^{193}Au ε decay (17.65 h) 1968Sv01,1970Pl02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 143, 1 (2017)	31-Mar-2017

Parent: ^{193}Au: E=0.0; $J^{\pi}=3/2^{+}$; $T_{1/2}$=17.65 h *15*; Q(ε)=1075 *9*; %ε+%β^{+} decay=100.0

1970Pl02: sources from spallation of Pb by 680-MeV protons, chem; measured Eγ, Iγ (Ge(Li)).

1968Sv01: sources from Pt(p,xn), E(p)=35 MeV; measured E(ce), Ice (mag spect). (preliminary report 1967Jo14).

1957Ew34: measured γγ, ceγ.

Others: 1954Gi04, 1962Ma18, 1976Di15, 1976ViZM.

^{193}Pt Levels

E(level)†	J^{π}†	$T_{1/2}$	Comments
0.0	1/2$^-$	50 y *6*	$T_{1/2}$: From Adopted Levels.
1.642 *2*	3/2$^-$	9.7 ns *3*	$T_{1/2}$: (ce)(ce)(t) with metallic gold source; $T_{1/2}$ is 4% longer when measured with a gold chloride source (1968Ma51). See 1977Do07 for a discussion of this and related phenomena.
14.276 *8*	5/2$^-$	2.52 ns *5*	$T_{1/2}$: (ce)(ce)(t) (1968Ma51). Other value: 2.2 ns *8* (1957Ew34).
114.158 *8*	3/2$^-$		
121.29 *3*	1/2$^-$,3/2$^-$,5/2$^-$		
187.81 *2*	3/2$^-$		
232.16 *2*	(5/2)$^-$		
269.83 *2*	(3/2)$^-$		
439.05 *3*	(3/2)$^-$		
491.24 *2*	(5/2)$^-$		
522.53 *7*	(3/2$^-$,5/2$^-$)		

† From Adopted Levels.

ε,β^{+} radiations

1976Di15 report two β^{+} groups with E(max.)=320 *30* and 150 *20*. The higher group gives Q+=1340 *30*, inconsistent with the adjusted Q+=1075 *9* from 2017Wa10. However, since the observed groups are inner groups in the FK plot in a combined β^{+} spectrum from ^{193}Hg + ^{193}Au decay, it is possible that the energy and/or the nuclear assignment of these groups could be in error.

No $\gamma^{\pm}$ seen, Iβ^{+}<0.08% (1957Ew34).

E(decay)	E(level)	Iε#	Log *ft*	I(ε+β^{+})†#	Comments
(552 *9*)	522.53	0.51 *10*	7.89 *9*	0.51 *10*	εK=0.7789 *9*; εL=0.1664 *6*; εM+=0.05464 *23*
(584 *9*)	491.24	2.7 *4*	7.22 *7*	2.7 *4*	εK=0.7816 *8*; εL=0.1645 *6*; εM+=0.05391 *21*
(636 *9*)	439.05	3.7 *5*	7.17 *6*	3.7 *5*	εK=0.7853 *6*; εL=0.1618 *5*; εM+=0.05287 *17*
(805 *9*)	269.83	15.7 *20*	6.77 *6*	15.7 *20*	εK=0.7937 *4*; εL=0.15579 *25*; εM+=0.05053 *10*
(843 *9*)	232.16	3.8 *7*	7.43 *8*	3.8 *7*	εK=0.7950 *4*; εL=0.15481 *23*; εM+=0.05015 *9*
(887 *9*)	187.81	26 *4*	6.64 *7*	26 *4*	εK=0.7965 *3*; εL=0.15377 *21*; εM+=0.04975 *8*
(954 *9*)	121.29	0.6 *3*	8.34 *22*	0.6 *3*	εK=0.7984 *3*; εL=0.15241 *18*; εM+=0.04923 *7*
(961 *9*)	114.158	12.4 *18*	7.03 *7*	12.4 *18*	εK=0.7985 *3*; εL=0.15228 *17*; εM+=0.04917 *7*
(1061 *9*)	14.276	20 *4*	6.92 *9*	20 *4*	εK=0.8009 *2*; εL=0.1506 *2*; εM+=0.04853 *6*
(1073 *9*)	1.642			‡	
(1075 *9*)	0.0	15 *6*	7.06 *18*	15‡ *6*	εK=0.8011 *2*; εL=0.1504 *2*; εM+=0.04845 *5*

† From intensity imbalance at each level.

‡ Iε given for 0.0 level is a combined value for the 0.0 and 1.6 levels.

\# Absolute intensity per 100 decays.

γ(^{193}Pt)

Iγ normalization: 1957Ew34 report %I(γ+ce) for several γ rays based on K conversion electron measurements per disintegration. Using %Ti(186.17γ)=21.3 and %Ti(173.52γ)=6.1, the evaluator deduced the normalization factor as an average. Mean number of K conversions per disintegration of ^{193}Au, 0.29 *3* (assuming ε(K)/ε=0.80), measured by 1957Ew34 is also used to obtain intensity per disintegration for relative conversion electron intensity reported in 1968Sv01 (in comments section).

All ce data are from 1968Sv01.

Unassigned ce-line: E(ce)=137.54 *10* Ice=0.8 *2* % of the 268 K ce intensity (1968Sv01).

E_γ[†]	I_γ[‡b]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[#a]	α[&]	$I_{(\gamma+ce)}$[b]	Comments
1.642 *2*		1.642	3/2⁻	0.0	1/2⁻	M1		3116		Mult.: N1/N2=5.5 *15*, N2/N3>3, N1/O1=1.5 *5* (1968Sv01). α: From BRICC. Others: 12000 (1991Ba63), 4010 (1978Ro21).
12.634 *8*	8.9 *11*	14.276	5/2⁻	1.642	3/2⁻	M1+E2	0.015 *+3−4*	142 *8*		α(L)=14.0 *45*; α(M)=99 *3* α(N)=24.4 *6*; α(O)=4.35 *10*; α(P)=0.281 *4* I_γ: Deduced from Ice(M1)=2550 *330* (1968Sv01)*0.29=740 *95* and α(M1)=83.5 *12* (Bricc). Mult.,δ: From M1/M2=7.0 *10*, M2/M3=3.8 *10* (1968Sv01).
37.65 *3*	0.80 *8*	269.83	(3/2)⁻	232.16	(5/2)⁻	M1+E2	0.042 *+12−13*	21.4 *6*		α(L)=16.5 *5*; α(M)=3.83 *12* α(N)=0.95 *3*; α(O)=0.169 *5*; α(P)=0.01100 *16* I_γ: From Ice(L)/α(L). Where Ice(L)=L1+L2+L3=45.5 *41**0.29=13.2 *12*. Mult.,δ: From L1/L2=8.4 *8*, L1/L3>27.
44.33 *3*	2.2 *2*	232.16	(5/2)⁻	187.81	3/2⁻	M1		12.76		α(L)=9.82 *14*; α(M)=2.27 *4* α(N)=0.562 *8*; α(O)=0.1011 *15*; α(P)=0.00680 *10* Mult.: From L1/L2=10.5 *10*, L1/L3>25 (1968Sv01). I_γ: From Ice(L1)=69 *6* (1968Sv01)*0.29=20 *2* and α(L1)=8.83 *13* (Bricc).
ˣ49.14 *3*	0.46 *6*					M1+E2	0.42 *2*	26.9 *15*		α(L)=20.4 *11*; α(M)=5.1 *3* α(N)=1.24 *7*; α(O)=0.201 *11*; α(P)=0.00440 *8* I_γ: deduced from Ice(L3)=3.3 *3* and α(L3)=7.2 *6* (Bricc). Mult.,δ: L1/L3=0.83 *6*, M1/M2=0.62 *11* (1968Sv01).
52.18 *2*	0.59 *9*	491.24	(5/2)⁻	439.05	(3/2)⁻	M1		7.90	5.7 *7*	ce(L)/(γ+ce)=0.683 *7*; ce(M)/(γ+ce)=0.158 *3* ce(N)/(γ+ce)=0.0391 *8*; ce(O)/(γ+ce)=0.00703 *14*; ce(P)/(γ+ce)=0.000473 *9* α(L)=6.08 *9*; α(M)=1.406 *20* α(N)=0.348 *5*; α(O)=0.0626 *9*; α(P)=0.00421 *6* I_γ: From Ice(L1)/α(L1). Where Ice(L1)=11.0 *16* (1968Sv01)*0.29=3.2 *5* and α(L1)=5.47 *8*. Mult.: From L1/L2=8 *4*, L1/L3>10 (1968Sv01).

$\gamma(^{193}$Pt) (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#a]	α[&]	Comments
73.62 *3*	4.0 *4*	187.81	3/2⁻	114.158	3/2⁻	(M1)		2.88	α(L)=2.22 *4*; α(M)=0.513 *8* α(N)=0.1271 *18*; α(O)=0.0228 *4*; α(P)=0.001538 *22* I_γ: From Ice(L1)=27.9 *25* (1968Sv01)*0.29=8.1 *7* and α(L1)=2.0 (Bricc). Mult.: From L1/L2=8.7 *15* (1968Sv01).
99.88 *4*	5.0 *8*	114.158	3/2⁻	14.276	5/2⁻	M1+E2	0.87 *3*	5.93	α(K)=3.44 *10*; α(L)=1.88 *5*; α(M)=0.473 *13* α(N)=0.116 *3*; α(O)=0.0187 *5*; α(P)=0.000399 *11* Mult.,δ: From K/L=1.1 *4*, L1/L2=0.68 *4*, L1/L3=0.86 *7* (1968Sv01). I_γ: From Ice(K)/α(K)(Bricc). Ice(K)=59 *9* (1968Sv01)*0.29=17.1 2.6.
[x]110.28 *5*	22 *11*					(E1)		0.318	α(K)=0.257 *4*; α(L)=0.0470 *7*; α(M)=0.01090 *16* α(N)=0.00265 *4*; α(O)=0.000447 *7*; α(P)=2.06×10^{-5} *3* I_γ: Obtained by subtraction of Iγ(112.5γ) from Iγ(110.3γ+112.5γ)=102 *10*. Mult.: From α(K)exp=Ice(K)/Iγ=0.25 *13*. Ice(K)=21 *4**0.29=6.1 *12*. Also K/L1=9.5 *28* (1968Sv01).
112.515 *10*	80 *5*	114.158	3/2⁻	1.642	3/2⁻	M1+E2	0.36 *2*	4.56	α(K)=3.53 *7*; α(L)=0.784 *18*; α(M)=0.187 *5* α(N)=0.0461 *11*; α(O)=0.00797 *17*; α(P)=0.000406 *8* Mult.,δ: From K/L12=3.9 *5*, L1/L2=3.34 *15*, L1/M1=3.6 *7* (1968Sv01). I_γ: From Ice(K)/α(K)(Bricc). Ice(K)=980 *60* (1968Sv01)*0.29=284 *17*.
114.155 *13*	27 *5*	114.158	3/2⁻	0.0	1/2⁻	M1+E2	0.48 *4*	4.24 *8*	α(K)=3.16 *10*; α(L)=0.82 *3*; α(M)=0.199 *8* α(N)=0.0491 *20*; α(O)=0.0083 *3*; α(P)=0.000363 *11* Mult.: From α(K)exp=Ice(K)/Iγ=3.3 *7*. Ice(K)=312 *20**0.29=90 *6*. Also K/(L1+L3)=5.1 *10*, L1/L3=3.4 *6*, M1/M2=2.1 *5* (1968Sv01).
117.99 *2*	19 *3*	232.16	(5/2)⁻	114.158	3/2⁻	M1		4.15	α(K)=3.41 *5*; α(L)=0.567 *8*; α(M)=0.1310 *19* α(N)=0.0324 *5*; α(O)=0.00583 *9*; α(P)=0.000393 *6* Mult.: From α(K)exp=Ice(K)/Iγ=3.1 *5*. Ice(K)=205 *15**0.29=59 *4*. Also K/L12=5.2 *11*, L1/L2=9.7 *15* (1968Sv01).
119.64 *3*	6.3 *15*	121.29	1/2⁻,3/2⁻,5/2⁻	1.642	3/2⁻	M1		3.99	α(K)=3.28 *5*; α(L)=0.544 *8*; α(M)=0.1259 *18* α(N)=0.0312 *5*; α(O)=0.00560 *8*; α(P)=0.000377 *6* Mult.: From α(K)exp=Ice(K)/Iγ=2.7 *7*. Ice(K)=57.9 *45**0.29=16.8 *13*. Also K/L1=5.6 *25*, L1/L2>3.1, L1/M1=4.9 *21* (1968Sv01).
155.68 *4*	12 *3*	269.83	(3/2)⁻	114.158	3/2⁻	M1		1.89	α(K)=1.553 *22*; α(L)=0.257 *4*; α(M)=0.0593 *9* α(N)=0.01468 *21*; α(O)=0.00264 *4*; α(P)=0.0001780 *25* Mult.: From α(K)exp=Ice(K)/Iγ=1.4 *3*. Ice(K)=58.5 *40**0.29=17.0 *12*. Also K/L12=5.3 *9*, L1/L2=10.9 *20*, L1/L3>5 (1968Sv01).
173.52 *5*	100	187.81	3/2⁻	14.276	5/2⁻	M1+E2	0.355 *21*	1.300 *21*	α(K)=1.043 *19*; α(L)=0.197 *3*; α(M)=0.0462 *7*

$^{193}_{78}$Pt$_{115}$-3

γ(^{193}Pt) (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[#a]	α[&]	Comments
									α(N)=0.01142 *18*; α(O)=0.00201 *3*; α(P)=0.0001188 *21* Mult.,δ: From K/L=5.2 *6*, L1/L2=5.0 *4*, L1/L3=14.4 *20* (1968Sv01).
^{x}180.0[@] *2*	2.1 *13*								
186.17 *3*	347 *20*	187.81	3/2⁻	1.642	3/2⁻	M1+E2	0.32 *4*	1.078 *22*	α(K)=0.871 *21*; α(L)=0.1584 *24*; α(M)=0.0370 *6* α(N)=0.00915 *15*; α(O)=0.001623 *24*; α(P)=9.92×10^{-5} *24* Mult.,δ: From α(K)exp=0.97 *9*, K/L12=5.2 *6*, L1/L2=5.9 *5*, L1/L3>11 (1968Sv01).
187.83 *4*	31 *12*	187.81	3/2⁻	0.0	1/2⁻	(M1+E2)		0.78 *34*	α(K)=0.56 *36*; α(L)=0.168 *18*; α(M)=0.041 *7* α(N)=0.0101 *15*; α(O)=0.00170 *15*; α(P)=6.2×10^{-5} *43* Mult.: From α(K)exp=Ice(K)/Iγ=0.30 *13*. Ice(K)=33 *6* (1968Sv01) *0.29.
206.85 *6*	3.1 *7*	439.05	(3/2)⁻	232.16	(5/2)⁻	(M1)		0.850	α(K)=0.700 *10*; α(L)=0.1152 *17*; α(M)=0.0266 *4* α(N)=0.00659 *10*; α(O)=0.001185 *17*; α(P)=7.99×10^{-5} *12* Mult.: From α(K)exp=Ice(K)/Iγ=0.61 *15* (Ice(K)=6.4 *8* (1968Sv01)*0.29=1.9 *2*).
^{x}215.41 *10*	3.3 *9*					M1+E2	1.5 *5*	0.43 *10*	α(K)=0.290 *94*; α(L)=0.1041 *16*; α(M)=0.0258 *7* α(N)=0.00632 *16*; α(O)=0.001046 *16*; α(P)=3.1×10^{-5} *12* Photon observed by 1970Pl02; 1968Sv01 unassigned line with E(ce)=137.02 *10* (Ice=1.2 *3* % of the 268 ce(K)) attributed to corresponding K line. Mult.,δ: α(K)exp=Ice(K)/Iγ=0.28 *10*. Ice(K)=3.2 *8* (see note above)*0.29=0.93 *23*.
221.40 *6*	2.7 *6*	491.24	(5/2)⁻	269.83	(3/2)⁻	M1+E2	1.7 *+12−5*	0.37 *7*	α(K)=0.247 *69*; α(L)=0.0940 *14*; α(M)=0.0233 *5* α(N)=0.00572 *10*; α(O)=0.000943 *16*; α(P)=2.64×10^{-5} *82* Mult.,δ: From α(K)exp=Ice(K)/Iγ=0.37 *10* (Ice(K)=3.5 *5**0.29=1.01 *14*). Also L1/L2>1, L1/L3=1.25 *75* (1968Sv01).
230.50 *7*	18.5 *20*	232.16	(5/2)⁻	1.642	3/2⁻	(E2)		0.224	α(K)=0.1187 *17*; α(L)=0.0793 *12*; α(M)=0.0201 *3* α(N)=0.00492 *7*; α(O)=0.000790 *11*; α(P)=1.153×10^{-5} *17* Mult.: From α(K)exp=Ice(K)/Iγ=0.11 *2*. Ice(K)=7.1 *7**0.29=2.1 *2*. Also K/M=7.1 *20* (1968Sv01).
232.18 *6*	18.5 *20*	232.16	(5/2)⁻	0.0	1/2⁻	E2		0.219	α(K)=0.1165 *17*; α(L)=0.0770 *11*; α(M)=0.0195 *3* α(N)=0.00478 *7*; α(O)=0.000767 *11*; α(P)=1.133×10^{-5} *16* Mult.: From α(K)exp=Ice(K)/Iγ=0.15 *3*. Ice(K)=9.5 *11**0.29=2.8 *3*. Also K/L23=1.5 *5*, L2/L3=2.4 *11*, L1/L3<1.5 (1968Sv01).
251.4[@] *5*	9 *4*	439.05	(3/2)⁻	187.81	3/2⁻	[M1]		0.495	α(K)=0.408 *7*; α(L)=0.0669 *10*; α(M)=0.01545 *24* α(N)=0.00382 *6*; α(O)=0.000688 *11*; α(P)=4.65×10^{-5} *7*
255.57 *4*	231 *20*	269.83	(3/2)⁻	14.276	5/2⁻	M1+E2	0.41 *7*	0.428 *15*	α(K)=0.347 *14*; α(L)=0.0623 *10*; α(M)=0.01454 *22* α(N)=0.00359 *6*; α(O)=0.000638 *11*; α(P)=3.93×10^{-5} *17* Mult.,δ: From α(K)exp=Ice(K)/Iγ=0.35 *4* (Ice(K)=283 *15**0.29=82 *4*). Also Also K/L=4.8 *2*, L1/L2=6.6 *16*, L1/L3=20 *6* (1968Sv01).

From ENSDF

$^{193}_{78}$Pt$_{115}$-4

γ(^{193}Pt) (continued)

E_γ [†]	I_γ [‡b]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [#]	δ [#a]	α [&]	Comments
259.05 6	7 3	491.24	(5/2)⁻	232.16	(5/2)⁻	M1		0.456	α(K)=0.376 6; α(L)=0.0616 9; α(M)=0.01422 20 α(N)=0.00352 5; α(O)=0.000633 9; α(P)=4.28$\times10^{-5}$ 6 Mult.: From α(K)exp=Ice(K)/Iγ=0.36 16 (Ice(K)=8.8 10*0.29=2.55 29). Also K/L1=11 6, L1/L2>1 (1968Sv01).
268.22 5	134 11	269.83	(3/2)⁻	1.642	3/2⁻	M1+E2	1.3 3	0.24 4	α(K)=0.18 4; α(L)=0.0481 18; α(M)=0.0117 3 α(N)=0.00287 8; α(O)=0.000486 20; α(P)=1.9$\times10^{-5}$ 4 Mult.,δ: From α(K)exp=Ice(K)/Iγ=0.216 10 (Ice(K)=100*0.29=29). Also K/L=4.8 22, L1/L2=1.5 7, L1/L3=2.5 13 (1968Sv01).
269.84 5	29 6	269.83	(3/2)⁻	0.0	1/2⁻	E2		0.1358	α(K)=0.0796 12; α(L)=0.0424 6; α(M)=0.01068 15 α(N)=0.00262 4; α(O)=0.000423 6; α(P)=7.91$\times10^{-6}$ 11 Mult.: From α(K)exp=Ice(K)/Iγ=0.093 22 (Ice(K)=9.3 9*0.29=2.7 3). Also K/L3=6.2 14 (1968Sv01).
^{x}281.76 10	5.4 9					M1		0.362	α(K)=0.299 5; α(L)=0.0488 7; α(M)=0.01128 16 α(N)=0.00279 4; α(O)=0.000502 7; α(P)=3.40$\times10^{-5}$ 5 Mult.: From α(K)exp=Ice(K)/Iγ=0.35 8. Ice(K)=6.6 10*0.29=1.9 3. Also K/L12>1.9 (1968Sv01).
290.33 10	3.0 12	522.53	(3/2⁻,5/2⁻)	232.16	(5/2)⁻	(M1)		0.334	α(K)=0.275 4; α(L)=0.0450 7; α(M)=0.01038 15 α(N)=0.00257 4; α(O)=0.000463 7; α(P)=3.13$\times10^{-5}$ 5 Mult.: From α(K)exp=Ice(K)/Iγ=0.44 19 (Ice(K)=4.6 8 (1968Sv01)*0.29=1.33 23).
303.41 7	9.3 26	491.24	(5/2)⁻	187.81	3/2⁻	(M1+E2)		0.20 10	α(K)=0.152 93; α(L)=0.033 7; α(M)=0.0080 13 α(N)=0.0020 3; α(O)=0.00034 7; α(P)=1.7$\times10^{-5}$ 11 Mult.: From α(K)exp=Ice(K)/Iγ=0.11 3 (Ice(K)=3.4 6 (1968Sv01)*0.29=0.99 17).
317.73	8.1 17	439.05	(3/2)⁻	121.29	1/2⁻,3/2⁻,5/2⁻	(M1)		0.261	α(K)=0.216 3; α(L)=0.0351 5; α(M)=0.00811 12 α(N)=0.00201 3; α(O)=0.000361 5; α(P)=2.44$\times10^{-5}$ 4 Mult.: From α(K)exp=Ice(K)/Iγ=0.23 6 (Ice(K)=6.4 10 (1968Sv01)*0.29=1.9 3).
324.89 5	12.0 21	439.05	(3/2)⁻	114.158	3/2⁻	M1		0.246	α(K)=0.203 3; α(L)=0.0331 5; α(M)=0.00763 11 α(N)=0.00189 3; α(O)=0.000340 5; α(P)=2.30$\times10^{-5}$ 4 Mult.: From α(K)exp=Ice(K)/Iγ=0.29 9 (Ice(K)=12 3 (1968Sv01)*0.29=3.5 9). Also K/L12=7.5 38.
334.7 [@] 3	2.2 13	522.53	(3/2⁻,5/2⁻)	187.81	3/2⁻	[M1]		0.227	α(K)=0.187 3; α(L)=0.0305 5; α(M)=0.00704 10 α(N)=0.001741 25; α(O)=0.000313 5; α(P)=2.12$\times10^{-5}$ 3
^{x}344.1 [@] 9	0.9 4								
^{x}369.9 [@] 2	2.1 5								
377.10 3	17.5 23	491.24	(5/2)⁻	114.158	3/2⁻	M1+E2	1.2 3	0.098 17	α(K)=0.076 15; α(L)=0.0164 14; α(M)=0.0039 3 α(N)=0.00096 8; α(O)=0.000166 15; α(P)=8.4$\times10^{-6}$ 17 Mult.,δ: From α(K)exp=Ice(K)/Iγ=0.112 20 (Ice(K)=6.8 8*0.29=1.97 23). Also K/L=3.8 11, L1/L2=2.4 7, L1/L3=11 4 (1968Sv01).

From ENSDF

γ(^{193}Pt) (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
^{x}383.4[@] *4*	0.8 *4*							
^{x}387.60 *9*	13.1 *16*					E2	0.0476	α(K)=0.0328 *5*; α(L)=0.01127 *16*; α(M)=0.00278 *4* α(N)=0.000683 *10*; α(O)=0.0001132 *16*; α(P)=3.39×10^{-6} *5* Mult.: From α(K)exp=Ice(K)/Iγ=0.053 *9*. Ice(K)=2.4 *3**0.29=0.70 *9*. Also K/L3=14 *7* (1968Sv01).
^{x}401.3[@] *3*	3.9 *9*							
408.4 *2*	4.5 *9*	522.53	(3/2$^-$,5/2$^-$)	114.158	3/2$^-$	(M1,E2)	0.087 *46*	α(K)=0.069 *41*; α(L)=0.0136 *42*; α(M)=0.00321 *90* α(N)=7.9×10^{-4} *23*; α(O)=1.39×10^{-4} *44*; α(P)=7.7×10^{-6} *47* Mult.: From α(K)exp=Ice(K)/Iγ=0.08 *4* (Ice(K)=1.3 *5**0.29=0.38 *15*). Also K/L12=4.5 *19* (1968Sv01).
^{x}421.3[@] *4*	1.8 *9*							
424.76 *12*	5.2 *10*	439.05	(3/2)$^-$	14.276	5/2$^-$	(M1)	0.1199	α(K)=0.0991 *14*; α(L)=0.01602 *23*; α(M)=0.00369 *6* α(N)=0.000914 *13*; α(O)=0.0001646 *23*; α(P)=1.117×10^{-5} *16* Mult.: From α(K)exp=Ice(K)/Iγ=0.100 *22* (Ice(K)=1.8 *2* (1968Sv01)*0.29=0.52 *6*).
^{x}431.4[@] *3*	1.0 *3*							
437.41 *8*	17 *3*	439.05	(3/2)$^-$	1.642	3/2$^-$	M1	0.1109	α(K)=0.0917 *13*; α(L)=0.01481 *21*; α(M)=0.00342 *5* α(N)=0.000845 *12*; α(O)=0.0001522 *22*; α(P)=1.033×10^{-5} *15* Mult.: From α(K)exp=Ice(K)/Iγ=0.065 *13* (Ice(K)=3.9 *4* (1968Sv01)*0.29=1.1 *1*).
439.04 *8*	66 *5*	439.05	(3/2)$^-$	0.0	1/2$^-$	M1	0.1099	α(K)=0.0908 *13*; α(L)=0.01467 *21*; α(M)=0.00338 *5* α(N)=0.000837 *12*; α(O)=0.0001507 *22*; α(P)=1.023×10^{-5} *15* Mult.: From α(K)exp=Ice(K)/Iγ=0.107 *9* (Ice(K)=24.5 *10* (1968Sv01)*0.29=7.1 *3*). Also K/L12=5.7 *6*, K/L3>29 (1968Sv01).
^{x}445[@] *1*	0.4 *4*							
^{x}459.2 *2*	0.5 *3*							Photon observed by 1970Pl02; 1968Sv01 unassigned line with E(ce)=380.77 *15* (Ice=0.25 *5* % of 268 ce(K)) attributed to corresponding K line.
^{x}464.1[@] *5*	1.0 *5*							
476.98 *9*	16 *3*	491.24	(5/2)$^-$	14.276	5/2$^-$	(E2)	0.0278	α(K)=0.0203 *3*; α(L)=0.00572 *8*; α(M)=0.001393 *20* α(N)=0.000342 *5*; α(O)=5.76×10^{-5} *8*; α(P)=2.13×10^{-6} *3* Mult.: From α(K)exp=Ice(K)/Iγ=0.085 *20* (Ice(K)=4.7 *7**0.29=1.36 *20*). Also K/L=4.4 *15*, L12/L3=7 *4* (1968Sv01). From L12/L3 ratio, the γ is mainly E2; too high α(K)exp seems to indicate that perhaps the Iγ(477.0) and Iγ(478.4) were not correctly resolved.
^{x}478.40 *15*	4.1 *10*							α(K)exp=Ice(K)/Iγ=0.39 *14*. Ice(K)=0.55 *13**0.29=1.6 *4*. K/L12=2.3 *8*; K/L12=4.18; M1: α(K)=0.0750, K/L12=6.23 (1968Sv01). E2: α(K)=0.02, M1: α(K)=0.072 (Bricc).
^{x}483[@] *1*	0.5 *3*							
489.61 *12*	8.0 *16*	491.24	(5/2)$^-$	1.642	3/2$^-$	(M1)	0.0824	α(K)=0.0681 *10*; α(L)=0.01097 *16*; α(M)=0.00253 *4* α(N)=0.000625 *9*; α(O)=0.0001126 *16*; α(P)=7.66×10^{-6} *11* Mult.: From α(K)exp=Ice(K)/Iγ=0.072 *23* (Ice(K)=2.0 *5**0.29=0.58 *15*). Also K/L12=5.6 *25*, L12/L3>0.7 (1968Sv01).

$^{193}_{78}$Pt$_{115}$-6

γ(^{193}Pt) (continued)

Eγ[†]	Iγ[‡b]	Ei(level)	J^{π}_{i}	Ef	J^{π}_{f}	Mult.[#]	α[&]	Comments
491.28 *12*	24 *4*	491.24	(5/2)⁻	0.0	1/2⁻	[E2]	0.0258	α(K)=0.0190 *3*; α(L)=0.00522 *8*; α(M)=0.001268 *18* α(N)=0.000312 *5*; α(O)=5.26×10⁻⁵ *8*; α(P)=2.00×10⁻⁶ *3* Mult.: From α(K)exp=Ice(K)/Iγ=0.027 *8* (Ice(K)=2.3 *6**0.29=0.67 *17*). Also K/L12>4 (1968Sv01).
[x]505.66 *20*	3.3 *6*							Mult.: K/L12<6, L12/L3>1.5 (1968Sv01).
508.26 *20*	1.9 *5*	522.53	(3/2⁻,5/2⁻)	14.276	5/2⁻	(M1+E2)	0.049 *26*	α(K)=0.040 *22*; α(L)=0.0073 *27*; α(M)=0.00171 *58* α(N)=4.2×10⁻⁴ *15*; α(O)=7.5×10⁻⁵ *28*; α(P)=4.4×10⁻⁶ *26* Mult.: From α(K)exp=Ice(K)/Iγ=0.040 *14* (Ice(K)=0.27 *6* (1968Sv01)*0.29=0.078 *17*).
520.97 *25*	2.7 *6*	522.53	(3/2⁻,5/2⁻)	1.642	3/2⁻	(E2)	0.0224	α(K)=0.01669 *24*; α(L)=0.00436 *7*; α(M)=0.001057 *15* α(N)=0.000260 *4*; α(O)=4.40×10⁻⁵ *7*; α(P)=1.760×10⁻⁶ *25* Mult.: From α(K)exp=Ice(K)/Iγ=0.022 *7* (Ice(K)=0.21 *5* (1968Sv01)*0.29=0.061 *15*).
522.66 *25*	2.5 *5*	522.53	(3/2⁻,5/2⁻)	0.0	1/2⁻	(E2)	0.0222	α(K)=0.01657 *24*; α(L)=0.00432 *6*; α(M)=0.001046 *15* α(N)=0.000257 *4*; α(O)=4.36×10⁻⁵ *7*; α(P)=1.747×10⁻⁶ *25* Mult.: From α(K)exp=Ice(K)/Iγ=0.025 *8* (Ice(K)=0.22 *5* (1968Sv01)*0.29=0.064 *15*).
[x]529.7[@] *4*	1.3 *3*							
[x]577.60 *20*	1.50 *16*					(M1)	0.0535	α(K)=0.0443 *7*; α(L)=0.00709 *10*; α(M)=0.001632 *23* α(N)=0.000404 *6*; α(O)=7.27×10⁻⁵ *11*; α(P)=4.95×10⁻⁶ *7* Mult.: α(K)exp=Ice(K)/Iγ=0.042 *12*. Ice(K)=0.22 *6**0.29=0.064 *17*.
[x]628.55 *25*	2.3 *3*					(M1)	0.0429	α(K)=0.0355 *5*; α(L)=0.00568 *8*; α(M)=0.001307 *19* α(N)=0.000323 *5*; α(O)=5.83×10⁻⁵ *9*; α(P)=3.97×10⁻⁶ *6* α(K)exp=Ice(K)/Iγ=0.039 *8*. Ice(K)=0.31 *5**0.29=0.090 *15*. Also K/L=5.2 *27*; K/L=6.25 (1968Sv01).
[x]685[@] *1*	0.74 *21*							
[x]698[@] *1*	2.2 *5*							
[x]730[@] *1*	0.7 *2*							
[x]743[@] *1*	1.2 *4*							
[x]845[@] *2*	2.4 *8*							
[x]1124[@] *4*	1.6 *8*							

[†] Deduced from E(ce) measurements of 1968Sv01, unless otherwise noted. Calibration: KL_1L_1 and KL_2L_3 Auger lines in Pt, E(ce(K)) 316γ in ^{192}Pt (E(ce(K))=238.087 *10*), ThC A (E(ce)=24.509) and ThB F (E(ce)=148.108) lines.

[‡] From 1970Pl02, unless otherwise noted.

[#] From experimental internal conversion coefficients and ratios, based on Ice of 1968Sv01 and Iγ of 1970Pl02.

[@] From 1970Pl02.

[&] Additional information 1.

From ENSDF

γ(^{193}Pt) (continued)

[a] If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[b] For absolute intensity per 100 decays, multiply by ≈0.028.
[x] γ ray not placed in level scheme.

$^{193}_{78}Pt_{115}$-8

^{193}Au ε decay (17.65 h) 1968Sv01,1970Pl02

Decay Scheme

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