Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. C. Batchelder and A. M. Hurst, M. S. Basunia	NDS 183, 1 (2022)	1-Mar-2022

Q(β^-)=−3828 *17*; S(n)=8265.4 *9*; S(p)=6470.0 *8*; Q(α)=2821.2 *9* 2021Wa16
Other Reactions: ^{186}W(^{16}O,X), E=110 MeV (1997Ka34): measured Doppler shift and FWHM for 713γ from 12$^+$ 2781 level.

For isotope shift data, see 2006Av09.

^{186}Os Levels

Cross Reference (XREF) Flags

A	^{186}Re β^- decay (3.7185 d)	F	^{184}W(α,2nγ)	K	^{186}Os(γ,xn)
B	^{186}Ir ε decay (16.64 h)	G	^{187}Re(p,2nγ)	L	^{188}Os(p,t)
C	^{186}Ir ε decay (1.90 h)	H	^{185}Re(^{3}He,d)	M	Muonic atom
D	^{190}Pt α decay	I	Coulomb excitation		
E	^{176}Yb(^{14}C,4nγ)	J	^{186}W(α,4nγ)		

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	XREF	Comments
0.0[a]	0$^+$	2.0×10^{15} y *11*	ABCDEFGHIJ LM	%α=100 T$_{1/2}$: From 1975Vi01. Others: ≥ 3.3 × 10^{17} y for decay to the 2$^+$, 100.1-keV level in ^{182}W and ≥ 6.0 × 10^{18} y for decay to the 4$^+$, 329.4-keV level in ^{182}W (2020Be23 − from a 15,851 h measurement).
137.15[a] *3*	2$^+$	868 ps *12*	ABCDEFGHIJ LM	μ=+0.58 *3* Q=−1.63 *4* μ: From 2020StZV (based on 1976St23 − Mossbauer). Additional value: +0.524 *30* (2016St14, from 1982Le02), transient integral PAC assuming T$_{1/2}$=0.83 ns. Q: From muonic x ray hyperfine structure (2021StZZ, from 1981Ho22). Others: −1.61 *5* (2014StZZ, from 1972Wa24), −1.18 *16* (1989Ra17). J$^\pi$: E2 137γ to 0$^+$ g.s. T$_{1/2}$: weighted average of 842 ps *12* from ^{186}Re β decay, 923 ps *18* and 840 ps *50* from ^{186}Ir ε decay (16.64 h). Uncertainty the lowest input value.
434.088[a] *23*	4$^+$	26.4 ps *12*	ABC EFGHIJ L	J$^\pi$: E2 297γ to 2$^+$; Coulomb excited member of g.s. band.
767.477[d] *18*	2$^+$	1.88 ps *14*	ABC EFGHIJ L	J$^\pi$: E2 767γ to 0$^+$ g.s.
868.94[a] *4*	6$^+$	3.03 ps *+8−12*	B EFG IJ L	J$^\pi$: E2 435γ to 4$^+$; Coulomb excited member of g.s. band.
910.473[d] *22*	3$^+$		ABC EFGHIJ	J$^\pi$: M1+E2 773γ to 2$^+$ 137; M1+E2 476γ to 4$^+$ 434.
1061.0[e] *10*	0$^+$	148 ps *+83−57*	HI L	J$^\pi$: L=0 in (p,t).
1070.48[d] *3*	4$^+$	1.83 ps *+31−23*	BC EFGHIJ	J$^\pi$: stretched E2 933γ to 2$^+$ in Coulomb excitation; M1+E2 636γ to 4$^+$ 434.
1208.29[e] *20*	2$^+$		B EF H L	J$^\pi$: M1 1071γ to 2$^+$; γ to 0$^+$; E2(+M1) 252γ from 4$^+$ 1460 level.
1275.61[d] *3*	5$^+$		B EFG J	J$^\pi$: E2 365γ to 3$^+$ 910; E2 407γ to 6$^+$ 869; E consistent with that expected for J=5 member of γ band.
1351.94[f] *7*	4$^+$	3.2 ps *+10−7*	BC EFGHIJ L	J$^\pi$: E2 584γ to 2$^+$ 768; log *ft*=8.4 from 5$^+$.
1420.94[a] *6*	8$^+$	1.30 ps *6*	B EFG IJ	J$^\pi$: E2 552γ to 6$^+$; Coulomb excited member of g.s. band.
1452.3 *4*	(3$^+$)		B F	J$^\pi$: 685γ to 2$^+$ 767 is M1; absence of γ to g.s.
1456 *2*	0$^+$		L	J$^\pi$: L(p,t)=0.
1460.74[e] *17*	4$^+$		B EF	J$^\pi$: E2 1324γ to 2$^+$; E2 591γ to 6$^+$.
1480.09 *8*	(3)$^-$		BC F H L	J$^\pi$: log *ft*=10.0 from 5$^+$; E1 570γ to 3$^+$ 910 level; strong 713γ to 2$^+$ 767 level.

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Adopted Levels, Gammas (continued)

^{186}Os Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF	Comments
1491.28[d] *4*	6^+	1.77 ps *+63–43*	B EFG IJ	Jπ: M1+E2 622γ to 6^+; E2 1057γ to 4^+; E consistent with expectations for J=6 γ-band member.
1559.8[f] *3*	$(5)^+$		B EFGH J	Jπ: E2 649γ to 3^+; E2 284γ to 5^+ 1276; band assignment.
1571 *2*			L	
1623.2? *4*			B	Jπ: γ to 3^+ and possibly to 4^+.
1628.53[g] *13*	5^-	<1 ns	B EFG J L	Jπ: E1 558γ to 4^+; J=5 from γ(θ) for oriented nuclei in 16.64 h ε decay. $T_{1/2}$: from (^{14}C,4nγ).
1640.81 *11*			C L	Jπ: log *ft*=7.8 from 2^-, 730γ to 3^+, so $J^\pi=1^+,2,3,4^+$.
1653.58 *11*	$2^+,3,4^+$		C L	Jπ: strong 302γ to 4^+; log *ft*=7.7 from 2^-.
1704.6 *6*	(4^+)		B	Jπ: log *ft*=8.9 from 5^+; strong 1567γ to 2^+; 352γ from $5^+,6^+$.
1750.93[d] *10*	7^+		B E J	Jπ: Gammas to 5^+ and 6^+; Band assignment.
1754.50 *7*	$2^{(+)}$		C	Jπ: 2 from 1754γ(θ,H,T); 1754γ to 0^+.
1771.9[g] *6*	(6^-)		E	Jπ: D 143 γ to 5^- at 1628.
1774.69[h] *22*	(7^-)	8.36 ns *30*	B EFG J	μ=−0.27 *17* μ: −0.22 *14* from DPAD (2020StZV, from 1984Go06) if $T_{1/2}$=10.4 ns; adjusted by evaluators to be consistent with adopted half-life. Jπ: possible stretched (E2) 146γ to 5^- 1629. $T_{1/2}$: weighted average of 8.5 ns *3* from (^{14}C,4nγ) and 8.1 ns *4* from (α,4nγ). Other values: 10-15 ns (1973Ya05) from (p,2nγ); 10.5 ns *10* and 10.4 ns *8* from (α,2nγ). The latter data from (α,2nγ) were not adopted because probable feeding from the 2165 level (5.7 ns *4*) would result in an apparently longer half-life.
1775.8 *4*	$4^+,5^+$		B F I L	Jπ: E2(+M1) 705γ to 4^+ 1070; 907γ to 6^+; anisotropy 705γ in ^{186}Ir ε decay (16.64 h) inconsistent with J=6. However, suggested as J=6 member of K=4 band in Coulomb excitation.
1812.47[e] *19*	$(6)^+$		B E	Jπ: E2 1378γ to 4^+; M1(+E2) 944γ to 6^+; band assignment.
1848.42 *8*	$2^+,3$		C	Jπ: 778γ to 4^+; log *ft*=7.1 (log $f^{1u}t$=8.5) from 2^-.
1916.1 *6*	$4^+,5,6^+$		B L	Jπ: gammas to 4^+ and 6^+.
1937 *2*			L	
1939.0[g] *6*	(7^-)		E	Jπ: 310γ Q to 5^-.
1953 *2*	(0^+)		L	Jπ: L=(0) in (p,t).
1968.4[h] *3*	(8^-)		EF J	Jπ: ΔJ=1 (M1+E2) 194γ to (7^-); no transition to J<7.
1976.0? *10*			B	Jπ: γ to 5^+.
1990 *2*	0^+		L	Jπ: L(p,t)=0.
2015.5[d] *7*	8^+	1.8 ps *3*	E IJ	Jπ: γ to 6^+ 1491; γ-band member excited in multiple Coulomb excitation. $T_{1/2}$: from Coulomb excitation.
2031.3 *4*	4^+		B	Jπ: log *ft*=8.2 from 5^+; E2 1265γ to 2^+.
2056.65 *23*	$5^+,6^+$		B L	Jπ: E2 to 1622γ to 4^+; M1+E2 565γ to 6^+.
2068.4[a] *5*	10^+	0.41 ps *12*	EF IJ	Jπ: E2 647γ to 8^+; Coulomb excited member of g.s. band. $T_{1/2}$: from Coulomb excitation.
2081.57 *21*	4^+		B	Jπ: M1+E2 1172γ to 3^+; M1+E2 806γ to 5^+.
2119.9? *10*			B	Jπ: γ to 6^+.
2133.8[g] *8*	(8^-)		E	Jπ: Q 362 γ to (6^-).
2135.1? *7*	$3^+,4^+,5^+$		B	Jπ: M1(+E2) 1701γ to 4^+.
2165.6[i] *3*	(9^-)	5.7 ns *4*	E J	Jπ: M1 γ to (8^-). $T_{1/2}$: Unweighted average of 5.3 ns *2* from (α,4nγ) and 6.1 ns *2* from (^{14}C,4nγ).
2188.1[h] *4*	(9^-)		E J	Jπ: (M1) to (8^-); γ to (7^-); absence of γ to J<7.
2222.8? *7*	4^+		B	Jπ: E0+M1+E2 1789γ to 4^+ 434 level.

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Adopted Levels, Gammas (continued)

^{186}Os Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF	Comments
2234? *3*			B	
2257.8[e] *11*	(8+)		E	Jπ: γ to (6)+.
2302.9? *10*			B	
2319.1[d] *10*	9+		E J	Jπ: Q 567 γ to (7+) 1751; band assignment.
2350.0[g] *9*	(9−)		E	Jπ: Q 410 γ to (7−).
2377.1 *6*	5+,6+		B	Jπ: M1 1508γ to 6+; 1943γ to 4+.
2431.2[i] *3*	(10−)		E J	Jπ: D+Q 266γ to (10−); γ to (8−).
2435.2[h] *5*	(10−)		E	Jπ: Q 467 γ to 8−.
2559.7? *19*			B	
2562.9[b] *4*	(10+)	<1 ns	E J	Jπ: D 397γ to (9−); 1142γ to 8+; 132γ to (10−). $T_{1/2}$: from (^{14}C,4nγ).
2587.6[g] *11*	(10−)		E	Jπ: Q γ to (8−), band assignment.
2599.2 *5*	4(+),5,6(+)		B	Jπ: gammas to 4+ and 6+.
2606.3? *5*	(5+,6+)		B	Jπ: (M1+E2) 1737γ to 6+; 2172γ to 4+.
2620.0 *5*	5+,6+		B	Jπ: M1 1751γ to 6+; γ to 4+.
2624.9[d] *13*	(10+)	1.17 ps *+33−43*	E IJ	Jπ: γ to (8+); γ-band member excited in multiple Coulomb excitation.
2666.5 *9*	(6)+		B	Jπ: E2 1107γ to (5)+; γ to 4+; log *ft*≈8.0 from 5+; anisotropy of 1107γ excludes J=4 and 5 in ^{186}Ir ε decay (16.40 h).
2698.6[h] *6*	(11−)		E	Jπ: Band assignment, 510.6γ Q to (9−).
2714.3[i] *6*	(11−)		E	Jπ: Band assignment, 283.0γ D to (10−).
2771.8? *11*	(4+)		B	Jπ: possible (E0+M1+E2) 2340γ to 4+.
2781.7[a] *5*	12+	0.29 ps *+23−4*	E IJ	Jπ: E2 713γ to 10+; Coulomb excited member of g.s. band.
2787.9[e] *15*	(10+)#		E	
2805.9[c] *4*	(11+)		E J	Jπ: (M1+E2) 243γ to (10+) in (α,4nγ).
2852.2[g] *12*	(11−)#		E	
2919.89 *15*	1,2+		C	Jπ: 2920γ to 0+; log *ft*=6.9 from 2−.
2958.1[d] *15*	(11+)		E J	Jπ: 639 γ to 9+; band assignment.
2958.4? *18*	+		B	Jπ: E2 1467γ to 6+ 1491 level.
2977.2[h] *7*	(12−)#		E	
2978.4? *5*			B	Jπ: γ to 4+.
3007.0[i] *7*	(12−)#		E	
3039.0[b] *4*	(12+)		E J	Jπ: intraband gammas to (12+) and (11+).
3110.1? *10*			B	
3123.2[g] *15*	(12−)#		E	
3185.1? *10*			B	
3186.4[j] *7*	(12+)		E	Jπ: ΔJ=2 1118 keV γ to (10+).
3214.5? *5*			B	
3221.4 *9*	(12+)		E	Jπ: 1151 Q γ to 10+.
3226.3? *5*			B	
3252.7? *5*	(6+)		B	Jπ: possible E0+M1+E2 2383.7γ to 6+.
3268.9? *3*			B	Jπ: possible E0+M1+E2 2399γ to 6+; however, possible 3132γ to 2+. One of these gammas may be misplaced.
3288.8[h] *9*	(13−)#		E	
3293.7[c] *7*	(13+)#		E	
3296.2[d] *16*	(12+)#		E J	
3309.1[i] *8*	(13−)#		E	
3414.3? *4*	(4+)		B	Jπ: possible γ to 4+ and 6+; possible E0+M1+E2 1334γ to 4+.
3425.5[g] *16*	(13−)#		E	

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Adopted Levels, Gammas (continued)

^{186}Os Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF		Comments
3431.9[j] 7	(13+)[#]		E		
3440.4[b] 6	(14+)	≥0.92 ps	E	IJ	Jπ: (E2) 659γ to 12+; excited in multiple Coulomb excitation.
3506.2 12	(13)		E		Jπ: γ to (12+).
3557.4[h] 12	(14−)[#]		E		
3558.4[a] 8	14+		E	IJ	Jπ: 580 Q γ to 12+; excited in multiple Coulomb excitation. Band assignment.
3623.8[i] 9	(14−)[#]		E		
3630.2[d] 18	(13+)[#]			J	
3731.0[k] 10	(15+)		E		Jπ: Q 299 keV γ to (13+).
3760.8?[g] 18	(14−)[#]		E		
3816.5[c] 7	(15+)[#]		E		
3935.2[b] 7	(16+)[#]		E	J	
3940.6[h] 10	(15−)[#]		E		
3946.2[i] 9	(15−)[#]		E		
4062.4[g] 19	(15−)[#]		E		
4100.0[k] 10	(16+)[#]		E		
4169.8[h] 16	(16−)[#]		E		
4242.2[l] 13	(16+)		E		Jπ: Q 684 keV γ to 14+.
4283.1[i] 11	(16−)[#]		E		
4351.3 10	(16+)		E		Jπ: γ to 14+.
4414.2[c] 10	(17+)[#]		E		
4483.4[k] 11	(17+)[#]		E		
4487.0[g] 21	(16−)[#]		E		
4494.7 8	(18+)[@]	<0.5 ns	E	J	Jπ: (E2) 559 keV γ to (16+). $T_{1/2}$: from (^{14}C,4nγ).
4505.1[b] 7	(18+)[#]		E	J	
4624.4[i] 9	(17−)[#]		E		
4637.1?[h] 10	(17−)[#]		E		
4760.2[g] 21	(17−)[#]		E		
4818.7[h] 19	(18−)[#]		E		
4869.6[k] 12	(18+)[#]		E		
4957.4 8	(19+)[#]		E	J	Jπ: ΔJ=1 to (18+).
4963.5[l] 16	(18+)[#]		E		
5025.7[m] 8	(18−)	<2 ns	E	J	$T_{1/2}$: from (^{14}C,4nγ). Jπ: Q 531 keV γ to (18−).
5107.1[c] 14	(19+)[#]		E		
5167.8[b] 7	(20+)[#]		E	J	
5243.9[m] 13	(19−)[#]		E		
5331.9[n] 8	(19−)	<1 ns	E	J	$T_{1/2}$: from (^{14}C,4nγ). Jπ: Q 708 keV γ to (17−).
5374.3 8	(20+)[#]		E	J	
5489.9[h] 21	(20−)[#]		E		
5496.4 9	(20+)[#]		E		
5501.0 8	(20+)[#]		E	J	
5560.4[n] 11	(20−)[#]		E		
5564.8 8	(20−)			J	Jπ: possibly Q intraband γ to (18−) 5025.

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Adopted Levels, Gammas (continued)

^{186}Os Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF	Comments
5670.5[k] *16*	(20+)[#]		E	
5701.9 *8*	(21+)		E J	Jπ: 201 D γ to (20+).
5781.7[l] *19*	(20+)[#]		E	
5832.9 *8*	(21−)		J	Jπ: ΔJ=2 γ to (19−) assumed in (α,4nγ).
5888.8[c] *17*	(21+)[#]		E	
5902.1[n] *11*	(21−)[#]		E	
5915.3[b] *7*	(22+)[#]		E J	
5922.8 *13*	(21+)		E	Jπ: 422 γ to (20+).
5923.1 *14*	(21+)		E	Jπ: 427 γ to (20+).
6026.9 *10*	(22+)		E J	Jπ: 653 Q γ to (20+).
6031.0 *10*	(22+)		E	Jπ: 656.6 Q γ to (20+).
6064.3 *13*	(22+)		E	Jπ: 362.4γ to (21+).
6151.9 *14*	(24+)		E	Jπ: 120.9 γ (Q) to (22+).
6185.4?[h] *24*	(22−)[#]		E	
6446.4? *15*	(22+)		E	Jπ: 525 γ to (20+).
6473.4 *17*	(25+)		E	Jπ: 322 D γ to (24+).
6487.9 *12*	(24+)		E	Jπ: 457 Q γ to (22+).
6727.9[b] *12*	(24+)[#]		E	
6946.6? *19*	(26+)		E	Jπ: 474.2 γ to (25+).
6989.1 *15*	(26+)		E	Jπ: 501 Q γ to (24+).
6993.0 *15*	(25+)		E	Jπ: 505 D γ to (24+).
7142.9 *18*	(28+)[&]	<2 ns	E	
7477.4 *18*	(26+)		E	Jπ: 484.4 γ to (25+).
7583.2[b] *16*	(26+)[#]		E	
7710.3 *21*	(30+)		E	Jπ: 567 γ to (28+).
7749.7 *21*	(30+)		E	Jπ: 607 Q γ to (28+).
7778.4 *21*	(30+)		E	Jπ: 636 γ to (28+).
13.03×10^3 *9*	1−	3.13 MeV *24*	K	Component of GDR; J^π=1−.
15.26×10^3 *9*	1−	3.38 MeV *21*	K	Component of GDR; J^π=1−.

[†] From least-squares adjustment of Eγ allowing ΔE_γ=1 keV for missing uncertainty.

[‡] From measured E2 matrix elements in Coulomb excitation and adopted γ-ray properties, unless noted otherwise.

[#] From band member.

[@] Probably a four-quasineutron intrinsic triaxial (γ=23°) state; blocked BCS calculations predict a low-lying 18+ state with configuration=((11/2[615])+(9/2[624])+(9/2[505])+(7/2[503])). The short $T_{1/2}$, despite predominantly ΔK=8 deexcitation, for this yrast state is consistent with the onset of triaxiality.

[&] Probably a six-quasiparticle intrinsic triaxial (γ=26°) state; blocked BCS calculations predict a low-lying 28+ state with configuration=((18+ 4495 level)⊗((π 11/2[505])+(π 9/2[514]))). The short $T_{1/2}$ for this yrast state may result from the onset of triaxiality.

[a] Band(A): $K^\pi=0^+$ g.s. band. Rotational parameters: A=20.8, B=−0.019 (based on J=0 to 14 members). Yrast for J≤12.

[b] Band(B): $K^\pi=10^+$, α=0 tilted-axis band. Likely configuration=((ν 11/2[615])+(ν 9/2[624])), consistent with the relatively large alignment and the intraband E2-to-M1 branching ratios observed. Crosses g.s. band; yrast for J=14-16.

[c] Band(b): $K^\pi=10^+$, α=1 tilted-axis band. Signature partner of $K^\pi=10^+$, α=0 band, exhibiting pronounced signature splitting.

[d] Band(C): $K^\pi=2^+$ γ band. Rotational parameters: A=20.4, B=−0.024 (based on all even J members).

[e] Band(D): $K^\pi=0^+$ β band.

[f] Band(E): Possible $K^\pi=4^+$ hexadecapole band. Rotational parameter: A=20.8. Could alternatively be interpreted as a two γ phonon excitation.

[g] Band(F): $K^\pi=5^-$ band. Similarity of alignment curve to that for the 11/2+ band in ^{185}Os favors configuration=((ν

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Adopted Levels, Gammas (continued)

^{186}Os Levels (continued)

11/2[615])-(ν 1/2[510])), analogous to the 8.3 μs, 5^- isomer with this configuration in ^{184}W.

[h] Band(G): $K^\pi=7^-$ band. Likely configuration=((ν 11/2[615])+(ν 3/2[512])); alignment is consistent with that for other (ν $i_{13/2}$) bands. Analogous to band with same configuration built on 7^-, 2.4 ns isomer in ^{184}W isotone.

[i] Band(H): $K^\pi=9^-$ band. Likely configuration=((ν 11/2[615])+(ν 7/2[503])), supported by similarity of alignment curve to that for other (ν 11/2[615]) bands.

[j] Band(I): $K^\pi=(12^+)$ four-quasineutron band. Possible configuration=((11/2[615])+(9/2[624])+(3/2[512])+(1/2[510])) supported by BCS calculations.

[k] Band(J): $K^\pi=(15^+)$ four-quasineutron band. Possible configuration=((11/2[615])+(9/2[624])+(7/2[503])+(3/2[512])).

[l] Band(K): π=+, α=0 band. Possible rotational aligned low-K s-band; alignment much larger than that of g.s. band.

[m] Band(L): $K^\pi=(18^-)$ four-quasiparticle band. Possible configuration=((ν 11/2[615])+(ν 9/2[624])+(π 5/2[402])+(π 11/2[505])) supported by blocked BCS calculations.

[n] Band(M): $K^\pi=(19^-)$ four-quasiparticle band. Possible configuration=((ν 11/2[615])+(ν 7/2[503])+(π 9/2[514])+(π 11/2[505])) based on comparisons with blocked BCS calculations.

Adopted Levels, Gammas (continued)

γ(^{186}Os)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
137.15	2+	137.15 *5*	100	0.0	0+	E2		1.271	α(K)=0.434 *6*; α(L)=0.632 *9*; α(M)=0.1610 *23* α(N)=0.0386 *6*; α(O)=0.00575 *8*; α(P)=3.96×10^{-5} *6* B(E2)(W.u.)=93.6 *21* E_γ,I_γ: from ^{186}Re β^- decay.
434.088	4+	296.90 *3*	100	137.15	2+	E2		0.0942	α(K)=0.0606 *9*; α(L)=0.0255 *4*; α(M)=0.00632 *9* α(N)=0.001523 *22*; α(O)=0.000236 *4*; α(P)=6.08×10^{-6} *9* B(E2)(W.u.)=135 *7*
767.477	2+	333.4 *4*	0.19 *5*	434.088	4+	[E2]		0.0671	B(E2)(W.u.)=1.2 *4* α(K)=0.0452 *7*; α(L)=0.01666 *25*; α(M)=0.00410 *6* α(N)=0.000989 *15*; α(O)=0.0001548 *23*; α(P)=4.61×10^{-6} *7* E_γ,I_γ: from ^{186}Re β^- decay.
		630.34[#] *4*	88.8[#] *15*	137.15	2+	M1+E2	−13.7 *+17−23*	0.01330	α(K)=0.01040 *15*; α(L)=0.00223 *4*; α(M)=0.000528 *8* α(N)=0.0001280 *18*; α(O)=2.11×10^{-5} *3*; α(P)=1.115×10^{-6} *16* B(M1)(W.u.)=0.00012 *3*; B(E2)(W.u.)=22.1 *17* δ: Others: +14 *+7−3* from γγ(θ) in ^{186}Re β^- decay, −16 *+3−5* from Coulomb excitation.
		767.50[#] *3*	100.0[#] *15*	0.0	0+	E2		0.00856	α(K)=0.00683 *10*; α(L)=0.001323 *19*; α(M)=0.000310 *5* α(N)=7.53×10^{-5} *11*; α(O)=1.254×10^{-5} *18*; α(P)=7.34×10^{-7} *11* B(E2)(W.u.)=9.4 *8*
868.94	6+	434.84 *3*	100	434.088	4+	E2		0.0324	α(K)=0.0237 *4*; α(L)=0.00671 *10*; α(M)=0.001625 *23* α(N)=0.000393 *6*; α(O)=6.28×10^{-5} *9*; α(P)=2.49×10^{-6} *4* B(E2)(W.u.)=185 *+8−5*
910.473	3+	143.17 *5*	3.49[#] *31*	767.477	2+	M1+E2	0.7	≈1.82	α(K)≈1.331; α(L)≈0.337; α(M)≈0.0807 α(N)≈0.0196; α(O)≈0.00318; α(P)≈0.0001525 I_γ: from ^{186}Ir ε decay Others: 34 *4* (^{14}C,4nγ), 14 *4* in (α,2nγ), 39 *8* in (α,4nγ).
		476.40[#] *5*	7.5[#] *3*	434.088	4+	E2+M1	−22 *10*	0.0258 *5*	α(K)=0.0192 *4*; α(L)=0.00503 *8*; α(M)=0.001211 *18* α(N)=0.000293 *5*; α(O)=4.72×10^{-5} *7*; α(P)=2.03×10^{-6} *4* I_γ: Weighted average of data from (^{14}C,4nγ), (α,4nγ) and ^{186}Ir (16h) decays Other Iγ: 11 *3* in (α,2nγ), 19.8 *15* in (p,2nγ).
		773.28 *3*	100[‡] *3*	137.15	2+	M1+E2	−60 *+12−20*	0.00842	α(K)=0.00673 *10*; α(L)=0.001298 *19*; α(M)=0.000304 *5* α(N)=7.39×10^{-5} *11*; α(O)=1.231×10^{-5} *18*; α(P)=7.23×10^{-7} *11*
1061.0	0+	923.8	100	137.15	2+	[E2]		0.00582	α(K)=0.00473 *7*; α(L)=0.000845 *12*; α(M)=0.000196 *3* α(N)=4.77×10^{-5} *7*; α(O)=8.03×10^{-6} *12*; α(P)=5.07×10^{-7} *7* B(E2)(W.u.)=0.066 E_γ: From Coulomb excitation.
1070.48	4+	160.11 *10*	0.98 *9*	910.473	3+	[M1,E2]		1.10 *38*	α(K)=0.76 *46*; α(L)=0.26 *6*; α(M)=0.063 *18* α(N)=0.0152 *42*; α(O)=0.0024 *5*; α(P)=8.4×10^{-5} *58* I_γ: Others: 4.77 *23* (^{14}C,4nγ), <9.5 (α,4nγ).

$^{186}_{76}Os_{110}$-7

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
1070.48	4+	302.89 *8*	6.2[#] *3*	767.477	2+	E2		0.0888	B(E2)(W.u.)=69 *+11−13* α(K)=0.0576 *8*; α(L)=0.0237 *4*; α(M)=0.00586 *9* α(N)=0.001412 *20*; α(O)=0.000219 *3*; α(P)=5.79×10^{-6} *9* I_γ: Others: 6.3 *13* (α,2nγ), 6.4 *6* (Coulomb excitation).
		636.38 *4*	100 *3*	434.088	4+	M1+E2	+24 *+26−8*	0.01294	B(M1)(W.u.)=4.E−5 *+9−4*; B(E2)(W.u.)=24 *+4−5* α(K)=0.01012 *15*; α(L)=0.00216 *3*; α(M)=0.000512 *8* α(N)=0.0001242 *18*; α(O)=2.04×10^{-5} *3*; α(P)=1.084×10^{-6} *16* δ: Other: +15 *+30−8* (Coulomb excitation).
		933.34 *4*	67[#] *2*	137.15	2+	E2		0.00570	B(E2)(W.u.)=3.0 *+5−6* α(K)=0.00463 *7*; α(L)=0.000825 *12*; α(M)=0.000192 *3* α(N)=4.66×10^{-5} *7*; α(O)=7.84×10^{-6} *11*; α(P)=4.97×10^{-7} *7* Others: 100 *13* (1.90 h ε decay), 77 *15* (α,2nγ), 74 *6* (p,2nγ), 44 *9* (α,4nγ), 80 *+14−9* (Coulomb excitation).
1208.29	2+	1071.0 *4*	100 *23*	137.15	2+	M1		0.00947	α(K)=0.00790 *11*; α(L)=0.001212 *17*; α(M)=0.000276 *4* α(N)=6.75×10^{-5} *10*; α(O)=1.169×10^{-5} *17*; α(P)=8.89×10^{-7} *13* E_γ: From (α,2nγ).
		1209		0.0	0+				
1275.61	5+	365.16 *3*	15.3[#] *6*	910.473	3+	E2		0.0519	α(K)=0.0360 *5*; α(L)=0.01207 *17*; α(M)=0.00295 *5* α(N)=0.000713 *10*; α(O)=0.0001124 *16*; α(P)=3.72×10^{-6} *6*
		406.63 *7*	4.6 *3*	868.94	6+	(E2)		0.0387	α(K)=0.0277 *4*; α(L)=0.00837 *12*; α(M)=0.00203 *3* α(N)=0.000492 *7*; α(O)=7.82×10^{-5} *11*; α(P)=2.90×10^{-6} *4* Other Iγ: 9.2 *23* from (α,2nγ).
		841.50 *3*	100 *5*	434.088	4+	E2(+M1)	<−16	0.0122 *52*	α(K)=0.0101 *44*; α(L)=0.00165 *59*; α(M)=3.8×10^{-4} *14* α(N)=9.2×10^{-5} *33*; α(O)=1.58×10^{-5} *58*; α(P)=1.12×10^{-6} *52*
1351.94	4+	281.3	1.6 *6*	1070.48	4+	(E2)		0.1109	α(K)=0.0697 *10*; α(L)=0.0313 *5*; α(M)=0.00777 *11* α(N)=0.00187 *3*; α(O)=0.000289 *4*; α(P)=6.92×10^{-6} *10* B(E2)(W.u.)=17 *+8−9* I_γ: weighted average from ε decays. Others: 6.1 *23* (Coulomb excitation) and 7.7 *3* (^{14}C,4nγ).
		441.48 *11*	40.8[#] *17*	910.473	3+	M1+E2	+13.3 *+22−17*	0.0315	α(K)=0.0231 *4*; α(L)=0.00642 *9*; α(M)=0.001552 *22* α(N)=0.000376 *6*; α(O)=6.02×10^{-5} *9*; α(P)=2.44×10^{-6} *4* B(M1)(W.u.)=0.00012 *+5−6*; B(E2)(W.u.)=45 *+10−15* E_γ: from ^{186}Ir ε decay (1.90 h).
		584.42 *19*	100[#] *3*	767.477	2+	E2		0.01568	α(K)=0.01211 *17*; α(L)=0.00274 *4*; α(M)=0.000650 *10* α(N)=0.0001577 *22*; α(O)=2.58×10^{-5} *4*; α(P)=1.294×10^{-6} *19* B(E2)(W.u.)=0.11
		919[‡]	2.60[‡] *12*	434.088	4+				
		1215.1[‡]	3.41[‡] *14*	137.15	2+				

$^{186}_{76}Os_{110}$-8

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
1420.94	8+	552.00 *5*	100	868.94	6+	E2		0.0179	B(E2)(W.u.)=132 *7* α(K)=0.01372 *20*; α(L)=0.00322 *5*; α(M)=0.000769 *11* α(N)=0.000186 *3*; α(O)=3.04×10^{-5} *5*; α(P)=1.464×10^{-6} *21* Mult.: Q from γ(θ) in (α,4nγ); not M2 from α(K)exp in 16.64 h ^{186}Ir ε decay.
1452.3	(3+)	542.2[i] *4*		910.473	3+				
		684.8 *4*	100 *49*	767.477	2+	M1		0.0294	α(K)=0.0244 *4*; α(L)=0.00381 *6*; α(M)=0.000869 *13* α(N)=0.000212 *3*; α(O)=3.67×10^{-5} *6*; α(P)=2.77×10^{-6} *4*
1460.74	4+	252.45 *15*	23 *7*	1208.29	2+	(E2)		0.1551	α(K)=0.0923 *13*; α(L)=0.0476 *7*; α(M)=0.01189 *17* α(N)=0.00286 *4*; α(O)=0.000439 *7*; α(P)=9.00×10^{-6} *13* I_γ: from ^{186}Ir ε decay (16.64 h); Iγ=100 *23* in (α,2nγ). Mult.: E2(+M1) from α(K)exp in ^{186}Ir ε decay (16.64 h); ΔJ=2 from level scheme.
		592.4 *9*	26 *8*	868.94	6+	E2		0.01520	α(K)=0.01176 *17*; α(L)=0.00263 *4*; α(M)=0.000626 *10* α(N)=0.0001517 *23*; α(O)=2.48×10^{-5} *4*; α(P)=1.257×10^{-6} *18*
		1026.5 *3*	100 *4*	434.088	4+	M1(+E2)	≤+0.8	0.0094 *12*	α(K)=0.0078 *10*; α(L)=0.00122 *14*; α(M)=0.00028 *3* α(N)=6.8×10^{-5} *8*; α(O)=1.17×10^{-5} *14*; α(P)=8.8×10^{-7} *12*
		1323.7 *3*	97 *9*	137.15	2+	E2		0.00290	α(K)=0.00238 *4*; α(L)=0.000384 *6*; α(M)=8.80×10^{-5} *13* α(N)=2.14×10^{-5} *3*; α(O)=3.66×10^{-6} *6*; α(P)=2.55×10^{-7} *4*; α(IPF)=2.12×10^{-5} *3* I_γ: from ^{186}Ir ε decay (16.64 h); Iγ=77 *29* in (α,2nγ).
1480.09	(3)−	409.60[&] *22*	22.4[&] *21*	1070.48	4+	[E1]		0.01187	α(K)=0.00991 *14*; α(L)=0.001521 *22*; α(M)=0.000346 *5* α(N)=8.40×10^{-5} *12*; α(O)=1.421×10^{-5} *20*; α(P)=9.56×10^{-7} *14*
		569.70[a] *13*	45 *20*	910.473	3+	E1		0.00582	α(K)=0.00488 *7*; α(L)=0.000730 *11*; α(M)=0.0001658 *24* α(N)=4.02×10^{-5} *6*; α(O)=6.86×10^{-6} *10*; α(P)=4.81×10^{-7} *7*
		712.57[&] *10*	100 *20*	767.477	2+	[E1]		0.00370	α(K)=0.00311 *5*; α(L)=0.000458 *7*; α(M)=0.0001039 *15* α(N)=2.52×10^{-5} *4*; α(O)=4.32×10^{-6} *6*; α(P)=3.10×10^{-7} *5* I_γ: From (α,2nγ).
		1046.26[&ci] *16*	32[&] *3*	434.088	4+				
		1343.1[g] *11*	≈30[g]	137.15	2+				
1491.28	6+	215.51 *20*	3.7[#] *3*	1275.61	5+	[M1,E2]		0.45 *20*	α(K)=0.33 *20*; α(L)=0.088 *3*; α(M)=0.0211 *16* α(N)=0.0051 *4*; α(O)=0.000826 *12*; α(P)=3.7×10^{-5} *25* I_γ: Other: 20 *7* in (α,2nγ).
		420.81 *3*	82[#] *4*	1070.48	4+	E2		0.0354	B(E2)(W.u.)=1.2×10^2 *+3−5* α(K)=0.0256 *4*; α(L)=0.00747 *11*; α(M)=0.00181 *3* α(N)=0.000438 *7*; α(O)=6.99×10^{-5} *10*; α(P)=2.68×10^{-6} *4* I_γ: Other: 70 *13* in (α,2nγ), 59 *+8−5* in Coulomb excitation.

$^{186}_{76}Os_{110}$-9

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
1491.28	6^+	622.33 *4*	100 *5*	868.94	6^+	M1+E2	+10.0 *+20−12*	0.01381 *21*	α(K)=0.01078 *17*; α(L)=0.00232 *4*; α(M)=0.000549 *8* α(N)=0.0001333 *20*; α(O)=2.19×10^{-5} *4*; α(P)=1.156×10^{-6} *18* B(M1)(W.u.)=0.011; B(E2)(W.u.)=7.2
		1057.25 *8*	94[#] *4*	434.088	4^+	E2		0.00445	B(E2)(W.u.)=1.2 *+4−5* α(K)=0.00364 *5*; α(L)=0.000622 *9*; α(M)=0.0001437 *21* α(N)=3.49×10^{-5} *5*; α(O)=5.92×10^{-6} *9*; α(P)=3.90×10^{-7} *6* Other Iγ: 65 *13* in (α,2nγ), 80 *+10−12* in Coulomb excitation.
1559.8	$(5)^+$	208.0 *6*	37.3 *27*	1351.94	4^+	E2		0.291 *5*	α(K)=0.1532 *25*; α(L)=0.1043 *20*; α(M)=0.0262 *5* α(N)=0.00631 *12*; α(O)=0.000957 *18*; α(P)=1.445×10^{-5} *23* I_γ: Wt. ave. of data from ^{186}Ir ε decay (16.64 h), (α,2nγ), and (^{14}C,4nγ).
		284.26[i] *15*	5 *3*	1275.61	5^+	E2		0.1074	α(K)=0.0678 *10*; α(L)=0.0301 *5*; α(M)=0.00746 *11* α(N)=0.00180 *3*; α(O)=0.000278 *4*; α(P)=6.75×10^{-6} *10*
		489.5 *4*	86 *6*	1070.48	4^+	E2(+M1)	>+42	0.0240	α(K)=0.0180 *3*; α(L)=0.00462 *7*; α(M)=0.001110 *16* α(N)=0.000269 *4*; α(O)=4.34×10^{-5} *7*; α(P)=1.91×10^{-6} *3* E_γ: Weighted ave. of data from (α,2nγ), (p,2nγ), and ^{186}Ir ε decay (16.64 h). I_γ: Other: 100 *21* (α,2nγ); 70 *5* (p,2nγ); 90 *18* (α,4nγ); 85 *5* (^{14}C,4nγ).
		649.1 *5*	100 *5*	910.473	3^+	E2		0.01234	α(K)=0.00967 *14*; α(L)=0.00205 *3*; α(M)=0.000484 *7* α(N)=0.0001173 *17*; α(O)=1.93×10^{-5} *3*; α(P)=1.036×10^{-6} *15* E_γ: Weighted ave. of data from (α,2nγ), (p,2nγ), and ^{186}Ir ε decay (16.64 h). I_γ: From (^{14}C,4nγ).
1623.2?		712.7[i] *4*	100 *31*	910.473	3^+				Eγ is for doubly placed γ; intensity suitably divided.
		1187.9[gi] *4*	<357[g]	434.088	4^+				
1628.53	5^-	276.54 *14*	100 *3*	1351.94	4^+	E1		0.0297	B(E1)(W.u.)>5.3×10^{-6} α(K)=0.0247 *4*; α(L)=0.00391 *6*; α(M)=0.000894 *13* α(N)=0.000216 *3*; α(O)=3.62×10^{-5} *5*; α(P)=2.30×10^{-6} *4* I_γ: from (^{14}C,4nγ).
		353.1[&] *5*	19.4 *6*	1275.61	5^+	[E1]		0.01666	B(E1)(W.u.)>4.9×10^{-7} α(K)=0.01387 *20*; α(L)=0.00215 *4*; α(M)=0.000491 *7* α(N)=0.0001190 *18*; α(O)=2.01×10^{-5} *3*; α(P)=1.323×10^{-6} *19*

$^{186}_{76}Os_{110}$-10

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
									E_γ: Wt. ave. of data from (α,2nγ), (α,4nγ), and (p,2nγ). I_γ: from (^{14}C,4nγ). Others: 12.5 *38* (16.64 h ε decay), 26.7 *53* (α,4nγ), 26.4 *24* (p,2nγ), and 16.1 *50* (α,2nγ). Unweighted average: 20 *3*.
1628.53	5$^-$	557.8[b] *4*	29.8 *9*	1070.48	4$^+$	E1		0.00608	α(K)=0.00510 *8*; α(L)=0.000764 *11*; α(M)=0.0001735 *25* α(N)=4.21×10^{-5} *6*; α(O)=7.17×10^{-6} *11*; α(P)=5.01×10^{-7} *7* I_γ: From (^{14}C,4nγ).
		759.9[b] *4*	33.4 *9*	868.94	6$^+$	(E1)		0.00326	B(E1)(W.u.)>8.5×10^{-8} α(K)=0.00274 *4*; α(L)=0.000403 *6*; α(M)=9.12×10^{-5} *13* α(N)=2.22×10^{-5} *4*; α(O)=3.80×10^{-6} *6*; α(P)=2.74×10^{-7} *4* I_γ: from (^{14}C,4nγ).
1640.81		730.35[&] *17*	82[&] *11*	910.473	3$^+$				
		873.32[&] *14*	100[&] *7*	767.477	2$^+$				
1653.58	2$^+$,3,4$^+$	301.87[&] *20*	100[&] *19*	1351.94	4$^+$				
		742.99[&] *14*	98[&] *20*	910.473	3$^+$				
		886.1[&] *3*	65[&] *22*	767.477	2$^+$				
1704.6	(4$^+$)	1271	100 *31*	434.088	4$^+$				
		1567	75 *25*	137.15	2$^+$				
1750.93	7$^+$	475[@] *1*	83 *3*	1275.61	5$^+$	Q			I_γ: from (^{14}C,4nγ). Other Iγ: ≈164 in (α,4nγ). Mult.: from (^{14}C,4nγ).
		882[@] *1*	100 *4*	868.94	6$^+$				I_γ: from (^{14}C,4nγ).
1754.50	2$^{(+)}$	844.08[&] *11*	21.6[&] *12*	910.473	3$^+$				
		987.03[&] *10*	100[&]	767.477	2$^+$				
		1617.21[&] *15*	38[&] *4*	137.15	2$^+$				
		1754.4[&] *3*	42[&] *4*	0.0	0$^+$				
1771.9	(6$^-$)	143.3[‡]	100[‡] *3*	1628.53	5$^-$	D[‡]		2.01	
		903.2[‡]	17.5[‡] *9*	868.94	6$^+$				
1774.69	(7$^-$)	146.1[@] *2*	100 *3*	1628.53	5$^-$	(E2)[d]		1.006	B(E2)(W.u.)=7.9 *5* α(K)=0.374 *6*; α(L)=0.477 *8*; α(M)=0.1213 *19* α(N)=0.0291 *5*; α(O)=0.00434 *7*; α(P)=3.41×10^{-5} *5* I_γ: from (^{14}C,4nγ).
		906.4[‡]	2.30[‡] *12*	868.94	6$^+$	[E1]		0.00233	B(E1)(W.u.)=3.8×10^{-10} *3* α(K)=0.00197 *3*; α(L)=0.000285 *4*; α(M)=6.45×10^{-5} *9* α(N)=1.569×10^{-5} *22*; α(O)=2.70×10^{-6} *4*; α(P)=1.97×10^{-7} *3*
1775.8	4$^+$,5$^+$	423.6		1351.94	4$^+$				E_γ: from Coulomb excitation; γ unreported in other studies.
		705.1 *4*	100 *22*	1070.48	4$^+$	E2(+M1)	<−3	0.0196 *77*	α(K)=0.0161 *66*; α(L)=0.00268 *85*; α(M)=6.2×10^{-4} *19* α(N)=1.50×10^{-4} *47*; α(O)=2.57×10^{-5} *84*; α(P)=1.81×10^{-6} *77* E_γ: weighted average from ^{186}Ir ε decay (16.64 h) and (α,2nγ).

$^{186}_{76}Os_{110}$-11

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
1775.8	4+,5+	907	65 *22*	868.94	6+				
		1343.1[g] *11*	26[g] *3*	434.088	4+				
1812.47	(6)+	351.73 *13*	100[‡] *8*	1460.74	4+	(E2)		0.0576	α(K)=0.0395 *6*; α(L)=0.01376 *20*; α(M)=0.00337 *5* α(N)=0.000815 *12*; α(O)=0.0001281 *18*; α(P)=4.06×10^{-6} *6* E_γ: for triplet in which this transition is the major component.
		943.6 *4*	79[‡] *11*	868.94	6+	M1(+E2)	+0.4 *5*	0.0120 *23*	α(K)=0.0100 *20*; α(L)=0.0016 *3*; α(M)=0.00035 *6* α(N)=8.6×10^{-5} *15*; α(O)=1.5×10^{-5} *3*; α(P)=1.12×10^{-6} *23*
		1378.1 *6*	53 *13*	434.088	4+	E2		0.00270	α(K)=0.00221 *4*; α(L)=0.000353 *5*; α(M)=8.09×10^{-5} *12* α(N)=1.97×10^{-5} *3*; α(O)=3.37×10^{-6} *5*; α(P)=2.36×10^{-7} *4*; α(IPF)=3.30×10^{-5} *5*
1848.42	2+,3	777.85[&] *22*	37[&] *4*	1070.48	4+				
		938.00[&] *12*	100[&] *6*	910.473	3+				
		1081.26[&] *24*	44[&] *4*	767.477	2+				
		1414.06[&] *22*	30[&] *4*	434.088	4+				
		1711.13[&] *18*	90[&] *11*	137.15	2+				
1916.1	4+,5,6+	847	100 *31*	1070.48	4+				
		1046.6[c] *6*	63 *8*	868.94	6+				
1939.0	(7−)	167.3[‡]	82[‡] *3*	1771.9	(6−)	D[‡]			
		310.4[‡]	100[‡] *3*	1628.53	5−	Q[‡]			
1968.4	(8−)	193.7[‡] *2*	100[‡]	1774.69	(7−)	(M1+E2)[d]		0.62 *25*	α(K)=0.45 *27*; α(L)=0.128 *13*; α(M)=0.031 *5* α(N)=0.0075 *11*; α(O)=0.00120 *9*; α(P)=5.0×10^{-5} *33*
1976.0?		700.37[i]	100	1275.61	5+				
2015.5	8+	524.0[‡]	100[‡] *4*	1491.28	6+	(E2)		0.0203	α(K)=0.01541 *22*; α(L)=0.00376 *6*; α(M)=0.000899 *13* α(N)=0.000218 *3*; α(O)=3.54×10^{-5} *5*; α(P)=1.639×10^{-6} *23* B(E2)(W.u.)=99 *18* I_γ: from (^{14}C,4nγ). Mult.: Q from (^{14}C,4nγ).
		1146.8[‡]	25.4[‡] *13*	868.94	6+	[E2]			B(E2)(W.u.)=6 *2*
2031.3	4+	679.5[i] *5*	21 *10*	1351.94	4+	M1		0.0300	α(K)=0.0249 *4*; α(L)=0.00388 *6*; α(M)=0.000887 *13* α(N)=0.000217 *3*; α(O)=3.75×10^{-5} *6*; α(P)=2.83×10^{-6} *4*
		1121.1 *6*	57 *10*	910.473	3+				
		1264.7 *8*	91 *9*	767.477	2+	E2		0.00315	α(K)=0.00260 *4*; α(L)=0.000422 *6*; α(M)=9.70×10^{-5} *14* α(N)=2.36×10^{-5} *4*; α(O)=4.02×10^{-6} *6*; α(P)=2.77×10^{-7} *4*; α(IPF)=1.183×10^{-5} *20*
		1597.1 *8*	100 *9*	434.088	4+	M1		0.00366	α(K)=0.00294 *5*; α(L)=0.000445 *7*; α(M)=0.0001014 *15* α(N)=2.48×10^{-5} *4*; α(O)=4.29×10^{-6} *6*; α(P)=3.29×10^{-7} *5*; α(IPF)=0.0001466 *21*
		1893.7 *5*	27 *7*	137.15	2+				

$^{186}_{76}Os_{110}$-12

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†f]	α[e]	Comments
2056.65	5$^+$,6$^+$	352	39 *13*	1704.6	(4$^+$)				
		565.4 *4*	43 *13*	1491.28	6$^+$	M1+E2		0.033 *16*	α(K)=0.027 *14*; α(L)=0.0046 *17*; α(M)=0.00108 *36* α(N)=2.62×10^{-4} *89*; α(O)=4.4×10^{-5} *17*; α(P)=3.0×10^{-6} *16* Eγ is for doublet; divided Iγ given.
		780.8 *4*	57 *17*	1275.61	5$^+$				
		1187.9[g] *4*	222[g] *26*	868.94	6$^+$				
		1621.7 *20*	100 *9*	434.088	4$^+$	(E2)		0.00208	α(K)=0.001642 *24*; α(L)=0.000254 *4*; α(M)=5.80×10^{-5} *9* α(N)=1.413×10^{-5} *20*; α(O)=2.43×10^{-6} *4*; α(P)=1.748×10^{-7} *25*; α(IPF)=0.0001099 *18* Mult.: E1,E2 from α(K)exp; Δπ=no from level scheme.
2068.4	10$^+$	647.7 *7*	100	1420.94	8$^+$	E2[d]		0.01240	B(E2)(W.u.)=1.9×10^2 *6* α(K)=0.00971 *14*; α(L)=0.00206 *3*; α(M)=0.000486 *7* α(N)=0.0001180 *17*; α(O)=1.95×10^{-5} *3*; α(P)=1.041×10^{-6} *15* Eγ: Wt. ave. of data from (α,2nγ) and (α,4nγ).
2081.57	4$^+$	729.5 *4*	12.4 *25*	1351.94	4$^+$	M1+E2		0.0173 *78*	α(K)=0.0142 *67*; α(L)=0.00237 *87*; α(M)=5.5×10^{-4} *20* α(N)=1.33×10^{-4} *48*; α(O)=2.27×10^{-5} *85*; α(P)=1.59×10^{-6} *78*
		805.5 *5*	24.8 *17*	1275.61	5$^+$	M1+E2		0.0136 *59*	α(K)=0.0112 *50*; α(L)=0.00184 *67*; α(M)=4.2×10^{-4} *15* α(N)=1.03×10^{-4} *37*; α(O)=1.76×10^{-5} *66*; α(P)=1.25×10^{-6} *59*
		1011.1 *5*	15.7 *17*	1070.48	4$^+$	M1		0.01094	α(K)=0.00912 *13*; α(L)=0.001402 *20*; α(M)=0.000320 *5* α(N)=7.81×10^{-5} *11*; α(O)=1.352×10^{-5} *19*; α(P)=1.027×10^{-6} *15*
		1171.5 *5*	31 *5*	910.473	3$^+$	M1+E2	+2.0 *4*	0.0044 *4*	α(K)=0.0037 *3*; α(L)=0.00059 *4*; α(M)=0.000136 *9* α(N)=3.30×10^{-5} *22*; α(O)=5.7×10^{-6} *4*; α(P)=4.0×10^{-7} *4*; α(IPF)=2.46×10^{-6} *11*
		1213	8.3 *25*	868.94	6$^+$				
		1314.4[h] *6*	35[h] *11*	767.477	2$^+$	(E2)		0.00294	α(K)=0.00242 *4*; α(L)=0.000389 *6*; α(M)=8.94×10^{-5} *13* α(N)=2.18×10^{-5} *3*; α(O)=3.71×10^{-6} *6*; α(P)=2.58×10^{-7} *4*; α(IPF)=1.95×10^{-5} *3*
		1647.4 *6*	100 *5*	434.088	4$^+$	E2+M1	+0.073 *10*	0.00342	α(K)=0.00272 *4*; α(L)=0.000411 *6*; α(M)=9.37×10^{-5} *14* α(N)=2.29×10^{-5} *4*; α(O)=3.97×10^{-6} *6*; α(P)=3.04×10^{-7} *5*; α(IPF)=0.0001732 *25*
2119.9?		1251[i]	100	868.94	6$^+$				
2133.8	(8$^-$)	195.0‡	34.1‡ *14*	1939.0	(7$^-$)			0.846	
		361.9‡	100‡ *3*	1771.9	(6$^-$)	Q‡			
2135.1?	3$^+$,4$^+$,5$^+$	1701.0[i] *7*	100	434.088	4$^+$	M1(+E2)		0.0026 *7*	α(K)=0.00201 *51*; α(L)=0.00031 *8*; α(M)=7.0×10^{-5} *17* α(N)=1.7×10^{-5} *5*; α(O)=2.9×10^{-6} *8*; α(P)=2.21×10^{-7} *61*; α(IPF)=0.00017 *4* δ(D,Q)=−0.044 *15*, −0.67, +0.45, respectively, for J(2135 level)=4, 3, 5 (from γ(θ,H,T), 1982Al11).

$^{186}_{76}Os_{110}$-13

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[e]	Comments
2165.6	(9⁻)	197.2[‡] *2*	100[‡] *3*	1968.4	(8⁻)	M1	0.820	B(M1)(W.u.)=0.000273 *23* α(K)=0.679 *10*; α(L)=0.1093 *16*; α(M)=0.0251 *4* α(N)=0.00612 *9*; α(O)=0.001057 *16*; α(P)=7.88×10^{-5} *12* I_γ,Mult.: from (^{14}C,4nγ).
		226.7[‡]	1.93[‡] *9*	1939.0	(7⁻)	[E2]	0.219	B(E2)(W.u.)=0.028 *3* α(K)=0.1223 *18*; α(L)=0.0733 *11*; α(M)=0.0184 *3* α(N)=0.00442 *7*; α(O)=0.000674 *10*; α(P)=1.170×10^{-5} *17*
2188.1	(9⁻)	220.0[@] *5*	100 *3*	1968.4	(8⁻)	(M1)	0.605 *10*	α(K)=0.501 *8*; α(L)=0.0805 *13*; α(M)=0.0185 *3* α(N)=0.00451 *7*; α(O)=0.000779 *12*; α(P)=5.81×10^{-5} *9* I_γ: from (^{14}C,4nγ). Mult.: from (α,4nγ). Mult=D from γ(θ) for contaminated line.
		413.3[@] *3*	87 *3*	1774.69	(7⁻)	Q		I_γ,Mult.: from (^{14}C,4nγ).
2222.8?	4⁺	447.0[i] *6*	100 *50*	1775.8	4⁺,5⁺			
		1789.0[i] *20*	56 *6*	434.088	4⁺	E0+M1+E2		
2234?		1800.1[i] *25*	100	434.088	4⁺			
2257.8	(8⁺)	445.3[‡]	100[‡]	1812.47	(6)⁺			
2302.9?		1434[i]	100	868.94	6⁺			
2319.1	9⁺	566.6[‡]	100[‡]	1750.93	7⁺	Q[‡]		
2350.0	(9⁻)	216.5[‡]	24.8[‡] *10*	2133.8	(8⁻)	D[‡]		
		410.7[‡]	100[‡] *3*	1939.0	(7⁻)	Q[‡]		
2377.1	5⁺,6⁺	1508.1 *7*	100 *8*	868.94	6⁺	M1	0.00415	α(K)=0.00338 *5*; α(L)=0.000514 *8*; α(M)=0.0001169 *17* α(N)=2.85×10^{-5} *4*; α(O)=4.95×10^{-6} *7*; α(P)=3.79×10^{-7} *6*; α(IPF)=0.0001017 *15* δ(D,Q)=−0.07 *3* if J(2377 level)=6; from γ(θ,H,T) in ^{186}Ir ε decay (16.40 h).
		1943	67 *21*	434.088	4⁺			
2431.2	(10⁻)	243.3[‡]	16.6[‡] *7*	2188.1	(9⁻)	D[‡]		
		265.7[@] *2*	100[‡] *3*	2165.6	(9⁻)	D+Q[‡]		
		462.8[@] *2*	64.6 *22*	1968.4	(8⁻)			I_γ: from (^{14}C,4nγ).
2435.2	(10⁻)	247.2[‡]	43.5[‡] *15*	2188.1	(9⁻)	D[‡]		
		269.5[‡]	100[‡] *3*	2165.6	(9⁻)	D[‡]		
		466.8[‡]	59.3[‡] *19*	1968.4	(8⁻)	Q[‡]		
2559.7?		1690.8[i] *19*	100	868.94	6⁺			
2562.9	(10⁺)	132.3[‡]	2.05[‡] *13*	2431.2	(10⁻)			
		397.2[‡] *2*	100[‡] *3*	2165.6	(9⁻)	D[‡]		
		1142.1[‡]	2.45[‡] *13*	1420.94	8⁺			
2587.6	(10⁻)	237.6[‡]	21.3[‡] *8*	2350.0	(9⁻)	D[‡]		
		453.9[‡]	100[‡] *3*	2133.8	(8⁻)	Q[‡]		

$^{186}_{76}Os_{110}$-14

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.†	α e	Comments
2599.2	4(+),5,6(+)	1730		868.94	6+			
		2165.2 *5*		434.088	4+			
2606.3?	(5+,6+)	1737.8 *20*	100 *9*	868.94	6+	(M1+E2)	0.0025 *6*	α(K)=0.0019 *5*; α(L)=0.00029 *7*; α(M)=6.6×10^{-5} *16* α(N)=1.6×10^{-5} *4*; α(O)=2.8×10^{-6} *7*; α(P)=2.10×10^{-7} *57*; α(IPF)=0.00019 *4*
		2172.2 *5*	29 *6*	434.088	4+			
2620.0	5+,6+	1751.4 *9*	100 *5*	868.94	6+	M1	0.00303	α(K)=0.00234 *4*; α(L)=0.000354 *5*; α(M)=8.06×10^{-5} *12* α(N)=1.97×10^{-5} *3*; α(O)=3.41×10^{-6} *5*; α(P)=2.62×10^{-7} *4*; α(IPF)=0.000233 *4*
		2185.8 *5*	75 *9*	434.088	4+			
2624.9	(10+)	609.4‡	100‡	2015.5	8+	(E2)‡	0.01424	α(K)=0.01106 *16*; α(L)=0.00243 *4*; α(M)=0.000577 *8* α(N)=0.0001399 *20*; α(O)=2.30×10^{-5} *4*; α(P)=1.184×10^{-6} *17* B(E2)(W.u.)=9.E+1 *+4−3*
2666.5	(6)+	1107.1 *15*	97 *12*	1559.8	(5)+	(E2)	0.00406	α(K)=0.00333 *5*; α(L)=0.000562 *8*; α(M)=0.0001296 *19* α(N)=3.15×10^{-5} *5*; α(O)=5.35×10^{-6} *8*; α(P)=3.57×10^{-7} *5*; α(IPF)=2.50×10^{-7} *17*
		1314.4[h]	100[h] *30*	1351.94	4+			
2698.6	(11−)	263.6‡	7.8‡ *4*	2435.2	(10−)			
		267.3‡	17.1‡ *7*	2431.2	(10−)	D‡		
		510.6‡	100‡ *3*	2188.1	(9−)	Q‡		
2714.3	(11−)	279.1‡	100‡ *3*	2435.2	(10−)	D‡		
		283.0‡	48.0‡ *16*	2431.2	(10−)	D‡		
		549.2‡	20.2‡ *7*	2165.6	(9−)			
2771.8?	(4+)	2339.7[i] *5*	100	434.088	4+	E0+M1+E2		α(K)exp=0.0019
2781.7	12+	713.3[@] *5*	100	2068.4	10+	E2[d]	0.01002	B(E2)(W.u.)=166 *+23−132* α(K)=0.00794 *12*; α(L)=0.001594 *23*; α(M)=0.000375 *6* α(N)=9.10×10^{-5} *13*; α(O)=1.510×10^{-5} *22*; α(P)=8.52×10^{-7} *12*
2787.9	(10+)	530.1‡	100‡	2257.8	(8+)			
2805.9	(11+)	243.0[@] *2*	100	2562.9	(10+)	(M1+E2)[d]	0.32 *15*	α(K)=0.24 *14*; α(L)=0.058 *3*; α(M)=0.01393 *22* α(N)=0.00338 *7*; α(O)=0.00055 *4*; α(P)=2.7×10^{-5} *18*
2852.2	(11−)	264.5‡	19.4‡ *8*	2587.6	(10−)			
		502.2‡	100‡ *3*	2350.0	(9−)	Q‡		
2919.89	1,2+	1071.40[&] *17*	100[&] *9*	1848.42	2+,3			
		1165.4[&] *3*	43[&] *11*	1754.50	2(+)			
		2920.2[&] *4*	27[&] *5*	0.0	0+			
2958.1	(11+)	639.0‡	100‡	2319.1	9+	Q‡		
2958.4?	+	1467.1[i] *18*	100	1491.28	6+	E2	0.00243	α(K)=0.00197 *3*; α(L)=0.000311 *5*; α(M)=7.11×10^{-5} *11* α(N)=1.731×10^{-5} *25*; α(O)=2.96×10^{-6} *5*; α(P)=2.10×10^{-7} *3*; α(IPF)=5.73×10^{-5} *10*

$^{186}_{76}Os_{110}$-15

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]
2977.2	(12⁻)	278.5[‡]	48.4[‡] *20*	2698.6	(11⁻)	
		542.0[‡]	75.3[‡] *25*	2435.2	(10⁻)	Q[‡]
		545.9[‡]	100[‡] *4*	2431.2	(10⁻)	Q[‡]
2978.4?		2544.3[i] *5*	100	434.088	4⁺	
3007.0	(12⁻)	292.4[‡]	100[‡] *3*	2714.3	(11⁻)	D[‡]
		571.6[‡]	37.2[‡] *14*	2435.2	(10⁻)	Q[‡]
		575.8[‡]	29.9[‡] *11*	2431.2	(10⁻)	
3039.0	(12⁺)	233.1[@] *2*	100[‡] *3*	2805.9	(11⁺)	D[‡]
		476.1[‡]	46.3[‡] *17*	2562.9	(10⁺)	
		971.1[‡]	65.9[‡] *20*	2068.4	10⁺	Q[‡]
3110.1?		2676[i]	100	434.088	4⁺	
3123.2	(12⁻)	535.6[‡]	100[‡]	2587.6	(10⁻)	Q[‡]
3185.1?		2751[i]	100	434.088	4⁺	
3186.4	(12⁺)	380.2[‡]	28.2[‡] *12*	2805.9	(11⁺)	
		623.6[‡]	100[‡] *3*	2562.9	(10⁺)	Q[‡]
		1118.3[‡]	82[‡] *3*	2068.4	10⁺	Q[‡]
3214.5?		2780.4 *5*	100	434.088	4⁺	
3221.4	(12⁺)	1153.3[‡]	100[‡]	2068.4	10⁺	Q[‡]
3226.3?		2357.3 *5*	100	868.94	6⁺	
3252.7?	(6⁺)	2383.7[i] *5*	100	868.94	6⁺	E0+M1+E2
3268.9?		2399.1[i] *5*	52 *7*	868.94	6⁺	E0+M1+E2
		2835.2[i] *5*	100 *10*	434.088	4⁺	
		3132.2[i] *5*	6.0 *10*	137.15	2⁺	
3288.8	(13⁻)	311.5[‡]	8.9[‡] *5*	2977.2	(12⁻)	
		590.5[‡]	100[‡] *3*	2698.6	(11⁻)	Q[‡]
3293.7	(13⁺)	254.6[‡]	93[‡] *3*	3039.0	(12⁺)	D[‡]
		488.0[‡]	100[‡] *3*	2805.9	(11⁺)	Q[‡]
3296.2	(12⁺)	671.3[‡]	100[‡]	2624.9	(10⁺)	Q[‡]
3309.1	(13⁻)	302.1[‡]	75.9[‡] *24*	3007.0	(12⁻)	D[‡]
		595.3[‡]	100[‡] *3*	2714.3	(11⁻)	Q[‡]
3414.3?	(4⁺)	1334.0[i] *15*	100 *23*	2081.57	4⁺	E0+M1+E2
		2138.6[i] *5*	54 *10*	1275.61	5⁺	
		2980.1[i] *5*	49 *10*	434.088	4⁺	
3425.5	(13⁻)	573.3[‡]	100[‡]	2852.2	(11⁻)	Q[‡]
3431.9	(13⁺)	210.7[‡]	7.0[‡] *3*	3221.4	(12⁺)	
		245.5[‡]	100[‡] *3*	3186.4	(12⁺)	D[‡]

$^{186}_{76}Os_{110}$-16

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[e]	Comments
3431.9	(13$^+$)	392.3[‡]	40.5[‡] *12*	3039.0	(12$^+$)	D[‡]		
		626.2[‡]	66.8[‡] *21*	2805.9	(11$^+$)	Q[‡]		
3440.4	(14$^+$)	148.5[‡i]	0.83[‡] *3*	3293.7	(13$^+$)			
		401.1[‡]	3.1[‡] *2*	3039.0	(12$^+$)	(E2)[‡]	0.0402	B(E2)(W.u.)<28 α(K)=0.0287 *4*; α(L)=0.00876 *13*; α(M)=0.00213 *3* α(N)=0.000515 *8*; α(O)=8.18×10^{-5} *12*; α(P)=2.99×10^{-6} *5*
		658.5[@] *5*	100[‡] *3*	2781.7	12$^+$	(E2)[‡d]	0.01195	α(K)=0.00938 *14*; α(L)=0.00197 *3*; α(M)=0.000465 *7* α(N)=0.0001128 *16*; α(O)=1.86×10^{-5} *3*; α(P)=1.006×10^{-6} *15* B(E2)(W.u.)<75
3506.2	(13)	319.8[‡]	100[‡]	3186.4	(12$^+$)			
3557.4	(14$^-$)	268.2[‡i]	6.1[‡] *6*	3288.8	(13$^-$)			
		580.2[‡]	100[‡] *3*	2977.2	(12$^-$)	Q[‡]		
3558.4	14$^+$	777[‡]	100[‡]	2781.7	12$^+$	Q[‡]		
3623.8	(14$^-$)	314.7[‡]	42.1[‡] *13*	3309.1	(13$^-$)	D[‡]		
		616.6[‡]	100[‡] *3*	3007.0	(12$^-$)	(Q)[‡]		
3630.2	(13$^+$)	672.1[@]	100	2958.1	(11$^+$)			
3731.0	(15$^+$)	299.1[‡]	100[‡]	3431.9	(13$^+$)	Q[‡]		
3760.8?	(14$^-$)	637.6[‡]	100[‡]	3123.2	(12$^-$)			
3816.5	(15$^+$)	258.4[‡]	14.8[‡] *5*	3558.4	14$^+$	D[‡]		
		376.5[‡]	13.2[‡] *8*	3440.4	(14$^+$)			
		523.1[‡]	100[‡] *3*	3293.7	(13$^+$)	Q[‡]		
3935.2	(16$^+$)	118.9[‡]	1.32[‡] *5*	3816.5	(15$^+$)			
		376.8[‡]	1.45[‡] *7*	3558.4	14$^+$	Q[‡]		
		494.5[@] *5*	100[‡] *3*	3440.4	(14$^+$)	Q[‡]		
3940.6	(15$^-$)	652.1[‡]	100[‡]	3288.8	(13$^-$)	Q[‡]		
3946.2	(15$^-$)	322.2[‡]	22.2[‡] *9*	3623.8	(14$^-$)	D[‡]		
		637.4[‡]	100[‡] *4*	3309.1	(13$^-$)	Q[‡]		
4062.4	(15$^-$)	636.9[‡]	100[‡]	3425.5	(13$^-$)			
4100.0	(16$^+$)	368.9[‡]	100[‡]	3731.0	(15$^+$)	D[‡]		
4169.8	(16$^-$)	612.4[‡]	100[‡]	3557.4	(14$^-$)	Q[‡]		
4242.2	(16$^+$)	683.8[‡]	100[‡]	3558.4	14$^+$	Q[‡]		
4283.1	(16$^-$)	336.9[‡]	9.8[‡] *6*	3946.2	(15$^-$)			
		659.3[‡]	100[‡] *3*	3623.8	(14$^-$)			
4351.3	(16$^+$)	793.0[‡]	78[‡] *6*	3558.4	14$^+$			
		910.9[‡]	100[‡] *6*	3440.4	(14$^+$)			

$^{186}_{76}Os_{110}$-17

Adopted Levels, Gammas (continued)

$\gamma(^{186}Os)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[e]	Comments
4414.2	(17$^+$)	478.5[‡]	23.9[‡] *9*	3935.2	(16$^+$)	D[‡]		
		598.2[‡]	100[‡] *3*	3816.5	(15$^+$)	Q[‡]		
4483.4	(17$^+$)	383.2[‡]	100[‡] *3*	4100.0	(16$^+$)	D[‡]		
		752.4[‡]	39.7[‡] *14*	3731.0	(15$^+$)			
4487.0	(16$^-$)	726.2[‡]	100[‡]	3760.8?	(14$^-$)			
4494.7	(18$^+$)	394.6[‡]	1.90[‡] *6*	4100.0	(16$^+$)	[E2]		B(E2)(W.u.)>2.7
		559.4[@] *5*	100 *3*	3935.2	(16$^+$)	(E2)	0.01738	α(K)=0.01333 *19*; α(L)=0.00310 *5*; α(M)=0.000739 *11* α(N)=0.000179 *3*; α(O)=2.92×10^{-5} *5*; α(P)=1.422×10^{-6} *20* B(E2)(W.u.)>0.31 I_γ: From (^{14}C,4nγ). Mult.: Q from DCO ratio for cascade γ in (α,4nγ).
4505.1	(18$^+$)	569.9[@] *1*	100[‡]	3935.2	(16$^+$)	Q[‡]		
4624.4	(17$^-$)	678.4[‡]	100[‡] *3*	3946.2	(15$^-$)	Q[‡]		
		684.0[‡]	45.6[‡] *16*	3940.6	(15$^-$)			
4637.1?	(17$^-$)	691.3[‡i]	56.8[‡] *18*	3946.2	(15$^-$)			
		696.8[‡i]	100[‡] *3*	3940.6	(15$^-$)	Q[‡]		
4760.2	(17$^-$)	697.8[‡]	100[‡]	4062.4	(15$^-$)	Q[‡]		
4818.7	(18$^-$)	648.9[‡]	100[‡]	4169.8	(16$^-$)	Q[‡]		
4869.6	(18$^+$)	386.0[‡]	100[‡] *4*	4483.4	(17$^+$)			
		769.8[‡]	86[‡] *4*	4100.0	(16$^+$)			
4957.4	(19$^+$)	462.8[@] *1*	100	4494.7	(18$^+$)	D+Q		Mult.,δ: From DCO ratio in (α,4nγ); mult=D+Q and δ=−1.5 *+5−13* or −0.62 *+18−38*.
4963.5	(18$^+$)	721.3[‡]	100[‡]	4242.2	(16$^+$)	Q[‡]		
5025.7	(18$^-$)	531.0[@] *1*	100	4494.7	(18$^+$)	Q+D		Mult.: from DCO ratio in (α,4nγ) E=50,55 MeV. Likely M2(+E1) The lifetime of the state limits the M2 component to < 9%.
5107.1	(19$^+$)	692.9[‡]	100[‡]	4414.2	(17$^+$)	Q[‡]		
5167.8	(20$^+$)	662.7[@] *1*	100	4505.1	(18$^+$)	Q[‡]		
5243.9	(19$^-$)	218.2[‡]	100[‡]	5025.7	(18$^-$)	D[‡]		
5331.9	(19$^-$)	306.2[@] *1*	99[‡] *3*	5025.7	(18$^-$)			
		707.9[‡]	100[‡] *3*	4624.4	(17$^-$)	(E2)[‡]		B(E2)(W.u.)>0.1 Mult.: Q from (^{14}C,4nγ), M2 is excluded by RUL.
5374.3	(20$^+$)	416.9[@] *1*	25.3[‡] *8*	4957.4	(19$^+$)	D[‡]		
		879.6[@] *1*	100[‡] *3*	4494.7	(18$^+$)	Q[‡]		
5489.9	(20$^-$)	671.2[‡]	100[‡]	4818.7	(18$^-$)			
5496.4	(20$^+$)	539.5[‡]	100[‡] *3*	4957.4	(19$^+$)	D[‡]		
		1002.1[‡]	35.3[‡] *12*	4494.7	(18$^+$)	Q[‡]		

$^{186}_{76}Os_{110}$-18

Adopted Levels, Gammas (continued)

γ(^{186}Os) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[e]	Comments
5501.0	(20$^+$)	543.5[@] *1*	100[‡] *3*	4957.4	(19$^+$)	D[‡]		
		1006.8[‡]	36.7[‡] *12*	4494.7	(18$^+$)	Q[‡]		
5560.4	(20$^-$)	228.6[‡]	100[‡]	5331.9	(19$^-$)	[‡]		
5564.8	(20$^-$)	539.1[@] *1*	100	5025.7	(18$^-$)	(Q)		Mult.: from DCO ratio in (α,4nγ).
5670.5	(20$^+$)	800.9[‡]	100[‡]	4869.6	(18$^+$)			
5701.9	(21$^+$)	200.9[@] *1*	42.8[‡] *14*	5501.0	(20$^+$)	D[‡]		
		206.0[‡]	17.3[‡] *7*	5496.4	(20$^+$)			
		327.5[@] *1*	100[‡] *3*	5374.3	(20$^+$)	D[‡]		
5781.7	(20$^+$)	818.2[‡]	100[‡]	4963.5	(18$^+$)	(Q)[‡]		
5832.9	(21$^-$)	501.0[@] *1*	100	5331.9	(19$^-$)			E_γ: for doublet.
5888.8	(21$^+$)	781.7[‡]	100[‡]	5107.1	(19$^+$)	(Q)[‡]		
5902.1	(21$^-$)	341.7[‡]	100[‡] *3*	5560.4	(20$^-$)			
		570.2[‡]	80[‡] *4*	5331.9	(19$^-$)			
5915.3	(22$^+$)	747.5[@] *1*	100	5167.8	(20$^+$)	Q[‡]		
5922.8	(21$^+$)	421.8[‡]	100[‡]	5501.0	(20$^+$)			
5923.1	(21$^+$)	426.7[‡]	100[‡]	5496.4	(20$^+$)			
6026.9	(22$^+$)	530.7[‡]	46.6[‡] *17*	5496.4	(20$^+$)	Q[‡]		
		652.4[‡]	100[‡] *3*	5374.3	(20$^+$)	Q[‡]		
6031.0	(22$^+$)	530.1[‡]	100[‡] *3*	5501.0	(20$^+$)			
		534.6[‡]	41.6[‡] *13*	5496.4	(20$^+$)			
		656.6[‡]	84.3[‡] *26*	5374.3	(20$^+$)	Q[‡]		
6064.3	(22$^+$)	362.4[‡]	100[‡]	5701.9	(21$^+$)			
6151.9	(24$^+$)	120.9[‡]	100[‡]	6031.0	(22$^+$)	(Q)[‡]		
6185.4?	(22$^-$)	695.7[‡i]	100[‡]	5489.9	(20$^-$)	(Q)[‡]		
6446.4?	(22$^+$)	524.6[‡i]	100[‡]	5922.8	(21$^+$)			
6473.4	(25$^+$)	321.5[‡]	100[‡]	6151.9	(24$^+$)	D[‡]		
6487.9	(24$^+$)	456.9[‡]	100[‡] *3*	6031.0	(22$^+$)	Q[‡]		
		460.9[‡]	41.5[‡] *13*	6026.9	(22$^+$)			
6727.9	(24$^+$)	812.6[‡]	100[‡]	5915.3	(22$^+$)	Q[‡]		
6946.6?	(26$^+$)	474.2[‡i]	100[‡]	6473.4	(25$^+$)			
6989.1	(26$^+$)	501.2[‡]	100[‡]	6487.9	(24$^+$)	Q[‡]		
6993.0	(25$^+$)	505.1[‡]	100[‡]	6487.9	(24$^+$)	D[‡]		
7142.9	(28$^+$)	153.8[‡]	100[‡]	6989.1	(26$^+$)	(E2)[‡]	0.834	B(E2)(W.u.)>75.2 Mult.: Q from (^{14}C,4nγ), M2 is excluded by RUL.
7477.4	(26$^+$)	484.4[‡]	100[‡]	6993.0	(25$^+$)			

$^{186}_{76}Os_{110}$-19

Adopted Levels, Gammas (continued)

$\gamma(^{186}Os)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]
7583.2	(26^+)	855.3[‡]	100[‡]	6727.9	(24^+)	(Q)[‡]
7710.3	(30^+)	567.4[‡]	100[‡]	7142.9	(28^+)	
7749.7	(30^+)	606.8[‡]	100[‡]	7142.9	(28^+)	Q[‡]
7778.4	(30^+)	635.5[‡]	100[‡]	7142.9	(28^+)	

† From ^{186}Ir ε decay (16.64 h), unless noted otherwise.
‡ From (^{14}C,4nγ).
# Weighted average of γ data from source datasets. Exceptions are noted.
@ From (α,4nγ).
& From ^{186}Ir ε decay (1.90 h).
a Wt. ave. of data from ^{186}Ir ε decay (1.90 h), (α,2nγ), and ^{186}Ir ε decay (16.64 h).
b Wt. ave. of data from (α,2nγ), (p,2nγ), and ^{186}Ir ε decay (16.64 h).
c Different placements are required for the 1047 gammas reported in ^{186}Ir ε decay (16.64 h) and in ^{186}Ir ε decay (1.90 h). In the former decay, $\gamma\gamma$ coin establishes a 1915 level deexcited by a 1047γ and a 847γ of comparable strength, whereas in the latter decay the 847γ is absent, as is the level which the 1047γ would feed. Placement of the 1047γ in ^{186}Ir ε decay (1.90 h) from the 1480 level is questioned by the evaluator, however, due to lack of expected corroborative evidence from (α,2nγ) or ^{186}Ir ε decay (16.64 h).
d From $\gamma(\theta)$ in (α,4nγ), assuming that Q transitions are E2 and that D intraband transitions are M1.
e Additional information 1.
f If no value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
g Multiply placed with undivided intensity.
h Multiply placed with intensity suitably divided.
i Placement of transition in the level scheme is uncertain.

$^{186}_{76}Os_{110}$-20

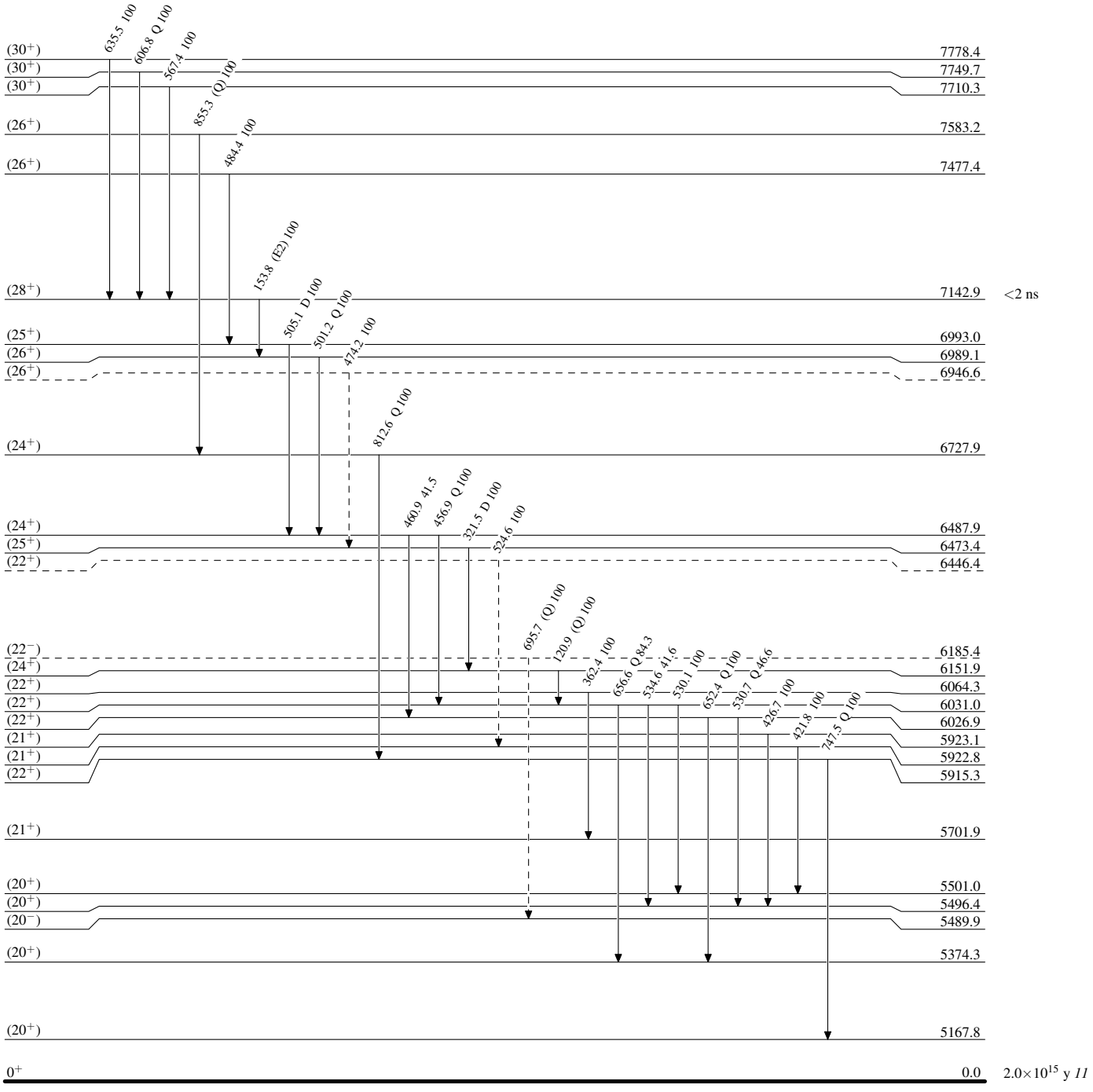
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{186}_{76}Os_{110}$

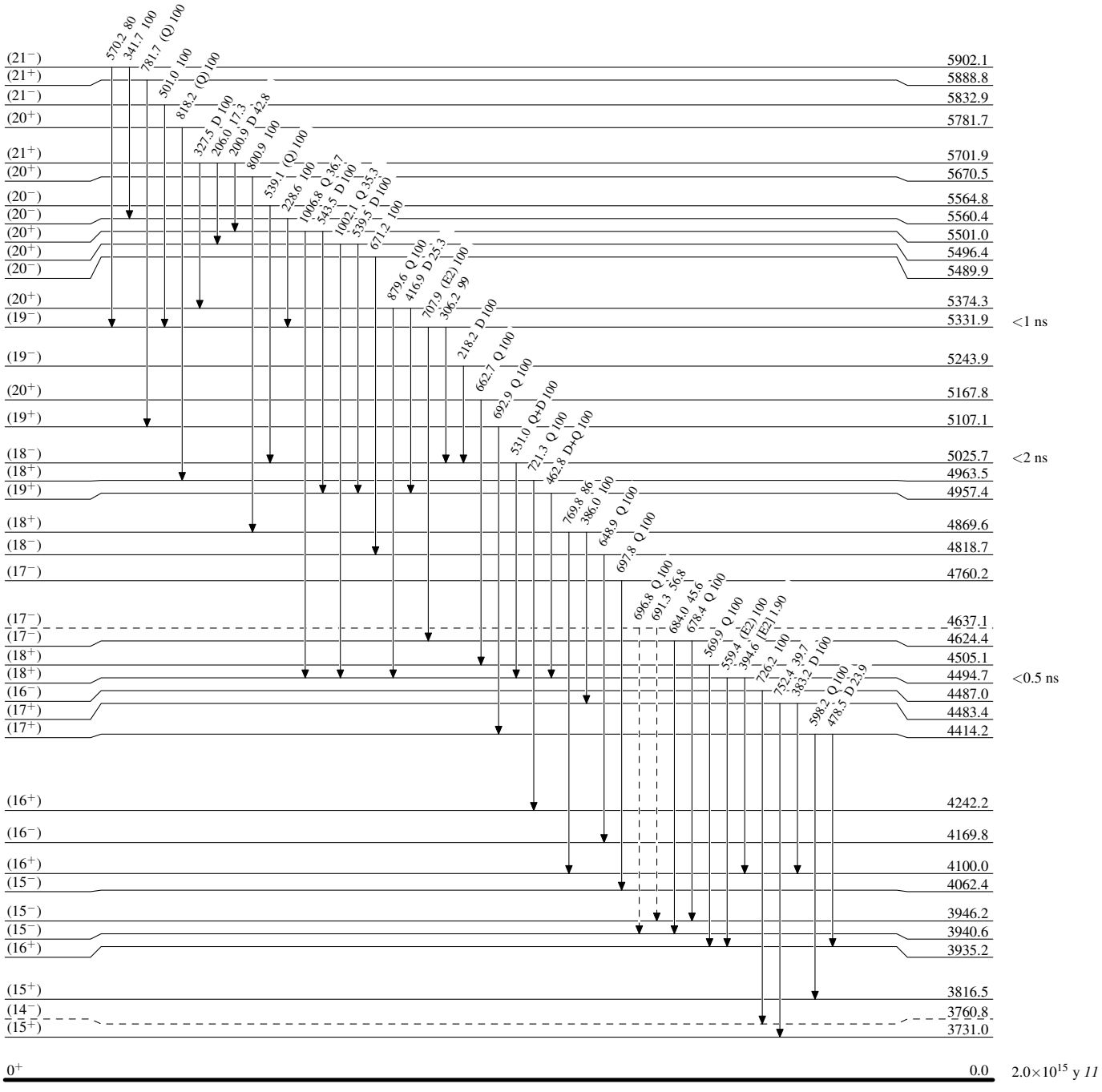
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{186}_{76}Os_{110}$

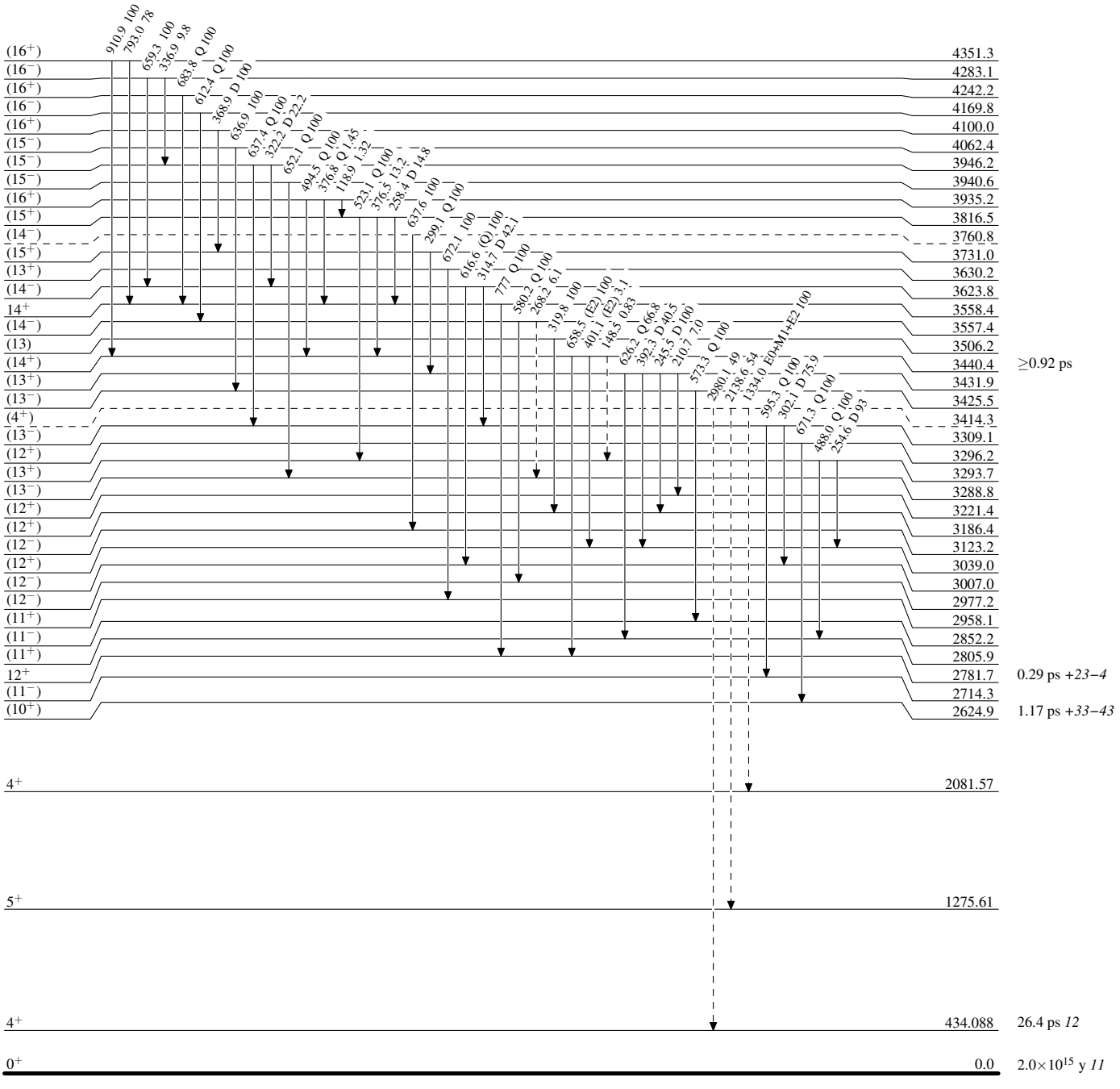
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{186}_{76}Os_{110}$

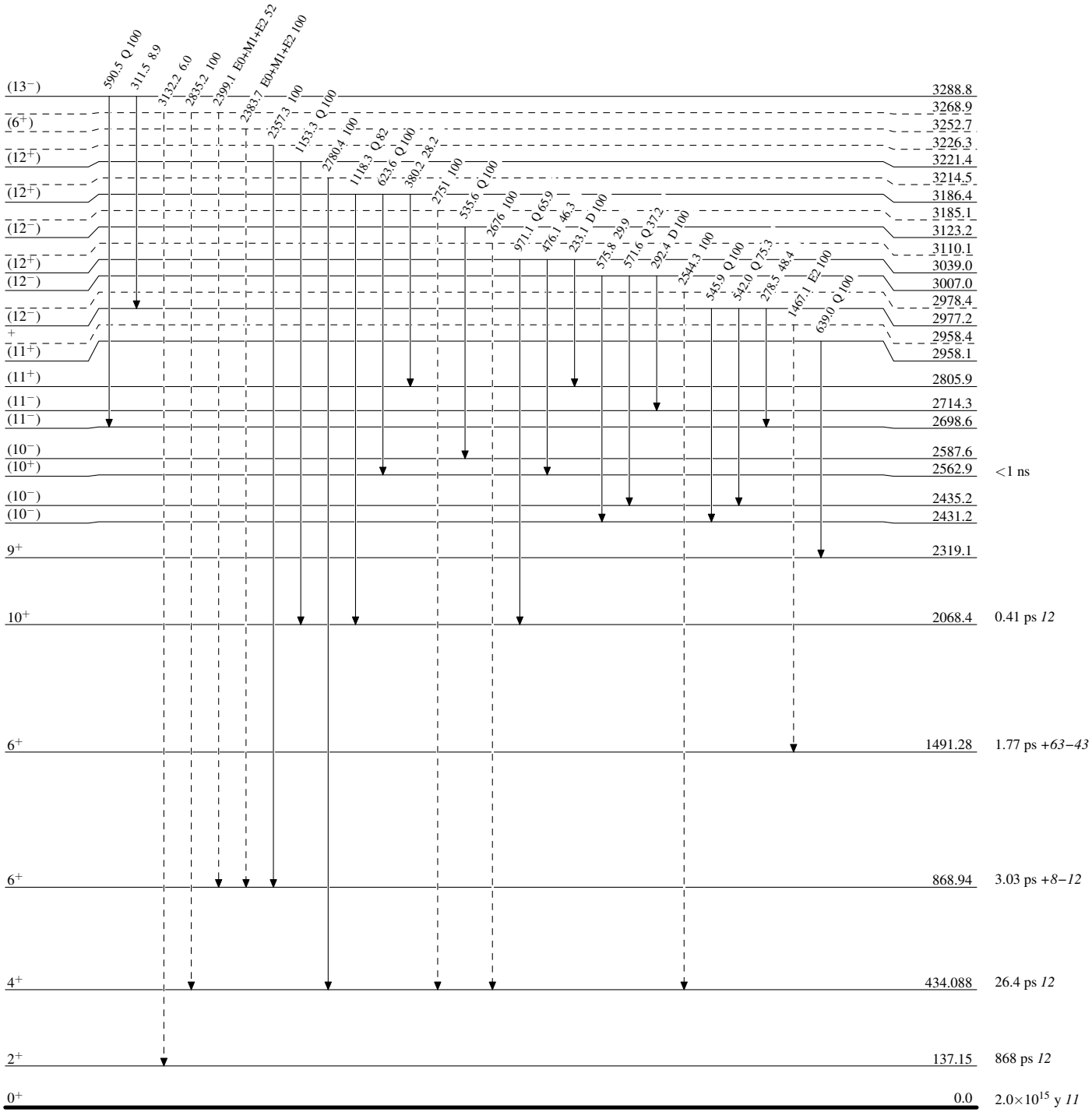
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{186}_{76}Os_{110}$

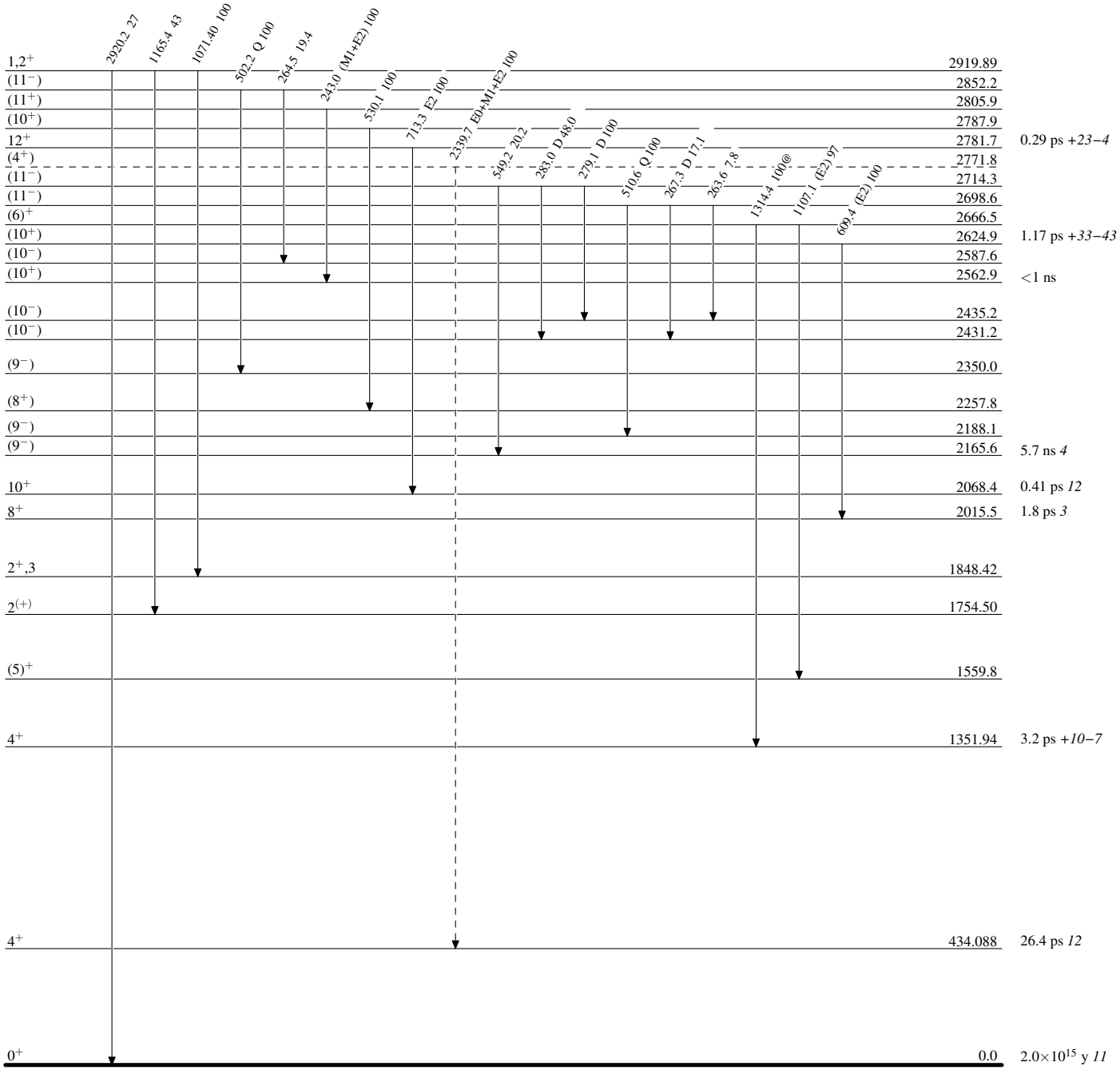
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



$^{186}_{76}Os_{110}$

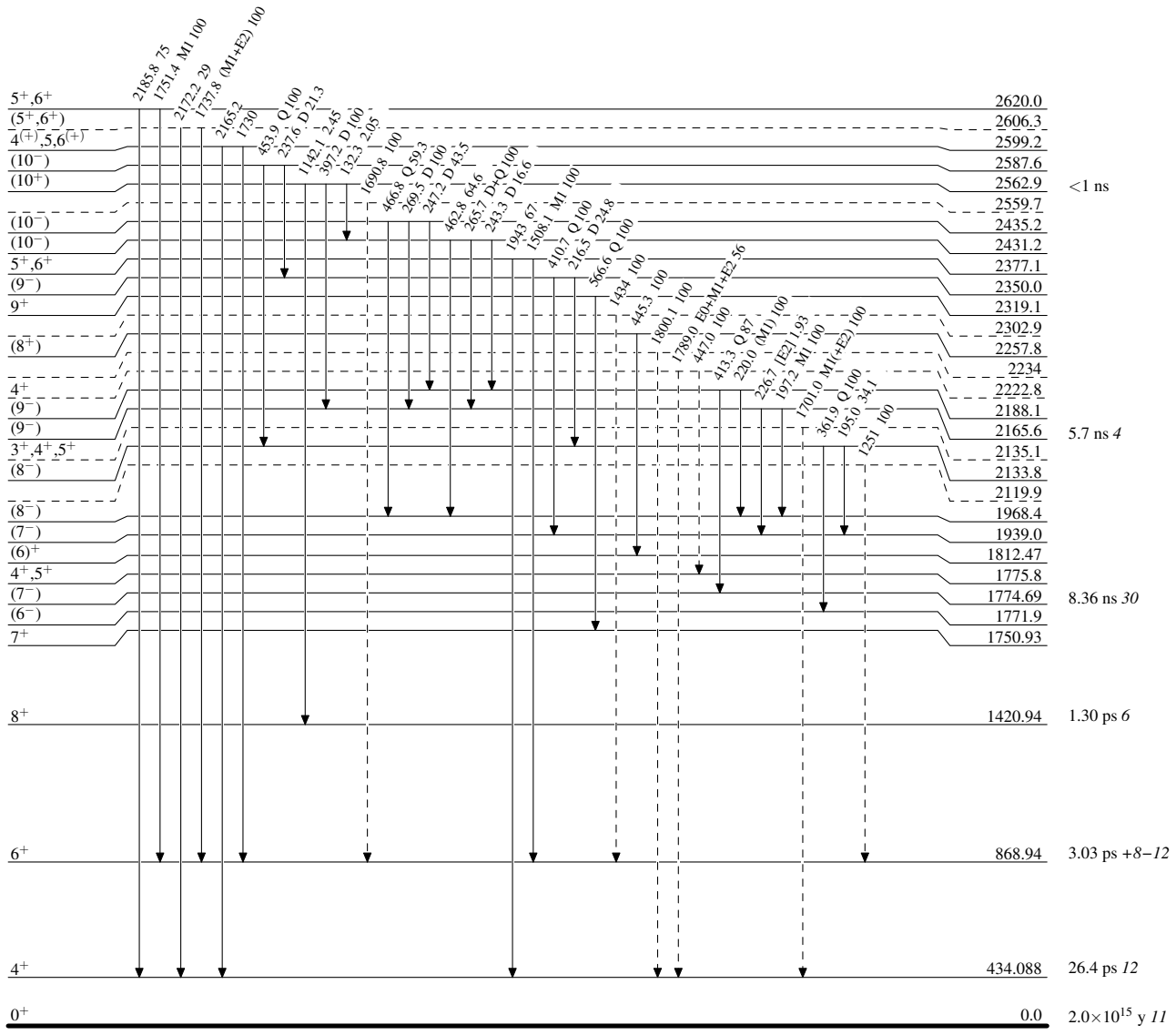
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)

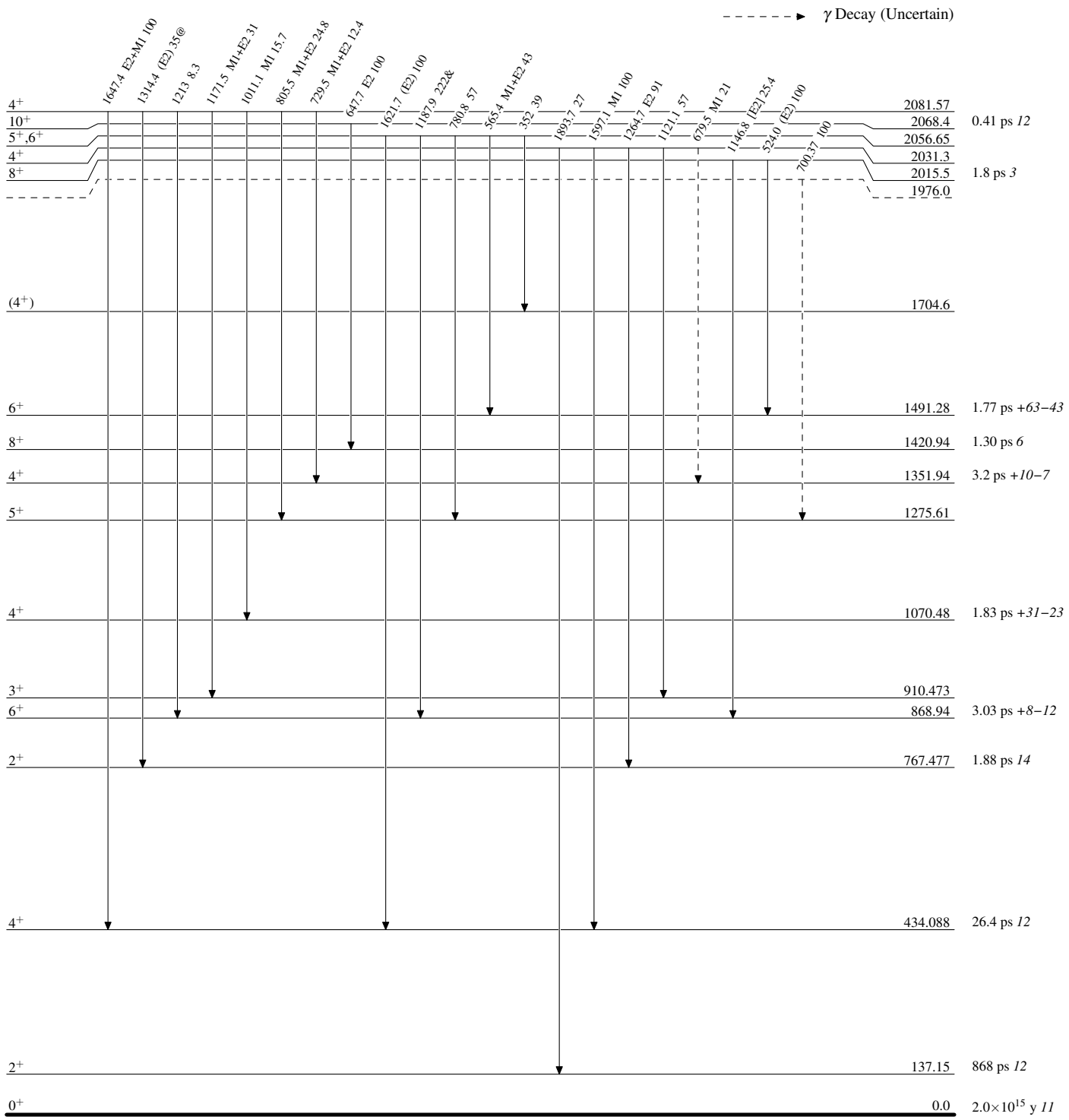


$^{186}_{76}Os_{110}$

Adopted Levels, Gammas

Level Scheme (continued)

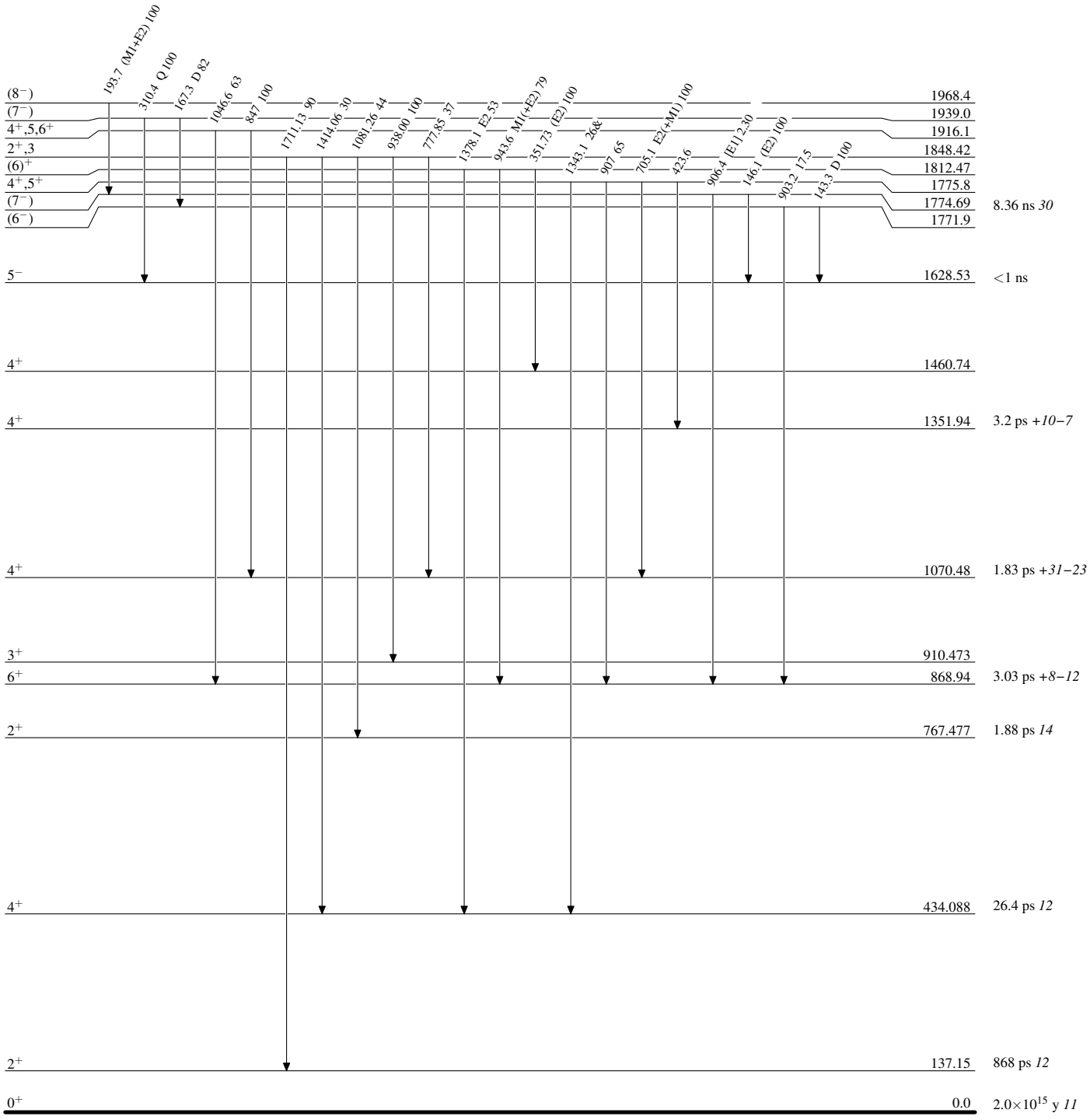
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



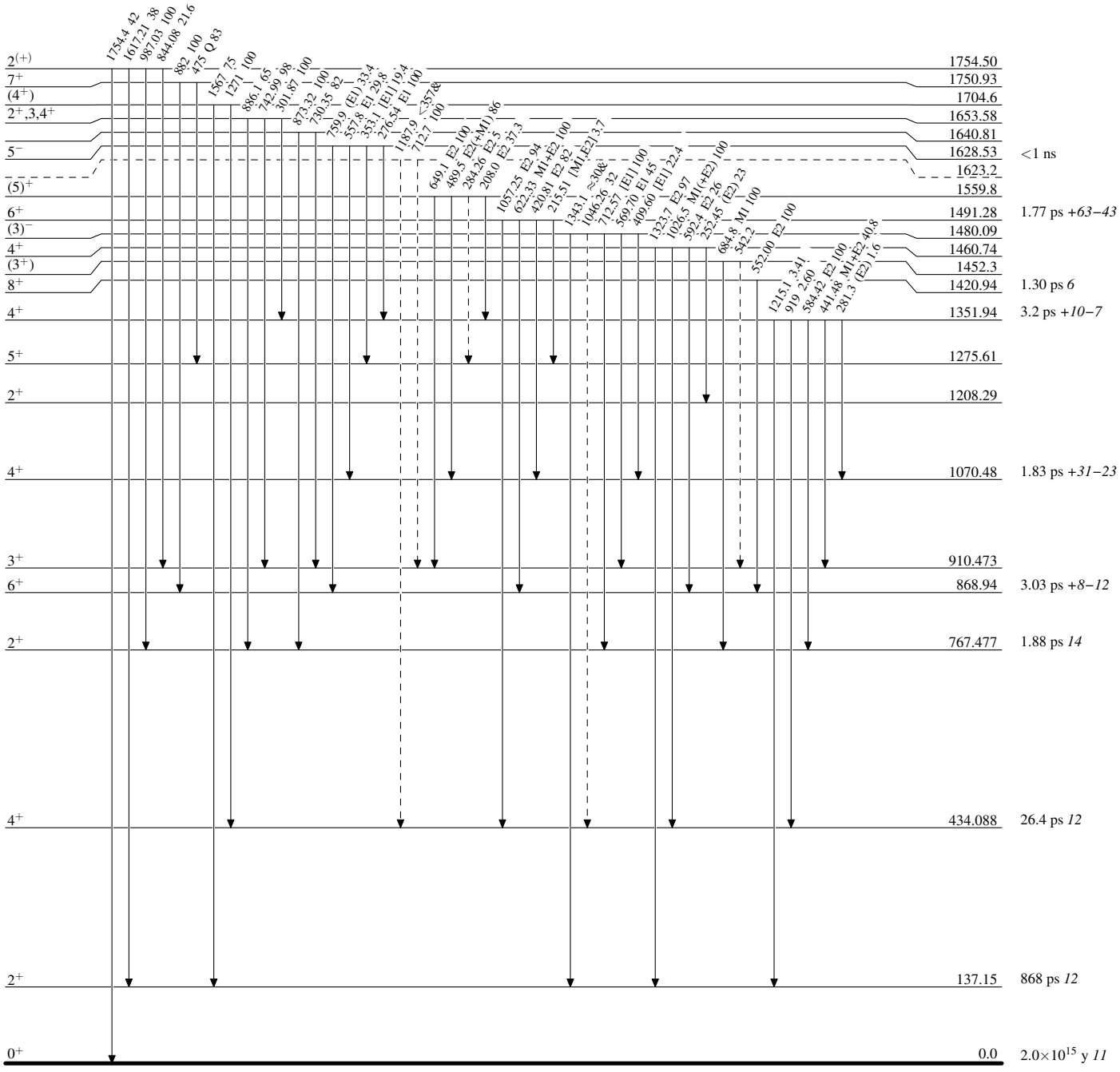
$^{186}_{76}Os_{110}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend
- - - - - - ► γ Decay (Uncertain)

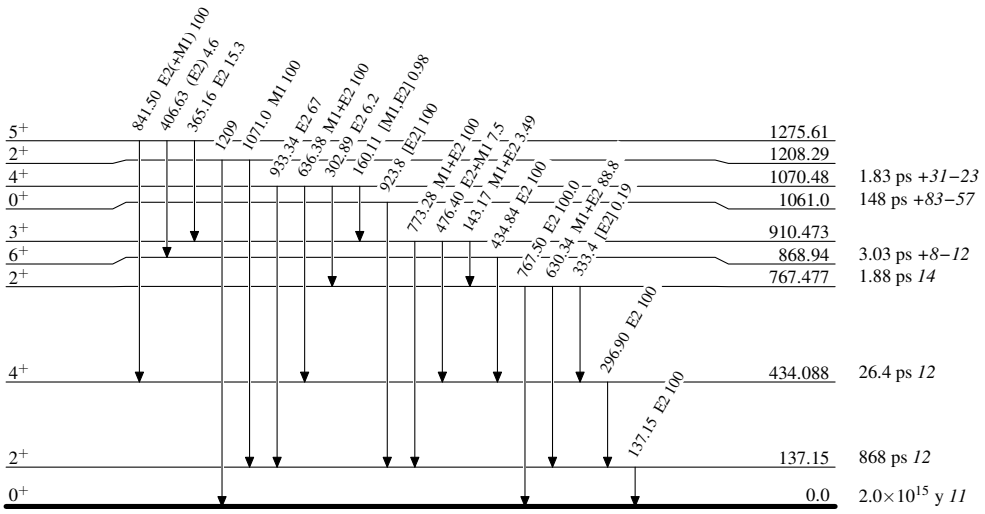


$^{186}_{76}Os_{110}$

Adopted Levels, Gammas

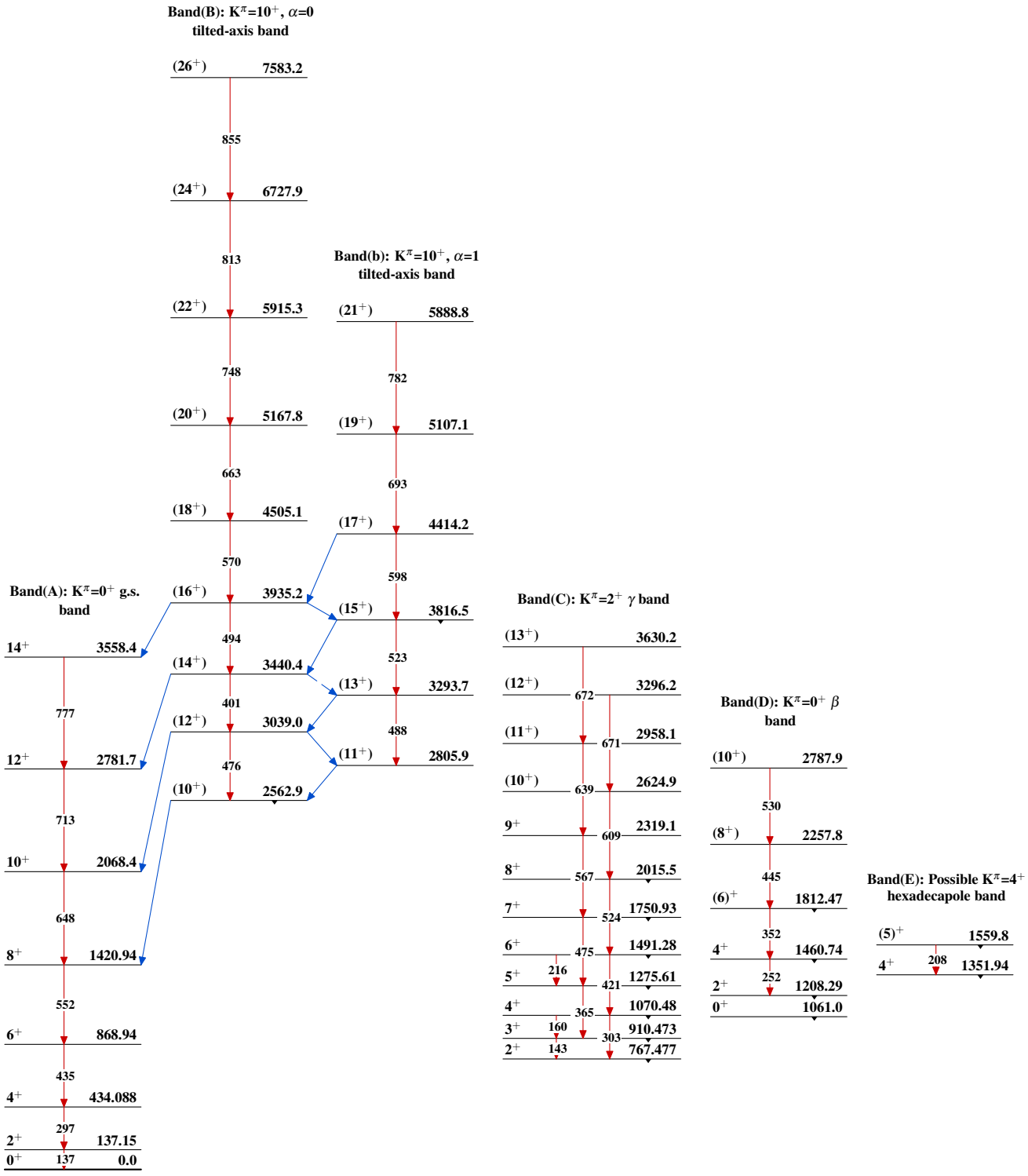
Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



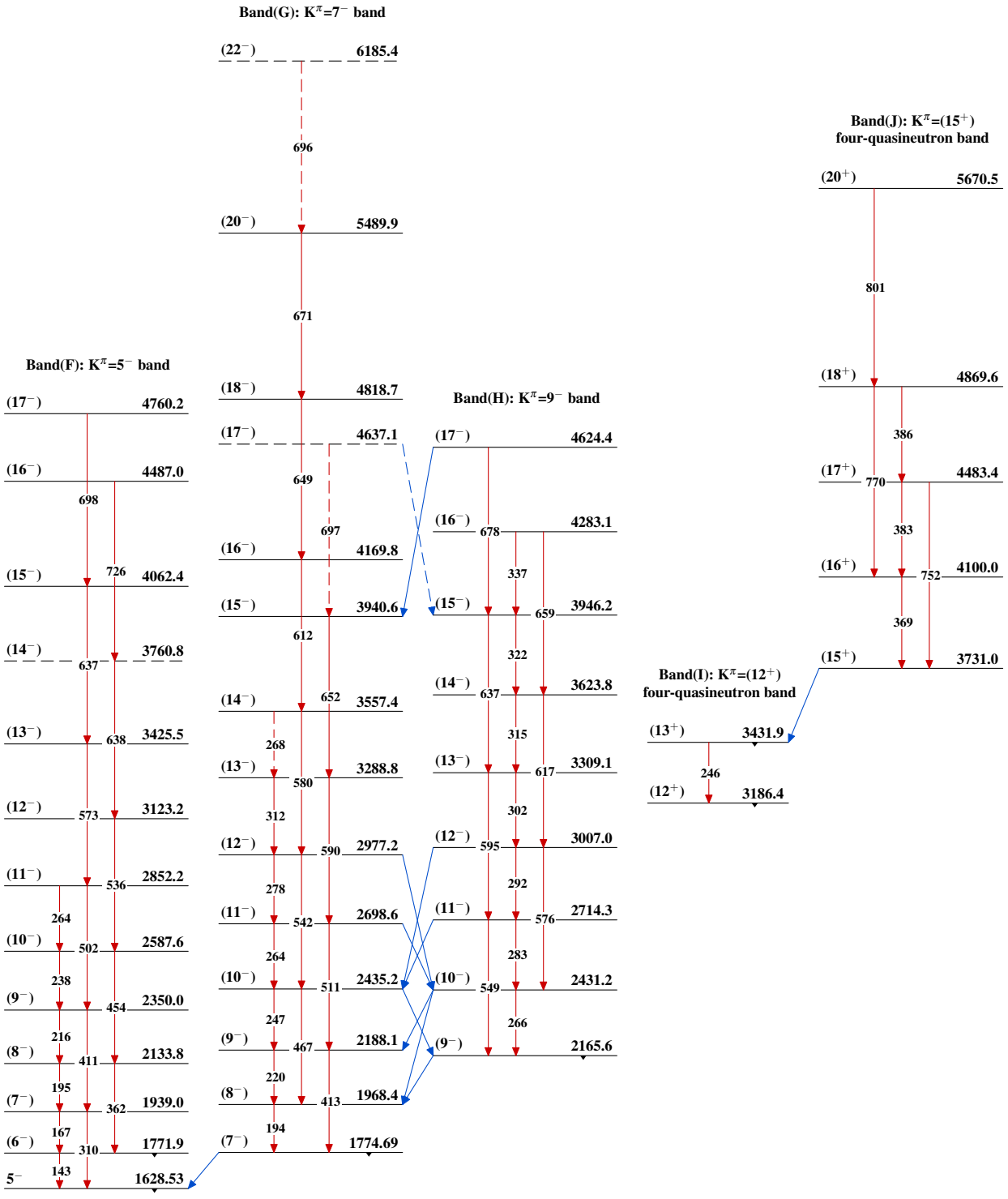
$^{186}_{76}Os_{110}$

Adopted Levels, Gammas



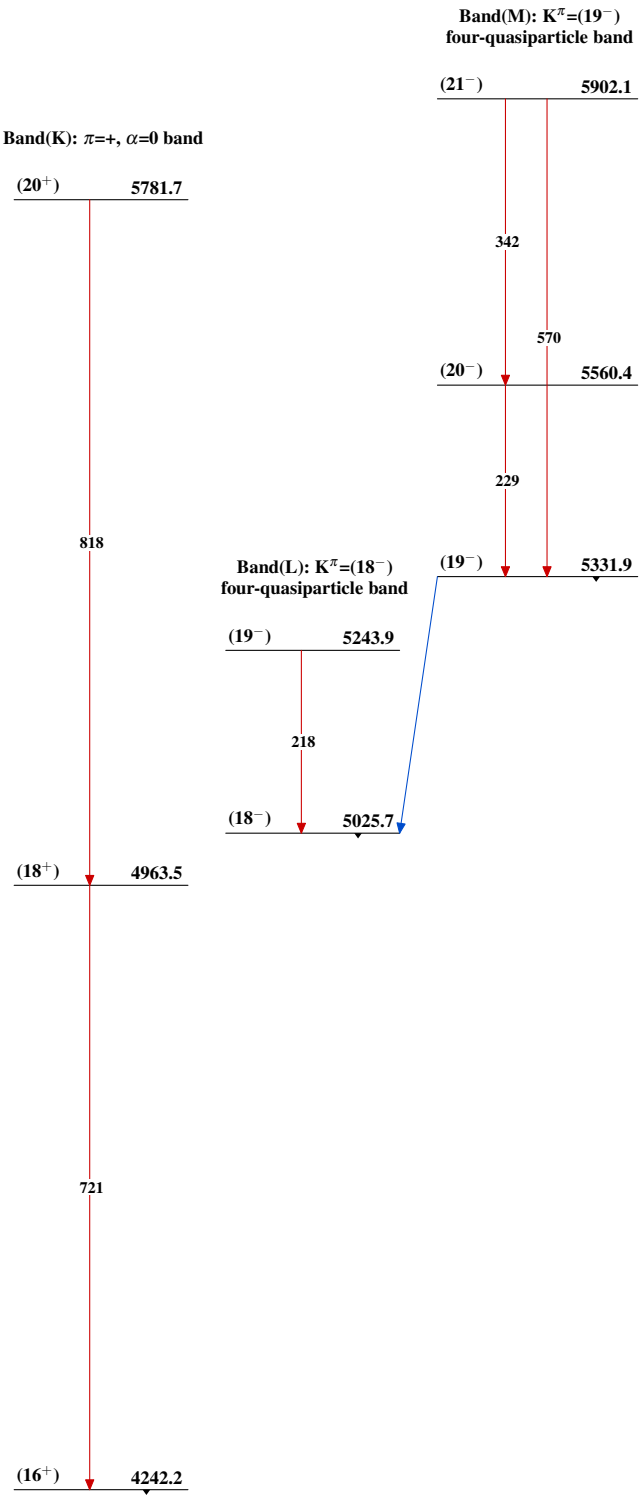
$^{186}_{76}Os_{110}$

Adopted Levels, Gammas (continued)



$^{186}_{76}Os_{110}$

Adopted Levels, Gammas (continued)



$^{186}_{76}Os_{110}$