

¹⁸³Ir ε decay 1988Ro13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 134, 149 (2016)	15-Apr-2015

Parent: ¹⁸³Ir: E=0.0; J^π=5/2⁻; T_{1/2}=58 min 6; Q(ε)=3460 50; %ε+%β⁺ decay=100.0

Other measurements: 1975La22, 1961Di04, 1961La05.

1988Ro13: Source produced by bombardment of Pt-B alloy target with 200 MeV p or 280 MeV ³He; Isocele mass separator, two HPGe detectors (FWHM 1.9 keV at 1.3 MeV) for γ spectroscopy (Eγ=15-2500), magnetic spectrometer (for E(ce)=44-340 keV) and cooled Si(Li) detector for electron measurements; measured Eγ, Iγ, I(ce), γγ coin.

Total energy release for this decay scheme is 3556 323 cf. QxBR=3460 50.

¹⁸³Os Levels

E(level) [†]	J ^π [‡]	T _{1/2}	E(level) [†]	J ^π [‡]
0.0	9/2 ⁺		832.03 11	(3/2,5/2,7/2) ⁻
96.23 11	11/2 ⁺		850.20 13	(3/2,5/2,7/2) ⁻
170.70 7	1/2 ⁻	9.9 [‡] h 3	896.76 14	7/2 ⁺
258.32 8	3/2 ⁻		944.31 12	(3/2,5/2) ⁻
273.04 8	5/2 ⁻		964.83 16	(3/2,5/2) ⁻
392.48 8	(7/2) ⁻		1039.19 22	(5/2,7/2,9/2) ⁻
395.19 10	1/2 ⁻		1045.95 12	(5/2 ⁺)
453.05 9	3/2 ⁻		1054.34 14	(5/2,7/2,9/2) ⁻
486.99 10	7/2 ⁻		1180.87 17	(3/2,5/2) ⁻
509.88 11	9/2 ⁻		1236.76 15	(7/2) ⁺
512.54 12	7/2 ⁻		1252.96 15	5/2 ⁺
513.09 8	5/2 ⁻		1295.46 18	(5/2,7/2) ⁺
544.38 9	5/2 ⁻		1332.58 23	(1/2,3/2,5/2) ⁻
558.15 14	(9/2) ⁻		1911.52 17	(3/2 ⁻ ,5/2,7/2) ⁻
582.21 10	(3/2) ⁻		1921.03 23	1/2,3/2,5/2 ⁻
620.78 10	7/2 ⁻		1977.95 15	(3/2) ⁺
646.88 22	9/2 ⁻		2083.43 23	(1/2,3/2,5/2) ⁻
655.32 11	(7/2) ⁻		2219.11 24	(5/2 ⁻ ,7/2)
669.09 9	(5/2) ⁻		2249.34 23	(5/2 ⁺ ,7/2)
714.01 11	9/2 ⁺		2254.58 19	3/2 ⁽⁻⁾ ,5/2,7/2 ⁽⁻⁾
731.58 11	7/2 ⁺		2258.31 14	(7/2)
748.76 17	(11/2) ⁻		2273.79 10	(7/2) ⁻
763.82 12	(7/2) ⁻		2300.03 11	(5/2) ⁻
792.93 17	(11/2) ⁺		2310.49 23	3/2,5/2,7/2 ⁽⁻⁾
800.56 13	(5/2) ⁺		2511.21 23	(5/2 ⁺ ,7/2)

[†] From least-squares fit to Eγ omitting transitions whose placement is uncertain.

[‡] From Adopted Levels.

ε,β⁺ radiations

E(decay)	E(level)	Iε [‡]	Log ft	I(ε+β ⁺) ^{†‡}	Comments
(9.5×10 ² 5)	2511.21	0.46 8	7.13 11	0.46 8	εK=0.8036 13; εL=0.1490 10; εM+=0.0474 4
(1.15×10 ³ 5)	2310.49	0.54 9	7.24 10	0.54 9	εK=0.8076 9; εL=0.1462 7; εM+=0.04627 23
(1.16×10 ³ 5)	2300.03	8.1 10	6.07 8	8.1 10	εK=0.8077 9; εL=0.1460 6; εM+=0.04622 23
(1.19×10 ³ 5)	2273.79	7.6 10	6.12 9	7.6 10	εK=0.8081 8; εL=0.1457 6; εM+=0.04611 22
(1.20×10 ³ 5)	2258.31	1.6 3	6.81 10	1.6 3	εK=0.8084 8; εL=0.1456 6; εM+=0.04605 21
(1.21×10 ³ 5)	2254.58	0.84 13	7.09 9	0.84 13	εK=0.8084 8; εL=0.1455 6; εM+=0.04604 21
(1.21×10 ³ 5)	2249.34	0.54 9	7.28 10	0.54 9	εK=0.8085 8; εL=0.1455 6; εM+=0.04602 21
(1.24×10 ³ 5)	2219.11	0.23 4	7.68 10	0.23 4	εK=0.8089 7; εL=0.1452 6; εM+=0.04590 20

Continued on next page (footnotes at end of table)

^{183}Ir ϵ decay **1988Ro13** (continued) ϵ, β^+ radiations (continued)

E(decay)	E(level)	$I\beta^+$ ‡	$I\epsilon^\ddagger$	Log ft	$I(\epsilon + \beta^+)^\ddagger$	Comments
(1.38×10^3 5)	2083.43		0.53 8	7.41 9	0.53 8	$\epsilon K=0.8104$ 5; $\epsilon L=0.1439$ 5; $\epsilon M+=0.04544$ 16
(1.48×10^3 5)	1977.95	0.0016 9	2.2 4	6.86 10	2.2 4	av $E\beta=226$ 23; $\epsilon K=0.8110$ 3; $\epsilon L=0.1431$ 4; $\epsilon M+=0.04512$ 15
(1.54×10^3 5)	1921.03	0.0007 4	0.61 11	7.45 10	0.61 11	av $E\beta=252$ 23; $\epsilon K=0.8112$ 2; $\epsilon L=0.1427$ 4; $\epsilon M+=0.04496$ 14
(1.55×10^3 5)	1911.52	0.0012 6	0.92 13	7.28 9	0.92 13	av $E\beta=256$ 23; $\epsilon K=0.81118$ 9; $\epsilon L=0.1426$ 4; $\epsilon M+=0.04494$ 14
(2.13×10^3 5)	1332.58	0.016 4	0.74 13	7.65 9	0.76 13	av $E\beta=511$ 22; $\epsilon K=0.7990$ 25; $\epsilon L=0.1373$ 7; $\epsilon M+=0.04312$ 21
(2.16×10^3 5)	1295.46	0.0030 15	0.13 6	8.44 21	0.13 6	av $E\beta=527$ 22; $\epsilon K=0.797$ 3; $\epsilon L=0.1369$ 7; $\epsilon M+=0.04297$ 21
(2.21×10^3 # 5)	1252.96					$I(\epsilon + \beta^+)$: more intensity deexcites than feeds this level.
(2.28×10^3 5)	1180.87	0.010 2	0.32 6	8.08 10	0.33 6	av $E\beta=578$ 22; $\epsilon K=0.791$ 4; $\epsilon L=0.1353$ 8; $\epsilon M+=0.04247$ 24
(2.41×10^3 5)	1054.34	0.069 15	1.5 3	7.45 10	1.6 3	av $E\beta=633$ 22; $\epsilon K=0.782$ 4; $\epsilon L=0.1334$ 9; $\epsilon M+=0.0419$ 3
(2.41×10^3 5)	1045.95	0.048 12	1.04 22	7.62 11	1.09 23	av $E\beta=637$ 22; $\epsilon K=0.781$ 4; $\epsilon L=0.1333$ 9; $\epsilon M+=0.0418$ 3
(2.42×10^3 5)	1039.19	0.0055 13	0.118 23	8.57 10	0.124 24	av $E\beta=640$ 22; $\epsilon K=0.780$ 4; $\epsilon L=0.1332$ 9; $\epsilon M+=0.0418$ 3
(2.50×10^3 5)	964.83	0.054 12	0.98 20	7.68 11	1.03 21	av $E\beta=673$ 22; $\epsilon K=0.774$ 5; $\epsilon L=0.1319$ 9; $\epsilon M+=0.0414$ 3
(2.52×10^3 5)	944.31	0.067 13	1.15 19	7.61 9	1.22 20	av $E\beta=682$ 22; $\epsilon K=0.772$ 5; $\epsilon L=0.1315$ 10; $\epsilon M+=0.0413$ 3
(2.56×10^3 5)	896.76	0.066 19	1.0 3	7.68 13	1.1 3	av $E\beta=703$ 22; $\epsilon K=0.768$ 5; $\epsilon L=0.1307$ 10; $\epsilon M+=0.0410$ 3
(2.61×10^3 5)	850.20	0.048 9	0.68 10	7.87 9	0.73 11	av $E\beta=723$ 22; $\epsilon K=0.764$ 6; $\epsilon L=0.1298$ 10; $\epsilon M+=0.0407$ 4
(2.63×10^3 5)	832.03	0.14 2	1.9 3	7.44 9	2.0 3	av $E\beta=731$ 22; $\epsilon K=0.762$ 6; $\epsilon L=0.1294$ 10; $\epsilon M+=0.0406$ 4
(2.66×10^3 5)	800.56	0.14 4	1.8 5	7.48 13	1.9 5	av $E\beta=745$ 22; $\epsilon K=0.758$ 6; $\epsilon L=0.1288$ 11; $\epsilon M+=0.0404$ 4
(2.67×10^3 5)	792.93	0.103 19	1.30 20	7.61 9	1.40 22	av $E\beta=748$ 22; $\epsilon K=0.758$ 6; $\epsilon L=0.1286$ 11; $\epsilon M+=0.0403$ 4
(2.70×10^3 5)	763.82	0.054 16	0.65 18	7.93 14	0.70 20	av $E\beta=761$ 23; $\epsilon K=0.754$ 6; $\epsilon L=0.1280$ 11; $\epsilon M+=0.0401$ 4
(2.71×10^3 5)	748.76	0.014 3	0.16 4	8.55 12	0.17 4	av $E\beta=768$ 22; $\epsilon K=0.753$ 6; $\epsilon L=0.1277$ 11; $\epsilon M+=0.0400$ 4
(2.73×10^3 5)	731.58	0.10 4	1.1 5	7.71 19	1.2 5	av $E\beta=775$ 22; $\epsilon K=0.751$ 6; $\epsilon L=0.1274$ 11; $\epsilon M+=0.0399$ 4
(2.75×10^3 5)	714.01	<0.02	<0.8	>9.3 ^{1u}	<0.8	av $E\beta=785$ 22; $\epsilon K=0.7895$ 20; $\epsilon L=0.1405$ 6; $\epsilon M+=0.04437$ 20
(2.79×10^3 5)	669.09	0.20 4	2.0 4	7.47 10	2.2 4	av $E\beta=803$ 23; $\epsilon K=0.744$ 6; $\epsilon L=0.1260$ 12; $\epsilon M+=0.0395$ 4
(2.80×10^3 5)	655.32	0.08 3	0.8 3	7.86 16	0.9 3	av $E\beta=809$ 23; $\epsilon K=0.742$ 7; $\epsilon L=0.1257$ 12; $\epsilon M+=0.0394$ 4
(2.81×10^3 5)	646.88	0.096 22	0.92 20	7.81 11	1.02 22	av $E\beta=813$ 23; $\epsilon K=0.741$ 7; $\epsilon L=0.1255$ 12; $\epsilon M+=0.0393$ 4
(2.84×10^3 5)	620.78	0.30 7	2.8 6	7.34 11	3.1 7	av $E\beta=824$ 23; $\epsilon K=0.738$ 7; $\epsilon L=0.1249$ 12; $\epsilon M+=0.0391$ 4
(2.88×10^3 5)	582.21	0.26 6	2.2 4	7.44 10	2.5 5	av $E\beta=841$ 23; $\epsilon K=0.733$ 7; $\epsilon L=0.1240$ 12; $\epsilon M+=0.0389$ 4
(2.90×10^3 5)	558.15	0.18 6	1.5 4	7.62 14	1.7 5	av $E\beta=852$ 23; $\epsilon K=0.730$ 7; $\epsilon L=0.1235$ 12; $\epsilon M+=0.0387$ 4

Continued on next page (footnotes at end of table)

^{183}Ir ε decay **1988Ro13** (continued) ε, β^+ radiations (continued)

E(decay)	E(level)	$I\beta^+$ †	$I\varepsilon$ ‡	Log ft	$I(\varepsilon + \beta^+)$ †‡	Comments
(2.92×10^3 5)	544.38	0.31 12	2.5 10	7.41 18	2.8 11	av $E\beta=858$ 23; $\varepsilon K=0.728$ 7; $\varepsilon L=0.1231$ 13; $\varepsilon M+=0.0386$ 4
(2.95×10^3 5)	513.09	0.33 12	2.6 9	7.41 16	2.9 10	av $E\beta=872$ 23; $\varepsilon K=0.724$ 7; $\varepsilon L=0.1224$ 13; $\varepsilon M+=0.0383$ 4
(2.95×10^3 5)	512.54	0.20 12	1.5 9	7.6 3	1.7 10	av $E\beta=872$ 23; $\varepsilon K=0.724$ 7; $\varepsilon L=0.1224$ 13; $\varepsilon M+=0.0383$ 4
(2.95×10^3 5)	509.88	0.13 5	1.0 4	7.83 17	1.1 4	av $E\beta=874$ 23; $\varepsilon K=0.723$ 7; $\varepsilon L=0.1223$ 13; $\varepsilon M+=0.0383$ 4
(2.97×10^3 5)	486.99	0.59 18	4.3 13	7.19 15	4.9 15	av $E\beta=884$ 23; $\varepsilon K=0.720$ 7; $\varepsilon L=0.1217$ 13; $\varepsilon M+=0.0381$ 4
(3.01×10^3 5)	453.05	0.62 17	4.3 11	7.20 13	4.9 13	av $E\beta=899$ 23; $\varepsilon K=0.716$ 7; $\varepsilon L=0.1209$ 13; $\varepsilon M+=0.0379$ 4
(3.06×10^3 5)	395.19	0.26 12	1.6 8	7.64 22	1.9 9	av $E\beta=925$ 23; $\varepsilon K=0.707$ 8; $\varepsilon L=0.1194$ 14; $\varepsilon M+=0.0374$ 5
(3.07×10^3 5)	392.48	0.34 22	2.2 14	7.5 3	2.5 16	av $E\beta=926$ 23; $\varepsilon K=0.707$ 8; $\varepsilon L=0.1193$ 14; $\varepsilon M+=0.0374$ 5
(3.20×10^3 5)	258.32	2.7 13	14 7	6.74 21	17 8	av $E\beta=986$ 23; $\varepsilon K=0.687$ 8; $\varepsilon L=0.1157$ 14; $\varepsilon M+=0.0362$ 5
(3.36×10^3 5)	96.23	0.23 15	1.0 6	7.9 3	1.2 8	av $E\beta=1058$ 23; $\varepsilon K=0.661$ 9; $\varepsilon L=0.1112$ 15; $\varepsilon M+=0.0348$ 5
(3.46×10^3 # 5)	0.0	<1.1	<12	>8.5 ^{1u}	<13	av $E\beta=1090$ 22; $\varepsilon K=0.747$ 5; $\varepsilon L=0.1302$ 9; $\varepsilon M+=0.0410$ 3 $I(\varepsilon + \beta^+)$: calculated assuming $\log f^{1u} t > 8.5$.

† Calculated from decay scheme intensity balances, assigning $0.5I\gamma \pm 0.5I\gamma$ to transitions with uncertain placements. About 20% of observed transition intensity remains unplaced, so the weaker feedings may be unreliable.

‡ Absolute intensity per 100 decays.

Existence of this branch is questionable.

¹⁸³Ir ϵ decay **1988Ro13** (continued)

$\gamma(^{183}\text{Os})$

I γ normalization: assuming Σ (I(γ +ce) to g.s.+171 level)=93% 7 based on I β (g.s.)<13% if log $f^{1u}t_1$ >8.5 and negligible expected feeding of 171 level ($\Delta J=3$, $\Delta\pi$ =yes). The Q(β^-) value and complexity of the decay scheme suggest that significant unobserved transition intensity may exist.

E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Mult. @	δ &	α^\dagger	$I_{(\gamma+ce)}^e$	Comments
14.7 2		273.04	5/2 ⁻	258.32	3/2 ⁻	[M1]		276 12	97 14	ce(L)/(γ +ce)=0.767 23; ce(M)/(γ +ce)=0.178 10 ce(N)/(γ +ce)=0.044 3; ce(O)/(γ +ce)=0.0075 5; ce(P)/(γ +ce)=0.00056 4 α (L)=212 9; α (M)=49.3 22; α (N)=12.0 6; α (O)=2.07 10; α (P)=0.154 7 I $_{(\gamma+ce)}$: calculated from the intensity balance at the 273 level assuming no direct ϵ feeding to that level. Authors estimated I(γ +ce) \approx 60 from coincidence intensities.
26.1 2	0.33 5	513.09	5/2 ⁻	486.99	7/2 ⁻	M1(+E2)	<0.1	62 12		α (L)=48 9; α (M)=11.2 23 α (N)=2.7 6; α (O)=0.45 8; α (P)=0.0279 8 Mult., δ : I(γ +ce)=21.0 from authors' coin spectrum analysis implies α (exp)=63 9 and δ <0.1.
31.6 2	0.120 18	544.38	5/2 ⁻	512.54	7/2 ⁻	M1+E2	0.34 +12-15	1.2 \times 10 ² 7		α (L)=9.E1 5; α (M)=23 13 α (N)=6 3; α (O)=0.8 5; α (P)=0.0147 9 Mult., δ : I(γ +ce)=15.0 from authors' coin spectrum analysis implies α (exp)=124 19 and δ =0.34.
57.9 2	\approx 0.50 ^a	453.05	3/2 ⁻	395.19	1/2 ⁻	M1+E2	0.4 4	11 11		α (L)=8 9; α (M)=2.0 22 α (N)=0.5 5; α (O)=0.08 8; α (P)=0.0024 6 Mult., δ : I(γ +ce)=5.4 from authors' coin spectrum analysis implies α (exp) \approx 11 and δ =0.4.
^x 84.7 2 87.5 1	0.62 9 54 8	258.32	3/2 ⁻	170.70	1/2 ⁻	E2+M1	0.85 +18-16	7.96 14		α (K)=4.3 6; α (L)=2.8 4; α (M)=0.69 10 α (N)=0.165 24; α (O)=0.025 4; α (P)=0.00051 7 %I γ =5.3 6 assuming adopted decay scheme normalization. Mult.: L1:L2:L3:M:N+=24 4:61 9:52 8:35 5:9.7 15; α (L2)exp=1.13 24. δ : from α (L2)exp.
91.1 2	0.80 12	544.38	5/2 ⁻	453.05	3/2 ⁻	M1		7.35 12		α (K)=6.07 10; α (L)=0.991 16; α (M)=0.227 4 α (N)=0.0555 9; α (O)=0.00958 15; α (P)=0.000713 11 Mult.: α (L1)exp=1.25 25.
96.2 2	6.1 9	96.23	11/2 ⁺	0.0	9/2 ⁺	M1+E2	-0.39 4	6.13 10		α (K)=4.62 13; α (L)=1.16 6; α (M)=0.277 16 α (N)=0.067 4; α (O)=0.0109 6; α (P)=0.000540 15

¹⁸³Ir ε decay **1988Ro13** (continued)

γ(¹⁸³Os) (continued)

<u>E_γ[‡]</u>	<u>I_γ^{#e}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[@]</u>	<u>δ&</u>	<u>α[†]</u>	<u>Comments</u>
102.2 1	14.0 21	273.04	5/2 ⁻	170.70	1/2 ⁻	E2		3.99	%Iγ=0.63 10 assuming adopted decay scheme normalization. Mult.,δ: L1:L2=4.4 7:1.8 3; sign of δ from Adopted Gammas. α(L)exp=0.72 15 implies δ=0.3 +4-3. α(K)=0.774 11; α(L)=2.42 4; α(M)=0.620 10 α(N)=0.1486 22; α(O)=0.0219 4; α(P)=7.98×10 ⁻⁵ 12 %Iγ=1.37 25 assuming adopted decay scheme normalization. Mult.: from L1:L2:L3:M:N+=2.1 3:17.0 26:16.0 24:9.9 15:7.5 11; α(L)exp=2.5 5.
107.6 2	3.9 6	620.78	7/2 ⁻	513.09	5/2 ⁻	M1(+E2)	<0.11	4.55	α(K)=3.75 6; α(L)=0.620 13; α(M)=0.143 3 α(N)=0.0348 8; α(O)=0.00599 12; α(P)=0.000438 7 Mult.: L1:L2=1.00 15:0.20 3; α(L)exp=0.26 5.
110.8 2	2.2 3	655.32	(7/2) ⁻	544.38	5/2 ⁻	[E2]		2.89 5	α(K)=0.677 10; α(L)=1.67 3; α(M)=0.426 7 α(N)=0.1022 17; α(O)=0.01512 25; α(P)=6.58×10 ⁻⁵ 10
118.0 2	≈1.0 ^a	513.09	5/2 ⁻	395.19	1/2 ⁻	[E2]		2.26	α(K)=0.600 9; α(L)=1.249 20; α(M)=0.319 6 α(N)=0.0765 13; α(O)=0.01133 19; α(P)=5.67×10 ⁻⁵ 9
119.9 2	3.4 5	512.54	7/2 ⁻	392.48	(7/2) ⁻	M1(+E2)	≤0.52	3.22 14	α(K)=2.53 24; α(L)=0.52 8; α(M)=0.124 21 α(N)=0.030 5; α(O)=0.0050 7; α(P)=0.00029 3 Mult.: α(K)exp=2.9 6.
124.3 2	3.7 6	669.09	(5/2) ⁻	544.38	5/2 ⁻	E2(+M1)	≥3.4	1.89 6	α(K)=0.62 8; α(L)=0.96 3; α(M)=0.245 8 α(N)=0.0588 18; α(O)=0.00875 25; α(P)=6.0×10 ⁻⁵ 10 Mult.: α(K)exp=0.57 12.
128.9 2	4.5 7	582.21	(3/2) ⁻	453.05	3/2 ⁻	M1(+E2)	0.4 4	2.6 3	α(K)=2.0 5; α(L)=0.43 12; α(M)=0.10 4 α(N)=0.025 8; α(O)=0.0041 11; α(P)=0.00023 6 Mult.: α(K)exp=2.0 4.
136.8 1	13.0 20	395.19	1/2 ⁻	258.32	3/2 ⁻	M1+E2	0.4 1	2.16 7	α(K)=1.70 10; α(L)=0.353 22; α(M)=0.083 6 α(N)=0.0203 14; α(O)=0.00337 19; α(P)=0.000196 12 Mult.: K:L1:L2=15.0 23:3.2 5:0.56 8. α(K)exp=1.15 24 implies δ=1.0 +4-3.
137.4 2	≈0.50 ^a	792.93	(11/2) ⁺	655.32	(7/2) ⁻	[M2]		15.40	α(K)=11.08 17; α(L)=3.28 5; α(M)=0.810 13 α(N)=0.200 3; α(O)=0.0337 6; α(P)=0.00217 4
151.7 2	0.46 7	544.38	5/2 ⁻	392.48	(7/2) ⁻	[M1+E2]		1.3 5	α(K)=0.9 6; α(L)=0.32 9; α(M)=0.08 3 α(N)=0.019 6; α(O)=0.0029 8; α(P)=0.00010 7
156.2 2	0.83 12	669.09	(5/2) ⁻	513.09	5/2 ⁻	[M1+E2]		1.2 4	α(K)=0.8 5; α(L)=0.28 8; α(M)=0.069 21 α(N)=0.017 5; α(O)=0.0026 6; α(P)=9.E-5 7
165.7 2	8.9 14	558.15	(9/2) ⁻	392.48	(7/2) ⁻	M1+E2	0.7 4	1.11 18	α(K)=0.83 21; α(L)=0.210 24; α(M)=0.050 7 α(N)=0.0122 17; α(O)=0.00198 20; α(P)=9.E-5 3 Mult.: α(K)exp=0.85 18.
167.7 2	2.0 3	620.78	7/2 ⁻	453.05	3/2 ⁻	[E2]		0.611	α(K)=0.267 4; α(L)=0.260 4; α(M)=0.0660 10 α(N)=0.01584 24; α(O)=0.00238 4; α(P)=2.44×10 ⁻⁵ 4
168 1	≈0.8 ^a	655.32	(7/2) ⁻	486.99	7/2 ⁻	[M1+E2]		0.9 4	α(K)=0.7 4; α(L)=0.21 5; α(M)=0.052 14 α(N)=0.013 3; α(O)=0.0020 4; α(P)=7.E-5 5
170.7 1		170.70	1/2 ⁻	0.0	9/2 ⁺	M4		208	α(K)=63.1 9; α(L)=105.1 16; α(M)=30.9 5

5

¹⁸³Ir ε decay **1988Ro13** (continued)

γ(¹⁸³Os) (continued)

E_γ [‡]	I_γ ^{#e}	E_i (level)	J_i^π	E_f	J_f^π	Mult. [@]	α^\dagger	Comments
								$\alpha(N)=7.71\ 12$; $\alpha(O)=1.194\ 18$; $\alpha(P)=0.0386\ 6$ E_γ : isomeric transition populated primarily directly in the reaction. Mult.: K:L1:L2:L3:M=6.1 9:6.0 9:1.20 18:9.1 14:6.1 9.
176.6 2	0.78 12	832.03	(3/2,5/2,7/2) ⁻	655.32	(7/2) ⁻	[M1+E2]	0.8 3	$\alpha(K)=0.6\ 4$; $\alpha(L)=0.18\ 3$; $\alpha(M)=0.043\ 10$ $\alpha(N)=0.0105\ 22$; $\alpha(O)=0.00167\ 24$; $\alpha(P)=6.E-5\ 5$
179.8 2	3.1 5	453.05	3/2 ⁻	273.04	5/2 ⁻	[M1+E2]	0.8 3	$\alpha(K)=0.6\ 4$; $\alpha(L)=0.17\ 3$; $\alpha(M)=0.041\ 9$ $\alpha(N)=0.0098\ 19$; $\alpha(O)=0.00157\ 20$; $\alpha(P)=6.E-5\ 4$
181.8 2	1.70 26	669.09	(5/2) ⁻	486.99	7/2 ⁻	[M1+E2]	0.7 3	$\alpha(K)=0.5\ 4$; $\alpha(L)=0.161\ 24$; $\alpha(M)=0.039\ 8$ $\alpha(N)=0.0094\ 18$; $\alpha(O)=0.00151\ 18$; $\alpha(P)=6.E-5\ 4$
^x 183.2 2	0.33 5							
190.7 2	0.78 12	748.76	(11/2) ⁻	558.15	(9/2) ⁻	(M1+E2)	0.6 3	$\alpha(K)=0.5\ 3$; $\alpha(L)=0.135\ 16$; $\alpha(M)=0.033\ 6$ $\alpha(N)=0.0079\ 12$; $\alpha(O)=0.00127\ 11$; $\alpha(P)=5.E-5\ 4$
194.7 1	15.0 23	453.05	3/2 ⁻	258.32	3/2 ⁻	M1	0.850	$\alpha(K)=0.703\ 10$; $\alpha(L)=0.1133\ 16$; $\alpha(M)=0.0260\ 4$ $\alpha(N)=0.00635\ 9$; $\alpha(O)=0.001096\ 16$; $\alpha(P)=8.17\times 10^{-5}\ 12$ Mult.: K:L1=13.0 20:2.3 3; $\alpha(K)\text{exp}=0.87\ 18$.
^x 198.2 2	0.54 8							
^x 199.8 2	0.52 8							
211.2 2	1.9 3	832.03	(3/2,5/2,7/2) ⁻	620.78	7/2 ⁻	[M1+E2]	0.48 20	$\alpha(K)=0.35\ 21$; $\alpha(L)=0.094\ 4$; $\alpha(M)=0.0227\ 20$ $\alpha(N)=0.0055\ 5$; $\alpha(O)=0.000886\ 19$; $\alpha(P)=4.E-5\ 3$
213.9 2	5.0 8	486.99	7/2 ⁻	273.04	5/2 ⁻	[M1+E2]	0.46 20	$\alpha(K)=0.34\ 20$; $\alpha(L)=0.090\ 4$; $\alpha(M)=0.0217\ 18$ $\alpha(N)=0.0052\ 4$; $\alpha(O)=0.000848\ 14$; $\alpha(P)=3.8\times 10^{-5}\ 25$
228.6 1	66 10	486.99	7/2 ⁻	258.32	3/2 ⁻	E2	0.213	$\alpha(K)=0.1196\ 17$; $\alpha(L)=0.0708\ 10$; $\alpha(M)=0.0178\ 3$ $\alpha(N)=0.00427\ 6$; $\alpha(O)=0.000652\ 10$; $\alpha(P)=1.147\times 10^{-5}\ 17$ Mult.: $\alpha(K)\text{exp}=0.13\ 3$.
236.8 1	16.0 24	509.88	9/2 ⁻	273.04	5/2 ⁻	E2	0.190	$\alpha(K)=0.1091\ 16$; $\alpha(L)=0.0614\ 9$; $\alpha(M)=0.01538\ 22$ $\alpha(N)=0.00370\ 6$; $\alpha(O)=0.000566\ 8$; $\alpha(P)=1.052\times 10^{-5}\ 15$ Mult.: $\alpha(K)\text{exp}=0.17\ 4$.
239.9 1	17 3	513.09	5/2 ⁻	273.04	5/2 ⁻	M1	0.477	$\delta(M1,E2)=2.0\ +17-6$ from $\alpha(K)\text{exp}$. $\alpha(K)=0.395\ 6$; $\alpha(L)=0.0633\ 9$; $\alpha(M)=0.01451\ 21$ $\alpha(N)=0.00354\ 5$; $\alpha(O)=0.000612\ 9$; $\alpha(P)=4.57\times 10^{-5}\ 7$ Mult.: $\alpha(K)\text{exp}=0.48\ 10$.
245.2 2	0.49 7	1045.95	(5/2 ⁺)	800.56	(5/2) ⁺	[M1+E2]	0.31 14	$\alpha(K)=0.24\ 14$; $\alpha(L)=0.057\ 4$; $\alpha(M)=0.01351\ 25$ $\alpha(N)=0.00328\ 8$; $\alpha(O)=0.00053\ 5$; $\alpha(P)=2.6\times 10^{-5}\ 17$
249.7 2	2.0 3	832.03	(3/2,5/2,7/2) ⁻	582.21	(3/2) ⁻	[M1+E2]	0.29 14	$\alpha(K)=0.22\ 13$; $\alpha(L)=0.053\ 4$; $\alpha(M)=0.0127\ 4$ $\alpha(N)=0.00308\ 10$; $\alpha(O)=0.00050\ 5$; $\alpha(P)=2.5\times 10^{-5}\ 16$
250.7 2	6.3 9	763.82	(7/2) ⁻	513.09	5/2 ⁻	[M1+E2]	0.29 14	$\alpha(K)=0.22\ 13$; $\alpha(L)=0.053\ 4$; $\alpha(M)=0.0125\ 4$ $\alpha(N)=0.00304\ 11$; $\alpha(O)=0.00050\ 5$; $\alpha(P)=2.5\times 10^{-5}\ 16$
253 1	≈1.2 ^a	763.82	(7/2) ⁻	509.88	9/2 ⁻	[M1+E2]	0.28 13	$\alpha(K)=0.22\ 13$; $\alpha(L)=0.051\ 4$; $\alpha(M)=0.0122\ 5$ $\alpha(N)=0.00295\ 13$; $\alpha(O)=0.00048\ 5$; $\alpha(P)=2.4\times 10^{-5}\ 16$
254.4 2	8.1 12	646.88	9/2 ⁻	392.48	(7/2) ⁻	M1(+E2) ^b	0.28 13	$\alpha(K)=0.21\ 13$; $\alpha(L)=0.050\ 4$; $\alpha(M)=0.0119\ 5$ $\alpha(N)=0.00289\ 13$; $\alpha(O)=0.00047\ 5$; $\alpha(P)=2.4\times 10^{-5}\ 15$ Mult.: $\alpha(K)\text{exp}(254.4+254.9)=0.34\ 7$.
254.9 1	12.0 18	513.09	5/2 ⁻	258.32	3/2 ⁻	M1 ^b	0.403	$\alpha(K)=0.334\ 5$; $\alpha(L)=0.0535\ 8$; $\alpha(M)=0.01227\ 18$

¹⁸³Ir ε decay 1988Ro13 (continued)

γ(¹⁸³Os) (continued)

<u>E_γ[‡]</u>	<u>I_γ^{#e}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[@]</u>	<u>δ&</u>	<u>α[†]</u>	<u>Comments</u>
267.7 2	1.20 18	850.20	(3/2,5/2,7/2) ⁻	582.21	(3/2) ⁻	[M1+E2]		0.24 12	α(N)=0.00300 5; α(O)=0.000518 8; α(P)=3.87×10 ⁻⁵ 6 Mult.: α(K)exp(254.4+254.9)=0.34 7.
271.3 1	15.0 23	544.38	5/2 ⁻	273.04	5/2 ⁻	M1		0.340	α(K)=0.19 11; α(L)=0.042 5; α(M)=0.0101 7 α(N)=0.00244 18; α(O)=0.00040 6; α(P)=2.1×10 ⁻⁵ 13 α(K)=0.282 4; α(L)=0.0451 7; α(M)=0.01033 15 α(N)=0.00252 4; α(O)=0.000436 7; α(P)=3.26×10 ⁻⁵ 5 Mult.: α(K)exp=0.32 7.
273.8 2	3.6 5	669.09	(5/2) ⁻	395.19	1/2 ⁻	E2 ^c		0.1205	α(K)=0.0747 11; α(L)=0.0347 5; α(M)=0.00863 13 α(N)=0.00208 3; α(O)=0.000321 5; α(P)=7.39×10 ⁻⁶ 11 Mult.: α(K)exp<0.14.
276.7 ^f 2	≈1.2 ^{fa}	669.09	(5/2) ⁻	392.48	(7/2) ⁻	[M1+E2]		0.22 11	α(K)=0.17 10; α(L)=0.038 5; α(M)=0.0090 8 α(N)=0.00219 20; α(O)=0.00036 6; α(P)=1.9×10 ⁻⁵ 12
276.7 ^f 2	0.8 ^{fa} 4	763.82	(7/2) ⁻	486.99	7/2 ⁻	[M1+E2]		0.22 11	α(K)=0.17 10; α(L)=0.038 5; α(M)=0.0090 8 α(N)=0.00219 20; α(O)=0.00036 6; α(P)=1.9×10 ⁻⁵ 12
282.5 1	47 7	453.05	3/2 ⁻	170.70	1/2 ⁻	M1(+E2)	0.11 +52-11	0.30 6	α(K)=0.25 5; α(L)=0.040 3; α(M)=0.0092 5 α(N)=0.00225 12; α(O)=0.00039 3; α(P)=2.9×10 ⁻⁵ 6 Mult.: K:L1=11.5 17:3.0 5; α(K)exp=0.25 5.
286.1 2	9.8 15	544.38	5/2 ⁻	258.32	3/2 ⁻	M1		0.294	α(K)=0.244 4; α(L)=0.0390 6; α(M)=0.00893 13 α(N)=0.00218 3; α(O)=0.000377 6; α(P)=2.82×10 ⁻⁵ 4 Mult.: K:L1=11.5 17:3.0 5; α(K)exp=0.30 6.
309.2 2	1.8 3	582.21	(3/2) ⁻	273.04	5/2 ⁻	M1		0.238	α(K)=0.198 3; α(L)=0.0315 5; α(M)=0.00722 11 α(N)=0.001763 25; α(O)=0.000305 5; α(P)=2.28×10 ⁻⁵ 4 Mult.: α(K)exp=0.26 5.
314.4 2	4.5 7	1045.95	(5/2 ⁺)	731.58	7/2 ⁺	M1+E2	0.5 +4-5	0.20 4	α(K)=0.16 4; α(L)=0.0282 24; α(M)=0.0065 5 α(N)=0.00159 12; α(O)=0.000271 25; α(P)=1.8×10 ⁻⁵ 4 Mult.: α(K)exp=0.16 3.
319.1 2	6.4 10	832.03	(3/2,5/2,7/2) ⁻	513.09	5/2 ⁻	M1		0.219	α(K)=0.181 3; α(L)=0.0289 4; α(M)=0.00662 10 α(N)=0.001617 23; α(O)=0.000280 4; α(P)=2.09×10 ⁻⁵ 3 Mult.: α(K)exp=0.23 5.
323.9 2	5.9 9	582.21	(3/2) ⁻	258.32	3/2 ⁻	M1		0.210	α(K)=0.1742 25; α(L)=0.0278 4; α(M)=0.00636 9 α(N)=0.001553 22; α(O)=0.000268 4; α(P)=2.01×10 ⁻⁵ 3 Mult.: α(K)exp=0.22 5.
^x 330.7 2	1.1 2								
332.0 2	1.10 17	1045.95	(5/2 ⁺)	714.01	9/2 ⁺	[E2]		0.0679	α(K)=0.0457 7; α(L)=0.01691 24; α(M)=0.00416 6 α(N)=0.001004 15; α(O)=0.0001571 23; α(P)=4.65×10 ⁻⁶ 7
342.4 1	21 3	513.09	5/2 ⁻	170.70	1/2 ⁻	E2		0.0622	α(K)=0.0423 6; α(L)=0.01514 22; α(M)=0.00372 6 α(N)=0.000898 13; α(O)=0.0001408 20; α(P)=4.33×10 ⁻⁶ 6 α(K)exp=0.036 7.
345 1	≈1.6 ^a	832.03	(3/2,5/2,7/2) ⁻	486.99	7/2 ⁻	[M1+E2]		0.12 6	α(K)=0.09 6; α(L)=0.019 5; α(M)=0.0045 9 α(N)=0.00109 22; α(O)=0.00018 5; α(P)=1.1×10 ⁻⁵ 7

¹⁸³Ir ε decay **1988Ro13** (continued)

γ(¹⁸³Os) (continued)

E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Mult. @	$\delta\&$	α^\dagger	Comments
347.8 1	25 4	620.78	7/2 ⁻	273.04	5/2 ⁻	M1+E2	0.9 +4-3	0.122 21	$\alpha(K)=0.098$ 19; $\alpha(L)=0.0191$ 16; $\alpha(M)=0.0045$ 4 $\alpha(N)=0.00109$ 8; $\alpha(O)=0.000182$ 17; $\alpha(P)=1.10\times 10^{-5}$ 23 Mult.: $\alpha(K)\text{exp}=0.100$ 21.
356.2 ^f 2	≈0.25 ^{fa}	748.76	(11/2 ⁻)	392.48	(7/2 ⁻)	(E2)		0.0556	$\alpha(K)=0.0383$ 6; $\alpha(L)=0.01317$ 19; $\alpha(M)=0.00323$ 5 $\alpha(N)=0.000779$ 11; $\alpha(O)=0.0001226$ 18; $\alpha(P)=3.94\times 10^{-6}$ 6
356.2 ^f 2	≈1.1 ^{fa}	1252.96	5/2 ⁺	896.76	7/2 ⁺	M1 ^b		0.1628	$\alpha(K)=0.1350$ 19; $\alpha(L)=0.0215$ 3; $\alpha(M)=0.00491$ 7 $\alpha(N)=0.001200$ 17; $\alpha(O)=0.000207$ 3; $\alpha(P)=1.553\times 10^{-5}$ 22 Mult.: $\alpha(K)\text{exp}(\text{doublet})=0.046$ 10.
^x 361.7 2	1.4 2					E2+M1	1.9 +13-5	0.076 14	$\alpha(K)=0.057$ 12; $\alpha(L)=0.0142$ 11; $\alpha(M)=0.00341$ 22 $\alpha(N)=0.00083$ 6; $\alpha(O)=0.000134$ 11; $\alpha(P)=6.2\times 10^{-6}$ 15 Mult.: $\alpha(K)\text{exp}=0.057$ 12.
^x 370.4 2 ^x 371.5 2 373.8 2	0.43 7 0.64 10 2.0 3	544.38	5/2 ⁻	170.70	1/2 ⁻	E2		0.0486	$\alpha(K)=0.0340$ 5; $\alpha(L)=0.01113$ 16; $\alpha(M)=0.00272$ 4 $\alpha(N)=0.000657$ 10; $\alpha(O)=0.0001038$ 15; $\alpha(P)=3.52\times 10^{-6}$ 5 Mult.: $\alpha(K)\text{exp}<0.05$. $\delta(M1,E2)>1$ from $\alpha(K)\text{exp}$.
379.0 2	1.7 3	832.03	(3/2,5/2,7/2) ⁻	453.05	3/2 ⁻	E2+M1	1.7 +11-4	0.070 14	$\alpha(K)=0.054$ 12; $\alpha(L)=0.0125$ 11; $\alpha(M)=0.00299$ 23 $\alpha(N)=0.00073$ 6; $\alpha(O)=0.000119$ 12; $\alpha(P)=5.9\times 10^{-6}$ 14 Mult.: $\alpha(K)\text{exp}\approx 0.053$ 11.
392.5 1	100 15	392.48	(7/2) ⁻	0.0	9/2 ⁺	E1		0.01307	$\alpha(K)=0.01090$ 16; $\alpha(L)=0.001679$ 24; $\alpha(M)=0.000383$ 6 $\alpha(N)=9.27\times 10^{-5}$ 13; $\alpha(O)=1.568\times 10^{-5}$ 22; $\alpha(P)=1.049\times 10^{-6}$ 15 %I _γ =9.8 19 assuming adopted decay scheme normalization.
396.1 2	2.0 3	669.09	(5/2) ⁻	273.04	5/2 ⁻	M1		0.1226	Mult.: $\alpha(K)\text{exp}=0.013$ 3. $\alpha(K)=0.1017$ 15; $\alpha(L)=0.01612$ 23; $\alpha(M)=0.00369$ 6 $\alpha(N)=0.000901$ 13; $\alpha(O)=0.0001558$ 22; $\alpha(P)=1.168\times 10^{-5}$ 17 Mult.: $\alpha(K)\text{exp}=0.125$ 26.
^x 409.1 2 410.7 2	0.47 7 5.8 9	669.09	(5/2) ⁻	258.32	3/2 ⁻	[M1+E2]		0.07 4	$\alpha(K)=0.06$ 4; $\alpha(L)=0.011$ 4; $\alpha(M)=0.0027$ 7 $\alpha(N)=0.00065$ 18; $\alpha(O)=0.00011$ 4; $\alpha(P)=7.E-6$ 4 $\alpha(K)\text{exp}=0.036$ 7 for doublet.
411.5 1	11.0 17	582.21	(3/2) ⁻	170.70	1/2 ⁻	E2(+M1) ^b		0.07 4	$\alpha(K)=0.06$ 4; $\alpha(L)=0.011$ 4; $\alpha(M)=0.0026$ 7 $\alpha(N)=0.00064$ 17; $\alpha(O)=0.00011$ 4; $\alpha(P)=7.E-6$ 4 Mult.: $\alpha(K)\text{exp}(410.7+411.5)=0.026$ 7.
^x 417.1 2 ^x 434.1 2	0.85 13 0.37 6								

∞

¹⁸³Ir ε decay **1988Ro13** (continued)

γ(¹⁸³Os) (continued)

E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Mult. @	δ &	α^\dagger	Comments
^x 436.9 2	0.76 11								
^x 442.1 2	0.52 8								
^x 443.8 2	0.48 7								
^x 450.6 2	1.7 3					M1(+E2)	0.4 4	0.079 15	$\alpha(K)=0.065$ 13; $\alpha(L)=0.0107$ 14; $\alpha(M)=0.0025$ 3 $\alpha(N)=0.00060$ 8; $\alpha(O)=0.000103$ 14; $\alpha(P)=7.5\times 10^{-6}$ 16 Mult.: $\alpha(K)\text{exp}=0.065$ 14.
457.9 ^f 2	≈3.8 ^{fa}	850.20	(3/2,5/2,7/2) ⁻	392.48	(7/2) ⁻	(E2) ^b		0.0284	$\alpha(K)=0.0210$ 3; $\alpha(L)=0.00569$ 8; $\alpha(M)=0.001372$ 20 $\alpha(N)=0.000332$ 5; $\alpha(O)=5.33\times 10^{-5}$ 8; $\alpha(P)=2.21\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}(\text{doublet})=0.029$ 6; this is the dominant placement.
457.9 ^f 2	≈1.4 ^{fa}	944.31	(3/2,5/2) ⁻	486.99	7/2 ⁻	[M1+E2]		0.06 3	$\alpha(K)=0.045$ 25; $\alpha(L)=0.008$ 3; $\alpha(M)=0.0019$ 6 $\alpha(N)=0.00047$ 14; $\alpha(O)=8.E-5$ 3; $\alpha(P)=5.E-6$ 3
461.9 2	4.0 6	558.15	(9/2) ⁻	96.23	11/2 ⁺	E1		0.00910	$\alpha(K)=0.00761$ 11; $\alpha(L)=0.001156$ 17; $\alpha(M)=0.000263$ 4 $\alpha(N)=6.38\times 10^{-5}$ 9; $\alpha(O)=1.083\times 10^{-5}$ 16; $\alpha(P)=7.40\times 10^{-7}$ 11 Mult.: $\alpha(K)\text{exp}=0.0075$ 16.
^x 464.9 2	0.71 11								
^x 470.5 2	0.60 9								
490.7 2	3.5 5	763.82	(7/2) ⁻	273.04	5/2 ⁻	E2(+M1)	>2	0.028 5	$\alpha(K)=0.022$ 4; $\alpha(L)=0.0050$ 5; $\alpha(M)=0.00120$ 10 $\alpha(N)=0.000291$ 25; $\alpha(O)=4.8\times 10^{-5}$ 5; $\alpha(P)=2.4\times 10^{-6}$ 5 Mult.: $\alpha(K)\text{exp}=0.020$ 4.
494.9 2	3.2 5	1295.46	(5/2,7/2) ⁺	800.56	(5/2) ⁺	E2+M1	1.7 +11-5	0.035 7	$\alpha(K)=0.028$ 6; $\alpha(L)=0.0056$ 7; $\alpha(M)=0.00132$ 15 $\alpha(N)=0.00032$ 4; $\alpha(O)=5.3\times 10^{-5}$ 7; $\alpha(P)=3.0\times 10^{-6}$ 7 Mult.: $\alpha(K)\text{exp}=0.028$ 6.
498.5 1	12.0 18	669.09	(5/2) ⁻	170.70	1/2 ⁻	E2		0.0230	$\alpha(K)=0.01724$ 25; $\alpha(L)=0.00437$ 7; $\alpha(M)=0.001048$ 15 $\alpha(N)=0.000254$ 4; $\alpha(O)=4.10\times 10^{-5}$ 6; $\alpha(P)=1.83\times 10^{-6}$ 3 Mult.: $\alpha(K)\text{exp}=0.017$ 4.
^x 501.7 2	0.45 7								
505.1 2	1.40 21	1236.76	(7/2) ⁺	731.58	7/2 ⁺	M1+E2	1.0 +5-3	0.043 9	$\alpha(K)=0.035$ 8; $\alpha(L)=0.0063$ 9; $\alpha(M)=0.00147$ 18 $\alpha(N)=0.00036$ 5; $\alpha(O)=6.0\times 10^{-5}$ 9; $\alpha(P)=4.0\times 10^{-6}$ 9 Mult.: $\alpha(K)\text{exp}=0.036$ 7.
512.5 2	23 3	512.54	7/2 ⁻	0.0	9/2 ⁺	E1		0.00727	$\alpha(K)=0.00609$ 9; $\alpha(L)=0.000918$ 13; $\alpha(M)=0.000209$ 3 $\alpha(N)=5.06\times 10^{-5}$ 8; $\alpha(O)=8.61\times 10^{-6}$ 12; $\alpha(P)=5.96\times 10^{-7}$ 9 Mult.: $\alpha(K)\text{exp}=0.0078$ 16.
^x 519.5 2	0.66 10								
521.3 2	4.0 6	1252.96	5/2 ⁺	731.58	7/2 ⁺	(M1) ^b		0.0595	$\alpha(K)=0.0494$ 7; $\alpha(L)=0.00776$ 11; $\alpha(M)=0.001775$ 25 $\alpha(N)=0.000433$ 6; $\alpha(O)=7.50\times 10^{-5}$ 11; $\alpha(P)=5.64\times 10^{-6}$ 8 Mult.: $\alpha(K)\text{exp}(521.3+522.8)=0.096$ 10.
522.8 2	3.4 5	1236.76	(7/2) ⁺	714.01	9/2 ⁺	(M1) ^b		0.0590	$\alpha(K)=0.0490$ 7; $\alpha(L)=0.00770$ 11; $\alpha(M)=0.001762$ 25 $\alpha(N)=0.000430$ 6; $\alpha(O)=7.44\times 10^{-5}$ 11; $\alpha(P)=5.60\times 10^{-6}$ 8 Mult.: $\alpha(K)\text{exp}(521.3+522.8)=0.096$ 10.

¹⁸³Ir ε decay 1988Ro13 (continued)

$\gamma(^{183}\text{Os})$ (continued)

E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Mult. @	δ &	α^\dagger	Comments
544.6 2	0.88 13	1054.34	(5/2,7/2,9/2) ⁻	509.88	9/2 ⁻				
551.5 2	0.85 13	944.31	(3/2,5/2) ⁻	392.48	(7/2) ⁻				
552.2 2	1.20 18	1039.19	(5/2,7/2,9/2) ⁻	486.99	7/2 ⁻	M1		0.0512	$\alpha(K)=0.0425$ 6; $\alpha(L)=0.00667$ 10; $\alpha(M)=0.001525$ 22 $\alpha(N)=0.000372$ 6; $\alpha(O)=6.44 \times 10^{-5}$ 9; $\alpha(P)=4.85 \times 10^{-6}$ 7 Mult.: $\alpha(K)\text{exp}=0.058$ 12.
558.48 2	3.0 5	558.15	(9/2) ⁻	0.0	9/2 ⁺	E1		0.00607	$\alpha(K)=0.00508$ 8; $\alpha(L)=0.000762$ 11; $\alpha(M)=0.0001731$ 25 $\alpha(N)=4.20 \times 10^{-5}$ 6; $\alpha(O)=7.16 \times 10^{-6}$ 10; $\alpha(P)=5.00 \times 10^{-7}$ 7 Mult.: $\alpha(K)\text{exp}<0.013$ 3.
^x 559.3 2	0.93 14								
567.2 2	1.80 27	1054.34	(5/2,7/2,9/2) ⁻	486.99	7/2 ⁻	M1		0.0477	$\alpha(K)=0.0397$ 6; $\alpha(L)=0.00622$ 9; $\alpha(M)=0.001422$ 20 $\alpha(N)=0.000347$ 5; $\alpha(O)=6.00 \times 10^{-5}$ 9; $\alpha(P)=4.52 \times 10^{-6}$ 7 Mult.: $\alpha(K)\text{exp}=0.050$ 11.
573.8 2	5.2 8	832.03	(3/2,5/2,7/2) ⁻	258.32	3/2 ⁻	(E2)		0.01637	$\alpha(K)=0.01260$ 18; $\alpha(L)=0.00288$ 4; $\alpha(M)=0.000686$ 10 $\alpha(N)=0.0001663$ 24; $\alpha(O)=2.72 \times 10^{-5}$ 4; $\alpha(P)=1.346 \times 10^{-6}$ 19 Mult.: $\alpha(K)\text{exp}=0.0077$ 16.
581.48 2	0.58 9	1295.46	(5/2,7/2) ⁺	714.01	9/2 ⁺				
^x 585.3 2	2.0 3					E2+M1	1.4 +8-4	0.025 5	$\alpha(K)=0.020$ 4; $\alpha(L)=0.0037$ 5; $\alpha(M)=0.00087$ 11 $\alpha(N)=0.00021$ 3; $\alpha(O)=3.6 \times 10^{-5}$ 5; $\alpha(P)=2.3 \times 10^{-6}$ 5 Mult.: $\alpha(K)\text{exp}=0.020$ 4.
592.0 2	3.5 5	850.20	(3/2,5/2,7/2) ⁻	258.32	3/2 ⁻	E2(+M1)	1.9 +24-6	0.021 5	$\alpha(K)=0.017$ 4; $\alpha(L)=0.0033$ 5; $\alpha(M)=0.00077$ 11 $\alpha(N)=0.00019$ 3; $\alpha(O)=3.1 \times 10^{-5}$ 5; $\alpha(P)=1.9 \times 10^{-6}$ 5 Mult.: $\alpha(K)\text{exp}=0.017$ 4.
617.7 2	18.0 27	714.01	9/2 ⁺	96.23	11/2 ⁺	M1(+E2)	0.4 +5-4	0.035 8	$\alpha(K)=0.029$ 7; $\alpha(L)=0.0046$ 9; $\alpha(M)=0.00106$ 18 $\alpha(N)=0.00026$ 5; $\alpha(O)=4.4 \times 10^{-5}$ 8; $\alpha(P)=3.3 \times 10^{-6}$ 8 Mult.: $\alpha(K)\text{exp}=0.029$ 6.
^x 620.2 2	1.8 3								
^x 622.8 2	2.1 3					E2+M1	2.2 +45-8	0.018 4	$\alpha(K)=0.014$ 4; $\alpha(L)=0.0027$ 5; $\alpha(M)=0.00064$ 10 $\alpha(N)=0.000156$ 24; $\alpha(O)=2.6 \times 10^{-5}$ 5; $\alpha(P)=1.5 \times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.014$ 3.
635.2 2	2.2 3	731.58	7/2 ⁺	96.23	11/2 ⁺	[E2]		0.01295	$\alpha(K)=0.01012$ 15; $\alpha(L)=0.00217$ 3; $\alpha(M)=0.000513$ 8 $\alpha(N)=0.0001246$ 18; $\alpha(O)=2.05 \times 10^{-5}$ 3; $\alpha(P)=1.084 \times 10^{-6}$ 16
^x 637.2 2	3.7 6								
^x 639.0 2	0.79 12								
655.4 2	14.0 21	655.32	(7/2) ⁻	0.0	9/2 ⁺	E1		0.00437	$\alpha(K)=0.00367$ 6; $\alpha(L)=0.000544$ 8; $\alpha(M)=0.0001233$ 18 $\alpha(N)=3.00 \times 10^{-5}$ 5; $\alpha(O)=5.12 \times 10^{-6}$ 8; $\alpha(P)=3.64 \times 10^{-7}$ 5 Mult.: $\alpha(K)\text{exp}=0.0043$ 9.
^x 661.6 2	0.96 14								
^x 663.8 2	0.89 13								
671.2 2	6.7 10	944.31	(3/2,5/2) ⁻	273.04	5/2 ⁻	E2+M1	1.2 +6-4	0.019 4	$\alpha(K)=0.016$ 4; $\alpha(L)=0.0027$ 5; $\alpha(M)=0.00064$ 10 $\alpha(N)=0.000155$ 24; $\alpha(O)=2.6 \times 10^{-5}$ 5; $\alpha(P)=1.8 \times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.016$ 3.
^x 678.3 2	2.6 4								
^x 679.9 2	4.3 7								

¹⁸³Ir ε decay **1988Ro13** (continued)

γ(¹⁸³Os) (continued)

E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Mult. @	δ &	α^\dagger	$I_{(\gamma+ce)}^e$	Comments
682.5 2	1.9 3	1977.95	(3/2) ⁺	1295.46	(5/2,7/2) ⁺	M1		0.0296		$\alpha(K)=0.0247$ 4; $\alpha(L)=0.00384$ 6; $\alpha(M)=0.000877$ 13 $\alpha(N)=0.000214$ 3; $\alpha(O)=3.71\times 10^{-5}$ 6; $\alpha(P)=2.80\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.026$ 6.
685.8 2	2.5 4	944.31	(3/2,5/2) ⁻	258.32	3/2 ⁻					
^x 686.5 2	2.0 3									
691.9 2	6.5 10	964.83	(3/2,5/2) ⁻	273.04	5/2 ⁻	E2+M1	1.2 +7-4	0.018 4		$\alpha(K)=0.015$ 3; $\alpha(L)=0.0025$ 4; $\alpha(M)=0.00059$ 9 $\alpha(N)=0.000143$ 22; $\alpha(O)=2.4\times 10^{-5}$ 4; $\alpha(P)=1.6\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.015$ 3.
696.9 2	4.6 7	792.93	(11/2) ⁺	96.23	11/2 ⁺	E2		0.01054		$\alpha(K)=0.00833$ 12; $\alpha(L)=0.001694$ 24; $\alpha(M)=0.000399$ 6 $\alpha(N)=9.68\times 10^{-5}$ 14; $\alpha(O)=1.603\times 10^{-5}$ 23; $\alpha(P)=8.94\times 10^{-7}$ 13 Mult.: $\alpha(K)\text{exp}=0.0065$ 14.
706.4 2	2.3 3	964.83	(3/2,5/2) ⁻	258.32	3/2 ⁻	M1		0.0271		$\alpha(K)=0.0226$ 4; $\alpha(L)=0.00351$ 5; $\alpha(M)=0.000802$ 12 $\alpha(N)=0.000196$ 3; $\alpha(O)=3.39\times 10^{-5}$ 5; $\alpha(P)=2.56\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.026$ 5.
714.1 2	6.1 9	714.01	9/2 ⁺	0.0	9/2 ⁺	E2+M1	1.0 +6-4	0.018 4		$\alpha(K)=0.015$ 4; $\alpha(L)=0.0025$ 5; $\alpha(M)=0.00058$ 10 $\alpha(N)=0.000141$ 24; $\alpha(O)=2.4\times 10^{-5}$ 5; $\alpha(P)=1.7\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.015$ 3.
^x 718.7 2	2.1 3					E2+M1	1.1 +7-4	0.017 4		$\alpha(K)=0.014$ 3; $\alpha(L)=0.0024$ 4; $\alpha(M)=0.00055$ 9 $\alpha(N)=0.000134$ 22; $\alpha(O)=2.3\times 10^{-5}$ 4; $\alpha(P)=1.6\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.014$ 3.
724.9 2	8.5 13	1977.95	(3/2) ⁺	1252.96	5/2 ⁺	M1+E2	0.8 +5-4	0.019 4		$\alpha(K)=0.016$ 4; $\alpha(L)=0.0026$ 5; $\alpha(M)=0.00060$ 10 $\alpha(N)=0.000146$ 25; $\alpha(O)=2.5\times 10^{-5}$ 5; $\alpha(P)=1.8\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.016$ 3.
727.9 2	1.40 21	1180.87	(3/2,5/2) ⁻	453.05	3/2 ⁻					
731.6 2	28 4	731.58	7/2 ⁺	0.0	9/2 ⁺	E2+M1	1.0 +7-4	0.017 4		$\alpha(K)=0.014$ 4; $\alpha(L)=0.0024$ 5; $\alpha(M)=0.00054$ 10 $\alpha(N)=0.000132$ 23; $\alpha(O)=2.3\times 10^{-5}$ 4; $\alpha(P)=1.6\times 10^{-6}$ 4 Mult.: $\alpha(K)\text{exp}=0.014$ 3.
^x 747.3 2	1.4 2									
748.9 ⁸ 2	0.36 5	748.76	(11/2) ⁻	0.0	9/2 ⁺	[E1]		0.00336		$\alpha(K)=0.00282$ 4; $\alpha(L)=0.000414$ 6; $\alpha(M)=9.39\times 10^{-5}$ 14

¹⁸³Ir ε decay 1988Ro13 (continued)

γ(¹⁸³Os) (continued)

<u>E_γ[‡]</u>	<u>I_γ^{#e}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[@]</u>	<u>δ&</u>	<u>α[†]</u>	<u>Comments</u>
									α(N)=2.28×10 ⁻⁵ 4; α(O)=3.91×10 ⁻⁶ 6; α(P)=2.81×10 ⁻⁷ 4
^x 753.1 2	1.4 2								
^x 754.2 2	0.79 12								
^x 757.8 2	0.73 11								
^x 759.9 2	1.3 2								
766.18 ^g 2	1.8 3	1039.19	(5/2,7/2,9/2) ⁻	273.04	5/2 ⁻	<i>d</i>			Mult.: α(K)exp=0.111 23.
^x 769.0 2	0.73 11								
773.88 ^g 2	1.60 24	944.31	(3/2,5/2) ⁻	170.70	1/2 ⁻				
781.3 2	13.0 20	1054.34	(5/2,7/2,9/2) ⁻	273.04	5/2 ⁻	E2(+M1)	≥1.7	0.0099 17	α(K)=0.0080 14; α(L)=0.00145 19; α(M)=0.00034 5 α(N)=8.2×10 ⁻⁵ 11; α(O)=1.38×10 ⁻⁵ 19; α(P)=8.7×10 ⁻⁷ 17 Mult.: α(K)exp=0.0077 16.
785.6 2	2.0 3	1180.87	(3/2,5/2) ⁻	395.19	1/2 ⁻	E2		0.00814	α(K)=0.00652 10; α(L)=0.001248 18; α(M)=0.000292 4 α(N)=7.09×10 ⁻⁵ 10; α(O)=1.183×10 ⁻⁵ 17; α(P)=7.00×10 ⁻⁷ 10 Mult.: α(K)exp=0.0050 11.
^x 790.8 2	1.1 2								
792.68 ^g 2	2.8 4	792.93	(11/2) ⁺	0.0	9/2 ⁺				
794.2 2	1.5 14	964.83	(3/2,5/2) ⁻	170.70	1/2 ⁻				
800.3 2	27 4	800.56	(5/2) ⁺	0.0	9/2 ⁺	E2		0.00783	α(K)=0.00628 9; α(L)=0.001192 17; α(M)=0.000279 4 α(N)=6.77×10 ⁻⁵ 10; α(O)=1.131×10 ⁻⁵ 16; α(P)=6.74×10 ⁻⁷ 10 Mult.: α(K)exp=0.0048 10.
^x 806.3 2	3.7 6					E2(+M1)	2.0 +47-7	0.0100 21	α(K)=0.0082 18; α(L)=0.00144 24; α(M)=0.00033 6 α(N)=8.1×10 ⁻⁵ 13; α(O)=1.37×10 ⁻⁵ 24; α(P)=9.0×10 ⁻⁷ 21 Mult.: α(K)exp=0.0081 17.
^x 818.4 2	1.5 2					M1(+E2)	0.6 6	0.016 4	α(K)=0.013 4; α(L)=0.0021 5; α(M)=0.00047 10 α(N)=0.000115 23; α(O)=2.0×10 ⁻⁵ 4; α(P)=1.5×10 ⁻⁶ 4 Mult.: α(K)exp=0.013 3.
^x 835.0 2	1.7 3								
^x 837.0 2	1.1 2								
^x 838.8 2	2.4 4								
^x 853.8 2	3.1 5					E2(+M1)	≥1.6	0.0082 14	α(K)=0.0067 12; α(L)=0.00118 16; α(M)=0.00027 4 α(N)=6.6×10 ⁻⁵ 9; α(O)=1.12×10 ⁻⁵ 16; α(P)=7.3×10 ⁻⁷ 14 Mult.: α(K)exp=0.0065 14.
^x 868.9 2	3.5 5					M1+E2+E0 ^d		0.011 5	α(K)=0.009 4; α(L)=0.0015 6; α(M)=0.00035 13

^{183}Ir ε decay **1988Ro13** (continued)

$\gamma(^{183}\text{Os})$ (continued)										
E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Mult. @	δ &	α^\dagger	$I_{(\gamma+ce)}$ e	Comments
$^x889.1$ 2	1.6 2									$\alpha(\text{N})=9.5 \times 10^{-5}$ 3; $\alpha(\text{O})=1.5 \times 10^{-5}$ 6; $\alpha(\text{P})=1.0 \times 10^{-6}$ 5 Mult.: $\alpha(\text{K})_{\text{exp}}=0.029$ 6.
$^x892.0$ 2	2.8 4					M1		0.01499		$\alpha(\text{K})=0.01250$ 18; $\alpha(\text{L})=0.00193$ 3; $\alpha(\text{M})=0.000440$ 7 $\alpha(\text{N})=0.0001074$ 15; $\alpha(\text{O})=1.86 \times 10^{-5}$ 3; $\alpha(\text{P})=1.411 \times 10^{-6}$ 20 Mult.: $\alpha(\text{K})_{\text{exp}}=0.014$ 3.
896.8 2	15.0 23	896.76	$7/2^+$	0.0	$9/2^+$	M1+E2	1.5 +14-5	0.0088 18		$\alpha(\text{K})=0.0073$ 15; $\alpha(\text{L})=0.00121$ 21; $\alpha(\text{M})=0.00028$ 5 $\alpha(\text{N})=6.8 \times 10^{-5}$ 11; $\alpha(\text{O})=1.16 \times 10^{-5}$ 20; $\alpha(\text{P})=8.0 \times 10^{-7}$ 18 Mult.: $\alpha(\text{K})_{\text{exp}}=0.0073$ 15.
$^x899.5$ 2	1.2 2									
$^x901.8$ 2	1.1 2									
$^x906.7$ 2	1.9 3									
$^x911.9$ 2	1.1 2									
$^x917.1$ 2	1.7 3									
931.9 2	6.0 9	1977.95	$(3/2)^+$	1045.95	$(5/2^+)$	M1+E2	1.5 +15-5	0.0081 16		$\alpha(\text{K})=0.0067$ 14; $\alpha(\text{L})=0.00110$ 19; $\alpha(\text{M})=0.00025$ 5 $\alpha(\text{N})=6.2 \times 10^{-5}$ 11; $\alpha(\text{O})=1.06 \times 10^{-5}$ 19; $\alpha(\text{P})=7.3 \times 10^{-7}$ 16 Mult.: $\alpha(\text{K})_{\text{exp}}=0.0067$ 14.
$^x936.6$ 2	1.0 2									
$^x940.9$ 2	0.96 14									
$^x942.0$ 2	2.3 3									
$^x948.5$ 2	2.3 3									
$^x950.1$ 2	1.7 3									
$^x955.7$ 2	3.4 5					E2+M1	1.8 +28-6	0.0071 14		$\alpha(\text{K})=0.0059$ 12; $\alpha(\text{L})=0.00098$ 16; $\alpha(\text{M})=0.00023$ 4 $\alpha(\text{N})=5.5 \times 10^{-5}$ 9; $\alpha(\text{O})=9.4 \times 10^{-6}$ 16; $\alpha(\text{P})=6.4 \times 10^{-7}$ 14 Mult.: $\alpha(\text{K})_{\text{exp}}=0.0059$ 12.
$^x961.2$ 2	1.9 3									
$^x971.0$ 2	1.2 2									
$^x978.3$ 2	1.4 2									
$^x1008.2$ 3	2.6 4									
$^x1024.1$ 3	3.9 6									
$^x1029.5$ 3	2.3 3									
$^x1032.9$ 3	3.7 6									
$^x1037.2$ 3	1.8 3					M1		0.01026		$\alpha(\text{K})=0.00856$ 12; $\alpha(\text{L})=0.001314$ 19; $\alpha(\text{M})=0.000300$ 5 $\alpha(\text{N})=7.32 \times 10^{-5}$ 11; $\alpha(\text{O})=1.268 \times 10^{-5}$ 18; $\alpha(\text{P})=9.64 \times 10^{-7}$ 14 Mult.: $\alpha(\text{K})_{\text{exp}}=0.0111$ 23.
$^x1039.7$ 3	1.4 2									

¹⁸³Ir ε decay **1988Ro13** (continued)

γ(¹⁸³Os) (continued)

E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Mult. @	δ &	α^\dagger	Comments
1045.9 3	10.0 15	1045.95	(5/2 ⁺)	0.0	9/2 ⁺	(E2)		0.00454	$\alpha(K)=0.00372$ 6; $\alpha(L)=0.000637$ 9; $\alpha(M)=0.0001472$ 21 $\alpha(N)=3.58\times 10^{-5}$ 5; $\alpha(O)=6.06\times 10^{-6}$ 9; $\alpha(P)=3.98\times 10^{-7}$ 6 Mult.: $\alpha(K)\text{exp}=0.0020$ 4.
^x 1057.8 3	1.2 2								
1059.7 3	2.7 4	1332.58	(1/2,3/2,5/2) ⁻	273.04	5/2 ⁻				
1063.2 3	9.5 14	2300.03	(5/2) ⁻	1236.76	(7/2) ⁺	E1		1.74×10 ⁻³	$\alpha(K)=0.001468$ 21; $\alpha(L)=0.000211$ 3; $\alpha(M)=4.78\times 10^{-5}$ 7 $\alpha(N)=1.161\times 10^{-5}$ 17; $\alpha(O)=2.00\times 10^{-6}$ 3; $\alpha(P)=1.480\times 10^{-7}$ 21 Mult.: $\alpha(K)\text{exp}<0.0021$ 4.
1074.1 3	5.1 8	1332.58	(1/2,3/2,5/2) ⁻	258.32	3/2 ⁻	M1+E2	0.9 +7-5	0.0071 16	$\alpha(K)=0.0059$ 14; $\alpha(L)=0.00093$ 19; $\alpha(M)=0.00021$ 5 $\alpha(N)=5.2\times 10^{-5}$ 11; $\alpha(O)=9.0\times 10^{-6}$ 19; $\alpha(P)=6.6\times 10^{-7}$ 16 Mult.: $\alpha(K)\text{exp}=0.0059$ 12.
^x 1093.7 3	1.2 2								
^x 1096.0 3	3.3 5								
^x 1112.7 3	1.7 3								
^x 1129.3 3	2.1 3					(M1) ^b		0.00829	$\alpha(K)=0.00692$ 10; $\alpha(L)=0.001060$ 15; $\alpha(M)=0.000242$ 4 $\alpha(N)=5.90\times 10^{-5}$ 9; $\alpha(O)=1.022\times 10^{-5}$ 15; $\alpha(P)=7.78\times 10^{-7}$ 11; $\alpha(\text{IPF})=9.00\times 10^{-7}$ 16 Mult.: $\alpha(K)\text{exp}(1129.3+1131.5)=0.0098$ 20.
^x 1131.5 3	2.0 3					(M1) ^b		0.00825	$\alpha(K)=0.00689$ 10; $\alpha(L)=0.001055$ 15; $\alpha(M)=0.000240$ 4 $\alpha(N)=5.87\times 10^{-5}$ 9; $\alpha(O)=1.017\times 10^{-5}$ 15; $\alpha(P)=7.74\times 10^{-7}$ 11; $\alpha(\text{IPF})=9.74\times 10^{-7}$ 18 Mult.: $\alpha(K)\text{exp}(1129.3+1131.5)=0.0098$ 20.
1140.2 3	1.7 16	1236.76	(7/2) ⁺	96.23	11/2 ⁺				
^x 1177.4 3	2.5 4								
^x 1254.2 3	3.0 5								
^x 1260.7 3	3.1 5								
^x 1291.1 3	1.6 2								
^x 1308.4 3	2.0 3								
^x 1310.9 3	2.4 4								
^x 1354.1 3	2.0 3								
1377.0 3	1.00 15	2273.79	(7/2) ⁻	896.76	7/2 ⁺				
1399.1 3	4.6 7	1911.52	(3/2 ⁻ ,5/2,7/2 ⁻)	512.54	7/2 ⁻				
1403.4 3	2.0 3	2300.03	(5/2) ⁻	896.76	7/2 ⁺				

¹⁸³Ir ε decay 1988Ro13 (continued)

γ(¹⁸³Os) (continued)

<u>E_γ[‡]</u>	<u>I_γ^{#e}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[@]</u>	<u>α[†]</u>	<u>Comments</u>
1404.4 3	1.50 23	2254.58	3/2 ⁽⁻⁾ ,5/2,7/2 ⁽⁻⁾	850.20	(3/2,5/2,7/2) ⁻			
^x 1419.7 3	2.0 3							
^x 1422.5 3	1.6 2							
1424.1 3	1.30 20	1911.52	(3/2 ⁻ ,5/2,7/2 ⁻)	486.99	7/2 ⁻			
1441.7 3	3.0 5	2273.79	(7/2) ⁻	832.03	(3/2,5/2,7/2) ⁻			
1455.0 3	1.00 15	2219.11	(5/2 ⁻ ,7/2)	763.82	(7/2) ⁻			
1458.8 3	1.75 11	1911.52	(3/2 ⁻ ,5/2,7/2 ⁻)	453.05	3/2 ⁻			
1468.0 3	5.4 8	1921.03	1/2,3/2,5/2 ⁻	453.05	3/2 ⁻			
1473.7 3	1.70 26	2273.79	(7/2) ⁻	800.56	(5/2) ⁺			
^x 1478.8 3	3.8 6							
1494.3 3	1.60 24	2258.31	(7/2)	763.82	(7/2) ⁻			
1498.8 3	2.1 3	2300.03	(5/2) ⁻	800.56	(5/2) ⁺			
^x 1500.8 3	2.1 3							
1509.8 3	4.5 7	2273.79	(7/2) ⁻	763.82	(7/2) ⁻			
1517.5 3	1.60 24	2249.34	(5/2 ⁺ ,7/2)	731.58	7/2 ⁺			
1519.0 3	1.70 26	1911.52	(3/2 ⁻ ,5/2,7/2 ⁻)	392.48	(7/2) ⁻			
^x 1523.7 3	1.6 2							
1525.8 3	0.85 13	1921.03	1/2,3/2,5/2 ⁻	395.19	1/2 ⁻			
^x 1532.1 3	1.8 3							
1542.4 3	1.40 21	2273.79	(7/2) ⁻	731.58	7/2 ⁺			
1544.4 3	2.3 3	2258.31	(7/2)	714.01	9/2 ⁺			
1559.5 3	11.0 17	2273.79	(7/2) ⁻	714.01	9/2 ⁺			
1568.5 3	4.8 7	2300.03	(5/2) ⁻	731.58	7/2 ⁺			
^x 1598.7 3	2.3 3							
1604.5 3	2.4 4	2273.79	(7/2) ⁻	669.09	(5/2) ⁻			
1618.9 3	2.9 4	2273.79	(7/2) ⁻	655.32	(7/2) ⁻			
1630.8 ^f 3	≈3.0 ^{fa}	2083.43	(1/2,3/2,5/2 ⁻)	453.05	3/2 ⁻	<i>d</i>		Mult.: α(K)exp(doublet)=0.0025 5 for doublet which primarily deexcites the 2300 level.
1630.8 ^f 3	≈17 ^{fa}	2300.03	(5/2) ⁻	669.09	(5/2) ⁻	(E2)	0.00206	α(K)=0.001625 23; α(L)=0.000251 4; α(M)=5.74×10 ⁻⁵ 8 α(N)=1.398×10 ⁻⁵ 20; α(O)=2.40×10 ⁻⁶ 4; α(P)=1.730×10 ⁻⁷ 25; α(IPF)=0.0001134 16 Mult.: α(K)exp=0.0025 5 for doublet for which this is dominant placement.
1638.0 3	1.40 21	2258.31	(7/2)	620.78	7/2 ⁻			
1644.8 3	2.0 3	2300.03	(5/2) ⁻	655.32	(7/2) ⁻			
1652.8 3	15.0 23	2273.79	(7/2) ⁻	620.78	7/2 ⁻	E2	0.00202	α(K)=0.001586 23; α(L)=0.000245 4; α(M)=5.59×10 ⁻⁵ 8 α(N)=1.361×10 ⁻⁵ 19; α(O)=2.34×10 ⁻⁶ 4; α(P)=1.688×10 ⁻⁷ 24; α(IPF)=0.0001219 18 Mult.: α(K)exp=0.0013 3.
^x 1673.4 3	2.9 4							
^x 1678.2 3	2.6 4							
1687.8 3	2.4 4	2083.43	(1/2,3/2,5/2 ⁻)	395.19	1/2 ⁻			
^x 1691.9 3	2.1 3							

¹⁸³Ir ε decay **1988Ro13** (continued)

γ(¹⁸³Os) (continued)

E_γ ‡	I_γ #e	E_i (level)	J_i^π	E_f	J_f^π	Comments
1700.0 3	5.7 9	2258.31	(7/2)	558.15	(9/2) ⁻	
1705.3 3	4.7 7	1977.95	(3/2) ⁺	273.04	5/2 ⁻	
1709.5 3	1.30 20	2219.11	(5/2 ⁻ ,7/2)	509.88	9/2 ⁻	
1717.8 3	4.2 6	2300.03	(5/2) ⁻	582.21	(3/2) ⁻	
1728.6 3	2.5 4	2310.49	3/2,5/2,7/2 ⁽⁻⁾	582.21	(3/2) ⁻	
^x 1730.5 3	3.8 6					
^x 1745.2 3	3.4 5					
1747.9 3	1.30 20	2258.31	(7/2)	509.88	9/2 ⁻	
1755.3 3	11.0 17	2300.03	(5/2) ⁻	544.38	5/2 ⁻	
1760.3 3	8.9 13	2273.79	(7/2) ⁻	513.09	5/2 ⁻	
1763.6 3	2.3 3	2273.79	(7/2) ⁻	509.88	9/2 ⁻	
1787.0 3	10.0 15	2300.03	(5/2) ⁻	513.09	5/2 ⁻	
1797.1 3	2.2 3	2511.21	(5/2 ⁺ ,7/2)	714.01	9/2 ⁺	
1801.3 3	2.6 4	2254.58	3/2 ⁽⁻⁾ ,5/2,7/2 ⁽⁻⁾	453.05	3/2 ⁻	
1806.9 3	1.5 14	1977.95	(3/2) ⁺	170.70	1/2 ⁻	
1812.8 3	3.4 5	2300.03	(5/2) ⁻	486.99	7/2 ⁻	
^x 1815.4 3	2.2 3					
1820.9 3	2.7 4	2273.79	(7/2) ⁻	453.05	3/2 ⁻	
1848.0 3	2.5 4	2300.03	(5/2) ⁻	453.05	3/2 ⁻	E _γ : reported as 1848 keV. Missing precision assumed by the evaluator.
1857.1 ^f 3	3.5 ^f ^a 5	2249.34	(5/2 ⁺ ,7/2)	392.48	(7/2) ⁻	
1857.1 ^f 3	3.0 ^f ^a 5	2310.49	3/2,5/2,7/2 ⁽⁻⁾	453.05	3/2 ⁻	
1862.3 3	4.5 7	2254.58	3/2 ⁽⁻⁾ ,5/2,7/2 ⁽⁻⁾	392.48	(7/2) ⁻	
1866.1 3	2.6 4	2258.31	(7/2)	392.48	(7/2) ⁻	
^x 1875.4 3	2.5 4					
1881.8 3	1.50 23	2273.79	(7/2) ⁻	392.48	(7/2) ⁻	
1890.5 3	2.5 4	2511.21	(5/2 ⁺ ,7/2)	620.78	7/2 ⁻	
1904.7 3	3.5 5	2300.03	(5/2) ⁻	395.19	1/2 ⁻	
1907.7 3	11.0 17	2300.03	(5/2) ⁻	392.48	(7/2) ⁻	
^x 1959.6 3	3.3 5					
^x 1976.7 3	7.9 12					
^x 1985.4 3	2.4 4					
^x 1994.0 3	1.9 3					
2000.6 3	18 3	2273.79	(7/2) ⁻	273.04	5/2 ⁻	
^x 2015.6 3	8.7 13					
^x 2035.7 3	2.2 3					
^x 2041.9 3	5.2 8					
^x 2192.0 3	2.7 4					
^x 2223.5 3	3.7 6					
2249.8 ^g 3	0.82 12	2249.34	(5/2 ⁺ ,7/2)	0.0	9/2 ⁺	
2258.7 ^g 3	3.8 6	2258.31	(7/2)	0.0	9/2 ⁺	
2273.6 ^g 3	3.1 5	2273.79	(7/2) ⁻	0.0	9/2 ⁺	

$\gamma(^{183}\text{Os})$ (continued)

† [Additional information 1.](#)

‡ From [1988Ro13](#); uncertainty is 0.1 keV for $E_\gamma < 500$ and $I_\gamma > 100$, 0.3 keV for $E_\gamma > 1000$ and 0.2 keV otherwise.

15% uncertainty estimated by authors, except where noted.

@ From $I(\text{ce})$ and I_γ , normalized by authors assuming E2 theory value for 102.2 γ consistent with experimental L1:L2:L3 subshell ratios. The authors estimate approximately 15% uncertainty in $I(\text{ce})$, resulting in $\approx 21\%$ uncertainty in the calculated conversion coefficients.

& From measured ce data, except as noted.

^a From authors' coincidence analysis; assumed by the evaluator to be approximate.

^b $\alpha(\text{K})_{\text{exp}}$ for doublet requires both components to have the admixture indicated.

^c Possible E1 assignment ruled out by level parities.

^d Conversion coefficient too large for E1, E2 or M1; possible E0 admixture.

^e For absolute intensity per 100 decays, multiply by 0.098 *II*.

^f Multiply placed with intensity suitably divided.

^g Placement of transition in the level scheme is uncertain.

^x γ ray not placed in level scheme.

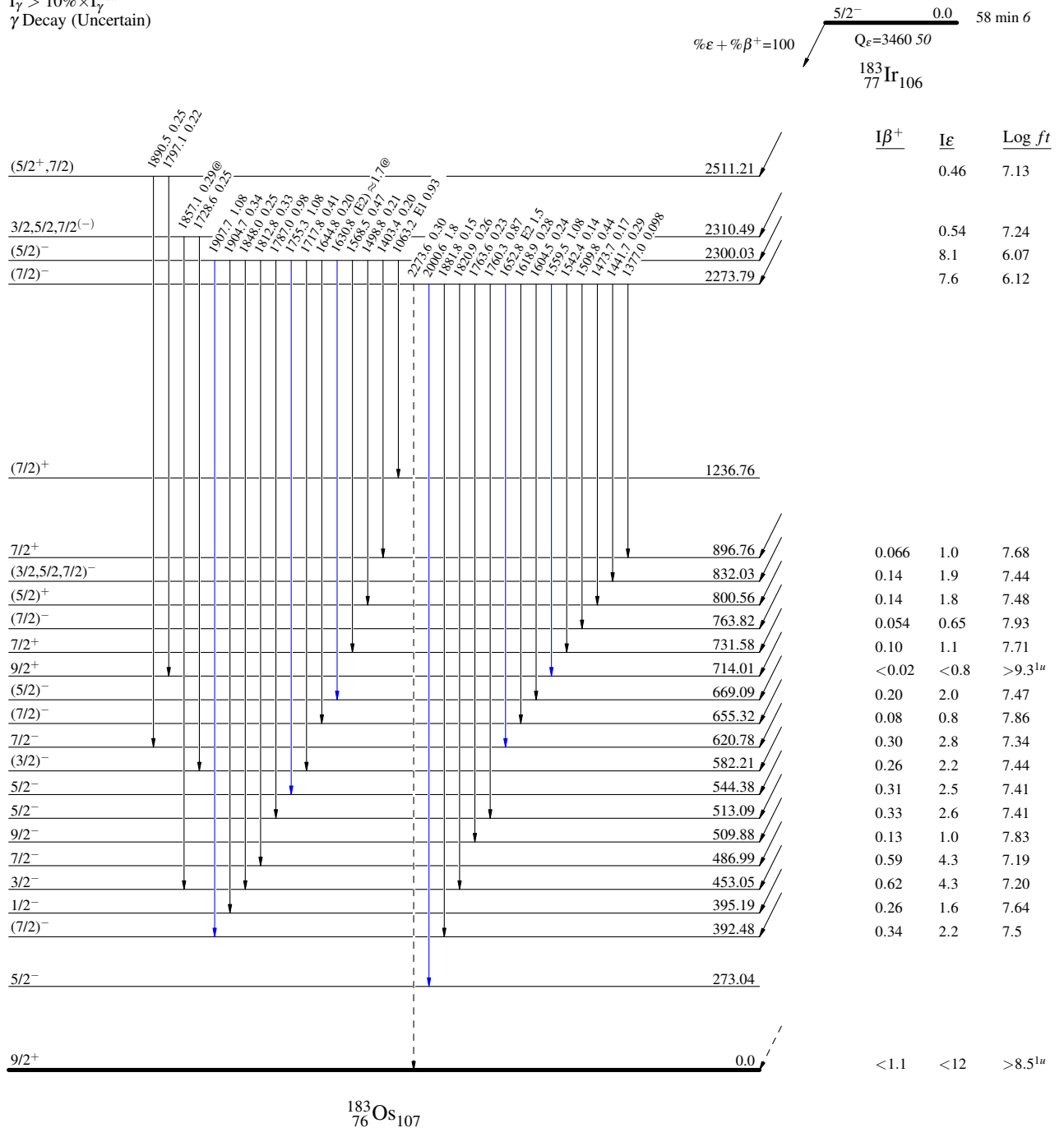
¹⁸³Ir ε decay 1988Ro13

Decay Scheme

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - γ Decay (Uncertain)

Intensities: I_(γ+ce) per 100 parent decays
 @ Multiply placed: intensity suitably divided



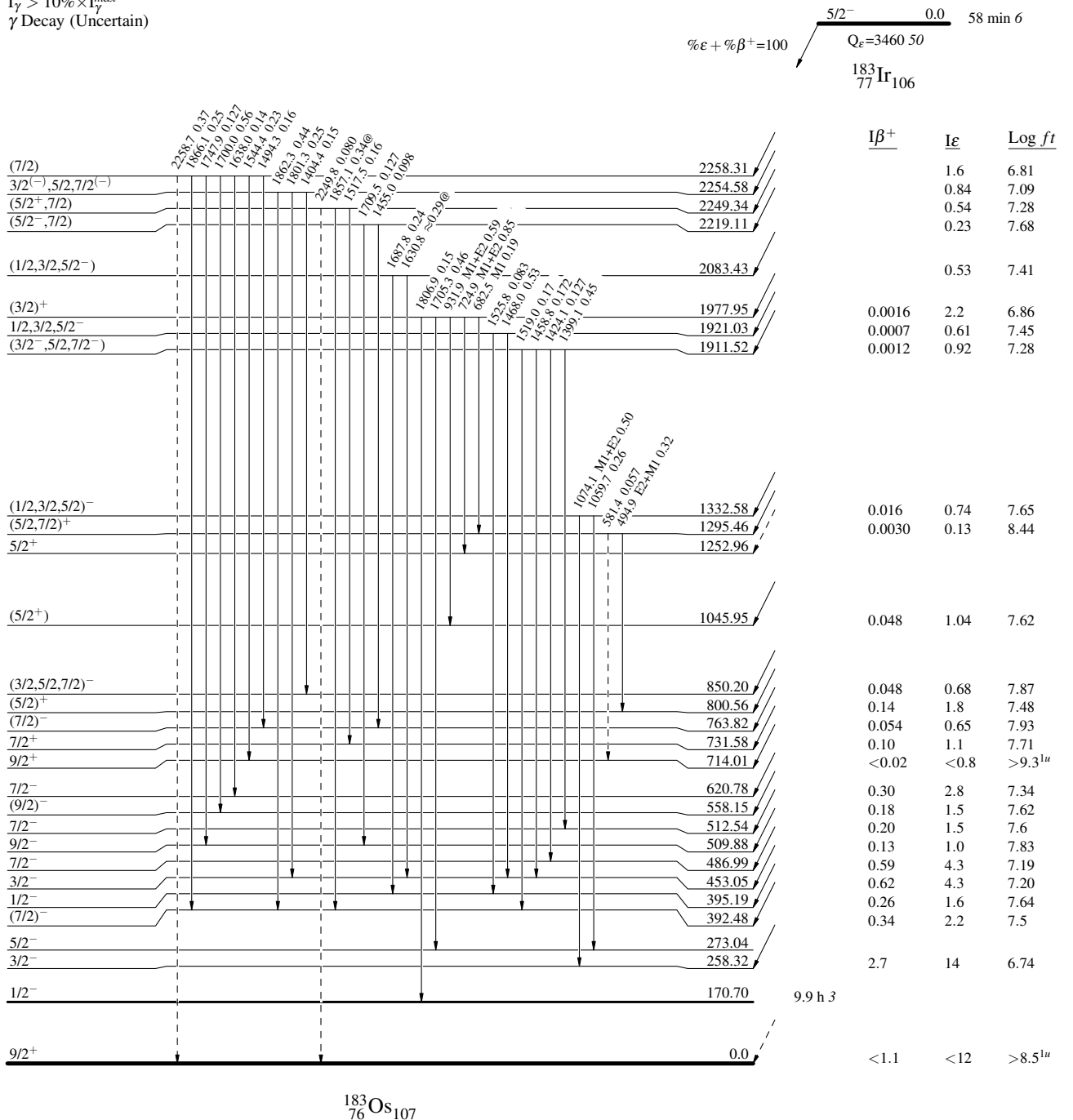
¹⁸³Ir ε decay 1988Ro13

Decay Scheme (continued)

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - γ Decay (Uncertain)

Intensities: I_(γ+ce) per 100 parent decays
 @ Multiply placed: intensity suitably divided



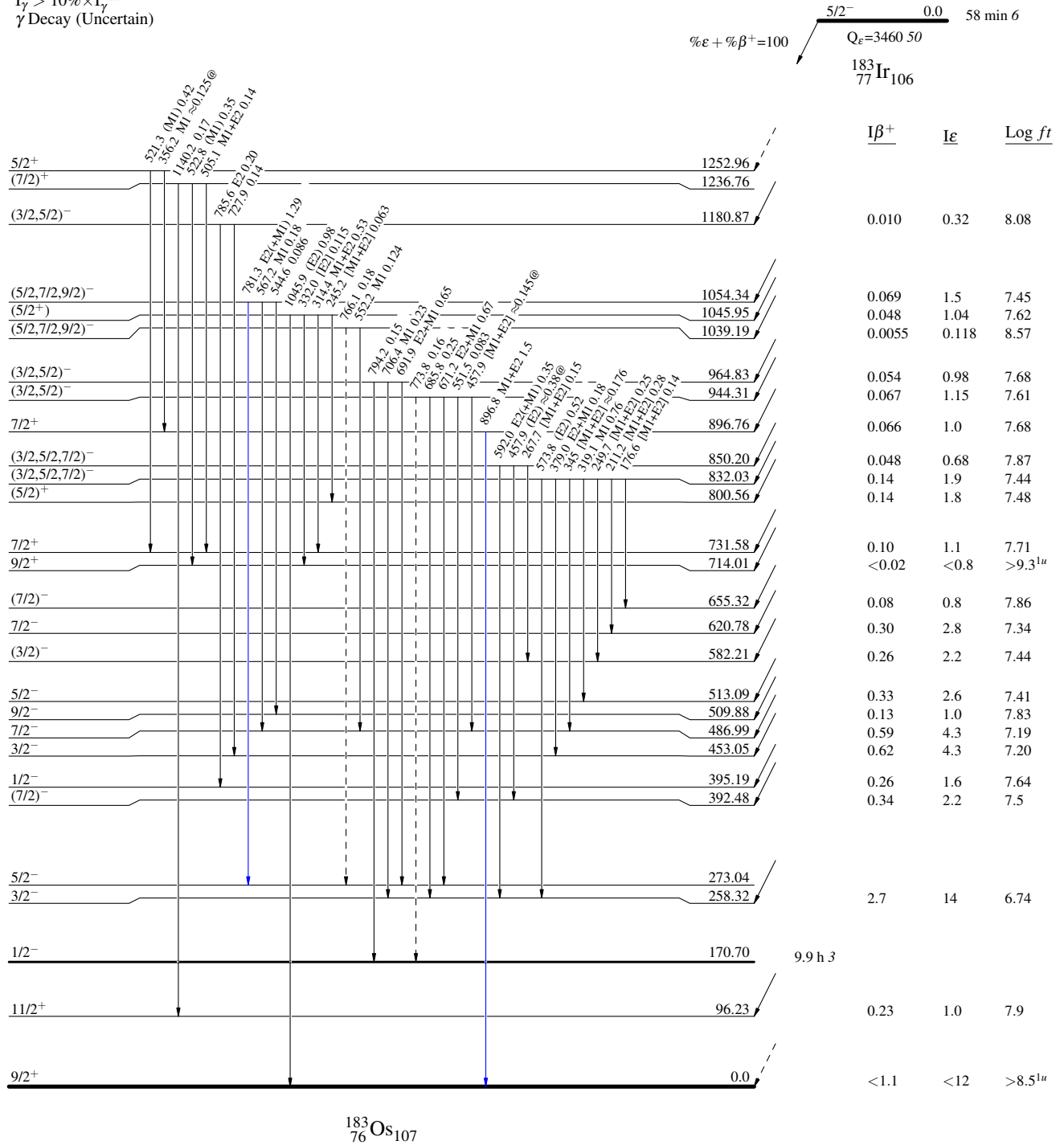
¹⁸³Ir ε decay 1988Ro13

Decay Scheme (continued)

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - γ Decay (Uncertain)

Intensities: I(γ+ce) per 100 parent decays
@ Multiply placed: intensity suitably divided



¹⁸³Os₁₀₇

¹⁸³Ir ε decay 1988Ro13

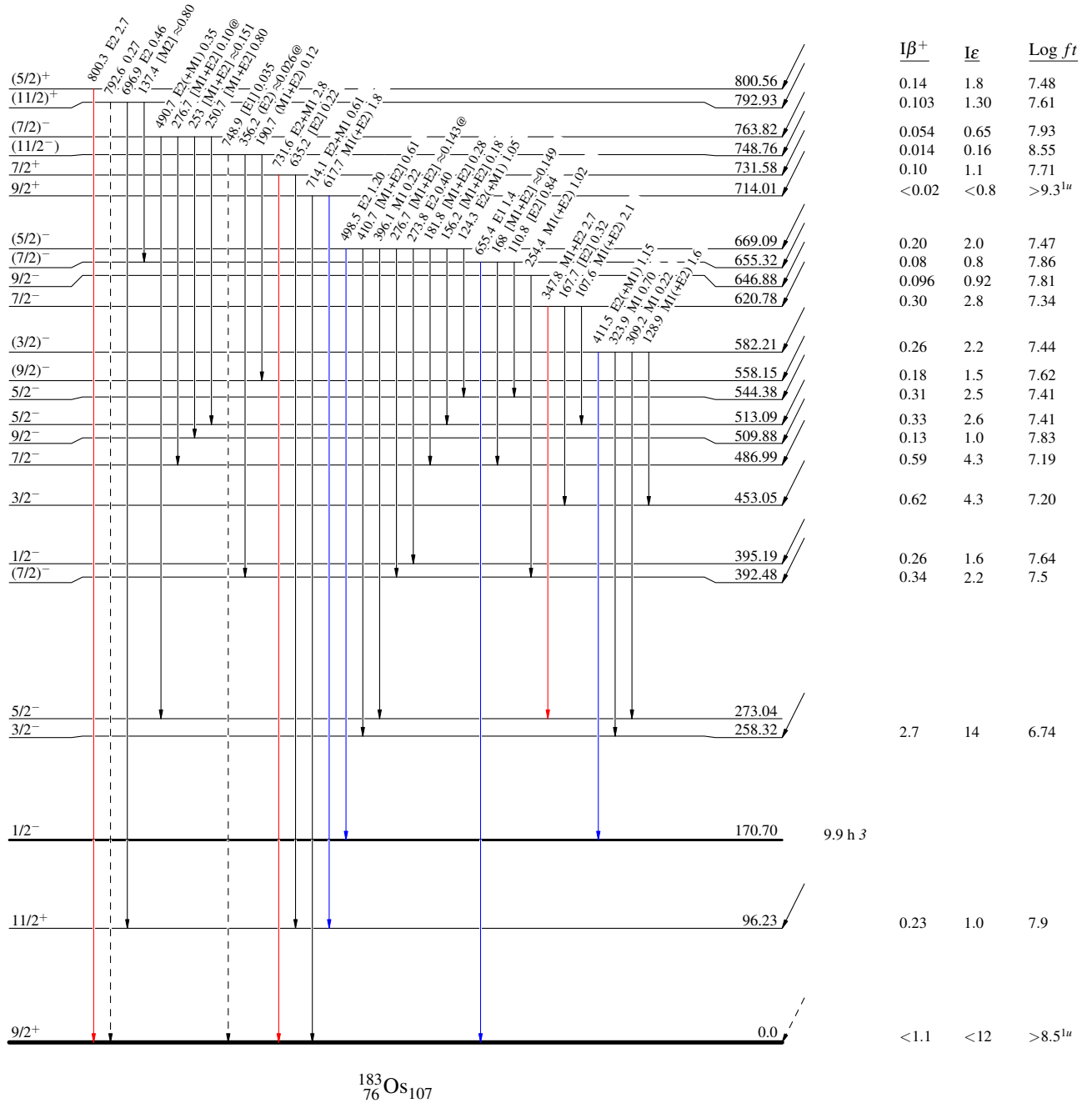
Decay Scheme (continued)

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - γ Decay (Uncertain)

Intensities: I_(γ+ce) per 100 parent decays
@ Multiply placed: intensity suitably divided

¹⁸³Ir₇₇¹⁰⁶ 58 min 6
 5/2⁻ 0.0
 Q_ε=3460.50
 %ε + %β⁺=100



¹⁸³Ir ε decay 1988Ro13

Decay Scheme (continued)

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - γ Decay (Uncertain)

Intensities: I_(γ+ce) per 100 parent decays
 @ Multiply placed: intensity suitably divided

