^{192}Os IT decay (5.9 s) 1970HeZH,1973Pa21,1979KaYT

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113, 1871 (2012)	15-Jun-2012

Parent: ^{192}Os: E=2015.40 *11*; $J^{\pi}=(10^-)$; $T_{1/2}$=5.9 s *1*; %IT decay>87.0

The decay scheme is from 1979KaYT. Sources from ^{192}Os(n,n′), E(n)=14 MeV; enriched ^{192}Os targets; measured Eγ, Iγ (Ge(Li)), γγ coin. Other: 1965Bl12.

^{192}Os Levels

E(level)†	J^{π}‡	$T_{1/2}$‡	Comments
0.0#	0^+	stable	
205.79442# *9*	2^+	288 ps *4*	
489.0601@ *6*	2^+	32.6 ps *+9−10*	
580.2800# *8*	4^+	14.7 ps *4*	
690.3705@ *4*	3^+		
909.591@ *7*	4^+	9.8 ps *4*	
1069.523& *10*	4^+	6.5 ps *+11−9*	
1089.23# *7*	6^+	2.47 ps *+8−13*	
1143.508@ *16*	5^+		
1362.000& *12*	(5^+)		
1465.35@ *16*	6^+		
1645.2&	(6^+)		
1708.38# *13*	8^+	0.81 ps *4*	
1712.90@ *9*	7^+		
1967.99& *20*	(7^+)		
2015.39 *11*	(10^-)	5.9 s *1*	%IT>87; %β^-<13 $T_{1/2}$: from 1979KaYT. Other values: 6.2 s *8* (1965Bl12), 6.1 s *2* (1973Pa21).

† From least-squares fit to Eγ.
‡ Adopted values, unless noted to the contrary.
# Band(A): K=0 g.s. band.
@ Band(B): K=2 quasi-γ vibration band.
& Band(C): K=4 band.

^{192}Os IT decay (5.9 s) 1970HeZH,1973Pa21,1979KaYT (continued)

γ(^{192}Os)

Iγ normalization: from Σ (I(γ+ce) to g.s.) >87% (%IT=93 *7* used in calculation).

E_γ ‡	I_γ ‡a	E_i(level)	J_i^π	E_f	J_f^π	Mult.#	δ#	α†	Comments
(47.4 *2*)	0.0025 *5*	2015.39	(10$^-$)	1967.99	(7$^+$)	[E3]		7.56×10^3 *22*	α(L)=5.48×10^3 *16*; α(M)=1.62×10^3 *5*; α(N+..)=454 *14* α(N)=397 *12*; α(O)=56.9 *17*; α(P)=0.0631 *17* E_γ: from energy difference between 2015 and 1968 levels; transition is not observed, but is required for population of 1968.0 level. I_γ: deduced from I(γ+ce)=19 *4* (from intensity balance at 1968 level) and α.
201.3112@ *7*	11.7 *7*	690.3705	3$^+$	489.0601	2$^+$	M1+E2	−2.7 *3*	0.379 *14*	α(K)=0.224 *14*; α(L)=0.1175 *17*; α(M)=0.0293 *5*; α(N+..)=0.00817 *13* α(N)=0.00706 *11*; α(O)=0.001084 *16*; α(P)=2.27×10^{-5} *17* E_γ: 201.27 *7* (1973Pa21).
205.79430@ *9*	100	205.79442	2$^+$	0.0	0$^+$	E2		0.302	α(K)=0.1575 *22*; α(L)=0.1090 *16*; α(M)=0.0274 *4*; α(N+..)=0.00762 *11* α(N)=0.00660 *10*; α(O)=0.001000 *14*; α(P)=1.483×10^{-5} *21*
218.488@ *14*	0.5&	1362.000	(5$^+$)	1143.508	5$^+$	[M1,E2]		0.43 *19*	α(K)=0.32 *19*; α(L)=0.0836 *20*; α(M)=0.0201 *14*; α(N+..)=0.0057 *3* α(N)=0.0049 *3*; α(O)=0.000788 *13*; α(P)=3.6×10^{-5} *24*
233.92@ *7*	2.8 *6*	1143.508	5$^+$	909.591	4$^+$	[M1,E2]		0.35 *16*	α(K)=0.27 *16*; α(L)=0.0662 *20*; α(M)=0.0159 *4*; α(N+..)=0.00450 *7* α(N)=0.00385 *7*; α(O)=0.00063 *4*; α(P)=3.0×10^{-5} *19* E_γ: 234.0 *3* (1973Pa21).
247.5&	0.8&	1712.90	7$^+$	1465.35	6$^+$	[M1,E2]		0.30 *14*	α(K)=0.23 *14*; α(L)=0.055 *4*; α(M)=0.0131 *3*; α(N+..)=0.00372 *15* α(N)=0.00317 *9*; α(O)=0.00052 *5*; α(P)=2.6×10^{-5} *17*
283.2668@ *8*	12.2 *8*	489.0601	2$^+$	205.79442	2$^+$	M1+E2	−3.8 *7*	0.121 *6*	α(K)=0.080 *6*; α(L)=0.0311 *6*; α(M)=0.00767 *12*; α(N+..)=0.00215 *4* α(N)=0.00185 *3*; α(O)=0.000289 *5*; α(P)=8.2×10^{-6} *7* E_γ: 283.27 *7* (1973Pa21).
292.478@ *8*	7.8 *6*	1362.000	(5$^+$)	1069.523	4$^+$	(M1+E2)		0.19 *9*	α(K)=0.15 *9*; α(L)=0.032 *5*; α(M)=0.0075 *9*; α(N+..)=0.0022 *3* α(N)=0.00183 *23*; α(O)=0.00030 *6*; α(P)=1.6×10^{-5} *11* E_γ: 292.48 *9* (1973Pa21).
302.48 *6*	81 *5*	2015.39	(10$^-$)	1712.90	7$^+$	(E3)		0.426	α(K)=0.1614 *23*; α(L)=0.199 *3*; α(M)=0.0515 *8*;

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^{192}Os IT decay (5.9 s) 1970HeZH,1973Pa21,1979KaYT (continued)

γ(^{192}Os) (continued)

E_γ[‡]	I_γ[‡a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
									α(N+..)=0.01438 *21* α(N)=0.01247 *18*; α(O)=0.00189 *3*; α(P)=2.35×10^{-5} *4* Mult.: from α(K)exp=0.37 *15* (value required to balance intensities at 1713 level).
307.02 *9*	10.8 *8*	2015.39	(10$^-$)	1708.38	8$^+$	(M2)		0.941	α(K)=0.733 *11*; α(L)=0.1594 *23*; α(M)=0.0381 *6*; α(N+..)=0.01106 *16* α(N)=0.00935 *14*; α(O)=0.001596 *23*; α(P)=0.0001101 *16* Mult.: from α(K)exp=0.78 *10* (value required to balance intensities at 1708 level).
322.7[&]	2.0[&]	1967.99	(7$^+$)	1645.2	(6$^+$)	[M1,E2]		0.14 *7*	α(K)=0.11 *7*; α(L)=0.023 *5*; α(M)=0.0055 *9*; α(N+..)=0.0016 *3* α(N)=0.00134 *23*; α(O)=0.00022 *5*; α(P)=1.3×10^{-5} *8*
329.310[@] *9*	2.6 *6*	909.591	4$^+$	580.2800	4$^+$	M1+E2	−1.51 *+13−22*	0.110 *8*	α(K)=0.083 *7*; α(L)=0.0202 *6*; α(M)=0.00483 *12*; α(N+..)=0.00137 *4* α(N)=0.00117 *3*; α(O)=0.000191 *6*; α(P)=9.2×10^{-6} *8* E_γ: 329.4 *3* (1973Pa21).
374.4852[@] *8*	37 *6*	580.2800	4$^+$	205.79442	2$^+$	E2		0.0484	α(K)=0.0339 *5*; α(L)=0.01106 *16*; α(M)=0.00270 *4*; α(N+..)=0.000759 *11* α(N)=0.000653 *10*; α(O)=0.0001031 *15*; α(P)=3.51×10^{-6} *5*
379.154[@] *10*	3.0 *5*	1069.523	4$^+$	690.3705	3$^+$	M1+E2	+3.3 *+15−12*	0.054 *10*	α(K)=0.040 *9*; α(L)=0.0112 *8*; α(M)=0.00272 *17*; α(N+..)=0.00077 *5* α(N)=0.00066 *4*; α(O)=0.000105 *8*; α(P)=4.2×10^{-6} *10* E_γ: 379.1 *3* (1973Pa21).
420.530[@] *10*	9.9 *7*	909.591	4$^+$	489.0601	2$^+$	(E2)		0.0354	α(K)=0.0256 *4*; α(L)=0.00749 *11*; α(M)=0.00182 *3*; α(N+..)=0.000512 *8* α(N)=0.000439 *7*; α(O)=7.00×10^{-5} *10*; α(P)=2.68×10^{-6} *4* E_γ: 420.58 *12* (1973Pa21).
452.2 *10*	7 *4*	1362.000	(5$^+$)	909.591	4$^+$	[M1,E2]		0.06 *3*	α(K)=0.05 *3*; α(L)=0.009 *3*; α(M)=0.0020 *6*; α(N+..)=0.00058 *18* α(N)=0.00049 *15*; α(O)=8.E−5 *3*; α(P)=5.E−6 *3* E_γ,I_γ: from coincidence spectra (1973Pa21).
453.10[@] *3*	90 *5*	1143.508	5$^+$	690.3705	3$^+$	[E2]		0.0292	α(K)=0.0215 *3*; α(L)=0.00588 *9*; α(M)=0.001420 *20*; α(N+..)=0.000401 *6* α(N)=0.000344 *5*; α(O)=5.51×10^{-5} *8*; α(P)=2.26×10^{-6} *4* E_γ: 453.14 *8* (1973Pa21).
484.5751[@] *4*	77 *4*	690.3705	3$^+$	205.79442	2$^+$	M1+E2	−5.9 *2*	0.0259	α(K)=0.0195 *3*; α(L)=0.00489 *7*; α(M)=0.001174 *17*; α(N+..)=0.000332 *5* α(N)=0.000284 *4*; α(O)=4.60×10^{-5} *7*; α(P)=2.08×10^{-6} *3*
489.038[@] *13*	20.7 *12*	489.0601	2$^+$	0.0	0$^+$	E2		0.0241	α(K)=0.0180 *3*; α(L)=0.00463 *7*; α(M)=0.001113 *16*;

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^{192}Os IT decay (5.9 s) 1970HeZH,1973Pa21,1979KaYT (continued)

γ(^{192}Os) (continued)

E_γ ‡	I_γ ‡ a	E_i(level)	J_i^π	E_f	J_f^π	Mult. #	α †	Comments
								α(N+..)=0.000315 *5* α(N)=0.000269 *4*; α(O)=4.35×10^{-5} *6*; α(P)=1.91×10^{-6} *3* E_γ: 489.08 *7* (1973Pa21).
502.5 &	1.4 &	1967.99	(7$^+$)	1465.35	6$^+$	[M1,E2]	0.044 *22*	α(K)=0.036 *19*; α(L)=0.0064 *22*; α(M)=0.0015 *5*; α(N+..)=0.00043 *14* α(N)=0.00036 *12*; α(O)=6.1×10^{-5} *22*; α(P)=4.0×10^{-6} *22*
508.97 @ *7*	20 *4*	1089.23	6$^+$	580.2800	4$^+$	E2	0.0218	α(K)=0.01645 *23*; α(L)=0.00410 *6*; α(M)=0.000983 *14*; α(N+..)=0.000278 *4* α(N)=0.000238 *4*; α(O)=3.86×10^{-5} *6*; α(P)=1.747×10^{-6} *25* E_γ: 508.8 *4* (1973Pa21).
555.75 @ *16*	2.2 &	1465.35	6$^+$	909.591	4$^+$	(E2)	0.01765	α(K)=0.01352 *19*; α(L)=0.00316 *5*; α(M)=0.000754 *11*; α(N+..)=0.000214 *3* α(N)=0.000183 *3*; α(O)=2.98×10^{-5} *5*; α(P)=1.442×10^{-6} *21*
563.32 *8*	14.8 *10*	1143.508	5$^+$	580.2800	4$^+$	[M1,E2]	0.033 *16*	α(K)=0.027 *14*; α(L)=0.0047 *17*; α(M)=0.0011 *4*; α(N+..)=0.00031 *11* α(N)=0.00026 *9*; α(O)=4.5×10^{-5} *17*; α(P)=3.0×10^{-6} *16*
569.36 *9*	106 *10*	1712.90	7$^+$	1143.508	5$^+$	[E2]	0.01667	α(K)=0.01282 *18*; α(L)=0.00295 *5*; α(M)=0.000702 *10*; α(N+..)=0.000199 *3* α(N)=0.0001701 *24*; α(O)=2.78×10^{-5} *4*; α(P)=1.369×10^{-6} *20*
575.5 &	1.6 &	1645.2	(6$^+$)	1069.523	4$^+$	[E2]	0.01625	α(K)=0.01252 *18*; α(L)=0.00286 *4*; α(M)=0.000680 *10*; α(N+..)=0.000193 *3* α(N)=0.0001649 *23*; α(O)=2.70×10^{-5} *4*; α(P)=1.338×10^{-6} *19*
580.46 *13*	6.0 *15*	1069.523	4$^+$	489.0601	2$^+$	(E2)	0.01593	α(K)=0.01229 *18*; α(L)=0.00279 *4*; α(M)=0.000663 *10*; α(N+..)=0.000188 *3* α(N)=0.0001608 *23*; α(O)=2.63×10^{-5} *4*; α(P)=1.313×10^{-6} *19* I_γ: corrected for summing of 205.8γ and 374.5γ.
606.0 *2*	15 *4*	1967.99	(7$^+$)	1362.000	(5$^+$)	[E2]	0.01442	α(K)=0.01120 *16*; α(L)=0.00247 *4*; α(M)=0.000586 *9*; α(N+..)=0.0001667 *24* α(N)=0.0001422 *20*; α(O)=2.33×10^{-5} *4*; α(P)=1.198×10^{-6} *17*
619.3 *3*	19 *2*	1708.38	8$^+$	1089.23	6$^+$	E2	0.01372	α(K)=0.01069 *15*; α(L)=0.00233 *4*; α(M)=0.000551 *8*; α(N+..)=0.0001568 *22* α(N)=0.0001337 *19*; α(O)=2.20×10^{-5} *3*; α(P)=1.144×10^{-6} *16*
624.0 *4*	2.0 *4*	1712.90	7$^+$	1089.23	6$^+$	[M1,E2]	0.025 *12*	α(K)=0.021 *11*; α(L)=0.0036 *13*; α(M)=0.0008 *3*; α(N+..)=0.00024 *9* α(N)=0.00020 *7*; α(O)=3.4×10^{-5} *13*; α(P)=2.3×10^{-6} *12*
671.8 *3*	2.3 *6*	1362.000	(5$^+$)	690.3705	3$^+$	[E2]	0.01143	α(K)=0.00899 *13*; α(L)=0.00187 *3*; α(M)=0.000440 *7*; α(N+..)=0.0001254 *18* α(N)=0.0001068 *15*; α(O)=1.765×10^{-5} *25*; α(P)=9.65×10^{-7} *14*
703.96 @ *10*	0.9 *3*	909.591	4$^+$	205.79442	2$^+$	(E2)	0.01031	α(K)=0.00816 *12*; α(L)=0.001650 *24*; α(M)=0.000388 *6*; α(N+..)=0.0001107 *16* α(N)=9.42×10^{-5} *14*; α(O)=1.562×10^{-5} *22*; α(P)=8.75×10^{-7} *13* E_γ: 704.1 *5* (1973Pa21).
x1000.0 *4*	3.5 *10*							

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^{192}Os IT decay (5.9 s) 1970HeZH,1973Pa21,1979KaYT (continued)

$\gamma(^{192}Os)$ (continued)

† Additional information 1.
‡ From 1973Pa21, unless noted otherwise.
# From Adopted Gammas, except as noted.
@ From Adopted Gammas.
& From 1979KaYT.
a For absolute intensity per 100 decays, multiply by 0.61 *5*.
x γ ray not placed in level scheme.

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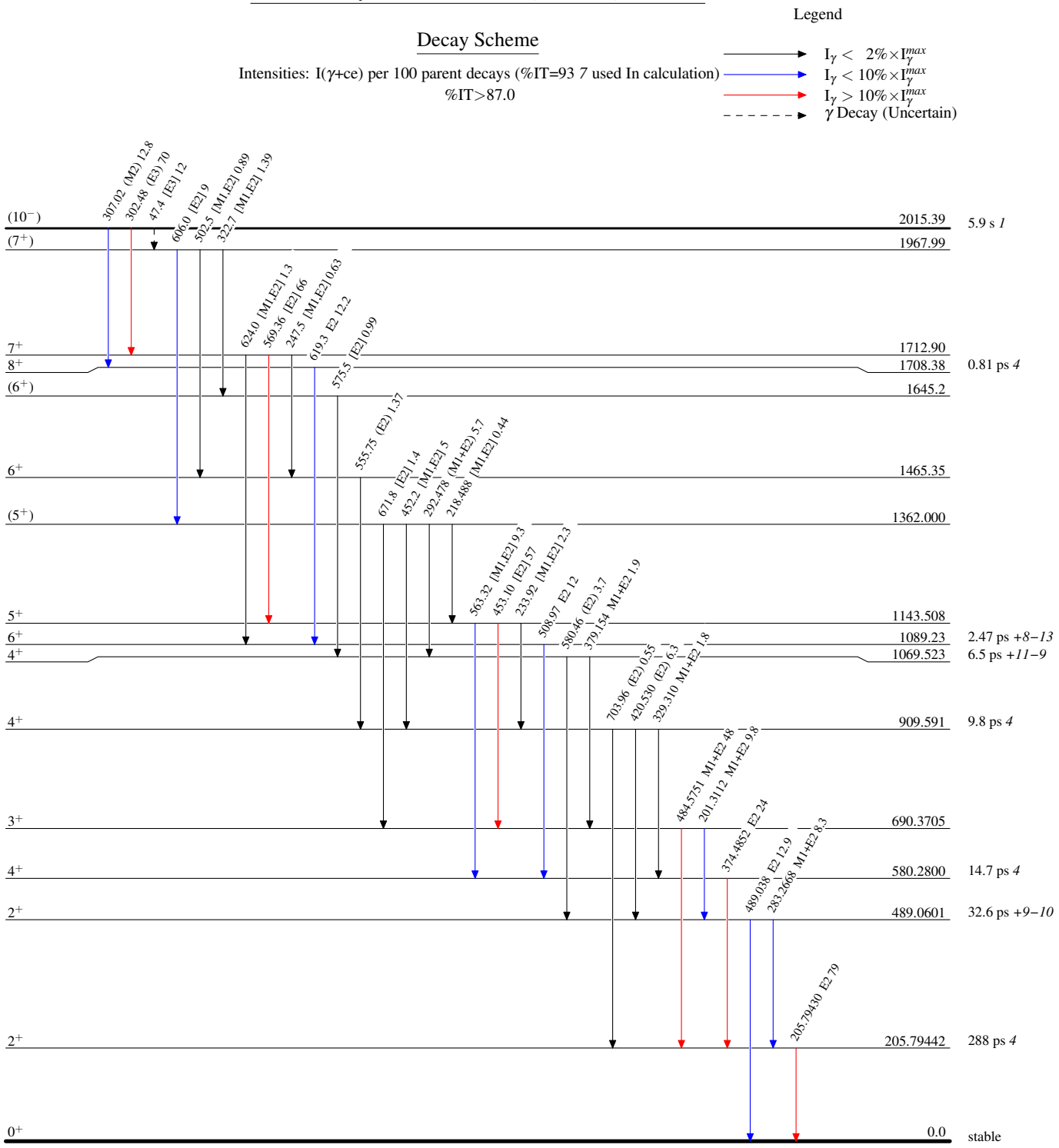
^{192}Os IT decay (5.9 s) 1970HeZH,1973Pa21,1979KaYT

Decay Scheme

Intensities: I(γ+ce) per 100 parent decays (%IT=93 *7* used In calculation)

%IT>87.0



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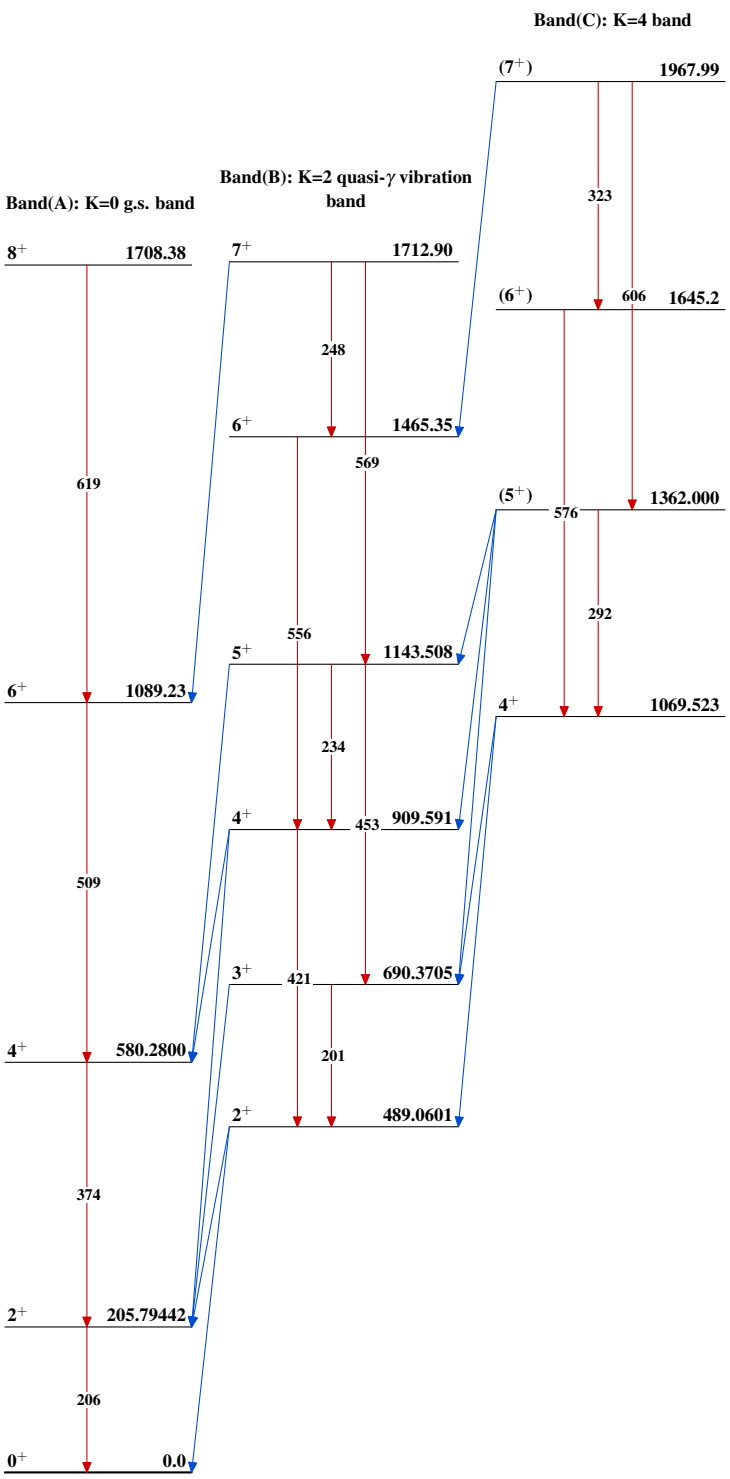
^{192}Os IT decay (5.9 s) 1970HeZH,1973Pa21,1979KaYT



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