

$^{184}\text{Pt}$   $\varepsilon$  decay **1988Be16,1996Om01**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 111,275 (2010)	1-Oct-2009

Parent:  $^{184}\text{Pt}$ :  $E=0.0$ ;  $J^\pi=0^+$ ;  $T_{1/2}=17.3$  min 2;  $Q(\varepsilon)=2280$  30;  $\% \varepsilon + \% \beta^+$  decay=100.0

Others: [1970FiZZ](#), [1975Ho03](#), [1987BrZR](#).

[1975Ho03](#):  $\beta$  strength function deduced from total-absorption  $\gamma$  measurement.

[1988Be16](#):  $^{184}\text{Pt}$  source from  $\varepsilon$  decay of  $^{184}\text{Au}$  obtained from on-line mass separated products of  $\text{Pt}(p,xn)$  reaction At  $E(p)=200$  MeV; planar HPGe (FWHM=0.6 keV At 122 keV) for  $E_\gamma=8-450$ , 2 coax HPGe (FWHM=1.9 keV At 1300) for  $E_\gamma<1500$  and  $E_\gamma<2000$ ; coax Ge(Li) (FWHM=2.1 keV) for  $E_\gamma<1100$ ; semi-circular magnetic spectrometer for  $E(\text{ce})=10-400$  keV and cooled Si(Li) for higher energy ce; measured  $E_\gamma$ ,  $I_\gamma$ ,  $I(\text{ce})$ ,  $\gamma\gamma$  coin,  $x-\gamma(t)$ ,  $\gamma\gamma(t)$ . two-quasiparticle plus rotor model calculations.

[1996Om01](#): measured ce-ce coin; deduced  $T_{1/2}$  (2 levels).

 $^{184}\text{Ir}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>	$T_{1/2}$ <sup>#</sup>	Comments
0.0	$5^-$		
11.6? <sup>@</sup> 3			E(level): order of 487.7 $\gamma$ and 11.6 $\gamma$ not established ( <a href="#">1988Be16</a> ).
18.4? <sup>@</sup> 3	$(3^-, 4^-, 5^-)$		
70.73 9	$4^-$	<180 ps	$T_{1/2}$ : from ce-ce coin ( <a href="#">1996Om01</a> ). other: <300 ps ( <a href="#">1987BrZR</a> ).
225.63 11	$3^+$	>500 ns	
237.16 21	$+$		
262.70 11	$3^-$	<300 <sup>a</sup> ps	
293.27 12	$2^+$	1.1 ns 3	$T_{1/2}$ : from ce-ce coin and ce- $\gamma$ coin ( <a href="#">1996Om01</a> ). other: $\approx$ 1 ns ( <a href="#">1987BrZR</a> ).
295.55 20	$(2, 3, 4)^+$		
342.70 12	$1^+$		
355.47 13	$2^-$		
428.24 13	$1^+$		
432.48 12	$(2)^+$	>10 ns	$T_{1/2}<200$ ns, from $\gamma\gamma(t)$ .
478.73 21	$(1)^+$		
484.88 15	$1^+$		
499.27 <sup>@</sup> 14	$(4)^+$		<a href="#">1988Be16</a> very tentatively suggest a configuration of $(\pi h_{9/2}) \otimes (\nu 7/2[503])$ for this state.
499.93 13	$1^-$		
504.79 13	$1^-, 2^-$		
509.45 13	$1^+, 2^+$		
519.38 14	$(3)^+$		
554.46 13	$2^+$		
604.70 15	$(3, 4)^+$		
621.02 14	$(0, 1)$		
639.02 14	$(3)^+$		
659.80 25			
663.20 16	$(2, 3)^+$		
792.59 17			
814.81 16	$\leq 3$		
855.94 13	$(2)^+$		
874.04 21	$(0, 1)^+$		
903.84 13	$1^+$		
910.11 16	$1^+, 2^+, 3^+$		
924.98 21	$1^+$		
942.62 <sup>&amp;</sup> 14	$(0^+, 1^+, 2^+)$		
1065.26 13	$1^+$		
1086.59 13	$1^+$		
1166.1 3	$(\leq 3)$		
1223.1 3			
1362.0 3			

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$^{184}\text{Pt}$   $\varepsilon$  decay **1988Be16,1996Om01** (continued) $^{184}\text{Ir}$  Levels (continued)

<sup>†</sup> From least-squares fit to  $E\gamma$ .

<sup>‡</sup> From Adopted Levels.

# From 1987BrZR, except As noted.

@ The existence of the 11.6, 18.4, and 499.3 levels is based on coincidences between the transitions deexciting the 499.3 level and those deexciting well established higher-lying levels. However, the intensity feeding the 499.3 level greatly exceeds the intensity deexciting that level. The feeding through the 499.3 level could be balanced by a  $66.7\gamma$ , creating only a very slight intensity imbalance at the 432.5 level. alternatively, the 499 level may deexcite via low energy transitions to levels directly feeding the g.s.. It would be unusual to have weakly fed low-J levels above the higher-spin  $^{184}\text{Ir}$  ground state, and low-lying higher-J levels should have been observed in the reaction data.

& The 942.6 level has some excess feeding from higher levels.

<sup>a</sup> From 1987BrZR.

 $\varepsilon, \beta^+$  radiations

E(decay)	E(level)	$I\beta^+$ <sup>‡</sup>	$I\varepsilon$ <sup>‡</sup>	Log $ft$	$I(\varepsilon + \beta^+)$ <sup>†‡</sup>	Comments
( $9.2 \times 10^2$ 3)	1362.0		0.41 6	6.65 7	0.41 6	$\varepsilon K=0.8000$ 9; $\varepsilon L=0.1515$ 7; $\varepsilon M+=0.04856$ 24
( $1.06 \times 10^3$ 3)	1223.1		0.37 3	6.83 5	0.37 3	$\varepsilon K=0.8032$ 7; $\varepsilon L=0.1491$ 5; $\varepsilon M+=0.04766$ 18
( $1.11 \times 10^3$ 3)	1166.1		0.40 5	6.84 6	0.40 5	$\varepsilon K=0.8043$ 6; $\varepsilon L=0.1483$ 4; $\varepsilon M+=0.04736$ 16
( $1.19 \times 10^3$ 3)	1086.59		23.3 15	5.14 4	23.3 15	$\varepsilon K=0.8056$ 5; $\varepsilon L=0.1474$ 4; $\varepsilon M+=0.04700$ 14
( $1.21 \times 10^3$ 3)	1065.26		11.5 8	5.46 4	11.5 8	$\varepsilon K=0.8059$ 5; $\varepsilon L=0.1471$ 4; $\varepsilon M+=0.04691$ 13
( $1.34 \times 10^3$ 3)	942.62		<0.4	>7.0	<0.4	$\varepsilon K=0.8075$ 4; $\varepsilon L=0.1459$ 3; $\varepsilon M+=0.04645$ 11
( $1.36 \times 10^3$ 3)	924.98		2.61 17	6.21 4	2.61 17	$\varepsilon K=0.8077$ 4; $\varepsilon L=0.1458$ 3; $\varepsilon M+=0.04639$ 11
( $1.37 \times 10^3$ 3)	910.11		<0.17	>7.4	<0.17	$\varepsilon K=0.8078$ 3; $\varepsilon L=0.1456$ 3; $\varepsilon M+=0.04634$ 10
( $1.38 \times 10^3$ 3)	903.84	0.007 3	29 3	5.18 5	29 3	av $E\beta=179$ 14; $\varepsilon K=0.8079$ 3; $\varepsilon L=0.1456$ 3; $\varepsilon M+=0.04632$ 10 $I(\varepsilon + \beta^+)$ : calculated assuming $\text{mult}(89\gamma)=M1, E2$ but similar result is obtained if $\text{mult}=E1$ .
( $1.41 \times 10^3$ 3)	874.04		1.67 10	6.44 4	1.67 10	$\varepsilon K=0.8081$ 3; $\varepsilon L=0.1453$ 3; $\varepsilon M+=0.04623$ 10
( $1.47 \times 10^3$ # 3)	814.81		1.0 7	6.7 3	1.0 7	$\varepsilon K=0.8085$ 2; $\varepsilon L=0.14483$ 25; $\varepsilon M+=0.04604$ 10
( $1.49 \times 10^3$ # 3)	792.59		0.21 10	7.39 21	0.21 10	$\varepsilon K=0.8086$ 2; $\varepsilon L=0.14466$ 24; $\varepsilon M+=0.04598$ 9
( $1.62 \times 10^3$ 3)	659.80	<0.002	<0.9	>6.8	<0.9	av $E\beta=289$ 14; $\varepsilon K=0.8088$ 1; $\varepsilon L=0.14362$ 24; $\varepsilon M+=0.04560$ 9
( $1.66 \times 10^3$ 3)	621.02	0.0036 9	1.42 19	6.66 6	1.42 19	av $E\beta=306$ 14; $\varepsilon K=0.8086$ 2; $\varepsilon L=0.14332$ 24; $\varepsilon M+=0.04549$ 9 $I(\varepsilon + \beta^+)$ : calculated assuming $\pi(621 \text{ level})=+$ , but value is almost the same if $\pi$ is reversed.
( $1.77 \times 10^3$ 3)	509.45	0.007 4	1.5 9	6.7 3	1.5 9	av $E\beta=355$ 14; $\varepsilon K=0.8076$ 5; $\varepsilon L=0.14243$ 25; $\varepsilon M+=0.04517$ 9
( $1.78 \times 10^3$ # 3)	504.79	0.006 4	1.2 9	6.8 4	1.2 9	av $E\beta=357$ 14; $\varepsilon K=0.8076$ 5; $\varepsilon L=0.1424$ 3; $\varepsilon M+=0.04516$ 9
( $1.78 \times 10^3$ 3)	499.93	0.012 4	2.5 6	6.48 11	2.5 6	av $E\beta=359$ 14; $\varepsilon K=0.8075$ 5; $\varepsilon L=0.1424$ 3; $\varepsilon M+=0.04514$ 9
( $1.80 \times 10^3$ 3)	484.88	0.019 3	3.61 10	6.323 21	3.63 10	av $E\beta=366$ 14; $\varepsilon K=0.8073$ 5; $\varepsilon L=0.1422$ 3; $\varepsilon M+=0.04510$ 9
( $1.80 \times 10^3$ 3)	478.73	0.0061 19	1.1 3	6.84 12	1.1 3	av $E\beta=368$ 14; $\varepsilon K=0.8072$ 5; $\varepsilon L=0.1422$ 3; $\varepsilon M+=0.04508$ 9
( $1.85 \times 10^3$ 3)	428.24	0.021 8	3.0 10	6.43 15	3.0 10	av $E\beta=391$ 14; $\varepsilon K=0.8064$ 6; $\varepsilon L=0.1417$ 3; $\varepsilon M+=0.04493$ 10
( $1.94 \times 10^3$ 3)	342.70	0.042 17	4.2 16	6.33 17	4.2 16	av $E\beta=428$ 14; $\varepsilon K=0.8045$ 9; $\varepsilon L=0.1410$ 3; $\varepsilon M+=0.04466$ 10
( $2.04 \times 10^3$ 3)	237.16	<0.028	<1.9	>6.7	<1.9	av $E\beta=474$ 14; $\varepsilon K=0.8012$ 11; $\varepsilon L=0.1399$ 4; $\varepsilon M+=0.04430$ 11

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$^{184}\text{Pt}$   $\varepsilon$  decay **1988Be16,1996Om01** (continued)

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$\varepsilon, \beta^+$  radiations (continued)

† About 10-15% of the transition intensity is unplaced. This makes the weaker intensity branches very doubtful. The uncertainties reflect only the statistical error in the adopted intensities. Branchings to levels with  $J^\pi=2^+$  or  $J\geq 3$  have been set to zero although, in some cases, an apparent net feeding exists.

‡ Absolute intensity per 100 decays.

# Existence of this branch is questionable.

γ(<sup>184</sup>Ir)

I<sub>γ</sub> normalization: from Ti(70.7γ+225.8γ)=100; No g.s. feeding expected (ΔJ=5).

<u>E<sub>γ</sub><sup>‡</sup></u>	<u>I<sub>γ</sub><sup>#&amp;</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>†</sup></u>	<u>δ<sup>†</sup></u>	<u>α<sup>a</sup></u>	<u>I<sub>(γ+ce)</sub><sup>&amp;</sup></u>	<u>Comments</u>
(11.6 CA)		11.6?		0.0	5 <sup>-</sup>				1.14 <sup>@</sup> 11	
(11.6 CA)		237.16	+	225.63	3 <sup>+</sup>	[M1+E2]			18.2 <sup>@</sup> 18	
(18.4 CA)		18.4?	(3 <sup>-</sup> ,4 <sup>-</sup> ,5 <sup>-</sup> )	0.0	5 <sup>-</sup>				1.31 <sup>@</sup> 10	
49.4 I	3.2 3	342.70	1 <sup>+</sup>	293.27	2 <sup>+</sup>	M1+E2	0.116 12	9.8 4		α(L)=7.5 3; α(M)=1.77 7; α(N+..)=0.513 18 α(N)=0.433 16; α(O)=0.0749 24; α(P)=0.00485 8 Mult.: L1:L2:L3=100:15:11 (1988Be16).
52.4 I	<1.7	484.88	1 <sup>+</sup>	432.48	(2) <sup>+</sup>	M1		7.10		α(L)=5.47 9; α(M)=1.260 19; α(N+..)=0.369 6 α(N)=0.310 5; α(O)=0.0548 9; α(P)=0.00413 7 Mult.: L1/L2≈10 (1988Be16).
58.4 I	2.4 2	295.55	(2,3,4) <sup>+</sup>	237.16	+	M1+E2	0.14 3	6.0 4		α(L)=4.6 3; α(M)=1.09 8; α(N+..)=0.315 22 α(N)=0.266 20; α(O)=0.046 3; α(P)=0.00295 5 Mult.: L1/L2=4.9 (1988Be16).
66.8 <sup>d</sup> 2	0.38 7	499.27	(4) <sup>+</sup>	432.48	(2) <sup>+</sup>	[E2]		26.2 6		α(L)=19.7 4; α(M)=5.07 11; α(N+..)=1.41 3 α(N)=1.223 25; α(O)=0.185 4; α(P)=0.000268 5 I <sub>γ</sub> : calculated from the assumed α(E2) and the intensity balance of -10.4 18 At the 499 level.
67.6 I	19 2	293.27	2 <sup>+</sup>	225.63	3 <sup>+</sup>	M1+E2	0.29 3	5.0 4		α(L)=3.8 3; α(M)=0.92 7; α(N+..)=0.264 19 α(N)=0.225 16; α(O)=0.0376 24; α(P)=0.00182 4 Mult.: L1:L2:L3=100:43:31 (1988Be16).
70.7 I	85 9	70.73	4 <sup>-</sup>	0.0	5 <sup>-</sup>	M1		2.95		α(L)=2.27 4; α(M)=0.524 8; α(N+..)=0.1534 23 α(N)=0.1289 19; α(O)=0.0228 4; α(P)=0.00172 3 %I <sub>γ</sub> =22.6 5 assuming recommended decay scheme normalization.
81.2 I	1.20 12	509.45	1 <sup>+</sup> ,2 <sup>+</sup>	428.24	1 <sup>+</sup>	[M1,E2]		11.10 17		Mult.: L1/L2=10. α(K)=5 5; α(L)=5 4; α(M)=1.2 9; α(N+..)=0.33 23 α(N)=0.28 20; α(O)=0.04 3; α(P)=0.0007 5 α(K)=7.38 21; α(L)=1.65 13; α(M)=0.39 4; α(N+..)=0.113 9
85.5 I	2.6 3	428.24	1 <sup>+</sup>	342.70	1 <sup>+</sup>	M1+E2	0.28 5	9.54		α(N)=0.096 8; α(O)=0.0163 12; α(P)=0.00093 3 Mult.: L1/L2≈3.4 (1988Be16).
89.0 I	0.3 1	903.84	1 <sup>+</sup>	814.81	≤3	[M1,E2]		8.0 6		α(K)=4 4; α(L)=3.1 20; α(M)=0.8 6; α(N+..)=0.22 14
89.8 I	0.4 1	432.48	(2) <sup>+</sup>	342.70	1 <sup>+</sup>	[M1+E2]		7.8 6		α(N)=0.19 13; α(O)=0.030 18; α(P)=0.0005 4 α(K)=4 3; α(L)=3.0 19; α(M)=0.7 5; α(N+..)=0.21 14
92.7 I	20 2	355.47	2 <sup>-</sup>	262.70	3 <sup>-</sup>	M1		7.61		α(N)=0.18 12; α(O)=0.028 17; α(P)=0.0005 4 α(K)=6.27 9; α(L)=1.035 15; α(M)=0.238 4; α(N+..)=0.0698 10

<sup>184</sup>Pt ε decay **1988Be16,1996Om01** (continued)

γ(<sup>184</sup>Ir) (continued)

<u>E<sub>γ</sub><sup>‡</sup></u>	<u>I<sub>γ</sub><sup>#&amp;</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>†</sup></u>	<u>δ<sup>‡</sup></u>	<u>α<sup>a</sup></u>	<u>Comments</u>
105.5 <i>I</i>	1.1 <i>I</i>	604.70	(3,4) <sup>+</sup>	499.27	(4) <sup>+</sup>	M1		5.25	α(N)=0.0586 9; α(O)=0.01038 15; α(P)=0.000781 12 Mult.: L1/L2≈10, α(L1)exp=0.9 (1988Be16). α(K)=4.33 7; α(L)=0.712 11; α(M)=0.1640 24; α(N+..)=0.0480 7 α(N)=0.0403 6; α(O)=0.00714 11; α(P)=0.000537 8 Mult.: α(K)exp=5 (1988Be16).
117.0 <i>I</i>	9.1 9	342.70	1 <sup>+</sup>	225.63	3 <sup>+</sup>	E2		2.46	α(K)=0.590 9; α(L)=1.405 21; α(M)=0.361 6; α(N+..)=0.1007 15 α(N)=0.0873 13; α(O)=0.01335 20; α(P)=6.23×10 <sup>-5</sup> 9 Mult.: L1:L2:L3=14:100:77, α(K)exp=0.6 (1988Be16).
121.1 <i>I</i>	0.2 <i>I</i>	621.02	(0,1)	499.93	1 <sup>-</sup>	[E1]		0.245	α(K)=0.199 3; α(L)=0.0353 5; α(M)=0.00814 12; α(N+..)=0.00231 4
122.7 <i>I</i>	1.5 2	1065.26	1 <sup>+</sup>	942.62	(0 <sup>+</sup> ,1 <sup>+</sup> ,2 <sup>+</sup> )	M1(+E2)	<0.7	3.18 23	α(N)=0.00197 3; α(O)=0.000328 5; α(P)=1.754×10 <sup>-5</sup> 25 α(K)=2.4 4; α(L)=0.57 11; α(M)=0.14 3; α(N+..)=0.039 9 α(N)=0.033 8; α(O)=0.0056 11; α(P)=0.00030 5 Mult.: α(K)exp=2.7 (1988Be16).
<sup>x</sup> 123.6 <i>I</i>	0.7 <i>I</i>					M1+E2	0.8 3	2.8 3	α(K)=1.9 5; α(L)=0.70 13; α(M)=0.17 4; α(N+..)=0.049 10 α(N)=0.042 8; α(O)=0.0068 12; α(P)=0.00023 6 Mult.: α(K)exp=1.9 (1988Be16).
135.0 <i>I</i>	1.3 <i>I</i>	428.24	1 <sup>+</sup>	293.27	2 <sup>+</sup>	[M1,E2]		2.0 6	α(K)=1.3 9; α(L)=0.54 20; α(M)=0.13 6; α(N+..)=0.038 15 α(N)=0.033 13; α(O)=0.0053 18; α(P)=0.00015 11
139.1 <i>I</i>	3.4 3	432.48	(2) <sup>+</sup>	293.27	2 <sup>+</sup>	M1(+E2)	<0.8	2.17 23	α(K)=1.7 3; α(L)=0.38 7; α(M)=0.092 18; α(N+..)=0.026 5 α(N)=0.022 5; α(O)=0.0038 6; α(P)=0.00020 4 Mult.: α(K)exp=1.7 (1988Be16).
139.7 <i>I</i>	3.7 4	639.02	(3) <sup>+</sup>	499.27	(4) <sup>+</sup>	M1(+E2)	<0.8	2.14 22	α(K)=1.6 3; α(L)=0.38 6; α(M)=0.090 18; α(N+..)=0.026 5 α(N)=0.022 5; α(O)=0.0037 6; α(P)=0.00020 4 Mult.: α(K)exp=1.7 (1988Be16).
143.9 <i>I</i>	1.1 <i>I</i>	1086.59	1 <sup>+</sup>	942.62	(0 <sup>+</sup> ,1 <sup>+</sup> ,2 <sup>+</sup> )	[M1+E2]		1.6 6	α(K)=1.1 7; α(L)=0.42 13; α(M)=0.10 4; α(N+..)=0.030 10 α(N)=0.025 9; α(O)=0.0041 12; α(P)=0.00013 10
144.4 <i>I</i>	3.8 4	499.93	1 <sup>-</sup>	355.47	2 <sup>-</sup>	M1(+E2)	<0.9	1.91 24	α(K)=1.5 4; α(L)=0.35 6; α(M)=0.083 17; α(N+..)=0.024 5 α(N)=0.020 4; α(O)=0.0034 6; α(P)=0.00018 4 Mult.: α(K)exp=1.5 (1988Be16).
<sup>x</sup> 145.5 <i>I</i>	0.5 <i>I</i>								
149.3 <i>I</i>	4.7 5	504.79	1 <sup>-</sup> ,2 <sup>-</sup>	355.47	2 <sup>-</sup>	M1(+E2)	<0.5	1.85 11	α(K)=1.48 13; α(L)=0.284 21; α(M)=0.067 6; α(N+..)=0.0193 16 α(N)=0.0163 15; α(O)=0.00282 19; α(P)=0.000183 17 Mult.: α(K)exp=1.7 (1988Be16).
154.8 <sup>C</sup> <i>I</i>	115 <sup>C</sup> 12	225.63	3 <sup>+</sup>	70.73	4 <sup>-</sup>	E1+M2	0.09 3	0.22 7	α(K)=0.17 5; α(L)=0.036 14; α(M)=0.009 4; α(N+..)=0.0025 10 α(N)=0.0021 9; α(O)=0.00036 15; α(P)=2.2×10 <sup>-5</sup> 10 Mult.: α(K)exp=0.17, L1/L2=3.0 (1988Be16).
154.8 <sup>C</sup> <i>I</i>	2 <sup>C</sup> <i>I</i>	659.80		504.79	1 <sup>-</sup> ,2 <sup>-</sup>				α(K)=0.9 6; α(L)=0.32 8; α(M)=0.078 24; α(N+..)=0.022 7 α(N)=0.019 6; α(O)=0.0031 8; α(P)=0.00011 8
154.8 <sup>C</sup> <i>I</i>	2 <sup>C</sup> <i>I</i>	814.81	≤3	659.80					
161.4 <i>I</i>	5.5 6	1065.26	1 <sup>+</sup>	903.84	1 <sup>+</sup>	M1(+E2)	<0.6	1.46 12	α(K)=1.16 14; α(L)=0.227 17; α(M)=0.053 5; α(N+..)=0.0155 13 α(N)=0.0131 12; α(O)=0.00226 15; α(P)=0.000142 18 Mult.: α(K)exp=1.3 (1988Be16).

<sup>184</sup>Pt ε decay **1988Be16,1996Om01** (continued)

γ(<sup>184</sup>Ir) (continued)

<u>E<sub>γ</sub><sup>‡</sup></u>	<u>I<sub>γ</sub><sup>#&amp;</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>†</sup></u>	<u>δ<sup>†</sup></u>	<u>α<sup>a</sup></u>	<u>Comments</u>
162.1 1	1.7 2	504.79	1 <sup>-</sup> ,2 <sup>-</sup>	342.70	1 <sup>+</sup>	[E1]		0.1161	α(K)=0.0952 14; α(L)=0.01615 23; α(M)=0.00372 6; α(N+...)=0.001063 15
166.7 1	1.0 1	509.45	1 <sup>+</sup> ,2 <sup>+</sup>	342.70	1 <sup>+</sup>	[M1+E2]		1.0 4	α(N)=0.000902 13; α(O)=0.0001523 22; α(P)=8.74×10 <sup>-6</sup> 13 α(K)=0.7 5; α(L)=0.24 5; α(M)=0.059 15; α(N+...)=0.017 4
169.8 1	3.5 4	432.48	(2) <sup>+</sup>	262.70	3 <sup>-</sup>	[E1]		0.1032	α(N)=0.014 4; α(O)=0.0023 5; α(P)=9.E-5 6 α(K)=0.0847 12; α(L)=0.01428 21; α(M)=0.00329 5; α(N+...)=0.000940 14
<sup>x</sup> 172.2 1	1.2 1								α(N)=0.000798 12; α(O)=0.0001350 19; α(P)=7.83×10 <sup>-6</sup> 11
<sup>x</sup> 176.0 1	1.2 1								
176.5 1	1.1 1	1086.59	1 <sup>+</sup>	910.11	1 <sup>+</sup> ,2 <sup>+</sup> ,3 <sup>+</sup>	[M1,E2]		0.9 4	α(K)=0.6 4; α(L)=0.19 3; α(M)=0.048 10; α(N+...)=0.014 3 α(N)=0.0116 23; α(O)=0.0019 3; α(P)=7.E-5 5
182.7 1	7.4 7	1086.59	1 <sup>+</sup>	903.84	1 <sup>+</sup>	M1		1.105	α(K)=0.912 13; α(L)=0.1487 21; α(M)=0.0342 5; α(N+...)=0.01002 15 α(N)=0.00842 12; α(O)=0.001491 21; α(P)=0.0001124 16
183.2 1	2.7 3	478.73	(1) <sup>+</sup>	295.55	(2,3,4) <sup>+</sup>	M1(+E2)		0.8 4	Mult.: α(K)exp(182.7+183.2)=0.9 (1988Be16). α(K)=0.6 4; α(L)=0.170 23; α(M)=0.041 8; α(N+...)=0.0118 19 α(N)=0.0101 18; α(O)=0.00166 18; α(P)=7.E-5 5
192.0 1	100 10	262.70	3 <sup>-</sup>	70.73	4 <sup>-</sup>	M1(+E2)	<0.6	0.89 8	Mult.: α(K)exp(182.7+183.2)=0.9 (1988Be16). However, 1970FiZZ report α(K)exp=5.0 15 for E <sub>γ</sub> =182.9 4. α(K)=0.71 8; α(L)=0.133 5; α(M)=0.0311 15; α(N+...)=0.0090 4 α(N)=0.0076 4; α(O)=0.00132 4; α(P)=8.7×10 <sup>-5</sup> 11
<sup>x</sup> 203.5 1	0.5 1								Mult.: α(K)exp=0.8 (1988Be16), 0.8 2 (1970FiZZ).
206.9 <sup>b</sup> 1	1.4 <sup>b</sup> 1	432.48	(2) <sup>+</sup>	225.63	3 <sup>+</sup>	[M1,E2]		0.54 24	α(K)=0.40 25; α(L)=0.110 6; α(M)=0.027 3; α(N+...)=0.0076 6 α(N)=0.0065 6; α(O)=0.00108 3; α(P)=5.E-5 4
206.9 <sup>bd</sup> 1	1.4 <sup>b</sup> 1	639.02	(3) <sup>+</sup>	432.48	(2) <sup>+</sup>	[M1,E2]		0.54 24	α(K)=0.40 25; α(L)=0.110 6; α(M)=0.027 3; α(N+...)=0.0076 6 α(N)=0.0065 6; α(O)=0.00108 3; α(P)=5.E-5 4
209.3 1	6.0 6	1065.26	1 <sup>+</sup>	855.94	(2) <sup>+</sup>	M1		0.756	α(K)=0.624 9; α(L)=0.1016 15; α(M)=0.0234 4; α(N+...)=0.00684 10 α(N)=0.00575 8; α(O)=0.001018 15; α(P)=7.68×10 <sup>-5</sup> 11
<sup>x</sup> 210.6 1	0.8 1								Mult.: α(K)exp=0.8 (1988Be16).
211.7 1	4.5 5	554.46	2 <sup>+</sup>	342.70	1 <sup>+</sup>	[M1+E2]		0.51 23	α(K)=0.38 23; α(L)=0.101 4; α(M)=0.0245 20; α(N+...)=0.0070 5 α(N)=0.0060 5; α(O)=0.000995 17; α(P)=4.E-5 3
<sup>x</sup> 212.5 1	0.4 1								
216.2 1	10 1	509.45	1 <sup>+</sup> ,2 <sup>+</sup>	293.27	2 <sup>+</sup>	M1(+E2)	<0.3	0.674 20	α(K)=0.553 20; α(L)=0.0929 14; α(M)=0.0215 4; α(N+...)=0.00627 10 α(N)=0.00528 8; α(O)=0.000930 13; α(P)=6.8×10 <sup>-5</sup> 3
216.9 1	9.1 9	855.94	(2) <sup>+</sup>	639.02	(3) <sup>+</sup>	M1(+E2)	<0.6	0.63 6	Mult.: α(K)exp=0.7 (1988Be16). α(K)=0.51 6; α(L)=0.0923 14; α(M)=0.0215 5; α(N+...)=0.00626 12 α(N)=0.00528 11; α(O)=0.000920 13; α(P)=6.2×10 <sup>-5</sup> 8
									Mult.: α(K)exp=0.6 (1988Be16).

<sup>184</sup>Pt ε decay **1988Be16,1996Om01** (continued)

γ(<sup>184</sup>Ir) (continued)

$E_\gamma$ ‡	$I_\gamma$ #&	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. †	$\delta^\dagger$	$\alpha^a$	Comments
225.8 <sup>cd</sup> 1	8.0 <sup>c</sup> 8	225.63	3 <sup>+</sup>	0.0	5 <sup>-</sup>	M2		2.85	$\alpha(K)=2.16$ 3; $\alpha(L)=0.529$ 8; $\alpha(M)=0.1286$ 19; $\alpha(N+..)=0.0378$ 6 $\alpha(N)=0.0319$ 5; $\alpha(O)=0.00556$ 8; $\alpha(P)=0.000379$ 6 %I $\gamma=2.12$ 29 assuming recommended decay scheme normalization. Mult.: $\alpha(K)_{\text{exp}}=2.3$ (1988Be16).
225.8 <sup>c</sup> 1	0.7 <sup>c</sup> 1	519.38	(3) <sup>+</sup>	293.27	2 <sup>+</sup>	[M1+E2]		0.42 20	$\alpha(K)=0.32$ 19; $\alpha(L)=0.0812$ 16; $\alpha(M)=0.0196$ 8; $\alpha(N+..)=0.00561$ 11 $\alpha(N)=0.00478$ 15; $\alpha(O)=0.00080$ 3; $\alpha(P)=3.7\times 10^{-5}$ 25
230.7 1	8.3 8	1086.59	1 <sup>+</sup>	855.94	(2) <sup>+</sup>	M1(+E2)	<0.2	0.570 11	$\alpha(K)=0.470$ 10; $\alpha(L)=0.0773$ 11; $\alpha(M)=0.0178$ 3; $\alpha(N+..)=0.00522$ 8 $\alpha(N)=0.00438$ 7; $\alpha(O)=0.000775$ 11; $\alpha(P)=5.77\times 10^{-5}$ 12 Mult.: $\alpha(K)_{\text{exp}}=0.6$ (1988Be16).
237.3 1	1.2 1	499.93	1 <sup>-</sup>	262.70	3 <sup>-</sup>	[E2]		0.196	$\alpha(K)=0.1094$ 16; $\alpha(L)=0.0655$ 10; $\alpha(M)=0.01651$ 24; $\alpha(N+..)=0.00465$ 7 $\alpha(N)=0.00401$ 6; $\alpha(O)=0.000631$ 9; $\alpha(P)=1.133\times 10^{-5}$ 16
<sup>x</sup> 240.7 1	1.0 1								
<sup>x</sup> 242.9 1	0.5 1								
<sup>x</sup> 244.6 1	0.6 1								
<sup>x</sup> 247.1 1	1.7 2								
251.3 1	3.7 4	855.94	(2) <sup>+</sup>	604.70	(3,4) <sup>+</sup>	[M1,E2]		0.31 15	$\alpha(K)=0.24$ 15; $\alpha(L)=0.057$ 5; $\alpha(M)=0.0136$ 6; $\alpha(N+..)=0.00390$ 22 $\alpha(N)=0.00332$ 15; $\alpha(O)=0.00056$ 6; $\alpha(P)=2.8\times 10^{-5}$ 19
<sup>x</sup> 253.4 1	1.3 1								
256.7 1	0.9 1	519.38	(3) <sup>+</sup>	262.70	3 <sup>-</sup>	[E1]		0.0368	$\alpha(K)=0.0304$ 5; $\alpha(L)=0.00491$ 7; $\alpha(M)=0.001127$ 16; $\alpha(N+..)=0.000324$ 5 $\alpha(N)=0.000274$ 4; $\alpha(O)=4.70\times 10^{-5}$ 7; $\alpha(P)=2.96\times 10^{-6}$ 5
261.3 1	3.0 3	554.46	2 <sup>+</sup>	293.27	2 <sup>+</sup>	[M1+E2]		0.28 14	$\alpha(K)=0.21$ 13; $\alpha(L)=0.050$ 6; $\alpha(M)=0.0119$ 8; $\alpha(N+..)=0.0034$ 3 $\alpha(N)=0.00291$ 20; $\alpha(O)=0.00049$ 6; $\alpha(P)=2.5\times 10^{-5}$ 17
<sup>x</sup> 262.0 1	3.0 3								
<sup>x</sup> 264.8 1	1.9 2								
<sup>x</sup> 268.8 1	1.4 1								
<sup>x</sup> 270.3 1	2.2 2								
<sup>x</sup> 271.9 1	1.5 2								
<sup>x</sup> 274.8 1	1.0 1								
<sup>x</sup> 276.1 1	1.2 1								
278.3 1	4.1 4	621.02	(0,1)	342.70	1 <sup>+</sup>	[M1+E2]		0.23 12	$\alpha(K)=0.18$ 11; $\alpha(L)=0.041$ 6; $\alpha(M)=0.0097$ 10; $\alpha(N+..)=0.0028$ 4 $\alpha(N)=0.00237$ 25; $\alpha(O)=0.00040$ 7; $\alpha(P)=2.1\times 10^{-5}$ 14
279.4 1	1.3 1	942.62	(0 <sup>+</sup> ,1 <sup>+</sup> ,2 <sup>+</sup> )	663.20	(2,3) <sup>+</sup>	[M1,E2]		0.23 12	$\alpha(K)=0.18$ 11; $\alpha(L)=0.040$ 6; $\alpha(M)=0.0096$ 10; $\alpha(N+..)=0.0028$ 4 $\alpha(N)=0.00234$ 25; $\alpha(O)=0.00040$ 7; $\alpha(P)=2.1\times 10^{-5}$ 14
<sup>x</sup> 283.7 1	0.8 1								
<sup>x</sup> 284.9 1	0.5 1								
287.8 1	1.9 2	792.59		504.79	1 <sup>-</sup> ,2 <sup>-</sup>				
<sup>x</sup> 293.8 1	1.0 1								
<sup>x</sup> 297.0 1	0.7 1								
<sup>x</sup> 303.9 3	1.1 1								

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<sup>184</sup>Ir  
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From ENSDF

<sup>184</sup>Ir  
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<sup>184</sup>Pt ε decay **1988Be16,1996Om01** (continued)

γ(<sup>184</sup>Ir) (continued)

$E_\gamma$ ‡	$I_\gamma$ #&	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. †	$\delta^\dagger$	$\alpha^a$	Comments
<sup>x</sup> 305.2 3 309.1 3	0.6 1 2.1 2	604.70	(3,4) <sup>+</sup>	295.55	(2,3,4) <sup>+</sup>	M1+E2	2.0 +11-5	0.121 19	$\alpha(K)=0.087$ 18; $\alpha(L)=0.0258$ 13; $\alpha(M)=0.00627$ 25; $\alpha(N+..)=0.00179$ 8 $\alpha(N)=0.00153$ 7; $\alpha(O)=0.000252$ 14; $\alpha(P)=1.00\times 10^{-5}$ 22 Mult.: $\alpha(K)\text{exp}=0.09$ (1988Be16). $\alpha(K)=0.0187$ 3; $\alpha(L)=0.00296$ 5; $\alpha(M)=0.000679$ 10; $\alpha(N+..)=0.000196$ 3 $\alpha(N)=0.0001656$ 24; $\alpha(O)=2.86\times 10^{-5}$ 4; $\alpha(P)=1.86\times 10^{-6}$ 3 Mult.: $\alpha(K)\text{exp}<0.06$ (1988Be16); consistent with E1 and E2.
314.8 3	3.3 3	814.81	$\leq 3$	499.93	1 <sup>-</sup>				$\alpha(K)=0.0187$ 3; $\alpha(L)=0.00296$ 5; $\alpha(M)=0.000679$ 10; $\alpha(N+..)=0.000196$ 3 $\alpha(N)=0.0001656$ 24; $\alpha(O)=2.86\times 10^{-5}$ 4; $\alpha(P)=1.86\times 10^{-6}$ 3 Mult.: $\alpha(K)\text{exp}<0.06$ (1988Be16); consistent with E1 and E2.
320.4 3	1.9 2	663.20	(2,3) <sup>+</sup>	342.70	1 <sup>+</sup>	[M1,E2]		0.16 8	$\alpha(K)=0.12$ 8; $\alpha(L)=0.026$ 6; $\alpha(M)=0.0062$ 11; $\alpha(N+..)=0.0018$ 4 $\alpha(N)=0.0015$ 3; $\alpha(O)=0.00026$ 6; $\alpha(P)=1.5\times 10^{-5}$ 10
<sup>x</sup> 326.3 3	0.7 1					M1(+E2)	<0.5	0.209 16	$\alpha(K)=0.172$ 14; $\alpha(L)=0.0288$ 12; $\alpha(M)=0.00665$ 23; $\alpha(N+..)=0.00194$ 7 $\alpha(N)=0.00163$ 6; $\alpha(O)=0.000288$ 12; $\alpha(P)=2.09\times 10^{-5}$ 18 Mult.: $\alpha(K)\text{exp}=0.2$ (1988Be16).
328.7 3	4.2 4	554.46	2 <sup>+</sup>	225.63	3 <sup>+</sup>	M1(+E2)	<0.5	0.205 15	$\alpha(K)=0.168$ 14; $\alpha(L)=0.0282$ 12; $\alpha(M)=0.00652$ 23; $\alpha(N+..)=0.00190$ 7 $\alpha(N)=0.00160$ 6; $\alpha(O)=0.000282$ 12; $\alpha(P)=2.05\times 10^{-5}$ 18 Mult.: $\alpha(K)\text{exp}=0.2$ (1988Be16).
336.4 3	3.7 4	855.94	(2) <sup>+</sup>	519.38	(3) <sup>+</sup>	M1(+E2)	<0.4	0.197 10	$\alpha(K)=0.162$ 9; $\alpha(L)=0.0267$ 8; $\alpha(M)=0.00617$ 17; $\alpha(N+..)=0.00180$ 5 $\alpha(N)=0.00152$ 5; $\alpha(O)=0.000268$ 9; $\alpha(P)=1.97\times 10^{-5}$ 12 Mult.: $\alpha(K)\text{exp}=0.2$ (1988Be16).
<sup>x</sup> 341.9 3	0.6 1					M1(+E2)	<0.8	0.17 3	$\alpha(K)=0.140$ 24; $\alpha(L)=0.0243$ 20; $\alpha(M)=0.0056$ 4; $\alpha(N+..)=0.00165$ 13 $\alpha(N)=0.00139$ 10; $\alpha(O)=0.000243$ 21; $\alpha(P)=1.7\times 10^{-5}$ 3 Mult.: $\alpha(K)\text{exp}=0.15$ (1988Be16).
343.4 3	1.1 1	639.02	(3) <sup>+</sup>	295.55	(2,3,4) <sup>+</sup>	M1+E2	1.5 +7-4	0.104 19	$\alpha(K)=0.079$ 18; $\alpha(L)=0.0191$ 15; $\alpha(M)=0.0046$ 3; $\alpha(N+..)=0.00132$ 10 $\alpha(N)=0.00112$ 8; $\alpha(O)=0.000188$ 16; $\alpha(P)=9.3\times 10^{-6}$ 22 Mult.: $\alpha(K)\text{exp}=0.08$ (1988Be16).
355.8 3	2.0 2	910.11	1 <sup>+</sup> ,2 <sup>+</sup> ,3 <sup>+</sup>	554.46	2 <sup>+</sup>	M1+E2	1.6 +8-4	0.091 16	$\alpha(K)=0.069$ 15; $\alpha(L)=0.0168$ 13; $\alpha(M)=0.0040$ 3; $\alpha(N+..)=0.00116$ 8 $\alpha(N)=0.00099$ 7; $\alpha(O)=0.000165$ 14; $\alpha(P)=8.1\times 10^{-6}$ 18 Mult.: $\alpha(K)\text{exp}=0.07$ (1988Be16).
364.5 3	2.2 2	874.04	(0,1) <sup>+</sup>	509.45	1 <sup>+</sup> ,2 <sup>+</sup>	M1,E2		0.11 6	$\alpha(K)=0.09$ 5; $\alpha(L)=0.018$ 5; $\alpha(M)=0.0041$ 10; $\alpha(N+..)=0.0012$ 3 $\alpha(N)=0.00101$ 24; $\alpha(O)=0.00017$ 5; $\alpha(P)=1.0\times 10^{-5}$ 7 Mult.: $\alpha(K)\text{exp}(364.5+366.4)=0.06$ (1988Be16).
<sup>x</sup> 366.4 3	2.5 3					M1,E2		0.11 6	$\alpha(K)=0.09$ 5; $\alpha(L)=0.017$ 5; $\alpha(M)=0.0041$ 10; $\alpha(N+..)=0.0012$ 3 $\alpha(N)=0.00100$ 24; $\alpha(O)=0.00017$ 5; $\alpha(P)=1.0\times 10^{-5}$ 7 Mult.: $\alpha(K)\text{exp}(364.5+366.4)=0.06$ (1988Be16). $E_\gamma$ consistent with placement between 660 and 293 levels.

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<sup>184</sup>Pt ε decay **1988Be16,1996Om01** (continued)

γ(<sup>184</sup>Ir) (continued)

$E_\gamma$ ‡	$I_\gamma$ #&	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. †	$\delta^\ddagger$	$\alpha^a$	Comments
371.0 3	0.5 1	855.94	(2) <sup>+</sup>	484.88	1 <sup>+</sup>	[M1+E2]		0.11 6	$\alpha(K)=0.08$ 5; $\alpha(L)=0.017$ 5; $\alpha(M)=0.0039$ 10; $\alpha(N+..)=0.0011$ 3 $\alpha(N)=0.00096$ 23; $\alpha(O)=0.00016$ 5; $\alpha(P)=1.0\times 10^{-5}$ 6
377.4 3	0.7 1	855.94	(2) <sup>+</sup>	478.73	(1) <sup>+</sup>	[M1+E2]		0.10 6	$\alpha(K)=0.08$ 5; $\alpha(L)=0.016$ 5; $\alpha(M)=0.0037$ 9; $\alpha(N+..)=0.0011$ 3 $\alpha(N)=0.00091$ 23; $\alpha(O)=0.00016$ 5; $\alpha(P)=1.0\times 10^{-5}$ 6
<sup>x</sup> 379.1 3	1.6 2								
384.6 3	1.1 1	903.84	1 <sup>+</sup>	519.38	(3) <sup>+</sup>	[E2]		0.0468	$\alpha(K)=0.0325$ 5; $\alpha(L)=0.01081$ 16; $\alpha(M)=0.00265$ 4; $\alpha(N+..)=0.000754$ 11 $\alpha(N)=0.000646$ 10; $\alpha(O)=0.0001051$ 15; $\alpha(P)=3.60\times 10^{-6}$ 5
394.3 3	19 2	903.84	1 <sup>+</sup>	509.45	1 <sup>+</sup> ,2 <sup>+</sup>	M1		0.1347	$\alpha(K)=0.1115$ 16; $\alpha(L)=0.0179$ 3; $\alpha(M)=0.00411$ 6; $\alpha(N+..)=0.001202$ 17 $\alpha(N)=0.001009$ 15; $\alpha(O)=0.000179$ 3; $\alpha(P)=1.357\times 10^{-5}$ 20 Mult.: $\alpha(K)\exp=0.15$ (1988Be16).
398.9 3	3.5 4	903.84	1 <sup>+</sup>	504.79	1 <sup>-</sup> ,2 <sup>-</sup>	E1		0.01306	$\alpha(K)=0.01087$ 16; $\alpha(L)=0.001690$ 24; $\alpha(M)=0.000386$ 6; $\alpha(N+..)=0.0001118$ 16 $\alpha(N)=9.43\times 10^{-5}$ 14; $\alpha(O)=1.636\times 10^{-5}$ 23; $\alpha(P)=1.105\times 10^{-6}$ 16 Mult.: $\alpha(K)\exp<0.04$ (1988Be16); E2 possible but eliminated by the decay scheme.
401.8 3	0.9 1	639.02	(3) <sup>+</sup>	237.16	<sup>+</sup>				
408.3 3	1.4 1	1223.1		814.81	$\leq 3$				
415.5 3	4.1 4	924.98	1 <sup>+</sup>	509.45	1 <sup>+</sup> ,2 <sup>+</sup>	M1(+E2)		0.08 4	$\alpha(K)=0.06$ 4; $\alpha(L)=0.012$ 4; $\alpha(M)=0.0028$ 8; $\alpha(N+..)=0.00081$ 24 $\alpha(N)=0.00069$ 19; $\alpha(O)=0.00012$ 4; $\alpha(P)=7.E-6$ 5 Mult.: $\alpha(K)\exp(415.5+416.6)=0.08$ (1988Be16).
<sup>x</sup> 416.6 3	1.4 1					M1,E2		0.08 4	$\alpha(K)=0.06$ 4; $\alpha(L)=0.012$ 4; $\alpha(M)=0.0028$ 8; $\alpha(N+..)=0.00081$ 24 $\alpha(N)=0.00068$ 19; $\alpha(O)=0.00012$ 4; $\alpha(P)=7.E-6$ 5 Mult.: $\alpha(K)\exp(415.5+416.6)=0.08$ (1988Be16).
<sup>x</sup> 423.3 3	1.3 1								
437.5 3	1.3 1	663.20	(2,3) <sup>+</sup>	225.63	3 <sup>+</sup>	M1(+E2)		0.07 4	$\alpha(K)=0.05$ 3; $\alpha(L)=0.010$ 4; $\alpha(M)=0.0024$ 7; $\alpha(N+..)=0.00070$ 21 $\alpha(N)=0.00059$ 18; $\alpha(O)=0.00010$ 4; $\alpha(P)=6.E-6$ 4 Mult.: $\alpha(K)\exp(437.5+438.1)=0.07$ (1988Be16).
<sup>x</sup> 438.1 3	1.2 1					M1(+E2)		0.07 4	$\alpha(K)=0.05$ 3; $\alpha(L)=0.010$ 4; $\alpha(M)=0.0024$ 7; $\alpha(N+..)=0.00070$ 21 $\alpha(N)=0.00059$ 18; $\alpha(O)=0.00010$ 4; $\alpha(P)=6.E-6$ 4 Mult.: $\alpha(K)\exp(437.5+438.1)=0.07$ (1988Be16).
448.8 3	1.9 2	519.38	(3) <sup>+</sup>	70.73	4 <sup>-</sup>				
<sup>x</sup> 457.1 3	0.6 1								
<sup>x</sup> 460.3 3	0.9 1								
<sup>x</sup> 463.7 3	0.6 1								
<sup>x</sup> 467.8 1	1.5 2								
471.3 3	6.0 6	903.84	1 <sup>+</sup>	432.48	(2) <sup>+</sup>	M1(+E2)	<0.7	0.075 10	$\alpha(K)=0.061$ 9; $\alpha(L)=0.0102$ 10; $\alpha(M)=0.00235$ 20; $\alpha(N+..)=0.00069$ 6 $\alpha(N)=0.00058$ 5; $\alpha(O)=0.000102$ 10; $\alpha(P)=7.4\times 10^{-6}$ 11 Mult.: $\alpha(K)\exp=0.07$ (1988Be16).
475.6 3	3.7 4	903.84	1 <sup>+</sup>	428.24	1 <sup>+</sup>	M1+E2	0.8 +4-3	0.060 11	$\alpha(K)=0.049$ 10; $\alpha(L)=0.0087$ 11; $\alpha(M)=0.00203$ 24; $\alpha(N+..)=0.00059$ 8

<sup>184</sup>Pt ε decay **1988Be16,1996Om01** (continued)

<u>γ(<sup>184</sup>Ir) (continued)</u>									
<u>E<sub>γ</sub><sup>‡</sup></u>	<u>I<sub>γ</sub><sup>#&amp;</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>†</sup></u>	<u>δ<sup>‡</sup></u>	<u>α<sup>a</sup></u>	<u>Comments</u>
480.9 3	1.3 1	499.27	(4) <sup>+</sup>	18.4?	(3 <sup>-</sup> ,4 <sup>-</sup> ,5 <sup>-</sup> )	E1		0.00865 13	α(N)=0.00050 6; α(O)=8.7×10 <sup>-5</sup> 12; α(P)=5.9×10 <sup>-6</sup> 12 Mult.: α(K)exp=0.05 (1988Be16). α(K)=0.00722 11; α(L)=0.001106 16; α(M)=0.000252 4; α(N+..)=7.32×10 <sup>-5</sup> 11 α(N)=6.17×10 <sup>-5</sup> 9; α(O)=1.074×10 <sup>-5</sup> 16; α(P)=7.44×10 <sup>-7</sup> 11 Mult.: α(K)exp<0.015 (1988Be16).
487.7 3	1.1 1	499.27	(4) <sup>+</sup>	11.6?					
496.9 3	1.4 1	924.98	1 <sup>+</sup>	428.24	1 <sup>+</sup>	M1+E2	1.0 +5-4	0.049 12	α(K)=0.039 10; α(L)=0.0072 12; α(M)=0.0017 3; α(N+..)=0.00049 8 α(N)=0.00041 7; α(O)=7.1×10 <sup>-5</sup> 12; α(P)=4.7×10 <sup>-6</sup> 13 Mult.: α(K)exp=0.04 (1988Be16).
499.4 3	5.6 6	499.27	(4) <sup>+</sup>	0.0	5 <sup>-</sup>	E1		0.00798 12	α(K)=0.00666 10; α(L)=0.001017 15; α(M)=0.000232 4; α(N+..)=6.73×10 <sup>-5</sup> 10 α(N)=5.67×10 <sup>-5</sup> 8; α(O)=9.89×10 <sup>-6</sup> 14; α(P)=6.88×10 <sup>-7</sup> 10 Mult.: α(K)exp=0.006 (1988Be16).
531.4 3	1.6 2	874.04	(0,1) <sup>+</sup>	342.70	1 <sup>+</sup>				
532.3 3	4.4 4	1086.59	1 <sup>+</sup>	554.46	2 <sup>+</sup>	M1(+E2)		0.041 21	α(K)=0.033 18; α(L)=0.0059 21; α(M)=0.0014 5; α(N+..)=0.00040 14 α(N)=0.00034 12; α(O)=5.9×10 <sup>-5</sup> 22; α(P)=3.9×10 <sup>-6</sup> 22 Mult.: α(K)exp(531.4+532.3)=0.05 (1988Be16).
<sup>x</sup> 541.9 3	0.9 1								
548.3 3	87 9	903.84	1 <sup>+</sup>	355.47	2 <sup>-</sup>	E1		0.00655 10	α(K)=0.00548 8; α(L)=0.000830 12; α(M)=0.000189 3; α(N+..)=5.49×10 <sup>-5</sup> 8 α(N)=4.63×10 <sup>-5</sup> 7; α(O)=8.08×10 <sup>-6</sup> 12; α(P)=5.68×10 <sup>-7</sup> 8 Mult.: α(K)exp=0.005 (1988Be16), 0.005 2 (1970FIZZ)..
568.4 3	0.8 1	639.02	(3) <sup>+</sup>	70.73	4 <sup>-</sup>	[E1]		0.00608 9	α(K)=0.00509 8; α(L)=0.000769 11; α(M)=0.0001752 25; α(N+..)=5.08×10 <sup>-5</sup> 8 α(N)=4.28×10 <sup>-5</sup> 6; α(O)=7.49×10 <sup>-6</sup> 11; α(P)=5.29×10 <sup>-7</sup> 8
569.4 3	1.5 2	1362.0		792.59					
580.8 3	2.1 2	874.04	(0,1) <sup>+</sup>	293.27	2 <sup>+</sup>	M1,E2		0.033 16	α(K)=0.027 14; α(L)=0.0047 17; α(M)=0.0011 4; α(N+..)=0.00032 12 α(N)=0.00027 10; α(O)=4.7×10 <sup>-5</sup> 18; α(P)=3.2×10 <sup>-6</sup> 18 Mult.: α(K)exp(580.8+582.1)=0.02 (1988Be16).
582.1 3	0.7 1	1086.59	1 <sup>+</sup>	504.79	1 <sup>-</sup> ,2 <sup>-</sup>	[E1]		0.00579 9	α(K)=0.00484 7; α(L)=0.000731 11; α(M)=0.0001665 24; α(N+..)=4.83×10 <sup>-5</sup> 7 α(N)=4.07×10 <sup>-5</sup> 6; α(O)=7.12×10 <sup>-6</sup> 10; α(P)=5.04×10 <sup>-7</sup> 7
<sup>x</sup> 586.8 3	0.8 1								
610.5 3	13 1	903.84	1 <sup>+</sup>	293.27	2 <sup>+</sup>	M1+E2	1.4 +7-4	0.024 5	α(K)=0.020 4; α(L)=0.0036 5; α(M)=0.00084 11; α(N+..)=0.00024 4 α(N)=0.00021 3; α(O)=3.6×10 <sup>-5</sup> 5; α(P)=2.3×10 <sup>-6</sup> 5 Mult.: α(K)exp=0.02 (1988Be16).
<sup>x</sup> 612.8 3	1.1 1								

γ(<sup>184</sup>Ir) (continued)

$E_\gamma$ <sup>‡</sup>	$I_\gamma$ #&	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>†</sup>	$\alpha^a$	Comments
631.6 3	3.8 4	924.98	1 <sup>+</sup>	293.27	2 <sup>+</sup>	M1,E2	0.026 13	$\alpha(K)=0.022$ 11; $\alpha(L)=0.0037$ 14; $\alpha(M)=0.0009$ 3; $\alpha(N+..)=0.00025$ 10 $\alpha(N)=0.00021$ 8; $\alpha(O)=3.7\times 10^{-5}$ 15; $\alpha(P)=2.6\times 10^{-6}$ 14 Mult.: $\alpha(K)\exp(631.6+632.6)\approx 0.02$ (1988Be16).
632.6 3	3.4 3	1065.26	1 <sup>+</sup>	432.48	(2) <sup>+</sup>	M1,E2	0.026 13	$\alpha(K)=0.021$ 11; $\alpha(L)=0.0037$ 14; $\alpha(M)=0.0009$ 3; $\alpha(N+..)=0.00025$ 10 $\alpha(N)=0.00021$ 8; $\alpha(O)=3.7\times 10^{-5}$ 14; $\alpha(P)=2.6\times 10^{-6}$ 14 Mult.: $\alpha(K)\exp(631.6+632.6)\approx 0.02$ (1988Be16).
636.9 3	0.9 1	1065.26	1 <sup>+</sup>	428.24	1 <sup>+</sup>			
<sup>x</sup> 653.9 3	0.8 1							
<sup>x</sup> 707.8 3	1.1 1					M1	0.0292	$\alpha(K)=0.0243$ 4; $\alpha(L)=0.00381$ 6; $\alpha(M)=0.000875$ 13; $\alpha(N+..)=0.000256$ 4 $\alpha(N)=0.000215$ 3; $\alpha(O)=3.82\times 10^{-5}$ 6; $\alpha(P)=2.92\times 10^{-6}$ 4 Mult.: $\alpha(K)\exp=0.04$ (1988Be16).
709.8 3	8 1	1065.26	1 <sup>+</sup>	355.47	2 <sup>-</sup>	E1	0.00388 6	$\alpha(K)=0.00326$ 5; $\alpha(L)=0.000485$ 7; $\alpha(M)=0.0001103$ 16; $\alpha(N+..)=3.20\times 10^{-5}$ 5 $\alpha(N)=2.70\times 10^{-5}$ 4; $\alpha(O)=4.73\times 10^{-6}$ 7; $\alpha(P)=3.42\times 10^{-7}$ 5 Mult.: $\alpha(K)\exp<0.006$ (1988Be16).
731.2 3	48 5	1086.59	1 <sup>+</sup>	355.47	2 <sup>-</sup>	E1	0.00367 6	$\alpha=0.00367$ 6; $\alpha(K)=0.00307$ 5; $\alpha(L)=0.000456$ 7; $\alpha(M)=0.0001038$ 15; $\alpha(N+..)=3.02\times 10^{-5}$ 5 $\alpha(N)=2.54\times 10^{-5}$ 4; $\alpha(O)=4.46\times 10^{-6}$ 7; $\alpha(P)=3.23\times 10^{-7}$ 5 Mult.: $\alpha(K)\exp=0.003$ (1988Be16).
<sup>x</sup> 740.5 3	1.2 1							
810.6 3	1.5 2	1166.1	(≤3)	355.47	2 <sup>-</sup>			
<sup>x</sup> 823.3 3	1.0 1							

<sup>†</sup> From ce data (1988Be16), assuming 50% uncertainty in approximate values and 20% uncertainty in all other values. For unresolved conversion electron intensities, some multiplicities could be assigned by comparing multiplet ce intensities with the resolved γ intensities.

<sup>‡</sup> From 1988Be16. Uncertainty <0.1 keV below 300 keV and <0.3 keV above 300 keV.

# From 1988Be16. Uncertainty ≈10%. For weak transitions, the evaluator has limited the minimum uncertainty to 0.1 units on the relative intensity scale.

@ Calculated by the evaluator from the intensity balance.

& For absolute intensity per 100 decays, multiply by 0.266 26.

<sup>a</sup> Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

<sup>b</sup> Multiply placed with undivided intensity.

<sup>c</sup> Multiply placed with intensity suitably divided.

<sup>d</sup> Placement of transition in the level scheme is uncertain.

<sup>x</sup> γ ray not placed in level scheme.

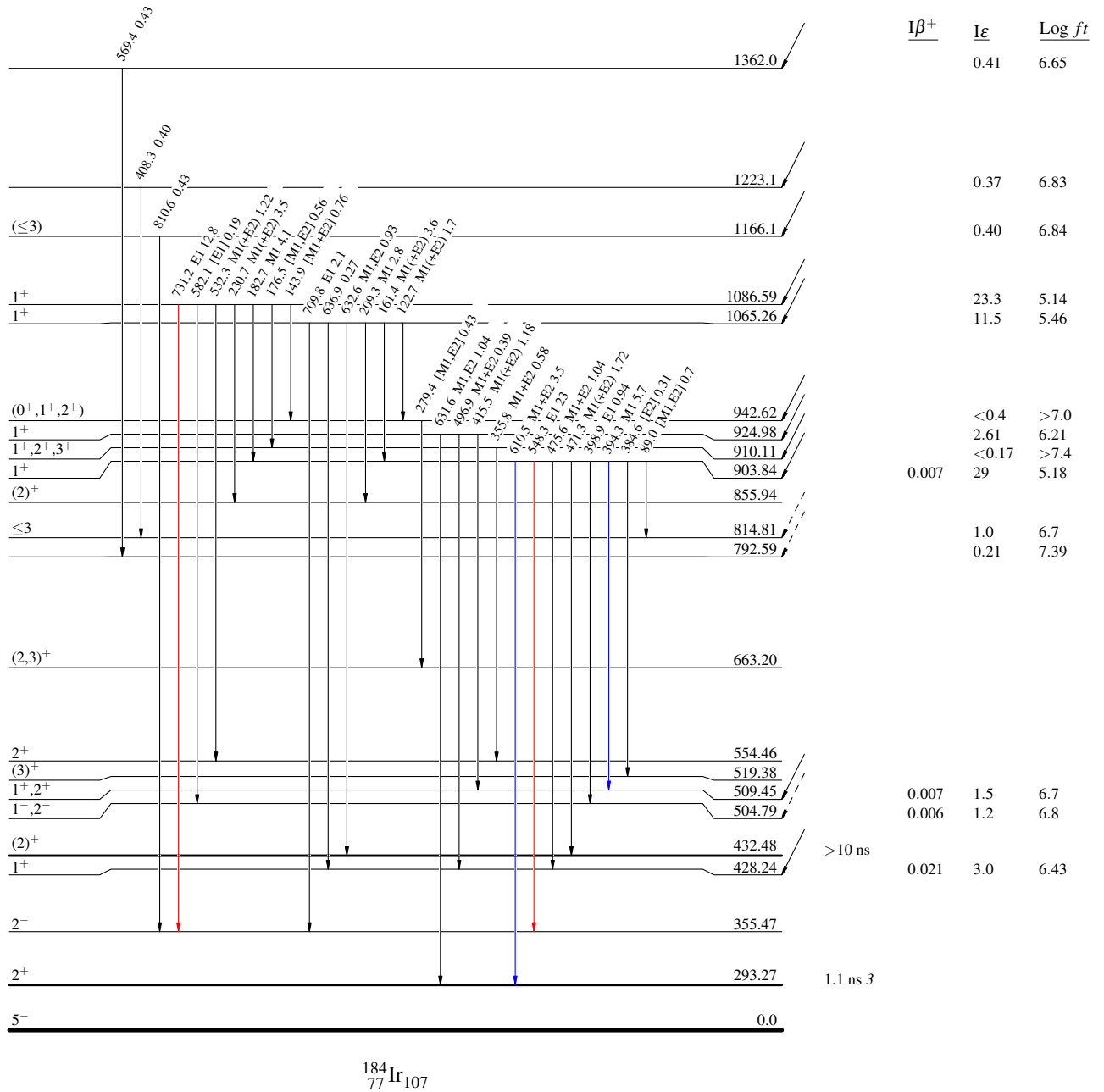
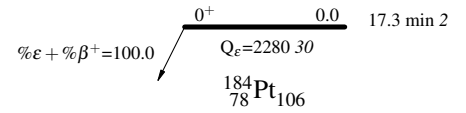
$^{184}\text{Pt}$   $\epsilon$  decay 1988Be16,1996Om01

Decay Scheme

Legend

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

- $I_{\gamma} < 2\% \times I_{\gamma}^{\max}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{\max}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{\max}$



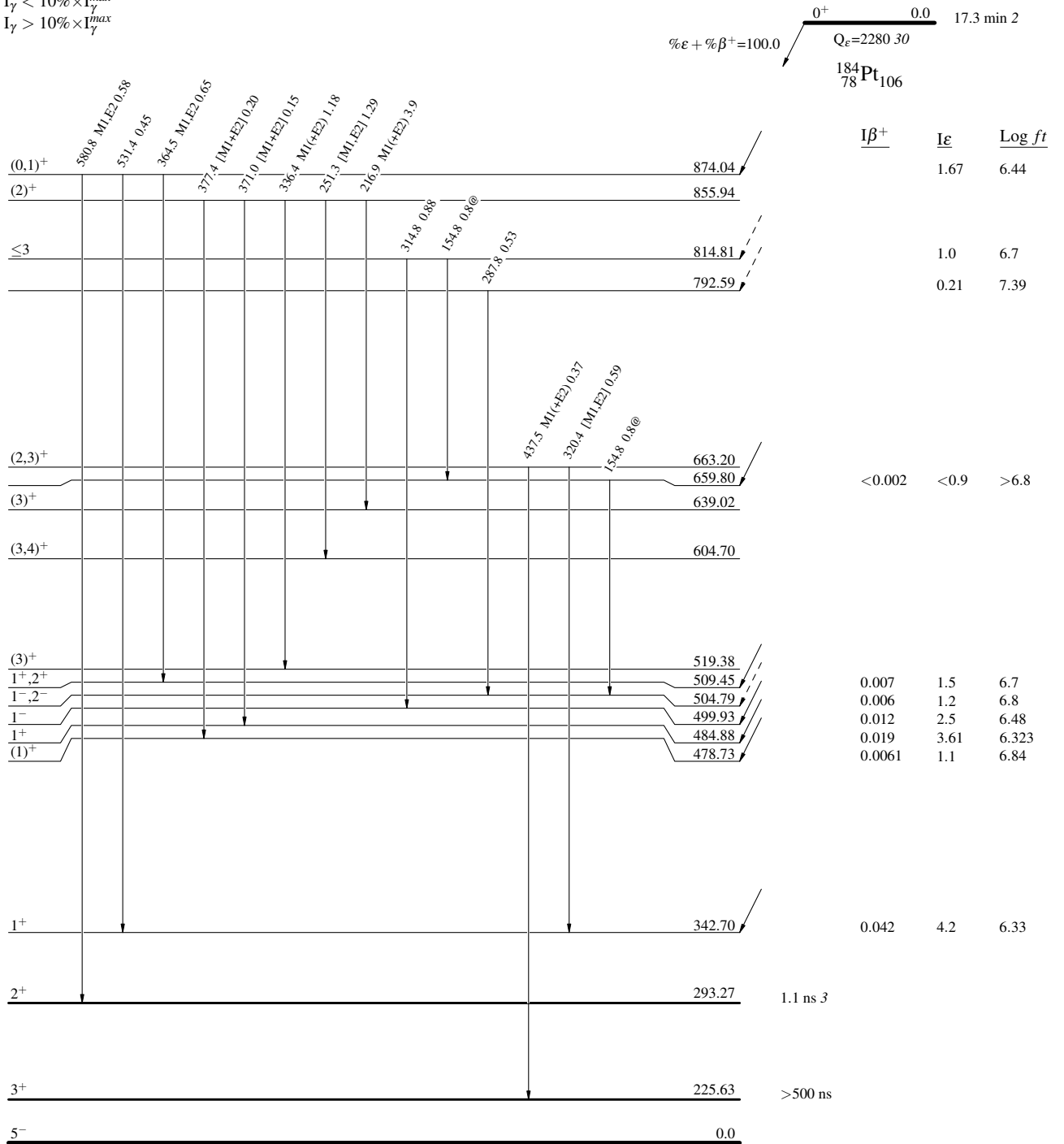
$^{184}\text{Pt}$   $\epsilon$  decay 1988Be16,1996Om01

Decay Scheme (continued)

Intensities:  $I_{(\gamma+ce)}$  per 100 parent decays  
 @ Multiply placed: intensity suitably divided

Legend

- $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{max}$



$^{184}_{77}\text{Ir}_{107}$

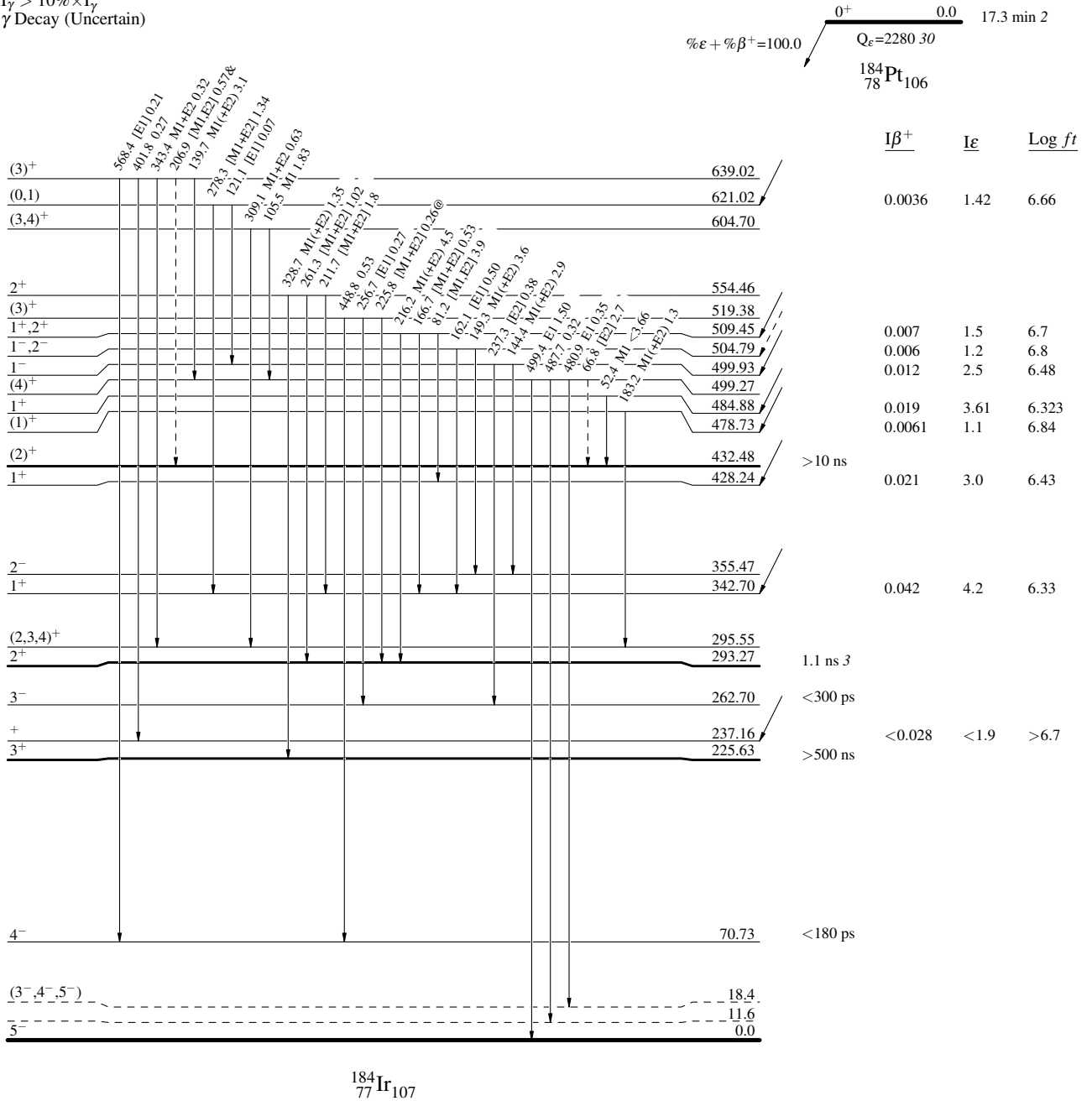
<sup>184</sup>Pt ε decay 1988Be16,1996Om01

Decay Scheme (continued)

Intensities: I<sub>(γ+ce)</sub> per 100 parent decays  
& Multiply placed: undivided intensity given  
@ Multiply placed: intensity suitably divided

Legend

- I<sub>γ</sub> < 2% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> < 10% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> > 10% × I<sub>γ</sub><sup>max</sup>
- - - - - γ Decay (Uncertain)



$^{184}\text{Pt}$   $\epsilon$  decay 1988Be16,1996Om01

Decay Scheme (continued)

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

Legend

- $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{max}$
- - - - -→  $\gamma$  Decay (Uncertain)

