^{192}Os(^{14}C,5nγ) 1995Ba70

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 187,355 (2023)	20-Sep-2022

E(^{14}C)=76 MeV; Target: ^{192}Os, enriched to 99% with average thickness of 100 mg/cm^2; Detectors: 12 Compton suppressed Ge detectors and 48 BGO scintillation counters; Measured: Eγ, Iγ, $\gamma\gamma$ coin, $\gamma\gamma(\theta)$(DCO); Deduced: level scheme, J^π.
Other: 1989Su12, 1992Ba39 (superseded by 1995Ba70).

^{201}Pb Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0	5/2$^-$	9.33 h *5*	J$^\pi$,$T_{1/2}$: From Adopted Levels.
629.1[#] *3*	13/2$^+$	60.8 s *18*	Additional information 1. E(level),J$^\pi$,$T_{1/2}$: From Adopted Levels.
1542.1[@] *5*	17/2$^+$		
1546.1 *5*	15/2$^+$		
1896.6[&] *5*	19/2$^+$		
1902.7[a] *6*	21/2$^+$		
2069.1 *7*			
2497.2[b] *6*	21/2$^-$		
2719.6[c] *8*	25/2$^-$	63 ns *3*	J$^\pi$,$T_{1/2}$: From Adopted Levels.
2719.6+x[d]	(29/2$^-$)	508 ns *5*	Additional information 2. J$^\pi$,$T_{1/2}$: From Adopted Levels. E(level): Deexcites to the 2719.6-keV level via a low-energy (Eγ<80 keV) γ ray.
2733.3 *7*			
2736.7 *7*			
3510.6+x *4*	(31/2$^-$)		
3546.2+x *4*	(33/2$^-$)		
3639.1+x *4*	(31/2)		
3833.4+x *6*	(35/2$^-$)		
3933.0+x[e] *4*	(33/2$^+$)		
4060.6 *10*			
4060.6+y[h]			Additional information 3.
4169.8+y[h] *5*			
4351.4+y[h] *7*			
4506.2+x *6*	(35/2)		
4561.4+x *6*	(37/2$^+$)		
4615.2+y[h] *9*			
4640.9+x[f] *7*	(41/2$^+$)	43 ns *3*	$T_{1/2}$: From 80.1γ(t) in 1989Su12.
4640.9+z[i]			Additional information 4. E(level): Decays to levels between 2719+x to 4506+x.
4640.9+u[j]			Additional information 5. E(level): Decays to levels between 2719+x to 4641+x.
4640.9+v[k]			Additional information 6. E(level): Decays to levels above 2719+x.
4648.7+x *6*	(35/2)		
4780.5+z[i] *5*			
4793.8+v[k] *5*			
4817.4+u[j] *5*			
4831.3+x *7*	(39/2)		
4956.0+y[h] *10*			
4956.3+z[i] *7*			
4992.4+v[k] *7*			

Continued on next page (footnotes at end of table)

^{192}Os(^{14}C,5nγ) 1995Ba70 (continued)

^{201}Pb Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
5043.1+u[j] *7*		5836.7+x *7*	(41/2)	6461.1+x *8*	(47/2)	7378.5+x *8*	(47/2)
5088.2+x *7*	(43/2)	5892.2+x *7*	(43/2)	6549.1+x[g] *9*	(41/2)	7379.9+x[g] *8*	(47/2)
5178.6+z[i] *9*		5928.8+v[k] *12*		6616.7+z[i] *12*		7471.4+u[j] *15*	
5242.4+v[k] *9*		5990.4+x *7*	(45/2)	6707.7+x *8*	(49/2)	7648.2+z[i] *13*	
5321.3+u[j] *9*		6028.4+u[j] *12*		6769.5+x[g] *8*	(43/2)	7760.5+x *8*	(49/2)
5359.8+y[h] *10*		6146.2+x[g] *7*	(35/2)	6858.2+v[k] *14*		7773.3+x[g] *8*	(49/2)
5390.2+x *8*	(45/2)	6175.4+z[i] *12*		6883.0+y[h] *12*		8004.4+x *10*	(53/2)
5455.0+z[i] *10*		6247.8+x[g] *8*	(37/2)	6911.0+x *8*	(47/2)	8019.7+x *8*	(51/2)
5554.4+v[k] *10*		6324.5+y[h] *11*		6941.2+u[j] *14*		8199.0+x *10*	(53/2)
5583.0+x *7*	(39/2$^-$)	6324.8+x *8*	(45/2$^+$)	7009.4+x *8*	(49/2)	8215.8+x *10*	(51/2)
5648.0+u[j] *10*		6337.2+y *11*		7045.4+x[g] *8*	(45/2)	8227.2+x[g] *10*	(51/2)
5787.3+z[i] *12*		6364.8+v[k] *13*		7108.4+z[i] *13*		8654.8+x *11*	(55/2)
5818.8+y[h] *10*		6377.5+x[g] *9*	(39/2)	7143.3+x *8*	(49/2$^+$)		
5831.0+x *7*	(45/2$^+$)	6458.1+u[j] *13*		7340.5+x *9*	(51/2)		

† From a least-squares fit to Eγ. Energies are relative to E(13/2$^+$)=629.11 *18* keV. For levels labeled with +x, +y, +z, +u and +v the excitation energies are relative to the 2719.6+y, 4060.6+y, 0+z, 0+u and 0+v states, respectively.

‡ From deduced transition multipolarities and multiple decay branches in 1995Ba70, unless otherwise stated.

[#] Configuration=$\nu\ i_{13/2}^{-1}$.

[@] Probably an admixture of configuration=$\nu\ (f_{5/2}^{-1},p_{1/2}^{-1},i_{13/2}^{-1})\otimes 2^+$ and configuration=$\nu\ (i_{13/2}^{-1})\otimes 2^+$.

[&] Probably an admixture of configuration=$\nu\ (f_{5/2}^{-1},p_{1/2}^{-1},i_{13/2}^{-1})\otimes 4^+$ and configuration=$\nu\ (i_{13/2}^{-1})\otimes 4^+$.

[a] Configuration=$\nu\ (f_{5/2}^{-2},i_{13/2}^{-1})$.

[b] Configuration=$\nu\ [p_{3/2}^{-1},(i_{13/2}^{-2})_{12+}]$.

[c] Probably an admixture of configuration=$\nu\ [f_{5/2}^{-1},(i_{13/2}^{-2})_{10+}]$, configuration=$\nu\ [p_{3/2}^{-1},(i_{13/2}^{-2})_{12+}]$ and configuration=$\nu\ [p_{1/2}^{-1},(i_{13/2}^{-2})_{12+}]$.

[d] Configuration=$\nu\ [f_{5/2}^{-1},(i_{13/2}^{-2})_{12+}]$.

[e] Configuration=$\nu\ (i_{13/2}^{-3})$.

[f] Configuration=$\nu\ (p_{3/2}^{-1},f_{5/2}^{-1},i_{13/2}^{-3})$.

[g] Band(A): configuration=$\nu\ [p_{3/2}^{-1},(i_{13/2})^{-2})_{12+}]\otimes\ \pi\ (h_{9/2}^{+1},i_{13/2}^{+1})_{11-}$. Band 2 in 1995Ba70.

[h] Band(B): configuration=$\nu\ (i_{13/2}^{-1})\ \otimes\pi\ (h_{9/2}^{+1},i_{13/2}^{+1})_{11-}$. Band 1 in 1995Ba70.

[i] Band(C): Band 3 in 1995Ba70.

[j] Band(D): Band 4 in 1995Ba70.

[k] Band(E): Band 5 in 1995Ba70.

$\gamma(^{201}Pb)$

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. ‡	α @	$I_{(\gamma+ce)}$ #	Comments
79.5 *5*	10.2 *19*	4640.9+x	(41/2$^+$)	4561.4+x	(37/2$^+$)	E2	17.1 *6*		α(L)=12.8 *4*; α(M)=3.37 *11* α(N)=0.849 *28*; α(O)=0.151 *5*; α(P)=0.00561 *18* E_γ: Other: 80.1 keV *5* in 1989Su12. Mult.: R(DCO)=1.1 *4*; L/M in 1989Su12.
98.2 *5*	0.8 *1*	5990.4+x	(45/2)	5892.2+x	(43/2)	(D)			Mult.: R(DCO)=0.74 *21*.
101.7 *5*		6247.8+x	(37/2)	6146.2+x	(35/2)	D		72 *23*	Mult.: R(DCO)=0.55 *14*.
109.2 *5*		4169.8+y		4060.6+y		D		89 *28*	Mult.: R(DCO)=0.71 *15*.
129.7 *5*		6377.5+x	(39/2)	6247.8+x	(37/2)	D		77 *15*	Mult.: R(DCO)=0.57 *8*.
136.2 *5*	0.6 *1*	6461.1+x	(47/2)	6324.8+x	(45/2$^+$)	(D)			Mult.: R(DCO)=0.89 *28*.
139.6 *5*		4780.5+z		4640.9+z		D		100 *18*	Mult.: R(DCO)=0.69 *17*.
142.5 *5*	1.1 *1*	4648.7+x	(35/2)	4506.2+x	(35/2)	D,E2			Mult.: R(DCO)=1.00 *35*, consistent with ΔJ=0 transition.
152.9 *5*		4793.8+v		4640.9+v		D		94 *21*	Mult.: R(DCO)=0.55 *23*.
153.7 *5*	2.0 *1*	5990.4+x	(45/2)	5836.7+x	(41/2)	E2	1.114 *21*		α(K)=0.300 *5*; α(L)=0.607 *12*; α(M)=0.1597 *32* α(N)=0.0403 *8*; α(O)=0.00723 *15*; α(P)=0.000325 *6* Mult.: R(DCO)=1.02 *15*.
159.4 *5*	2.3 *1*	5990.4+x	(45/2)	5831.0+x	(45/2$^+$)	D,E2			Mult.: R(DCO)=1.06 *13*, ΔJ=0 transition.
166.4 *5*	3.3 *2*	2069.1		1902.7	21/2$^+$	D,E2			Mult.: R(DCO)=1.08 *9*.
171.6 *5*		6549.1+x	(41/2)	6377.5+x	(39/2)	D		86 *12*	Mult.: R(DCO)=0.58 *6*.
175.8 *5*		4956.3+z		4780.5+z		D		99 *28*	Mult.: R(DCO)=0.68 *19*.
176.5 *5*		4817.4+u		4640.9+u		(D)		93 *19*	Mult.: R(DCO)=0.83 *19*.
179.3 *5*	6.8 *7*	8199.0+x	(53/2)	8019.7+x	(51/2)	D			Mult.: R(DCO)=0.70 *6*.
181.6 *5*		4351.4+y		4169.8+y		D		100 *21*	Mult.: R(DCO)=0.66 *6*.
190.4 *5*	<1.0	4831.3+x	(39/2)	4640.9+x	(41/2$^+$)	(D)			Mult.: R(DCO)=0.81 *18*.
197.2 *5*	4.1 *1*	7340.5+x	(51/2)	7143.3+x	(49/2$^+$)	D			Mult.: R(DCO)=0.70 *11*.
198.6 *5*		4992.4+v		4793.8+v		D		96 *9*	Mult.: R(DCO)=0.63 *11*.
220.5 *5*		6769.5+x	(43/2)	6549.1+x	(41/2)	D		100 *15*	Mult.: R(DCO)=0.58 *5*.
222.3 *5*		5178.6+z		4956.3+z		D		100 *15*	Mult.: R(DCO)=0.64 *10*.
222.4 *5*	58.0 *12*	2719.6	25/2$^-$	2497.2	21/2$^-$	(E2)	0.298 *5*		α(K)=0.1315 *20*; α(L)=0.1242 *21*; α(M)=0.0323 *5* α(N)=0.00817 *14*; α(O)=0.001482 *25*; α(P)=7.82×10^{-5} *13* Mult.: R(DCO)=0.93 *10*.
225.7 *5*		5043.1+u		4817.4+u		(D)		100 *17*	Mult.: R(DCO)=0.88 *17*.
232.2 *5*	0.6 *3*	7143.3+x	(49/2$^+$)	6911.0+x	(47/2)	(D)			Mult.: R(DCO)=0.81 *25*.
250.0 *5*		5242.4+v		4992.4+v		D		100 *11*	Mult.: R(DCO)=0.68 *11*.
253.7 *5*	0.9 *1*	5836.7+x	(41/2)	5583.0+x	(39/2$^-$)	(D)			Mult.: R(DCO)=0.78 *28*.
259.2 *5*	1.8 *1*	8019.7+x	(51/2)	7760.5+x	(49/2)	D			Mult.: R(DCO)=0.63 *13*.
263.8 *5*		4615.2+y		4351.4+y		D		99 *10*	Mult.: R(DCO)=0.71 *6*.
269.9 *5*	4.0 *7*	4831.3+x	(39/2)	4561.4+x	(37/2$^+$)	D			Mult.: R(DCO)=0.64 *12*.
275.9 *5*		7045.4+x	(45/2)	6769.5+x	(43/2)	D		92 *10*	Mult.: R(DCO)=0.56 *3*.
276.4 *5*		5455.0+z		5178.6+z		D		94 *15*	Mult.: R(DCO)=0.66 *9*.
278.2 *5*		5321.3+u		5043.1+u		(D)		91 *10*	Mult.: R(DCO)=0.85 *14*.
287.2 *5*	42.1 *8*	3833.4+x	(35/2$^-$)	3546.2+x	(33/2$^-$)	M1	0.481 *7*		α(K)=0.393 *6*; α(L)=0.0671 *10*; α(M)=0.01572 *23*

^{192}Os(^{14}C,5nγ) 1995Ba70 (continued)

$\gamma(^{201}Pb)$ (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. ‡	α @	$I_{(\gamma+ce)}$ #	Comments
									α(N)=0.00399 *6*; α(O)=0.000796 *12*; α(P)=8.52×10^{-5} *13*
									Mult.: R(DCO)=0.76 *5*; K/L in 1989Su12.
293.9 *5*	12.8 *8*	3933.0+x	(33/2$^+$)	3639.1+x	(31/2)	D			Mult.: R(DCO)=0.78 *7*.
302.0 *5*	4.5 *1*	5390.2+x	(45/2)	5088.2+x	(43/2)	(D)			Mult.: R(DCO)=0.79 *13*.
312.0 *5*		5554.4+v		5242.4+v		D		75 *10*	Mult.: R(DCO)=0.58 *11*.
326.7 *5*		5648.0+u		5321.3+u		(D)		64 *12*	Mult.: R(DCO)=0.79 *16*.
331.1 *5*	1.7 *2*	7340.5+x	(51/2)	7009.4+x	(49/2)	(D)			Mult.: R(DCO)=0.77 *18*.
332.3 *5*		5787.3+z		5455.0+z		D		69 *11*	Mult.: R(DCO)=0.69 *13*.
333.1 *5*		7378.5+x	(47/2)	7045.4+x	(45/2)	D		46 *9*	Mult.: R(DCO)=0.57 *5*.
334.6 *5*		7379.9+x	(47/2)	7045.4+x	(45/2)	D		43 *11*	Mult.: R(DCO)=0.60 *5*.
340.8 *5*		4956.0+y		4615.2+y		D		87 *8*	Mult.: R(DCO)=0.69 *5*.
350.5 *5*	34.5 *14*	1896.6	19/2$^+$	1546.1	15/2$^+$	E2	0.0738 *11*		α(K)=0.0454 *7*; α(L)=0.02131 *32*; α(M)=0.00542 *8*
									α(N)=0.001371 *20*; α(O)=0.000254 *4*; α(P)=1.681×10^{-5} *25*
									Mult.: R(DCO)=0.95 *13*.
354.5 *5*	63.4 *19*	1896.6	19/2$^+$	1542.1	17/2$^+$	M1			α(K)=0.13 *9*; α(L)=0.029 *9*; α(M)=0.0070 *18*
									α(N)=0.0018 *5*; α(O)=3.5×10^{-4} *10*; α(P)=3.2×10^{-5} *16*
									Mult.: From adopted gammas. R(DCO)=1.10 *11*.
360.6 *5*	26.3 *11*	1902.7	21/2$^+$	1542.1	17/2$^+$	E2	0.0682 *10*		α(K)=0.0425 *6*; α(L)=0.01925 *29*; α(M)=0.00489 *7*
									α(N)=0.001237 *18*; α(O)=0.0002295 *34*; α(P)=1.540×10^{-5} *23*
									Mult.: R(DCO)=0.96 *9*.
374.4 *5*		5928.8+v		5554.4+v		D		57 *7*	Mult.: R(DCO)=0.68 *14*.
380.4 *5*		6028.4+u		5648.0+u		(D)		36 *7*	Mult.: R(DCO)=0.89 *11*.
380.6 *5*	3.2 *3*	7760.5+x	(49/2)	7379.9+x	(47/2)	(D)			Mult.: R(DCO)=0.84 *29*.
382.0 *5*	3.8 *1*	7760.5+x	(49/2)	7378.5+x	(47/2)	D			Mult.: R(DCO)=0.66 *15*.
387.0 *5*	3.3 *1*	3933.0+x	(33/2$^+$)	3546.2+x	(33/2$^-$)	(D)			Mult.: R(DCO)=0.90 *15*, ΔJ=0 transition.
388.1 *5*		6175.4+z		5787.3+z		D		51 *7*	Mult.: R(DCO)=0.59 *14*.
393.3 *5*		7773.3+x	(49/2)	7379.9+x	(47/2)	D		28 *4*	Mult.: R(DCO)=0.64 *10*.
394.8 *5*		7773.3+x	(49/2)	7378.5+x	(47/2)	D		31 *7*	Mult.: R(DCO)=0.60 *13*.
404.0 *5*		5359.8+y		4956.0+y		D		75 *7*	Mult.: R(DCO)=0.70 *6*.
422.5 *5*	32.5 *16*	3933.0+x	(33/2$^+$)	3510.6+x	(31/2$^-$)	(D)			Mult.: R(DCO)=0.83 *14*.
429.7 *5*		6458.1+u		6028.4+u		(D)		16 *7*	Mult.: R(DCO)=0.79 *30*.
436.0 *5*		6364.8+v		5928.8+v		(D)		39 *10*	Mult.: R(DCO)=0.77 *21*.
441.3 *5*		6616.7+z		6175.4+z		D		39 *10*	Mult.: R(DCO)=0.64 *16*.
442.5 *5*		8215.8+x	(51/2)	7773.3+x	(49/2)	D		9 *5*	Mult.: R(DCO)=0.68 *16*.
447.3 *5*	31.5 *6*	5088.2+x	(43/2)	4640.9+x	(41/2$^+$)	D			Mult.: R(DCO)=0.76 *5*.
453.9 *5*		8227.2+x	(51/2)	7773.3+x	(49/2)	D		19 *6*	Mult.: R(DCO)=0.62 *14*.
455.8 *5*	3.2 *2*	8654.8+x	(55/2)	8199.0+x	(53/2)	D			Mult.: R(DCO)=0.71 *7*.
459.0 *5*		5818.8+y		5359.8+y		D		52 *6*	Mult.: R(DCO)=0.70 *6*.
470.7 *5*	7.1 *4*	6461.1+x	(47/2)	5990.4+x	(45/2)	(D)			Mult.: R(DCO)=0.94 *12*.
483.1 *5*		6941.2+u		6458.1+u		(D)		19 *7*	Mult.: R(DCO)=0.73 *26*.
491.7 *5*		7108.4+z		6616.7+z		D		26 *5*	Mult.: R(DCO)=0.64 *17*.
493.4 *5*		6858.2+v		6364.8+v		(D)		37 *7*	Mult.: R(DCO)=0.76 *20*.

$^{201}_{82}Pb_{119}$-4

^{192}Os(^{14}C,5nγ) 1995Ba70 (continued)

$\gamma(^{201}Pb)$ (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. ‡	α @	$I_{(\gamma+ce)}$ #	Comments
505.7 *5*		6324.5+y		5818.8+y		D		17 *6*	Mult.: R(DCO)=0.67 *11*.
518.4 *5*		6337.2+y		5818.8+y		D		10 *2*	Mult.: R(DCO)=0.69 *10*.
530.2 *5*		7471.4+u		6941.2+u		(D)		15 *3*	Mult.: R(DCO)=0.85 *20*.
539.8 *5*		7648.2+z		7108.4+z		(D)		12 *3*	Mult.: R(DCO)=0.66 *26*.
548.3 *5*	2.7 *1*	7009.4+x	(49/2)	6461.1+x	(47/2)	D			Mult.: R(DCO)=0.67 *9*.
558.5 *5*		6883.0+y		6324.5+y		D		7 *1*	Mult.: R(DCO)=0.65 *18*.
573.2 *5*	9.0 *8*	4506.2+x	(35/2)	3933.0+x	$(33/2^+)$	D			Mult.: R(DCO)=0.63 *11*.
586.1 *5*	1.8 *3*	6911.0+x	(47/2)	6324.8+x	$(45/2^+)$	D			Mult.: R(DCO)=0.76 *13*.
594.5 *5*	3.0 *3*	2497.2	$21/2^-$	1902.7	$21/2^+$	(D)			Mult.: R(DCO)=0.73 *21*; ΔJ=0 transition;
600.2 *5*	2.9 *4*	5990.4+x	(45/2)	5390.2+x	(45/2)	D,E2			Mult.: R(DCO)=0.98 *16*, ΔJ=0 transition.
600.5 *5*	70.9 *14*	2497.2	$21/2^-$	1896.6	$19/2^+$	D			Mult.: R(DCO)=0.80 *8*.
x610	36 *4*								E_γ: Depopulates band 1 in 1995Ba70, but the exact placement is not known. I_γ: % branching of the total population of band 1 in 1995Ba70.
628.4 *5*	27.0 *14*	4561.4+x	$(37/2^+)$	3933.0+x	$(33/2^+)$	E2	0.01736 *24*		α(K)=0.01298 *18*; α(L)=0.00332 *5*; α(M)=0.000812 *12* α(N)=0.0002057 *29*; α(O)=3.94×10^{-5} *6*; α(P)=3.36×10^{-6} *5* Mult.: R(DCO)=1.00 *9*.
663.9 *5*	3.1 *2*	8004.4+x	(53/2)	7340.5+x	(51/2)	(D)			Mult.: R(DCO)=0.80 *12*. Note, that the authors give R(DCO)=0.8 *12* that is probably a typo.
664.1 *5*	1.3 *1*	2733.3		2069.1		D,E2			Mult.: R(DCO)=1.08 *25*.
667.6 *5*	2.8 *2*	2736.7		2069.1		D,E2			Mult.: R(DCO)= 1.03 *16*.
682.3 *5*	1.0 *1*	7143.3+x	$(49/2^+)$	6461.1+x	(47/2)	(D)			Mult.: R(DCO)=0.73 *18*.
715.7 *5*	5.5 *8*	4648.7+x	(35/2)	3933.0+x	$(33/2^+)$	D			Mult.: R(DCO)=0.66 *12*.
717.3 *5*	27.7 *6*	6707.7+x	(49/2)	5990.4+x	(45/2)	E2	0.01305 *18*		α(K)=0.00999 *14*; α(L)=0.002324 *33*; α(M)=0.000564 *8* α(N)=0.0001428 *20*; α(O)=2.75×10^{-5} *4*; α(P)=2.446×10^{-6} *34* Mult.: R(DCO)=1.05 *6*.
728.0 *5*	61.5 *18*	4561.4+x	$(37/2^+)$	3833.4+x	$(35/2^-)$	(D)			Mult.: R(DCO)=0.89 *4*.
744.6 *5*		5359.8+y		4615.2+y		E2	0.01206 *17*	11 *4*	ce(K)/(γ+ce)=0.00918 *13*; ce(L)/(γ+ce)=0.002084 *29*; ce(M)/(γ+ce)=0.000504 *7* ce(N)/(γ+ce)=0.0001277 *18*; ce(O)/(γ+ce)=2.466×10^{-5} *35*; ce(P)/(γ+ce)=2.217×10^{-6} *31* α(K)=0.00929 *13*; α(L)=0.002109 *30*; α(M)=0.000510 *7* α(N)=0.0001293 *18*; α(O)=2.496×10^{-5} *35*; α(P)=2.244×10^{-6} *32* Mult.: R(DCO)=1.1 *3*.
791.0 *5*	22.8 *11*	3510.6+x	$(31/2^-)$	2719.6+x	$(29/2^-)$	D			Mult.: R(DCO)=0.61 *4*.
826.6 *5*	89.4 *18*	3546.2+x	$(33/2^-)$	2719.6+x	$(29/2^-)$	E2	0.00973 *14*		α(K)=0.00759 *11*; α(L)=0.001621 *23*; α(M)=0.000390 *5* α(N)=9.88×10^{-5} *14*; α(O)=1.916×10^{-5} *27*; α(P)=1.771×10^{-6} *25* Mult.: R(DCO)=1.00 *14*.
829.4 *5*		6616.7+z		5787.3+z		E2	0.00966 *14*	12 *5*	ce(K)/(γ+ce)=0.00747 *10*; ce(L)/(γ+ce)=0.001593 *22*; ce(M)/(γ+ce)=0.000383 *5*

$^{201}_{82}Pb_{119}$-5

^{192}Os(^{14}C,5nγ) 1995Ba70 (continued)

$\gamma(^{201}Pb)$ (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. ‡	α @	$I_{(\gamma+ce)}$ #	Comments
									ce(N)/(γ+ce)=9.70×10^{-5} *14*; ce(O)/(γ+ce)=1.882×10^{-5} *26*; ce(P)/(γ+ce)=1.741×10^{-6} *24* α(K)=0.00755 *11*; α(L)=0.001608 *23*; α(M)=0.000387 *5* α(N)=9.80×10^{-5} *14*; α(O)=1.900×10^{-5} *27*; α(P)=1.758×10^{-6} *25* Mult.: R(DCO)=1.2 *7*.
830.7 *5*	2.7 *3*	2733.3		1902.7	21/2$^+$	D,E2			Mult.: R(DCO)=1.13 *16*.
834.0 *5*	3.8 *3*	2736.7		1902.7	21/2$^+$	D,E2			Mult.: R(DCO)= 0.94 *11*.
862.8 *5*		5818.8+y		4956.0+y		E2	0.00892 *13*	10 *4*	ce(K)/(γ+ce)=0.00694 *10*; ce(L)/(γ+ce)=0.001448 *20*; ce(M)/(γ+ce)=0.000347 *5* ce(N)/(γ+ce)=8.80×10^{-5} *12*; ce(O)/(γ+ce)=1.710×10^{-5} *24*; ce(P)/(γ+ce)=1.597×10^{-6} *22* α(K)=0.00700 *10*; α(L)=0.001460 *21*; α(M)=0.000350 *5* α(N)=8.88×10^{-5} *12*; α(O)=1.725×10^{-5} *24*; α(P)=1.611×10^{-6} *23* Mult.: R(DCO)=0.92 *34*.
902.2 *5*	23.9 *2*	5990.4+x	(45/2)	5088.2+x	(43/2)	D			Mult.: R(DCO)=0.55 *5*.
913.0 *5*	100.0 *20*	1542.1	17/2$^+$	629.1	13/2$^+$	E2	0.00797 *11*		α(K)=0.00629 *9*; α(L)=0.001276 *18*; α(M)=0.000305 *4* α(N)=7.73×10^{-5} *11*; α(O)=1.506×10^{-5} *21*; α(P)=1.425×10^{-6} *20* Mult.: R(DCO)=1.08 *8*.
917.0 *5*	37.0 *15*	1546.1	15/2$^+$	629.1	13/2$^+$	(D)			Mult.: R(DCO)=0.81 *11*.
919.4 *5*	8.8 *25*	3639.1+x	(31/2)	2719.6+x	(29/2$^-$)	(D)			Mult.: R(DCO)=0.87 *12*.
933.1 *5*		7108.4+z		6175.4+z		E2	0.00763 *11*	10 *4*	ce(K)/(γ+ce)=0.00599 *8*; ce(L)/(γ+ce)=0.001203 *17*; ce(M)/(γ+ce)=0.000287 *4* ce(N)/(γ+ce)=7.28×10^{-5} *10*; ce(O)/(γ+ce)=1.419×10^{-5} *20*; ce(P)/(γ+ce)=1.349×10^{-6} *19* α(K)=0.00604 *8*; α(L)=0.001212 *17*; α(M)=0.000289 *4* α(N)=7.34×10^{-5} *10*; α(O)=1.430×10^{-5} *20*; α(P)=1.360×10^{-6} *19* Mult.: R(DCO)=0.8 *3*.
964.7 *5*		6324.5+y		5359.8+y		(E2)	0.00714 *10*	10 *3*	ce(K)/(γ+ce)=0.00563 *8*; ce(L)/(γ+ce)=0.001113 *16*; ce(M)/(γ+ce)=0.000266 *4* ce(N)/(γ+ce)=6.73×10^{-5} *9*; ce(O)/(γ+ce)=1.313×10^{-5} *18*; ce(P)/(γ+ce)=1.257×10^{-6} *18* α(K)=0.00567 *8*; α(L)=0.001121 *16*; α(M)=0.000267 *4* α(N)=6.78×10^{-5} *10*; α(O)=1.323×10^{-5} *19*; α(P)=1.266×10^{-6} *18* Mult.: R(DCO)=0.77 *18*.
1005.5 *5*	1.9 *1*	5836.7+x	(41/2)	4831.3+x	(39/2)	(D)			Mult.: R(DCO)=0.76 *20*.
1031.4 *5*		7648.2+z		6616.7+z		E2	0.00627 *9*	12 *4*	ce(K)/(γ+ce)=0.00498 *7*; ce(L)/(γ+ce)=0.000956 *13*; ce(M)/(γ+ce)=0.0002273 *32* ce(N)/(γ+ce)=5.76×10^{-5} *8*; ce(O)/(γ+ce)=1.127×10^{-5} *16*; ce(P)/(γ+ce)=1.093×10^{-6} *15* α(K)=0.00501 *7*; α(L)=0.000962 *14*; α(M)=0.0002287 *32* α(N)=5.80×10^{-5} *8*; α(O)=1.134×10^{-5} *16*; α(P)=1.100×10^{-6} *15* Mult.: R(DCO)=1.2 *5*.

$^{201}_{82}Pb_{119}$-6

$\gamma(^{201}Pb)$ (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. ‡	α @	Comments
1190.1 *5*	13.6 *4*	5831.0+x	(45/2$^+$)	4640.9+x	(41/2$^+$)	E2	0.00477 *7*	α(K)=0.00385 *5*; α(L)=0.000701 *10*; α(M)=0.0001657 *23* α(N)=4.20×10^{-5} *6*; α(O)=8.25×10^{-6} *12*; α(P)=8.20×10^{-7} *11*; α(IPF)=3.08×10^{-6} *6* Mult.: R(DCO)=1.07 *13*.
1251.3 *5*	3.5 *1*	5892.2+x	(43/2)	4640.9+x	(41/2$^+$)	(D)		Mult.: R(DCO)=0.74 *17*.
1312.0 *5*	19.6 *12*	8019.7+x	(51/2)	6707.7+x	(49/2)	D		Mult.: R(DCO)=0.73 *13*.
1312.3 *5*	5.8 *4*	7143.3+x	(49/2$^+$)	5831.0+x	(45/2$^+$)	E2	0.00398 *6*	α(K)=0.00322 *5*; α(L)=0.000569 *8*; α(M)=0.0001340 *19* α(N)=3.40×10^{-5} *5*; α(O)=6.69×10^{-6} *9*; α(P)=6.74×10^{-7} *9*; α(IPF)=1.758×10^{-5} *26* Mult.: R(DCO)=0.97 *11*.
1341.0 *5*	3.4 *1*	4060.6		2719.6	25/2$^-$	D,E2		Mult.: R(DCO)=0.89 *16*.
1388.1 *5*	1.9 *1*	7378.5+x	(47/2)	5990.4+x	(45/2)	(D)		Mult.: R(DCO)=0.72 *29*.
1389.4 *5*	1.4 *1*	7379.9+x	(47/2)	5990.4+x	(45/2)	(D)		Mult.: R(DCO)=0.64 *37*.
1640.0 *5*	1.7 *1*	6146.2+x	(35/2)	4506.2+x	(35/2)	D,E2		Mult.: R(DCO)=1.13 *26*, ΔJ=0 transition.
1683.8 *5*	3.8 *2*	6324.8+x	(45/2$^+$)	4640.9+x	(41/2$^+$)	E2	0.00263 *4*	α(K)=0.002053 *29*; α(L)=0.000342 *5*; α(M)=8.00×10^{-5} *11* α(N)=2.027×10^{-5} *28*; α(O)=4.01×10^{-6} *6*; α(P)=4.15×10^{-7} *6*; α(IPF)=0.0001288 *18* Mult.: R(DCO)=1.01 *17*.
1749.5 *5*	1.9 *1*	5583.0+x	(39/2$^-$)	3833.4+x	(35/2$^-$)	E2	2.48×10^{-3} *4*	α(K)=0.001916 *27*; α(L)=0.000317 *4*; α(M)=7.40×10^{-5} *10* α(N)=1.877×10^{-5} *26*; α(O)=3.72×10^{-6} *5*; α(P)=3.86×10^{-7} *5*; α(IPF)=0.0001548 *22* Mult.: R(DCO)=0.93 *19*.

† From 1995Ba70, unless otherwise stated. $\Delta E\gamma$=0.5 keV estimated by the evaluator.

‡ From DCO ratios, multiple decay branches and proposed spin differences in 1995Ba70, unless otherwise stated. Some of the transitions assigned as dipole may have quadrupole admixtures.

Relative total intensity within each band from 1995Ba70. Values were corrected in 1995Ba70 for internal electron conversion by assuming pure M1 and E2 characters for the ΔJ=1 and ΔJ=2 transitions, respectively.

@ Additional information 7.

x γ ray not placed in level scheme.

^{192}Os(^{14}C,5nγ) 1995Ba70

Level Scheme

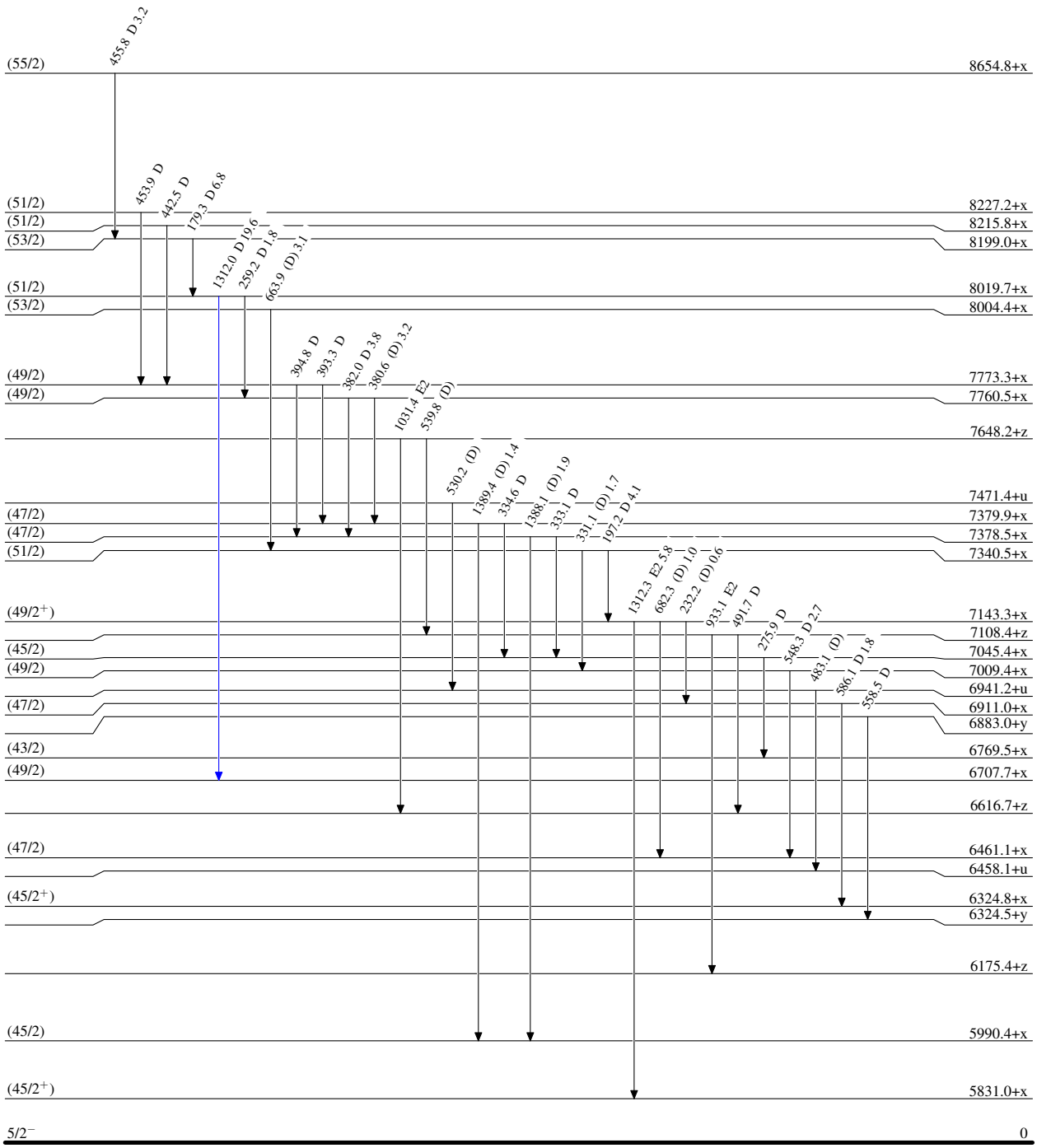
Intensities: Relative I_γ

Legend

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

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

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



$^{201}_{82}Pb_{119}$

^{192}Os(^{14}C,5nγ) 1995Ba70

Level Scheme (continued)

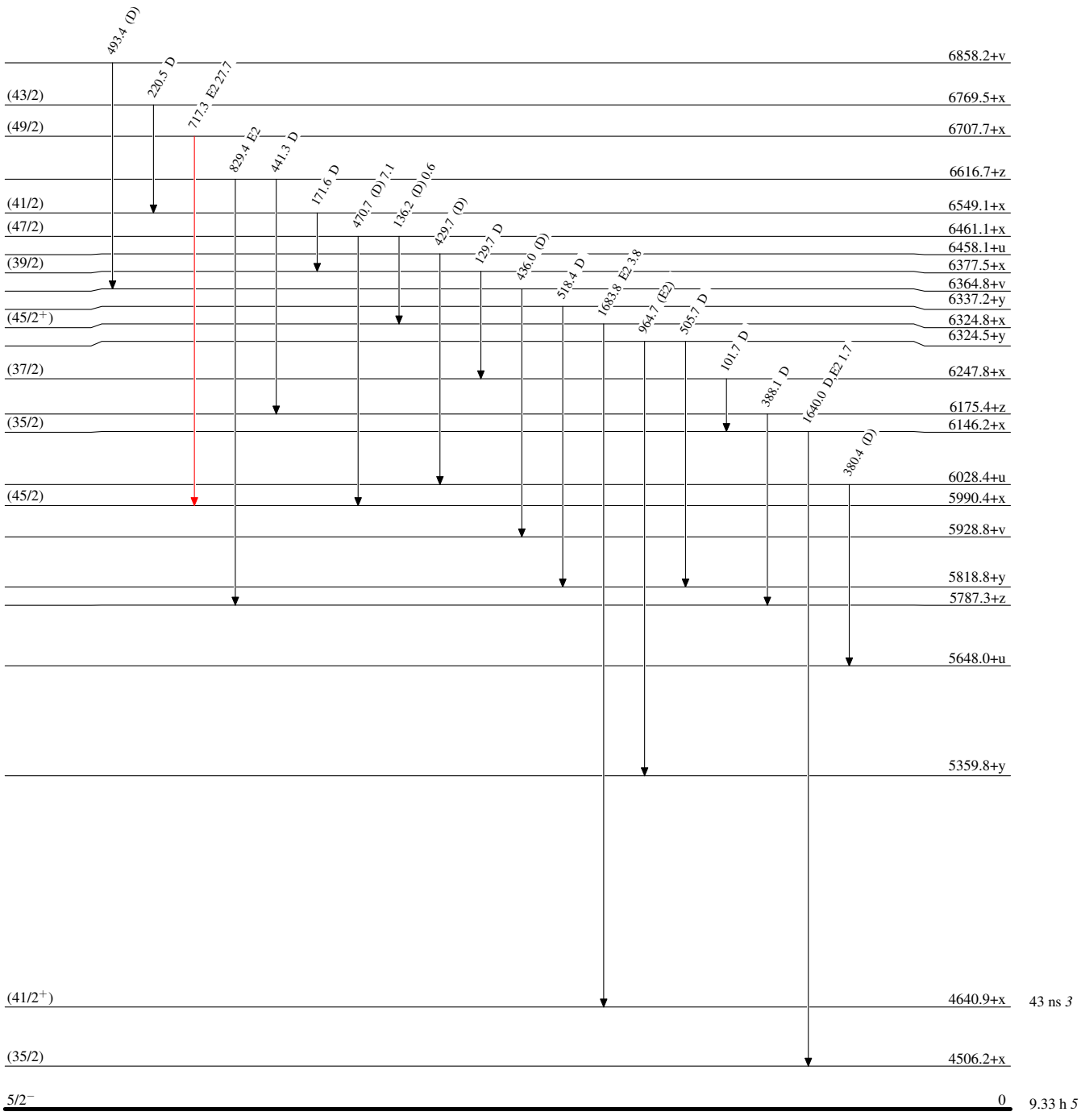
Intensities: Relative I_γ

Legend

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

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

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

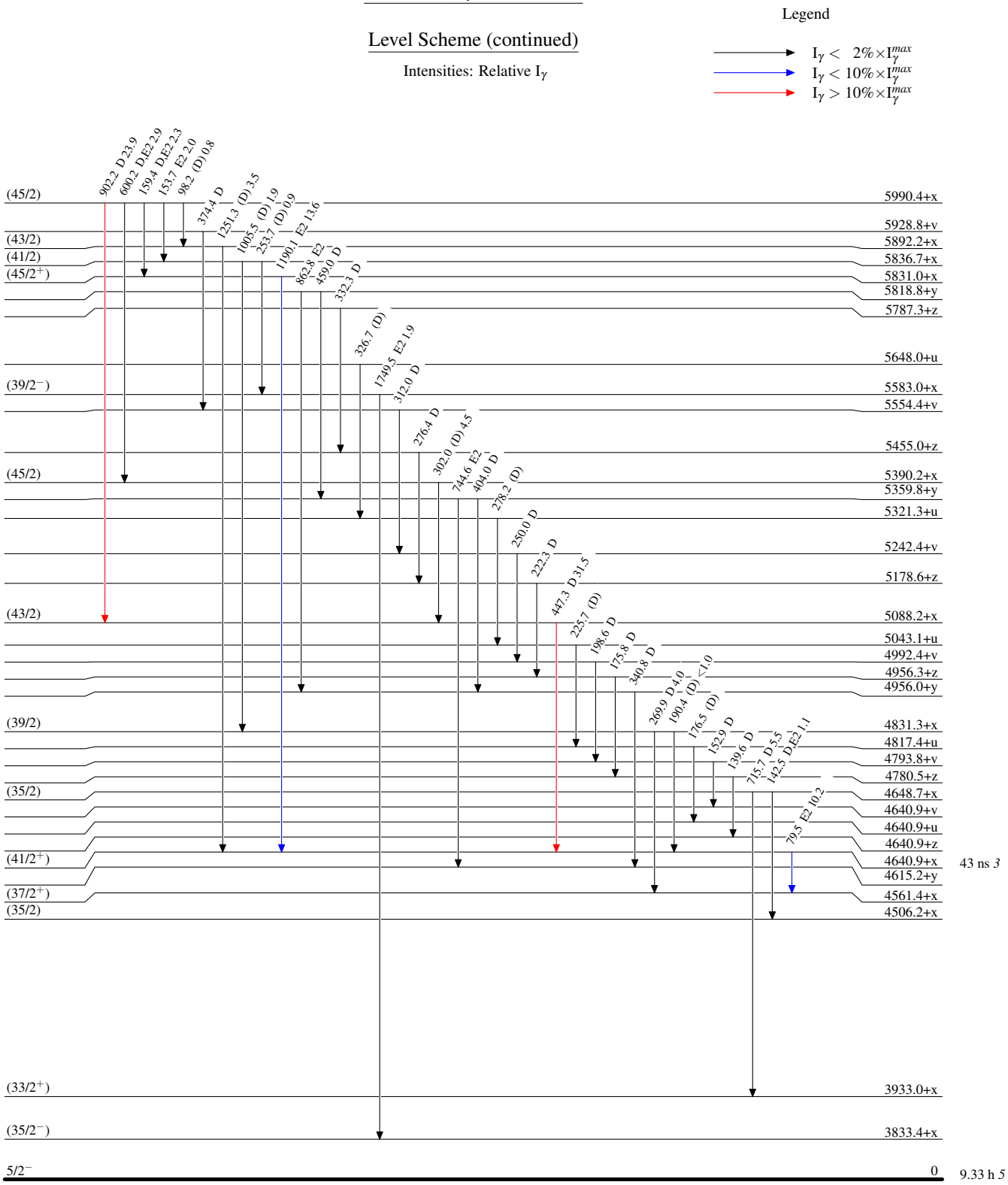


$^{201}_{82}Pb_{119}$

^{192}Os(^{14}C,5nγ) 1995Ba70

Level Scheme (continued)

Intensities: Relative I_γ

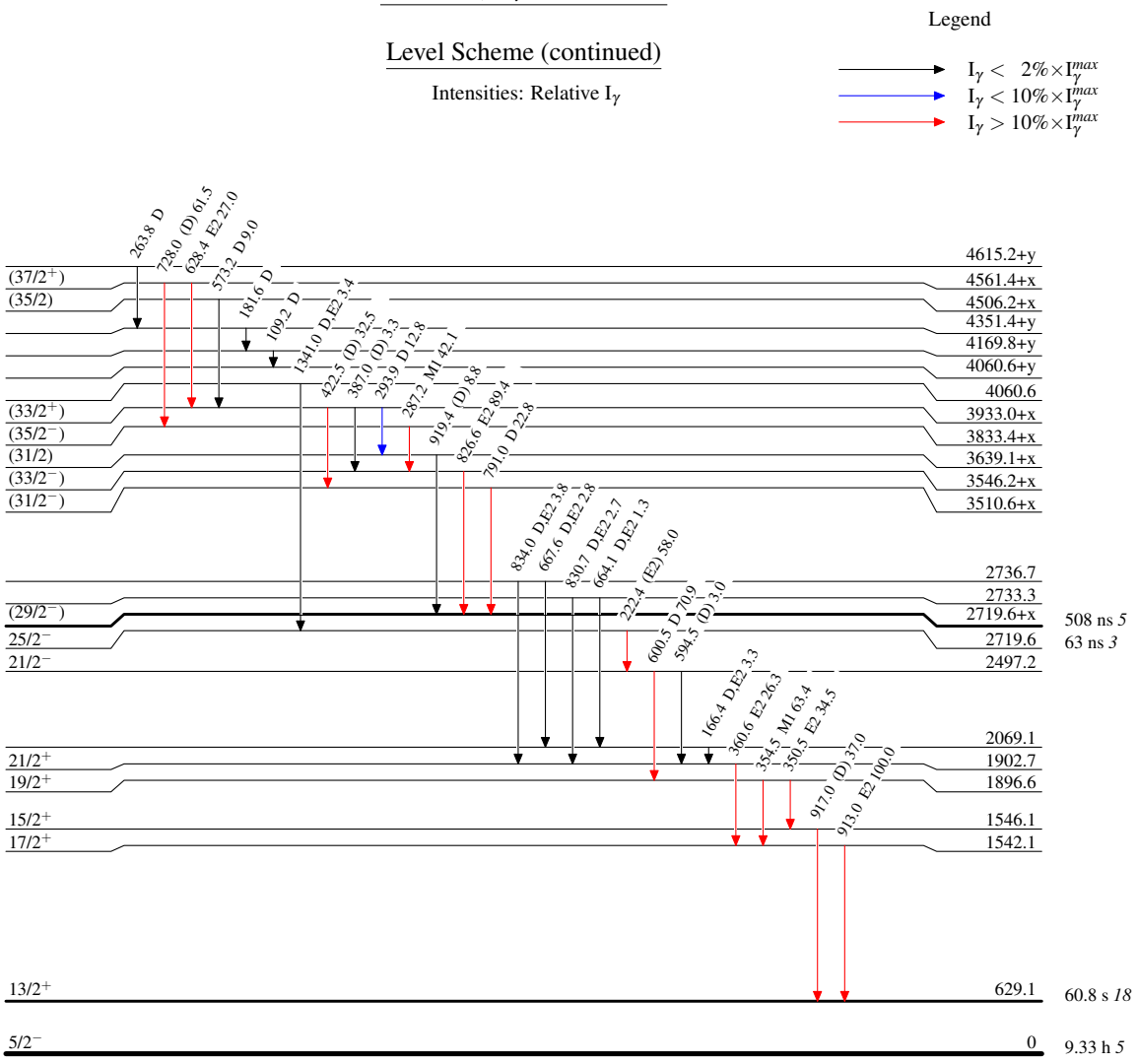


$^{201}_{82}Pb_{119}$

^{192}Os(^{14}C,5nγ) 1995Ba70

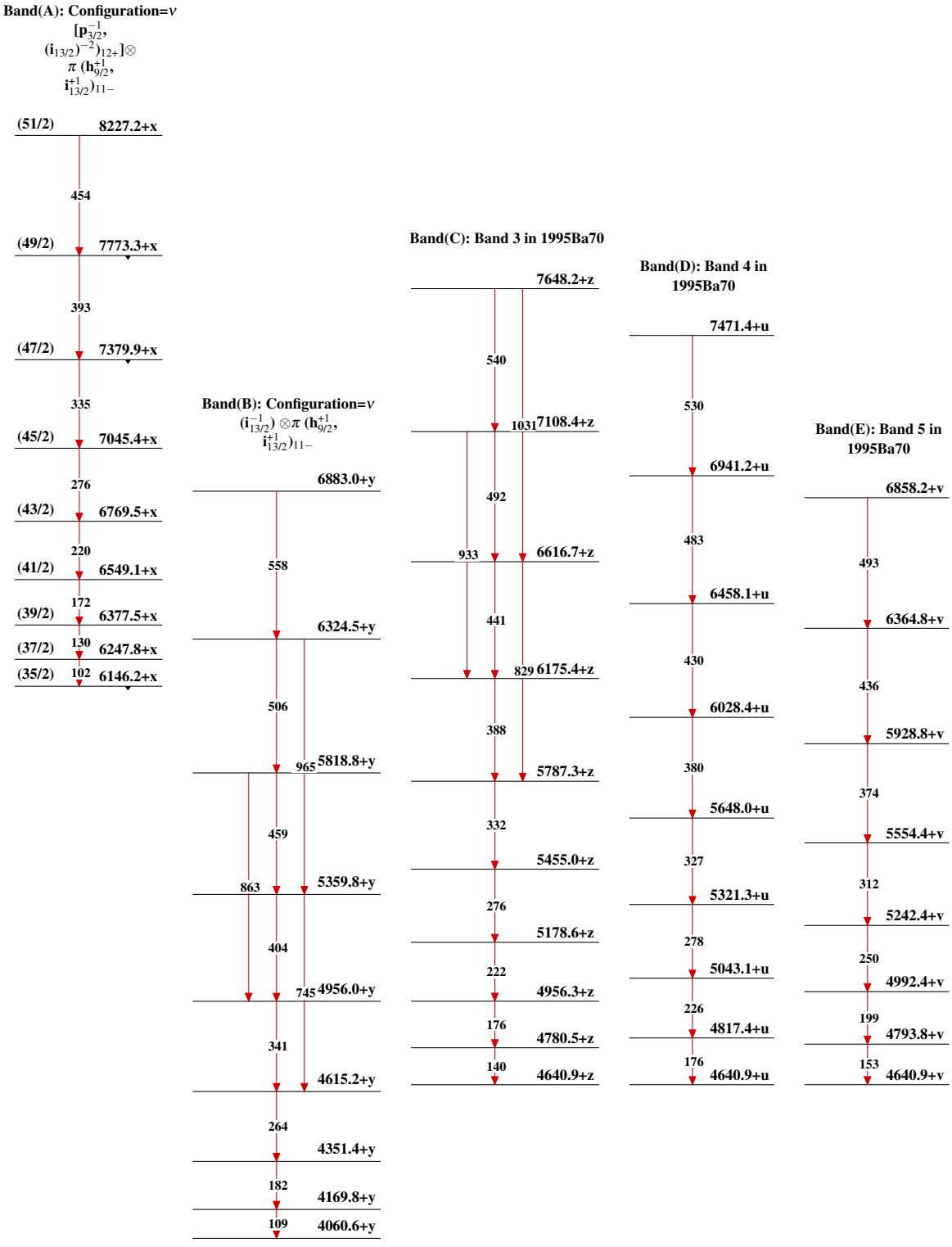
Level Scheme (continued)

Intensities: Relative I_γ



$^{201}_{82}Pb_{119}$

^{192}Os(^{14}C,5nγ) 1995Ba70



$^{201}_{82}Pb_{119}$