Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 177, 1 (2021)	3-Sep-2021

Q(β^-)=−5246 *14*; S(n)=9193 *16*; S(p)=6068 *9*; Q(α)=2697.6 *30* 2021Wa16
S(2n)=16315 *16*, S(2p)=10473 *4*, Q(ε)=28 *4* (2021Wa16).

A 0.40 s activity with γ rays of 48 *4* and 134 *4*, assigned to ^{194}Hg (1953He57) has not been confirmed in any later work on ^{194}Hg decay.

Mass measurements: 2010El11, 2001Sc41 (also 2001Sc54), 1985De40.

Additional information 1.

Theoretical references: consult the NSR database (www.nndc.bnl.gov/nsr/) for 228 references dealing with nuclear structure calculation.

Negative result on a search for superdeformation at low-spin states populated by ^{194}Tl ε decay. Expected 3600γ in coincidence with 428γ (from 428 level) was not observed (1989HeYZ,1990HeYY).

^{194}Hg Levels

Average g factor of three SD bands=+0.41 *8* (1999We04).

Quasiparticle labeling scheme (1986Hu02):

A: ν1/2[660], α=+1/2.
B: ν1/2[660], α=−1/2.
C: ν3/2[651], α=+1/2.
D: ν3/2[651], α=−1/2.
E: ν1/2[521], α=+1/2.
F: ν1/2[521], α=−1/2.
A_p: π/2[550], α=−1/2.
B_p: π/2[550], α=+1/2.

Cross Reference (XREF) Flags

A	^{194}Tl ε decay (33.0 min)	D	^{186}W(^{13}C,5nγ)
B	^{194}Tl ε decay (32.8 min)	E	Pt(α,xnγ)
C	^{150}Nd(^{48}Ca,4nγ)	F	^{196}Hg(p,t)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	XREF	Comments
0.0[@]	0$^+$	447 y *52*	ABCDEF	%ε=100 T$_{1/2}$: weighted average of 477 y *32* (1981Ho18, specific activity) and 358 y *55* (1979Pr15, ^{197}Au(p,xn) yields). Original values of 520 y *32* in 1981Ho18 (using %I(328.5γ)=67) and 367 y *55* in 1979Pr15 (using %I(328.5γ)=63) were adjusted (by 2015Do01) using adopted %I(328.5γ)=61.4% *7* in ^{194}Pt from ^{194}Au ε decay. Note that 2015Do01 list a weighted averaged value of 447 y *28*. Evaluators cannot reproduce a low uncertainty of 28 y. Others: >15 y and <540 y (1973Or02); 260 y *40* (1977PrZX), 1.17 y *14* (1967Cr09), 1.9 y *3* (1964Be14), ≈1.6 y (1958Br88), and 0.4 y (1961Me12, 1958Ma50, 1955Br12) are discrepant. Evaluated rms charge radius <r^2>$^{1/2}$=5.4309 fm *33* (2013An02). Evaluated δ<r^2>(^{198}Hg,^{194}Hg)=−0.164 fm^2 *1* (2013An02). −0.1607 fm^2 *7* from 1986Ul02. Others: 1987WaZO, 1975Hu05, 1966Da07, 1964To05, 1963Kl03, 1963To07.
427.92[@] *9*	2$^+$	18.5 ps *14*	ABCDE	J$^\pi$: 427.9γ E2 to 0$^+$. T$_{1/2}$: weighted average of 19 ps *1* from ^{194}Tl ε decay (32.8 min) and 14.6 ps *28* from (^{12}C,4nγ).
1064.32[@] *14*	4$^+$	4.9 ps *28*	ABCDE	J$^\pi$: 636.4γ E2 to 2$^+$; member of g.s. band.

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Adopted Levels, Gammas (continued)

^{194}Hg Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
				$T_{1/2}$: using GCD method applied to 748.9γ and 734.8γ as feeder transitions in (^{12}C,4nγ) (2018Es04). Other: <3 ps from γγ(t) in ^{194}Tl ε decay (32.8 min) (2019Ol05).
1073.09 *13*	$(2)^+$		A	Jπ: 645.18γ M1+E2 to 2^+, 1073.0γ to 0^+; 395.39γ M1(+E2) from $(3)^+$.
1468.50 *14*	$(3)^+$		A	Jπ: 404.19γ M1(+E2) to 4^+, 1040.5γ to 2^+; 395.39γ(M1(+E2))−1073.0γ cascade to 0^+ disfavors 4^+.
1500	0^+		F	Jπ: L(p,t)=0 from 0^+.
1799.09[@] *21*	6^+		BCDE	Jπ: 734.8γ E2 to 4^+ and member of g.s. band.
1813.16[a] *21*	5^-	51 ps *6*	BCDE	Jπ: 748.8γ ΔJ=1, E1 to 4^+; spin=5 from γ(θ) in (^{13}C,5nγ) and (α,xnγ). $T_{1/2}$: from ce-γ(t) in ^{194}Tl ε decay (32.8 min) (1970To14).
1910.08[a] *21*	7^-	3.48 ns *6*	BCDE	Jπ: 96.92γ E2 to 5^-; band assignment. $T_{1/2}$: weighted average of 3.46 ns *3* (2019Ol05, γγ(t) in ε decay (32.8 min)), 4.0 ns *6* (2001Gu31, recoil-shadow asymmetry method listed in (^{13}C,5nγ)), and 3.75 ns *11* (1970To14, ce-γ(t) in ε decay (32.8 min)). Other: 4.46 ns *11* (1974Ca30, ce(K)(t) in ^{197}Au(p,4n ce), not corrected for partial feeding from 8.1 ns, 12^+ isomer at 2475). Note that reduced χ^2=3.6 is somewhat higher than the critical χ^2=3.0.
1957.8 *5*	$(0^+$ to $4^+)$		A	Jπ: 1529.9γ to 2^+.
1979.5 *5*	$(0^+$ to $4^+)$		A	Jπ: 1551.6γ to 2^+.
2051.7 *3*	$(0^+$ to $4^+)$		A	Jπ: 1623.5γ to 2^+.
2137.96[b] *24*	8^-	0.91 ns *3*	BCDE	Jπ: 227.88γ E2+M1 to 7^-; spin=8 from γ(θ) in (^{13}C,5nγ) and (α,xnγ); band assignment. $T_{1/2}$: from γ(t) (1977Gu05) in (α,xnγ). Other: 1.1 ns *5* (2001Gu31, recoil-shadow method) in (^{13}C,5nγ).
2143.10[a] *24*	9^-	302 ps *9*	BCDE	Jπ: 232.9γ E2 to 7^- and spin=9 from γ(θ) in (^{13}C,5nγ) and (α,xnγ); band assignment. $T_{1/2}$: weighted average of 302 ps *9* (2018Es04, γγ(t) in (^{13}C,5nγ)) and 291 ps *50* (1977Gu05, ce(t) in (α,xnγ)).
2165.45 *22*	6^-		B	Jπ: 352.2γ M1+E2 to 5^- and 255.4γ M1(+E2) to 7^-.
2179.57 *25*	5^-,6^-		B	Jπ: 366.5γ M1(+E2) to 5^-, 380.5γ to 6^+.
2259.7? *8*	$(4,5,6)^-$		B	Jπ: 446.5γ M1+E2 to 5^-.
2264.35 *24*	$(5,6)^-$		B	Jπ: 451.0γ M1+E2 to 5^- and ε feeding from (7^+) (log $f^{1u}t$=8.4).
2364.0[&] *3*	(8^+)		CDE	Jπ: 565.0γ Q, ΔJ=2 to 6^+; band member.
2374.4 *3*	6^-,7^-		B	Jπ: 208.9γ E2(+M1) to 6^-, 464.5γ E2(+M1) to 7^-.
2423.3[&] *3*	(10^+)	3.1 ns *5*	CDE	$T_{1/2}$: weighted average of 2.9 ns *5* from γ(t) in 1981Kr04 and 4.0 ns *10* from ce(L2)(52) ce(M)(59.5)(t) in 1985Ko13 in (α,xnγ). In 1981Kr04, fitting of 233γ(t), 280γ(t), and 565γ(t) in terms of a two half-life pattern gives 2.9 ns for 10^+ isomer and 8.1 ns for 12^+ isomer. g(average)=−0.24 *4* (1980Kr21,2014StZZ) in (α,xnγ), from integral PAD method, using $T_{1/2}$=12 ns *1*. The g factor corresponds to both or either of the 12^+ and 10^+ isomers at 2475 and 2423, respectively.
2463.50 *24*	6^-		B	Jπ: 553.2γ M1(+E2) to 7^-, 650.3γ M1+E2 to 5^-.
2475.2[&] *4*	(12^+)	8.1 ns *5*	CDE	$T_{1/2}$: from γ(t) in 1981Kr04 in (α,xnγ). See $T_{1/2}$ comment for 2423.6 level. This value consistent with 7.5 ns *20* from (ce(L3) of 52γ)(t) (1983Gu05). Others from γ(t): 11.6 ns *10* (1977Gu05), 10 ns *2* (1974Pr13), and 11 ns *2* (1975Li16) in (α,xnγ), corresponding to both of the 12^+ and 10^+ levels. g(average)=−0.24 *4* (1980Kr21,2014StZZ) from integral PAD method in (α,xnγ), using $T_{1/2}$=12 ns *1*. The g factor corresponds to both or either of the 12^+ and 10^+ isomers at 2475 and 2423, respectively. A correction for revised $T_{1/2}$ needs to be considered.
2561.7[b] *3*	(10^-)		CDE	
2687.6[a] *3*	(11^-)		CDE	

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Adopted Levels, Gammas (continued)

^{194}Hg Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
2888.1[&] *4*	(14$^+$)		CDE	
3063.6? *6*			C	
3172.9[b] *4*	(12$^-$)		CDE	
3393.7[a] *4*	(13$^-$)		CDE	
3531.2[&] *4*	(16$^+$)		CDE	
3747.5[e] *4*	(14$^-$)		CDE	
3819.9 *5*	(15$^-$)		CD	Jπ: 931.9γ D+Q to (14$^+$); 701.0γ from (17$^-$).
3878.9[d] *4*	(15$^-$)		CDE	
3983.7[e] *4*	(16$^-$)	<0.50 ns	CDE	$T_{1/2}$: from γ(t) (1977Gu05) in (α,xnγ).
4004.3[h] *5*	(15$^-$)		CD	XREF: D(?).
4014.8[g] *4*	(14$^+$)		CD	
4114.4[d] *4*	(17$^-$)		CD	
4274.8[&] *4*	(18$^+$)		CDE	
4289.6[e] *4*	(18$^-$)		CDE	
4317.3[g] *5*	(16$^+$)		CD	
4491.2 *5*	(17$^-$)		CD	
4497.4[d] *4*	(19$^-$)		CDE	
4520.7[h] *5*	(17$^-$)		CD	
4797.4[g] *5*	(18$^+$)		CD	
4896.4[e] *6*	(20$^-$)		CD	
4985.2[c] *4*	(20$^+$)		CDE	
5103.1[h] *5*	(19$^-$)		CD	
5163.3[d] *4*	(21$^-$)		CD	
5265.7 *6*	(20$^+$)		CD	Jπ: 990.8γ, ΔJ=2 (Q) to (18$^+$).
5391.4 *5*			C	
5493.3 *5*			C	
5522.8[g] *6*	(20$^+$)		CD	
5577.9[c] *5*	(22$^+$)		CD	
5609.8[h] *5*	(21$^-$)		CD	
5700.0[e] *7*	(22$^-$)		CD	Jπ: 803.6γ (Q) to (20$^-$); band assignment.
6012.9 *6*			C	
6032.3 *4*	(22$^+$)		C	
6049.3[d] *5*	(23$^-$)		CD	
6119.7[h] *5*	(23$^-$)		CD	
6256.1 *6*			CD	
6349.4[g] *7*	(22$^+$)		CD	XREF: D(?).
6410.3[c] *5*	(24$^+$)		CD	Jπ: 832.6γ to (22$^+$); band assignment.
6417.1[k] *5*	(8$^+$)		C	
6454.7 *7*			C	
6628.8[k] *4*	(10$^+$)		C	≈94% of the decay is through unresolved multi-step statistical decays.
6645.2[e] *8*	(24$^-$)		CD	
6675.1?[f] *6*	(22$^+$)		CD	
6776.6 *8*			C	
6790.1 *5*			C	
6815.1 *6*	(25$^-$)		CD	
6833.4[f] *5*	(24$^+$)		CD	
6882.7[k] *4*	(12$^+$)	2.4 ps *4*	C	$T_{1/2}$: from 2001De42 in (^{48}Ca,4nγ). Others: 1.9 ps 7 RDDS for 254.3γ (1997Ku03), deduced Q(intrinsic)=20 *+5−3* (1997Ku03), 18.1 *+25−19* (2001De42). ≈42% of the decay is through unresolved multi-step statistical decays.
6941.1[d] *6*	(25$^-$)		CD	

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Adopted Levels, Gammas (continued)

^{194}Hg Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
6988.6[f] 6	(26+)		CD	Jπ: 155.1γ to (24+); band assignment.
7178.7[k] 4	(14+)	2.1 ps 4	C	$T_{1/2}$: from 2001De42. Other: 2.3 ps 4 from RDDS for 254.3γ (1997Ku03), deduced Q(intrinsic)=20 +5−3 (1997Ku03), 17.6 +20−15 (2001De42).
7231.0[m] 11	(9−)		C	
7262.5 5			C	
7303.3[f] 7	(28+)		CD	
7453.0[m] 4	(11−)		C	≈91% of the decay is through unresolved multi-step statistical decays.
7515.9[k] 4	(16+)	1.36 ps 17	C	$T_{1/2}$: from 2001De42. Other: 1.0 ps 3 from RDDS for 254.3γ (1997Ku03), deduced Q(intrinsic)=20 +5−3 (1997Ku03), 15.9 +12−10 (2001De42).
7555.0 6	(27−)		C	
7581.6[j] 5			C	
7587.6 7	(27−)		C	
7715.3[m] 4	(13−)	2.1 ps 7	C	$T_{1/2}$: from 2001De42, deduced Q(intrinsic)=22 +6−4.
7767.7?[d] 8	(27)		CD	
7783.6[f] 8	(30+)		CD	
7893.3[k] 4	(18+)		C	
7941.3[j] 5			C	
8018.0[m] 4	(15−)	2.1 ps 6	C	$T_{1/2}$: from 2001De42, deduced Q(intrinsic)=16.9 +39−25.
8286.7[j] 6			C	
8309.9[k] 4	(20+)		C	
8360.5[m] 4	(17−)	1.4 ps 5	C	$T_{1/2}$: from 2001De42, deduced Q(intrinsic)=14.8 +40−24.
8561.0 6	(29−)		C	Jπ: 1006.0γ Q to (27−).
8664.3[j] 6			C	
8742.1[m] 4	(19−)		C	
8764.6[k] 4	(22+)	0.27 ps 6	C	$T_{1/2}$: from 1994Hu05, Q(transition)=17.3 +25−17.
9067.8[j] 6	(30)		C	
9162.2[m] 4	(21−)		C	
9256.5[k] 4	(24+)	0.166 ps 22	C	$T_{1/2}$: from 1994Hu05, Q(transition)=18.1 +13−11.
9499.9[j] 6			C	
9564.2 7	(31−)		C	
9590.7 9	(31−)		C	
9620.0[m] 4	(23−)		C	
9784.4[k] 4	(26+)	0.120 ps 25	C	$T_{1/2}$: from 1994Hu05, Q(transition)=17.8 +22−16.
9881.2[i] 8	(32)		C	Jπ: 317.0γ D to (31−).
9932.5[j] 7	(32)		C	
10114.8[m] 4	(25−)		C	
10224.8[i] 9	(33)		C	
10347.3[k] 4	(28+)	0.114 ps 39	C	$T_{1/2}$: from 1994Hu05, Q(transition)=15.6 +36−21.
10602.7[i] 9	(34)		C	
10645.8[m] 4	(27−)		C	
10944.2[k] 4	(30+)	0.078 ps 17	C	$T_{1/2}$: from 1994Hu05, Q(transition)=16.3 +22−16.
11011.7[i] 10	(35)		C	
11212.1[m] 4	(29−)		C	
11574.1[k] 4	(32+)	0.060 ps 21	C	$T_{1/2}$: from 1994Hu05, Q(transition)=16.1 +40−23.
11813.0[m] 4	(31−)		C	
12236.2[k] 4	(34+)	0.042 ps 13	C	$T_{1/2}$: from 1994Hu05, Q(transition)=17.2 +36−22.
12447.6[m] 4	(33−)		C	
12929.6[k] 4	(36+)	0.026 ps 11	C	$T_{1/2}$: 1994Hu05, Q(transition)=19.5 +64−32.
13115.4[m] 4	(35−)		C	

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Adopted Levels, Gammas (continued)

^{194}Hg Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
13653.5[k] *4*	(38+)		C	
13815.5[m] *4*	(37−)		C	
14407.4[k] *4*	(40+)		C	
14547.2[m] *5*	(39−)		C	
15191.1[k] *4*	(42+)		C	
15310.0[m] *5*	(41−)		C	
16004.2[k] *4*	(44+)		C	
16103.5[m] *5*	(43−)		C	
16846.7[k] *4*	(46+)		C	
16927.2[m] *5*	(45−)		C	
17719.2[k] *4*	(48+)		C	
17781.0[m] *5*	(47−)		C	
18622.3[k] *5*	(50+)		C	
18664.6[m] *6*	(49−)		C	
x[l]	J≈(8)		C	Additional information 2.
200.79+x[l] *6*	J+2		C	
443.04+x[l] *9*	J+4	3.0 ps *8*	C	$T_{1/2}$: from 2001De42, deduced Q(intrinsic)=20.8 *+45−30*.
726.18+x[l] *11*	J+6	2.7 ps *6*	C	$T_{1/2}$: from 2001De42, deduced Q(intrinsic)=17.4 *+26−18*.
1049.63+x[l] *12*	J+8	1.3 ps *5*	C	$T_{1/2}$: from 2001De42, deduced Q(intrinsic)=18.1 *+54−29*.
1412.75+x[l] *14*	J+10		C	
1814.80+x[l] *15*	J+12		C	
2255.11+x[l] *16*	J+14	0.27 ps *9*	C	$T_{1/2}$: from 1994Hu05, Q(transition)=19.0 *+43−26*.
2732.79+x[l] *17*	J+16	0.20 ps *5*	C	$T_{1/2}$: from 1994Hu05, Q(transition)=17.9 *+26−18*.
3247.02+x[l] *18*	J+18	0.13 ps *5*	C	$T_{1/2}$: from 1994Hu05, Q(transition)=18.5 *+55−29*.
3796.95+x[l] *19*	J+20	0.100 ps *33*	C	$T_{1/2}$: from 1994Hu05, Q(transition)=17.7 *+39−23*.
4381.78+x[l] *20*	J+22	0.089 ps *19*	C	$T_{1/2}$: from 1994Hu05, Q(transition)=16.1 *+21−15*.
5000.74+x[l] *21*	J+24	0.065 ps *28*	C	$T_{1/2}$: from 1994Hu05, Q(transition)=16.3 *+54−27*.
5652.77+x[l] *22*	J+26		C	
6337.34+x[l] *23*	J+28		C	
7053.54+x[l] *24*	J+30		C	
7800.4+x[l] *3*	J+32		C	
8578.2+x[l] *3*	J+34		C	
9385.9+x[l] *4*	J+36		C	
10223.4+x[l] *4*	J+38		C	
11090.5+x[l] *4*	J+40		C	

[†] From a least-squares fit to γ-ray energies, assuming ΔEγ=0.3 keV for values quoted to tenth keV and 1 keV for those quoted to keV if not given.

[‡] For levels above 2300 in normal bands and populated in in-beam γ-ray studies only, the assignments are from γ(θ) and γγ(θ) data suggestive of stretched quadrupole transitions and band assignments based on the quasiparticle alignment, unless otherwise noted. It is assumed that stretched mult=Q transitions are of E2 type and that spin values in such reactions increase with the excitation energy. The assignments for SD bands are from least-squares fit of Eγ data (in a SD band) to empirical formulas based on rotational model (1992Wu01, 1990Be37, 1990Dr08). Stretched quadrupole (E2) transitions are assumed within a SD band as indicated by γγ(θ) data.

[#] For SD bands, values are from DSAM method (1994Hu05,1994Ce04) listed ^{150}Nd(^{48}Ca,4nγ) dataset.

[@] Band(A): g.s. band.

[&] Band(B): AB band,α=0. Crossing frequency from g.s. band to AB band=0.206 MeV (1986Hu02).

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Adopted Levels, Gammas (continued)

^{194}Hg Levels (continued)

[a] Band(C): AE band,α=1.
[b] Band(D): AF band,α=0.
[c] Band(E): ABCD band,α=0. Average g factor=0.25 *2* (1998We23,1999We04,2014StZZ transient field method). Crossing frequency from AB band to ABCD band=0.348 MeV (1986Hu02).
[d] Band(F): ABCE band,α=1. Average g factor=0.26 *3* (1998We23,1999We04,2014StZZ transient field method). Crossing frequency from AE band to ABCE band=0.239 MeV (1986Hu02).
[e] Band(G): ABCF band,α=0. Average g factor=0.27 *2* (1998We23,1999We04,2014StZZ transient field method). Crossing frequency from AF band to ABCF band=0.221 MeV (1986Hu02).
[f] Band(H): $ABCDA_pB_p$ band,α=0. Crossing frequency from ABCD band to $ABCDA_pB_p$ band<0.36 MeV (1986Hu02).
[g] Band(I): ABEF band,α=0. Crossing frequency from AB band to ABEF band $\approx$ 0.52 MeV (1986Hu02).
[h] Band(J): $\nu i^2_{13/2}\otimes\pi h^2_{11/2}$. Tentative assignment.
[i] Band(K): Dipole band. Tentative assignment (1996Fo01). Possible configuration=$\pi h^{+2}_{9/2}\otimes\pi h^{-2}_{11/2}\otimes\nu i^6_{13/2}$ (1996Fo01). The first member of the band could also be 9564, (31^-).
[j] Band(L): Dipole band. Tentative assignment (1996Fo01). Possible configuration=$\pi h^2_{9/2}\otimes\pi h^{-2}_{11/2}\otimes\nu i^4_{13/2}$ (1996Fo01).
[k] Band(M): SD-1 band. SD-1 band from 1990Ri05, 1990Be11, 1990St12, 1994Ce04, 1994Hu05, 1996Kr13, 1996Kh04, 1997Ha49, 1997Ka34, 1997Ku03, 1997Mo12, 1998Ma71, 1999We04, 2000La31, 2001De42. Spins and parities are proposed by 1996Kh04 on the basis of connecting transitions to the normal bands. Average (for the SD band) Q(intrinsic)=16.8 *7* (2001De42), 17.7 *4* (1997Mo12), 17.2 *20* (1994Hu05), 17.3 *15* (1997Ku03). Population of this band is estimated as 7% of the 4^+ to 2^+ transition in the normal g.s. band (1990Be11). Average g factor=+0.36 *10* (1999We04,1998Ma71,2014StZZ) by transient field method.
[l] Band(N): SD-2 band. SD-2 band from 1990Ri05, 1990Be11, 1994Ce04, 1994Hu05, 1996Kr13, 1997Mo12, 1997Ku03, 1998Ma71, 1999We04, 2001De42. Population of this band is estimated as 2% of the 4^+ to 2^+ transition in g.s. band (1990Be11). Q(intrinsic)=19.0 *20* (2001De42), 17.6 *6* (1997Mo12), 16.5 *31* (1997Ku03), 17.6 *30* (1994Hu05). Average g factor=+0.41 *20* (1999We04,1998Ma71,2014StZZ) by transient field method.
[m] Band(O): SD-3 band. SD-3 band from 1990Ri05, 1990Be11, 1994Ce04, 1996Kr13, 1997Mo12, 1997Ku03, 1998Ma71, 1999We04, 2001De42. Q(intrinsic)=18.8 *25* (2001De42), 17.5 *8* (1997Mo12), 15.1 *36* (1997Ku03). Average g factor=+0.72 *26* (1999We04,1998Ma71,2014StZZ) by transient field method. SD-2 and SD-3 bands are interpreted as signature partners of a 2-quasiparticle (neutrons) excited state band with configuration: 9/2[624]⊗5/2[512] (1990Ri05,1990Be11,1994Ce04).

Adopted Levels, Gammas (continued)

γ(^{194}Hg)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ[&]	α[a]	Comments
427.92	2$^+$	427.93 *9*	100	0.0	0$^+$	E2		0.0397	α(K)=0.0275 *4*; α(L)=0.00929 *13*; α(M)=0.00231 *4* α(N)=0.000575 *8*; α(O)=0.0001014 *15*; α(P)=3.62×10^{-6} *5* B(E2)(W.u.)=30.7 *+26−22* E_γ: weighted average of 427.91 *9* from ^{194}Tl ε decay (33.0 min), 428.20 *25* from ^{194}Tl ε decay (32.8 min), 427.9 *2* from (^{48}Ca,4nγ), 427.9 *2* from (^{13}C,5nγ), 427.9 *3* from (α,xnγ).
1064.32	4$^+$	636.44 *14*	100	427.92	2$^+$	E2		0.01541	B(E2)(W.u.)=16 *+15−6* E_γ: weighted average of 636.34 *14* from ^{194}Tl ε decay (33.0 min), 636.30 *25* from ^{194}Tl ε decay (32.8 min), 636.6 *2* from (^{48}Ca,4nγ), 636.6 *2* from (^{13}C,5nγ), 636.4 *3* from (α,xnγ).
1073.09	(2)$^+$	645.18 *14*	100 *7*	427.92	2$^+$	M1+E2		0.031 *16*	α(K)=0.025 *14*; α(L)=0.0045 *19*; α(M)=0.0011 *4* α(N)=0.00027 *11*; α(O)=5.0×10^{-5} *21*; α(P)=3.5×10^{-6} *20*
		1073.0 *3*	44 *4*	0.0	0$^+$				
1468.50	(3)$^+$	395.39 *13*	31 *8*	1073.09	(2)$^+$	M1(+E2)	<1	0.14 *3*	α(K)=0.11 *3*; α(L)=0.021 *3*; α(M)=0.0048 *6* α(N)=0.00121 *16*; α(O)=0.00023 *4*; α(P)=1.6×10^{-5} *4*
		404.19 *8*	14.6 *15*	1064.32	4$^+$	M1(+E2)	<1	0.13 *3*	α(K)=0.11 *3*; α(L)=0.019 *3*; α(M)=0.0045 *6* α(N)=0.00113 *15*; α(O)=0.00021 *3*; α(P)=1.5×10^{-5} *4*
		1040.5 *3*	100 *8*	427.92	2$^+$				
1799.09	6$^+$	734.8 *2*	100	1064.32	4$^+$	E2		0.01129	E_γ: weighted average of 735.0 *3* from ^{194}Tl ε decay (32.8 min), 734.7 *2* from (^{48}Ca,4nγ), 734.8 *2* from (^{13}C,5nγ), 734.7 *3* from (α,xnγ).
1813.16	5$^-$	748.8 *2*	100	1064.32	4$^+$	E1		0.00395	B(E1)(W.u.)=9.4×10^{-6} *+12−10* E_γ: weighted average of 749.0 *3* from ^{194}Tl ε decay (32.8 min), 748.9 *2* from (^{48}Ca,4nγ), 748.8 *2* from (^{13}C,5nγ), 748.7 *3* from (α,xnγ).
1910.08	7$^-$	96.92 *8*	100 *9*	1813.16	5$^-$	E2		6.33	B(E2)(W.u.)=34.0 *9* α(K)=0.624 *9*; α(L)=4.27 *7*; α(M)=1.116 *17* α(N)=0.277 *4*; α(O)=0.0459 *7*; α(P)=0.0001280 *19* E_γ: weighted average of 96.90 *8* from ^{194}Tl ε decay (32.8 min), 97.0 *2* from (^{13}C,5nγ), 97.0 *3* from (α,xnγ). I_γ: from (^{13}C,5nγ). Other: 100 *20* from ^{194}Tl ε decay (32.8 min).
		110.98 *8*	79 *8*	1799.09	6$^+$	(E1)		0.325	B(E1)(W.u.)=4.0×10^{-6} *5* α(K)=0.261 *4*; α(L)=0.0494 *7*; α(M)=0.01155 *17* α(N)=0.00285 *4*; α(O)=0.000506 *8*; α(P)=2.58×10^{-5} *4* E_γ: weighted average of 110.96 *8* from ^{194}Tl ε decay (32.8 min), 111.0 *3* from (^{13}C,5nγ), 111.2 *3* from (α,xnγ). I_γ: weighted average of 83 *20* from ^{194}Tl ε decay (32.8 min) and 78 *8* from (^{13}C,5nγ).
1957.8	(0$^+$ to 4$^+$)	1529.9 *5*	100	427.92	2$^+$				
1979.5	(0$^+$ to 4$^+$)	1551.6 *5*	100	427.92	2$^+$				
2051.7	(0$^+$ to 4$^+$)	978.7 *3*	100 *22*	1073.09	(2)$^+$				

$^{194}_{80}Hg_{114}$-7

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ[&]	α[a]	Comments
2051.7	(0$^+$ to 4$^+$)	1623.5 *6*	46 *17*	427.92	2$^+$				
2137.96	8$^-$	227.89 *12*	100	1910.08	7$^-$	E2+M1	2.1 *+17−6*	0.35 *7*	B(M1)(W.u.)=2.9×10^{-4} *18*; B(E2)(W.u.)=9.1 *14* α(K)=0.22 *7*; α(L)=0.0982 *18*; α(M)=0.0248 *4* α(N)=0.00617 *9*; α(O)=0.001070 *22*; α(P)=2.9×10^{-5} *9* E_γ: weighted average of 227.98 *8* from ^{194}Tl ε decay (32.8 min), 227.6 *2* from (^{13}C,5nγ), 227.6 *2* from (α,xnγ). δ: other: 0.25 *5* from γ(θ) in (α,xnγ).
2143.10	9$^-$	232.93 *15*	100	1910.08	7$^-$	E2		0.234	B(E2)(W.u.)=33.2 *10* α(N)=0.00563 *8*; α(O)=0.000959 *14*; α(P)=1.472×10^{-5} *21* α(K)=0.1169 *17*; α(L)=0.0883 *13*; α(M)=0.0227 *4* E_γ: weighted average of 233.10 *15* from ^{194}Tl ε decay (32.8 min), 232.9 *2* from (^{48}Ca,4nγ), 232.9 *2* from (^{13}C,5nγ), 232.7 *2* from (α,xnγ). Mult.: also from ce data in (α,xnγ).
2165.45	6$^-$	255.40 *10*	100 *17*	1910.08	7$^-$	M1(+E2)	0.7 *5*	0.46 *10*	α(K)=0.37 *10*; α(L)=0.073 *5*; α(M)=0.0173 *7* α(N)=0.00434 *17*; α(O)=0.00080 *5*; α(P)=5.2×10^{-5} *14*
		352.20 *25*	18.3 *33*	1813.16	5$^-$	M1+E2	0.9 *4*	0.15 *5*	α(K)=0.12 *5*; α(L)=0.025 *5*; α(M)=0.0060 *9* α(N)=0.00150 *22*; α(O)=0.00027 *5*; α(P)=1.6×10^{-5} *7*
2179.57	5$^-$,6$^-$	366.50 *25*	100 *18*	1813.16	5$^-$	M1(+E2)	<0.8	0.17 *4*	α(K)=0.14 *4*; α(L)=0.025 *4*; α(M)=0.0060 *7* α(N)=0.00150 *18*; α(O)=0.00028 *4*; α(P)=1.9×10^{-5} *5*
		380.5 *3*	78 *13*	1799.09	6$^+$	[E1]		0.01610	
2259.7?	(4,5,6)$^-$	446.5 *7*	100	1813.16	5$^-$	M1+E2	1.1 *+15−7*	0.08 *4*	α(K)=0.06 *4*; α(L)=0.012 *4*; α(M)=0.0029 *8* α(N)=0.00072 *20*; α(O)=0.00013 *4*; α(P)=8.E−6 *5*
2264.35	(5,6)$^-$	98.9 *1*	12 *5*	2165.45	6$^-$	[M1]		8.15	α(K)=6.67 *10*; α(L)=1.137 *17*; α(M)=0.265 *4* α(N)=0.0664 *10*; α(O)=0.01256 *18*; α(P)=0.000960 *14*
		451.0 *7*	100 *23*	1813.16	5$^-$	M1+E2	1.7 *+27−8*	0.06 *3*	α(K)=0.044 *22*; α(L)=0.010 *3*; α(M)=0.0024 *6* α(N)=0.00060 *14*; α(O)=0.00011 *3*; α(P)=6.E−6 *4*
2364.0	(8$^+$)	565.0 *2*	100	1799.09	6$^+$	Q			E_γ: weighted average of 565.1 *2* from (^{48}Ca,4nγ), 565.0 *2* from (^{13}C,5nγ), 564.7 *3* from (α,xnγ). Mult.: from γ(θ) in (α,xnγ) and (^{13}C,5nγ).
2374.4	6$^-$,7$^-$	208.90 *18*	100 *25*	2165.45	6$^-$	E2(+M1)	>2.1	0.40 *6*	α(K)=0.21 *6*; α(L)=0.1380 *21*; α(M)=0.0353 *7* α(N)=0.00877 *16*; α(O)=0.001499 *22*; α(P)=2.8×10^{-5} *9*
		464.5 *7*	38 *13*	1910.08	7$^-$	E2(+M1)	>2	0.040 *8*	α(K)=0.030 *7*; α(L)=0.0079 *8*; α(M)=0.00193 *18* α(N)=0.00048 *5*; α(O)=8.7×10^{-5} *9*; α(P)=4.0×10^{-6} *10*
2423.3	(10$^+$)	59.5	1.6	2364.0	(8$^+$)	E2		58.5 *13*	B(E2)(W.u.)=30 *6* α(L)=43.8 *10*; α(M)=11.42 *25* α(N)=2.83 *6*; α(O)=0.466 *10*; α(P)=0.000615 *12* E_γ,Mult.: transition observed in ce data in (α,xnγ) (1983Gu05). I_γ: from relative γ+ce intensity balance at 2423 level in (^{13}C,5nγ).

$^{194}_{80}Hg_{114}$-8

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ[&]	α[a]	Comments
2423.3	(10$^+$)	280.2 *2*	100 *5*	2143.10	9$^-$	(E1)		0.0326	B(E1)(W.u.)=1.49×10^{-6} *+34−24* α(K)=0.0268 *4*; α(L)=0.00446 *7*; α(M)=0.001034 *15* α(N)=0.000257 *4*; α(O)=4.72×10^{-5} *7*; α(P)=3.00×10^{-6} *5* E_γ: weighted average of 280.1 *2* from (^{48}Ca,4nγ), 280.2 *2* from (^{13}C,5nγ), and 280.2 *3* from (α,xnγ). I_γ: from (^{13}C,5nγ).
2463.50	6$^-$	284.00 *20*	27 *5*	2179.57	5$^-$,6$^-$	M1(+E2)	<0.7	0.37 *5*	α(K)=0.30 *5*; α(L)=0.055 *3*; α(M)=0.0129 *6* α(N)=0.00322 *14*; α(O)=0.00060 *4*; α(P)=4.2×10^{-5} *7*
		298.1 *2*	30.0 *33*	2165.45	6$^-$	E2(+M1)	>2	0.13 *3*	α(K)=0.088 *24*; α(L)=0.0352 *18*; α(M)=0.0088 *4* α(N)=0.00220 *9*; α(O)=0.000384 *20*; α(P)=1.2×10^{-5} *4*
		553.2 *3*	67 *17*	1910.08	7$^-$	M1(+E2)	<0.8	0.061 *10*	α(K)=0.050 *9*; α(L)=0.0085 *11*; α(M)=0.00197 *24* α(N)=0.00049 *6*; α(O)=9.3×10^{-5} *12*; α(P)=6.9×10^{-6} *12*
		650.3 *3*	100 *22*	1813.16	5$^-$	M1+E2	1.3 *5*	0.026 *8*	α(K)=0.021 *7*; α(L)=0.0040 *9*; α(M)=0.00094 *20* α(N)=0.00023 *5*; α(O)=4.4×10^{-5} *10*; α(P)=2.9×10^{-6} *9*
		664.2 *7*	17 *5*	1799.09	6$^+$				
2475.2	(12$^+$)	52.0 *2*	100	2423.3	(10$^+$)	E2		112 *5*	B(E2)(W.u.)=24.4 *+23−20* α(L)=84 *4*; α(M)=21.9 *9* α(N)=5.43 *22*; α(O)=0.89 *4*; α(P)=0.00106 *4* E_γ,Mult.: transition observed in ce data in (α,xnγ) (1983Gu05).
2561.7	(10$^-$)	418.5[#] *3*	28[#] *6*	2143.10	9$^-$				
		423.8[#] *2*	100[#] *6*	2137.96	8$^-$	Q			Mult.: from γ(θ) in (α,xnγ) and (^{13}C,5nγ).
2687.6	(11$^-$)	544.5 *2*	100	2143.10	9$^-$	Q			E_γ: weighted average of 544.6 *4* from (^{48}Ca,4nγ), 544.6 *2* from (^{13}C,5nγ), 544.4 *3* from (α,xnγ). Mult.: from γ(θ) in (α,xnγ) and (^{13}C,5nγ).
2888.1	(14$^+$)	412.9 *2*	100	2475.2	(12$^+$)	Q			E_γ: from (^{48}Ca,4nγ) and (^{13}C,5nγ). Other: 412.9 *3* from (α,xnγ). Mult.: from γ(θ) in (α,xnγ) and (^{13}C,5nγ).
3063.6?		919[b]		2143.10	9$^-$				E_γ: from (^{48}Ca,4nγ) only.
3172.9	(12$^-$)	485.1 *4*		2687.6	(11$^-$)				E_γ: weighted average of 485.2 *4* from (^{48}Ca,4nγ) and 485.0 *4* from (^{13}C,5nγ).
		611.1 *3*		2561.7	(10$^-$)				E_γ: weighted average of 611.2 *4* from (^{48}Ca,4nγ), 611.2 *4* from (^{13}C,5nγ), and 611.0 *3* from (α,xnγ).
3393.7	(13$^-$)	706.1 *2*	100	2687.6	(11$^-$)	Q			E_γ: weighted average of 706.2 *4* from (^{48}Ca,4nγ), 706.2 *2* from (^{13}C,5nγ), 705.9 *3* from (α,xnγ). Mult.: from γ(θ) in (α,xnγ) and (^{13}C,5nγ).
3531.2	(16$^+$)	643.1 *2*	100	2888.1	(14$^+$)	Q			E_γ: weighted average of 643.2 *2* from (^{48}Ca,4nγ), 643.0 *2* from (^{13}C,5nγ), and 643.0 *3* from (α,xnγ). Mult.: from γ(θ) in (α,xnγ) and (^{13}C,5nγ).
3747.5	(14$^-$)	353.6[#] *4*	2.6[#] *13*	3393.7	(13$^-$)				
		574.6 *2*	100 *9*	3172.9	(12$^-$)	Q			E_γ: weighted average of 574.7 *4* from (^{48}Ca,4nγ), 574.7 *2* from (^{13}C,5nγ), and 574.4 *3* from (α,xnγ).

$^{194}_{80}Hg_{114}$-9

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[a]	Comments
								I_γ: from (^{13}C,5nγ). Mult.: from γ(θ) in (α,xnγ) and (^{13}C,5nγ).
3819.9	(15$^-$)	931.9[‡] *3*	100	2888.1	(14$^+$)	D+Q		E_γ: weighted average of 932.0 *2* from (^{48}Ca,4nγ) and 931.4 *4* from (^{13}C,5nγ). Mult.: γ(θ) from (^{13}C,5nγ) is consistent with D+Q, ΔJ=1.
3878.9	(15$^-$)	485.2 *3*	100	3393.7	(13$^-$)	Q		E_γ: weighted average of 485.2 *4* from (^{48}Ca,4nγ), 485.2 *4* from (^{13}C,5nγ), and 485.1 *3* from (α,xnγ). Mult.: from γ(θ) in (α,xnγ).
3983.7	(16$^-$)	236.2 *2*		3747.5	(14$^-$)	(E2)	0.224	B(E2)(W.u.)>19 α(K)=0.1130 *16*; α(L)=0.0834 *12*; α(M)=0.0214 *3* α(N)=0.00532 *8*; α(O)=0.000906 *13*; α(P)=1.424×10^{-5} *21* E_γ: weighted average of 236.3 *4* from (^{13}C,5nγ), 236.2 *2* from (α,xnγ). Mult.: Q from γ(θ) in (α,xnγ); (E2) from level scheme.
4004.3	(15$^-$)	1116.1 *4*	100	2888.1	(14$^+$)			E_γ: weighted average of 1116.6 *8* from (^{48}Ca,4nγ) and 1116.0 *4* from (^{13}C,5nγ).
4014.8	(14$^+$)	267.3[#] *4*	100[#] *50*	3747.5	(14$^-$)			
		621.3[#] *4*		3393.7	(13$^-$)			
		1126.5[#] *4*	67[#] *33*	2888.1	(14$^+$)			
4114.4	(17$^-$)	130.8[‡] *4*		3983.7	(16$^-$)			
		235.5 *2*		3878.9	(15$^-$)	(E2)	0.226	α(K)=0.1138 *17*; α(L)=0.0844 *13*; α(M)=0.0217 *4* α(N)=0.00539 *8*; α(O)=0.000917 *14*; α(P)=1.434×10^{-5} *21* E_γ: from (^{48}Ca,4nγ). Other: 235.5 *4* from (^{13}C,5nγ). Mult.: Q from γ(θ) in (^{13}C,5nγ) and (α,xnγ) for a doublet; E2 is favorable at low energy.
		583.1[#] *4*		3531.2	(16$^+$)			
4274.8	(18$^+$)	743.6 *2*	100	3531.2	(16$^+$)	Q		E_γ: weighted average of 743.7 *2* from (^{48}Ca,4nγ), 743.6 *2* from (^{13}C,5nγ), and 743.6 *3* from (α,xnγ). Mult.: from γ(θ) in (^{13}C,5nγ) and (α,xnγ).
4289.6	(18$^-$)	305.9 *2*	100	3983.7	(16$^-$)	(E2)	0.1005	α(K)=0.0602 *9*; α(L)=0.0304 *5*; α(M)=0.00770 *11* α(N)=0.00192 *3*; α(O)=0.000331 *5*; α(P)=7.76×10^{-6} *11* E_γ: weighted average of 305.9 *2* from (^{13}C,5nγ) and 306.0 *3* from (α,xnγ). Mult.: Q from γ(θ) in (^{13}C,5nγ) and (α,xnγ); E2 is favorable at low energy.
4317.3	(16$^+$)	302.5[‡] *4*		4014.8	(14$^+$)			
		333.6[#b] *4*		3983.7	(16$^-$)			
4491.2	(17$^-$)	671.4 *4*	100 *4*	3819.9	(15$^-$)	Q		E_γ: weighted average of 671.5 *4* from (^{48}Ca,4nγ) and 671.3 *4* from (^{13}C,5nγ). Mult.: γ(θ) in (^{13}C,5nγ) and γγ(DCO) consistent with mult=Q.
		960.1 *10*	23 *4*	3531.2	(16$^+$)			
4497.4	(19$^-$)	208.0[#] *4*	100[#] *20*	4289.6	(18$^-$)			
		383.0[‡] *2*	<320	4114.4	(17$^-$)	Q		E_γ: weighted average of 383.0 *2* from (^{48}Ca,4nγ), 383.2 *4* from (^{13}C,5nγ), and 382.7 *3* from (α,xnγ).

$^{194}_{80}Hg_{114}$-10

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	Comments
							I_γ: from (^{13}C,5nγ).
							Mult.: from γ(θ) in (^{13}C,5nγ).
4520.7	(17$^-$)	516.2[‡] *4*		4004.3	(15$^-$)		E_γ: weighted average of 516.3 *8* from (^{48}Ca,4nγ) and 516.2 *4* from (^{13}C,5nγ).
		701.0[#] *4*	40[#] *15*	3819.9	(15$^-$)		
		989.4[‡] *4*	100 *40*	3531.2	(16$^+$)		E_γ: weighted average of 990.1 *8* from (^{48}Ca,4nγ) and 989.2 *4* from (^{13}C,5nγ).
							I_γ: from (^{13}C,5nγ).
4797.4	(18$^+$)	480.0[#] *4*		4317.3	(16$^+$)		
		507.5[‡] *4*		4289.6	(18$^-$)		
4896.4	(20$^-$)	606.8[‡] *4*	100	4289.6	(18$^-$)		
4985.2	(20$^+$)	710.4 *2*	100	4274.8	(18$^+$)	Q	E_γ: weighted average of 710.5 *2* from (^{48}Ca,4nγ), 710.4 *2* from (^{13}C,5nγ), and 710.3 *3* from (α,xnγ).
							Mult.: from γ(θ) in (^{13}C,5nγ).
5103.1	(19$^-$)	582.5 *2*	100 *4*	4520.7	(17$^-$)	Q	E_γ: weighted average of 582.5 *2* from (^{48}Ca,4nγ) and 582.4 *4* from (^{13}C,5nγ).
		612.1 *4*		4491.2	(17$^-$)		E_γ: from (^{13}C,5nγ) and (^{48}Ca,4nγ).
		828.4 *4*	20 *2*	4274.8	(18$^+$)		E_γ: weighted average of 828.6 *8* from (^{48}Ca,4nγ) and 828.3 *4* from (^{13}C,5nγ).
5163.3	(21$^-$)	665.9 *2*	100	4497.4	(19$^-$)	Q	E_γ: weighted average of 666.0 *2* from (^{48}Ca,4nγ) and 665.8 *3* from (^{13}C,5nγ).
5265.7	(20$^+$)	990.8[‡] *4*	100	4274.8	(18$^+$)	(Q)	E_γ: weighted average of 990.9 *4* from (^{48}Ca,4nγ) and 990.7 *4* from (^{13}C,5nγ).
5391.4		1116.5 *4*	100	4274.8	(18$^+$)		
5493.3		995.8 *2*	100	4497.4	(19$^-$)		
5522.8	(20$^+$)	725.2[#] *4*	100	4797.4	(18$^+$)	Q	Mult.: from γ(θ) in (^{13}C,5nγ).
5577.9	(22$^+$)	592.7 *2*	100	4985.2	(20$^+$)	Q	E_γ: weighted average of 592.6 *2* from (^{48}Ca,4nγ) and 592.8 *3* from (^{13}C,5nγ).
							Mult.: from γ(θ) in (^{13}C,5nγ).
5609.8	(21$^-$)	506.7 *2*	100 *4*	5103.1	(19$^-$)	Q	E_γ,I_γ: from (^{48}Ca,4nγ). Other: 506.7 *3*, Iγ=100 *20* from (^{13}C,5nγ).
							Mult.: from γ(θ) in (^{13}C,5nγ) and γγ(DCO) in (^{48}Ca,4nγ).
		624.5[‡] *4*	19.0 *10*	4985.2	(20$^+$)	D	E_γ: weighted average of 625.1 *8* from (^{48}Ca,4nγ) and 624.4 *4* from (^{13}C,5nγ).
5700.0	(22$^-$)	803.6 *3*	100	4896.4	(20$^-$)	(Q)	E_γ: from (^{48}Ca,4nγ). Other: 803.6 *3* from (^{13}C,5nγ).
							Mult.: from γ(θ) in (^{13}C,5nγ).
6012.9		1027.6 *4*	100	4985.2	(20$^+$)		
6032.3	(22$^+$)	454.7 *4*	52.7 *14*	5577.9	(22$^+$)		
		538.9 *4*	32.4 *14*	5493.3			
		640.8 *4*	47.3 *14*	5391.4			
		766.4[b] *10*	<6.8	5265.7	(20$^+$)		
		869.1 *2*	100 *4*	5163.3	(21$^-$)	D	Mult.: γγ(DCO) from (^{48}Ca,4nγ) consistent with mult=D.
		1047.0 *4*	32.4 *14*	4985.2	(20$^+$)		
6049.3	(23$^-$)	886.0[‡] *2*	100	5163.3	(21$^-$)		E_γ: weighted average of 886.1 *2* from (^{48}Ca,4nγ) and 885.8 *4* from (^{13}C,5nγ).
6119.7	(23$^-$)	510.0[‡] *2*	100 *4*	5609.8	(21$^-$)	Q	E_γ: weighted average of 509.9 *2* from (^{48}Ca,4nγ) and 510.3 *4* from (^{13}C,5nγ).
		541.8 *4*	29 *3*	5577.9	(22$^+$)		E_γ: weighted average of 541.9 *4* from (^{48}Ca,4nγ) and 541.6 *4* from (^{13}C,5nγ).

$^{194}_{80}Hg_{114}$-11

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[a]	Comments
6256.1		678.2[#] *4*	100	5577.9	(22$^+$)			
6349.4	(22$^+$)	826.6[#] *4*	100	5522.8	(20$^+$)	(Q)		Mult.: γ(θ) in (^{13}C,5nγ) consistent with mult=Q.
6410.3	(24$^+$)	832.5 *2*	100	5577.9	(22$^+$)			E_γ: weighted average of 832.5 *2* from (^{48}Ca,4nγ) and 832.6 *3* from (^{13}C,5nγ).
6454.7		441.5 *8*	100	6012.9				
6628.8	(10$^+$)	211.7	100	6417.1	(8$^+$)	[E2]	0.352	
		3564.8 *5*	27	3063.6?				
		3942.0 *5*	9	2687.6	(11$^-$)			
		4485.5 *5*	50	2143.10	9$^-$	D		
6645.2	(24$^-$)	945.2[#] *4*	100	5700.0	(22$^-$)			
6675.1?	(22$^+$)	1152.0[#b] *4*	100	5522.8	(20$^+$)			
6776.6		763.6 *8*	100	6012.9				
6790.1		335.3 *8*	12.9 *11*	6454.7				
		757.8 *2*	100 *4*	6032.3	(22$^+$)			
6815.1	(25$^-$)	695.4 *3*	100	6119.7	(23$^-$)	Q		E_γ: weighted average of 695.5 *2* from (^{48}Ca,4nγ) and 695.0 *3* from (^{13}C,5nγ).
6833.4	(24$^+$)	158.0[#] *4*	57[#] *29*	6675.1?	(22$^+$)			
		713.9[#] *4*	100[#] *43*	6119.7	(23$^-$)			
6882.7	(12$^+$)	253.93 *4*	100 *6*	6628.8	(10$^+$)	[E2]	0.1776	α(K)=0.0946 *14*; α(L)=0.0624 *9*; α(M)=0.01596 *23* α(N)=0.00397 *6*; α(O)=0.000678 *10*; α(P)=1.200×10^{-5} *17* B(E2)(W.u.)=2.7×10^3 *+5−4*
		3488.7 *5*	2.0	3393.7	(13$^-$)	(E1)	1.69×10^{-3}	B(E1)(W.u.)=3.2×10^{-8} *+9−8* Mult.: D from γ(θ) in (^{48}Ca,4nγ).
		3708[b]	2.0	3172.9	(12$^-$)	(E1)	1.76×10^{-3}	B(E1)(W.u.)=2.7×10^{-8} *+8−7* Mult.: D from γ(θ) in (^{48}Ca,4nγ).
		4194.8 *5*	1.6	2687.6	(11$^-$)	(E1)	0.00192	B(E1)(W.u.)=1.5×10^{-8} *+5−4* Mult.: D from γ(θ) in (^{48}Ca,4nγ).
6941.1	(25$^-$)	891.8 *4*	100	6049.3	(23$^-$)	(Q)		E_γ: weighted average of 891.9 *4* from (^{48}Ca,4nγ) and 891.7 *4* from (^{13}C,5nγ). Mult.: from γ(θ) in (^{13}C,5nγ).
6988.6	(26$^+$)	155.1[#] *4*	71[#] *30*	6833.4	(24$^+$)			
		578.4[#] *4*	100[#] *41*	6410.3	(24$^+$)			
7178.7	(14$^+$)	295.99 *3*	100	6882.7	(12$^+$)	[E2]	0.1108	B(E2)(W.u.)=1.60×10^3 *+38−26* α(K)=0.0651 *10*; α(L)=0.0344 *5*; α(M)=0.00873 *13* α(N)=0.00217 *3*; α(O)=0.000374 *6*; α(P)=8.38×10^{-6} *12*
7262.5		472.3 *4*	100 *4*	6790.1				
		807.4 *10*	26 *4*	6454.7				
7303.3	(28$^+$)	314.7[‡] *4*		6988.6	(26$^+$)			
7453.0	(11$^-$)	222	<128	7231.0	(9$^-$)	[E2]	0.300	
		824.2[b]		6628.8	(10$^+$)			

$^{194}_{80}Hg_{114}$-12

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. @	α [a]	Comments
7453.0	(11$^-$)	4978.1 *5*	100	2475.2	(12$^+$)	D		
		5029.9 *5*	50	2423.3	(10$^+$)			
7515.9	(16$^+$)	337.18 *3*	100	7178.7	(14$^+$)	[E2]	0.0758	B(E2)(W.u.)=1.33×10^3 *+19−15* α(K)=0.0477 *7*; α(L)=0.0212 *3*; α(M)=0.00534 *8* α(N)=0.001330 *19*; α(O)=0.000231 *4*; α(P)=6.20×10^{-6} *9*
7555.0	(27$^-$)	739.8 *2*	100	6815.1	(25$^-$)	Q		
7581.6		319.1 *4*	33.0 *10*	7262.5				
		791.5 *2*	100 *4*	6790.1				
		804.8 *8*	12.6 *10*	6776.6				
7587.6	(27$^-$)	772.6 *4*	100	6815.1	(25$^-$)	Q		
7715.3	(13$^-$)	262.27 *6*	100 *6*	7453.0	(11$^-$)	[E2]	0.1604	B(E2)(W.u.)=2.7×10^3 *+14−7* α(K)=0.0874 *13*; α(L)=0.0549 *8*; α(M)=0.01402 *20* α(N)=0.00349 *5*; α(O)=0.000597 *9*; α(P)=1.112×10^{-5} *16*
		832.4 *5*	3.6	6882.7	(12$^+$)	[E1]	0.00323	B(E1)(W.u.)=5.0×10^{-6} *+29−15*
7767.7?	(27)	826.6#b *4*	100	6941.1	(25$^-$)			
7783.6	(30$^+$)	480.3# *4*	100	7303.3	(28$^+$)			
7893.3	(18$^+$)	377.39 *3*	100	7515.9	(16$^+$)			
7941.3		359.8 *2*	100.0 *26*	7581.6		D		
		678.7 *2*	47.8 *18*	7262.5				
8018.0	(15$^-$)	302.68 *6*	100 *6*	7715.3	(13$^-$)	[E2]	0.1037	B(E2)(W.u.)=1.4×10^3 *+6−3* α(K)=0.0617 *9*; α(L)=0.0316 *5*; α(M)=0.00801 *12* α(N)=0.00199 *3*; α(O)=0.000344 *5*; α(P)=7.95×10^{-6} *12*
		839.1 *5*	1.2	7178.7	(14$^+$)	[E1]	0.00318	B(E1)(W.u.)=1.8×10^{-6} *+9−5*
8286.7		345.4 *2*	100	7941.3		D		
8309.9	(20$^+$)	416.60 *3*	100	7893.3	(18$^+$)			
8360.5	(17$^-$)	342.50 *6*	100 *6*	8018.0	(15$^-$)	[E2]	0.0725	B(E2)(W.u.)=1.2×10^3 *+6−3* α(K)=0.0459 *7*; α(L)=0.0200 *3*; α(M)=0.00504 *7* α(N)=0.001256 *18*; α(O)=0.000218 *3*; α(P)=5.98×10^{-6} *9*
		844.6b		7515.9	(16$^+$)			
8561.0	(29$^-$)	973.6 *4*	49 *4*	7587.6	(27$^-$)			
		1006.0 *2*	100 *8*	7555.0	(27$^-$)	Q		
8664.3		377.6 *4*	100.0 *26*	8286.7		(D)		
		723.0 *2*	42.6 *18*	7941.3				
8742.1	(19$^-$)	381.68 *6*	100 *5*	8360.5	(17$^-$)	[E2]	0.058	
		848.8b		7893.3	(18$^+$)			
8764.6	(22$^+$)	454.76 *3*	100	8309.9	(20$^+$)	[E2]	0.0340	B(E2)(W.u.)=1.56×10^3 *+44−29*
9067.8	(30)	403.5 *2*	100 *7*	8664.3				
		781.0 *4*	62.2 *22*	8286.7				
9162.2	(21$^-$)	420.08 *6*	100	8742.1	(19$^-$)			
9256.5	(24$^+$)	491.86 *5*	100	8764.6	(22$^+$)	[E2]	0.0280	B(E2)(W.u.)=1.73×10^3 *+27−20*
9499.9		432.1 *4*		9067.8	(30)			
		835.7 *4*	100 *9*	8664.3				

$^{194}_{80}Hg_{114}$-13

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[a]	Comments
9564.2	(31$^-$)	1003.2 *4*	100	8561.0	(29$^-$)			
9590.7	(31$^-$)	1029.7 *8*	100	8561.0	(29$^-$)			
9620.0	(23$^-$)	457.79 *6*	100	9162.2	(21$^-$)			
9784.4	(26$^+$)	527.88 *3*	100	9256.5	(24$^+$)	[E2]	0.0237	B(E2)(W.u.)=1.68×10^3 *+45−29*
9881.2	(32)	290.4 *8*	50.0 *31*	9590.7	(31$^-$)			
		317.0 *4*	100.0 *31*	9564.2	(31$^-$)	D		
9932.5	(32)	432.6 *4*		9499.9				
		864.8 *8*		9067.8	(30)			
10114.8	(25$^-$)	494.77 *6*	100	9620.0	(23$^-$)			
10224.8	(33)	343.6 *4*	100	9881.2	(32)	D		
10347.3	(28$^+$)	562.92 *3*	100	9784.4	(26$^+$)	[E2]	0.0203	B(E2)(W.u.)=1.3×10^3 *+7−3*
10602.7	(34)	377.9 *4*	100 *5*	10224.8	(33)	(D)		
		721.7 *8*	55 *5*	9881.2	(32)			
10645.8	(27$^-$)	531.01 *7*	100	10114.8	(25$^-$)			
10944.2	(30$^+$)	596.87 *5*	100	10347.3	(28$^+$)	[E2]	0.01779	B(E2)(W.u.)=1.41×10^3 *+39−25*
11011.7	(35)	409.1 *8*	55 *5*	10602.7	(34)			
		786.8 *4*	100 *5*	10224.8	(33)			
11212.1	(29$^-$)	566.26 *6*	100	10645.8	(27$^-$)			
11574.1	(32$^+$)	629.93 *3*	100	10944.2	(30$^+$)	[E2]	0.01577	B(E2)(W.u.)=1.4×10^3 *+7−4*
11813.0	(31$^-$)	600.92 *6*	100	11212.1	(29$^-$)			
12236.2	(34$^+$)	662.07 *4*	100	11574.1	(32$^+$)	[E2]	0.01413	B(E2)(W.u.)=1.6×10^3 *+7−4*
12447.6	(33$^-$)	634.60 *11*	100	11813.0	(31$^-$)			
12929.6	(36$^+$)	693.40 *4*	100	12236.2	(34$^+$)	[E2]	0.01278	B(E2)(W.u.)=2.0×10^3 *+14−6*
13115.4	(35$^-$)	667.84 *7*	100	12447.6	(33$^-$)			
13653.5	(38$^+$)	723.91 *6*	100	12929.6	(36$^+$)			
13815.5	(37$^-$)	700.11 *6*	100	13115.4	(35$^-$)			
14407.4	(40$^+$)	753.92 *6*	100	13653.5	(38$^+$)			
14547.2	(39$^-$)	731.70 *17*	100	13815.5	(37$^-$)			
15191.1	(42$^+$)	783.67 *8*	100	14407.4	(40$^+$)			
15310.0	(41$^-$)	762.77 *6*	100	14547.2	(39$^-$)			
16004.2	(44$^+$)	813.12 *3*	100	15191.1	(42$^+$)			
16103.5	(43$^-$)	793.51 *6*	100	15310.0	(41$^-$)			
16846.7	(46$^+$)	842.55 *6*	100	16004.2	(44$^+$)			
16927.2	(45$^-$)	823.65 *13*	100	16103.5	(43$^-$)			
17719.2	(48$^+$)	872.41 *13*	100	16846.7	(46$^+$)			
17781.0	(47$^-$)	853.85 *12*	100	16927.2	(45$^-$)			
18622.3	(50$^+$)	903.10 *18*	100	17719.2	(48$^+$)			
18664.6	(49$^-$)	883.60 *22*	100	17781.0	(47$^-$)			
200.79+x	J+2	200.79 *6*	100	x	J≈(8)			
443.04+x	J+4	242.25 *6*	100	200.79+x	J+2	[E2]	0.206	B(E2)(W.u.)=2.8×10^3 *+10−6* α(K)=0.1062 *15*; α(L)=0.0753 *11*; α(M)=0.0193 *3* α(N)=0.00480 *7*; α(O)=0.000818 *12*; α(P)=1.341×10^{-5} *19*
726.18+x	J+6	283.14 *6*	100	443.04+x	J+4	[E2]	0.1267	B(E2)(W.u.)=1.53×10^3 *+43−28*

Adopted Levels, Gammas (continued)

γ(^{194}Hg) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. @	α [a]	Comments
								α(K)=0.0725 *11*; α(L)=0.0407 *6*; α(M)=0.01037 *15* α(N)=0.00258 *4*; α(O)=0.000443 *7*; α(P)=9.29×10^{-6} *13*
1049.63+x	J+8	323.45 *6*	100	726.18+x	J+6	[E2]	0.0854	B(E2)(W.u.)=1.7×10^3 *+11−5* α(K)=0.0526 *8*; α(L)=0.0247 *4*; α(M)=0.00623 *9* α(N)=0.001552 *22*; α(O)=0.000269 *4*; α(P)=6.82×10^{-6} *10*
1412.75+x	J+10	363.12 *6*	100	1049.63+x	J+8			
1814.80+x	J+12	402.05 *6*	100	1412.75+x	J+10			
2255.11+x	J+14	440.31 *6*	100	1814.80+x	J+12	[E2]	0.0369	B(E2)(W.u.)=1.8×10^3 *+9−5*
2732.79+x	J+16	477.68 *6*	100	2255.11+x	J+14	[E2]	0.0301	B(E2)(W.u.)=1.7×10^3 *+5−3*
3247.02+x	J+18	514.23 *6*	100	2732.79+x	J+16	[E2]	0.0252	B(E2)(W.u.)=1.8×10^3 *+11−5*
3796.95+x	J+20	549.93 *6*	100	3247.02+x	J+18	[E2]	0.0215	B(E2)(W.u.)=1.7×10^3 *+8−4*
4381.78+x	J+22	584.82 *6*	100	3796.95+x	J+20	[E2]	0.0186	B(E2)(W.u.)=1.37×10^3 *+37−24*
5000.74+x	J+24	618.96 *6*	100	4381.78+x	J+22	[E2]	0.01640	B(E2)(W.u.)=1.4×10^3 *+10−4*
5652.77+x	J+26	652.03 *6*	100	5000.74+x	J+24			
6337.34+x	J+28	684.57 *7*	100	5652.77+x	J+26			
7053.54+x	J+30	716.20 *6*	100	6337.34+x	J+28			
7800.4+x	J+32	746.89 *19*	100	7053.54+x	J+30			
8578.2+x	J+34	777.73 *6*	100	7800.4+x	J+32			
9385.9+x	J+36	807.76 *8*	100	8578.2+x	J+34			
10223.4+x	J+38	837.48 *7*	100	9385.9+x	J+36			
11090.5+x	J+40	867.08 *24*	100	10223.4+x	J+38			

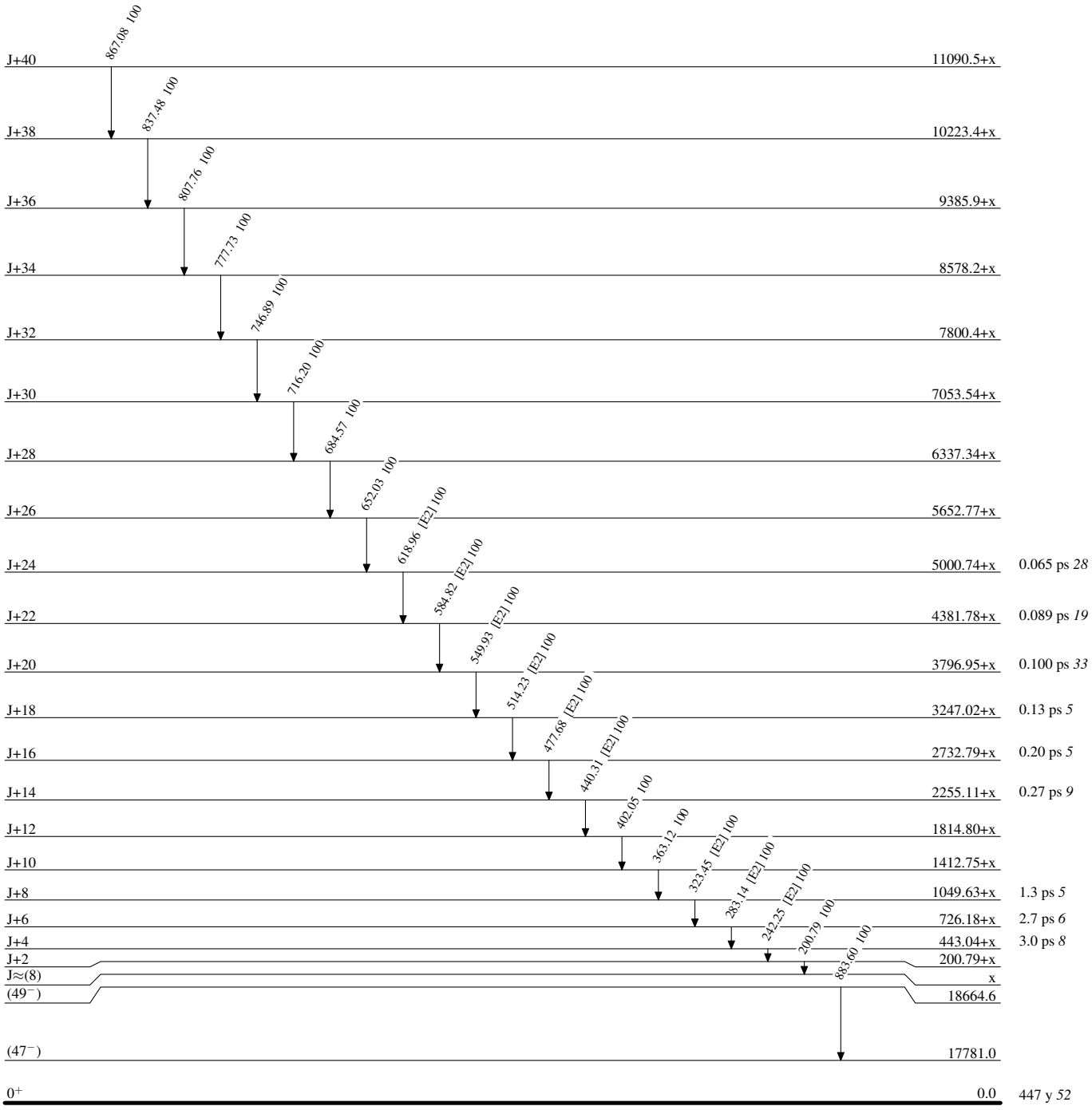
† From ce data in ^{194}Tl ε decay up to 2464 level and from ^{150}Nd(^{48}Ca,4nγ) above that, unless otherwise noted.
‡ Complex line in (^{13}C,5nγ).
# From (^{13}C,5nγ).
@ From ce data in ^{194}Tl ε decay up to 2464 level and from γγ(DCO) in ^{150}Nd(^{48}Ca,4nγ) above that, unless otherwise noted. DCO data indicating ΔJ=2, quadrupole transitions are assigned (E2) below Eγ≤400 keV from RUL for E2 and M2, as no long-lived levels are evident in high-spin data. Above this energy, mult=Q is assigned for such transitions.
& From ce data in ^{194}Tl ε decay, unless otherwise noted.
[a] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[b] Placement of transition in the level scheme is uncertain.

$^{194}_{80}Hg_{114}$-15

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

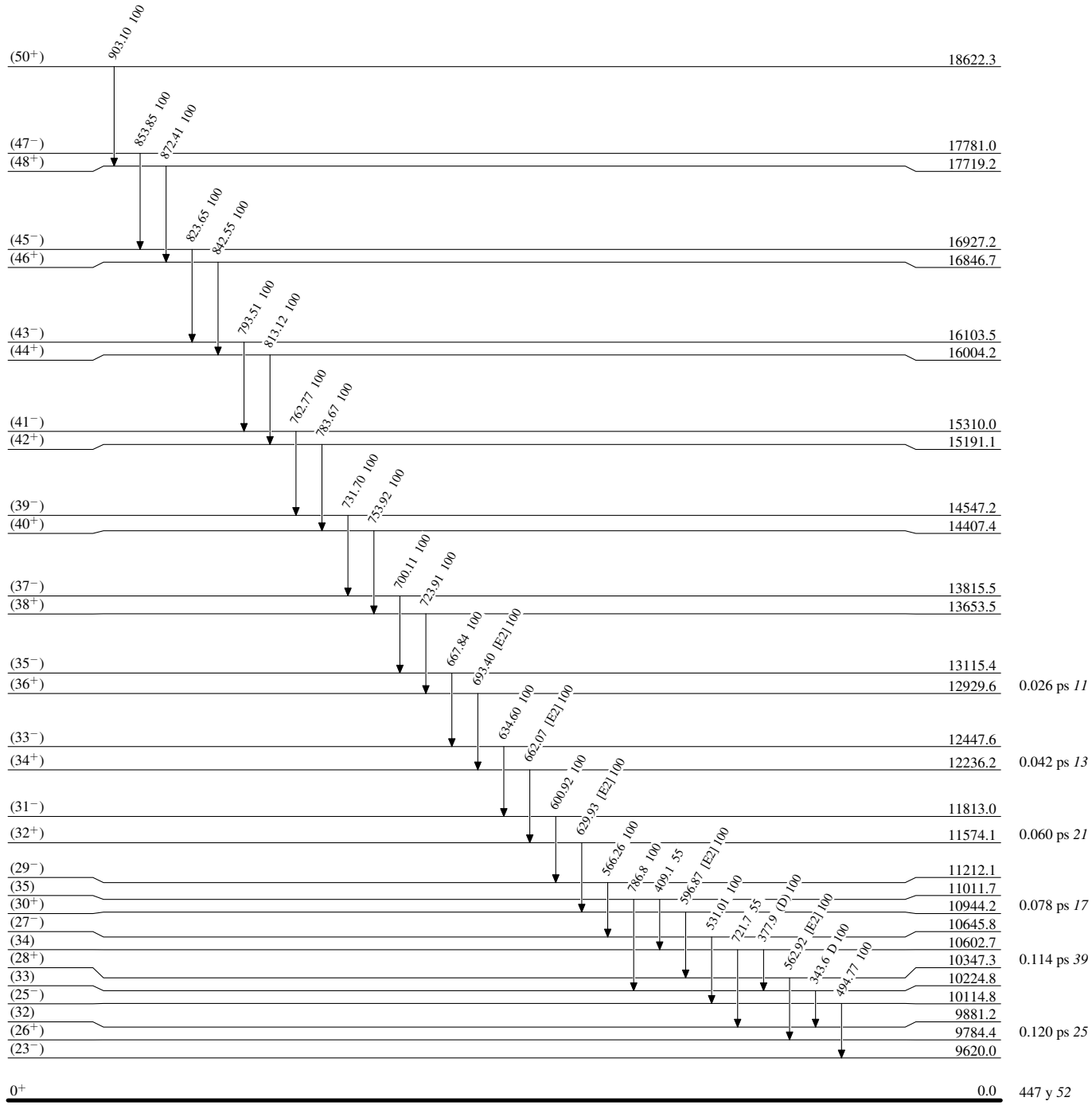


$^{194}_{80}Hg_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{194}_{80}Hg_{114}$

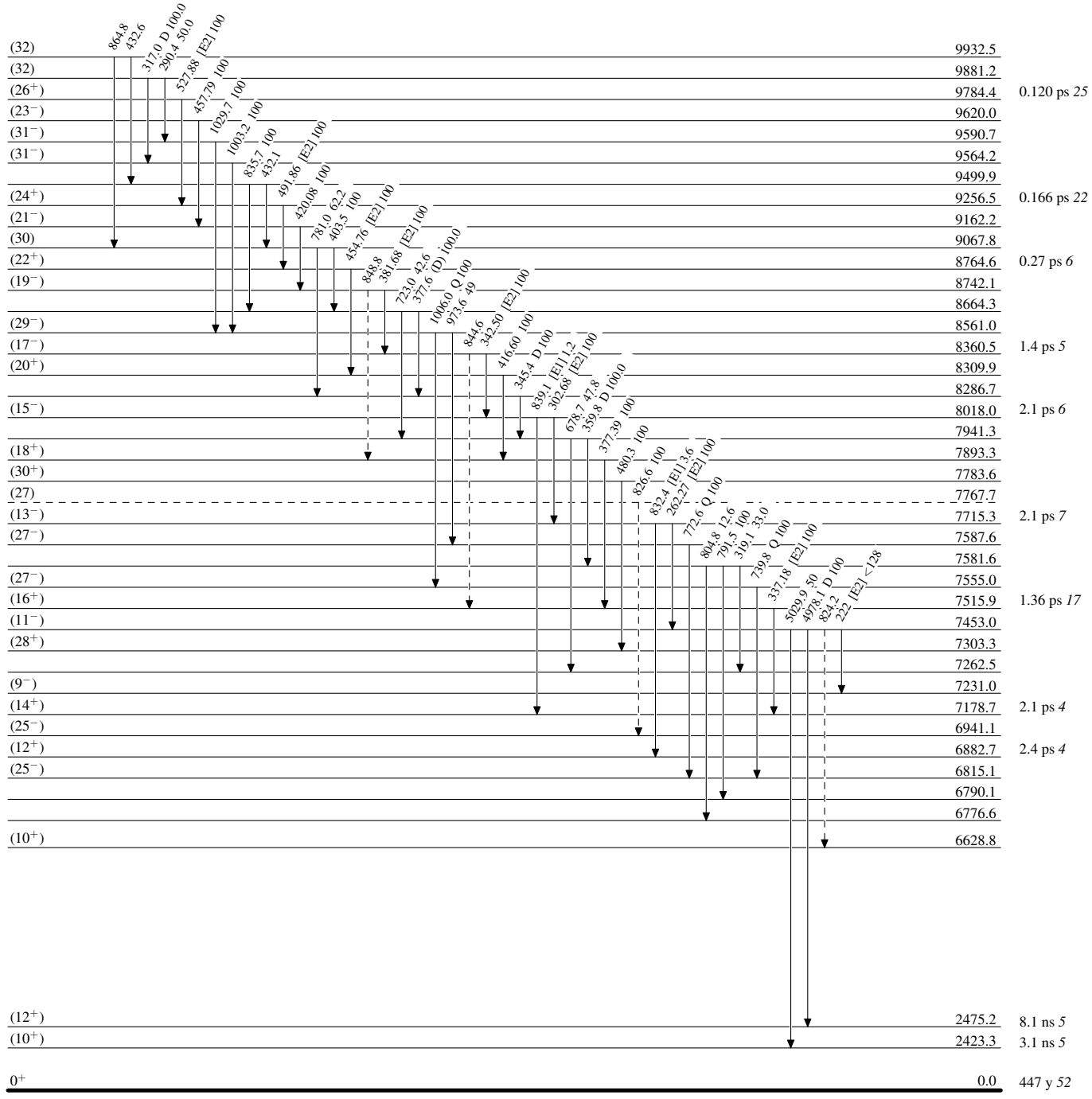
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{194}_{80}Hg_{114}$

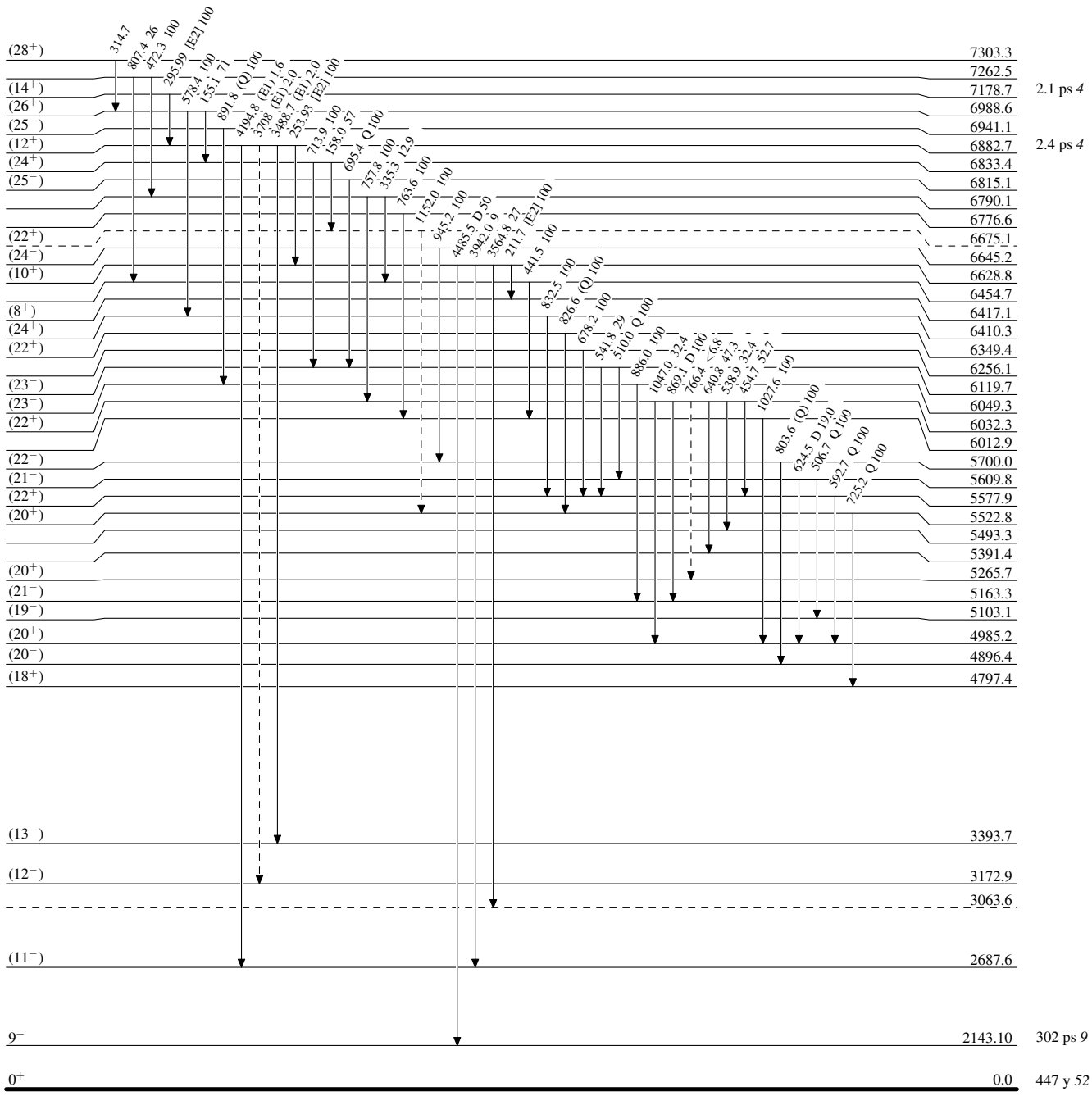
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{194}_{80}Hg_{114}$

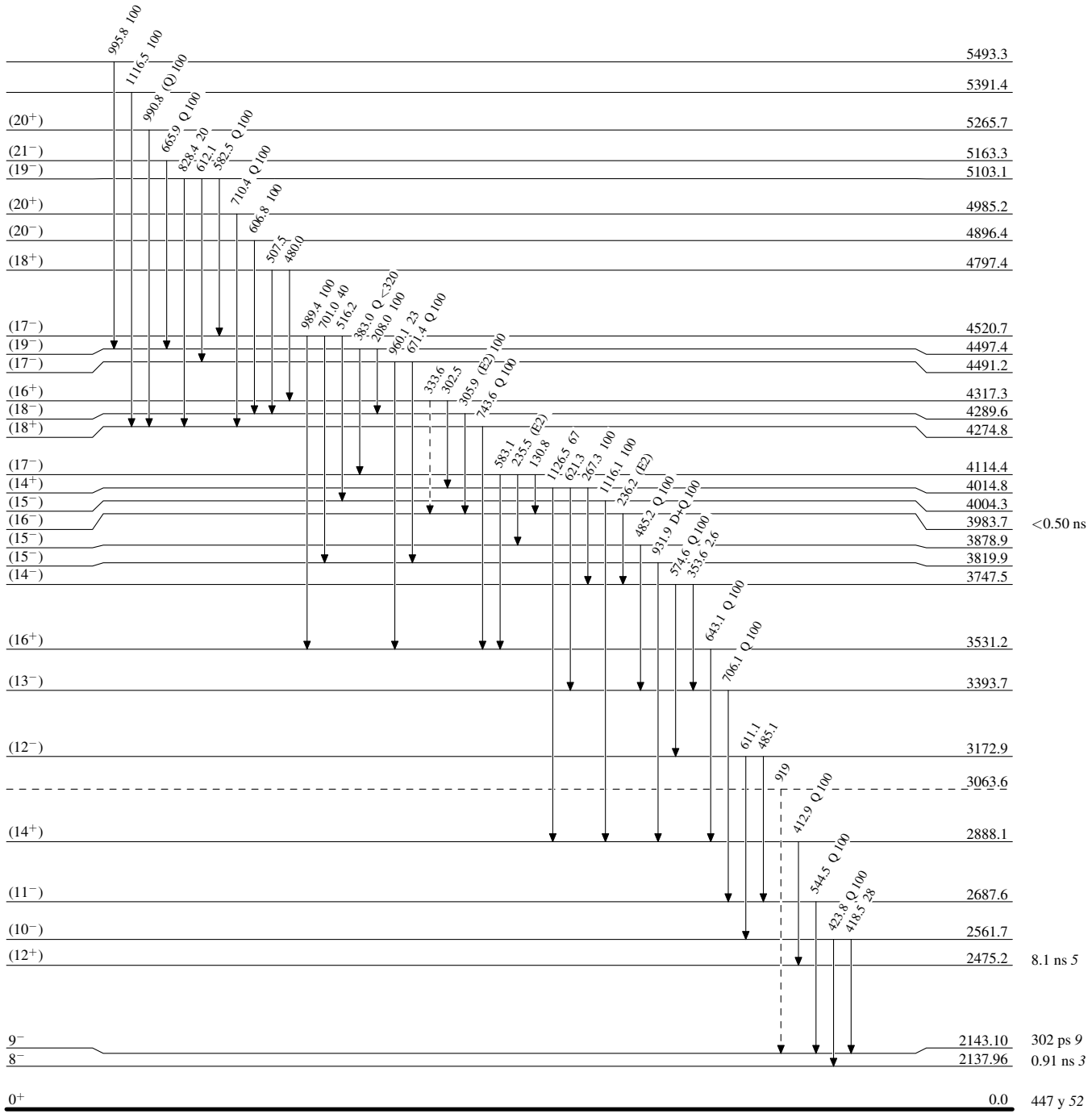
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)

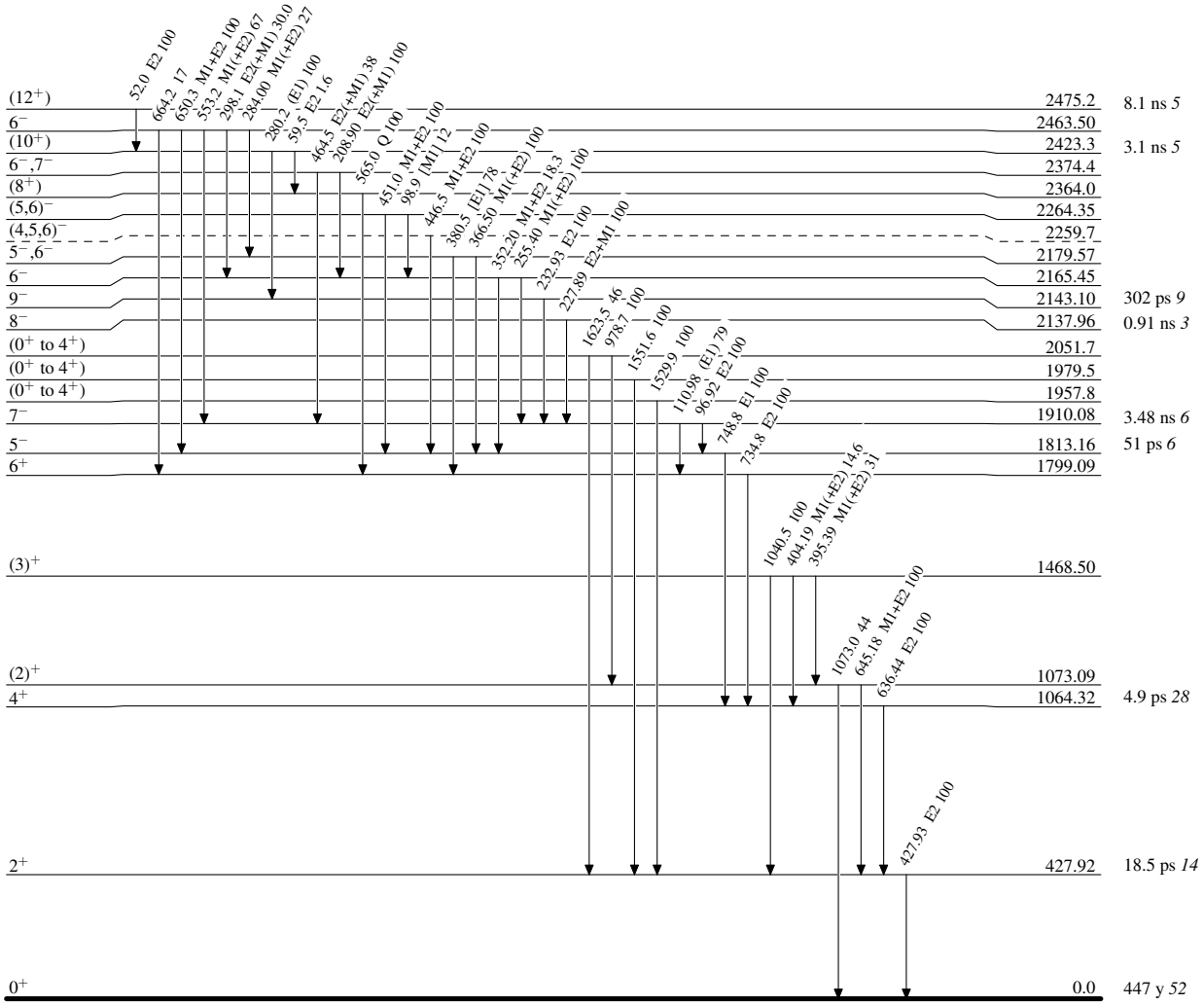


$^{194}_{80}Hg_{114}$

Adopted Levels, Gammas

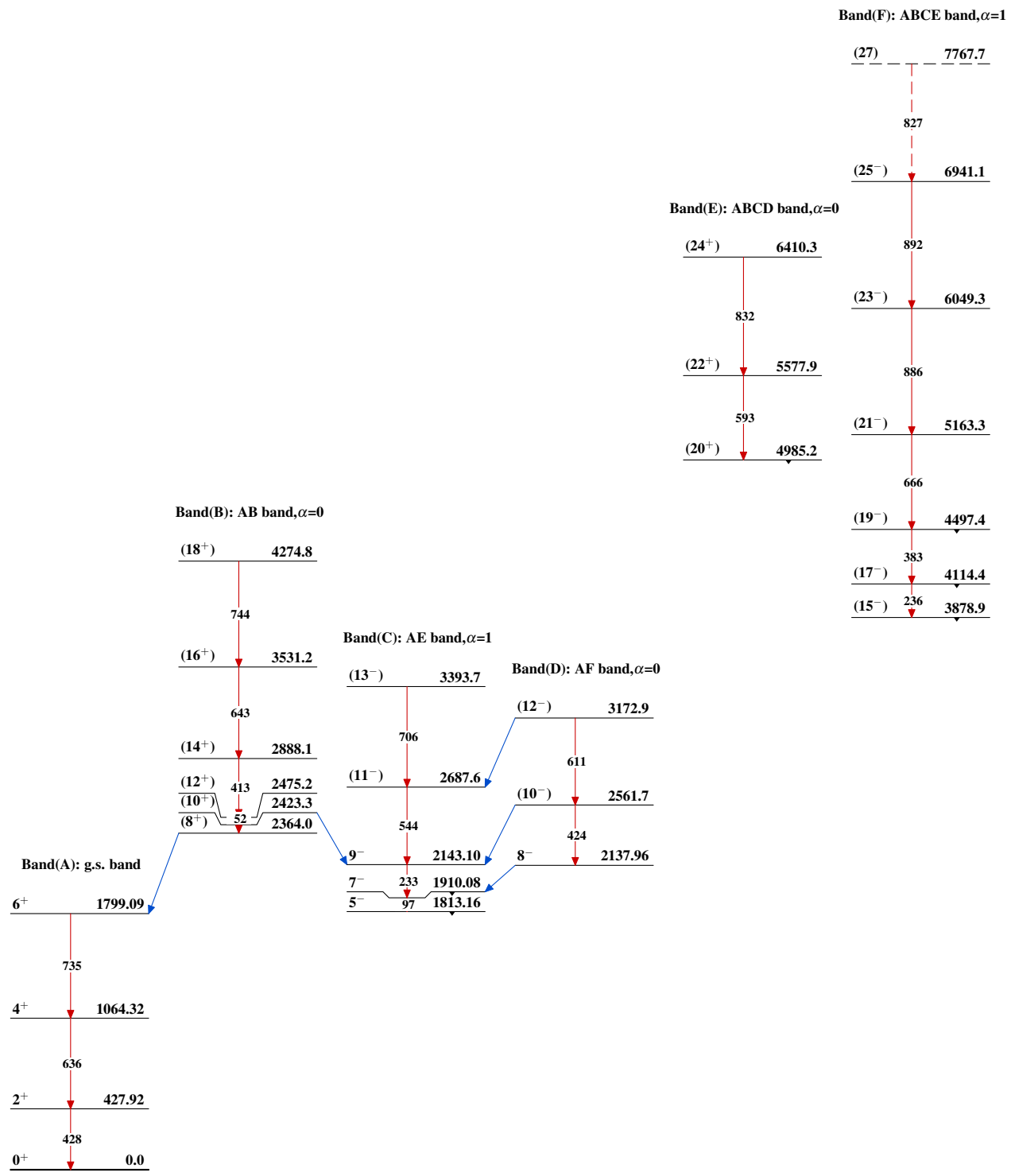
Level Scheme (continued)

Intensities: Relative photon branching from each level



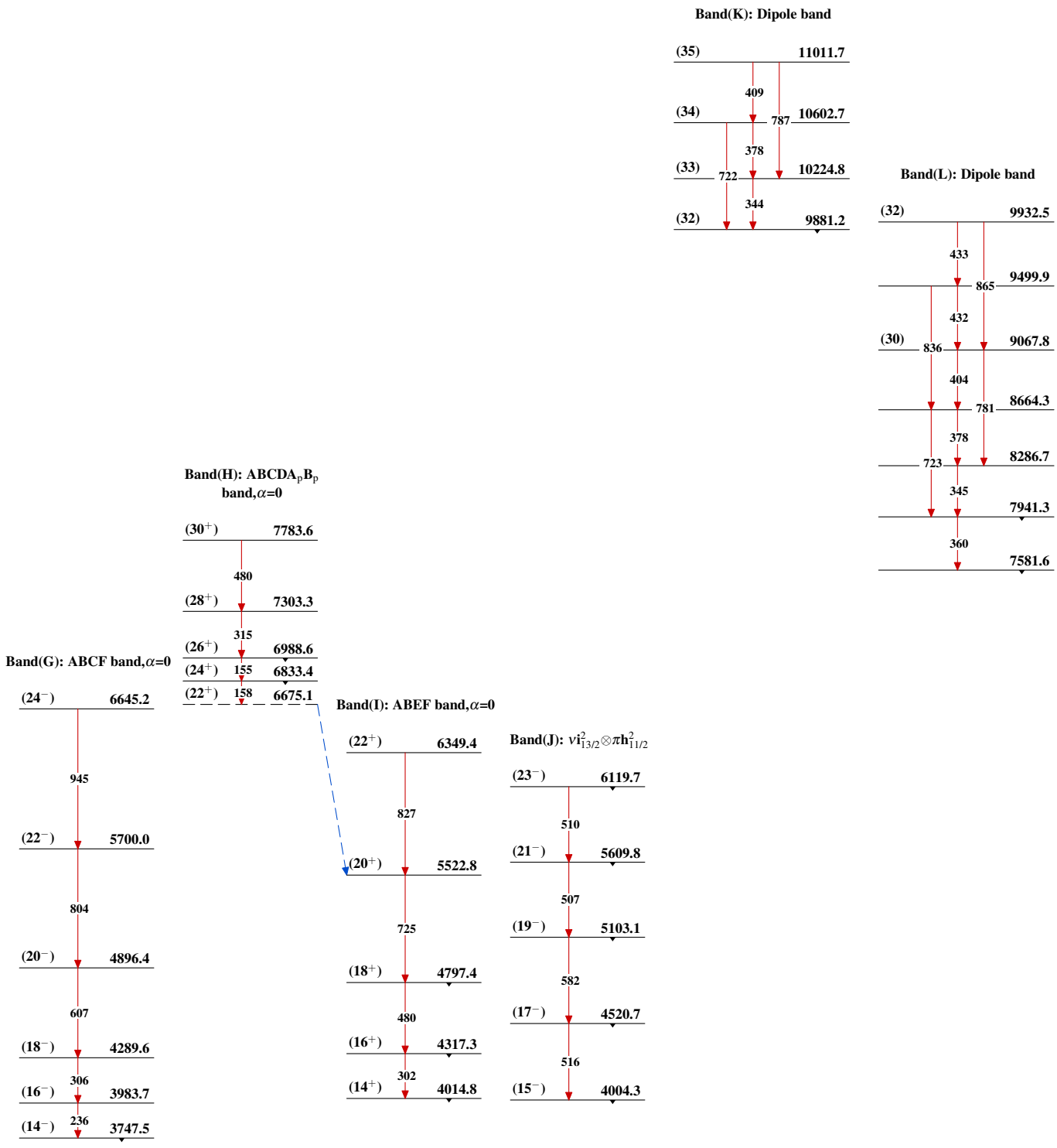
$^{194}_{80}Hg_{114}$

Adopted Levels, Gammas



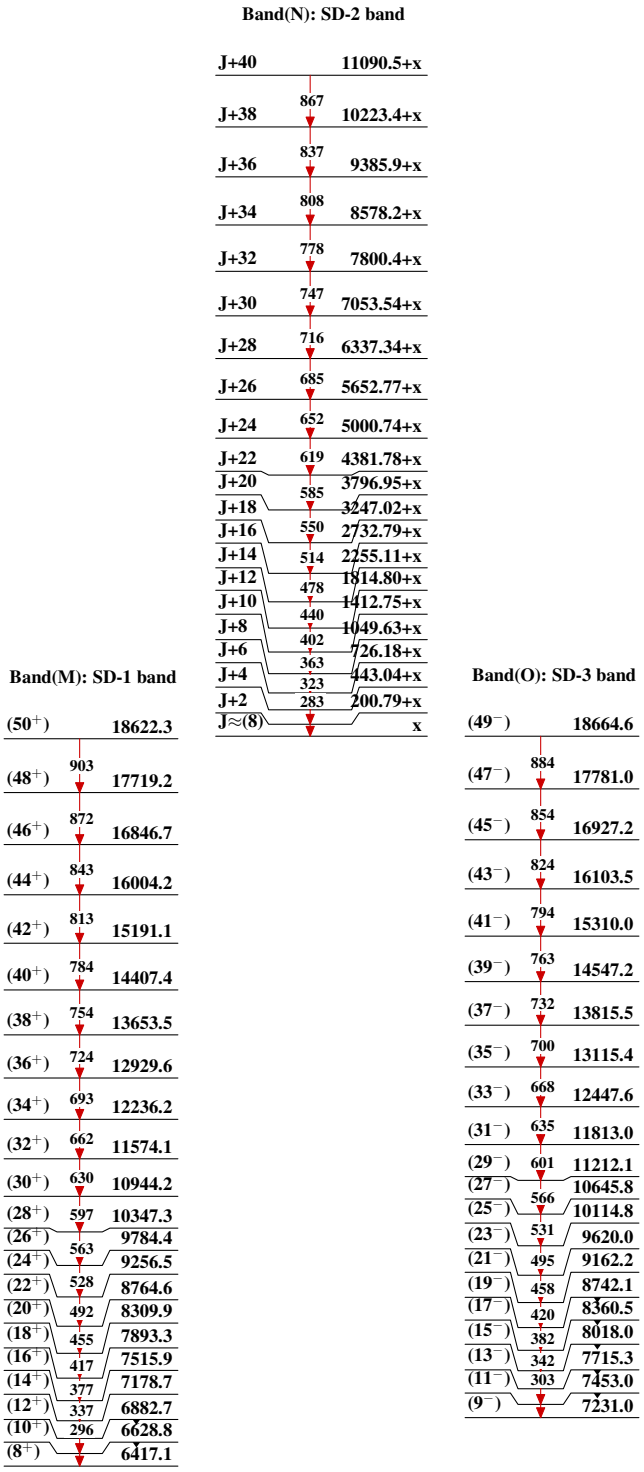
$^{194}_{80}Hg_{114}$

Adopted Levels, Gammas (continued)



$^{194}_{80}Hg_{114}$

Adopted Levels, Gammas (continued)



$^{194}_{80}Hg_{114}$