} *2*	α(K)=0.000739 *10*; α(L)=0.0001076 *15*; α(M)=2.459×10^{-5} *34* α(N)=6.14×10^{-6} *9*; α(O)=1.162×10^{-6} *16*; α(P)=9.06×10^{-8} *13*; α(IPF)=0.000351 *5* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation. Mult.: A_2=−0.17 *2*, A_4=0.04 *3* in 2019Ke01.
		2264	25.1 *10*	439.564	2^+	[E1]	1.29×10^{-3} *2*	α(K)=0.000484 *7*; α(L)=7.00×10^{-5} *10*; α(M)=1.597×10^{-5} *22* α(N)=3.99×10^{-6} *6*; α(O)=7.56×10^{-7} *11*; α(P)=5.96×10^{-8} *8*; α(IPF)=0.000716 *10* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.
		2709		0.0	0^+	[E3]	2.15×10^{-3} *3*	α(K)=0.001433 *20*; α(L)=0.0002364 *33*; α(M)=5.49×10^{-5} *8* α(N)=1.376×10^{-5} *19*; α(O)=2.59×10^{-6} *4*; α(P)=1.929×10^{-7} *27*; α(IPF)=0.000407 *6* E_γ,I_γ: From 2019Ke01 in Coulomb Excitation.
2821.2	(11^-)	598.1[#] *5*	100[#]	2223.1	(9^-)			
3164.1	3^-	1980	100 *8*	1182.24	2^+	[E1]	1.24×10^{-3} *2*	α(K)=0.000601 *8*; α(L)=8.73×10^{-5} *12*; α(M)=1.992×10^{-5} *28* α(N)=4.98×10^{-6} *7*; α(O)=9.42×10^{-7} *13*; α(P)=7.39×10^{-8} *10*; α(IPF)=0.000521 *7*
		3166		0.0	0^+	[E3]	1.86×10^{-3} *3*	α(K)=0.001063 *15*; α(L)=0.0001708 *24*; α(M)=3.95×10^{-5} *6* α(N)=9.90×10^{-6} *14*; α(O)=1.871×10^{-6} *26*; α(P)=1.419×10^{-7} *20*; α(IPF)=0.000573 *8* B(E3)(W.u.)=1.0 1 in Coulomb Excitation (2019Ke01).
3514.0	(12^+)	692.8[#] *5*	100[#]	2821.2	(11^-)			
3777.3	(13^-)	956.1[#] *5*	100[#]	2821.2	(11^-)			
3918.3		404.3[#] *5*	100[#]	3514.0	(12^+)			

$^{202}_{80}Hg_{122}$-14

$\gamma(^{202}$Hg) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
4156.4		379.1[#] *5*	100[#]	3777.3	(13$^-$)			
4493.9		337.5[#] *5*	100[#]	4156.4				
4648.0		729.7[#] *5*	100[#]	3918.3				
4924	1$^-$	4924 *5*	100	0.0	0$^+$	E1	2.13×10^{-3} *3*	α(K)=0.0001474 *21*; α(L)=2.092×10^{-5} *29*; α(M)=4.76×10^{-6} *7* α(N)=1.190×10^{-6} *17*; α(O)=2.260×10^{-7} *32*; α(P)=1.814×10^{-8} *26*; α(IPF)=0.001954 *27* B(E1)(W.u.)=0.00108 *18* Mult.: From A_2=0.51 *2* and polarization [N(par)/N(ver)]=1.18 *3* (1974Te01) in ^{202}Hg(γ,γ').
5490.3		842.3[#] *5*	100[#]	4648.0				
5710.3		220.0[#] *5*	100[#]	5490.3				
6339.3		629.0[#] *5*	100[#]	5710.3				
7126.9		787.6[#] *5*	100[#]	6339.3				
7663.5		536.6[#] *5*	100[#]	7126.9				

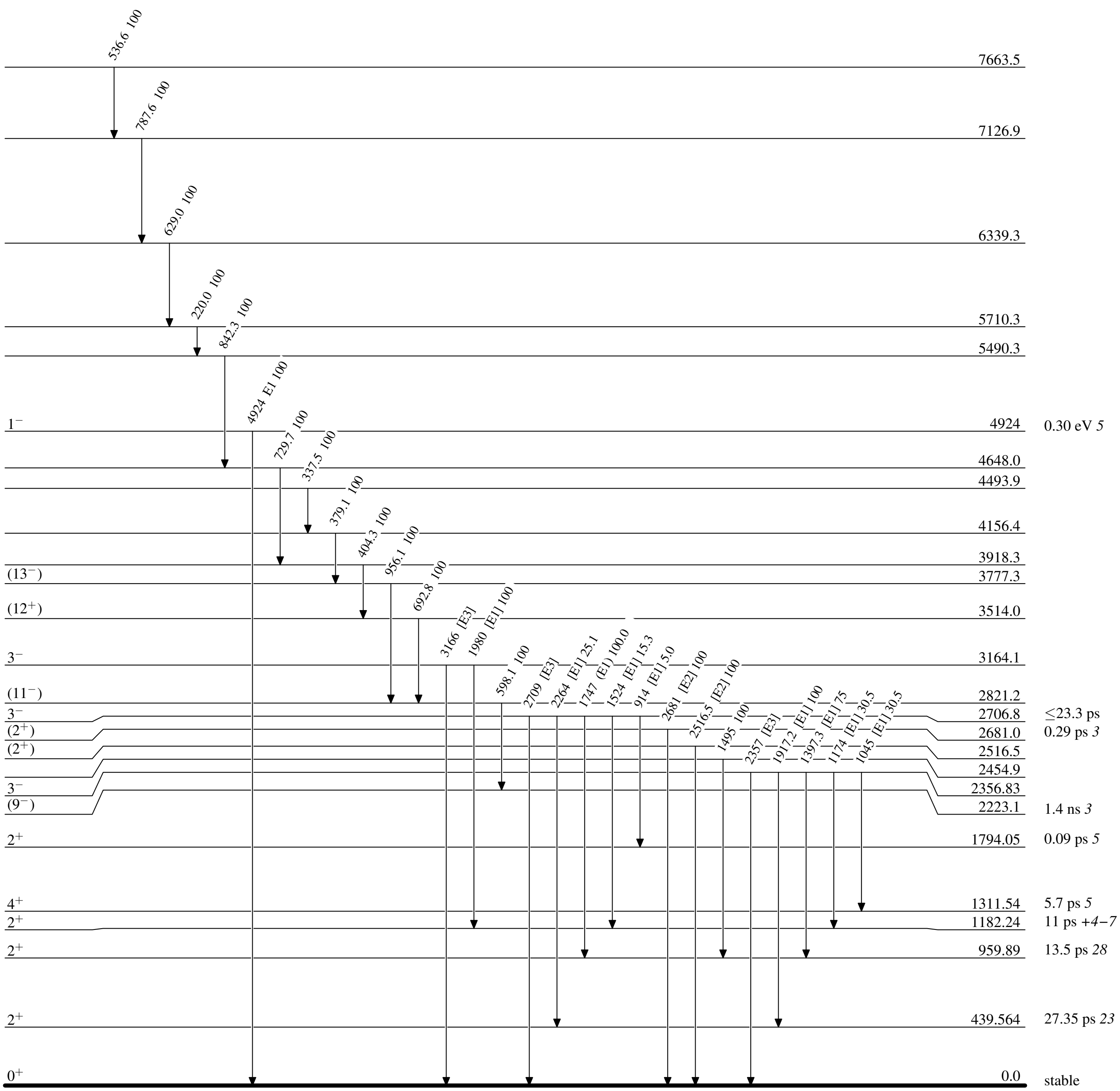
† From ^{202}Hg(n,n$'\gamma$), unless otherwise stated.
‡ From Coulomb Excitation.
# From ^{197}Au(HI,xnγ).
@ From ^{201}Hg(n,γ), E=thermal.
& Additional information 1.
a Placement of transition in the level scheme is uncertain.

$^{202}_{80}$Hg$_{122}$-15

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{202}_{80}Hg_{122}$

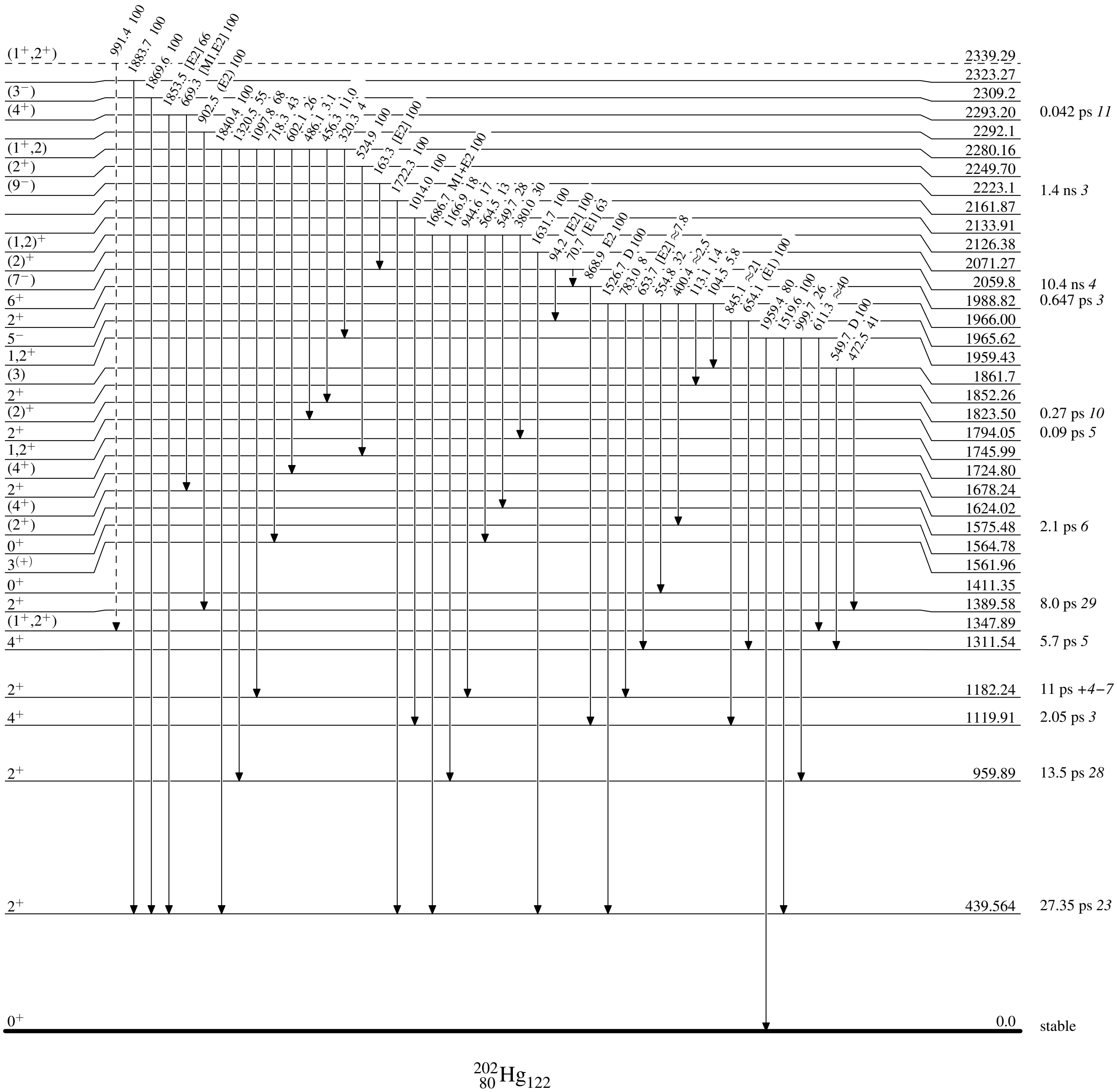
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



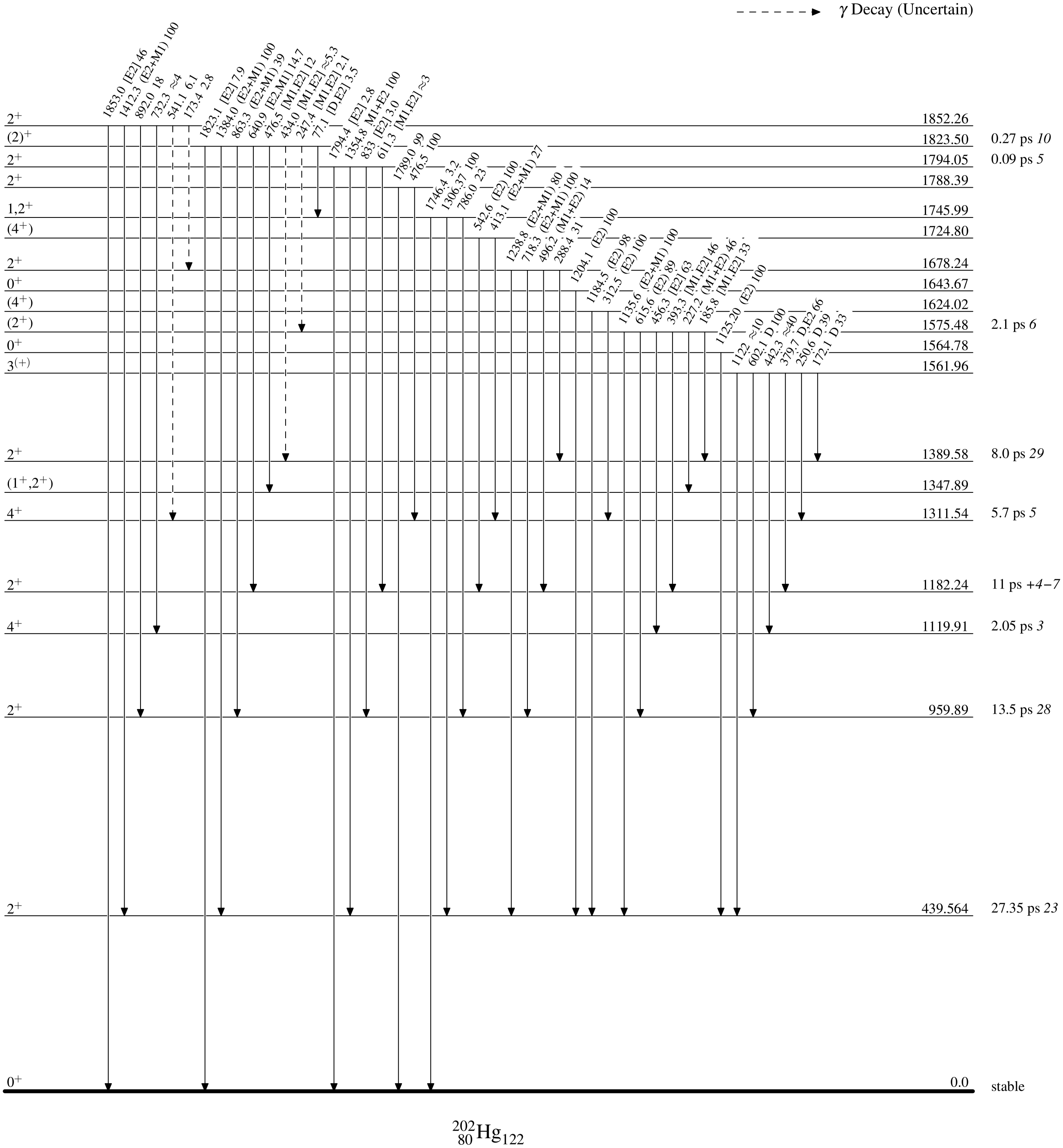
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

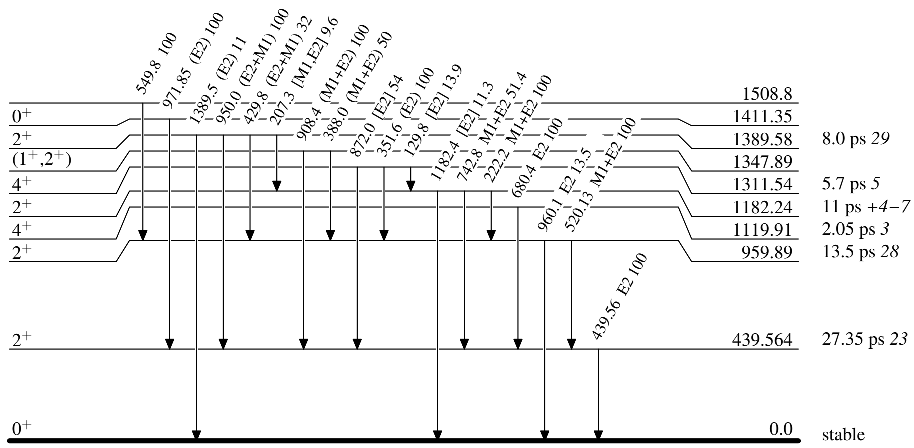


$^{202}_{80}Hg_{122}$

Adopted Levels, Gammas

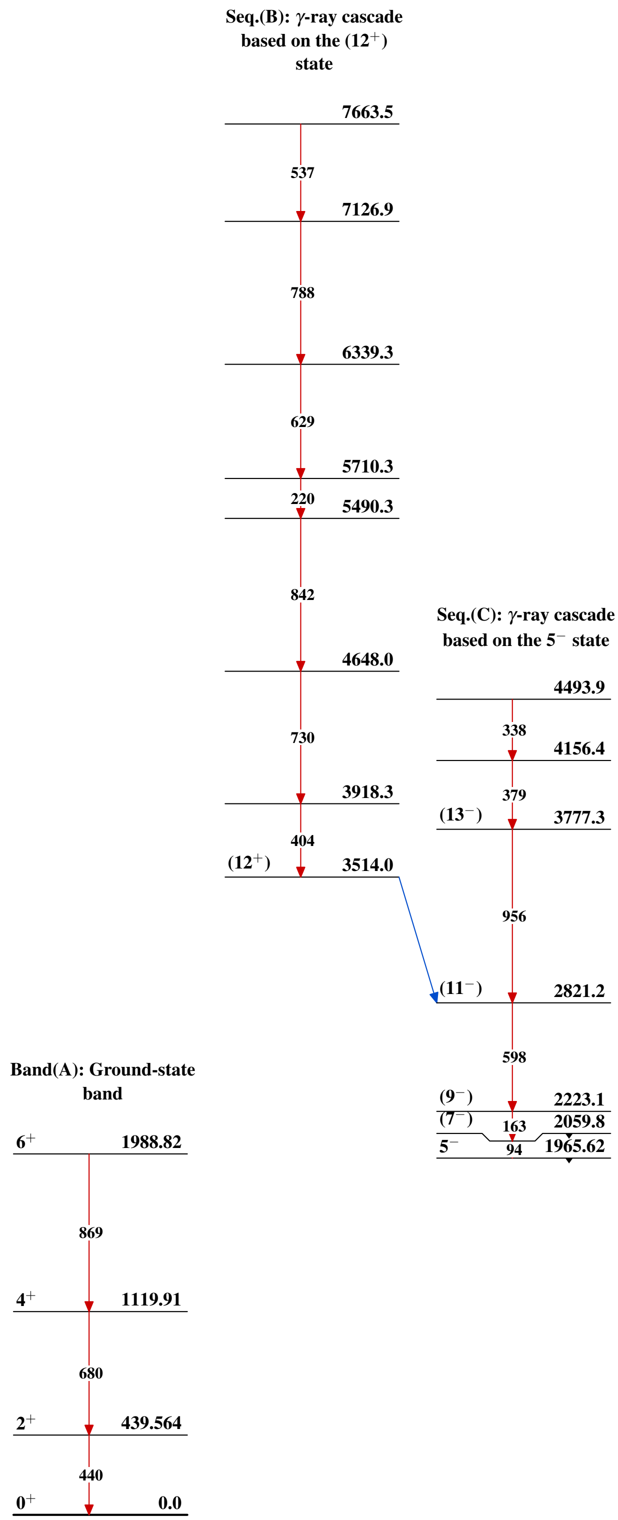
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{202}_{80}Hg_{122}$

Adopted Levels, Gammas



$^{202}_{80}Hg_{122}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. J. Chiara and F. G. Kondev	NDS 111,141 (2010)	1-Oct-2009

Q(β^-)=−344.6 *13*; S(n)=7492.7 *18*; S(p)=8836 *3*; Q(α)=−514 *21* 2012Wa38
Note: Current evaluation has used the following Q record −344.3 13 *7492.4 17* 8836 3 −512 *20* 2003Au03.

^{204}Hg Levels

Cross Reference (XREF) Flags

A	^{204}Au β^- decay	F	^{204}Hg(d,pnγ)	K	^{205}Tl(e,e′p)
B	^{204}Tl ε decay	G	^{204}Hg(d,d′)	L	^{205}Tl(μ^-,nγ)
C	^{204}Hg(e,e′)	H	^{204}Hg(α,α′)	M	^{205}Tl(d,^{3}He)
D	^{204}Hg(n,n′γ)	I	^{204}Hg(^{9}Be,^{9}Be′γ)	N	^{208}Pb(d,^{6}Li)
E	^{204}Hg(p,p′)	J	Coulomb excitation		

E(level)†	J$^\pi$‡	T$_{1/2}$	XREF	Comments
0	0$^+$	stable	ABCDEFGHIJKLMN	Charge distribution studied: Δ<r^2>(^{204}Hg,^{198}Hg)=0.333 *11* (1989BuZP), Δ<r^2>(^{204}Hg,^{A}Hg)=0.298 *28*, 0.271 *26*, 0.194 *19*, 0.182 *23*, 0.099 *28* for A=198-202, respectively (1978Le09), Δ<r^2>(^{204}Hg,^{206}Hg)=−0.107 *5* (1999GaZX). Other: 1979Ha08. Isotope shifts: 1977Du03, 1975Ro10, 1972Bo09. Additional information 1.
436.552 *8*	2$^+$	40.3 ps *3*	A CDEFGHIJ LMN	Q=0.40 *20*; μ=0.67 *9* XREF: G(443)N(430). J$^\pi$: 436.551γ E2 to 0$^+$; L(d,^{3}He)=2, vector analyzing power. B(E2)↑: 0.427 *3*, weighted average of 0.429 *4* in (e,e′) (1989BuZP) and 0.427 *6* (1979Bo16) and 0.423 *5* (1981Es03) in Coul. ex. T$_{1/2}$: From B(E2)↑=0.427 *3*. Additional information 2. Q: From Coul. ex., assuming negligible contributions from low-lying unobserved states (1981Es03). Other: 0.39 *20* or 0.24 *20*, depending on positive or negative interference of the E2 matrix elements (1979Bo16). μ: This value is deduced by the evaluators from μ(^{198}Hg)=0.75 *5* (average of 1995Br34 and 1990Ba40) and μ(^{204}Hg)/μ(^{198}Hg)=0.89 *10*. Note that g(^{204}Hg)/g(^{198}Hg)=0.95 *11* in 1974Do01, but $\omega^2\tau_c$ is changed by evaluators from 4.6 ns^{-1} 8 (1974Do01) to 4.1 ns^{-1} 7, due to change in T$_{1/2}$(437-keV level) from 36 ps *2* to 40.3 ps *3*. Others (renormalized to the same μ(^{198}Hg) value): 0.55 *10* (1970Ka09) by IMPAC method and 0.62 *18* (1986Ko02) by TF method. β_2=0.061 from optical model in (α,α′), −0.069 from coupled-channels analysis in (p,p′). The sign convention in (α,α′) is not explained; in (p,p′) it is based on the sign for ^{198}Hg.
1128.23 *11*	4$^+$	2.91 ps *21*	A CDEFGHIJ LMN	XREF: G(1140)N(1085). J$^\pi$: 691.74γ E2 to 2$^+$; population in Coul. ex., (e,e′), and (p,p′). B(E2)↑=0.218 *16* (1985Ag01). Other: 0.34 *11* (1981Es03). Both values were deduced by the evaluators from B(E2)(4$^+$ to 2$^+$)=0.121 *9* (1985Ag01) and 0.19 *6* (1981Es03). T$_{1/2}$: From B(E2)(4$^+$ to 2$^+$)=0.121 *9* (1985Ag01). B(E4)↑=0.045 *6* from (e,e′).
1635.76 *10*	0$^+$		CDE K M	XREF: E(1632)K(1640)M(1630). J$^\pi$: 1199.2γ (E2) to 2$^+$; L(d,^{3}He)=0; no γ to 0$^+$ g.s. is observed. M(E0)[e(fm)^2]=1.1 *7*.
1716.76 *10*	(2$^+$)		DE	XREF: E(1714).

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Adopted Levels, Gammas (continued)

^{204}Hg Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
				Jπ: From excitation function in (n,n′γ); 1280.2γ (M1+E2) to 2^+. Additional information 3.
1828.71 *11*	(2^-)		A D F I L n	XREF: n(1810). Jπ: 1392.15γ (E1) to 2^+; intense feeding of this level in ^{204}Au β^- decay (J^π=2^-) favors J^π=(1^-,2,3^-); absence of observed γ to 0^+ g.s. and the lack of population in (e,e′) and (p,p′) favor 2^-; excit. function in (n,n′γ) indicates J=(2).
1841.38 *11*	1^+		A DE I LMn	XREF: E(1836)M(1840)n(1810). Jπ: 1404.82γ M1+E2 to 2^+; 1841.38γ M1 to 0^+; L(d,^{3}He)=2. Additional information 4.
1851.26 *10*	$(2,3)^+$		A D FG I n	XREF: n(1810). Jπ: 723.0γ M1+E2 to 4^+ and 1414.9γ M1+E2 to 2^+ indicate J^π=3^+. However, their corresponding excit. functions in (n,n′γ) suggest J=2 for the 1851 keV level; 1851.7γ to 0^+ g.s. is observed tentatively only in ^{204}Au β^- decay. If this is confirmed, 3^+ can be ruled out. Additional information 5.
1947.69 *11*	2^+		A CD F IJ LM	XREF: C(1944)M(1950). Jπ: 1511.10γ to 2^+, 1947.76γ to 0^+; L(d,^{3}He)=2; population in Coul. ex. and (e,e′) favor 2^+. Additional information 6.
1989.36 *10*	(2^+)		A CDEF IJ L	XREF: C(1974)E(1985). Jπ: 1552.8γ to 2^+; population in Coul. ex., (e,e′), and (p,p′) favors natural-parity levels; direct population in ^{204}Au β^- decay (J^π=(2^-)) rules out 4^+. Additional information 7.
2088.51 *10*	2^+		A cD m	XREF: c(2047,2090)m(2060). Jπ: 2088.5γ E2 to 0^+.
2094.46 *20*	$(3)^+$		cDE m	XREF: c(2047,2090)E(2099)m(2060). Jπ: 1657.9γ M1+E2 to 2^+; excit. functions in (n,n′γ) favor J>3. Additional information 8.
2117.47 *9*	2^+		A cD I m	XREF: c(2090,2124)m(2120). Jπ: 2117.5γ E2 to 0^+, 1680.9γ M1+E2 to 2^+.
2131.26 *20*	(1^+,2^+)		cDe m	XREF: c(2124)e(2137)m(2120). Jπ: 1694.7γ to 2^+; L(d,^{3}He)=2, but it is an unresolved doublet. Additional information 9.
2140.86 *10*	(1^+,2^+,3^+)		A cDe L	XREF: c(2124,2200)e(2137). Jπ: 1704.3γ (M1+E2) to 2^+; direct population in ^{204}Au β^- decay (J^π=(2^-)). Additional information 10.
2191.01 *15*	6^+	0.30 ps *4*	cDEF IJ L	XREF: c(2200)E(2183). Jπ: 1062.8γ E2 to 4^+; L(p,p′)=6. Additional information 11. $T_{1/2}$: From B(E2)(6^+ to 4^+)=0.139 *17* (1985Ag01).
2235.94 *15*	3,4,5		cD F I n	XREF: c(2200)n(2240). Jπ: 1107.7γ D to 4^+; Additional information 12.
2262.97 *15*	5^-		CDEF hI LMn	XREF: C(2262)E(2257)h(2272)M(2250)n(2240). Jπ: 1134.7γ E1 to 4^+; population in (e,e′) and (p,p′). Additional information 13. B(E5)↑: 0.041 *9* from (e,e′) (1989BuZP). Possible configuration= $\pi[(s_{1/2})^{-1}(h_{11/2})^{-1}]\nu[(p_{1/2})^{-2}]_{0+}$.
2264.36 *18*	(1,2,3)		A D h LMn	XREF: h(2272)M(2250)n(2240). Jπ: 1827.80γ to 2^+; excit. function in (n,n′γ); direct population in ^{204}Au β^- decay (J^π=(2^-)) makes 0^+ and 4^+ unlikely.
2295.66 *10*			D	

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Adopted Levels, Gammas (continued)

^{204}Hg Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
2300.20 *14*	(2+,3)		A D F I	Jπ: 1172.0γ to 4+, 1863.3γ to 2+; J≤2 from excit. function in (n,n′γ).
2300.65 *19*	7−	6.8 ns *3*	C EF I L	XREF: C(2299)E(2293). Jπ: 109.6γ E1 to 6+; population in (e,e′) and (p,p′). $T_{1/2}$: Weighted average of 6.7 ns *5* from (d,pnγ) (1984Sc19) and 6.9 ns *3* from (^{9}Be,^{9}Be′γ) (1994Po21). B(E7)↑: 32×10^{-4} *13* from (e,e′). Additional information 14. Possible configuration: admixture of $\pi[(s_{1/2})^{-2}]_{0+}\nu[(p_{1/2})^{-1}(i_{13/2})^{-1}]$ and $\pi[(d_{3/2})^{-1}(h_{11/2})^{-1}]\nu[(p_{1/2})^{-2}]_{0+}$.
2359# *5*	(0+)		C K	XREF: K(2370). Jπ: L(e,e′p)=(0).
2385.9 *4*	1+,2+		A cD M	XREF: c(2397)M(2380). Jπ: 2385.9γ to 0+; L(d,^{3}He)=0+2. Additional information 15.
2395.6 *4*	1,2,3		A c E	XREF: c(2397)E(2398). Jπ: 1959.0γ to 2+; direct population in ^{204}Au β^- decay (Jπ=(2−)) rules out 0+ and 4+. Additional information 16.
2465.46 *20*	(2)+		A CDE M	XREF: C(2462)E(2463)M(2470). Jπ: 2028.9γ to 2+; L(d,^{3}He)=2 and population in (e,e′) and (p,p′) favor 2+.
2514.44 *23*	(2+,4+,6+)		CDE IJ	XREF: C(2507)E(2509). Jπ: 1386.2γ M1,E2 to 4+; population in (e,e′) and (p,p′) rules out 3+ and 5+. Additional information 17.
2568.84 *15*	3+,5+		CD	XREF: C(2570). Jπ: 1440.6γ M1+E2 to 4+; A_2<0 for 1440.6γ rules out ΔJ=0 transition.
2628.26 *10*	(1+)		cD K	XREF: c(2590)K(2620). Jπ: 2191.7γ D to 2+; L(e,e′p)=(0).
2657.3 *6*	(2)+		c I M	XREF: c(2590)M(2650). Jπ: 1529.1γ to 4+; L(d,^{3}He)=0+2.
2675.25 *19*	3−		CDE HIJ	B(E3)↑=0.40 *3* XREF: C(2673)E(2672)H(2674). Jπ: Population in (e,e′), (α,α′), (p,p′), and Coul. ex. Collective octupole vibration. Additional information 18. B(E3)↑: Weighted average of 0.42 *4* in (e,e′) (1989BuZP) and 0.37 *4* in Coul. ex. (1991Li03). β_3=0.076 from optical model in (α,α′), 0.089 from coupled-channels analysis in (p,p′).
2710@ *4*			E	
2724.1 *6*	(≥5)		c F I n	XREF: c(2719,2730)n(2740). Jπ: 423.5γ to 7−.
2726.6 *3*	(2+,3)		A c L n	XREF: c(2719,2730)n(2740). Jπ: 1598.4γ to 4+, 897.9γ to (2−); direct population in ^{204}Au β^- decay (Jπ=(2−)) makes 4− assignment unlikely.
2761.2 *4*	(5)−		C EF I LMn	XREF: E(2759)M(2770)n(2740,2800). Jπ: 461.0γ to 7−, 497.7γ to 5−; L(d,^{3}He)=2+5; population in (p,p′) and (e,e′) favors 5−.
2812.83 *24*	3−		A C E n	B(E3)↑=0.139 *16* XREF: n(2800).

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Adopted Levels, Gammas (continued)

^{204}Hg Levels (continued)

E(level)†	Jπ‡	XREF	Comments
			Jπ: From L=3 in (p,p′), (e,e′); 2376.26γ to 2+. B(E3)↑: From (e,e′). β_3=0.046 from coupled-channels analysis in (p,p′).
2866@ 4		c E m	XREF: c(2883)m(2890).
2908.6 6	(≥2)	c I m	XREF: c(2883,2925)m(2890). Jπ: 1780.4γ to 4+.
2914.3 6	(≥3)	c I	XREF: c(2883,2925). Jπ: 651.3γ to 5−.
3021@ 4	4+&	C E n	B(E4)↑=0.040 13 XREF: C(3017)n(3040). B(E4)↑: From (e,e′). Additional information 19.
3033.2 6	(4,5,6)−	I Mn	XREF: M(3050)n(3040). Jπ: 770.2γ to 5−; L(d,^{3}He)=2+5. Additional information 20.
3112@ 4	(4+)	C E	XREF: C(3096). Jπ: From (p,p′).
3174.0 6		I	
3190 15	(2)+	C M	XREF: C(3187). E(level): From (d,^{3}He). Jπ: L(d,^{3}He)=2; population in (e,e′) favors 2+.
3227@ 4	(5−)	C E	XREF: C(3222). Jπ: From (p,p′).
3315@ 4	(3−)&	C E	B(E3)↑=0.109 13 XREF: C(3316). E(level): a multiplet 3320 keV 15 level is observed in (d,^{3}He) with L=2+5, neither component of which is consistent with J^π=3− deduced in (e,e′) and (p,p′) for this level. B(E3)↑: From (e,e′). Additional information 21. β_3=0.048 from coupled-channels analysis in (p,p′).
3364@ 4	5−&	C E	B(E5)↑=0.036 5 XREF: C(3361). B(E5)↑: From (e,e′). Additional information 22.
3417@ 4		c E	XREF: c(3426).
3439@ 4		c E	XREF: c(3426).
3468 10	(2)+	C M	E(level): Weighted average of 3475 14 in (e,e′) and 3460 15 in (d,^{3}He). Jπ: L(d,^{3}He)=2; population in (e,e′) favors 2+.
3496@ 5		c E	XREF: c(3539).
3528@ 6		c E n	XREF: c(3539)n(3550).
3585@ 4		c E mn	XREF: c(3539,3594)m(3600)n(3550).
3618@ 6		c E m	XREF: c(3594)m(3600).
3664@ 9		C E	XREF: C(3670).
3689.3 8		I	
3697@ 5		E	
3712@ 7		C E	XREF: C(3720).
3750@ 4		c E	XREF: c(3750,3820).
3779@ 4	(2)+	c E M	XREF: c(3750,3820)M(3770). Jπ: L(d,^{3}He)=2; possible observation in (e,e′) and (p,p′) favors 2+.
3833@ 8		c E	XREF: c(3820).
3869@ 7	(0,2)+	C E M	XREF: C(3860)M(3890).

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Adopted Levels, Gammas (continued)

^{204}Hg Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
			Jπ: L(d,^{3}He)=0+2; possible observation in (e,e′) and (p,p′) favors (0,2)$^+$. Additional information 23.
3923[@] *9*		C E	XREF: C(3919).
3954[@] *10*		C E	XREF: C(3968).
4033[#] *15*		C	
4113[@] *5*	4$^+$[&]	C E	B(E4)↑=0.054 *6* XREF: C(4100). B(E4)↑: From (e,e′). Additional information 24.
4164[@] *5*		C E	XREF: C(4147).
4225[@] *6*		C E	XREF: C(4210).
4262[@] *5*		C E	XREF: C(4245). Levels observed in (e,e′) and in (p,p′) do not overlap within uncertainties and may be two distinct states.
4321[@] *6*		E	
4356[@] *6*		C E	XREF: C(4348).
≈4380[#]		C	
4406[@] *6*		C E	XREF: C(4413).
4493[#] *9*		C	
4539[#] *7*		C	
≈4610[#]		C	
4663[#] *27*		C	
4.70×10^3[#] *10*		C	
4723[#] *7*		C	
4815[#] *13*		C	
4895[#] *24*		C	
4915[#] *26*		C	
4960[#] *60*		C	

† From a least-squares fit to Eγ, unless otherwise specified.
‡ Specific arguments are presented with each level. For J^π assignments based on (e,e′) and (p,p′) data, natural-parity states were excited preferentially.
# From (e,e′).
@ From (p,p′).
& Based on L transfer in (p,p′), and from (e,e′).

$\gamma(^{204}\mathrm{Hg})$

Additional information 25.

E_i(level)	J_i^π	E_γ ‡	I_γ ‡	E_f	J_f^π	Mult.	α †	Comments
436.552	2^+	436.551 *8*	100	0	0^+	E2	0.0378	α(K)=0.0263 *4*; α(L)=0.00870 *13*; α(M)=0.00216 *3*; α(N+..)=0.000636 *9* α(N)=0.000538 *8*; α(O)=9.50×10^{-5} *14*; α(P)=3.47×10^{-6} *5* B(E2)(W.u.)=11.96 *9* E_γ,I_γ: From (μ^-,nγ). Mult.: From $\gamma(\theta)$ in (d,pnγ) and (n,n$'\gamma$). Additional information 26.
1128.23	4^+	691.74 *15*	100	436.552	2^+	E2	0.01285	B(E2)(W.u.)=17.0 *13* α(K)=0.00991 *14*; α(L)=0.00224 *4*; α(M)=0.000538 *8*; α(N+..)=0.0001603 *23* α(N)=0.0001345 *19*; α(O)=2.45×10^{-5} *4*; α(P)=1.313×10^{-6} *19* E_γ: From ^{204}Au β^- decay. Mult.: From $\gamma(\theta)$ in (n,n$'\gamma$) and (^{9}Be,^{9}Be$'\gamma$). Additional information 27.
1635.76	0^+	1199.2 *1*	100	436.552	2^+	(E2)	0.00425 *6*	α(K)=0.00346 *5*; α(L)=0.000607 *9*; α(M)=0.0001422 *20*; α(N+..)=4.66×10^{-5} *7* α(N)=3.56×10^{-5} *5*; α(O)=6.63×10^{-6} *10*; α(P)=4.52×10^{-7} *7*; α(IPF)=3.95×10^{-6} *6* Mult.: Isotropic $\gamma(\theta)$ to 2^+ in (n,n$'\gamma$) consistent with E2 from 0^+ initial level.
1716.76	(2^+)	1280.2 *1*	100	436.552	2^+	(M1+E2)	0.0060 *22*	α(K)=0.0049 *19*; α(L)=0.0008 *3*; α(M)=0.00019 *7*; α(N+..)=7.4×10^{-5} *24* α(N)=4.7×10^{-5} *16*; α(O)=9.E−6 *3*; α(P)=7.E−7 *3*; α(IPF)=1.8×10^{-5} *5* Mult.: From $\gamma(\theta)$ in (n,n$'\gamma$).
1828.71	(2^-)	1392.15 *11*	100	436.552	2^+	(E1)	0.001391 *20*	α(K)=0.001080 *16*; α(L)=0.0001589 *23*; α(M)=3.63×10^{-5} *5*; α(N+..)=0.000115 α(N)=9.08×10^{-6} *13*; α(O)=1.714×10^{-6} *24*; α(P)=1.320×10^{-7} *19*; α(IPF)=0.0001042 *15* E_γ: From ^{204}Au β^- decay. Mult.: ΔJ=0 dipole from excit. function and $\gamma(\theta)$ in (n,n$'\gamma$), electric character inferred from likely parity deduced for initial state. In (^{9}Be,^{9}Be$'\gamma$) data, an opposite sign for A_2 is reported, and hence, ΔJ=1 dipole, which is inconsistent with (n,n$'\gamma$). The evidence more strongly supports the former assignment.
1841.38	1^+	1404.82 *12*	100 *5*	436.552	2^+	M1+E2	0.0048 *17*	α(K)=0.0040 *14*; α(L)=0.00064 *21*; α(M)=0.00015 *5*; α(N+..)=0.00010 *3* α(N)=3.7×10^{-5} *12*; α(O)=7.1×10^{-6} *23*; α(P)=5.3×10^{-7} *20*; α(IPF)=5.0×10^{-5} *12* E_γ,I_γ: From ^{204}Au β^- decay. Mult.: From $\gamma(\theta)$ in (n,n$'\gamma$).
		1841.38 *19*	69 *3*	0	0^+	M1	0.00357 *5*	α(K)=0.00271 *4*; α(L)=0.000429 *6*; α(M)=9.90×10^{-5} *14*; α(N+..)=0.000339 *5* α(N)=2.48×10^{-5} *4*; α(O)=4.71×10^{-6} *7*; α(P)=3.70×10^{-7} *6*; α(IPF)=0.000310 *5* E_γ,I_γ: From ^{204}Au β^- decay. Mult.: From $\gamma(\theta)$ in (n,n$'\gamma$).

$\gamma(^{204}Hg)$ (continued)

E_i(level)	J^π_i	E_γ‡	I_γ‡	E_f	J^π_f	Mult.	α†	Comments
1851.26	$(2,3)^+$	723.00 *16*	100 *3*	1128.23	4^+	M1+E2	0.023 *12*	α(K)=0.019 *10*; α(L)=0.0033 *14*; α(M)=0.0008 *3*; α(N+..)=0.00024 *10* α(N)=0.00020 *8*; α(O)=3.7×10^{-5} *15*; α(P)=2.6×10^{-6} *14* E_γ,I_γ: From ^{204}Au β^- decay. Additional information 28. Mult.: From $\gamma(\theta)$ in (n,n′γ).
		1414.72 *11*	39.3 *12*	436.552	2^+	M1+E2	0.0048 *17*	α(K)=0.0039 *14*; α(L)=0.00063 *21*; α(M)=0.00015 *5*; α(N+..)=0.00010 *3* α(N)=3.7×10^{-5} *12*; α(O)=6.9×10^{-6} *23*; α(P)=5.3×10^{-7} *20*; α(IPF)=5.3×10^{-5} *13* E_γ,I_γ: From ^{204}Au β^- decay. Additional information 29. Mult.: From $\gamma(\theta)$ in (n,n′γ).
		1851.7# *4*	≤1.2	0	0^+			E_γ,I_γ: From ^{204}Au β^-.
1947.69	2^+	1511.10 *12*	100 *3*	436.552	2^+	[M1+E2]	0.0041 *14*	α(K)=0.0034 *11*; α(L)=0.00054 *17*; α(M)=0.00013 *4*; α(N+..)=0.00013 *4* α(N)=3.1×10^{-5} *10*; α(O)=5.9×10^{-6} *19*; α(P)=4.5×10^{-7} *16*; α(IPF)=8.9×10^{-5} *22* Additional information 30. E_γ,I_γ: From ^{204}Au β^- decay. Mult.: Inferred from known J^π′s of initial and final levels, consistent with $\gamma(\theta)$ in (n,n′γ).
		1947.76 *20*	5.3 *4*	0	0^+	[E2]	0.00197 *3*	α(K)=0.001432 *20*; α(L)=0.000227 *4*; α(M)=5.24×10^{-5} *8*; α(N+..)=0.000259 *4* α(N)=1.311×10^{-5} *19*; α(O)=2.47×10^{-6} *4*; α(P)=1.85×10^{-7} *3*; α(IPF)=0.000243 *4* Additional information 31. E_γ,I_γ: From ^{204}Au β^- decay.
1989.36	(2^+)	1552.8 *1*	100	436.552	2^+			Mult.: $\gamma(\theta)$ in (n,n′γ) rules out ΔJ=1 E1 assignment.
2088.51	2^+	2088.5 *1*	100	0	0^+	E2	0.00183 *3*	α(K)=0.001263 *18*; α(L)=0.000198 *3*; α(M)=4.57×10^{-5} *7*; α(N+..)=0.000322 *5* α(N)=1.144×10^{-5} *16*; α(O)=2.16×10^{-6} *3*; α(P)=1.631×10^{-7} *23*; α(IPF)=0.000308 *5* Mult.: From $\gamma(\theta)$ in (n,n′γ).
2094.46	$(3)^+$	1657.9 *2*	100	436.552	2^+	M1+E2	0.0034 *10*	α(K)=0.0027 *8*; α(L)=0.00044 *13*; α(M)=0.00010 *3*; α(N+..)=0.00019 *5* α(N)=2.5×10^{-5} *8*; α(O)=4.8×10^{-6} *14*; α(P)=3.7×10^{-7} *12*; α(IPF)=0.00016 *4* Additional information 32. Mult.: From $\gamma(\theta)$ in (n,n′γ).
2117.47	2^+	1680.9 *1*	100 *9*	436.552	2^+	M1+E2	0.0034 *10*	α(K)=0.0026 *8*; α(L)=0.00042 *12*; α(M)=0.00010 *3*; α(N+..)=0.00020 *5* α(N)=2.4×10^{-5} *7*; α(O)=4.6×10^{-6} *14*; α(P)=3.5×10^{-7} *12*; α(IPF)=0.00017 *4* Additional information 33. Mult.: From $\gamma(\theta)$ in (n,n′γ).
		2117.5 *2*	41 *9*	0	0^+	E2	0.00180 *3*	α(K)=0.001232 *18*; α(L)=0.000193 *3*; α(M)=4.45×10^{-5} *7*; α(N+..)=0.000335

Adopted Levels, Gammas (continued)

$\gamma(^{204}$Hg) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$‡	I$_\gamma$‡	E$_f$	J$^\pi_f$	Mult.	α†	Comments
								5 α(N)=1.114×10^{-5} *16*; α(O)=2.10×10^{-6} *3*; α(P)=1.591×10^{-7} *23*; α(IPF)=0.000321 *5* Mult.: From $\gamma(\theta)$ in (n,n′γ).
2131.26	(1$^+$,2$^+$)	1694.7 *2*	100	436.552	2$^+$			
2140.86	(1$^+$,2$^+$,3$^+$)	1704.3 *1*	100	436.552	2$^+$	(M1+E2)	0.0033 *10*	α(K)=0.0026 *8*; α(L)=0.00041 *12*; α(M)=9.E−5 *3*; α(N+..)=0.00021 *5* α(N)=2.4×10^{-5} *7*; α(O)=4.5×10^{-6} *13*; α(P)=3.4×10^{-7} *11*; α(IPF)=0.00018 *5* Mult.: From $\gamma(\theta)$ in (n,n′γ).
2191.01	6$^+$	1062.8 *1*	100	1128.23	4$^+$	E2	0.00536 *8*	α(K)=0.00433 *6*; α(L)=0.000791 *11*; α(M)=0.000186 *3*; α(N+..)=5.57×10^{-5} *8* α(N)=4.65×10^{-5} *7*; α(O)=8.64×10^{-6} *12*; α(P)=5.67×10^{-7} *8* B(E2)(W.u.)=20 *3* Additional information 34. Mult.: From $\gamma(\theta)$ in (n,n′γ) and from Coul. ex.
2235.94	3,4,5	1107.7 *1*	100	1128.23	4$^+$	D		Mult.: From $\gamma(\theta)$ in (^{9}Be,^{9}Be′γ) and (n,n′γ). Additional information 35.
2262.97	5$^-$	1134.7 *1*	100	1128.23	4$^+$	E1	0.00184 *3*	α(K)=0.001540 *22*; α(L)=0.000229 *4*; α(M)=5.24×10^{-5} *8*; α(N+..)=1.87×10^{-5} *3* α(N)=1.308×10^{-5} *19*; α(O)=2.47×10^{-6} *4*; α(P)=1.87×10^{-7} *3*; α(IPF)=3.01×10^{-6} *5* Additional information 36. Mult.: From ce and $\gamma(\theta)$ in (d,pnγ), and supported by $\gamma(\theta)$ in (n,n′γ) and (^{9}Be,^{9}Be′γ).
2264.36	(1,2,3)	1827.80 *18*	100	436.552	2$^+$			E$_\gamma$: From ^{204}Au β^- decay.
2295.66		1859.1 *1*	100	436.552	2$^+$			
2300.20	(2$^+$,3)	1172.0 *1*	100 *11*	1128.23	4$^+$			
		1863.3 *3*	21.7 *22*	436.552	2$^+$			
2300.65	7$^-$	(36.7)		2262.97	5$^-$	[E2]	620	E$_\gamma$: From levels evergy difference; γ not observed, but inferred to exist in (^{9}Be,^{9}Be′γ) based on coin. relationships.
		109.68 *12*	100	2191.01	6$^+$	E1	0.335	α(K)=0.269 *4*; α(L)=0.0510 *8*; α(M)=0.01192 *17*; α(N+..)=0.00349 *5* α(N)=0.00294 *5*; α(O)=0.000523 *8*; α(P)=2.65×10^{-5} *4* B(E1)(W.u.)=1.63×10^{-5} *8* Additional information 37. E$_\gamma$,I$_\gamma$: From (μ^-,nγ). Mult.: From ce in (d,pnγ); stretched nature of transition is not confirmed in (d,pnγ), but it can be inferred from the known J^{π}′s of the initial and final states.
2385.9	1$^+$,2$^+$	2385.9 *4*	100	0	0$^+$			
2395.6	1,2,3	554.7# *3*	100 *17*	1841.38	1$^+$			E$_\gamma$,I$_\gamma$: From ^{204}Au β^-.

$\gamma(^{204}Hg)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.	α[†]	Comments
2395.6	1,2,3	1959.0 *4*	≤10	436.552	2^+			E_γ,I_γ: From ^{204}Au β^-.
2465.46	$(2)^+$	2028.9 *2*	100	436.552	2^+			Additional information 38.
2514.44	$(2^+,4^+,6^+)$	1386.2 *2*	100	1128.23	4^+	M1,E2		Mult.: $\gamma(\theta)$ in (n,n′γ) rules out ΔJ=1 E1 assignment.
2568.84	$3^+,5^+$	1440.6 *1*	100	1128.23	4^+	M1+E2	0.0046 *16*	α(K)=0.0037 *13*; α(L)=0.00061 *20*; α(M)=0.00014 *5*; α(N+..)=0.00010 *3* α(N)=3.5×10^{-5} *12*; α(O)=6.6×10^{-6} *22*; α(P)=5.0×10^{-7} *19*; α(IPF)=6.2×10^{-5} *15* Mult.: From $\gamma(\theta)$ in (n,n′γ).
2628.26	(1^+)	2191.7 *1*	100	436.552	2^+	D		Mult.: From $\gamma(\theta)$ in (n,n′γ).
2657.3	$(2)^+$	1529.1 *5*	100	1128.23	4^+			E_γ,I_γ: From (^{9}Be,^{9}Be′γ).
2675.25	3^-	1547.0 *2*	79 *16*	1128.23	4^+	[E1]	0.001283 *18*	α(K)=0.000904 *13*; α(L)=0.0001324 *19*; α(M)=3.03×10^{-5} *5*; α(N+..)=0.000215 α(N)=7.56×10^{-6} *11*; α(O)=1.429×10^{-6} *20*; α(P)=1.107×10^{-7} *16*; α(IPF)=0.000206 *3* Additional information 39. Mult.: Inferred from known J^π′s of initial and final states, supported by $\gamma(\theta)$ in (n,n′γ).
		2238.7 *3*	100 *20*	436.552	2^+	[E1]	0.001284 *18*	α(K)=0.000493 *7*; α(L)=7.13×10^{-5} *10*; α(M)=1.627×10^{-5} *23*; α(N+..)=0.000704 α(N)=4.07×10^{-6} *6*; α(O)=7.70×10^{-7} *11*; α(P)=6.07×10^{-8} *9*; α(IPF)=0.000699 *10* Additional information 40. Mult.: Inferred from known J^π′s of initial and final states, supported by $\gamma(\theta)$ in (n,n′γ).
2724.1	(≥5)	423.5 *5*	100	2300.65	7^-			(d,pnγ) tentatively placed a 460.5γ from this level parallel to the 423.5γ. Evaluators have moved it to the 2761.2-keV level based on observation of 461.0γ in (^{9}Be,^{9}Be′γ).
2726.6	$(2^+,3)$	897.9 *6*	81 *51*	1828.71	(2^-)			E_γ,I_γ: From ^{204}Au β^-.
		1598.4 *3*	100 *19*	1128.23	4^+			E_γ,I_γ: From ^{204}Au β^-.
2761.2	$(5)^-$	461.0 *5*	53	2300.65	7^-			Additional information 41.
		497.7 *5*	100	2262.97	5^-			Additional information 42.
		569.5[#] *10*	≈30	2191.01	6^+			Observed in (d,pnγ), but placed tentatively in the level scheme. This transition was not confirmed in (^{9}Be,^{9}Be′γ), where a contaminant 570γ was identified. I_γ: Normalized to 497.7γ in (d,pnγ).
2812.83	3^-	2376.26 *24*	100	436.552	2^+	[E1]	0.001321 *19*	α(K)=0.000448 *7*; α(L)=6.47×10^{-5} *9*; α(M)=1.476×10^{-5} *21*; α(N+..)=0.000793 *1* α(N)=3.69×10^{-6} *6*; α(O)=6.99×10^{-7} *10*; α(P)=5.52×10^{-8} *8*; α(IPF)=0.000789 *11* Additional information 43. E_γ,I_γ: From ^{204}Au β^-.

$^{204}_{80}Hg_{124}$-9

$\gamma(^{204}Hg)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π
2908.6	(≥2)	1780.4 *5*	100	1128.23	4^+
2914.3	(≥3)	651.3 *5*	100	2262.97	5^-
3033.2	$(4,5,6)^-$	770.2 *5*	100	2262.97	5^-
3174.0		911.0 *5*	100	2262.97	5^-
3689.3		965.2 *5*	100	2724.1	(≥5)

† Additional information 44.

‡ From $^{204}Hg(n,n'\gamma)$ for levels below 2.7 MeV, and from $^{204}Hg(^9Be,^9Be'\gamma)$ for levels above 2.7 MeV, unless otherwise noted.

Placement of transition in the level scheme is uncertain.

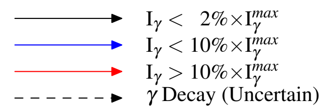
$^{204}_{80}Hg_{124}$-10

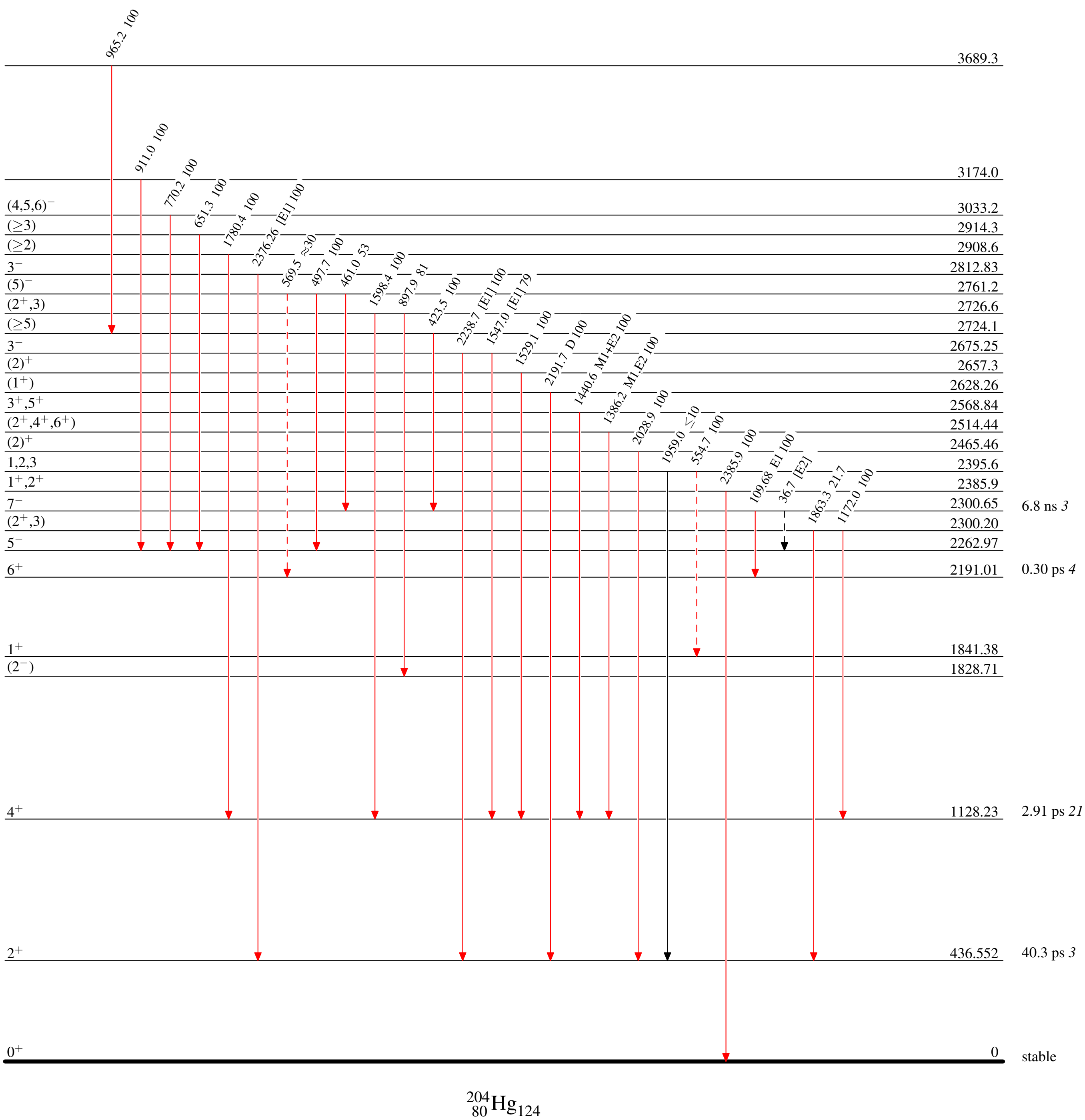
Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

Legend

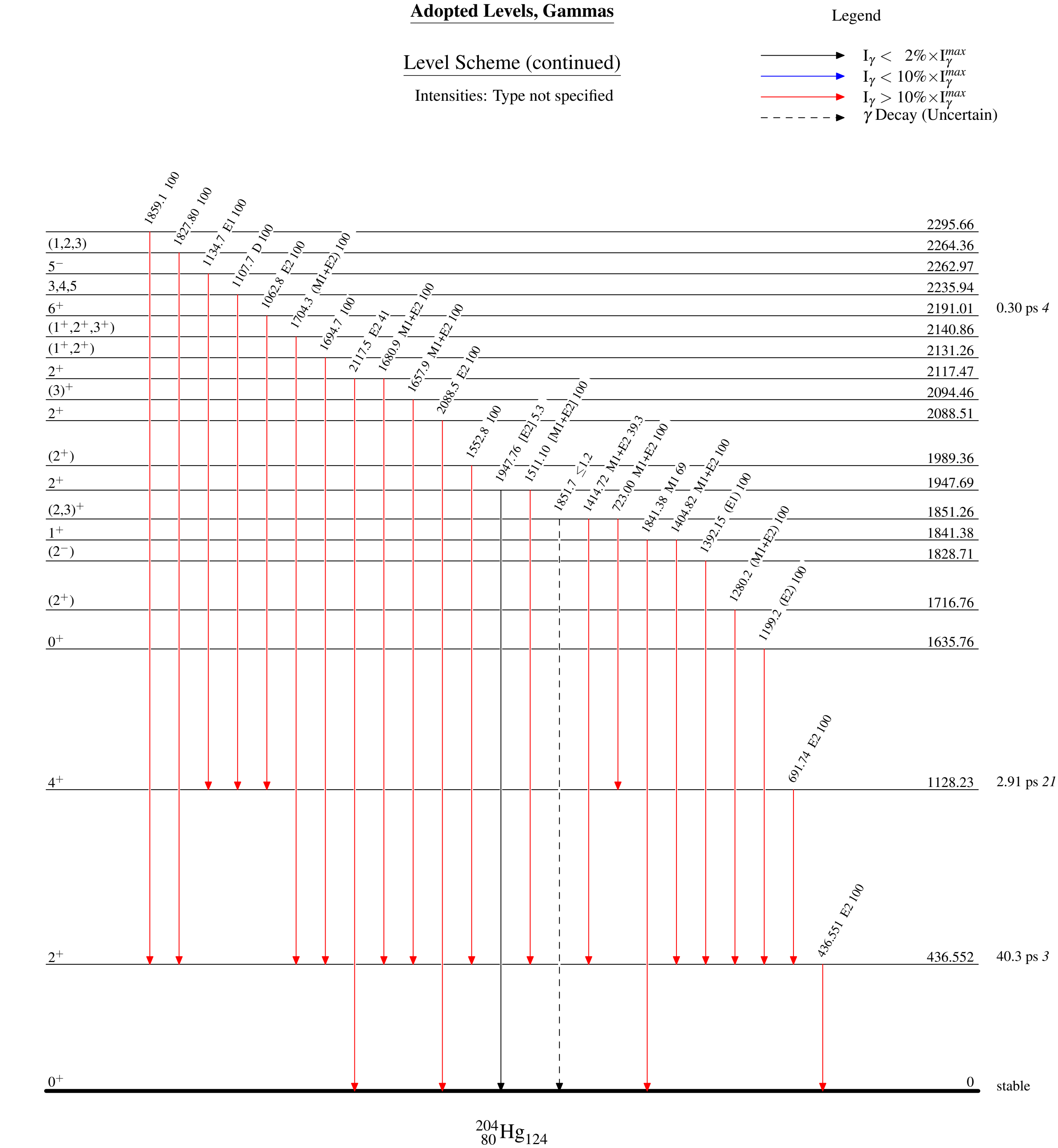




Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 121, 561 (2014)	31-Mar-2014

$Q(\beta^-)$=3880 *SY*; S(n)=4790 *SY*; S(p)=10190 *SY*; $Q(\alpha)$=1840 *SY* 2012Wa38
$\Delta Q(\beta^-)$=200 (syst), ΔS(n)=250 (syst), ΔS(p)=450 (syst), $\Delta Q(\alpha)$=360 (syst) 2012Wa38.

^{210}Hg Levels

Cross Reference (XREF) Flags

A ^{210}Hg IT decay (2.1 μs)
B ^{210}Hg IT decay (2 μs)

E(level)†	J^π‡	$T_{1/2}$	XREF	Comments
0.0	0^+		AB	
643	(2^+)		AB	
(663)	(3^-)	2.1 μs *7*	AB	J^π: (3^-) in 2013Go10, based on unobserved but expected highly converted 20 keV γ-ray feeding the (2^+) state, 663γ to 0^+ g.s., and calculated reduced transition strengths. Shell model calculation can not reliably predict the location of a 3^- state, because it does not allow core excitations and also the 3^- state in the lead region is very fragmented as mentioned in 2013Go10. For ^{208}Pb, ^{210}Pb, and ^{214}Pb nuclides 3^- state is prediction at much energy. $T_{1/2}$: From 663γ(t).
1196	(4^+)		B	
1366	(6^+)		B	
x+1366	(8^+)	2 μs *1*	B	$T_{1/2}$: From 553γ(t). Other: 2.0 μs *4* (from 643γ(t)).

† From γ-ray energy and feeding.
‡ From shell model calculation and γ ray feeding, except otherwise noted.

γ(^{210}Hg)

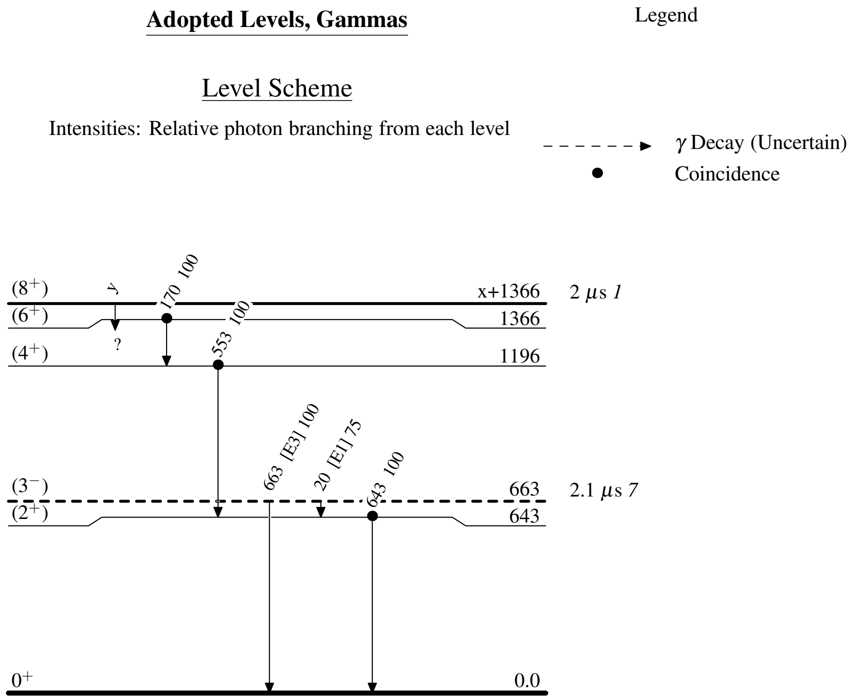
E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	Comments
643	(2^+)	643	100	0.0	0^+		
(663)	(3^-)	(20)	75† *16*	643	(2^+)	[E1]	B(E1)(W.u.)=4.9×10^{-6} *22*
		663	100† *16*	0.0	0^+	[E3]	B(E3)(W.u.)=2.2 *9*
1196	(4^+)	553	100	643	(2^+)		
1366	(6^+)	170	100	1196	(4^+)		
x+1366	(8^+)	y					E_γ: 20 < Y < 80 keV suggested in 2013Go10. Upper limit from x-ray measurements – the 71 keV identified as characteristics K_α x ray following 170 keV γ-ray. Lower limit from systematics.

† From branching ratio 0.43 *9* and 0.57 *9* for 663- and 20-keV γ rays, respectively (Table 2 – 2013Go10).

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{210}_{80}Hg_{130}$