(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 192,1 (2023)	1-Aug-2023

1988Pa12: ^{186}W(^{18}O,4nγ) at E(^{18}O)=81 MeV; Target: self-supporting 250 μg/cm^2 thick, enriched to 96.9% in ^{186}W; Detectors: intrinsic Ge detectors and magnetic spectrometer with a Si(Li) detector; Measured: Eγ, Iγ, ce, γγ coin, ce-γ coin, γγ(t), ceγ(t); Deduced: level scheme, J^π, $T_{1/2}$.

1992Ba13: ^{192}Os(^{13}C,5nγ) at E(^{13}C)=76 and 81 MeV; Target: two stacked self-supporting foils of ^{192}Os, enriched to 99% with thicknesses around 300 μg/cm^2; Detectors: OSIRIS γ-ray spectrometer consisting of 12 Compton-shielded Ge detectors and multiplicity detector consisting of 48 BGO detectors; Measured: γ singles, γγ coin, γγ(θ), Eγ, Iγ; Deduced: level scheme, J^π, band structures.

1994Ba43: ^{186}W(^{18}O,4nγ) at E(^{18}O)=94 MeV with a 97% enriched in ^{186}W target; ^{192}Os(^{13}C,5nγ) at E=76 MeV with 99% enriched in ^{192}Os target; performed on VICKSI in Berlin; Detectors: OSIRIS γ-ray spectrometer consisting of 12 Compton-shielded Ge detectors and multiplicity detector consisting of 48 BGO detectors; Measured: γ singles, γγ coin, γγ(θ), Eγ, Iγ; Deduced: level scheme, J^π, band structures.

Others: 2018La03, 2014ChZW, 1993Be55, 1989Di13, 1989Su12, 1975Yo04, 1973Pa03.

^{200}Pb Levels

E(level)[†]	J$^\pi$[a]	$T_{1/2}$	Comments
0.0	0$^+$		
1026.50 *10*	2$^+$		
1488.69 *21*	4$^+$		
1836.7 *3*	(3)		
1908.3 *3*	5$^-$	1.40 ns *9*	$T_{1/2}$: From γγ(t) in 1988Pa12; Other: 1.3 ns *1* in 1989Su12. A mixture of configuration=$\nu(f_{5/2}^{-1},i_{13/2}^{-1})$ and configuration=$\nu(p_{3/2}^{-1},i_{13/2}^{-1})$.
2153.5 *4*	7$^-$	44 ns *2*	$T_{1/2}$: From 1989Su12 and 1988Pa12. A mixture of configuration=$\nu(f_{5/2}^{-1},i_{13/2}^{-1})$, configuration=$\nu(p_{3/2}^{-1},i_{13/2}^{-1})$ and configuration=$\nu(p_{1/2}^{-1},i_{13/2}^{-1})$.
2183.0 *11*	9$^-$	480 ns *20*	$T_{1/2}$: From γ(t) in 1988Pa12; Others: 480 ns *30* (1989Su12) and 476 ns *12* (2018La03). g=−0.030 *3* (1975Yo04) using the time-differential perturbed angular distribution technique. Configuration=$\nu(f_{5/2}^{-1},i_{13/2}^{-1})$.
2183.0+x[&]			Additional information 1.
2493.1+x[&] *4*			
2960.0 *11*	10$^+$		
3005.4 *12*	12$^+$	199 ns *5*	$T_{1/2}$: From 1989Su12. Other: 152 ns *20* (1988Pa12), 158 ns *30* (1975Yo04), 195 ns *8* (2018La03), 160 ns *30* (1973Pa03). g=−0.157 *6* (1975Yo04) using the time-differential perturbed angular distribution technique. Configuration=$\nu(i_{13/2}^{-2})$.
3019.3+x[&] *4*			
3180.9 *12*	11$^-$		
3395.4 *16*	(12)		
3549.7+x[&] *6*			
3867.0 *13*	14$^+$		
3884.9+x[&] *6*			
4145.1 *13*	16$^+$	3.1 ns *2*	$T_{1/2}$: From 1989Su12. Configuration=$\nu(i_{13/2}^{-2})\otimes 4^+$.
4342.0 *14*	16$^+$		
4342.0+y[‡]			Additional information 2.
4442.7+y[‡] *5*			
4566.0+y[‡] *7*			
4726.3+y[‡] *9*			
4934.9+y[‡] *10*			

Continued on next page (footnotes at end of table)

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43 (continued)

^{200}Pb Levels (continued)

E(level)[†]	J^{π}[a]	$T_{1/2}$	Comments
5007.7 *13*	17^-		Configuration=$\nu(f^{-1}_{5/2},i^{-3}_{13/2})$.
5075.4 *16*	19^-	73 ns *4*	$T_{1/2}$: From 1989Su12. Others: 87 ns *18* (2018La03), 77 ns *5* (1988Pa12) and 60 ns *15* (1973Pa03). Configuration=$\nu(f^{-1}_{5/2},i^{-3}_{13/2})$.
5197.4+y[‡] *12*			
5516.9+y[‡] *13*			
5801.0 *16*			
5891.6+y[‡] *14*			
6075.2 *16*			
6160.7 *16*			
6160.7+z[#] *17*			Additional information 3.
6160.7+u[@]			Additional information 4.
6278.1 *16*			
6321.0+y[‡] *15*			
6373.3+z[#] *5*			
6398.3+u[@] *5*			
6613.6+z[#] *7*			
6679.6+u[@] *7*			
6799.6 *16*			
6801.6+y[‡] *15*			
6896.9+z[#] *9*			
6947.9 *17*	(25^-)	58 ns *4*	J^{π},$T_{1/2}$: From γγ(t) in 1988Pa12. Configuration=$\nu(f^{-1}_{5/2},i^{-5}_{13/2})$.
7014.2+u[@] *9*			
7226.5+z[#] *10*			
7334.6+y[‡] *16*			
7395.6+u[@] *10*			
7606.6+z[#] *12*			
7819.1+u[@] *12*			
7916.7+y[‡] *17*			
8045.4+z[#] *13*			
8170.1 *18*			
8436.5 *18*			
8549.0+y[‡] *17*			
8630.1 *18*			

[†] From a least-squares fit to Eγ.
[‡] Band 1 in 1994Ba43.
[#] Band 2 in 1994Ba43.
[@] Band 3 in 1994Ba43.
[&] Group 1 from 1994Ba43.
[a] From 1994Ba43, unless otherwise stated.

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43 (continued)

γ(^{200}Pb)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	$I_{(\gamma+ce)}$[@]	Comments
29.5[‡] *10*		2183.0	9^-	2153.5	7^-				E_γ: From ce(M) in 1988Pa12 and 1989Di13; < 30 keV in 1989Su12.
45.4 *4*		3005.4	12^+	2960.0	10^+				E_γ: Average of 45.9 keV *7* and 45.2 keV *5*, determined from γ-ce coincidence data in 1988Pa12 and 1989Su12, respectively.
67.7 *8*		5075.4	19^-	5007.7	17^-	E2	37.0 *22*		α(L)=27.5 *17*; α(M)=7.3 *4* α(N)=1.83 *11*; α(O)=0.325 *20*; α(P)=0.0117 *7* E_γ: Average of 68.5 keV *5* and 66.9 keV *5*, determined from γ-ce coincidence data in 1988Pa12 and 1989Su12, respectively. Mult.: L12/L3=1.3 *2* and L12/(M+N+O)=1.75 *50* in 1988Pa12.
100.6 *5*		4442.7+y		4342.0+y		(M1+E2)	7.7 *15*	47 *12*	ce(K)/(γ+ce)=0.5 *6*; ce(L)/(γ+ce)=0.32 *12*; ce(M)/(γ+ce)=0.08 *4* ce(N)/(γ+ce)=0.021 *12*; ce(O)/(γ+ce)=0.0038 *21*; ce(P)/(γ+ce)=0.00021 *4* α(K)=4.0 *35*; α(L)=2.8 *14*; α(M)=0.7 *4* α(N)=0.18 *10*; α(O)=0.033 *17*; α(P)=0.00181 *16* Mult.: DCO=0.87 *36* (1994Ba43).
123.3 *5*		4566.0+y		4442.7+y		M1(+E2)	3.9 *13*	69[a] *14*	ce(K)/(γ+ce)=0.47 *28*; ce(L)/(γ+ce)=0.24 *9*; ce(M)/(γ+ce)=0.062 *30* ce(N)/(γ+ce)=0.016 *8*; ce(O)/(γ+ce)=0.0029 *13*; ce(P)/(γ+ce)=1.8×10^{-4} *5* α(K)=2.3 *19*; α(L)=1.2 *5*; α(M)=0.30 *13* α(N)=0.076 *33*; α(O)=0.014 *5*; α(P)=0.00087 *6* Mult.: DCO=0.60 *17* (1994Ba43).
148.3 *5*	20 *7*	6947.9	(25^-)	6799.6		E1,E2		6.0 *8*	Mult.: DCO=0.94 *25* (1994Ba43) would support E2 assignment, but the α(T)exp=0.141 *22* in 1988Pa12 favor E1.
160.3 *5*		4726.3+y		4566.0+y		M1(+E2)	1.7 *7*	91[a] *15*	ce(K)/(γ+ce)=0.42 *19*; ce(L)/(γ+ce)=0.16 *5*; ce(M)/(γ+ce)=0.040 *14* ce(N)/(γ+ce)=0.010 *4*; ce(O)/(γ+ce)=0.0019 *6*; ce(P)/(γ+ce)=1.3×10^{-4} *5* α(K)=1.1 *9*; α(L)=0.42 *8*; α(M)=0.106 *26* α(N)=0.027 *6*; α(O)=0.0050 *10*; α(P)=0.00036 *8* Mult.: DCO=0.71 *14* (1994Ba43).
[x]193.1 *5*									
193.6 *5*	5.2 *19*	8630.1		8436.5					
196.7[‡] *5*	5.2 *19*	4342.0	16^+	4145.1	16^+	M1	1.372 *22*	≈29	ce(K)/(γ+ce)=0.472 *5*; ce(L)/(γ+ce)=0.0812 *14*; ce(M)/(γ+ce)=0.01904 *34* ce(N)/(γ+ce)=0.00484 *9*; ce(O)/(γ+ce)=0.000965 *18*; ce(P)/(γ+ce)=0.0001031 *19* α(K)=1.120 *18*; α(L)=0.1927 *30*; α(M)=0.0452 *7* α(N)=0.01148 *18*; α(O)=0.00229 *4*; α(P)=0.000244 *4* Mult.: From intensity balances in 1988Pa12. The relatively small population of this level would argue against J=17; K/L in 1989Su12.

$^{200}_{82}Pb_{118}$-3

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43 (continued)

γ(^{200}Pb) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	$I_{(\gamma+ce)}$[@]	Comments
208.6 *5*		4934.9+y		4726.3+y		M1(+E2)	0.8 *4*	99[a] *15*	ce(K)/(γ+ce)=0.31 *16*; ce(L)/(γ+ce)=0.092 *21*; ce(M)/(γ+ce)=0.023 *5* ce(N)/(γ+ce)=0.0058 *13*; ce(O)/(γ+ce)=0.00110 *25*; ce(P)/(γ+ce)=9.E−5 *4* α(K)=0.6 *4*; α(L)=0.1628 *27*; α(M)=0.0403 *21* α(N)=0.0102 *5*; α(O)=0.001937 *32*; α(P)=1.5×10^{-4} *5* Mult.: DCO=0.66 *12* (1994Ba43).
212.5 *5*		6373.3+z		6160.7+z		M1(+E2)	0.7 *4*	50[&] *10*	ce(K)/(γ+ce)=0.30 *15*; ce(L)/(γ+ce)=0.088 *20*; ce(M)/(γ+ce)=0.022 *5* ce(N)/(γ+ce)=0.0055 *12*; ce(O)/(γ+ce)=0.00105 *23*; ce(P)/(γ+ce)=8.4×10^{-5} *35* α(K)=0.5 *4*; α(L)=0.1526 *35*; α(M)=0.0377 *15* α(N)=0.0096 *4*; α(O)=0.00182 *4*; α(P)=1.4×10^{-4} *5* Mult.: DCO=0.62 *16* (1994Ba43).
214.5 *10* [x]234.3 *5*		3395.4	(12)	3180.9	11$^-$				
237.5 *5*		6398.3+u		6160.7+u				84[b] *19*	
240.3 *5*		6613.6+z		6373.3+z		M1(+E2)	0.51 *28*	82[&] *15*	ce(K)/(γ+ce)=0.25 *13*; ce(L)/(γ+ce)=0.066 *14*; ce(M)/(γ+ce)=0.0163 *31* ce(N)/(γ+ce)=0.0041 *8*; ce(O)/(γ+ce)=0.00079 *16*; ce(P)/(γ+ce)=6.6×10^{-5} *29* α(K)=0.38 *27*; α(L)=0.100 *10*; α(M)=0.0246 *12* α(N)=0.00624 *32*; α(O)=0.00119 *11*; α(P)=1.0×10^{-4} *4* Mult.: DCO=0.73 *15* (1994Ba43).
245.2[‡] *2*	70 *15*	2153.5	7$^-$	1908.3	5$^-$	E2	0.2161 *31*	105.5 *10*	ce(K)/(γ+ce)=0.0860 *11*; ce(L)/(γ+ce)=0.0686 *9*; ce(M)/(γ+ce)=0.01778 *26* ce(N)/(γ+ce)=0.00449 *7*; ce(O)/(γ+ce)=0.000818 *12*; ce(P)/(γ+ce)=4.53×10^{-5} *7* α(K)=0.1045 *15*; α(L)=0.0834 *12*; α(M)=0.02163 *31* α(N)=0.00546 *8*; α(O)=0.000995 *14*; α(P)=5.51×10^{-5} *8* Mult.: α(K)exp=0.11 *1*; α(L1)exp+α(L2)exp=0.077 *10*, α(L3)exp=0.030 *5* (1988Pa12).
262.5 *5*		5197.4+y		4934.9+y		M1(+E2)	0.39 *22*	100[a] *14*	ce(K)/(γ+ce)=0.21 *12*; ce(L)/(γ+ce)=0.054 *11*; ce(M)/(γ+ce)=0.0131 *25* ce(N)/(γ+ce)=0.0033 *6*; ce(O)/(γ+ce)=0.00064 *14*; ce(P)/(γ+ce)=5.5×10^{-5} *25* α(K)=0.30 *21*; α(L)=0.075 *11*; α(M)=0.0183 *19* α(N)=0.0046 *5*; α(O)=0.00089 *13*; α(P)=7.6×10^{-5} *33* Mult.: DCO=0.72 *12* (1994Ba43).
274.1 *5*	12 *4*	6075.2		5801.0		D,Q			E_γ: 1988Pa12, 1994Ba43. Mult.: DCO=0.85 *38* (1994Ba43).
278.1[‡] *2*	76 *22*	4145.1	16$^+$	3867.0	14$^+$	E2	0.1453 *21*	68 *3*	ce(K)/(γ+ce)=0.0678 *9*; ce(L)/(γ+ce)=0.0442 *6*;

$^{200}_{82}Pb_{118}$-4

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43 (continued)

γ(^{200}Pb) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [c]	$I_{(\gamma+ce)}$ [@]	Comments
									ce(M)/(γ+ce)=0.01140 *16* ce(N)/(γ+ce)=0.00288 *4*; ce(O)/(γ+ce)=0.000528 *8*; ce(P)/(γ+ce)=3.11×10^{-5} *4* α(K)=0.0777 *11*; α(L)=0.0507 *7*; α(M)=0.01306 *19* α(N)=0.00330 *5*; α(O)=0.000605 *9*; α(P)=3.56×10^{-5} *5* Mult.: α(K)exp=0.087 *9*, α(L1)exp+α(L2)exp=0.051 *7*, α(L3)exp=0.018 *4* (1988Pa12); DCO=0.95 *23* (1994Ba43).
281.3 *5*		6679.6+u		6398.3+u				100[b] *19*	
283.3 *5*		6896.9+z		6613.6+z		M1(+E2)	0.32 *18*	100[&] *15*	ce(K)/(γ+ce)=0.18 *10*; ce(L)/(γ+ce)=0.044 *10*; ce(M)/(γ+ce)=0.0108 *22* ce(N)/(γ+ce)=0.0027 *6*; ce(O)/(γ+ce)=0.00053 *12*; ce(P)/(γ+ce)=4.6×10^{-5} *22* α(K)=0.24 *17*; α(L)=0.058 *11*; α(M)=0.0142 *21* α(N)=0.0036 *5*; α(O)=0.00069 *13*; α(P)=6.1×10^{-5} *28* Mult.: DCO=0.56 *12* (1994Ba43).
[x]293.1 *5*									
310.1 *5*		2493.1+x		2183.0+x		[M1(+E2)]	0.25 *14*		α(K)=0.19 *13*; α(L)=0.044 *10*; α(M)=0.0106 *21* α(N)=0.0027 *5*; α(O)=0.00052 *12*; α(P)=4.7×10^{-5} *22*
319.5 *5*		5516.9+y		5197.4+y		M1(+E2)	0.23 *13*	80[a] *11*	ce(K)/(γ+ce)=0.14 *8*; ce(L)/(γ+ce)=0.033 *9*; ce(M)/(γ+ce)=0.0079 *19* ce(N)/(γ+ce)=0.0020 *5*; ce(O)/(γ+ce)=3.9×10^{-4} *11*; ce(P)/(γ+ce)=3.5×10^{-5} *17* α(K)=0.17 *12*; α(L)=0.040 *10*; α(M)=0.0097 *20* α(N)=0.0025 *5*; α(O)=4.8×10^{-4} *12*; α(P)=4.3×10^{-5} *21* Mult.: DCO=0.62 *12* (1994Ba43).
329.6 *5*		7226.5+z		6896.9+z		M1(+E2)	0.21 *12*	88[&] *18*	ce(K)/(γ+ce)=0.13 *8*; ce(L)/(γ+ce)=0.030 *8*; ce(M)/(γ+ce)=0.0073 *18* ce(N)/(γ+ce)=0.0018 *5*; ce(O)/(γ+ce)=3.6×10^{-4} *10*; ce(P)/(γ+ce)=3.3×10^{-5} *16* α(K)=0.16 *11*; α(L)=0.036 *10*; α(M)=0.0088 *20* α(N)=0.0022 *5*; α(O)=4.3×10^{-4} *11*; α(P)=3.9×10^{-5} *19* Mult.: DCO=0.61 *12* (1994Ba43).
334.6 *5*		7014.2+u		6679.6+u				75[b] *14*	
335.2 *5*		3884.9+x		3549.7+x					
348.1 *3*		1836.7	(3)	1488.69	4$^+$	(D)			E_γ,Mult.: From 2014ChZW. ΔEγ estimated by the evaluator.
359.6 *5*	20 *5*	6160.7		5801.0		D			Mult.: DCO=0.61 *19* (1994Ba43).
[x]363.9 *5*									
374.7 *5*		5891.6+y		5516.9+y		M1(+E2)	0.15 *9*	65[a] *10*	ce(K)/(γ+ce)=0.10 *6*; ce(L)/(γ+ce)=0.021 *7*; ce(M)/(γ+ce)=0.0052 *15* ce(N)/(γ+ce)=0.0013 *4*; ce(O)/(γ+ce)=2.5×10^{-4} *8*; ce(P)/(γ+ce)=2.4×10^{-5} *12* α(K)=0.11 *8*; α(L)=0.025 *8*; α(M)=0.0059 *17* α(N)=0.0015 *4*; α(O)=2.9×10^{-4} *9*; α(P)=2.7×10^{-5} *14* Mult.: DCO=0.63 *11* (1994Ba43).

$^{200}_{82}Pb_{118}$-5

(HI,xnγ) **1988Pa12,1992Ba13,1994Ba43 (continued)**

γ(^{200}Pb) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	$I_{(\gamma+ce)}$[@]	Comments
380.1 *5*		7606.6+z		7226.5+z		M1(+E2)	0.14 *8*	67[&] *13*	ce(K)/(γ+ce)=0.10 *6*; ce(L)/(γ+ce)=0.021 *7*; ce(M)/(γ+ce)=0.0050 *15* ce(N)/(γ+ce)=0.0013 *4*; ce(O)/(γ+ce)=2.5×10^{-4} *8*; ce(P)/(γ+ce)=2.3×10^{-5} *12* α(K)=0.11 *7*; α(L)=0.024 *8*; α(M)=0.0057 *16* α(N)=0.0014 *4*; α(O)=2.8×10^{-4} *9*; α(P)=2.6×10^{-5} *13* Mult.: DCO=0.67 *15* (1994Ba43).
381.4 *5*		7395.6+u		7014.2+u				66[b] *14*	
419.6[‡] *2*	97 *24*	1908.3	5$^-$	1488.69	4$^+$	E1	0.01389 *19*	105.2 *11*	ce(K)/(γ+ce)=0.01129 *16*; ce(L)/(γ+ce)=0.001845 *26*; ce(M)/(γ+ce)=0.000429 *6* ce(N)/(γ+ce)=0.0001084 *15*; ce(O)/(γ+ce)=2.121×10^{-5} *30*; ce(P)/(γ+ce)=2.043×10^{-6} *29* α(K)=0.01145 *16*; α(L)=0.001871 *26*; α(M)=0.000435 *6* α(N)=0.0001099 *15*; α(O)=2.150×10^{-5} *30*; α(P)=2.072×10^{-6} *29* Mult.: α(K)exp=0.023 *4* (1988Pa12).
423.5 *5*		7819.1+u		7395.6+u				32[b] *9*	
429.4 *5*		6321.0+y		5891.6+y		M1(+E2)	0.10 *6*	53[a] *8*	ce(K)/(γ+ce)=0.07 *4*; ce(L)/(γ+ce)=0.015 *5*; ce(M)/(γ+ce)=0.0036 *12* ce(N)/(γ+ce)=9.1×10^{-4} *30*; ce(O)/(γ+ce)=1.8×10^{-4} *6*; ce(P)/(γ+ce)=1.7×10^{-5} *9* α(K)=0.08 *5*; α(L)=0.016 *6*; α(M)=0.0039 *13* α(N)=1.00×10^{-3} *33*; α(O)=2.0×10^{-4} *7*; α(P)=1.9×10^{-5} *10* Mult.: DCO=0.51 *10* (1994Ba43).
438.8 *5*		8045.4+z		7606.6+z		M1(+E2)	0.10 *6*	42[&] *8*	ce(K)/(γ+ce)=0.07 *4*; ce(L)/(γ+ce)=0.014 *5*; ce(M)/(γ+ce)=0.0034 *11* ce(N)/(γ+ce)=8.6×10^{-4} *29*; ce(O)/(γ+ce)=1.7×10^{-4} *6*; ce(P)/(γ+ce)=1.6×10^{-5} *8* α(K)=0.08 *5*; α(L)=0.015 *6*; α(M)=0.0037 *12* α(N)=9.4×10^{-4} *32*; α(O)=1.8×10^{-4} *7*; α(P)=1.8×10^{-5} *9* Mult.: DCO=0.52 *16* (1994Ba43).
462.2[‡] *2*	100 *20*	1488.69	4$^+$	1026.50	2$^+$	E2	0.0356 *5*	98.1 *11*	ce(K)/(γ+ce)=0.02372 *32*; ce(L)/(γ+ce)=0.00803 *11*; ce(M)/(γ+ce)=0.002007 *28* ce(N)/(γ+ce)=0.000508 *7*; ce(O)/(γ+ce)=9.56×10^{-5} *13*; ce(P)/(γ+ce)=7.21×10^{-6} *10* α(K)=0.02456 *34*; α(L)=0.00832 *12*; α(M)=0.002078 *29* α(N)=0.000526 *7*; α(O)=9.90×10^{-5} *14*; α(P)=7.47×10^{-6} *10* Mult.: α(K)exp=0.034 *5*, α(L1)exp+α(L2)exp=0.0063 *12*, α(L3)exp=0.0039 *8* (1988Pa12).
477.1 *5*	1.2 *8*	6278.1		5801.0					
480.6 *5*		6801.6+y		6321.0+y		M1(+E2)	0.08 *4*	32[a] *6*	ce(K)/(γ+ce)=0.056 *33*; ce(L)/(γ+ce)=0.011 *4*; ce(M)/(γ+ce)=0.0027 *10* ce(N)/(γ+ce)=6.7×10^{-4} *24*; ce(O)/(γ+ce)=1.3×10^{-4} *5*;

$^{200}_{82}Pb_{118}$-6

(HI,xnγ) **1988Pa12,1992Ba13,1994Ba43 (continued)**

γ(^{200}Pb) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	$I_{(\gamma+ce)}$[@]	Comments
									ce(P)/(γ+ce)=1.3×10^{-5} *7* α(K)=0.06 *4*; α(L)=0.012 *5*; α(M)=0.0029 *10* α(N)=7.2×10^{-4} *26*; α(O)=1.4×10^{-4} *5*; α(P)=1.4×10^{-5} *7* Mult.: DCO=0.60 *13* (1994Ba43).
521.6 *5*	7 *3*	6799.6		6278.1					
526.3 *5*		3019.3+x		2493.1+x		M1(+E2)	0.060 *34*		α(K)=0.048 *29*; α(L)=0.009 *4*; α(M)=0.0022 *8* α(N)=5.6×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=1.1×10^{-5} *6* Mult.: DCO=0.45 *13*(1994Ba43).
530.4 *5*		3549.7+x		3019.3+x		M1(+E2)	0.059 *33*		α(K)=0.047 *29*; α(L)=0.009 *4*; α(M)=0.0022 *8* α(N)=5.5×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=1.1×10^{-5} *6* Mult.: DCO=0.47 *14*(1994Ba43).
533.0 *5*		7334.6+y		6801.6+y		M1(+E2)	0.058 *33*	25[a] *5*	ce(K)/(γ+ce)=0.044 *26*; ce(L)/(γ+ce)=0.0085 *34*; ce(M)/(γ+ce)=0.0020 *8* ce(N)/(γ+ce)=5.1×10^{-4} *20*; ce(O)/(γ+ce)=1.0×10^{-4} *4*; ce(P)/(γ+ce)=1.0×10^{-5} *5* α(K)=0.046 *28*; α(L)=0.009 *4*; α(M)=0.0021 *8* α(N)=5.4×10^{-4} *21*; α(O)=1.1×10^{-4} *4*; α(P)=1.1×10^{-5} *5* Mult.: DCO=0.59 *12* (1994Ba43).
582.1 *5*		7916.7+y		7334.6+y		M1(+E2)	0.046 *26*	12[a] *3*	ce(K)/(γ+ce)=0.036 *20*; ce(L)/(γ+ce)=0.0067 *28*; ce(M)/(γ+ce)=0.0016 *6* ce(N)/(γ+ce)=4.0×10^{-4} *16*; ce(O)/(γ+ce)=8.0×10^{-5} *33*; ce(P)/(γ+ce)=8.E−6 *4* α(K)=0.037 *22*; α(L)=0.0070 *29*; α(M)=0.0017 *7* α(N)=4.2×10^{-4} *17*; α(O)=8.3×10^{-5} *34*; α(P)=8.E−6 *4* Mult.: DCO=0.56 *20* (1994Ba43).
632.4 *5*		8549.0+y		7916.7+y				6[a] *2*	
638.9 *5*	25 *7*	6799.6		6160.7		D,Q			Mult.: DCO=0.97 *30* (1994Ba43).
665.6[‡] *3*	19 *7*	5007.7	17$^-$	4342.0	16$^+$	E1	0.00537 *8*	28.7 *14*	ce(K)/(γ+ce)=0.00443 *6*; ce(L)/(γ+ce)=0.000695 *10*; ce(M)/(γ+ce)=0.0001610 *23* ce(N)/(γ+ce)=4.07×10^{-5} *6*; ce(O)/(γ+ce)=8.02×10^{-6} *11*; ce(P)/(γ+ce)=8.07×10^{-7} *11* α(K)=0.00446 *6*; α(L)=0.000699 *10*; α(M)=0.0001618 *23* α(N)=4.09×10^{-5} *6*; α(O)=8.07×10^{-6} *11*; α(P)=8.11×10^{-7} *11* Mult.: DCO=0.66 *3* (1994Ba43); small α(K)exp in 1988Pa12.
724.3[‡] *4*	20 *5*	6799.6		6075.2		D	0.0129	2.6 *4*	Mult.: DCO=0.68 *26* (1994Ba43).
725.6[‡] *4*	48 *10*	5801.0		5075.4	19$^-$	(E2)	0.01273 *18*	5.9 *8*	ce(K)/(γ+ce)=0.00964 *13*; ce(L)/(γ+ce)=0.002227 *31*; ce(M)/(γ+ce)=0.000540 *8* ce(N)/(γ+ce)=0.0001367 *19*; ce(O)/(γ+ce)=2.64×10^{-5} *4*; ce(P)/(γ+ce)=2.352×10^{-6} *33*

$^{200}_{82}Pb_{118}$-7

(HI,xnγ) **1988Pa12,1992Ba13,1994Ba43 (continued)**

γ(^{200}Pb) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [c]	$I_{(\gamma+ce)}$ [@]	Comments
									ce(K)/(γ+ce)=0.00964 *13*; ce(L)/(γ+ce)=0.002227 *31*; ce(M)/(γ+ce)=0.000540 *8* ce(N)/(γ+ce)=0.0001367 *19*; ce(O)/(γ+ce)=2.64×10^{-5} *4*; ce(P)/(γ+ce)=2.352×10^{-6} *33* α(K)=0.00976 *14*; α(L)=0.002255 *32*; α(M)=0.000546 *8* α(N)=0.0001384 *19*; α(O)=2.67×10^{-5} *4*; α(P)=2.382×10^{-6} *33* Mult.: M. Pautrat (Priv. Comm. to M. Schmorak) withdrew the E1 assignment in 1988Pa12; DCO=0.93 *22* (1994Ba43).
777.0[‡] *2*	56 *22*	2960.0	10^+	2183.0	9^-	E1	0.00399 *6*	100.5 *12*	ce(K)/(γ+ce)=0.00330 *5*; ce(L)/(γ+ce)=0.000512 *7*; ce(M)/(γ+ce)=0.0001184 *17* ce(N)/(γ+ce)=2.99×10^{-5} *4*; ce(O)/(γ+ce)=5.91×10^{-6} *8*; ce(P)/(γ+ce)=6.01×10^{-7} *8* α(K)=0.00332 *5*; α(L)=0.000514 *7*; α(M)=0.0001188 *17* α(N)=3.00×10^{-5} *4*; α(O)=5.94×10^{-6} *8*; α(P)=6.04×10^{-7} *8* Mult.: α(K)exp=0.0027 *17* (1988Pa12).
810.2 *3*		1836.7	(3)	1026.50	2^+	(D)			Eγ,Mult.: From 2014ChZW. ΔEγ estimated by the evaluator.
836.3 *5*		3019.3+x		2183.0+x		E2	0.00950 *13*		α(K)=0.00743 *10*; α(L)=0.001576 *22*; α(M)=0.000379 *5* α(N)=9.59×10^{-5} *14*; α(O)=1.862×10^{-5} *26*; α(P)=1.726×10^{-6} *24* Mult.: DCO=0.87 *36* (1994Ba43).
861.6 *5*	105 *21*	3867.0	14^+	3005.4	12^+	E2	0.00894 *13*	71 *3*	ce(K)/(γ+ce)=0.00696 *10*; ce(L)/(γ+ce)=0.001452 *20*; ce(M)/(γ+ce)=0.000348 *5* ce(N)/(γ+ce)=8.83×10^{-5} *12*; ce(O)/(γ+ce)=1.715×10^{-5} *24*; ce(P)/(γ+ce)=1.602×10^{-6} *23* α(K)=0.00702 *10*; α(L)=0.001465 *21*; α(M)=0.000352 *5* α(N)=8.91×10^{-5} *13*; α(O)=1.731×10^{-5} *24*; α(P)=1.616×10^{-6} *23* Eγ: Other: 862.7 keV *3* in 1988Pa12. Mult.: α(K)exp=0.0066 *9* (1988Pa12), DCO=1.00 *14* (1994Ba43).
862.7[‡] *3*	25 *8*	5007.7	17^-	4145.1	16^+	E1	0.00328 *5*	46.2 *23*	ce(K)/(γ+ce)=0.00272 *4*; ce(L)/(γ+ce)=0.000419 *6*; ce(M)/(γ+ce)=9.67×10^{-5} *14* ce(N)/(γ+ce)=2.445×10^{-5} *34*; ce(O)/(γ+ce)=4.84×10^{-6} *7*; ce(P)/(γ+ce)=4.95×10^{-7} *7* α(K)=0.00273 *4*; α(L)=0.000420 *6*; α(M)=9.70×10^{-5} *14* α(N)=2.453×10^{-5} *34*; α(O)=4.86×10^{-6} *7*; α(P)=4.97×10^{-7} *7* Mult.: α(K)exp=0.0066 *9* doublet in 1988Pa12.
865.6 *5*		3884.9+x		3019.3+x		E2	0.00886 *12*		α(K)=0.00696 *10*; α(L)=0.001449 *20*; α(M)=0.000348 *5* α(N)=8.81×10^{-5} *12*; α(O)=1.711×10^{-5} *24*; α(P)=1.600×10^{-6} *22* Mult.: DCO=1.14 *33* (1994Ba43).
997.9 *5*	7 *4*	3180.9	11^-	2183.0	9^-	(E2)	0.00669 *9*		α(K)=0.00533 *7*; α(L)=0.001037 *15*; α(M)=0.0002470 *35* α(N)=6.26×10^{-5} *9*; α(O)=1.223×10^{-5} *17*; α(P)=1.179×10^{-6} *17* Mult.: DCO=0.83 *38* (1994Ba43).
998.6 *5*	3.7 *19*	6799.6		5801.0					
1014.2[d] *10*		7334.6+y		6321.0+y					
1026.5[‡] *1*	100 *20*	1026.50	2^+	0.0	0^+	E2	0.00633 *9*	100	ce(K)/(γ+ce)=0.00502 *7*; ce(L)/(γ+ce)=0.000967 *14*;

$^{200}_{82}Pb_{118}$-8

γ(^{200}Pb) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	$I_{(\gamma+ce)}$[@]	Comments
									ce(M)/(γ+ce)=0.0002298 *32*

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43 (continued)

γ(^{200}Pb) (continued)

E_γ [†]	I_γ [†]	E_i(level)	E_f	J^π_f	Mult. [#]	Comments
						ce(N)/(γ+ce)=5.82×10^{-5} *8*; ce(O)/(γ+ce)=1.139×10^{-5} *16*; ce(P)/(γ+ce)=1.104×10^{-6} *15* α(K)=0.00505 *7*; α(L)=0.000973 *14*; α(M)=0.0002313 *32* α(N)=5.86×10^{-5} *8*; α(O)=1.146×10^{-5} *16*; α(P)=1.111×10^{-6} *16* Mult.: α(K)exp=0.0032 *15* (1988Pa12).
1202.7 *5*	4.8 *18*	6278.1	5075.4	19$^-$		
1214.3 *10*		8549.0+y	7334.6+y			
1222.2 *5*	10 *3*	8170.1	6947.9	(25$^-$)		
1488.6 *5*	21 *5*	8436.5	6947.9	(25$^-$)	D	Mult.: DCO=0.66 *23* (1994Ba43).

† From 1994Ba43, unless otherwise stated. ΔEγ estimated by evaluator.
‡ From 1988Pa12.
# From α(K)exp, α(L)exp and subshell ratios in 1988Pa12, and DCO and the apparent band structures in 1994Ba43.
@ From 1988Pa12, unless otherwise stated.
& From 1994Ba43 normalized to the 283.3γ. The I(γ+ce) of this transition is ≈11% of that for the 1026.5γ.
a From 1994Ba43 normalized to the 262.5γ. The I(γ+ce) of this transition is ≈15% of that for the 1026.5γ.
b From 1994Ba43 normalized to the 281.3γ. The I(γ+ce) of this transition is ≈7% of that for the 1026.5γ.
c Additional information 5.
d Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

$^{200}_{82}Pb_{118}$-10

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43

Level Scheme

Intensities: Relative I_γ

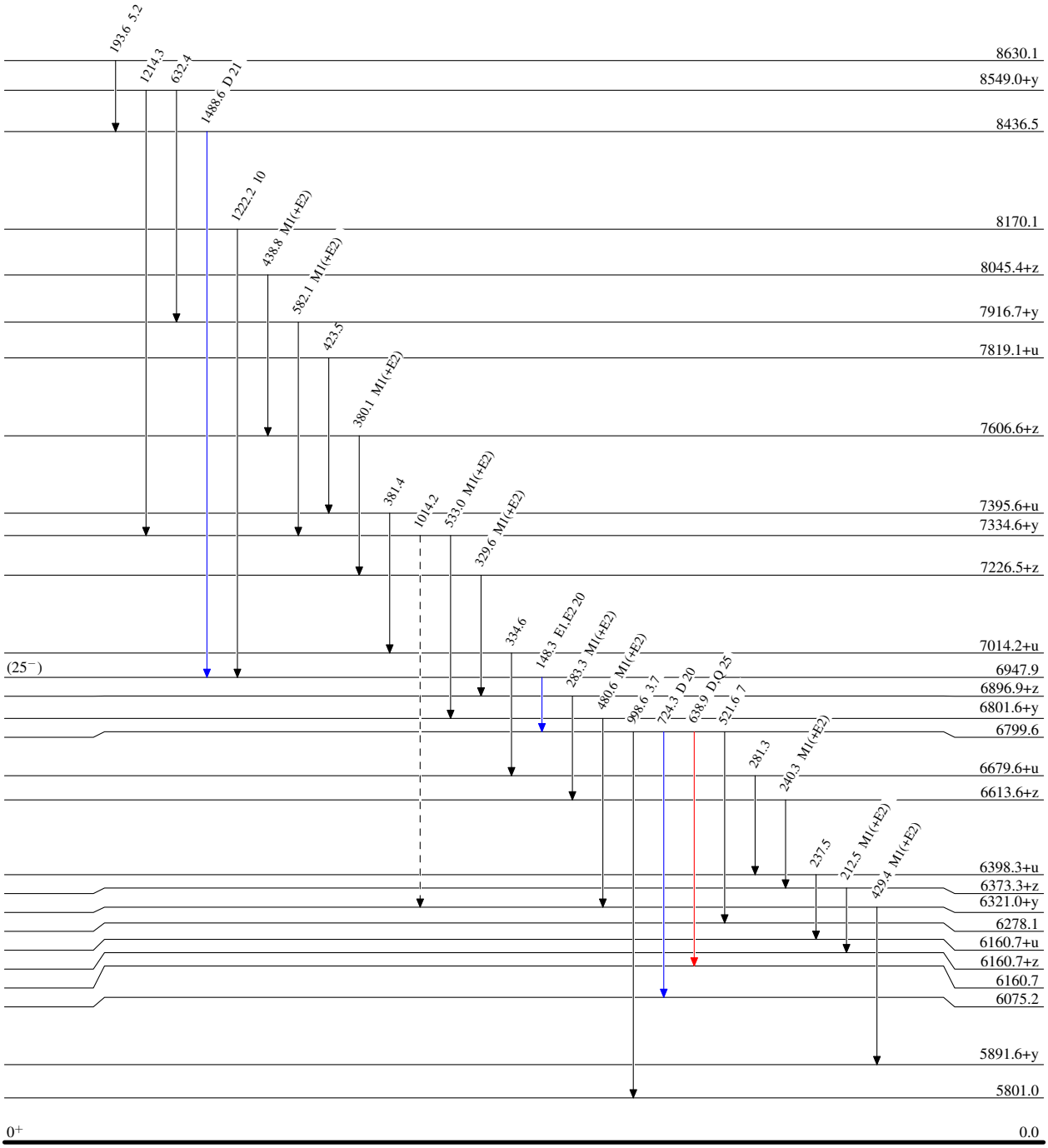
Legend

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

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

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

γ Decay (Uncertain)



$^{200}_{82}Pb_{118}$

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43

Level Scheme (continued)

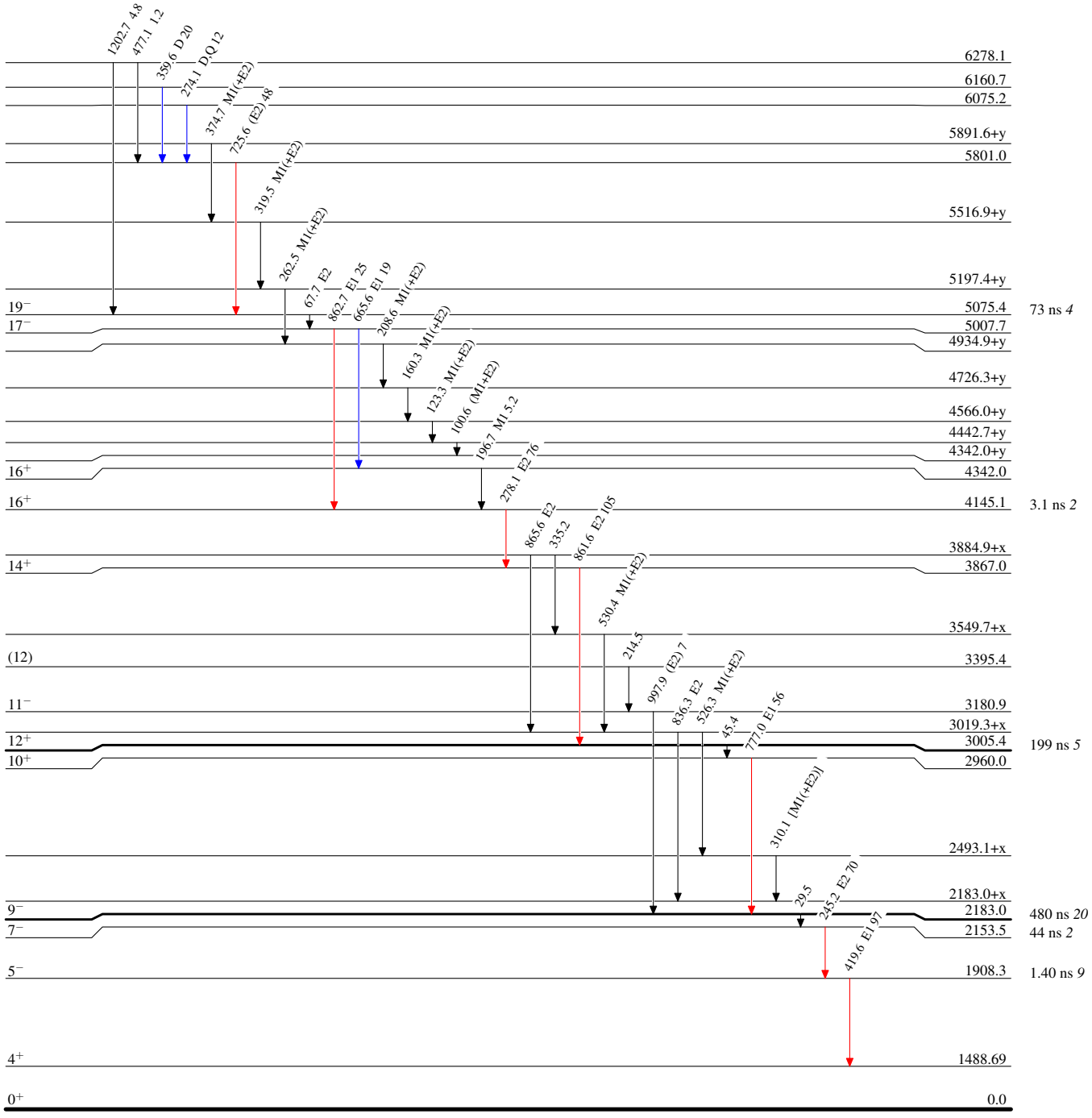
Intensities: Relative I_γ

Legend

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

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

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

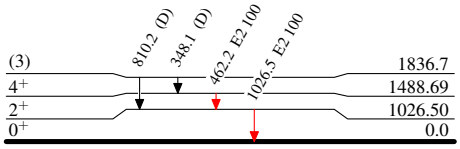


$^{200}_{82}Pb_{118}$

(HI,xnγ) 1988Pa12,1992Ba13,1994Ba43

Level Scheme (continued)

Intensities: Relative I_γ



$^{200}_{82}Pb_{118}$