^{182}Hg ε decay (10.83 s) 2001Ib02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 130, 21 (2015)	15-Jul-2015

Parent: ^{182}Hg: E=0.0; $J^\pi=0^+$; $T_{1/2}$=10.83 s *6*; Q(ε)=4724 *23*; %ε+%$β^+$ decay=86.2 *9*

^{182}Hg-$T_{1/2}$: From ^{182}Hg Adopted Levels.

^{182}Hg-Q(ε): From 2012Wa38.

^{182}Hg-%ε+%$β^+$ decay: %α=13.8 *9* from ^{182}Hg Adopted Levels.

2001Ib02: measured Eγ, Iγ, γγ, ce, ce(γ)-coin, γγ(t), (ce)(γ)(t) using a Si(Li) electron detector, a coaxial HPGe detector, a planar HPGe X-ray detector and a large Ge detector.

Others: 1974Ca28, 1970FiZZ. All the ten γ rays from 103.5 to 542.9 keV reported by 1974Ca28 are confirmed by 2001Ib02.

^{182}Hg α decay has been studied by 1993Wa03 and three α groups deexciting to g.s.; 171, 2^+ and 422, 0^+ levels in ^{178}Pt are reported at 5867 *5*, 5689 *7*, 5446 *7*.

^{182}Au Levels

E(level)†	J^π‡	$T_{1/2}$	Comments
0.0	(2^+)		
25.60 *10*	$(\leq 3)^{(+)}$		
62.90 *10*	$(1^+,2^+)$		
98.97 *10*	(1^+)		
100.71 *12*	$(0^+,1^+,2^+)$		J^π: 2001Ib02 give $1^+,2^+$.
127.00 *11*	$(1^+,2^+)$		
129.49 *7*	$(1^-,2^-)$	≤50 ns	$T_{1/2}$: from γγ(t) or (ce)(γ)(t) (2001Ib02).
273.51 *7*	$(1^-,2^-)$		
308.97 *14*	$(\leq 3)^{(-)}$		
325.40 *9*	$(0^-,1^-,2^-)$		
339.30 *10*	(1^+)		
362.69 *13*	(1^+)		
482.01 *12*	$(0^+,1^+,2^+)$		
543.00 *7*	(1^+)		

† From least-squares fit to Eγ data.

‡ From Adopted Levels.

ε,$β^+$ radiations

E(decay)	E(level)	Iβ+ ‡	Iε‡	Log *ft*†	I(ε+β+)†‡	Comments
(4181 *23*)	543.00	16 *2*	35 *4*	≈4.2	51 *5*	av Eβ=1425 *10*; εK=0.554 *4*; εL=0.0960 *7*; εM+=0.03069 *21* I(ε+β+): 55 *9* (2001Ib02).
(4361 *23*)	362.69	3.9 *4*	7.0 *6*	≈4.9	10.9 *10*	av Eβ=1506 *10*; εK=0.525 *4*; εL=0.0908 *7*; εM+=0.02902 *21* I(ε+β+): 12.1 *16* (2001Ib02).
(4385 *23*)	339.30	2.3 *3*	4.1 *4*	≈5.2	6.4 *7*	av Eβ=1517 *10*; εK=0.521 *4*; εL=0.0901 *7*; εM+=0.02881 *21* I(ε+β+): 7.2 *16* (2001Ib02).
(4415 *23*)	308.97	0.80 *15*	1.4 *3*	≈5.6	2.2 *4*	av Eβ=1531 *10*; εK=0.516 *4*; εL=0.0892 *7*; εM+=0.02853 *21* I(ε+β+): 2.5 *16* (2001Ib02).
(4595 *23*)	129.49	5.2 *12*	7.8 *18*	≈4.9	13 *3*	av Eβ=1612 *10*; εK=0.488 *4*; εL=0.0842 *7*; εM+=0.02691 *20* I(ε+β+): 14 *13* (2001Ib02).
(4625 *23*)	98.97	2.8 *4*	4.2 *7*	≈5.2	7.0 *11*	av Eβ=1626 *10*; εK=0.483 *4*; εL=0.0833 *6*; εM+=0.02664

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^{182}Hg ε decay (10.83 s) 2001Ib02 (continued)

ε,β+ radiations (continued)

E(decay)	E(level)	Comments
		20 I(ε+β+): 7 *2* (2001Ib02).

† The values given here are considered by the evaluators as apparent ε+β+ feedings due to a large energy gap of about 4 MeV between the Q(ε) value and the uppermost known level at 543. The associated log *ft* values should be considered as approximate. The ε+β+ feedings quoted by 2001Ib02 in their table 2 are consistently higher than the values given here since 2001Ib02 did not take into account the 15% α decay branch of ^{182}Hg decay.

‡ For absolute intensity per 100 decays, multiply by 1.001 *11*.

γ(^{182}Au)

Iγ normalization: I(γ+ce)(γ rays to g.s.)=100.

E_γ	I_γ#	E_i(level)	J_i^π	E_f	J_f^π	Mult.†	α‡	$I_{(\gamma+ce)}$#	Comments
25.6 *1*	0.5 *2*	25.60	$(\leq 3)^{(+)}$	0.0	(2^+)	[M1]	71.1 *13*	38 *15*	ce(L)/(γ+ce)=0.757 *10*; ce(M)/(γ+ce)=0.176 *4* ce(N)/(γ+ce)=0.0439 *11*; ce(O)/(γ+ce)=0.00806 *21*; ce(P)/(γ+ce)=0.000544 *14* α(L)=54.6 *10*; α(M)=12.70 *24* α(N)=3.17 *6*; α(O)=0.582 *11*; α(P)=0.0392 *8*
30.5 *1*	3.7 *7*	129.49	$(1^-,2^-)$	98.97	(1^+)	[E1]	2.09 *4*	11.5 *21*	ce(L)/(γ+ce)=0.518 *6*; ce(M)/(γ+ce)=0.1238 *23* ce(N)/(γ+ce)=0.0296 *6*; ce(O)/(γ+ce)=0.00464 *10*; ce(P)/(γ+ce)=0.0001264 *25* α(L)=1.60 *3*; α(M)=0.382 *7* α(N)=0.0915 *16*; α(O)=0.01432 *24*; α(P)=0.000390 *6*
37.8 *1*	0.4 *2*	100.71	$(0^+,1^+,2^+)$	62.90	$(1^+,2^+)$	[M1]	22.5	11 *5*	ce(L)/(γ+ce)=0.736 *8*; ce(M)/(γ+ce)=0.171 *4* ce(N)/(γ+ce)=0.0426 *10*; ce(O)/(γ+ce)=0.00782 *18*; ce(P)/(γ+ce)=0.000528 *12* α(L)=17.3 *3*; α(M)=4.01 *7* α(N)=0.999 *16*; α(O)=0.184 *3*; α(P)=0.01238 *20*
51.9 *1*	3.5 *2*	325.40	$(0^-,1^-,2^-)$	273.51	$(1^-,2^-)$	M1	8.83	36 *3*	α(L1)exp=5 ce(L)/(γ+ce)=0.690 *7*; ce(M)/(γ+ce)=0.160 *3* ce(N)/(γ+ce)=0.0399 *8*; ce(O)/(γ+ce)=0.00734 *15*; ce(P)/(γ+ce)=0.000495 *10* α(L)=6.79 *11*; α(M)=1.575 *24* α(N)=0.392 *6*; α(O)=0.0721 *11*; α(P)=0.00487 *8*
61.0 *1*	1.4 *7*	543.00	(1^+)	482.01	$(0^+,1^+,2^+)$	[M1]	5.50	9.4 *47*	ce(L)/(γ+ce)=0.650 *7*; ce(M)/(γ+ce)=0.151 *3* ce(N)/(γ+ce)=0.0376 *8*; ce(O)/(γ+ce)=0.00691 *14*;

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^{182}Hg ε decay (10.83 s) 2001Ib02 (continued)

γ(^{182}Au) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[‡]	$I_{(\gamma+ce)}$[#]	Comments
									ce(P)/(γ+ce)=0.000466 *9* α(L)=4.22 *7*; α(M)=0.981 *15* α(N)=0.244 *4*; α(O)=0.0449 *7*; α(P)=0.00303 *5*
62.9 *1*	6.0 *30*	62.90	(1$^+$,2$^+$)	0.0	(2$^+$)	[M1]	5.03	37 *18*	ce(L)/(γ+ce)=0.641 *6*; ce(M)/(γ+ce)=0.149 *3* ce(N)/(γ+ce)=0.0371 *7*; ce(O)/(γ+ce)=0.00681 *13*; ce(P)/(γ+ce)=0.000460 *9* α(L)=3.86 *6*; α(M)=0.896 *14* α(N)=0.223 *4*; α(O)=0.0411 *6*; α(P)=0.00277 *4*
64.1 *2*	3.2 *16*	127.00	(1$^+$,2$^+$)	62.90	(1$^+$,2$^+$)	[M1]	4.76 *8*	19 *9*	ce(L)/(γ+ce)=0.635 *7*; ce(M)/(γ+ce)=0.147 *3* ce(N)/(γ+ce)=0.0367 *8*; ce(O)/(γ+ce)=0.00675 *15*; ce(P)/(γ+ce)=0.000455 *10* α(L)=3.65 *7*; α(M)=0.848 *15* α(N)=0.211 *4*; α(O)=0.0388 *7*; α(P)=0.00262 *5*
98.9 *2*	4.2 *2*	98.97	(1$^+$)	0.0	(2$^+$)	[M1]	7.49	37 *2*	ce(K)/(γ+ce)=0.724 *7*; ce(L)/(γ+ce)=0.1219 *23*; ce(M)/(γ+ce)=0.0283 *6* ce(N)/(γ+ce)=0.00705 *15*; ce(O)/(γ+ce)=0.00130 *3*; ce(P)/(γ+ce)=8.75×10^{-5} *18* α(K)=6.14 *10*; α(L)=1.035 *16*; α(M)=0.240 *4* α(N)=0.0599 *9*; α(O)=0.01100 *17*; α(P)=0.000742 *12*
103.9 *2*	23 *2*	129.49	(1$^-$,2$^-$)	25.60	(≤3)$^{(+)}$	E1	0.377	32 *3*	α(L3)exp<1.9×10^{-2}; α(L1)exp+α(L2)exp<8×10^{-2} ce(K)/(γ+ce)=0.220 *3*; ce(L)/(γ+ce)=0.0415 *7*; ce(M)/(γ+ce)=0.00966 *15* ce(N)/(γ+ce)=0.00236 *4*; ce(O)/(γ+ce)=0.000407 *7*; ce(P)/(γ+ce)=1.82×10^{-5} *3* α(K)=0.303 *5*; α(L)=0.0571 *9*; α(M)=0.01331 *20* α(N)=0.00326 *5*; α(O)=0.000560 *9*; α(P)=2.51×10^{-5} *4*
127.0 *3*	1.2 *6*	127.00	(1$^+$,2$^+$)	0.0	(2$^+$)	(M1)	3.66	6 *3*	ce(K)/(γ+ce)=0.645 *6*; ce(L)/(γ+ce)=0.1081 *20*; ce(M)/(γ+ce)=0.0251 *5* ce(N)/(γ+ce)=0.00625 *13*; ce(O)/(γ+ce)=0.001149 *23*; ce(P)/(γ+ce)=7.75×10^{-5} *16* α(K)=3.01 *5*; α(L)=0.504 *8*; α(M)=0.1169 *19* α(N)=0.0291 *5*; α(O)=0.00536 *9*; α(P)=0.000362 *6* Mult.: possible assignment from intensity balance.
129.5 *1*	100	129.49	(1$^-$,2$^-$)	0.0	(2$^+$)	E1	0.216	122	α(M)exp=7.7×10^{-3} ce(K)/(γ+ce)=0.1437 *18*;

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^{182}Hg ε decay (10.83 s) 2001Ib02 (continued)

γ(^{182}Au) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[‡]	$I_{(\gamma+ce)}$[#]	Comments
									ce(L)/(γ+ce)=0.0260 *4*; ce(M)/(γ+ce)=0.00604 *9* ce(N)/(γ+ce)=0.001481 *22*; ce(O)/(γ+ce)=0.000257 *4*; ce(P)/(γ+ce)=1.226×10^{-5} *18* α(K)=0.1747 *25*; α(L)=0.0316 *5*; α(M)=0.00734 *11* α(N)=0.00180 *3*; α(O)=0.000313 *5*; α(P)=1.491×10^{-5} *21* K/L=5.1.
144.0 *2*	6.7 *10*	273.51	(1$^-$,2$^-$)	129.49	(1$^-$,2$^-$)	M1	2.56	24 *4*	α(K)exp=2.1 ce(K)/(γ+ce)=0.591 *5*; ce(L)/(γ+ce)=0.0988 *17*; ce(M)/(γ+ce)=0.0229 *4* ce(N)/(γ+ce)=0.00571 *11*; ce(O)/(γ+ce)=0.001050 *19*; ce(P)/(γ+ce)=7.09×10^{-5} *13* α(K)=2.10 *3*; α(L)=0.352 *6*; α(M)=0.0816 *12* α(N)=0.0203 *3*; α(O)=0.00374 *6*; α(P)=0.000253 *4*
173.1 *2*	6.6 *4*	482.01	(0$^+$,1$^+$,2$^+$)	308.97	(≤3)$^{(-)}$	E1	0.1035	7.3 *5*	α(K)exp<0.15 ce(K)/(γ+ce)=0.0766 *11*; ce(L)/(γ+ce)=0.01324 *19*; ce(M)/(γ+ce)=0.00307 *5* ce(N)/(γ+ce)=0.000756 *11*; ce(O)/(γ+ce)=0.0001329 *20*; ce(P)/(γ+ce)=6.81×10^{-6} *10* α(K)=0.0845 *12*; α(L)=0.01461 *21*; α(M)=0.00339 *5* α(N)=0.000834 *12*; α(O)=0.0001466 *21*; α(P)=7.51×10^{-6} *11* K/L>5.3.
179.5 *2*	3.1 *2*	308.97	(≤3)$^{(-)}$	129.49	(1$^-$,2$^-$)	M1+E2	0.96 *42*	7.4 *5*	α(K)exp=0.75 ce(K)/(γ+ce)=0.34 *16*; ce(L)/(γ+ce)=0.11 *3*; ce(M)/(γ+ce)=0.0272 *75* ce(N)/(γ+ce)=0.0067 *19*; ce(O)/(γ+ce)=0.0012 *3*; ce(P)/(γ+ce)=4.0×10^{-5} *30* α(K)=0.68 *46*; α(L)=0.22 *3*; α(M)=0.053 *10* α(N)=0.0132 *23*; α(O)=0.0023 *3*; α(P)=7.9×10^{-5} *57* α: for δ(E2/M1)=1.0.
180.3 *3*	0.7 *2*	543.00	(1$^+$)	362.69	(1$^+$)	[M1]	1.358	1.6 *4*	ce(K)/(γ+ce)=0.473 *5*; ce(L)/(γ+ce)=0.0789 *13*; ce(M)/(γ+ce)=0.0183 *3* ce(N)/(γ+ce)=0.00456 *8*; ce(O)/(γ+ce)=0.000838 *15*; ce(P)/(γ+ce)=5.66×10^{-5} *10* α(K)=1.116 *17*; α(L)=0.186 *3*; α(M)=0.0431 *7*

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^{182}Hg ε decay (10.83 s) 2001Ib02 (continued)

γ(^{182}Au) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[‡]	$I_{(\gamma+ce)}$[#]	Comments
									α(N)=0.01075 *16*; α(O)=0.00198 *3*; α(P)=0.0001335 *20*
182.0 *2*	6.7 *5*	308.97	(≤3)$^{(-)}$	127.00	(1$^+$,2$^+$)	E1	0.0912	7.3 *6*	ce(K)/(γ+ce)=0.0683 *9*; ce(L)/(γ+ce)=0.01175 *17*; ce(M)/(γ+ce)=0.00272 *4* ce(N)/(γ+ce)=0.000670 *10*; ce(O)/(γ+ce)=0.0001180 *17*; ce(P)/(γ+ce)=6.12×10^{-6} *9* α(K)=0.0746 *11*; α(L)=0.01282 *19*; α(M)=0.00297 *5* α(N)=0.000732 *11*; α(O)=0.0001288 *19*; α(P)=6.68×10^{-6} *10*
195.9 *2*	4.5 *5*	325.40	(0$^-$,1$^-$,2$^-$)	129.49	(1$^-$,2$^-$)		≈6.0	≈30	α(K)exp: ≈ 0.1, K/L>6.4. α(K)exp=4.5 Mult.: E0+M1 or abnormal M1; K/L=4.8.
203.7 *1*	1.0 *2*	543.00	(1$^+$)	339.30	(1$^+$)	(M1)	0.965	2.0 *4*	α(K)exp=1.6; α(L1)exp=0.3 ce(K)/(γ+ce)=0.404 *4*; ce(L)/(γ+ce)=0.0671 *10*; ce(M)/(γ+ce)=0.01557 *24* ce(N)/(γ+ce)=0.00388 *6*; ce(O)/(γ+ce)=0.000714 *12*; ce(P)/(γ+ce)=4.82×10^{-5} *8* α(K)=0.794 *12*; α(L)=0.1320 *19*; α(M)=0.0306 *5* α(N)=0.00762 *11*; α(O)=0.001402 *20*; α(P)=9.48×10^{-5} *14* K/L=4.5.
212.3 *2*	5.7 *5*	339.30	(1$^+$)	127.00	(1$^+$,2$^+$)	M1	0.860	10.8 *10*	α(K)exp=0.8; α(L1)exp=0.16 ce(K)/(γ+ce)=0.380 *4*; ce(L)/(γ+ce)=0.0632 *10*; ce(M)/(γ+ce)=0.01465 *23* ce(N)/(γ+ce)=0.00365 *6*; ce(O)/(γ+ce)=0.000671 *11*; ce(P)/(γ+ce)=4.54×10^{-5} *8* α(K)=0.707 *10*; α(L)=0.1175 *17*; α(M)=0.0273 *4* α(N)=0.00679 *10*; α(O)=0.001249 *18*; α(P)=8.44×10^{-5} *12* a(Ll)=0.16.
217.6 *1*	62 *5*	543.00	(1$^+$)	325.40	(0$^-$,1$^-$,2$^-$)	E1	0.0585	66 *6*	α(K)exp=0.03 ce(K)/(γ+ce)=0.0453 *6*; ce(L)/(γ+ce)=0.00763 *11*; ce(M)/(γ+ce)=0.001767 *25* ce(N)/(γ+ce)=0.000436 *7*; ce(O)/(γ+ce)=7.72×10^{-5} *11*; ce(P)/(γ+ce)=4.15×10^{-6} *6* α(K)=0.0480 *7*; α(L)=0.00808 *12*; α(M)=0.00187 *3* α(N)=0.000461 *7*; α(O)=8.17×10^{-5} *12*; α(P)=4.40×10^{-6} *7*
233.2 *3*	7.9 *3*	362.69	(1$^+$)	129.49	(1$^-$,2$^-$)	(E1)	0.0493	8.3 *3*	α(K)exp=0.1 ce(K)/(γ+ce)=0.0386 *6*; ce(L)/(γ+ce)=0.00645 *10*;

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^{182}Hg ε decay (10.83 s) 2001Ib02 (continued)

γ(^{182}Au) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[‡]	$I_{(\gamma+ce)}$[#]	Comments
									ce(M)/(γ+ce)=0.001494 *22* ce(N)/(γ+ce)=0.000368 *6*; ce(O)/(γ+ce)=6.54×10^{-5} *10*; ce(P)/(γ+ce)=3.57×10^{-6} *6* α(K)=0.0405 *6*; α(L)=0.00677 *10*; α(M)=0.001568 *23* α(N)=0.000387 *6*; α(O)=6.86×10^{-5} *10*; α(P)=3.75×10^{-6} *6*
235.7 *1*	11.8 *5*	362.69	(1$^+$)	127.00	(1$^+$,2$^+$)	M1	0.644	19.7 *10*	α(K)exp=0.58 ce(K)/(γ+ce)=0.322 *4*; ce(L)/(γ+ce)=0.0534 *8*; ce(M)/(γ+ce)=0.01238 *19* ce(N)/(γ+ce)=0.00309 *5*; ce(O)/(γ+ce)=0.000568 *9*; ce(P)/(γ+ce)=3.84×10^{-5} *6* α(K)=0.529 *8*; α(L)=0.0878 *13*; α(M)=0.0204 *3* α(N)=0.00507 *8*; α(O)=0.000933 *14*; α(P)=6.31×10^{-5} *9*
240.4 *3*	1.3 *2*	339.30	(1$^+$)	98.97	(1$^+$)	[M1]	0.610	2.0 *3*	ce(K)/(γ+ce)=0.312 *4*; ce(L)/(γ+ce)=0.0516 *8*; ce(M)/(γ+ce)=0.01197 *19* ce(N)/(γ+ce)=0.00298 *5*; ce(O)/(γ+ce)=0.000549 *9*; ce(P)/(γ+ce)=3.71×10^{-5} *6* α(K)=0.501 *8*; α(L)=0.0831 *12*; α(M)=0.0193 *3* α(N)=0.00480 *7*; α(O)=0.000883 *13*; α(P)=5.97×10^{-5} *9*
248.0 *2*	6.1 *2*	273.51	(1$^-$,2$^-$)	25.60	(≤3)$^{(+)}$	(E1)	0.0425	6.4 *2*	α(M1)exp=5.8×10^{-3} ce(K)/(γ+ce)=0.0335 *5*; ce(L)/(γ+ce)=0.00556 *8*; ce(M)/(γ+ce)=0.001287 *19* ce(N)/(γ+ce)=0.000317 *5*; ce(O)/(γ+ce)=5.65×10^{-5} *8*; ce(P)/(γ+ce)=3.12×10^{-6} *5* α(K)=0.0349 *5*; α(L)=0.00580 *9*; α(M)=0.001342 *19* α(N)=0.000331 *5*; α(O)=5.88×10^{-5} *9*; α(P)=3.25×10^{-6} *5* K/L>2.2.
269.5 *1*	8.2 *3*	543.00	(1$^+$)	273.51	(1$^-$,2$^-$)	E1	0.0347	8.5 *3*	α(L1)exp<0.017 ce(K)/(γ+ce)=0.0276 *4*; ce(L)/(γ+ce)=0.00455 *7*; ce(M)/(γ+ce)=0.001053 *15* ce(N)/(γ+ce)=0.000260 *4*; ce(O)/(γ+ce)=4.63×10^{-5} *7*; ce(P)/(γ+ce)=2.60×10^{-6} *4* α(K)=0.0286 *4*; α(L)=0.00471 *7*; α(M)=0.001089 *16* α(N)=0.000269 *4*; α(O)=4.79×10^{-5} *7*; α(P)=2.69×10^{-6} *4* K/L=6.6 ≈
273.5 *1*	15.7 *3*	273.51	(1$^-$,2$^-$)	0.0	(2$^+$)	E1	0.0335	16.2 *3*	α(L1)exp<1.6×10^{-2}

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^{182}Hg ε decay (10.83 s) 2001Ib02 (continued)

γ(^{182}Au) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[‡]	$I_{(\gamma+ce)}$[#]	Comments
									ce(K)/(γ+ce)=0.0267 *4*; ce(L)/(γ+ce)=0.00440 *7*; ce(M)/(γ+ce)=0.001016 *15* ce(N)/(γ+ce)=0.000251 *4*; ce(O)/(γ+ce)=4.47×10^{-5} *7*; ce(P)/(γ+ce)=2.52×10^{-6} *4* α(K)=0.0276 *4*; α(L)=0.00454 *7*; α(M)=0.001050 *15* α(N)=0.000259 *4*; α(O)=4.62×10^{-5} *7*; α(P)=2.60×10^{-6} *4* K/L≥6.
339.3 *2*	8.6 *2*	339.30	(1$^+$)	0.0	(2$^+$)	M1	0.238	10.7 *3*	α(K)exp=0.12 ce(K)/(γ+ce)=0.1582 *19*; ce(L)/(γ+ce)=0.0260 *4*; ce(M)/(γ+ce)=0.00603 *9* ce(N)/(γ+ce)=0.001502 *22*; ce(O)/(γ+ce)=0.000276 *4*; ce(P)/(γ+ce)=1.87×10^{-5} *3* α(K)=0.196 *3*; α(L)=0.0322 *5*; α(M)=0.00746 *11* α(N)=0.00186 *3*; α(O)=0.000342 *5*; α(P)=2.32×10^{-5} *4* K/L=6.1.
362.7 *3*	8.5 *2*	362.69	(1$^+$)	0.0	(2$^+$)	M1	0.199	10.2 *2*	α(K)exp=0.17 ce(K)/(γ+ce)=0.1365 *17*; ce(L)/(γ+ce)=0.0224 *4*; ce(M)/(γ+ce)=0.00519 *8* ce(N)/(γ+ce)=0.001293 *19*; ce(O)/(γ+ce)=0.000238 *4*; ce(P)/(γ+ce)=1.615×10^{-5} *24* α(K)=0.1637 *24*; α(L)=0.0269 *4*; α(M)=0.00622 *9* α(N)=0.001550 *22*; α(O)=0.000285 *4*; α(P)=1.94×10^{-5} *3*
413.5 *1*	52 *5*	543.00	(1$^+$)	129.49	(1$^-$,2$^-$)	E1	0.01293	53 *5*	α(K)exp=0.016 ce(K)/(γ+ce)=0.01059 *15*; ce(L)/(γ+ce)=0.001677 *24*; ce(M)/(γ+ce)=0.000386 *6* ce(N)/(γ+ce)=9.55×10^{-5} *14*; ce(O)/(γ+ce)=1.721×10^{-5} *25*; ce(P)/(γ+ce)=1.037×10^{-6} *15* α(K)=0.01073 *15*; α(L)=0.001698 *24*; α(M)=0.000391 *6* α(N)=9.68×10^{-5} *14*; α(O)=1.743×10^{-5} *25*; α(P)=1.050×10^{-6} *15*
442.3 *2*	7.1 *2*	543.00	(1$^+$)	100.71	(0$^+$,1$^+$,2$^+$)	M1	0.1169	8.0 *3*	α(K)exp=0.11 ce(K)/(γ+ce)=0.0863 *12*; ce(L)/(γ+ce)=0.01410 *20*; ce(M)/(γ+ce)=0.00326 *5* ce(N)/(γ+ce)=0.000813 *12*; ce(O)/(γ+ce)=0.0001496 *22*; ce(P)/(γ+ce)=1.017×10^{-5} *15* α(K)=0.0964 *14*; α(L)=0.01575 *23*; α(M)=0.00364 *6*

Continued on next page (footnotes at end of table)

^{182}Hg ε decay (10.83 s) 2001Ib02 (continued)

γ(^{182}Au) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[‡]	$I_{(\gamma+ce)}$[#]	Comments
									α(N)=0.000908 *13*; α(O)=0.0001671 *24*; α(P)=1.136×10^{-5} *16*
480.0 *3*	9.9 *5*	543.00	(1$^+$)	62.90	(1$^+$,2$^+$)	M1	0.0942	10.9 *6*	α(K)exp=0.095 ce(K)/(γ+ce)=0.0710 *10*; ce(L)/(γ+ce)=0.01157 *17*; ce(M)/(γ+ce)=0.00268 *4* ce(N)/(γ+ce)=0.000667 *10*; ce(O)/(γ+ce)=0.0001227 *18*; ce(P)/(γ+ce)=8.35×10^{-6} *12* α(K)=0.0777 *11*; α(L)=0.01266 *18*; α(M)=0.00293 *5* α(N)=0.000729 *11*; α(O)=0.0001343 *19*; α(P)=9.14×10^{-6} *13*
543.0 *2*	6.4 *4*	543.00	(1$^+$)	0.0	(2$^+$)	M1	0.0681	10.9 *7*	α(K)exp=0.055 ce(K)/(γ+ce)=0.0526 *7*; ce(L)/(γ+ce)=0.00854 *12*; ce(M)/(γ+ce)=0.00198 *3* ce(N)/(γ+ce)=0.000492 *7*; ce(O)/(γ+ce)=9.06×10^{-5} *13*; ce(P)/(γ+ce)=6.17×10^{-6} *9* α(K)=0.0562 *8*; α(L)=0.00912 *13*; α(M)=0.00211 *3* α(N)=0.000525 *8*; α(O)=9.67×10^{-5} *14*; α(P)=6.59×10^{-6} *10*

[†] From ce data (2001Ib02).
[‡] From BrIcc v2.3b (16-Dec-2014) 2008Ki07, "Frozen Orbitals" appr.
[#] For absolute intensity per 100 decays, multiply by 0.30 *3*.

^{182}Hg ε decay (10.83 s) 2001Ib02

Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$