```
History
                                                               Author
                                                                                           Citation
                                                                                                                 Literature Cutoff Date
                                         Type
                                  Full Evaluation
                                                        V. R. Vanin et al.
                                                                                 NDS 108, 2393 (2007)
                                                                                                                        1-Dec-2006
Q(\beta^{-})=-4310\ 24;\ S(n)=7.29\times10^{3}\ 3;\ S(p)=5.00\times10^{3}\ 3;\ Q(\alpha)=3.67\times10^{3}\ 4
Note: Current evaluation has used the following Q record.
Q(\beta^+)=3220 \ 40 \ \text{keV} \ (2003\text{Au}03).
Q(\beta^{-})=-4312\ 24; S(n)=7294\ 28; S(p)=5001\ 28; Q(\alpha)=3700\ 40
                                                                                  2003Au03
                                                                               <sup>191</sup>Hg Levels
                                                                     Cross Reference (XREF) Flags
                                                                            <sup>191</sup>Tl \varepsilon decay (5.22 min)
                                                                           ^{194}Pt(\alpha,7n\gamma)
                                                                           (HI,xn\gamma)
                                                                           (HI,xny):SD
                                                                                                                  Comments
                                                                        %\varepsilon+\%\beta^{+}=100
                                                                        No \alpha decay: <5 \times 10^{-6}\% (1963Ka17).
                                                                        J^{\pi}: J=3/2, from \beta-radiation detected optical pumping (1976Bo09).
                                                                           Systematics of g.s. J\pi in <sup>187</sup>Hg, <sup>189</sup>Hg, and <sup>193</sup>Hg. Parity from
                                                                           systematics and magnetic moment (Schmidt plot).
                                                                        T<sub>1/2</sub>: from 1974Va19. Others: 1975UnZZ, 1976Bo09.
                                                                        \mu = -0.618 \ 11 \ \mu_N.
                                                                         Q=-0.80\ 25 eb.
                                                                        \mu,Q: radiative detection of optical pumping. Laser spectroscopy in
                                                                           resonance cells with fluorescence detection (includes Sternheimer
                                                                           correction) (1986Ul02,1989Ra17).
                                                                        RMS charge radius: 5.417 4 fm (2004An14).
                                                                        Isotope shift: \Delta < r^2 > = -0.3041 \ 15 \ \text{fm}^2 (1986Ul02, relative to <sup>198</sup>Hg).
                                                                        T_{1/2}: from 1985Ab03, 1976BoYC in <sup>191</sup>Tl \varepsilon decay.
                   (5/2^{-})^{\#}
    51.58 20
                                              0.42 ns 4
                                                                        J^{\pi}: 103\gamma M1+E2 to 3/2<sup>(-)</sup>.
   103.7 4
                   (1/2^{-})
                                                             Α
   336.32 17
                   (5/2^{-})^{\#}
   375.5 3
                   (3/2^{-})
                   (7/2^{-})^{\#}
   377.9 3
   430.4 3
                   (1/2^-,3/2^-,5/2^-)
                   (7/2^{-})^{\#}
   563.5 4
                   (9/2^{-})^{\#}
   632.3 4
   659.0 4
                   (9/2^{-})
                                                                        J^{\pi}: 281\gamma M1+E2 to (7/2<sup>-</sup>), 607\gamma E2 to (5/2<sup>-</sup>).
   691.7 3
   911.2 4
                   (9/2^{-})^{\#}
   952.1 4
                   (5/2^-,7/2^-,9/2^-)
   997.1 4
                   (11/2^{-})^{\#}
  1016.2 5
  1075.68
  1081.1 8
  1107.2 5
                   (7/2^-,9/2^-,11/2^-)
  1146.5 5
  1178.3 9
  1193.1 5
                                                             Α
  1212.4 8
                   (5/2^-,7/2^-,9/2^-)
  1317.6 9
```

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
1319.6 11 1843.9 11 2412.4 21 2423.3 11 2440.2 9 2441.5 11 2443.0 15 2459.7 10 2475.2 21 2476.3 11 2477.0 11 2543.1 15	(13/2 ⁻)#		A A A A A A A A A A A A A A A A A A A	
0.0+x ^{&}	13/2 ⁽⁺⁾	50.8 min <i>15</i>	ABC	%ε+%β ⁺ =100 μ=-1.068 5; Q=+0.64 25 Additional information 1. No IT decay. α decay limit: <5×10 ⁻⁶ % (1963Ka17). E(level): x≈130 keV expected from extrapolation of estimates for similar states in ¹⁹³ Hg and ¹⁹⁵ Hg. From precision atomic mass measurements a value of x=128 8 keV can be deduced (2001Sc41). A value of 128 22 keV has been adopted for the latest atomic mass evaluation (AME2003, 2003Au02). T _{1/2} : from 1971Be61. Others: 1954Gi04, 1955Sm42. J ^π : optical quantum-beat spectroscopy (1979Kr11). Systematics of 13/2 ⁺ state in neighboring odd-A mercury isotopes. μ=-1.068 5 μ _N . Laser spectroscopy in resonance cells with fluorescence detection (1979Da06,1989Ra17). Q=+0.64 25 eb. Laser spectroscopy in resonance cells with fluorescence detection (recalculation) (1986Ul02,1989Ra17). Original value: +0.76 24 eb, includes Sternheimer correction (1979Da06). Isotope shift: Δ <r2> = -0.3037 13 fm² (1986Ul02, relative to ¹⁹⁸Hg).</r2>
215.96+x <i>17</i> 265.03+x <i>17</i> 390.47+x& 24	$(9/2)^+$ $(11/2)^+$ $(17/2^+)$		A A ABC	
534.7+x 5			A	
535.21+x ^d 22 588.6+x 4	$(15/2^+)$ $(7/2)^+$		ABC A	
742.7+x 3	$(13/2)^+$		A	
761.1+x <i>4</i> 900.0+x <i>4</i>	$(11/2)^+$ $(11/2,13/2)^+$		A A	
1019.3+x ^{&} 3	$(21/2^+)$		BC	
1087.8+x 10			A	
1105.7+x <i>7</i> 1130.8+x <i>6</i>	$(7/2,9/2,11/2^+)$		A A	
1133.3+x 5			A	
1171.74+x ^a 24 1207.6+x 11 1318.5+x 8	(19/2+)		BC A A	
1434.2+x <i>10</i> 1637.9+x ^g <i>3</i> 1688.4+x <i>11</i>	(21/2-)		A BC A	
1769.4+x ^{&} 4 1804.5+x ^g 4 1861.8+x ^e 4	$(25/2^+)$ $(25/2^-)$ $(23/2^-)$	0.72 ns 7	BC BC C	$T_{1/2}$: from 1978Me11 (see ¹⁹⁴ Pt(α , ⁷ n γ) dataset).

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
2064.8+x ^e 4	$(27/2^{-})$		С	
2123.5+x ⁸ 4	$(29/2^{-})$		ВС	
2286.4+x <i>11</i> 2299.5+x <i>20</i>			A A	
2302.9+x 11			A	
2307.5+x 12			A	
2310.4+x <i>11</i>			A	
2315.1+x <i>11</i>			A	
2329.0+x 8 2335.4+x 11			A A	
2340.2+x 14			A	
2351.9+x <i>11</i>			A	
2356.4+x 10			A	
2358.8+x 8			A	
2361.6+x 8 2406.0+x 20			A A	
2408.9+x 15			A	
2431.5+x ^b 4	$(29/2^+)$		ВС	
2545.0+x ^e 5	$(31/2^{-})$		C	
2588.8+x ^{&} 5	$(29/2^+)$		C	
2594.8+x 5 2598.5+x ^b 5	$(29/2^{-})$ $(33/2^{+})$	0.92 ns 6	C BC	$T_{1/2}$: from 1978Me11 (see ¹⁹⁴ Pt(α , ⁷ n γ) dataset).
$2598.5 + x^{j} 5$ $2643.4 + x^{j} 5$	$(33/2^{-})$	0.92 IIS 0	С	$\Gamma_{1/2}$: Holli 19/8We11 (see $\Gamma_{1}(\alpha, \pi \gamma)$ dataset).
$2690.3 + x^8 5$	$(33/2^{-})$ $(33/2^{-})$		BCD	
2935.4+x ^c 5	$(29/2^+)$		C	
$3078.4 + x^{b} 5$	$(37/2^+)$		BC	
3117.4+x 6	$(33/2^+)$		C	
3166.9+x ^c 5 3222.2+x ^e 5	$(33/2^+)$ $(35/2^-)$		C	
3252.2+x 5	$(33/2^{-})$		CD C	
3428.8+x ⁸ 5	$(37/2^{-})$		BC	
3487.6+x ^c 5	$(37/2^+)$		C	
3518.8+x ^j 6	$(37/2^{-})$		C	
3728.0+x 5	(35/2)		С	
3792.6+x ^b 6 3946.7+x 5	$(41/2^+)$		C	
3946.7+x 5 $3957.2+x^{f} 5$	$(37/2^{-})$ $(39/2^{-})$		C C	
3969.0+x ^e 6	$(39/2^{-})$		C	
3988.5+x ^c 6	$(41/2^+)$		c	
4140.8+x ⁱ 6	$(41/2^{-})$		C	
4217.6+x ^h 6	$(41/2^{-})$		C	
4276.0+x ^j 7	$(41/2^{-})$		C	
4357.4+x ^f 6	$(43/2^{-})$		С	
4382.5+x 6	$(41/2^{-})$		С	
4491.9+x ^d 5	$(41/2^+)$		C	
4529.7+x <i>5</i> 4587.1+x <i>5</i>	(39/2) (41/2 ⁻)		C C	
$4587.1+x5$ $4632.2+x^{b}6$	$(41/2)$ $(45/2^+)$		C	
4652.2+x 6 4653.7+x 6	$(43/2^{-})$ $(43/2^{-})$		C	
4667.3+x ^c 6	$(45/2^+)$		C	
4850.8+x ^d 6	$(45/2^+)$		C	

E(level) [†]	$J^{\pi \ddagger}$	XREF	Comments
4855.9+x 6	$(43/2^{-})$	С	
4894.9+x 6	$(45/2^{-})$	C	
4903.5+x 6	(45/2)	C	
4957.7+x ^h 12		C	
$5006.5 + x^f 7$	$(47/2^{-})$	C	
5027.8+x ⁱ 7	$(45/2^{-})$	C	
5072.0+x ^j 8	$(45/2^{-})$	C	
5128.2+x 7	(47/2)	C	
5142.5+x 6	$(45/2^{-})$	C	
5296.1+x 6	$(47/2^{-})$	C	
5427.2+x ^c 7	$(49/2^+)$	C	
5506.6+x 6	$(47/2^{-})$	C	
5533.9+x ^d 6	$(49/2^+)$	С	
5553.3+x ^b 7	$(49/2^+)$	C	
5653.8+x 6	$(49/2^{-})$	С	
5795.7+x ^f 7	$(51/2^{-})$	С	
5802.8+x ^h 12		С	
$6025.4 + x^{i} 7$		C	
6085.3+x 6	$(51/2^{-})$	C	
6230.7+x ^c 7	$(53/2^+)$	С	
6333.6+x ^d 7 6459.6+x 6	$(53/2^+)$ (53/2)	C C	
6520.6+x ^b 7	$(53/2^+)$	С	
6678.2+x ^f 8	$(55/2^{-})$	С	
6936.5+x 7	$(55/2^{-})$	С	
7077.3+x ^c 8	$(57/2^+)$	C	
7227.0+x 7	$(57/2^{-})$	C	
7527.8+x 8	(59/2)	C	
7670.7+x ^f 9		C	
7689.9+x 8	(59/2)	C	
7697.0+x 9		C	
7987.4+x 8	(61/2)	C	
8351.8+x 8	(63/2)	C	
8668.9+x 8	T (21/2) (0	C	
y ^k	J≈(31/2) [@]	D	Additional information 2. E(level): y=5689+x (2004Si19,1999SiZZ). See comment for 310.9+y level. J ^{\pi} : 31/2 from linking transitions reported in 2004Si19,1998ReZV,1999SiZZ.
310.9+y ^k 7	J+2	D	E(level): 6000+x from observation of two linking transitions to normal deformed bands: 2778γ (to 3222+x, 35/2 ⁻) and 3310γ (to 2690+x, 33/2 ⁻) (2004Si19,1998ReZV,1999SiZZ).
662.4+y ^k 7	J+4	D	
1054.0+y ^k 9	J+6	D	
1485.3+y ^k 9	J+8	D	
1955.4+y ^k 9	J+10	D	
2463.8+y ^k 9	J+12	D	
3009.7+y ^k 9	J+14	D	
3592.1+y ^k 9	J+16	D	
4210.6+y ^k 9	J+18	D	
4864.3+y ^k 9	J+20	D	

E(level) [†]	$J^{\pi \ddagger}$	XREF	Comments
5552.6+y ^k 10	J+22	D	
$6274.8 + y^{k}$ 10	J+24	D	
$7030.4 + y^{k}$ 11	J+26	D	
7819.2+y ^k 12	J+28		
7819.2+y** 12 z ^l		D	A 11/2 11 C 22 2
$\mathbf{Z}^{\boldsymbol{\nu}}$	J1≈(21/2) [@]	D	Additional information 3. Q(intrinsic)≈18 (1990Ca18).
252.4+z ^l 7	J1+2	D	Q(maniste) = 10 (1990 cu10).
545.1+z ^l 7	J1+4	D	
878.2+z ^l 8	J1+6	D	
1250.9+z ^l 8	J1+8	D	
1662.7+z ^l 8	J1+10	D	
$2113.0+z^{l}$ 8	J1+12	D	
$2601.1 + z^{l} 8$	J1+14	D	
$3126.3+z^{l}$ 8	J1+14 J1+16		
$3687.9 + z^{l} 9$		D	
	J1+18	D	
$4285.1+z^{l}9$	J1+20	D	
$4917.2+z^{l}9$	J1+22	D	
$5583.4 + z^{l}$ 10	J1+24	D	
6283.3+z ^l 10	J1+26	D	
7016.0+z ^l 11	J1+28	D	
7781.2+z ^l 11	J1+30	D	
8577.7+z ^l 13	J1+32	D	
u ^m	$J2 \approx (23/2)^{@}$	D	Additional information 4.
272.0+u ^m 10	J2+2	D	
585.1+u ^m 11	J2+4	D	
937.6+u ^m 11	J2+6	D	
1329.1+u ^m 11 1758.8+u ^m 11	J2+8 J2+10	D	
$2225.9 + u^{m}$ 12	J2+10 J2+12	D D	
2729.8+u ^m 12	J2+14	D	
3269.5+u ^m 12	J2+16	D	
3844.5+u ^m 12	J2+18	D	
4454.0+u ^m 12	J2+20	D	
5096.7+u ^m 12	J2+22	D	
5772.8+u ^m 13	J2+24	D	
6481.3+u ^m 13 7221.3+u ^m 13	J2+26 J2+28	D D	
7992.6+u ^m 14	J2+30	D	
8793.2+u ^m 17	J2+32	D	
v^n	J3≈(25/2) [@]	D	Additional information 5.
280.9+v ⁿ 6	J3+2	D	
604.5+v ⁿ 7	J3+4	D	
971.6+v ⁿ 7	J3+6	D	
1381.9+v ⁿ 8	J3+8	D	
$1834.5 + v^n 9$	J3+10	D	
2328.6+v ⁿ 9 2864.0+v ⁿ 9	J3+12 J3+14	D D	
$3439.0+v^n$ 10	J3+14 J3+16	D D	
$4053.3+v^n$ 11	J3+18	D	
		_	

E(level) [†]	$J^{\pi \ddagger}$	XREF
4704.1+v ⁿ 13	J3+20	D
5391.7+v ⁿ 15	J3+22	D
6114.9+v ⁿ 17	J3+24	D
6870.9+v ⁿ 21	J3+26	D
7659.9+v ⁿ 25	J3+28	D

- [†] From least-squares fit to adopted γ -ray energies. Doubtful levels from ¹⁹¹Tl ε decay (e.g., levels based only on doubtful coincidences of γ rays with uncertain placement in the level scheme (1988WoZZ)) are not included in this list.
- [‡] Spin and parity assignments are based on band structure, on γ -ray multipolarities and decay patterns, and on energy systematics of levels with known J π in other odd-A Hg isotopes. Most of the bands from (HI,xn γ) have been interpreted in terms of the cranking shell model assuming oblate nuclear deformation (1992Ye01). Bands are labeled by parity and signature (π ,a). Specific arguments are given with some of the individual levels.
- # Jπ assignment is based on γ -ray multipolarities, and on the energy systematics of levels with known Jπ in odd-A Hg isotopes (1979WoZU,1976GoZP).
- [®] From least-squares fit to rotational-model formula (1990Be37,1992Wu01).
- & Band(A): Band 1 $(\pi,\alpha)=(+,+1/2)$ Conf=i13/2.
- ^a Band(B): Band 2 $(\pi,\alpha)=(+,-1/2)$.
- ^b Band(C): Band 3 $(\pi,\alpha)=(+,+1/2)$ Aligned band.
- ^c Band(D): Band 4 $(\pi,\alpha)=(+,+1/2)$.
- ^d Band(E): Band 5 $(\pi,\alpha)=(+,+1/2)$.
- ^e Band(F): Band 6 $(\pi, \alpha) = (-, -1/2)$.
- f Band(G): Band 7 $(\pi,\alpha)=(-,-1/2)$.
- Ballu(G). Ballu / $(\pi,\alpha)=(-,-1/2)$
- ^g Band(H): Band 8 $(\pi,\alpha)=(-,+1/2)$.
- ^h Band(I): Band 9 $(\pi,\alpha)=(-,+1/2)$.
- ⁱ Band(J): Band 10 $(\pi,\alpha)=(-,+1/2)$.
- ^j Band(K): Terminating band.
- ^k Band(L): SD-1 band (1995So17,1995Ca15,1989Mo08). Q(intrinsic)=18 3; β_2 =0.55 (1990Ca18), 17.5 8 (1998ReZV). Favored j15/2 intruder orbitals (α =-1/2). Percent population=2.0 3 (1995So17), 1.2 6 (1995So17 in (64 Ni,3ny)), 2 (1989Mo08). 2004Si19, 1999SiZZ (also 1998SiZZ,1998ReZV) propose the lowest SD member at 5689 from the observation of two linking transitions of 2778 and 3310 keV, from the second member of this band to ND levels at 3222+x and 2690+x, respectively.
- ¹ Band(M): SD-2 band Q(intrinsic)≈18 (1990Ca18), 17.5 8 (1998ReZV). Unfavored signature of 3/2[642] or favored signature of 1/2[640] (1995Ca15). Percent population=0.8 4 (64 Ni,3nγ) (1995So17), 0.8 I (36 S,5nγ) (1995So17), 1 (1990Ca18).
- ^m Band(N): SD-3 band (1995So17,1995Ca15,1990Ca18). Favored signature of 3/2[642] Percent population=0.8 4 (⁶⁴Ni,3ny) (1995So17), 0.8 3 (³⁶S,5ny) (1995So17), 1 (1990Ca18).
- ⁿ Band(O): SD-4 band Unfavored j15/2 intruder orbitals. Percent population=0.2 (1995Ca15).

γ (¹⁹¹Hg)

E_i (level)	\mathtt{J}_{i}^{π}	E_{γ}^{\dagger}	${\rm I}_{\gamma}{}^{\dagger}$	\mathbf{E}_f \mathbf{J}_f^{π}	Mult.a	δ#	α^d	Comments
51.58	(5/2 ⁻)	51.6 [‡] 3	100 [‡]	0.0 3/2 ⁽⁻⁾	M1+E2	0.624	39.8 12	B(M1)(W.u.)=0.0067 7; B(E2)(W.u.)=3.9×10 ² 4 α (L)=30.0 9; α (M)=7.65 24; α (N+)=2.22 7 α (N)=1.90 6; α (O)=0.321 10; α (P)=0.00491 12
103.7	(1/2 ⁻)	103.5‡ 4	100 [‡]	0.0 3/2 ⁽⁻⁾	M1+E2	0.52 20	6.7 4	$\alpha(K)$ =4.7 7; $\alpha(L)$ =1.5 3; $\alpha(M)$ =0.36 8; $\alpha(N+)$ =0.106 22 $\alpha(N)$ =0.089 19; $\alpha(O)$ =0.016 3; $\alpha(P)$ =0.00069 10
336.32	(5/2 ⁻)	284.7 [‡] 3	10.0 [‡] 10	51.58 (5/2-)	M1(+E2)		0.27 15	$\alpha(K)$ =0.21 14; $\alpha(L)$ =0.048 9; $\alpha(M)$ =0.0117 16; $\alpha(N+)$ =0.0035 6 $\alpha(N)$ =0.0029 4; $\alpha(O)$ =0.00053 10; $\alpha(P)$ =2.9×10 ⁻⁵ 20
		336.3‡ 2	100‡ 6	0.0 3/2 ⁽⁻⁾	M1+E2	1.5 4	0.13 3	$\alpha(K)$ =0.100 25; $\alpha(L)$ =0.0259 22; $\alpha(M)$ =0.0063 5; $\alpha(N+)$ =0.00188 14 $\alpha(N)$ =0.00158 12; $\alpha(O)$ =0.000284 25; $\alpha(P)$ =1.4×10 ⁻⁵ 4
375.5	$(3/2^{-})$	271.4 [‡] 5	4.4 [‡] 21	103.7 (1/2-)				
		324.1 [‡] 10	≈12 [‡]	51.58 (5/2-)				
		375.7 [‡] 4	100 [‡] 18	0.0 3/2 ⁽⁻⁾	M1		0.196	$\alpha(K)$ =0.1613 23; $\alpha(L)$ =0.0268 4; $\alpha(M)$ =0.00622 9; $\alpha(N+)$ =0.00188 3 $\alpha(N)$ =0.001560 23; $\alpha(O)$ =0.000295 5; $\alpha(P)$ =2.27×10 ⁻⁵ 4
377.9	$(7/2^{-})$	41.7 [‡]	≈6.5 [‡]	336.32 (5/2-))			
		326.3 [‡] 3	100‡ 5	51.58 (5/2-)	M1+E2	0.93 20	0.192 24	$\alpha(K)$ =0.150 22; $\alpha(L)$ =0.0321 19; $\alpha(M)$ =0.0077 4; $\alpha(N+)$ =0.00230 12 $\alpha(N)$ =0.00192 10; $\alpha(O)$ =0.000353 21; $\alpha(P)$ =2.1×10 ⁻⁵ 3
		378.0 [‡] <i>10</i>	≈13 [‡]	$0.0 3/2^{(-)}$				
430.4	$(1/2^-,3/2^-,5/2^-)$	378.8 [‡] <i>10</i>	100 [‡]	51.58 (5/2-))			
		430.4 [‡] 4	29 [‡] 4	0.0 3/2 ⁽⁻⁾	M1+E2	0.8 8	0.10 4	$\alpha(K)$ =0.08 4; $\alpha(L)$ =0.015 4; $\alpha(M)$ =0.0035 8; $\alpha(N+)$ =0.00105 25 $\alpha(N)$ =0.00088 21; $\alpha(O)$ =0.00016 5; $\alpha(P)$ =1.1×10 ⁻⁵ 5
563.5	$(7/2^{-})$	227.1 [‡] 5	5.1 [‡] 24	336.32 (5/2-))			
		563.5 [‡] 5	100‡ 4	0.0 3/2 ⁽⁻⁾	E2		0.0203	$\alpha(K)$ =0.01509 22; $\alpha(L)$ =0.00395 6; $\alpha(M)$ =0.000964 14; $\alpha(N+)$ =0.000286 4 $\alpha(N)$ =0.000241 4; $\alpha(O)$ =4.32×10 ⁻⁵ 7; $\alpha(P)$ =2.00×10 ⁻⁶ 3
632.3	(9/2-)	254.3 [‡] 7	≈7 [‡]	377.9 (7/2-))			
		580.7 [‡] 4	100‡ 4	51.58 (5/2-)	E2		0.0189	$\alpha(K)=0.01417 \ 20; \ \alpha(L)=0.00363 \ 6; \\ \alpha(M)=0.000882 \ 13; \ \alpha(N+)=0.000262 \ 4 \\ \alpha(N)=0.000220 \ 4; \ \alpha(O)=3.96\times10^{-5} \ 6; \\ \alpha(P)=1.88\times10^{-6} \ 3$

γ (¹⁹¹Hg) (continued)

E (1 1)	τ77	$\mathrm{E}_{\gamma}^{\dagger}$	${ m I}_{\gamma}{}^{\dagger}$	Г	J_{α}^{π}	Mult.a	$\delta^{\!\#}$	α^{d}	
$E_i(level)$	${\rm J}_i^\pi$			\mathbf{E}_f					Comments
659.0	(9/2 ⁻)	281.2‡ 4	77 [‡] 8	377.9		M1+E2	0.7 4	0.33 8	$\alpha(K)$ =0.26 7; $\alpha(L)$ =0.053 5; $\alpha(M)$ =0.0127 8: $\alpha(N+)$ =0.0038 3 $\alpha(N)$ =0.00318 21; $\alpha(O)$ =0.00059 5; $\alpha(P)$ =3.7×10 ⁻⁵ 10
		322.8 [‡] 10 607.4 [‡] 5	≈27 [‡]		(5/2-)	F2		0.01710	(II) 0.01001 10 (I) 0.00010 5
			100 [‡] 10	51.58	(5/2 ⁻)	E2		0.01710	$\alpha(K)$ =0.01291 19; $\alpha(L)$ =0.00319 5; $\alpha(M)$ =0.000774 11; $\alpha(N+)$ =0.000230 4 $\alpha(N)$ =0.000193 3; $\alpha(O)$ =3.49×10 ⁻⁵ 5; $\alpha(P)$ =1.713×10 ⁻⁶ 25
691.7		261.5 [‡] 4	10.1 [‡] 25	430.4	$(1/2^-,3/2^-,5/2^-)$				
		354.8 [‡] 5	7 [‡] 3	336.32	$(5/2^{-})$				
		640.2 [‡] 5	100 [‡] <i>10</i>		(5/2-)				
		692.3 [‡] <i>f</i> 7	31‡ 8	0.0	$3/2^{(-)}$				
911.2		480.5 [‡] 6	52 [‡] 20	430.4	$(1/2^-,3/2^-,5/2^-)$				
		533.5 [‡] 6	50 [‡] 12	377.9	$(7/2^{-})$				
		535.5 [‡] 10	≈100 [‡]		$(3/2^{-})$				
		575.7 [‡] 10	40 [‡] 12	336.32	(5/2-)				
952.1	$(9/2^{-})$	521.7 [‡] <i>10</i>	≈29 [‡]		$(1/2^-,3/2^-,5/2^-)$				
		615.8‡ 4	100 [‡] <i>12</i>	336.32	(5/2 ⁻)	(E2)		0.01658	$\alpha(K)$ =0.01255 18; $\alpha(L)$ =0.00307 5; $\alpha(M)$ =0.000744 11; $\alpha(N+)$ =0.000221 4 $\alpha(N)$ =0.000186 3; $\alpha(O)$ =3.36×10 ⁻⁵ 5; $\alpha(P)$ =1.665×10 ⁻⁶ 24
997.1	$(5/2^-,7/2^-,9/2^-)$	566.8 [‡] 6	82 [‡] <i>15</i>	430.4	$(1/2^-,3/2^-,5/2^-)$				
		619.1 [‡] 5	100 [‡] 12	377.9	(7/2 ⁻)	M1+E2	0.9 6	0.036 14	$\alpha(K)$ =0.029 12; $\alpha(L)$ =0.0053 15; $\alpha(M)$ =0.0012 4; $\alpha(N+)$ =0.00037 11 $\alpha(N)$ =0.00031 9; $\alpha(O)$ =5.8×10 ⁻⁵ 17; $\alpha(P)$ =4.1×10 ⁻⁶ 16
		660.9 [‡] 5	92 [‡] <i>10</i>	336.32	$(5/2^{-})$				
1016.2	$(11/2^{-})$	383.9 [‡] 5	14 [‡] 4	632.3	(9/2-)				
		638.4 [‡] 5	100 [‡] 20	377.9	$(7/2^{-})$				
1075.6		739.3 [‡] 7	100 [‡]	336.32	(5/2-)				
1081.1		744.8 [‡] 7	100 [‡] <i>17</i>	336.32	(5/2-)				
		1080.9 [‡] 8	70 [‡] <i>13</i>	0.0	$3/2^{(-)}$				
1107.2	(7/2-,9/2-,11/2-)	474.8‡ 6	19 [‡] <i>10</i>	632.3	(9/2 ⁻)	M1+E2	1.1 11	0.06 4	$\begin{array}{l} \alpha({\rm K}){=}0.05 \ 4; \ \alpha({\rm L}){=}0.010 \ 5; \\ \alpha({\rm M}){=}0.0024 \ 10; \ \alpha({\rm N}+){=}0.0007 \ 3 \\ \alpha({\rm N}){=}0.00060 \ 24; \ \alpha({\rm O}){=}0.00011 \ 5; \\ \alpha({\rm P}){=}7.{\rm E}{-}6 \ 5 \end{array}$

$\underline{\gamma}(^{191}\text{Hg})$ (continued)

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$E_i(level)$	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_f	${\rm J}_f^\pi$	Mult.a	$\delta^{\#}$	α^d	Comments
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1107.2	$(7/2^-,9/2^-,11/2^-)$	729.5 [‡] 6	100‡ 11	377.9	$(7/2^{-})$				
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			1055.4 [‡] 8	61 [‡] 7	51.58	$(5/2^{-})$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1146.5		514.2 [‡] 6	100 [‡] 18	632.3	$(9/2^{-})$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			583.0 [‡] 6	≈77 [‡]	563.5	$(7/2^{-})$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1178.3				51.58	$(5/2^{-})$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1193.1						M1(+E2)		0.06 4	α (N+)=0.00064 23 α (N)=0.00053 19; α (O)=0.00010 4;
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1212.4		834.5‡ 7	100∓	377.9	(7/2 ⁻)	(E2)		0.00867	$\alpha(M)=0.000331 \ 5; \ \alpha(N+)=9.87\times10^{-5} \ 14$ $\alpha(N)=8.26\times10^{-5} \ 12; \ \alpha(O)=1.518\times10^{-5} \ 22;$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1317.6	(5/2 ⁻ ,7/2 ⁻ ,9/2 ⁻)	754.1 [‡] 8	100‡	563.5	(7/2 ⁻)	M1+E2	≥1.2	0.015 5	$\alpha(M)=0.00054$ 12; $\alpha(N+)=0.00016$ 4 $\alpha(N)=0.00014$ 3; $\alpha(O)=2.5\times10^{-5}$ 6;
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1319.6	$(13/2^{-})$	687.3 e ‡ 10	100 e ‡	632.3	$(9/2^{-})$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1843.9		1507.6 [‡] <i>10</i>	100‡	336.32					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2412.4		2034.5 ^{e‡} 20	100 e ‡	377.9	$(7/2^{-})$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2423.3		2045.4 ^{e‡} 10	100 e ‡	377.9	$(7/2^{-})$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2440.2		1488.1 [‡] 8	100 [‡]	952.1	$(9/2^{-})$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2441.5		2105.2 [‡] <i>10</i>	100‡	336.32	$(5/2^{-})$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2443.0				377.9	$(7/2^{-})$				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2459.7				1016.2	$(11/2^{-})$				
2477.0 2099.1 e‡ 10 100 e‡ 377.9 (7/2 $^{-}$) 2543.1 1979.6 ‡ 14 100 ‡ 563.5 (7/2 $^{-}$) 215.96+x (9/2) ⁺ 215.95 ‡ 20 100 ‡ 0.0+x 13/2(+) E2 0.301 α (K)=0.1407 20; α (L)=0.1204 18; α (M)=0.0310 5; α (N+)=0.00903 14 α (N)=0.00771 12; α (O)=0.001307 19; α (P)=1.763×10 $^{-5}$ 25 265.03+x (11/2) ⁺ 49.0 ‡ 4 \approx 26 ‡ 215.96+x (9/2) ⁺ E2 150 7 α (L)=113 5; α (M)=29.3 13; α (N+)=8.4 4 α (N)=7.2 4; α (O)=1.19 6; α (P)=0.00136 6	2475.2				1016.2	$(11/2^{-})$				
2543.1 1979.6‡ 14 100‡ 563.5 (7/2 ⁻) 215.96+x (9/2)+ 215.95‡ 20 100‡ 0.0+x 13/2(+) E2 0.301 $\alpha(K)=0.1407$ 20; $\alpha(L)=0.1204$ 18; $\alpha(M)=0.0310$ 5; $\alpha(N+)=0.00903$ 14 $\alpha(N)=0.00771$ 12; $\alpha(O)=0.001307$ 19; $\alpha(P)=1.763\times10^{-5}$ 25 265.03+x (11/2)+ 49.0‡ 4 \approx 26‡ 215.96+x (9/2)+ E2 150 7 $\alpha(L)=0.1204$ 18; $\alpha(N)=0.00771$ 12; $\alpha(N)=0.001307$ 19; $\alpha(N)=0.00711$ 13; $\alpha(N)=0.00711$ 13; $\alpha(N)=0.00711$ 15; $\alpha(N)=0.00711$ 15; $\alpha(N)=0.00711$ 16; $\alpha(N)=0.00711$ 17; $\alpha(N)=0.00711$ 17; $\alpha(N)=0.00711$ 18; $\alpha(N)=0.00711$ 19; $\alpha(N)=0.007111$ 19; $\alpha(N)=0.007111$ 19; $\alpha(N)=0.0071111$ 19; $\alpha(N)=0.00711111$ 19; $\alpha(N)=0.0071111111111111111111111111111111111$	2476.3				632.3	$(9/2^{-})$				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2477.0				377.9	$(7/2^{-})$				
$\alpha(M) = 0.0310 \ 5; \ \alpha(N+) = 0.00903 \ 14$ $\alpha(N) = 0.00771 \ 12; \ \alpha(O) = 0.001307 \ 19;$ $\alpha(P) = 1.763 \times 10^{-5} \ 25$ $265.03 + x (11/2)^{+} \qquad 49.0^{\ddagger} \ 4 \approx 26^{\ddagger} \qquad 215.96 + x (9/2)^{+} E2 \qquad \qquad 150 \ 7 \qquad \qquad \alpha(L) = 113 \ 5; \ \alpha(M) = 29.3 \ 13; \ \alpha(N+) = 8.4 \ 4$ $\alpha(N) = 7.2 \ 4; \ \alpha(O) = 1.19 \ 6; \ \alpha(P) = 0.00136 \ 6$	2543.1				563.5	$(7/2^{-})$				
$\alpha(N)=7.2$ 4; $\alpha(O)=1.19$ 6; $\alpha(P)=0.00136$ 6	215.96+x	(9/2)+	215.95 [‡] 20	100‡	0.0+x	13/2 ⁽⁺⁾	E2		0.301	$\alpha(M)=0.0310\ 5; \ \alpha(N+)=0.00903\ 14$ $\alpha(N)=0.00771\ 12; \ \alpha(O)=0.001307\ 19;$
$265.0^{\ddagger} 2 \qquad 100^{\ddagger} 5 \qquad 0.0 + x 13/2^{(+)} M1 + E2 \qquad 1.8 \ 6 \qquad 0.24 \ 7 \qquad \alpha(K) = 0.16 \ 6; \ \alpha(L) = 0.057 \ 3; \ \alpha(M) = 0.0141 \ 6;$	265.03+x	$(11/2)^+$,	E2		150 7	
			$265.0^{\ddagger} 2$	100 [‡] 5	0.0+x	$13/2^{(+)}$	M1+E2	1.8 6	0.24 7	$\alpha(K)$ =0.16 6; $\alpha(L)$ =0.057 3; $\alpha(M)$ =0.0141 6;

9

γ (¹⁹¹Hg) (continued)

$E_i(level)$	$\underline{\hspace{1cm}} \mathbf{J}_i^{\pi}$	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_f \mathbf{J}_f^{π}	Mult. ^a	δ#	α^d	Comments
								$\alpha(N+)=0.00416 \ 18$ $\alpha(N)=0.00351 \ 14; \ \alpha(O)=0.00062 \ 4;$ $\alpha(P)=2.2\times10^{-5} \ 9$
390.47+x	(17/2+)	390.3 [§] 3	100	0.0+x 13/2 ⁽⁺⁾	(E2) ^b		0.0506	$\alpha(K)$ =0.0339 5; $\alpha(L)$ =0.01265 18; $\alpha(M)$ =0.00316 5; $\alpha(N+)$ =0.000930 14 $\alpha(N)$ =0.000787 12; $\alpha(O)$ =0.0001381 20; $\alpha(P)$ =4.45×10 ⁻⁶ 7
534.7+x		318.7 [‡] 4	100‡	215.96+x (9/2)+				
535.21+x	(15/2+)	535.4\§ 3	100	0.0+x 13/2 ⁽⁺⁾		0.14 4	0.0755 13	$\alpha(K)=0.0622\ 11;\ \alpha(L)=0.01025\ 16;\ \alpha(M)=0.00238\ 4;\ \alpha(N+)=0.000718\ 12$ $\alpha(N)=0.000597\ 10;\ \alpha(O)=0.0001129\ 18;\ \alpha(P)=8.67\times10^{-6}\ 15$ δ : from $\gamma(\theta)\ (1975\text{Li}16)$ in $^{194}\text{Pt}(\alpha,n\gamma)$ dataset.
588.6+x	$(7/2)^+$	323.6‡ 10		$265.03+x (11/2)^{-1}$	+			
		372.6 [‡] 4	100 [‡] 10	215.96+x (9/2) ⁺	M1+E2	1.4 5	0.11 3	$\alpha(K)$ =0.08 3; $\alpha(L)$ =0.019 3; $\alpha(M)$ =0.0046 6; $\alpha(N+)$ =0.00137 18 $\alpha(N)$ =0.00115 15; $\alpha(O)$ =0.00021 3; $\alpha(P)$ =1.1×10 ⁻⁵ 4
742.7+x	$(13/2)^+$	207.5 [‡] 4	10 [‡] 4	535.21+x (15/2+)			
		477.6 [‡] 4	90 [‡] 10	265.03+x (11/2)	-			
		526.6 [‡] 8	11 [‡] 3	215.96+x (9/2)+				
		742.8 [‡] 6	100‡ 10	0.0+x 13/2 ⁽⁺⁾	(M1+E2)	≥1.6	0.014 3	$\alpha(K)$ =0.011 3; $\alpha(L)$ =0.0022 4; $\alpha(M)$ =0.00053 8; $\alpha(N+)$ =0.000157 25 $\alpha(N)$ =0.000131 21; $\alpha(O)$ =2.4×10 ⁻⁵ 4; $\alpha(P)$ =1.5×10 ⁻⁶ 4
761.1+x	$(11/2)^+$	172.3 [‡] 5	12 [‡] 6	$588.6+x (7/2)^+$				
		496.1 [‡] 5	100 [‡] 11	265.03+x (11/2) ⁺	M1(+E2)		0.06 4	$\alpha(K)$ =0.05 3; $\alpha(L)$ =0.009 4; $\alpha(M)$ =0.0022 8; $\alpha(N+)$ =0.00066 24 $\alpha(N)$ =0.00055 20; $\alpha(O)$ =0.00010 4; $\alpha(P)$ =7.E-6 4
		545.2‡ 9	≈40 [‡]	215.96+x (9/2) ⁺	E2(+M1)	≥1.5	0.030 8	$\alpha(K)$ =0.023 7; $\alpha(L)$ =0.0052 9; $\alpha(M)$ =0.00125 19; $\alpha(N+)$ =0.00037 6 $\alpha(N)$ =0.00031 5; $\alpha(O)$ =5.7×10 ⁻⁵ 10;
								$\alpha(P)=3.1\times10^{-6}\ 10$
		761.1 [‡] 7	52 [‡] 11	$0.0+x$ $13/2^{(+)}$				
900.0+x	$(11/2,13/2)^+$	634.8‡ 5	37 [‡] 12	$265.03+x (11/2)^{-1}$				
		684.3‡ 7	100‡ 10	215.96+x (9/2) ⁺	E2(+M1)	≥1.7	0.017 4	$\alpha(K)$ =0.013 3; $\alpha(L)$ =0.0027 4; $\alpha(M)$ =0.00064 9; $\alpha(N+)$ =0.00019 3 $\alpha(N)$ =0.000161 23; $\alpha(O)$ =3.0×10 ⁻⁵ 5; $\alpha(P)$ =1.8×10 ⁻⁶ 5

10

γ (191 Hg) (continued)

$E_i(level)$	J_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	${\rm J}_f^\pi$	Mult.a	δ#	α^d	Comments
900.0+x	(11/2,13/2)+	900.5‡ 11	71‡ 10	0.0+x	13/2 ⁽⁺⁾	E2(+M1)	≥0.7	0.012 5	$\alpha(K)$ =0.009 4; $\alpha(L)$ =0.0017 5; $\alpha(M)$ =0.00039 12; $\alpha(N+)$ =0.00012 4 $\alpha(N)$ =0.00010 3; $\alpha(O)$ =1.8×10 ⁻⁵ 6; $\alpha(P)$ =1.3×10 ⁻⁶ 5
1019.3+x	(21/2+)	628.7 [§] 2	100	390.47+x	(17/2+)	(E2) ^b		0.01583	$\alpha(K)$ =0.01203 17; $\alpha(L)$ =0.00290 4; $\alpha(M)$ =0.000701 10; $\alpha(N+)$ =0.000208 3 $\alpha(N)$ =0.0001751 25; $\alpha(O)$ =3.17×10 ⁻⁵ 5; $\alpha(P)$ =1.596×10 ⁻⁶ 23
1087.8+x		871.8 [‡] 9	100 [‡]	215.96+x	$(9/2)^{+}$				
1105.7+x		517.1 [‡] 6	100 [‡]	588.6+x	$(7/2)^+$				
1130.8+x	$(7/2,9/2,11/2^+)$	865.6 [‡] 9	37 [‡] <i>17</i>	265.03+x					
		914.9 [‡] 7	100 [‡] 17	215.96+x	(9/2)+	M1+E2	≥0.3	0.013 6	$\alpha(K)$ =0.010 5; $\alpha(L)$ =0.0018 7; $\alpha(M)$ =0.00041 15; $\alpha(N+)$ =0.00012 5 $\alpha(N)$ =0.00010 4; $\alpha(O)$ =1.9×10 ⁻⁵ 8; $\alpha(P)$ =1.4×10 ⁻⁶ 7
1133.3+x		868.1 [‡] 9	32 [‡] 16	265.03+x	$(11/2)^+$				
		917.3 [‡] 7	100 [‡] <i>16</i>	215.96+x	$(9/2)^+$				
		1133.4 [‡] <i>10</i>	35 [‡] 12	0.0+x	$13/2^{(+)}$				
1171.74+x	(19/2+)	636.6 [§] 2	82 18	535.21+x	(15/2+)	(E2) ^b		0.01540	$\alpha(K)$ =0.01172 17; $\alpha(L)$ =0.00280 4; $\alpha(M)$ =0.000677 10; $\alpha(N+)$ =0.000201 3 $\alpha(N)$ =0.0001691 24; $\alpha(O)$ =3.06×10 ⁻⁵ 5; $\alpha(P)$ =1.555×10 ⁻⁶ 22
		781.3 [§] 2	100 15	390.47+x	(17/2+)	(M1+E2) ^b	0.14 4	0.0283 5	$\alpha(K)=0.0234 \ 4; \ \alpha(L)=0.00380 \ 6;$ $\alpha(M)=0.000880 \ 14; \ \alpha(N+)=0.000266 \ 5$ $\alpha(N)=0.000221 \ 4; \ \alpha(O)=4.18\times10^{-5} \ 7;$ $\alpha(P)=3.23\times10^{-6} \ 6$ δ : from $\gamma(\theta)$ (1975Li16) in ¹⁹⁴ Pt(α ,n γ).
1207.6+x		991.6 <mark>e</mark> 10	100 e	215.96+x	$(9/2)^{+}$				or non y(0) (15/02110) in 10(0,11/).
1318.5+x		1102.5 [‡] <i>10</i>	100‡ 29	215.96+x	$(9/2)^+$				
		1318.6 [‡] <i>11</i>	75 [‡] 25	0.0+x	13/2(+)				
1434.2+x		1218.2 [‡] _9	100‡	215.96+x	$(9/2)^+$				
1637.9+x	(21/2 ⁻)	466.25 [§] 21	100 15	1171.74+x	(19/2+)	(E1) ^b		0.01032	$\alpha(K)$ =0.00856 12; $\alpha(L)$ =0.001355 19; $\alpha(M)$ =0.000313 5; $\alpha(N+)$ =9.34×10 ⁻⁵ 14 $\alpha(N)$ =7.79×10 ⁻⁵ 11; $\alpha(O)$ =1.449×10 ⁻⁵ 21; $\alpha(P)$ =1.001×10 ⁻⁶ 14
		618.5 [§] 2	33 4	1019.3+x	(21/2+)	(E1)		0.00575	$\alpha(K)$ =0.00479 7; $\alpha(L)$ =0.000740 11; $\alpha(M)$ =0.0001704 24; $\alpha(N+)$ =5.10×10 ⁻⁵ 8

$\underline{\gamma}(^{191}\text{Hg})$ (continued)

$E_i(level)$	J_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbb{E}_f	\mathbf{J}_f^{π}	Mult.a	α^d	Comments
								$\alpha(N)=4.25\times10^{-5}$ 6; $\alpha(O)=7.94\times10^{-6}$ 12; $\alpha(P)=5.69\times10^{-7}$ 8
1688.4+x		1472.4 [‡] <i>10</i>	100 [‡]	215.96+x	$(9/2)^+$			
1769.4+x	$(25/2^+)$	750.1 3	100	1019.3+x	$(21/2^+)$	(E2) ^b	0.01081	$\alpha(K)$ =0.00843 12; $\alpha(L)$ =0.00181 3; $\alpha(M)$ =0.000434 6; $\alpha(N+)$ =0.0001294 19
								α (N)=0.0001084 <i>16</i> ; α (O)=1.98×10 ⁻⁵ <i>3</i> ; α (P)=1.116×10 ⁻⁶ <i>16</i>
1804.5+x	(25/2-)	166.6 3	100	1637.9+x	(21/2-)	(E2) b	0.746 12	B(E2)(W.u.)=54 6 α (K)=0.261 4; α (L)=0.364 6; α (M)=0.0945 16; α (N+)=0.0274 5 α (N)=0.0235 4; α (O)=0.00394 7; α (P)=3.29×10 ⁻⁵ 5 From their measured half-life 1978Me11 derive B(E2)=(3.50 34)×10 ³ e ² fm ⁴ .
1861.8+x	(23/2-)	224.0 3	12.1 <i>17</i>	1637.9+x	(21/2-)	(M1)	0.806	$\alpha(K)$ =0.661 10; $\alpha(L)$ =0.1110 16; $\alpha(M)$ =0.0258 4; $\alpha(N+)$ =0.00780 12
								α (N)=0.00648 10; α (O)=0.001226 18; α (P)=9.38×10 ⁻⁵ 14
		842.5 <i>3</i>	100 16	1019.3+x	$(21/2^+)$	(E1)	0.00316	$\alpha(K)$ =0.00264 4; $\alpha(L)$ =0.000399 6; $\alpha(M)$ =9.16×10 ⁻⁵ 13; $\alpha(N+)$ =2.75×10 ⁻⁵ 4
								$\alpha(N+)=2.75\times10^{-5}$ 4; $\alpha(O)=4.29\times10^{-6}$ 6; $\alpha(P)=3.18\times10^{-7}$ 5
2064.8+x	$(27/2^{-})$	203.0 3	100 7	1861.8+x	$(23/2^{-})$	(E2) b	0.371	$\alpha(K)=0.1635$ 24; $\alpha(L)=0.1559$ 24; $\alpha(M)=0.0402$ 7;
	(' /				(-1)	,		α(N+)=0.01171 18
		260.2.3	25.4	10045	(25/2=)	(M1 + E2)	0.25.10	$\alpha(N)=0.01000 \ 16; \ \alpha(O)=0.00169 \ 3; \ \alpha(P)=2.04\times10^{-5} \ 3$ $\alpha(K)=0.26 \ 18; \ \alpha(L)=0.065 \ 9; \ \alpha(M)=0.0157 \ 13; \ \alpha(N+)=0.0047 \ 5$
		260.2 3	25 4	1804.5+x	$(25/2^{-})$	(M1+E2)	0.35 19	$\alpha(K)=0.26 \ 76$; $\alpha(L)=0.063 \ 9$; $\alpha(M)=0.0137 \ 73$; $\alpha(N+)=0.0047 \ 3$ $\alpha(N)=0.0039 \ 4$; $\alpha(O)=0.00071 \ 10$; $\alpha(P)=4.E-5 \ 3$
		295.4 3	49 9	1769.4+x	(25/2+)	(E1)	0.0288	$\alpha(K)$ =0.0237 4; $\alpha(L)$ =0.00392 6; $\alpha(M)$ =0.000908 13; $\alpha(N+)$ =0.000270 4
2122.5	(20/2=)	318.95 [§] 21	100	1004.5	(25/2-)	a	0.0000	$\alpha(N)=0.000226 \ 4; \ \alpha(O)=4.15\times10^{-5} \ 6; \ \alpha(P)=2.66\times10^{-6} \ 4$
2123.5+x	(29/2 ⁻)	318.95° 21	100	1804.5+x	(25/2)	(E2) ^b	0.0889	$\alpha(K)$ =0.0544 8; $\alpha(L)$ =0.0260 4; $\alpha(M)$ =0.00657 10; $\alpha(N+)$ =0.00193 3
								$\alpha(N)$ =0.001635 24; $\alpha(O)$ =0.000283 4; $\alpha(P)$ =7.04×10 ⁻⁶ 10
2286.4+x		2070.4 ^{e‡} 10	100 e ‡	215.96+x	$(9/2)^+$			
2299.5+x		2034.5 ^{e‡} 20	100 ^{e‡}	265.03+x	$(11/2)^+$			
2302.9+x		2086.9 ^{e‡} 10	100 e ‡	215.96+x				
2307.5+x		2091.5 [‡] <i>11</i>	100‡	215.96+x				
2310.4+x		2045.4 ^{e‡} 10	100 e ‡	265.03+x				
2315.1+x		2099.1 ^{e‡} 10	100 ^{e‡}	215.96+x				
2329.0+x		1586.4 [‡] 11	43‡ 9	742.7+x				
		2112.8 [‡] <i>15</i>	45 [‡] 9	215.96+x				
0225 4 .		2328.9^{\ddagger} 12 $2070.4^{e\ddagger}$ 10	100 [‡] 10 100 ^e ‡		13/2 ⁽⁺⁾			
2335.4+x 2340.2+x		2070.4 [‡] 10 2075.2 [‡] 14	100 [‡]	265.03+x 265.03+x				
234U.2+X		2075.2* 14	100,	203.03+X	(11/2)			

 $\alpha(K)=0.01491\ 21;\ \alpha(L)=0.00389\ 6;\ \alpha(M)=0.000947\ 14;$

Comments

 $\alpha(K)=0.01082$ 16; $\alpha(L)=0.00252$ 4; $\alpha(M)=0.000607$ 9;

 $\alpha(K)=0.0213$ 3; $\alpha(L)=0.00641$ 9; $\alpha(M)=0.001580$ 23;

 $\alpha(N)=0.0233$ 4; $\alpha(O)=0.00391$ 7; $\alpha(P)=3.27\times10^{-5}$ 5 From their measured half-life 1978Me11 derive B(E2)=(2.72

 $\alpha(K)=0.0179 \ 3; \ \alpha(L)=0.00502 \ 7; \ \alpha(M)=0.001231 \ 18;$

 $\alpha(N)=0.000307\ 5;\ \alpha(O)=5.49\times10^{-5}\ 8;\ \alpha(P)=2.38\times10^{-6}\ 4$

 $\alpha(N)=0.0001516\ 22;\ \alpha(O)=2.75\times10^{-5}\ 4;\ \alpha(P)=1.435\times10^{-6}\ 21$

 $\alpha(N)=0.000394~6$; $\alpha(O)=7.00\times10^{-5}~10$; $\alpha(P)=2.82\times10^{-6}~4$

 $\alpha(N)=8.65\times10^{-5}$ 13; $\alpha(O)=1.587\times10^{-5}$ 23; $\alpha(P)=9.37\times10^{-7}$ 14

 $\alpha(K)=0.260$ 4; $\alpha(L)=0.361$ 6; $\alpha(M)=0.0937$ 15; $\alpha(N+..)=0.0272$ 5

 $\alpha(K)=0.00709 \ 10; \ \alpha(L)=0.001453 \ 21; \ \alpha(M)=0.000346 \ 5;$

 $\alpha(N)=0.000236$ 4; $\alpha(O)=4.25\times10^{-5}$ 6; $\alpha(P)=1.98\times10^{-6}$ 3

 $\alpha(K)=0.0213$ 3; $\alpha(L)=0.00642$ 9; $\alpha(M)=0.001583$ 23;

 $\alpha(N+..)=0.000468$ 7

 $\alpha(N)=0.000395$ 6; $\alpha(O)=7.02\times10^{-5}$ 10; $\alpha(P)=2.82\times10^{-6}$ 4

 $\alpha(K)=0.01728\ 25;\ \alpha(L)=0.00478\ 7;\ \alpha(M)=0.001169\ 17;$

 $\alpha(N+..)=0.000346.5$

 $\alpha(N+..)=0.000181 3$

 α (N+..)=0.000467 7

 $\alpha(N+..)=0.0001033 \ 15$

B(E2)(W.u.)=42 3

 $18)\times10^3 \text{ e}^2\text{fm}^4$.

 $\alpha(N+..)=0.000364 6$

 $\alpha(N+..)=0.000281$ 4

 $\alpha(N)=0.000292$ 5; $\alpha(O)=5.22\times10^{-5}$ 8; $\alpha(P)=2.29\times10^{-6}$ 4

 $\alpha(K)=0.1186\ 17$; $\alpha(L)=0.0903\ 14$; $\alpha(M)=0.0232\ 4$;

0.239 (E2)

Adopted Levels, Gammas (continued)

 $\gamma(^{191}\text{Hg})$ (continued)

 α^{d}

0.01413

0.0297

0.00900

0.742 12

0.0245

0.0200

0.0298

0.0236

Mult.a

 $(E2)^b$

 $(E2)^{b}$

 $(E2)^{b}$

 $(E2)^{b}$

(E2)

 $(E2)^b$

 $(E2)^b$

(E2)

 $1769.4+x \quad (25/2^+)$

1166.0 *3* 100 2598.5+x $(33/2^+)$ 100

 $(37/2^+)$ 479.9[§] 2 3078.4+x

3117.4+x $(33/2^+)$ 528.6 *3* 100 $2588.8+x (29/2^+)$

 E_{γ}^{\dagger}

2086.9^{e‡} 10

1613.6[‡] *10*

2141.0‡ 20

1616.1‡ 8

2358.7 14

1619.0[‡] 10

2361.5[‡] 10

2141.0^{e‡} 20

2192.9[‡] *15*

662.1 8 2

480.2 *3*

819.5 *3*

790.3 *3*

166.9 *3*

519.9 *3*

566.8[§] 2

 I_{γ}^{\dagger}

100**e**‡

100‡ 20

27‡ 7

100‡ 10

81[‡] *14*

46[‡] 5

100‡ 10

100^{e‡}

100‡

100

100

100

100

100

100

100

16 5

 \mathbf{E}_f

 $265.03+x (11/2)^+$

742.7+x $(13/2)^+$

 $215.96+x (9/2)^+$

 $742.7+x (13/2)^+$

 $742.7+x (13/2)^+$

 $265.03+x (11/2)^{+}$

 $215.96+x (9/2)^+$

 $1769.4+x \quad (25/2^+)$

 $2064.8+x (27/2^{-})$

 $1769.4+x \quad (25/2^+)$

2123.5+x $(29/2^{-})$

 $2123.5+x (29/2^{-})$

 $2935.4+x (29/2^+)$

1804.5 + x $2431.5+x (29/2^+)$

 $(25/2^{-})$

0.0+x $13/2^{(+)}$

 $0.0+x \quad 13/2^{(+)}$

 $3166.9+x \quad (33/2^+)$ 231.6 *3*

 $(29/2^+)$

2588.8+x2594.8+x

 $E_i(level)$

2351.9+x

2356.4+x

2358.8+x

2361.6+x

2406.0+x

2408.9+x

2431.5+x $(29/2^+)$

2545.0+x $(31/2^{-})$

2598.5+x $(33/2^+)$

2643.4+x $(33/2^{-})$

2690.3+x $(33/2^{-})$

2935.4+x

 $(29/2^+)$

 $(29/2^{-})$

 $^{191}_{80}\mathrm{Hg}_{111}$ -13

$\underline{\gamma}(^{191}\text{Hg})$ (continued)

E_i (level)	\mathbf{J}_i^{π}	$\mathrm{E}_{\gamma}^{\dagger}$	I_{γ}^{\dagger}	E_f	\mathbf{J}_f^{π}	Mult. ^a	α^{d}	Comments
								α (N+)=0.00676 <i>11</i> α (N)=0.00577 <i>9</i> ; α (O)=0.000981 <i>15</i> ; α (P)=1.492×10 ⁻⁵ 22
3166.9+x	(33/2+)	568.4 <i>3</i> 578.2 <i>3</i>	100 26 38 9	2598.5+x 2588.8+x		(Q) (E2)	0.0191	$\alpha(K)$ =0.01430 20; $\alpha(L)$ =0.00367 6; $\alpha(M)$ =0.000893 13; $\alpha(N+)$ =0.000265 4 $\alpha(N)$ =0.000223 4; $\alpha(O)$ =4.01×10 ⁻⁵ 6; $\alpha(P)$ =1.90×10 ⁻⁶ 3
3222.2+x	(35/2 ⁻)	677.2 3	100	2545.0+x	(31/2-)	(E2) ^b	0.01345	$\alpha(K)=0.000225$ 4, $\alpha(O)=4.01\times10^{-6}$ 6, $\alpha(E)=1.30\times10^{-5}$ 8; $\alpha(N)=0.0001697$ 24 $\alpha(N)=0.0001425$ 20; $\alpha(O)=2.59\times10^{-5}$ 4; $\alpha(P)=1.371\times10^{-6}$ 20
3252.8+x	(33/2-)	658.0 <i>3</i> 1129.3 <i>3</i>	100 <i>39</i> 22 <i>17</i>	2594.8+x 2123.5+x				$a(N)=0.0001423 \ 20; \ a(O)=2.39\times10^{-4}4; \ a(P)=1.371\times10^{-2}20$
3428.8+x	(37/2 ⁻)	738.55 [§] 21	100	2690.3+x	(33/2 ⁻)	(E2) ^b	0.01117	$\alpha(K)$ =0.00870 13; $\alpha(L)$ =0.00189 3; $\alpha(M)$ =0.000452 7; $\alpha(N+)$ =0.0001347 19
3487.6+x	(37/2+)	320.7 3	100 14	3166.9+x	(33/2+)	(E2) ^b	0.0875	$\alpha(N)=0.0001129\ 16;\ \alpha(O)=2.06\times10^{-5}\ 3;\ \alpha(P)=1.151\times10^{-6}\ 17$ $\alpha(K)=0.0537\ 8;\ \alpha(L)=0.0255\ 4;\ \alpha(M)=0.00644\ 10;\ \alpha(N+)=0.00189\ 3$ $\alpha(N)=0.001602\ 24;\ \alpha(O)=0.000277\ 4;\ \alpha(P)=6.95\times10^{-6}\ 10$
3518.8+x	(37/2-)	409.2 <i>3</i> 875.4 <i>3</i>	60 8 100	3078.4+x 2643.4+x		(Q) (E2)	0.00787	$\alpha(K)$ =0.00625 9; $\alpha(L)$ =0.001238 18; $\alpha(M)$ =0.000294 5; $\alpha(N+)$ =8.78×10 ⁻⁵ 13
3728.0+x	(35/2)	1037.7 3	100	2690.3+x	$(33/2^{-})$			$\alpha(N)=7.34\times10^{-5} \ 11; \ \alpha(O)=1.352\times10^{-5} \ 19; \ \alpha(P)=8.23\times10^{-7} \ 12$
3792.6+x	$(41/2^+)$	714.2 3	100	3078.4+x	(37/2+)	(E2) ^b	0.01199	$\alpha(K)$ =0.00930 13; $\alpha(L)$ =0.00206 3; $\alpha(M)$ =0.000494 7; $\alpha(N+)$ =0.0001471 21 $\alpha(N)$ =0.0001234 18; $\alpha(O)$ =2.25×10 ⁻⁵ 4; $\alpha(P)$ =1.231×10 ⁻⁶ 18
3946.7+x	(37/2-)	694.0 <i>3</i> 1256.4 <i>3</i>	100 <i>21</i> 42 <i>33</i>	3252.8+x 2690.3+x		(E2)	0.00390	$\alpha(\text{K})=0.0001234\ 76$, $\alpha(\text{O})=2.23\times10^{-5}\ 4$, $\alpha(\text{P})=1.231\times10^{-5}\ 7$ $\alpha(\text{K})=0.00317\ 5$; $\alpha(\text{L})=0.000550\ 8$; $\alpha(\text{M})=0.0001285\ 18$; $\alpha(\text{N}+)=4.86\times10^{-5}\ 7$ $\alpha(\text{N})=3.21\times10^{-5}\ 5$; $\alpha(\text{O})=6.00\times10^{-6}\ 9$; $\alpha(\text{P})=4.14\times10^{-7}\ 6$; $\alpha(\text{IPF})=1.004\times10^{-5}\ 15$
3957.2+x	(39/2-)	735.0 3	100	3222.2+x	(35/2 ⁻)	(E2) b	0.01128	$\alpha(K)$ =0.00878 13; $\alpha(L)$ =0.00191 3; $\alpha(M)$ =0.000458 7; $\alpha(N+)$ =0.0001364 20
3969.0+x	(39/2-)	746.8 <i>3</i>	100	3222.2+x	(35/2-)	(E2)	0.01091	$\alpha(N)=0.0001144\ 16;\ \alpha(O)=2.09\times10^{-5}\ 3;\ \alpha(P)=1.162\times10^{-6}\ 17$ $\alpha(K)=0.00851\ 12;\ \alpha(L)=0.00183\ 3;\ \alpha(M)=0.000439\ 7;$ $\alpha(N+)=0.0001309\ 19$
3988.5+x	(41/2+)	500.9 3	100	3487.6+x	(37/2+)	(E2) b	0.0268	$\alpha(N)=0.0001097\ 16;\ \alpha(O)=2.00\times10^{-5}\ 3;\ \alpha(P)=1.126\times10^{-6}\ 16$ $\alpha(K)=0.0194\ 3;\ \alpha(L)=0.00562\ 8;\ \alpha(M)=0.001382\ 20;$ $\alpha(N+)=0.000409\ 6$
4140.8+x 4217.6+x	(41/2 ⁻) (41/2 ⁻)	712.0 <i>3</i> 788.8 <i>3</i>	100 100	3428.8+x 3428.8+x	. , ,	(Q) (Q)		$\alpha(N)=0.000345\ 5;\ \alpha(O)=6.15\times10^{-5}\ 9;\ \alpha(P)=2.57\times10^{-6}\ 4$

$\underline{\gamma}(^{191}\text{Hg})$ (continued)

$E_i(level)$	\mathbf{J}_i^{π}	${\rm E}_{\gamma}{}^{\dagger}$	${\rm I}_{\gamma}{}^{\dagger}$	\mathbf{E}_f	\mathbf{J}_f^{π}	Mult.a	α^{d}	Comments
4276.0+x	(41/2 ⁻)	757.2 3	100	3518.8+x	(37/2 ⁻)	(E2)	0.01060	$\alpha(K)$ =0.00828 12; $\alpha(L)$ =0.001770 25; $\alpha(M)$ =0.000424 6; $\alpha(N+)$ =0.0001263 18
								$\alpha(N)=0.0001058\ 15;\ \alpha(O)=1.93\times10^{-5}\ 3;\ \alpha(P)=1.095\times10^{-6}\ 16$
4357.4+x	(43/2 ⁻)	400.2 3	100	3957.2+x	(39/2-)	(E2) ^b	0.0474	$\alpha(K)$ =0.0320 5; $\alpha(L)$ =0.01162 17; $\alpha(M)$ =0.00290 5; $\alpha(N+)$ =0.000853 13 $\alpha(N)$ =0.000722 11; $\alpha(O)$ =0.0001268 18; $\alpha(P)$ =4.21×10 ⁻⁶ 6
4382.5+x	(41/2-)	953.7 3	100	3428.8+x	(37/2-)	(E2)	0.00663	$\alpha(K)$ =0.00530 8; $\alpha(L)$ =0.001012 15; $\alpha(M)$ =0.000239 4; $\alpha(N+)$ =7.15×10 ⁻⁵ 10 $\alpha(N)$ =5.98×10 ⁻⁵ 9; $\alpha(O)$ =1.105×10 ⁻⁵ 16; $\alpha(P)$ =6.98×10 ⁻⁷ 10
4491.9+x	$(41/2^+)$	1004.3 <i>3</i>	62 15	3487.6+x	(37/2+)			$\alpha(N)=5.98\times10^{-5}$ 9; $\alpha(O)=1.105\times10^{-5}$ 10; $\alpha(P)=6.98\times10^{-7}$ 10
7771.71X	(41/2)	1413.5 3	100 23	3078.4+x		(E2)	0.00316	$\alpha(K)=0.00256 \ 4; \ \alpha(L)=0.000430 \ 6; \ \alpha(M)=0.0001001 \ 14;$
					. , ,	,		$\alpha(N+)=7.03\times10^{-5}\ 10$
								$\alpha(N)=2.50\times10^{-5} 4$; $\alpha(O)=4.69\times10^{-6} 7$; $\alpha(P)=3.33\times10^{-7} 5$; $\alpha(IPF)=4.02\times10^{-5} 6$
4529.7+x	(39/2)	801.7 <i>3</i>	53 13	3728.0+x	(35/2)			
		1100.9 <i>3</i>	100 27	3428.8+x		(D)		
4587.1+x	$(41/2^{-})$	(57.3)		4529.7+x				
		629.9 3	90 20	3957.2+x		(D+Q)	0.01500	(II) 0.01150 IF (I) 0.000F(/ (IF) 0.000((/ IO (IF)) 0.000100 2
		640.3 <i>3</i>	80 <i>17</i>	3946.7+x	$(37/2^{-})$	(E2)	0.01520	$\alpha(K)=0.01158 \ 17; \ \alpha(L)=0.00276 \ 4; \ \alpha(M)=0.000666 \ 10; \ \alpha(N+)=0.000198 \ 3$
		1158.2 3	100 7	3428.8+x	(37/2-)	(E2)	0.00454	$\alpha(N)=0.0001664\ 24;\ \alpha(O)=3.01\times10^{-5}\ 5;\ \alpha(P)=1.537\times10^{-6}\ 22$ $\alpha(K)=0.00369\ 6;\ \alpha(L)=0.000655\ 10;\ \alpha(M)=0.0001535\ 22;$ $\alpha(N+)=4.74\times10^{-5}\ 7$
								$\alpha(N)=3.84\times10^{-5}$ 6; $\alpha(O)=7.15\times10^{-6}$ 10; $\alpha(P)=4.82\times10^{-7}$ 7; $\alpha(IPF)=1.379\times10^{-6}$ 23
4632.2+x	(45/2+)	839.6 <i>3</i>	100	3792.6+x	(41/2+)	(E2) ^b	0.00856	$\alpha(K)$ =0.00677 10; $\alpha(L)$ =0.001369 20; $\alpha(M)$ =0.000326 5; $\alpha(N+)$ =9.72×10 ⁻⁵ 14
								$\alpha(N)=8.14\times10^{-5} \ 12; \ \alpha(O)=1.496\times10^{-5} \ 21; \ \alpha(P)=8.93\times10^{-7} \ 13$
4653.7+x	$(43/2^{-})$	271.1 3	100	4382.5+x		(D)		
4667.3+x	$(45/2^+)$	678.8 <i>3</i>	100	3988.5+x		(E2)	0.01338	$\alpha(K)$ =0.01029 15; $\alpha(L)$ =0.00235 4; $\alpha(M)$ =0.000567 8; $\alpha(N+)$ =0.0001686 24 $\alpha(N)$ =0.0001416 20; $\alpha(O)$ =2.57×10 ⁻⁵ 4; $\alpha(P)$ =1.364×10 ⁻⁶ 20
4850.8+x	$(45/2^+)$	358.9 <i>3</i>	100 <i>21</i>	4491.9+x	$(41/2^+)$	(E2)	0.0636	$\alpha(K)$ =0.0412 6; $\alpha(L)$ =0.01695 25; $\alpha(M)$ =0.00426 6; $\alpha(N+)$ =0.001250 18 $\alpha(N)$ =0.001060 16; $\alpha(O)$ =0.000185 3; $\alpha(P)$ =5.38×10 ⁻⁶ 8
		862.3 3	25 4	3988.5+x	(41/2+)	(E2)	0.00811	$\alpha(K)=0.00643 \ 9; \ \alpha(L)=0.001283 \ 18; \ \alpha(M)=0.000305 \ 5;$ $\alpha(N+)=9.11\times10^{-5} \ 13$ $\alpha(N)=7.62\times10^{-5} \ 11; \ \alpha(O)=1.402\times10^{-5} \ 20; \ \alpha(P)=8.48\times10^{-7} \ 12$
4855.9+x	(43/2-)	268.8 <i>3</i>	100	4587.1+x	(41/2-)	(M1)	0.487	$\alpha(K)$ =0.400 6; $\alpha(L)$ =0.0669 10; $\alpha(M)$ =0.01556 23; $\alpha(N+)$ =0.00470 7
4894.9+x	(45/2-)	241.2 3	40 20	4653.7+x	(43/2-)	(D)		$\alpha(N)=0.00390\ 6;\ \alpha(O)=0.000738\ 11;\ \alpha(P)=5.66\times10^{-5}\ 9$
4074.7±X	(43/4)	512.3 3	100 20	4055.7+X 4382.5+X		(E2)	0.0254	$\alpha(K)$ =0.0185 3; $\alpha(L)$ =0.00525 8; $\alpha(M)$ =0.001288 19; $\alpha(N+)$ =0.000381 6 $\alpha(N)$ =0.000321 5; $\alpha(O)$ =5.74×10 ⁻⁵ 8; $\alpha(P)$ =2.45×10 ⁻⁶ 4
4903.5+x	(45/2)	249.8 <i>3</i>	38 13	4653.7+x	(43/2-)	D		$\alpha(N)=0.000321$ 3; $\alpha(O)=3.74\times10^{-6}$ 8; $\alpha(P)=2.43\times10^{-6}$ 4

15

$\underline{\gamma}(^{191}\text{Hg})$ (continued)

E_i (level)	\mathtt{J}_{i}^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	J_f^{π} Mul	t. $\frac{a}{\alpha}$ α^d	Comments
4903.5+x	(45/2)	520.9 3	100 25	4382.5+x (41			
4957.7+x 5006.5+x		740.0 <i>10</i> 649.1 <i>3</i>	100 100	4217.6+x (41 4357.4+x (43	, ,	0.01475	$\alpha(K)$ =0.01127 16; $\alpha(L)$ =0.00266 4; $\alpha(M)$ =0.000641 9; $\alpha(N+)$ =0.000191 3 $\alpha(N)$ =0.0001601 23; $\alpha(O)$ =2.90×10 ⁻⁵ 4; $\alpha(P)$ =1.494×10 ⁻⁶ 21
5027.8+x	(45/2-)	886.9 <i>3</i>	100	4140.8+x (41	1/2 ⁻) (E2)	0.00766	
5072.0+x	(45/2-)	796.0 <i>3</i>	100	4276.0+x (4)	1/2 ⁻) (E2)	0.00955	$\alpha(N)=7.11\times10^{-5}$ 10; $\alpha(O)=1.311\times10^{-5}$ 19; $\alpha(P)=8.03\times10^{-7}$ 12 $\alpha(K)=0.00751$ 11; $\alpha(L)=0.001561$ 22; $\alpha(M)=0.000372$ 6; $\alpha(N+)=0.0001111$ 16 $\alpha(N)=9.31\times10^{-5}$ 13; $\alpha(O)=1.706\times10^{-5}$ 24; $\alpha(P)=9.92\times10^{-7}$ 14
5128.2+x		233.3 <i>3</i>	100	4894.9+x (45			
5142.5+x	$(45/2^{-})$	286.6 <i>3</i>	100 4	4855.9+x (43	$3/2^{-}$) (M1	0.409	$\alpha(K)=0.336$ 5; $\alpha(L)=0.0560$ 8; $\alpha(M)=0.01303$ 19; $\alpha(N+)=0.00394$ 6
		555.4 <i>3</i>	86 5	4587.1+x (41	1/2 ⁻) (E2)	0.0210	$\alpha(N)=0.00327\ 5;\ \alpha(O)=0.000619\ 9;\ \alpha(P)=4.74\times10^{-5}\ 7$ $\alpha(K)=0.01556\ 22;\ \alpha(L)=0.00413\ 6;\ \alpha(M)=0.001006\ 15;\ \alpha(N+)=0.000298\ 5$ $\alpha(N)=0.000251\ 4;\ \alpha(O)=4.51\times10^{-5}\ 7;\ \alpha(P)=2.07\times10^{-6}\ 3$
5296.1+x	(47/2-)	440.2 3	100	4855.9+x (43	3/2 ⁻) (E2)	0.0370	$\alpha(N)=0.000251$ 4; $\alpha(O)=4.51\times10^{-5}$ 7; $\alpha(P)=2.07\times10^{-5}$ 3 $\alpha(K)=0.0258$ 4; $\alpha(L)=0.00847$ 12; $\alpha(M)=0.00210$ 3; $\alpha(N+)=0.000619$ 9 $\alpha(N)=0.000523$ 8; $\alpha(O)=9.24\times10^{-5}$ 14; $\alpha(P)=3.41\times10^{-6}$ 5
5427.2+x	(49/2+)	759.9 <i>3</i>	100	4667.3+x (45	5/2 ⁺) (E2)	0.01052	$\alpha(N)=0.000325$ 8, $\alpha(O)=9.24\times10^{-14}$, $\alpha(F)=3.41\times10^{-15}$ $\alpha(K)=0.00822$ 12; $\alpha(L)=0.001754$ 25; $\alpha(M)=0.000420$ 6; $\alpha(N+)=0.0001251$ 18
5506.6+x	(47/2-)	210.5 3	41 10	5296.1+x (47	7/2 ⁻) (M1) 0.958	$\alpha(N)=0.0001048$ 15; $\alpha(O)=1.92\times10^{-5}$ 3; $\alpha(P)=1.088\times10^{-6}$ 16 $\alpha(K)=0.786$ 12; $\alpha(L)=0.1320$ 20; $\alpha(M)=0.0307$ 5; $\alpha(N+)=0.00928$ 14 $\alpha(N)=0.00771$ 12; $\alpha(O)=0.001458$ 22; $\alpha(P)=0.0001116$ 17
		364.1 <i>3</i>	100 15	5142.5+x (45	$5/2^{-}$) (M1	0.213	$\alpha(K)$ =0.1754 25; $\alpha(L)$ =0.0291 5; $\alpha(M)$ =0.00677 10; $\alpha(N+)$ =0.00204 3
		650.7 3	78 <i>7</i>	4855.9+x (43	3/2 ⁻) (E2)	0.01467	$\alpha(N)=0.001698\ 24;\ \alpha(O)=0.000321\ 5;\ \alpha(P)=2.47\times10^{-5}\ 4$ $\alpha(K)=0.01121\ 16;\ \alpha(L)=0.00264\ 4;\ \alpha(M)=0.000637\ 9;\ \alpha(N+)=0.000189\ 3$
5533.9+x	(49/2+)	683.1 <i>3</i>	100 24	4850.8+x (45	5/2 ⁺) (E2)	0.01320	$\alpha(N)=0.0001590 \ 23; \ \alpha(O)=2.88\times10^{-5} \ 4; \ \alpha(P)=1.487\times10^{-6} \ 21$ $\alpha(K)=0.01016 \ 15; \ \alpha(L)=0.00231 \ 4; \ \alpha(M)=0.000557 \ 8; \ \alpha(N+)=0.0001658 \ 24$ $\alpha(N)=0.0001391 \ 20; \ \alpha(O)=2.53\times10^{-5} \ 4; \ \alpha(P)=1.347\times10^{-6} \ 19$
		866.6 <i>3</i>	21 4	4667.3+x (45	5/2+)		$u(1)-0.0001371\ 20,\ u(0)-2.33\times10$ 7, $u(1)-1.347\times10$ 17
		901.7 3	19 <i>3</i>	4632.2+x (45	$5/2^+$) (E2)	0.00741	$\alpha(K)$ =0.00590 9; $\alpha(L)$ =0.001154 17; $\alpha(M)$ =0.000273 4; $\alpha(N+)$ =8.17×10 ⁻⁵ 12
5553.3+x	(49/2+)	921.1 <i>3</i>	100	4632.2+x (45	5/2 ⁺) (E2)	0.00710	$\alpha(N+)=7.77\times10^{-5} 11$
5653.8+x	(49/2-)	147.2 3	100	5506.6+x (47	7/2 ⁻) (M1) 2.62	$\alpha(N)=6.49\times10^{-5}\ 10;\ \alpha(O)=1.198\times10^{-5}\ 17;\ \alpha(P)=7.46\times10^{-7}\ 11$ $\alpha(K)=2.15\ 4;\ \alpha(L)=0.363\ 6;\ \alpha(M)=0.0845\ 13;\ \alpha(N+)=0.0255\ 4$
5795.7+x	(51/2-)	789.2 <i>3</i>	100	5006.5+x (47	7/2 ⁻) (E2)	0.00972	α (N)=0.0212 4; α (O)=0.00401 6; α (P)=0.000306 5 α (K)=0.00763 11; α (L)=0.001595 23; α (M)=0.000381 6; α (N+)=0.0001136 16
							$\alpha(N) = 9.51 \times 10^{-5} \ 14; \ \alpha(O) = 1.743 \times 10^{-5} \ 25; \ \alpha(P) = 1.009 \times 10^{-6} \ 15$
5802.8+x		845.1 <i>3</i>	100	4957.7+x			

$\underline{\gamma}(^{191}\text{Hg})$ (continued)

$E_i(level)$	\mathbf{J}_i^{π}	$\mathrm{E}_{\gamma}^{\dagger}$	$_{\mathrm{I}_{\gamma}}^{\dagger}$	\mathbf{E}_f	\mathbf{J}_f^{π}	Mult.a	α^d	Comments
6025.4+x 6085.3+x	(51/2-)	997.6 <i>3</i> 431.5 <i>3</i>	100 81 <i>13</i>	5027.8+x 5653.8+x		(Q) (M1)	0.1354	$\alpha(K)$ =0.1115 16; $\alpha(L)$ =0.0184 3; $\alpha(M)$ =0.00428 6;
		578.7 <i>3</i>	100 32	5506.6+x	(47/2-)	(E2)	0.0191	$\alpha(N+)=0.001292$ 19 $\alpha(N)=0.001073$ 16; $\alpha(O)=0.000203$ 3; $\alpha(P)=1.562\times10^{-5}$ 22 $\alpha(K)=0.01427$ 20; $\alpha(L)=0.00366$ 6; $\alpha(M)=0.000891$ 13; $\alpha(N+)=0.000264$ 4
6230.7+x	(53/2+)	803.5 3	100	5427.2+x	(49/2+)	(E2)	0.00937	$\alpha(N)=0.000224$; $\alpha(O)=4.00\times10^{-5}$ 6; $\alpha(P)=1.89\times10^{-6}$ 3 $\alpha(K)=0.00737$ 11; $\alpha(L)=0.001525$ 22; $\alpha(M)=0.000364$ 6; $\alpha(N+)=0.0001085$ 16
6333.6+x	(53/2+)	799.7 <i>3</i>	100	5533.9+x	(49/2+)	(E2)	0.00946	$\alpha(N)=9.09\times10^{-5}$ 13; $\alpha(O)=1.666\times10^{-5}$ 24; $\alpha(P)=9.74\times10^{-7}$ 14 $\alpha(K)=0.00744$ 11; $\alpha(L)=0.001543$ 22; $\alpha(M)=0.000368$ 6; $\alpha(N+)=0.0001098$ 16
6459.6+x	(52/2)	374.3 <i>3</i>	67 20	6085.3+x	(51/2-)			$\alpha(N)=9.20\times10^{-5}\ 13;\ \alpha(O)=1.686\times10^{-5}\ 24;\ \alpha(P)=9.83\times10^{-7}\ 14$
0439.0+X	(53/2)	805.8 <i>3</i>	100 47	5653.8+x		Q		
6520.6+x	(53/2+)	967.3 3	100 47	5553.3+x		(E2)	0.00644	$\alpha(K)$ =0.00516 8; $\alpha(L)$ =0.000979 14; $\alpha(M)$ =0.000231 4; $\alpha(N+)$ =6.92×10 ⁻⁵ 10
6678.2+x	(55/2-)	882.5 3	100	5795.7+x	(51/2-)	(E2)	0.00774	$\alpha(N)=5.78\times10^{-5}$ 9; $\alpha(O)=1.069\times10^{-5}$ 15; $\alpha(P)=6.79\times10^{-7}$ 10 $\alpha(K)=0.00615$ 9; $\alpha(L)=0.001214$ 17; $\alpha(M)=0.000288$ 4; $\alpha(N+)=8.61\times10^{-5}$ 12
								$\alpha(N)=7.20\times10^{-5}\ 10;\ \alpha(O)=1.326\times10^{-5}\ 19;\ \alpha(P)=8.10\times10^{-7}\ 12$
6936.5+x	$(55/2^{-})$	476.9 <i>3</i>	29 8	6459.6+x	(//	(D)	0.00022	(II) 0.00(50.10 (I.) 0.001224.10 (A.) 0.000215.5
		851.2 <i>3</i>	100 6	6085.3+x	(51/2)	(E2)	0.00832	$\alpha(K)=0.00659 \ 10; \ \alpha(L)=0.001324 \ 19; \ \alpha(M)=0.000315 \ 5;$ $\alpha(N+)=9.40\times10^{-5} \ 14$
7077.3+x	(57/2+)	846.6 <i>3</i>	100	6230.7+x	(53/2+)	(E2)	0.00842	$\alpha(N)=7.87\times10^{-5}\ 1I;\ \alpha(O)=1.447\times10^{-5}\ 2I;\ \alpha(P)=8.70\times10^{-7}\ I3$ $\alpha(K)=0.00666\ I0;\ \alpha(L)=0.001342\ I9;\ \alpha(M)=0.000319\ 5;$ $\alpha(N+)=9.53\times10^{-5}\ I4$
7227.0+x	(57/2-)	290.5 3	100	6936.5+x	(55/2-)	(M1)	0.394	$\alpha(N)=7.97\times10^{-5}$ 12; $\alpha(O)=1.466\times10^{-5}$ 21; $\alpha(P)=8.79\times10^{-7}$ 13 $\alpha(K)=0.323$ 5; $\alpha(L)=0.0540$ 8; $\alpha(M)=0.01256$ 18; $\alpha(N+)=0.00379$ 6 $\alpha(N)=0.00315$ 5; $\alpha(O)=0.000596$ 9; $\alpha(P)=4.57\times10^{-5}$ 7
7527.8+x 7670.7+x	(59/2)	300.8 <i>3</i> 992.5 <i>3</i>	100 100	7227.0+x 6678.2+x		(D)		u(1)=0.00313 3, u(0)=0.000330 3, u(1)=1.37×10 7
7689.9+x	(59/2)	462.9 <i>3</i>	100	7227.0+x		(D)		
7697.0+x	(61.0)	1018.8 3	100	6678.2+x		(Q)		
7987.4+x	(61/2)	459.6 3	100 64	7527.8+x		(D)		
8351.8+x	(63/2)	760.4 <i>3</i> 364.4 <i>3</i> 661.9 <i>3</i>	50 27 100 79 75 17	7227.0+x 7987.4+x 7689.9+x	(61/2)	(Q)		
		824.0 <i>3</i>	75 29	7527.8+x		(Q)		
8668.9+x		317.1 3	100	8351.8+x	(63/2)			
310.9+y	J+2	310.9 <mark>&</mark> 7	0.14 @ 2	y	J≈(31/2)			

17

$\underline{\gamma}(^{191}\text{Hg})$ (continued)

$E_i(level)$	\mathtt{J}_i^{π}	$\mathrm{E}_{\gamma}{}^{\dagger}$	$_{\mathrm{I}_{\gamma}}^{\dagger}$	E_f	${\rm J}_f^\pi$	Mult.a
662.4+y	J+4	351.5 ^{&} 1	0.83 6 5	310.9+y	J+2	Q^{c}
1054.0+y	J+6	391.6 <mark>&</mark> 4	1.00 [@] 9	662.4+y		Q^{c}
1485.3+y	J+8	431.3 <mark>&</mark> <i>1</i>	0.98 [@] 4	1054.0+y	J+6	Q^{C}
1955.4+y	J+10	470.1 ^{&} 1	1.02 [@] 4	1485.3+y	J+8	Q^{C}
2463.8+y	J+12	508.4 <mark>&</mark> 1	0.97 [@] 6	1955.4+y	J+10	Q^{C}
3009.7+y	J+14	545.9 <mark>&</mark> 2	0.88 [@] 5	2463.8+y	J+12	Q^{C}
3592.1+y	J+16	582.4 <mark>&</mark> 1	0.77 [@] 4	3009.7+y	J+14	Q^{c}
4210.6+y	J+18	618.5 <mark>&</mark> 2	0.73 [@] 10	3592.1+y	J+16	Q^{C}
4864.3+y	J+20	653.7 <mark>&</mark> 2	0.61 [@] 5	4210.6+y	J+18	Q^{C}
5552.6+y	J+22	688.3 <mark>&</mark> 2	0.53 [@] 5	4864.3+y	J+20	Q^{C}
6274.8+y	J+24	722.2 <mark>&</mark> 3	0.34 [@] 5	5552.6+y	J+22	Q^{C}
7030.4+y	J+26	755.6 <mark>&</mark> 3	0.17 [@] 4	6274.8+y	J+24	Q^{C}
7819.2+y	J+28	788.8 <mark>&</mark> 6	0.09 [@] 2	7030.4+y	J+26	
252.4+z	J1+2	252.4 <mark>&</mark> 7		Z	J1≈(21/2)	
545.1+z	J1+4	292.7 <mark>&</mark> 1	0.43 [@] 7	252.4+z	J1+2	
878.2+z	J1+6	333.1 ^{&} 1	0.76 [@] 10	545.1+z	J1+4	
1250.9+z	J1+8	372.7 & 1	1.07 [@] 14	878.2 + z	J1+6	
1662.7+z	J1+10	411.8 ^{&} 2	0.87 [@] 19	1250.9+z	J1+8	
2113.0+z	J1+12	450.3 ^{&} 1	0.97 [@] 13	1662.7+z	J1+10	
2601.1+z	J1+14	488.1 2	0.83 @ 13	2113.0+z	J1+12	
3126.3+z	J1+16	525.2 ^{&} 2	0.57 [@] 16	2601.1+z	J1+14	
3687.9+z	J1+18	561.6 ^{&} 3	0.65 [@] 10	3126.3+z	J1+16	
4285.1+z	J1+20	597.2 <mark>&</mark> 2	0.97 [@] 14	3687.9+z	J1+18	
4917.2+z	J1+22	632.1 ^{&} 2	0.55 [@] 10	4285.1+z	J1+20	
5583.4+z	J1+24	666.2 ^{&} 2	0.53 [@] 6	4917.2+z	J1+22	
6283.3+z	J1+26	699.9 <mark>&</mark> 2	0.40 [@] 8	5583.4+z	J1+24	
7016.0+z	J1+28	732.7 <mark>&</mark> 4		6283.3+z	J1+26	
7781.2+z	J1+30	765.2 ^{&} 4		7016.0+z	J1+28	
8577.7+z	J1+32	796.5 <mark>&</mark> 6		7781.2+z	J1+30	
272.0+u	J2+2	272.0 ^{&} 10	_	u	J2≈(23/2)	
585.1+u	J2+4	313.1 2	0.95 [@] 16	272.0+u	J2+2	
937.6+u	J2+6	352.5 ^{&} 1	0.96 0 16	585.1+u		
1329.1+u	J2+8	391.5 ^{&} 4	1.44 [@] 19	937.6+u	J2+6	
1758.8+u	J2+10	429.7 <mark>&</mark> 1		1329.1+u	J2+8	
2225.9+u	J2+12	467.1 ^{&} 2	1.07 [@] 19	1758.8+u	J2+10	

$\gamma(^{191}\text{Hg})$ (continued)

$E_i(level)$	J_i^{π}	$\mathrm{E}_{\gamma}^{\dagger}$	I_{γ}^{\dagger}	\mathbf{E}_f	\mathbf{J}^{π}_f	$E_i(level)$	\mathbf{J}_i^{π}	$\mathrm{E}_{\gamma}^{\dagger}$	I_{γ}^{\dagger}	E_f	\mathbf{J}_f^{π}
2729.8+u	J2+14	503.9 ^{&} 1	0.78 [@] 14	2225.9+u	J2+12	971.6+v	J3+6	367.1 ^{&} 2	0.80 [@] 12	604.5+v	J3+4
3269.5+u	J2+16	539.7 <mark>&</mark> <i>3</i>	0.70 [@] 10	2729.8+u	J2+14	1381.9+v	J3+8	410.3 <mark>&</mark> 4	0.96 [@] <i>17</i>	971.6+v	J3+6
3844.5+u	J2+18	575.0 <mark>&</mark> 1	0.71 [@] 12	3269.5+u	J2+16	1834.5+v	J3+10	452.6 ^{&} 3	1.04 [@] 15	1381.9+v	J3+8
4454.0+u	J2+20	609.5 <mark>&</mark> 1	0.64 [@] 8	3844.5+u	J2+18	2328.6+v	J3+12	494.1 <mark>&</mark> 2	0.79 [@] 12	1834.5+v	J3+10
5096.7+u	J2+22	642.7 <mark>&</mark> 2	0.50 [@] 5	4454.0+u	J2+20	2864.0+v	J3+14	535.4 <mark>&</mark> <i>3</i>	0.71 [@] 15	2328.6+v	J3+12
5772.8+u	J2+24	676.1 ^{&} 3	0.40 [@] 5	5096.7+u	J2+22	3439.0+v	J3+16	575.0 <mark>&</mark> 4	0.73 [@] 15	2864.0+v	J3+14
6481.3+u	J2+26	708.5 <mark>&</mark> 3	0.33 [@] 6	5772.8+u	J2+24	4053.3+v	J3+18	614.3 <mark>&</mark> 5	0.58 [@] 11	3439.0+v	J3+16
7221.3+u	J2+28	740.0 <mark>&</mark> 3		6481.3+u	J2+26	4704.1+v	J3+20	650.8 <mark>&</mark> 6	0.50 [@] 12	4053.3+v	J3+18
7992.6+u	J2+30	771.3 <mark>&</mark> 3		7221.3+u	J2+28	5391.7+v	J3+22	687.6 <mark>&</mark> 7	0.46 [@] 11	4704.1+v	J3+20
8793.2+u	J2+32	800.5 ^{&} f 10		7992.6+u	J2+30	6114.9+v	J3+24	723.2 <mark>&</mark> 8	0.41 [@] 9	5391.7+v	J3+22
280.9+v	J3+2	280.9 <mark>&</mark> 6	0.22 [@] 5	V	J3≈(25/2)	6870.9+v	J3+26	756.0 <mark>&</mark> 12	0.32 [@] 8	6114.9+v	J3+24
604.5+v	J3+4	323.6 ^{&} 2	0.58 [@] 9	280.9+v	J3+2	7659.9+v	J3+28	789.0 <mark>&</mark> <i>13</i>	0.19 [@] 5	6870.9+v	J3+26

[†] Energies and relative photon branching from (HI,xn γ), except as noted. Some γ rays from ¹⁹¹Tl ε decay with doubtful placement in the adopted level scheme are not included in this list.

[‡] From ¹⁹¹Tl ε decay (5.22 min).

[§] Weighted average of data from (HI,xn γ) and ¹⁹⁴Pt(α ,⁷n γ).

[&]amp; Eγ from (HI,xnγ):SD dataset.

[®] Iy from (HI,xny):SD dataset. Iy are relative values within a SD band. These values were extracted from intensity plots of 1990Ca18 and 1995Ca15.

[#] From ce data in 191 Tl ε decay (5.22 min), unless otherwise specified.

^a From ¹⁹¹Tl ε decay (5.22 min), unless noted otherwise.

^b Also from $\gamma(\theta)$ in $(\alpha, xn\gamma)$ and $(HI, xn\gamma)$ reactions, assuming quadrupole transitions are stretched E2, and dipole transitions are M1+E2 (1975Li16,1974Be11,1986Hu02).

^c From DCO ratios (1989Mo08) in (HI,xn γ):SD.

^d 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.

^e Multiply placed with undivided intensity.

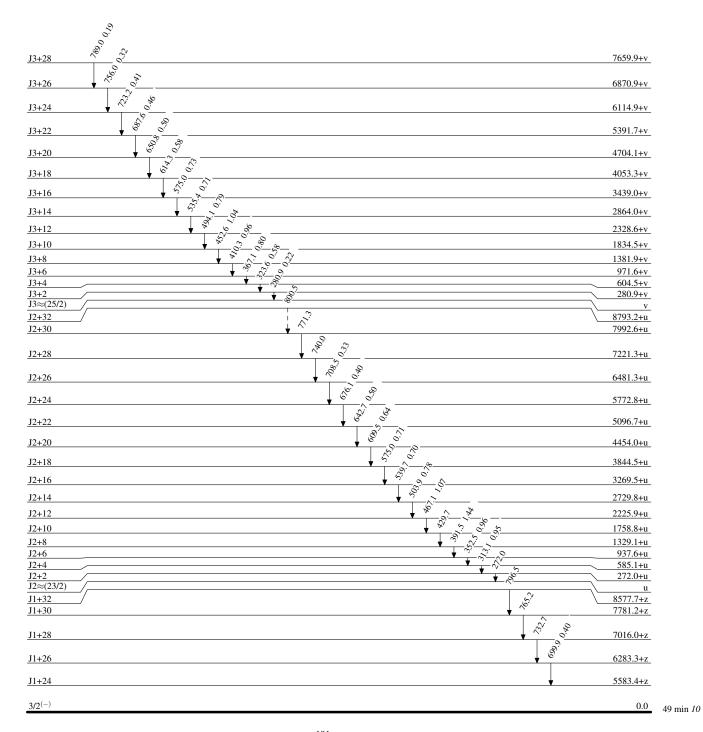
f Placement of transition in the level scheme is uncertain.

Legend

Level Scheme

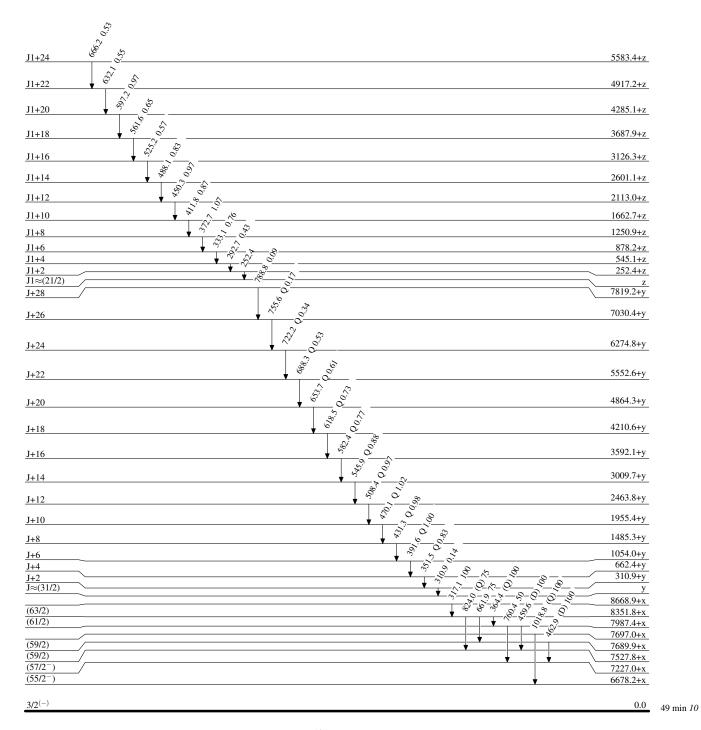
Intensities: Relative photon branching from each level

---- → γ Decay (Uncertain)



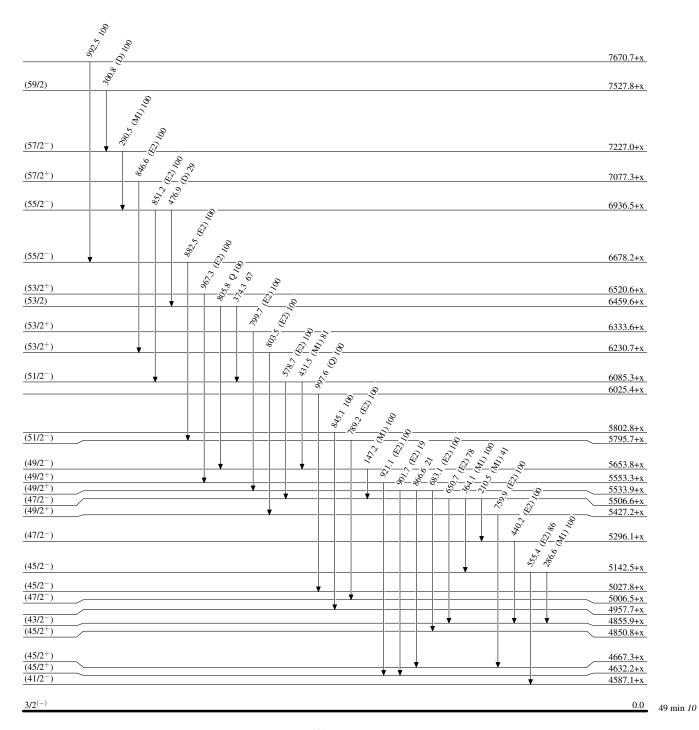
Level Scheme (continued)

Intensities: Relative photon branching from each level



Level Scheme (continued)

Intensities: Relative photon branching from each level

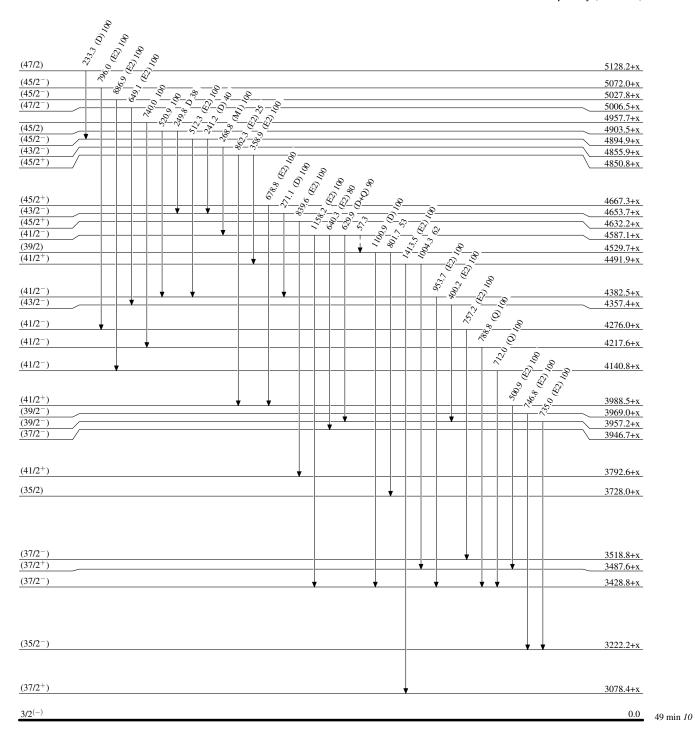


Legend

Level Scheme (continued)

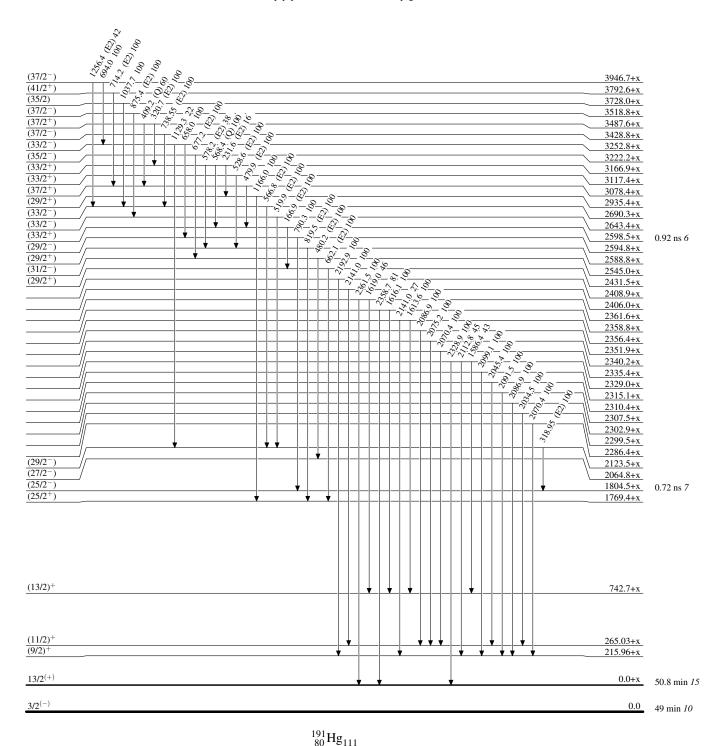
Intensities: Relative photon branching from each level

γ Decay (Uncertain)



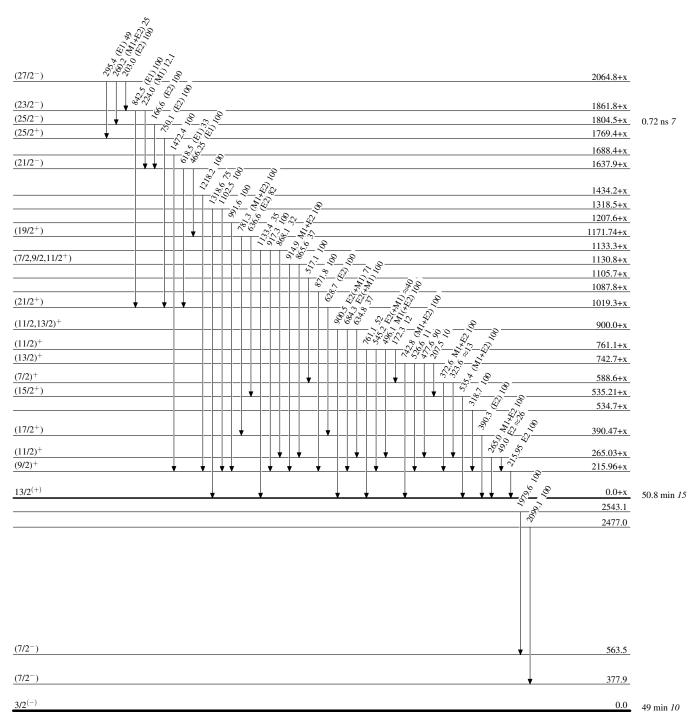
Level Scheme (continued)

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



Level Scheme (continued)

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

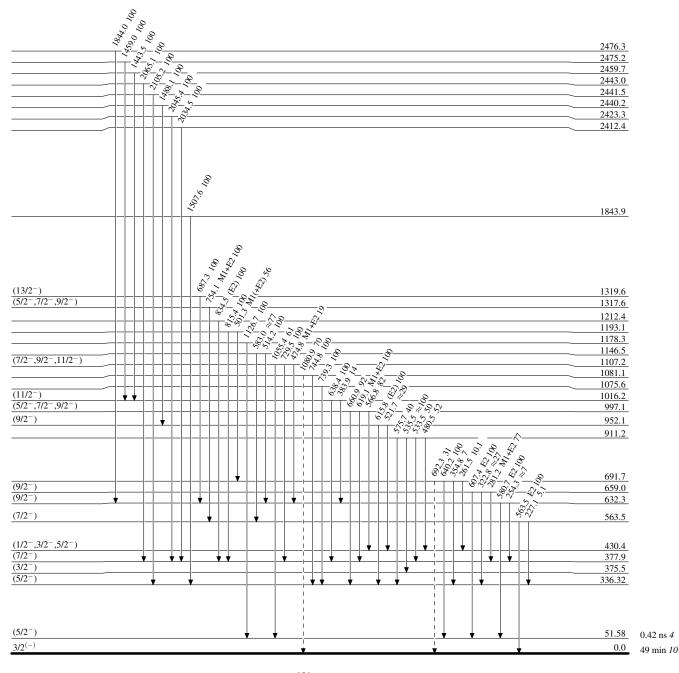


Legend

Level Scheme (continued)

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

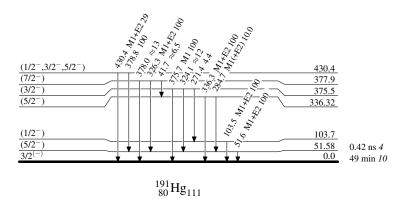
---- γ Decay (Uncertain)

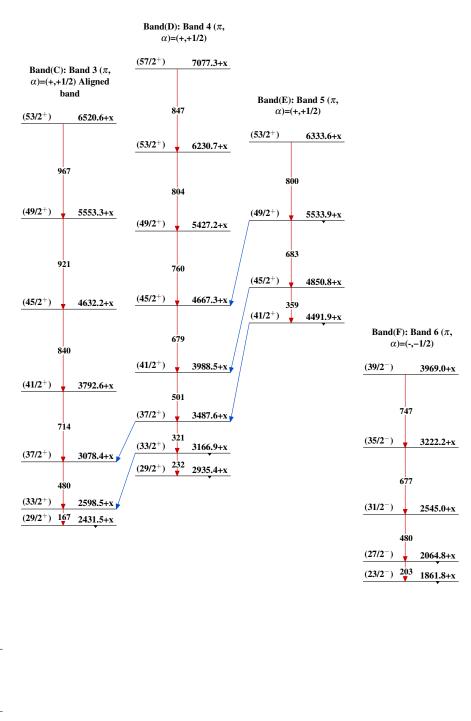


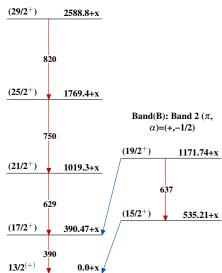
 $^{191}_{80}\mathrm{Hg}_{111}$

Level Scheme (continued)

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

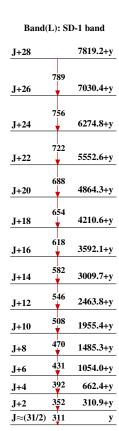


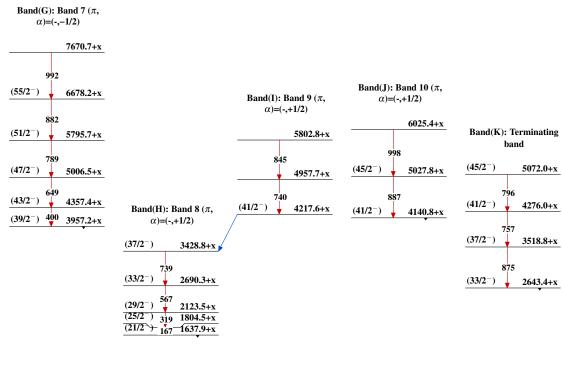




0.0+x

Band(A): Band 1 (π , α)=(+,+1/2) Conf=i13/2





Band(O): SD-4 band Unfavored j15/2 intruder orbitals

J3+28		7659.9+v
J3+26	789	6870.9+v
J3+24	756	6114.9+v
J3+22	723	5391.7+v
J3+20	688	4704.1+v
J3+18	651	4053.3+v
J3+16	614	3439.0+v
J3+14	575	2864.0+v
J3+12 J3+10	535	-2328.6+v -1834.5+v
J3+10	494	1834.5+v 1381.9+v
J3+6 \	453	/971.6+v
J3+4\	410	
J3+2\	367	_√280.9+v
J3≈(2 5/2	281_	v

Band(N): SD-3 band

J2+32		8793.2+u
J2+30	800	7992.6+u
J2+28	771	7221.3+u
J2+26	740	6481.3+u
J2+24	708	5772.8+u
J2+22	676	5096.7+u
J2+20	643	4454.0+u
J2+18	610	3844.5+u
J2+16	575	3269.5+u
J2+14 J2+12	540	2729.8+u 2225.9+u
J2+10	504	1758.8+u
J2+8	467	1329.1+u
J2+6\	430	/937.6+u
J2+4\	392	/ <u>585.1+u</u>
J2+2 \	352 313	—∕ <u>272.0+u</u>
$J2\approx(23/2)$	272_	u

Band(M): SD-2 band Q(intrinsic)≈18 (1990Ca18), 17.5 8 (1998ReZV)

J1+32		8577.7+z
J1+30	796	7781.2+z
J1+28	765	7016.0+z
J1+26	733	6283.3+z
J1+24	700	5583.4+z
J1+22	666	4917.2+z
J1+20	632	4285.1+z
J1+18	597	3687.9+z
J1+16—	<u></u>	−3126.3+z
J1+14	562	_2601.1+z
J1+12	525	2113.0+z
J1+10	488	1662.7+z
J1+8\	450	1250.9+z
J1+6	412	$\sqrt{878.2+z}$
J1+4\	373	$\sqrt{545.1+z}$
J1+2	333	$\sqrt{252.4+z}$
J1≈(2 1/2)	293	
$J_1 \sim (21/2)$	252	_ z

 $^{191}_{80}\mathrm{Hg}_{111}$