^{191}Au ε decay 1976Pi06,1967Jo06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	V. R. Vanin et al.	NDS 108, 2393 (2007)	1-Dec-2006

Parent: ^{191}Au: E=0.0; $J^{\pi}=3/2^{+}$; $T_{1/2}$=3.18 h *8*; Q(ε)=1890 *40*; %ε+%β^{+} decay=100.0

^{191}Pt Levels

E(level)†	J^{π}‡	$T_{1/2}$	Comments
0.0	$3/2^-$	2.83 d *2*	$T_{1/2}$: Adopted value.
9.546 *17*	$(5/2,7/2)^-$		
30.398 *9*	$1/2^-,3/2^-$		
100.662 *20*	$(9/2)^-$		
149.034 *22*	$(13/2)^+$		
158.77 *4*	$1/2^-,3/2^-,5/2^-$		
166.516 *13*	$(3/2,5/2)^-$		
173.426 *24*	$(11/2)^+$		
253.946 *21*	$(3/2,5/2,7/2)^-$		
277.877 *21*	$(3/2,5/2)^-$		
281.18 *3*	$(3/2,5/2,7/2)^-$		
293.458 *14*	$(5/2)^-$		
306.33 *3*	$(9/2)^+$		
399.837 *19*	$5/2^-,7/2^-$		
451.83 *4*	$(3/2)^-$		
453.81 *4*	$(7/2,9/2)^+$		
487.578 *18*	$(7/2)^-$		
535.27 *3*	$(3/2,5/2,7/2)^-$		
574.65 *4*	$(1/2,3/2,5/2)^-$		
594.29 *6*	$^-$		
613.14 *4*	$^-$		
625.81 *9*	$^-$		
660.24 *4*	$(5/2)^+$		
662.27 *5*	$(3/2,5/2,7/2)^-$		
732.40 *10*	$1/2^-,3/2^-$		
863.92 *5*	$(5/2,7/2)^+$		
929.19 *15*	$^-$		
986.44 *7*			
1074.03 *3*	$(5/2)^+$		
1113.49 *9*	$(5/2)^+$		
1174.57 *9*	$(3/2^-,5/2^-,7/2^-)$		
1289.96 *14*	$(^-)$		
1300.9 *3*	$(^-)$		
1453.3 *3*			

† Level energies recalculated by evaluator from a least-squares fit to adopted γ-ray energies, excluding 206.39 and 451.85 doublets.
‡ From Adopted Levels.

ε,β^{+} radiations

E(decay)	E(level)	Iε†‡	Log *ft*	I($\varepsilon+\beta^{+}$)‡	Comments
(4.4×10^{2} *4*)	1453.3	≈0.1	≈7.6	≈0.1	εK=0.765 *8*; εL=0.176 *6*; εM+=0.0585 *20*
(5.9×10^{2} *4*)	1300.9	≈0.1	≈7.9	≈0.1	εK=0.782 *4*; εL=0.1643 *25*; εM+=0.0538 *10*
(6.0×10^{2} *4*)	1289.96	≈0.3	≈7.5	≈0.3	εK=0.783 *4*; εL=0.1637 *24*; εM+=0.0536 *9*
(7.2×10^{2} *4*)	1174.57	≈0.7	≈7.3	≈0.7	εK=0.7897 *22*; εL=0.1586 *16*; εM+=0.0516 *6*

Continued on next page (footnotes at end of table)

^{191}Au ε decay 1976Pi06,1967Jo06 (continued)

ϵ,β^+ radiations (continued)

E(decay)	E(level)	Iβ^+ ‡	Iε†‡	Log *ft*	I(ε+β^+)‡	Comments
(7.8×10^2 *4*)	1113.49		≈3	≈6.7	≈3	εK=0.7925 *18*; εL=0.1566 *13*; εM+=0.0509 *5*
(8.2×10^2 *4*)	1074.03		≈30	≈5.8	≈30	εK=0.7940 *16*; εL=0.1555 *12*; εM+=0.0504 *5*
(9.0×10^2 *4*)	986.44		≈0.4	≈7.7	≈0.4	εK=0.7969 *13*; εL=0.1534 *9*; εM+=0.0496 *4*
(9.6×10^2 *4*)	929.19		≈0.2	≈8.1	≈0.2	εK=0.7985 *11*; εL=0.1523 *8*; εM+=0.0492 *3*
(1.16×10^3 *4*)	732.40		≈0.6	≈7.8	≈0.6	εK=0.8027; εL=0.1493 *6*; εM+=0.04803 *20*
(1.23×10^3 *4*)	660.24		≈1	≈7.6	≈1	εK=0.8038; εL=0.1485 *5*; εM+=0.04771 *18*
(1.26×10^3 *4*)	625.81		≈0.7	≈7.8	≈0.7	εK=0.8043; εL=0.1481 *5*; εM+=0.04757 *17*
(1.28×10^3 *4*)	613.14		≈0.1	≈8.6	≈0.1	εK=0.8045; εL=0.1480 *5*; εM+=0.04752 *16*
(1.30×10^3 *4*)	594.29		≈0.1	≈8.7	≈0.1	εK=0.8047; εL=0.1478 *4*; εM+=0.04745 *16*
(1.32×10^3 *4*)	574.65		≈1	≈7.7	≈1	εK=0.8050; εL=0.1476 *4*; εM+=0.04737 *16*
(1.35×10^3 *4*)	535.27		≈1	≈7.7	≈1	εK=0.8054; εL=0.1472 *4*; εM+=0.04723 *15*
(1.40×10^3 *4*)	487.578		≤2	≥8.3^{1u}	≤2	εK=0.7881 *12*; εL=0.1597 *9*; εM+=0.0521 *4*
(1.44×10^3 *4*)	453.81		≤2	≥7.5	≤2	εK=0.8061; εL=0.1465 *4*; εM+=0.04696 *13*
(1.44×10^3 *4*)	451.83	≈0.002	≈5	≈7.1	≈5	av Eβ=208 *19*; εK=0.8061; εL=0.1465 *4*; εM+=0.04695 *13*
(1.49×10^3 *4*)	399.837	≤0.001	≤2	≥7.5	≤2	av Eβ=231 *18*; εK=0.8065; εL=0.1461 *4*; εM+=0.04679 *13*
(1.60×10^3 *4*)	293.458	≈0.01	≈8	≈6.9	≈8	av Eβ=279 *18*; εK=0.8067; εL=0.1452 *4*; εM+=0.04648 *12*
(1.61×10^3 *4*)	281.18	≤0.003	≤2	≥7.6	≤2	av Eβ=284 *18*; εK=0.8067; εL=0.1451 *4*; εM+=0.04644 *12*
(1.61×10^3 *4*)	277.877	≈0.019	≈11	≈6.8	≈11	av Eβ=285 *18*; εK=0.8067; εL=0.1451 *4*; εM+=0.04643 *12* Eβ+=425 keV *61* (1976ViZM), s.
(1.64×10^3 *4*)	253.946	≈0.006	≈3	≈7.4	≈3	av Eβ=296 *18*; εK=0.8067; εL=0.1449 *4*; εM+=0.04636 *12*
(1.72×10^3 *4*)	166.516	≈0.02	≈7	≈7.1	≈7	av Eβ=335 *18*; εK=0.8062; εL=0.1442 *4*; εM+=0.04611 *12*
(1.73×10^3 *4*)	158.77	≈0.007	≈2	≈7.6	≈2	av Eβ=338 *18*; εK=0.8062; εL=0.1441 *4*; εM+=0.04609 *12*
(1.86×10^3 *4*)	30.398	≤0.02	≤3	≥7.5	≤3	av Eβ=395 *18*; εK=0.8046; εL=0.1431 *4*; εM+=0.04571 *13* I(ε+β^+): Iε≈5% given by 1976Pi06 is not consistent with experimental Iγ=269 *40* and theoretical α=40.4 for 30.4γ.
(1.88×10^3 *4*)	9.546	0.087	12	6.9	12.	av Eβ=404 *18*; εK=0.8042 *9*; εL=0.1429 *4*; εM+=0.04564 *13* I(ε+β^+): calculated by assuming log *ft*=6.9 (as for ^{193}Au ε decay).
(1.89×10^3 *4*)	0.0	0.091	12	6.9	12.	av Eβ=408 *18*; εK=0.8040 *9*; εL=0.1428 *4*; εM+=0.04561 *13* I(ε+β^+): calculated by assuming log *ft*=6.9 (as for ^{193}Au ε decay to 14 keV *5/2*$^-$ level). Eβ+=808 keV *50* (1976ViZM), s. Others: 1973ViZJ, 1975ViZK.

† Calculated by evaluator from γ-ray intensity balance and assuming 12% ε feeding for both g.s. (J$^\pi$=3/2$^-$) and 9.55 (J$^\pi$=5/2$^-$,7/2$^-$) levels (resultant log *ft*=6.9, as for the 14.3 (J$^\pi$=5/2$^-$) state populated in ^{193}Au ε decay (2006Ac01)).
‡ Absolute intensity per 100 decays.

γ(^{191}Pt)

Iγ normalization: Calculated by assuming 12% ε feeding for both the g.s. and 9.56 levels (resultant log *ft*=6.9, as for ^{193}Au ε decay (2006Ac01)), and Ti(g.s. + 9.55)≈76%.

Mult(24.39γ): from ce(L1):ce(L2):ce(L3):ce(M1):ce(M2):ce(M3):ce(N1):ce(N23) exp: 95 *25*:56 *25*:86 *30*:20 *7*:14 *5*:19 *6*:10 *4*:12 *5* (1967Jo06). 1967Jo06 assigned an E1 multipolarity to this transition on the bases of L subshell ratios; however, M1 + 2% E2 gives a best fit and is consistent with the placement of the 24.39-keV transition on the level scheme given by 1976Pi06.

Measured γ, $\gamma\gamma$-coin; detectors:Ge(Li) (1976Pi06). Measured ce, (ce)(ce) coin; detector: magnetic (1967Jo06). Determined internal conversion coefficients. Others: 1954Gi04, 1955Sm42, 1957Hu89, 1961An03, 1962Di01, 1962Ma18.

Iγ from 1976Pi06 and those deduced from 1967Jo06 ce data are discrepant below 130 keV; the intensity balance about the 149 (J^π=13/2$^+$) level using electron intensities of 1967Jo06 for 24.4γ and 48.4γ shows no ε feeding to this level, supporting the correctness of Ice low-energy transition measurements. For energies above 130 keV, the Iγ from 1976Pi06 agree with those deduced from 1967Jo06 data with a normalization factor of 1.00(4) when the uncertainties in Iγ from ce data fit are multiplied by 1.7; this factor was used to increase the uncertainty in Ice data when calculating α using 1976Pi06 γ-ray data.

ce: From 1967Pi06; relative uncertainties of 15% were added in ce(K) uncertainties quadratically, and 30% in ce(M)-total shell and upper shells.

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
(9.56 *CA*)		9.546	(5/2,7/2)$^-$	0.0	3/2$^-$				E_γ: deduced from Eγ′s (cascade and crossover). Placed via $\gamma\gamma$-coin about initial states.
24.39[@a] *1*	1.9 *6*	173.426	(11/2)$^+$	149.034	(13/2)$^+$	M1+E2	0.154 *22*	1.7×10^2 *3*	α(L)=126 *21*; α(M)=31 *6*; α(N+..)=8.8 *15* α(N)=7.5 *13*; α(O)=1.24 *20*; α(P)=0.0394 *6* I_γ: calculated from ce data fit. Mult.,δ: from ce data fit; see comment under the heading for details.
30.40[@] *1*	15.0 *22*	30.398	1/2$^-$,3/2$^-$	0.0	3/2$^-$	M1+E2	0.034 *9*	40.4 *11*	α(L)=31.0 *8*; α(M)=7.21 *20*; α(N+..)=2.12 *6* α(N)=1.78 *5*; α(O)=0.319 *8*; α(P)=0.0207 *3* Eγ=30.27 *6* (1976Pi06). I_γ: Other: Iγ=269 *40* (1976Pi06). Mult.,δ: from ce(L1):ce(L):ce(L3):ce(M1):ce(M2):ce(N1) exp=403 *40*:50 *11*:14 *5*: 88 *27*:10 *4*:28 *10*.
48.37[@a] *1*	0.92 *10*	149.034	(13/2)$^+$	100.662	(9/2)$^-$	M2		455	α(L)=339 *5*; α(M)=89.2 *13*; α(N+..)=26.5 *4* α(N)=22.4 *4*; α(O)=3.88 *6*; α(P)=0.203 *3* Mult.: from ce(L1):ce(L2):ce(L3):ce(M1):ce(M2):ce(M3) exp=205 *15*:20 *5*:95 *15*:52 *16*:5.3 *22*:23 *8*; ce data fit gives 0.10(17)% E3.
^{x}56.78[b] *7*	19 *3*								
87.74[@] *2*	3.8 *8*	487.578	(7/2)$^-$	399.837	5/2$^-$,7/2$^-$	M1+E2	0.25 *5*	9.62	α(K)=7.53 *21*; α(L)=1.60 *11*; α(M)=0.38 *3*; α(N+..)=0.110 *8* α(N)=0.093 *7*; α(O)=0.0163 *11*; α(P)=0.000876 *23* Eγ=87.55 *6* (1976Pi06).

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
									Mult.,δ: from ce(L1):ce(L2):ce(L3):ce(M1) exp=4.4 *6*:1.5 *6*:0.55 *22*:0.8 *3*. I_γ: Other: 12 *1* from 1976Pi06.
91.11[@] *2*	84 *10*	100.662	(9/2)⁻	9.546	(5/2,7/2)⁻	E2		7.23	α(K)=0.754 *11*; α(L)=4.86 *7*; α(M)=1.259 *18*; α(N+..)=0.355 *5* α(N)=0.307 *5*; α(O)=0.0477 *7*; α(P)=0.0001103 *16* Iγ=99 *7* (1976Pi06). Mult.: from ce(L1):ce(L2):ce(L3):ce(M2):ce(M3):ce(O) exp=9.0 *15*:210 *20*:185 *20*: <230:54 *17*:4 *2* ; discarded ce(K) exp=17 *4*, outlier in ce data fit, and ce(N2) exp=28 *5*.
106.36[b] *5*	3 *1*	399.837	5/2⁻,7/2⁻	293.458	(5/2)⁻	M1+E2	1.0 *7*	4.7 *8*	α(K)=2.6 *17*; α(L)=1.6 *7*; α(M)=0.39 *19*; α(N+..)=0.11 *5* α(N)=0.10 *5*; α(O)=0.016 *7*; α(P)=0.00030 *19* Mult.,δ: from α(K)exp=2.7 *11*, obtained from 29.97 keV ce line observed by 1967Jo06 with Ice=8 *2* and assigning it to K conversion.
[x]122.71[b] *5*	3 *1*								
126.92[@] *2*	7.4 *15*	293.458	(5/2)⁻	166.516	(3/2,5/2)⁻	M1+E2	0.83 *20*	2.76 *19*	α(K)=1.8 *3*; α(L)=0.70 *8*; α(M)=0.173 *21*; α(N+..)=0.050 *6* α(N)=0.042 *5*; α(O)=0.0070 *7*; α(P)=0.00021 *4* Mult.,δ: From ce(K):ce(L1):ce(L2) exp=16 *3*:3.9 *5*: <0.50; ce data fit gives 0 *6%* E2. I_γ: Other: 9 *1* from 1976Pi06.
[x]132.00[b] *5*	21 *2*								
132.89[@] *2*	72 *6*	306.33	(9/2)⁺	173.426	(11/2)⁺	M1+E2	0.33 *3*	2.82 *5*	α(K)=2.24 *5*; α(L)=0.447 *10*; α(M)=0.106 *3*; α(N+..)=0.0309 *8* α(N)=0.0261 *7*; α(O)=0.00456 *10*; α(P)=0.000256 *6* Eγ=132.98 *4* (1976Pi06). Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=151 *25*:25.4 *15*:3.5 *5*:2.1 *5*: 4.9 *19*. I_γ: Other: 70 *4* from ce data fit.
[x]133.70[b] *5*	16 *2*								
136.09[@] *2*	40 *4*	166.516	(3/2,5/2)⁻	30.398	1/2⁻,3/2⁻	M1+E2	0.40 *4*	2.58 *5*	α(K)=2.02 *6*; α(L)=0.430 *12*; α(M)=0.102 *3*; α(N+..)=0.0298 *9* α(N)=0.0252 *8*; α(O)=0.00438 *11*; α(P)=0.000231 *7* Eγ=136.16 *4* (1976Pi06). Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M):ce(N) exp=66 *11*:10.2 *10*: 3.1 *4*: 1.4 *3*:5.8 *19*:1.8 *7*. I_γ: Other: 35 *4* from ce data fit.
[x]142.51[b] *5*	14 *1*								
145.95[b] *5*	6 *1*	399.837	5/2⁻,7/2⁻	253.946	(3/2,5/2,7/2)⁻	(M1)		2.27	α(K)=1.86 *3*; α(L)=0.308 *5*; α(M)=0.0713 *10*; α(N+..)=0.0210 *3* α(N)=0.01764 *25*; α(O)=0.00317 *5*; α(P)=0.000214 *3*

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
									Mult.: from α(K)exp=2.0 *11*, obtained from 67.47 keV ce line observed by 1967Jo06 with Ice=12 *4* and assigning it to K conversion.
147.49[b] *4*	51 *3*	453.81	(7/2,9/2)$^+$	306.33	(9/2)$^+$	M1,E2		1.6 *6*	α(K)=1.1 *8*; α(L)=0.42 *12*; α(M)=0.10 *4*; α(N+..)=0.030 *10* α(N)=0.025 *9*; α(O)=0.0042 *11*; α(P)=0.00012 *9* Mult.: from α(K)exp=1.3 *7*, obtained from 69.00 keV ce line observed by 1967Jo06 with Ice=65 *20* and assigning it to K conversion.
156.97 *5*	29 *4*	166.516	(3/2,5/2)$^-$	9.546	(5/2,7/2)$^-$	[M1,E2]		1.3 *5*	α(K)=0.9 *6*; α(L)=0.33 *8*; α(M)=0.081 *23*; α(N+..)=0.023 *7* α(N)=0.020 *6*; α(O)=0.0033 *8*; α(P)=0.00010 *8*
157.33[b] *5*	40 *6*	306.33	(9/2)$^+$	149.034	(13/2)$^+$	[E2]		0.838	α(K)=0.305 *5*; α(L)=0.401 *6*; α(M)=0.1030 *15*; α(N+..)=0.0291 *5* α(N)=0.0252 *4*; α(O)=0.00396 *6*; α(P)=2.89×10^{-5} *4*
158.83[@] *4*	87 *6*	158.77	1/2$^-$,3/2$^-$,5/2$^-$	0.0	3/2$^-$	M1+E2	0.55 *9*	1.56 *6*	α(K)=1.20 *7*; α(L)=0.275 *10*; α(M)=0.066 *3*; α(N+..)=0.0192 *8* α(N)=0.0163 *7*; α(O)=0.00280 *9*; α(P)=0.000136 *9* Eγ=158.89 *4* (1976Pi06). Mult.,δ: from ce(K):ce(L1):ce(L2):ce(M):ce(N) exp=80 *23*:21 *2*:6.9 *14*:9.7 *33*: 1.4 *5*. I_γ: Other: 106 *15* from ce data fit.
166.50[@] *2*	195 *14*	166.516	(3/2,5/2)$^-$	0.0	3/2$^-$	M1+E2	0.54 *6*	1.36 *4*	α(K)=1.06 *5*; α(L)=0.235 *6*; α(M)=0.0561 *15*; α(N+..)=0.0163 *4* α(N)=0.0138 *4*; α(O)=0.00239 *5*; α(P)=0.000120 *5* Eγ=166.56 *3* (1976Pi06). Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=<460:29 *3*:9.4 *15*: 5.1 *10*: 10 *4*. I_γ: Other: 186 *26* from ce data fit.
192.82[b] *4*	15 *2*	293.458	(5/2)$^-$	100.662	(9/2)$^-$	E2		0.407	α(K)=0.186 *3*; α(L)=0.1664 *24*; α(M)=0.0425 *6*; α(N+..)=0.01206 *17* α(N)=0.01039 *15*; α(O)=0.001651 *24*; α(P)=1.773×10^{-5} *25* Mult.: from α(K)exp=0.13 *5*, obtained from 114.37 keV ce line observed by 1967Jo06 with Ice=2.0 *5* and assigning it to K conversion.
194.11[@] *3*	161 *11*	487.578	(7/2)$^-$	293.458	(5/2)$^-$	M1+E2	0.35 *5*	0.948 *23*	α(K)=0.765 *22*; α(L)=0.1403 *21*; α(M)=0.0328 *6*; α(N+..)=0.00964 *15* α(N)=0.00811 *13*; α(O)=0.001437 *21*; α(P)=8.7×10^{-5} *3* Eγ=194.17 *3* (1976Pi06). Mult.,δ: From ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=93 *17*:18.8 *15*:2.3 *4*:1.6 *3*: 4.7 *16*. I_γ: Other: 149 *17* from ce data fit.

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
[x]202.43[b] 4	6 1								
206.39 3	48 20	487.578	(7/2)$^-$	281.18	(3/2,5/2,7/2)$^-$	[M1,E2]		0.6 3	α(K)=0.4 3; α(L)=0.120 5; α(M)=0.029 3; α(N+..)=0.0085 6 α(N)=0.0072 6; α(O)=0.00122 3; α(P)=5.E−5 4 Eγ=206.46 5 (1976Pi06). I_γ: from doublet Iγ=130 10 (1976Pi06) minus Iγ=82 17 from 660 keV level decay. Mult.: α(K)exp=0.56 for the doublet is compatible with assignment.
206.39 3	82 17	660.24	(5/2)$^+$	453.81	(7/2,9/2)$^+$	[M1,E2]		0.6 3	α(K)=0.4 3; α(L)=0.120 5; α(M)=0.029 3; α(N+..)=0.0085 6 α(N)=0.0072 6; α(O)=0.00122 3; α(P)=5.E−5 4 I_γ: from Iγ(206γ)/Iγ(353γ)=0.45 9 in adopted gammas. Mult.: α(K)exp=0.56 for the doublet is compatible with assignment.
210.09 4	35 3	1074.03	(5/2)$^+$	863.92	(5/2,7/2)$^+$	M1+E2	0.35 12	0.76 4	α(K)=0.61 4; α(L)=0.1109 16; α(M)=0.0259 5; α(N+..)=0.00761 13 α(N)=0.00641 12; α(O)=0.001136 16; α(P)=7.0×10^{-5} 5 Mult.,δ: From ce(K):ce(L1):ce(L2):ce(M) exp=19 4:4.0 5:0.57 15:2.6 9. I_γ: Other: 39 6 from ce data fit.
223.63[b] 5	13 1	253.946	(3/2,5/2,7/2)$^-$	30.398	1/2$^-$,3/2$^-$	[M1,E2]		0.47 22	α(K)=0.35 22; α(L)=0.0912 20; α(M)=0.0221 8; α(N+..)=0.00640 13 α(N)=0.00544 16; α(O)=0.00092 4; α(P)=4.E−5 3
244.38 4	57 4	253.946	(3/2,5/2,7/2)$^-$	9.546	(5/2,7/2)$^-$	M1+E2	0.62 12	0.44 3	α(K)=0.35 3; α(L)=0.0697 13; α(M)=0.01648 24; α(N+..)=0.00482 8 α(N)=0.00407 6; α(O)=0.000711 14; α(P)=3.9×10^{-5} 4 Mult.: from α(L)exp=0.06 2. δ: from ce(L1):ce(L2):ce(L3) exp=2.5 5:0.63 10:0.29 10; ce(M) exp=0.13 3 rejected, outlier in ce data fit. I_γ: Other: 49 12 from ce data fit.
247.50 4	44 3	277.877	(3/2,5/2)$^-$	30.398	1/2$^-$,3/2$^-$	M1+E2	2.4 5	0.228 24	α(K)=0.147 23; α(L)=0.0611 12; α(M)=0.01523 23; α(N+..)=0.00436 7 α(N)=0.00373 6; α(O)=0.000612 13; α(P)=1.5×10^{-5} 3 Mult.,δ: from ce(K):ce(L1):ce(L2) exp=6.7 13:1.12 15:1.34 20. I_γ: Other: 51 10 from ce data fit.
253.95 3	149 10	253.946	(3/2,5/2,7/2)$^-$	0.0	3/2$^-$	E2		0.1641	α(K)=0.0928 13; α(L)=0.0538 8; α(M)=0.01359 19;

From ENSDF

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
									α(N+..)=0.00387 *6* α(N)=0.00333 *5*; α(O)=0.000536 *8*; α(P)=9.14×10^{-6} *13* Mult.: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=13.0 *22*:1.94 *20*:4.7 *5*:2.2 *4*: 3.5 *13*; ce(N) exp=2.1 *4* rejected, outlier; ce data fit gives 100 *3%* E2. I_γ: Other: 164 *21* from ce data fit.
263.09 *3*	91 *6*	293.458	(5/2)$^-$	30.398	1/2$^-$,3/2$^-$	E2		0.1469	α(K)=0.0849 *12*; α(L)=0.0468 *7*; α(M)=0.01181 *17*; α(N+..)=0.00337 *5* α(N)=0.00289 *4*; α(O)=0.000467 *7*; α(P)=8.40×10^{-6} *12* Mult.: from ce(K):ce(L3):ce(M) exp=7.8 *15*:1.9 *3*: <2.2. ce data fit gives 100 *5%* E2.
268.33 *4*	116 *9*	277.877	(3/2,5/2)$^-$	9.546	(5/2,7/2)$^-$	M1+E2	0.30 *10*	0.391 *17*	α(K)=0.320 *16*; α(L)=0.0548 *11*; α(M)=0.01274 *21*; α(N+..)=0.00375 *7* α(N)=0.00315 *6*; α(O)=0.000563 *12*; α(P)=3.63×10^{-5} *18* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=31 *8*:5.0 *15*:0.61 *20*:0.14 *6*: 2.5 *13*.
271.65 *3*	148 *10*	281.18	(3/2,5/2,7/2)$^-$	9.546	(5/2,7/2)$^-$	M1+E2	1.02 *11*	0.264 *16*	α(K)=0.202 *15*; α(L)=0.0475 *10*; α(M)=0.01142 *20*; α(N+..)=0.00332 *7* α(N)=0.00281 *5*; α(O)=0.000482 *11*; α(P)=2.24×10^{-5} *18* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp= <32: 4.1 *3*:1.74 *20*: <2.2: 2.3 *8*. I_γ: Other: 141 *16* from ce data fit.
277.86 *3*	424 *28*	277.877	(3/2,5/2)$^-$	0.0	3/2$^-$	M1		0.376	α(K)=0.311 *5*; α(L)=0.0507 *8*; α(M)=0.01172 *17*; α(N+..)=0.00346 *5* α(N)=0.00290 *4*; α(O)=0.000522 *8*; α(P)=3.53×10^{-5} *5* Mult.: from ce(K):ce(L1):ce(L2):ce(L3):ce(M):ce(N) exp=100 *18*:16.9 *10*: 1.5 *3*:0.12 *6*:4.1 *13*: <4. ce data fit gives 0.0 *16%* E2.
280.40 *3*	173 *11*	453.81	(7/2,9/2)$^+$	173.426	(11/2)$^+$	E2		0.1207	α(K)=0.0723 *11*; α(L)=0.0366 *6*; α(M)=0.00919 *13*; α(N+..)=0.00262 *4* α(N)=0.00225 *4*; α(O)=0.000365 *6*; α(P)=7.22×10^{-6} *11* Mult.: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=11.7 *20*:1.54 *20*: 2.81 *30*:1.71 *20*: <3.6. ce data fit gives 100 *3%* E2. I_γ: Other: 167 *19* from ce data fit.
283.90 *3*	396 *25*	293.458	(5/2)$^-$	9.546	(5/2,7/2)$^-$	M1+E2	0.52 *6*	0.304 *11*	α(K)=0.245 *10*; α(L)=0.0451 *8*; α(M)=0.01056 *18*; α(N+..)=0.00310 *6* α(N)=0.00261 *5*; α(O)=0.000461 *9*; α(P)=2.77×10^{-5} *11* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=79 *13*:11.4 *10*:1.64 *20*: 1.06 *15*: <6.6. I_γ: Other: 300 *32* from ce data fit.
293.45 *3*	167 *11*	293.458	(5/2)$^-$	0.0	3/2$^-$	M1+E2	0.9 *5*	0.23 *7*	α(K)=0.18 *7*; α(L)=0.038 *4*; α(M)=0.0090 *8*; α(N+..)=0.00263 *25*

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[†]	α[d]	Comments
									α(N)=0.00222 *19*; α(O)=0.00039 *5*; α(P)=2.0×10^{-5} *8* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(M) exp=30 *7*:5.3 *10*: <2.6:2.3 *9*.
316.5[b] *5*	≈5	929.19	−	613.14	−				
332.03[b] *5*	9 *1*	613.14	−	281.18	(3/2,5/2,7/2)$^-$				
340.35 *5*	9 *1*	594.29	−	253.946	(3/2,5/2,7/2)$^-$	(M1)		0.217	α(K)=0.179 *3*; α(L)=0.0291 *4*; α(M)=0.00672 *10*; α(N+..)=0.00198 *3* α(N)=0.001664 *24*; α(O)=0.000300 *5*; α(P)=2.03×10^{-5} *3* Mult.: from α(K)exp=0.22 *8*.
^{x}347.54[b] *5*	32 *3*								
353.88 *3*	183 *12*	660.24	(5/2)$^+$	306.33	(9/2)$^+$	(E2)		0.0611	α(K)=0.0407 *6*; α(L)=0.01547 *22*; α(M)=0.00384 *6*; α(N+..)=0.001101 *16* α(N)=0.000942 *14*; α(O)=0.0001552 *22*; α(P)=4.18×10^{-6} *6* Mult.: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp= 6.0 *6*:1.56 *15*:1.37 *15*:0.89 *15*:0.46 *20* compared to E2 theory using adopted Iγ = 7.5 *8*:1.00 *11*:1.23 *14*:0.60 *7*:0.70 *8*; outlier in ce data fit.
^{x}359.85[b] *5*	10 *2*								The assignment of this γ to the decay of 613.1 level by 1976Pi07 is in disagreement with the level energy difference, 359.19 *5* keV.
368.66 *4*	26 *2*	535.27	(3/2,5/2,7/2)$^-$	166.516	(3/2,5/2)$^-$	M1+E2	1.4 *6*	0.10 *4*	α(K)=0.07 *3*; α(L)=0.017 *3*; α(M)=0.0040 *6*; α(N+..)=0.00117 *18* α(N)=0.00099 *15*; α(O)=0.00017 *3*; α(P)=8.E−6 *4* Mult.,δ: from ce(K):ce(L1):ce(L2) exp=2.1 *6*:0.33 *8*:0.13 *5*.
376.56[b] *4*	25 *2*	535.27	(3/2,5/2,7/2)$^-$	158.77	1/2$^-$,3/2$^-$,5/2$^-$	[M1,E2]		0.11 *6*	α(K)=0.09 *5*; α(L)=0.017 *5*; α(M)=0.0041 *11*; α(N+..)=0.0012 *4* α(N)=0.0010 *3*; α(O)=0.00018 *6*; α(P)=1.0×10^{-5} *6*
386.90 *3*	212 *14*	487.578	(7/2)$^-$	100.662	(9/2)$^-$	M1+E2	1.45 *28*	0.082 *11*	α(K)=0.063 *10*; α(L)=0.0143 *10*; α(M)=0.00343 *20*; α(N+..)=0.00100 *7* α(N)=0.00084 *5*; α(O)=0.000145 *10*; α(P)=6.9×10^{-6} *11* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=24 *4*:3.7 *3*: <6:0.60 *15*:1.6 *5*.
390.27 *4*	160 *11*	399.837	5/2$^-$,7/2$^-$	9.546	(5/2,7/2)$^-$	M1+E2	0.51 *17*	0.129 *12*	α(K)=0.105 *11*; α(L)=0.0182 *11*; α(M)=0.00424 *22*; α(N+..)=0.00125 *7* α(N)=0.00105 *6*; α(O)=0.000187 *11*; α(P)=1.18×10^{-5} *12* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3) exp=18 *3*:3.4 *3*:0.44 *10*:0.6 *3*. I_γ: Other: 204 *35* from ce data fit.

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γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
399.84 *4*	279 *19*	399.837	5/2⁻,7/2⁻	0.0	3/2⁻	E2		0.0438	α(K)=0.0304 *5*; α(L)=0.01014 *15*; α(M)=0.00250 *4*; α(N+..)=0.000718 *10* α(N)=0.000613 *9*; α(O)=0.0001019 *15*; α(P)=3.16×10^{-6} *5* Mult.: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp=7.9 *13*:<1.9:1.7 *3*:0.5 *3*:<1.5. ce data fit gives 100 *5*% E2.
408.21 *6*	54 *7*	574.65	(1/2,3/2,5/2)⁻	166.516	(3/2,5/2)⁻	M1+E2	1.8 *4*	0.063 *10*	α(K)=0.048 *9*; α(L)=0.0114 *9*; α(M)=0.00275 *19*; α(N+..)=0.00080 *6* α(N)=0.00068 *5*; α(O)=0.000116 *10*; α(P)=5.2×10^{-6} *10* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(M) exp=4.0 *7*:0.79 *9*:0.33 *6*:0.31 *11*. I_γ: Other: 102 *22* from ce data fit.
410.20[@] *15*	26 *5*	863.92	(5/2,7/2)⁺	453.81	(7/2,9/2)⁺	M1+E2	1.3 *6*	0.07 *3*	α(K)=0.058 *24*; α(L)=0.0124 *25*; α(M)=0.0029 *6*; α(N+..)=0.00086 *17* α(N)=0.00073 *14*; α(O)=0.00013 *3*; α(P)=6.E−6 *3* Mult.,δ: from α(K)exp=0.06 *2*.
411.5[b] *2*	15 *3*	1074.03	(5/2)⁺	662.27	(3/2,5/2,7/2)⁻				
413.73 *5*	217 *14*	1074.03	(5/2)⁺	660.24	(5/2)⁺	M1+E2	1.07 *16*	0.081 *8*	α(K)=0.065 *7*; α(L)=0.0128 *7*; α(M)=0.00304 *15*; α(N+..)=0.00089 *5* α(N)=0.00075 *4*; α(O)=0.000131 *8*; α(P)=7.2×10^{-6} *8* Mult.,δ: from ce(K):ce(L12):ce(L3):ce(M):ce(N) exp=19 *3*:<21:0.29 *4*:1.7 *6*:<1.4.
421.44 *4*	203 *14*	451.83	(3/2)⁻	30.398	1/2⁻,3/2⁻	M1(+E2)	<0.6	0.111 *12*	α(K)=0.091 *10*; α(L)=0.0153 *11*; α(M)=0.00355 *23*; α(N+..)=0.00105 *7* α(N)=0.00088 *6*; α(O)=0.000157 *12*; α(P)=1.03×10^{-5} *12* Mult.,δ: from ce(K):ce(L1):ce(L2):ce(M) exp=16 *3*:3.05 *20*:0.35 *11*:0.46 *15*; ce data fit gives 6 *18*% E2.
^{x}427.33 *6*	13 *1*								
^{x}432.42[b] *10*	9 *1*								
442.27 *5*	35 *3*	451.83	(3/2)⁻	9.546	(5/2,7/2)⁻	M1+E2	0.6 *6*	0.088 *25*	α(K)=0.072 *22*; α(L)=0.0125 *24*; α(M)=0.0029 *5*; α(N+..)=0.00085 *16* α(N)=0.00072 *13*; α(O)=0.000128 *25*; α(P)=8.0×10^{-6} *25* Mult.,δ: from ce(K):ce(L12):ce(M) exp=3.4 *6*:0.51 *8*:0.37 *13*.
446.58 *6*	21 *2*	613.14	⁻	166.516	(3/2,5/2)⁻	(M1)		0.1050	α(K)=0.0868 *13*; α(L)=0.01401 *20*; α(M)=0.00323 *5*; α(N+..)=0.000953 *14* α(N)=0.000799 *12*; α(O)=0.0001440 *21*;

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γ(^{191}Pt) (continued)

Eγ[&]	Iγ[‡c]	Ei(level)	J^π_i	Ef	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
									α(P)=9.77×10^{-6} 14 Mult.: from ce(K):ce(L12) exp=1.7 3:0.30 5, and α(K)exp=0.08 3.
[x]450.69 11	9 2								
451.21[e] 13	79[e] 6	1113.49	(5/2)$^+$	662.27	(3/2,5/2,7/2)$^-$				α(K)=0.05 3; α(L)=0.010 4; α(M)=0.0024 8; α(N+..)=0.00070 23 α(N)=0.00059 19; α(O)=0.00010 4; α(P)=6.E−6 4 Eγ: Quoted value is the level energy difference, which disagrees with doublet energy (451.85 8 keV), and was not included in the level energies fit. Placement from 1976Pi06 γ-γ coincidence measurement. Mult.: same as for the γ from 451.83 level.
451.85[e] 5	79[e] 6	451.83	(3/2)$^-$	0.0	3/2$^-$				α(K)=0.05 3; α(L)=0.010 4; α(M)=0.0024 8; α(N+..)=0.00070 23 α(N)=0.00059 19; α(O)=0.00010 4; α(P)=6.E−6 4 Mult.: α(K)exp=0.076<, α(L1)exp=0.021 2, α(L2)exp=0.004<, α(L3)exp=0.0053 8 for the doublet, and theory: E2 (0.023,0.003,0.0025,0.0011) and M1 (0.084,0.012,0.0011,0,0001), would require multipolarity≥3 for at least one of the transitions forming the doublet.
460.94[b] 12	14 2	1074.03	(5/2)$^+$	613.14	$^-$				
467.04 8	44 6	625.81	$^-$	158.77	1/2$^-$,3/2$^-$,5/2$^-$	(M1)		0.0933	α(K)=0.0771 11; α(L)=0.01243 18; α(M)=0.00287 4; α(N+..)=0.000846 12 α(N)=0.000709 10; α(O)=0.0001277 18; α(P)=8.68×10^{-6} 13 Mult.: from α(K)exp=0.08 3, α(L12)exp=0.012 3.
478.04 4	232 16	487.578	(7/2)$^-$	9.546	(5/2,7/2)$^-$	M1+E2	0.92 9	0.060 4	α(K)=0.049 3; α(L)=0.0089 4; α(M)=0.00209 8; α(N+..)=0.000613 22 α(N)=0.000517 18; α(O)=9.1×10^{-5} 4; α(P)=5.4×10^{-6} 4 Mult.,δ: from ce(K):ce(L1):ce(L2):ce(L3):ce(M):ce(N) exp=<21:2.62 20:.43 6: 0.17 2:0.87 28:<0.21. Iγ: Other: 347 35 from ce data fit.
487.61 4	163 11	487.578	(7/2)$^-$	0.0	3/2$^-$	E2		0.0263	α(K)=0.0193 3; α(L)=0.00534 8; α(M)=0.001298 19; α(N+..)=0.000375 6 α(N)=0.000319 5; α(O)=5.38×10^{-5} 8; α(P)=2.03×10^{-6} 3 Mult.: from ce(K):ce(L1):ce(L2):ce(L3):ce(M) exp= 3.3 5:0.62 10:0.31 15:0.18 2:0.18 6; ce data fit gives 100 4% E2. Iγ: Other: 207 31 from ce data fit.
495.74 5	34 3	662.27	(3/2,5/2,7/2)$^-$	166.516	(3/2,5/2)$^-$	M1		0.0797	α(K)=0.0659 10; α(L)=0.01061 15; α(M)=0.00245 4; α(N+..)=0.000721 11 α(N)=0.000605 9; α(O)=0.0001090 16; α(P)=7.41×10^{-6}

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[†]	α[d]	Comments
									11 Mult.: from α(K)exp=0.08 *3*, α(L12)exp=0.0106 *22*, α(M)exp=0.0046 *23*.
499.62[b] *12*	27 *3*	1074.03	(5/2)$^+$	574.65	(1/2,3/2,5/2)$^-$				E_γ: Uncertainty increased from 1976Pi07 value; outlier in level energy fit, original uncertainty appeared to be incompatible with the complexity of the energy spectrum in the region.
525.79 *5*	51 *4*	535.27	(3/2,5/2,7/2)$^-$	9.546	(5/2,7/2)$^-$	M1		0.0683	α(K)=0.0565 *8*; α(L)=0.00908 *13*; α(M)=0.00209 *3*; α(N+..)=0.000617 *9* α(N)=0.000518 *8*; α(O)=9.32×10^{-5} *13*; α(P)=6.34×10^{-6} *9* Mult.: from α(K)exp=0.067 *20* and α(L12)exp=0.012 *3*.
532.63[b] *6*	23 *3*	986.44		453.81	(7/2,9/2)$^+$				
^{x}535.25 *12*	8 *2*								
538.7 *3*	48 *8*	1074.03	(5/2)$^+$	535.27	(3/2,5/2,7/2)$^-$	E1		0.00706	α(K)=0.00589 *9*; α(L)=0.000903 *13*; α(M)=0.000207 *3*; α(N+..)=6.04×10^{-5} *9* α(N)=5.09×10^{-5} *8*; α(O)=9.01×10^{-6} *13*; α(P)=5.64×10^{-7} *8* Mult.: from α(K)exp=0.0050 *17*.
544.35[b] *10*	9 *2*	574.65	(1/2,3/2,5/2)$^-$	30.398	1/2$^-$,3/2$^-$				
557.51 *8*	13 *2*	863.92	(5/2,7/2)$^+$	306.33	(9/2)$^+$	E2		0.0191	α(K)=0.01440 *21*; α(L)=0.00357 *5*; α(M)=0.000861 *12*; α(N+..)=0.000249 *4* α(N)=0.000212 *3*; α(O)=3.61×10^{-5} *5*; α(P)=1.521×10^{-6} *22* Mult.: from α(K)exp=0.011 *3*.
561.59 *14*	4 *1*	1174.57	(3/2$^-$,5/2$^-$,7/2$^-$)	613.14	$^-$	(M1)		0.0575	α(K)=0.0476 *7*; α(L)=0.00763 *11*; α(M)=0.001758 *25*; α(N+..)=0.000519 *8* α(N)=0.000435 *6*; α(O)=7.83×10^{-5} *11*; α(P)=5.33×10^{-6} *8* Mult.: form α(K)exp=0.08 *3*.
565.13 *5*	29 *3*	574.65	(1/2,3/2,5/2)$^-$	9.546	(5/2,7/2)$^-$	E2		0.0185	α(K)=0.01398 *20*; α(L)=0.00343 *5*; α(M)=0.000827 *12*; α(N+..)=0.000240 *4* α(N)=0.000203 *3*; α(O)=3.47×10^{-5} *5*; α(P)=1.478×10^{-6} *21* Mult.: from ce(K):ce(L1):ce(L2):ce(M) exp=0.83 *15*:0.18 *3*:0.11 *3*:0.12 *5*. ce data fit gives 100 *8*% E2.
^{x}568.29 *10*	10 *2*								
574.54[b] *7*	10 *2*	574.65	(1/2,3/2,5/2)$^-$	0.0	3/2$^-$	M1+E2	1.7 *7*	0.027 *9*	α(K)=0.022 *8*; α(L)=0.0043 *10*; α(M)=0.00101 *22*; α(N+..)=0.00030 *7* α(N)=0.00025 *6*; α(O)=4.4×10^{-5} *10*; α(P)=2.4×10^{-6} *9* Mult.,δ: from α(K)exp=0.021 *7*, obtained from 496.1 keV ce line observed by 1967Jo06 with Ice=0.21 *4* and assigning it to K conversion.
580.5[b] *3*	≈5	1174.57	(3/2$^-$,5/2$^-$,7/2$^-$)	594.29	$^-$				

γ(^{191}Pt) (continued)

Eγ[&]	Iγ[‡c]	Ei(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[†]	α[d]	Comments
586.44 *4*	1000	1074.03	$(5/2)^+$	487.578	$(7/2)^-$	E1		0.00593	α(K)=0.00495 *7*; α(L)=0.000754 *11*; α(M)=0.0001724 *25*; α(N+..)=5.04×10^{-5} *7* α(N)=4.24×10^{-5} *6*; α(O)=7.53×10^{-6} *11*; α(P)=4.76×10^{-7} *7* Mult.: from ce(K):ce(L12):ce(L3):ce(M) exp=5.2 *9*:0.77 *7*:0.064 *20*:<0.4; ce(N)=0.19 *4* discarded, outlier in ce data fit.
[x]595.90 *10*	20 *2*					E2		0.01635	α(K)=0.01249 *18*; α(L)=0.00295 *5*; α(M)=0.000708 *10*; α(N+..)=0.000205 *3* α(N)=0.0001743 *25*; α(O)=2.98×10^{-5} *5*; α(P)=1.321×10^{-6} *19* Mult.: from ce(K):ce(L12):ce(L3):ce(M) exp=0.67 *12*:0.16 *4*:<.4:0.08 *3*; ce data fit gives 100 *12%* E2.
[x]608.36[@a] *20*									Ice(K)=0.18 *2* (1967Jo06).
[x]616.26 *10*	22 *3*					E2+M1	2.2 *12*	0.020 *10*	α(K)=0.016 *9*; α(L)=0.0032 *11*; α(M)=0.00077 *25*; α(N+..)=0.00022 *8* α(N)=0.00019 *6*; α(O)=3.3×10^{-5} *12*; α(P)=1.7×10^{-6} *10* Mult.,δ: from α(K)exp=0.016 *6*, α(L12)exp=<0.011.
620.31 *8*	64 *6*	1074.03	$(5/2)^+$	453.81	$(7/2,9/2)^+$	M1+E2	0.85 *30*	0.032 *6*	α(K)=0.026 *5*; α(L)=0.0045 *6*; α(M)=0.00105 *14*; α(N+..)=0.00031 *4* α(N)=0.00026 *4*; α(O)=4.6×10^{-5} *7*; α(P)=2.9×10^{-6} *6* Mult.,δ: from α(K)exp=0.027 *4*.
625.85[f] *12*	53 *8*	1113.49	$(5/2)^+$	487.578	$(7/2)^-$				E2+M1, δ=0.73 *23*, from α(K)exp=0.018 *6*. Inconsistent with 1976Pi06 placement on level scheme from γ-γ coinc measurement.
627.74 *15*	12 *3*	1289.96	$(^-)$	662.27	$(3/2,5/2,7/2)^-$	(M1)		0.0431	α(K)=0.0357 *5*; α(L)=0.00570 *8*; α(M)=0.001312 *19*; α(N+..)=0.000387 *6* α(N)=0.000324 *5*; α(O)=5.85×10^{-5} *9*; α(P)=3.99×10^{-6} *6* Mult.: from α(K)exp=0.057 *22* and α(L12)exp=0.010 *5*.
[x]634.59[@a] *25*									Ice(K)=0.084 *15* (1967Jo06).
647.97[b] *15*	6 *2*	929.19	$^-$	281.18	$(3/2,5/2,7/2)^-$				
659.69 *12*	17 *2*	1113.49	$(5/2)^+$	453.81	$(7/2,9/2)^+$	M1+E2	1.2 *4*	0.023 *5*	α(K)=0.019 *5*; α(L)=0.0034 *6*; α(M)=0.00079 *13*; α(N+..)=0.00023 *4* α(N)=0.00019 *3*; α(O)=3.4×10^{-5} *6*; α(P)=2.1×10^{-6} *5* Mult.,δ: from α(K)exp=0.018 *7* and α(L12)exp=0.0034 *11*.
[x]669.59 *15*	4 *1*					(M1)		0.0364	α(K)=0.0302 *5*; α(L)=0.00481 *7*; α(M)=0.001108 *16*; α(N+..)=0.000327 *5* α(N)=0.000274 *4*; α(O)=4.94×10^{-5} *7*; α(P)=3.37×10^{-6} *5* Mult.: From α(K)exp=0.04 *2*.
674.22 *6*	402 *29*	1074.03	$(5/2)^+$	399.837	$5/2^-,7/2^-$	E1		0.00448	α(K)=0.00374 *6*; α(L)=0.000564 *8*; α(M)=0.0001289 *18*; α(N+..)=3.77×10^{-5} *6*

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	α[d]	Comments
								α(N)=3.17×10^{-5} *5*; α(O)=5.65×10^{-6} *8*; α(P)=3.62×10^{-7} *5* Mult.: from ce(K):ce(L12):ce(L3):ce(M) exp =1.7 *3*:0.22 *3*:0.06<:0.09 *3*; ce data fit gives 0(2)% M2.
[x]680.74 *15*	4 *1*							
701.96 *12*	32 *3*	732.40	1/2$^-$,3/2$^-$	30.398	1/2$^-$,3/2$^-$	(M1)	0.0323	α(K)=0.0267 *4*; α(L)=0.00426 *6*; α(M)=0.000979 *14*; α(N+..)=0.000289 *4* α(N)=0.000242 *4*; α(O)=4.37×10^{-5} *7*; α(P)=2.98×10^{-6} *5* Mult.: from α(K)exp=0.030 *10*, α(L12)exp=0.0059 *21*.
732.48 *16*	6 *1*	732.40	1/2$^-$,3/2$^-$	0.0	3/2$^-$	(M1)	0.0289	α(K)=0.0240 *4*; α(L)=0.00381 *6*; α(M)=0.000877 *13*; α(N+..)=0.000259 *4* α(N)=0.000217 *3*; α(O)=3.91×10^{-5} *6*; α(P)=2.67×10^{-6} *4* Mult.: from α(K)exp=0.023 *6*.
[x]734.51 *16*	8 *1*							α(K)exp=<0.04.
[x]751.62[@a] *25*								Ice(K)=0.114 *25* (1967Jo06).
767.75 *16*	12 *2*	1074.03	(5/2)$^+$	306.33	(9/2)$^+$			
780.51[b] *16*	15 *2*	1074.03	(5/2)$^+$	293.458	(5/2)$^-$			
792.78 *15*	42 *4*	1074.03	(5/2)$^+$	281.18	(3/2,5/2,7/2)$^-$	E1	0.00327	α(K)=0.00274 *4*; α(L)=0.000408 *6*; α(M)=9.31×10^{-5} *13*; α(N+..)=2.73×10^{-5} *4* α(N)=2.29×10^{-5} *4*; α(O)=4.09×10^{-6} *6*; α(P)=2.67×10^{-7} *4* Mult.: from ce(K):ce(L12) exp = 0.18 *4*:0.046 *12*; ce data fit gives 0(4)% M2.
820.07[b] *18*	21 *2*	1074.03	(5/2)$^+$	253.946	(3/2,5/2,7/2)$^-$			
[x]829.88[b] *20*	4 *1*							
835.53 *16*	40 *2*	1113.49	(5/2)$^+$	277.877	(3/2,5/2)$^-$	E1	0.00296	α(K)=0.00248 *4*; α(L)=0.000368 *6*; α(M)=8.39×10^{-5} *12*; α(N+..)=2.46×10^{-5} *4* α(N)=2.07×10^{-5} *3*; α(O)=3.69×10^{-6} *6*; α(P)=2.42×10^{-7} *4* Mult.: from α(K)exp=0.0035 *13*.
[x]839.64[@a] *35*								Ice(K)=0.054 *20* (1967Jo06).
[x]854.28[b] *20*	4 *1*							
859.57[b] *19*	18 *2*	1113.49	(5/2)$^+$	253.946	(3/2,5/2,7/2)$^-$			
[x]870.54 *22*	6 *1*					M1	0.0186	α(K)=0.01544 *22*; α(L)=0.00244 *4*; α(M)=0.000561 *8*; α(N+..)=0.0001655 *24* α(N)=0.0001388 *20*; α(O)=2.50×10^{-5} *4*; α(P)=1.714×10^{-6} *24*
[x]878.56[@a] *25*								ce(K) exp=0.35 *9*, coincides with impurity lines (1967Jo06).
880.77[b] *21*	11 *1*	1174.57	(3/2$^-$,5/2$^-$,7/2$^-$)	293.458	(5/2)$^-$			
896.58[b] *23*	8 *1*	1174.57	(3/2$^-$,5/2$^-$,7/2$^-$)	277.877	(3/2,5/2)$^-$			
920.66 *25*	5 *1*	1174.57	(3/2$^-$,5/2$^-$,7/2$^-$)	253.946	(3/2,5/2,7/2)$^-$	(M1)	0.01614	α(K)=0.01340 *19*; α(L)=0.00211 *3*; α(M)=0.000486 *7*; α(N+..)=0.0001433 *20* α(N)=0.0001202 *17*; α(O)=2.17×10^{-5} *3*; α(P)=1.486×10^{-6} *21* Mult.: from α(K)exp=0.013 *6*.
[x]924.04[@a] *30*								ce(K):ce(L12) exp=0.16 *3*:0.020 *7*.

$^{191}_{78}Pt_{113}$-13

γ(^{191}Pt) (continued)

E_γ[&]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	α[d]	Comments
[x]929.16[@a] *30*								ce(K):ce(L12) exp=0.084 *24*:0.030 *10*.
[x]971.32[@a] *35*								ce(K) exp=0.114 *20*.
[x]981.71[@a] *35*								
[x]985.36[@a] *35*								
[x]1006.3[b] *3*	4 *1*							
1023.0 *3*	6 *1*	1300.9	($^-$)	277.877	(3/2,5/2)$^-$	(M1)	0.01236	α(K)=0.01026 *15*; α(L)=0.001613 *23*; α(M)=0.000371 *6*; α(N+..)=0.0001094 *16* α(N)=9.17×10^{-5} *13*; α(O)=1.654×10^{-5} *24*; α(P)=1.136×10^{-6} *16* Mult.: from α(K)exp=0.017 *7*.
[x]1028.0[b] *3*	7 *1*							
1035.8 *3*	5 *1*	1289.96	($^-$)	253.946	(3/2,5/2,7/2)$^-$			
1064.7[b] *3*	9 *1*	1074.03	(5/2)$^+$	9.546	(5/2,7/2)$^-$			
1074.2[b] *3*	10 *1*	1074.03	(5/2)$^+$	0.0	3/2$^-$			
[x]1086.9[b] *4*	4 *1*							
[x]1096.8[b] *3*	7 *1*							
[x]1101.9 *3*	8 *1*					(M1)	0.01025	α(K)=0.00851 *12*; α(L)=0.001335 *19*; α(M)=0.000307 *5*; α(N+..)=9.08×10^{-5} *13* α(N)=7.59×10^{-5} *11*; α(O)=1.369×10^{-5} *20*; α(P)=9.41×10^{-7} *14*; α(IPF)=3.00×10^{-7} *6* Mult.: from α(K)exp=0.014 *5*.
1113.6[b] *3*	15 *2*	1113.49	(5/2)$^+$	0.0	3/2$^-$			
[x]1161.2[b] *3*	11 *2*							
1164.9[b] *3*	12 *2*	1174.57	(3/2$^-$,5/2$^-$,7/2$^-$)	9.546	(5/2,7/2)$^-$			
1174.0[f] *4*	8 *1*	1174.57	(3/2$^-$,5/2$^-$,7/2$^-$)	0.0	3/2$^-$			
1199.3[b] *3*	9 *1*	1453.3		253.946	(3/2,5/2,7/2)$^-$			
[x]1259.6[b] *3*	17 *2*							
[x]1302.3[b] *4*	9 *2*							

† δ values from ce data were calculated by evaluator using the minimization method of 1980Ry04 and 1967Jo06 Ice, where the 353.88γ ce data and six other specific ce, strongly discrepant, were discarded (noted in the comments), and the Ice relative to the doublet line 451.85γ was not used; Iγ data were not used. The reduced chi-square for the fit of the adopted data was 1.05 with 108 d.f. . When the subshell ratios did not give sufficiently precise results, δ was deduced using α=ce/Iγ, where the standard deviation of ce was multiplied for 1.7 to account for the discrepancies between ce and Iγ scales, as noted on the table comments.

‡ From 1967Jo06 evaluated ce data fit with uncertainties multiplied by 1.7 below 130 keV and from 1976Pi06 γ-ray measurements for higher energies, unless otherwise specified; values deduced from ce data with precision comparable to the γ-ray measurement are given in comments.

$^{191}_{78}Pt_{113}$-14

$\gamma(^{191}Pt)$ (continued)

[#] Multipolarities are from shell and subshell ratios whenever possible; when this procedure did not have sufficient precision, conversion coefficients were calculated by evaluator using Iγ from 1976Pi06 and Ice from 1967Jo06, with uncertainties in ce multiplied by 1.7, as described in the table comments.

[@] Energy from 1967Jo06.

[&] Energy from 1976Pi06, unless otherwise specified; energies from 1967Jo06 are compatible with 1976Pi06 values, and were adopted when more precise.

[a] Not observed by 1976Pi06.

[b] Not observed by 1967Jo06.

[c] For absolute intensity per 100 decays, multiply by ≈0.015.

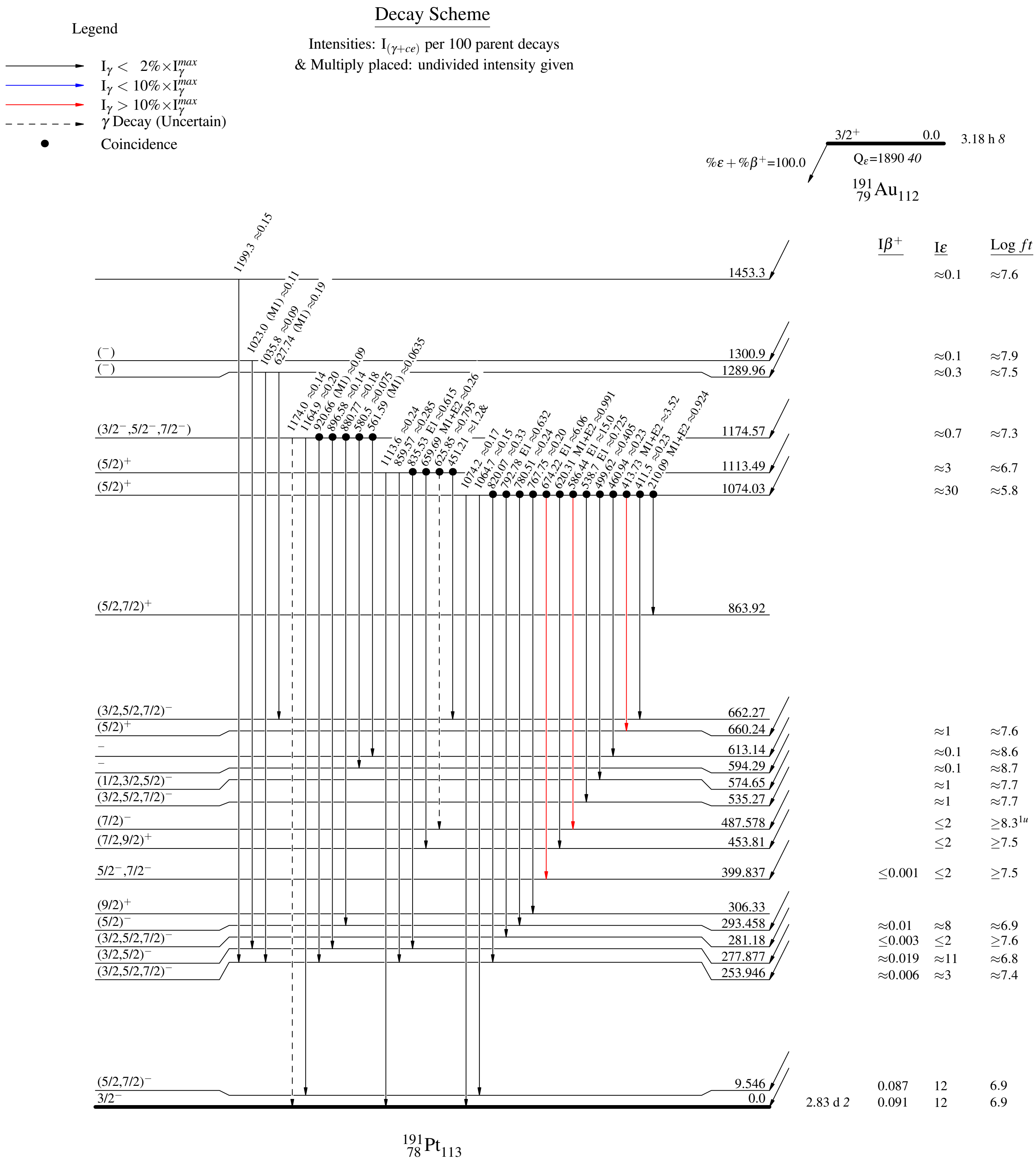
[d] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

[e] Multiply placed with undivided intensity.

[f] Placement of transition in the level scheme is uncertain.

[x] γ ray not placed in level scheme.

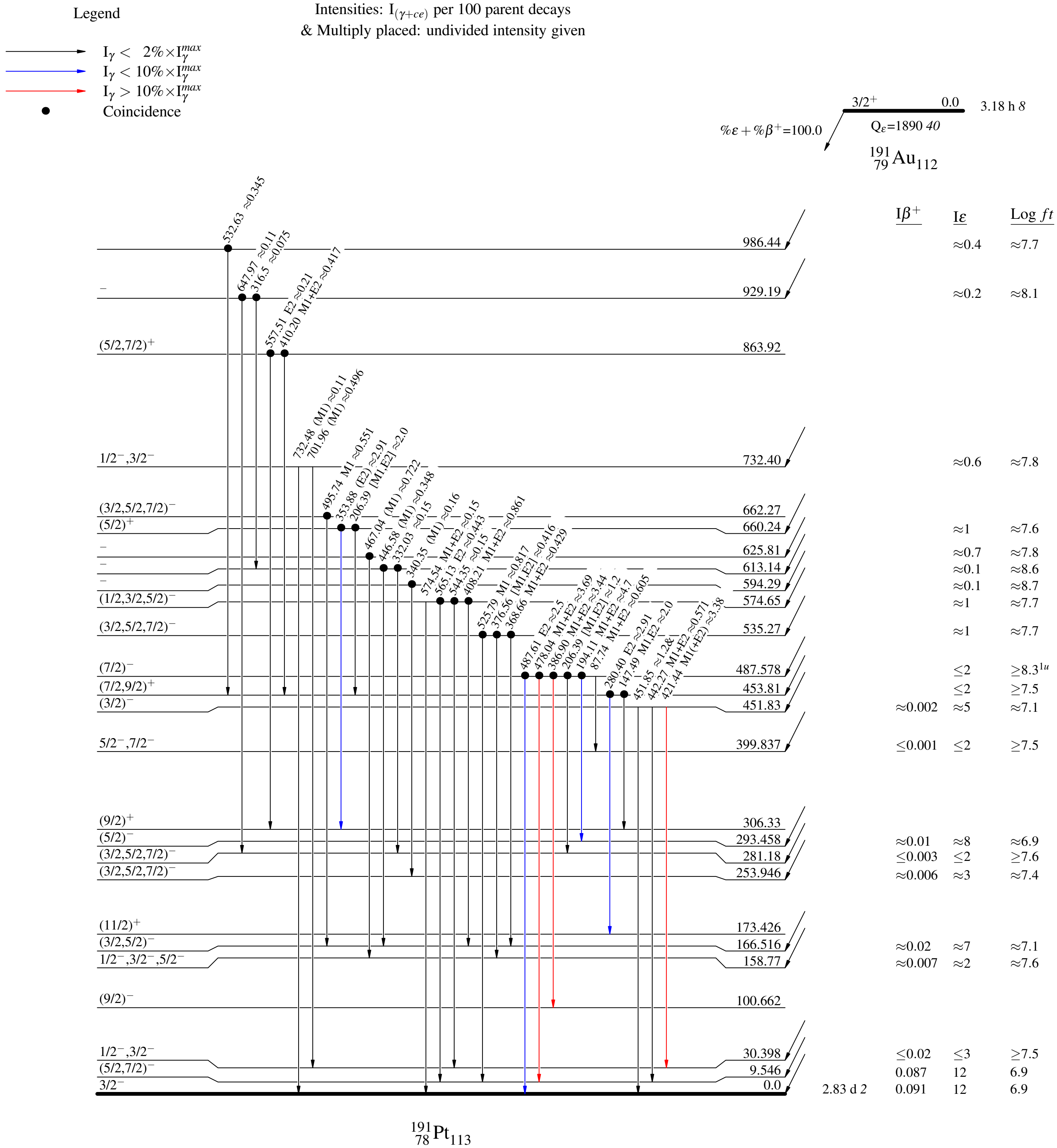
^{191}Au ε decay 1976Pi06,1967Jo06



^{191}Au ε decay 1976Pi06,1967Jo06

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given



^{191}Au ε decay 1976Pi06,1967Jo06

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given