(HI,xnγ) 1996Ka15,1986Pa18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 121, 395 (2014)	1-Mar-2014

Others: 1986Pa16, 1981He07.

1996Ka15: ^{184}W(^{16}O,5nγ) E=113 MeV. Two dipole γ-ray cascades observed by using EUROGAM spectrometer with 45 Ge detectors, γ(θ) at θ=72°, 86°, 94°, 108°, 134°, 158° and γγ- coin, Eγ, Iγ, measured. 10% population leading to ^{195}Pb observed.

1986Pa16: ^{184}W(^{16}O,5nγ) E=98 MeV; Eγ, Iγ, ce, and γ-ce coin measured with Ge(Li) and Si(Li).

1986Pa18: ^{184}W(^{16}O,5nγ) E=100 MeV, ^{14}N on Re E=76 MeV; Eγ, Iγ, ce, γ(θ) θ=30°, 60°, 90°, γγ coin, γ-ce coin, RDM measured with Ge(Li) and Si(Li); compared to the microscopic calculations in two or three quasiparticle approximation.

1981He07: ^{198}Hg(^{3}He,6n), ^{199}Hg(^{3}He,7n) E=74 MeV; Eγ, γ(θ), γγ coin, $T_{1/2}$ measured with Ge(Li).

For high-spin level syst of ^{195}Pb-^{203}Pb, see 1995Fa19, 1986Pa18 and 1977He06.

^{195}Pb Levels

All data are from 1996Ka15, except as noted. See also 1995Fa19, 1986Pa16.

E(level)†	Jπ#	$T_{1/2}$@	Comments
203[a] *5*	13/2+‡	15.0 min *12*	E(level): level energy held fixed In least-squares adjustment. E(level): to make comparisons easier with the even lead nuclei the isomeric 13/2+ state is considered as g.s. (1996Ka15,1995Fa19,1986Pa16,1986Pa18) x=201 *4* from Adopted Levels levels.
1172.90[a] *20*	17/2+		Configuration=((ν $1i_{13/2}$)$^{-1}$(^{196}Pb 2+))17/2+ (1986Pa18).
1754.2[a] *3*	21/2+		Configuration=((ν $1i_{13/2}$)$^{-1}$(^{196}Pb 4+))21/2+ (1986Pa18).
1759.4 *3*	21/2−	10.0& μs *7*	$T_{1/2}$: others: >6 μs (1978Ri01), >4 μs (1980AlZS), 10.0 μs (1978SaZE), 10.0 μs *7* (1976HeZD). Configuration=((ν $i_{13/2}$)$^{-1}$(^{196}Pb 5−))21/2− (1986Pa18).
1884.4 *3*	(23/2−)		
2186.4 *3*	(23/2−)		
2372.0[a] *3*	(25/2+)		
2413.5 *3*	27/2−	2.3 ns *7*	
2463.4 *4*	23/2		
2469.4 *4*	23/2+		
2572.0 *4*	25/2+		
2805.3 *4*	27/2−		
2815.3 *3*	29/2+		
2902.1 *5*	33/2+	95 ns *20*	g=−0.156 *6* (1985St16) $T_{1/2}$: from 1982AlZQ. Others: 50 ns *30* (1985St16), 81 ns *17* (1986Pa16), 95 ns (1986LaZT), 94 ns (1983RaZW, evaluator reassigned to this level). Configuration=(ν $1i_{13/2}$)$^{-3}$. Other: g=−0.185 *17* (1983RaZW) assigned by authors to 29/2+ level.
2903.5 *5*	27/2+		
2968.4[b] *4*	27/2−		
3054.2 *5*	29/2+		
3063.9 *7*	29/2+		
3098.1[b] *6*	29/2−		
3150.6 *5*			
3362.1[b] *6*	31/2−		
3496.3 *5*			
3646.9 *7*	31/2+		
3734.8[b] *6*	33/2−		
3787.6 *5*	33/2+		
3868.5 *7*	33/2+		

Continued on next page (footnotes at end of table)

(HI,xnγ) 1996Ka15,1986Pa18 (continued)

^{195}Pb Levels (continued)

E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#
3903.9 *6*		4559.5[d] *8*	(35/2$^-$)	5270.6[c] *8*	(41/2$^-$)	6529.0[d] *11*	(49/2$^-$)
4120.0[b] *7*	35/2$^-$	4566.6[b] *7*	(37/2)$^-$	5412.1[d] *11*	(43/2$^-$)	6674.4[c] *12*	(51/2$^-$)
4199.5 *6*		4693.0[d] *9*	(37/2$^-$)	5467.9[c] *9*	(43/2$^-$)	6906.8[d] *12*	(51/2$^-$)
4411.7 *7*	35/2$^+$	4834.9 *8*		5702.7[c] *10*	(45/2$^-$)	7091.0[c] *13*	(53/2$^-$)
4432.8 *8*		4865.6[d] *10*	(39/2$^-$)	5770.1[d] *11*	(45/2$^-$)	7280.8[d] *12*	(53/2$^-$)
4465.8[d] *6*	(33/2$^-$)	4967.1 *8*	(39/2)	5978.6[c] *11*	(47/2$^-$)	7538[c]	(55/2$^-$)
4500.1 *7*		5107.2[d] *10*	(41/2$^-$)	6144.0[d] *11*	(47/2$^-$)		
4524.0 *7*		5123.8[c] *7*	(39/2$^-$)	6308.3[c] *12*	(49/2$^-$)		

† From Eγ and $\gamma\gamma$-coin using least-squares fit to data. See also 1995Fa19,1986Pa16.
‡ From Adopted Levels.
# Based on $\gamma(\theta)$, mult, and J^π systematics of odd Pb isotopes, except as noted.
@ From RDM (1986Pa18), except as noted.
& From delay coin (1981He07,1977He06).
[a] Band(A): yrast band.
[b] Band(B): band-1.
[c] Band(C): band-2.
[d] Band(D): band-3.

(HI,xnγ) 1996Ka15,1986Pa18 (continued)

$\gamma(^{195}Pb)$

All data are from 1996Ka15, except as noted.

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ	α[a]	$I_{(\gamma+ce)}$[#]	Comments
(5.1[†])		1759.4	$21/2^-$	1754.2	$21/2^+$				28 *6*	$I_{(\gamma+ce)}$: from I(γ+ce)(5.1γ)/I(γ+ce)(586.5γ)=(41 *5*)/(59 *5*) and I(γ+ce)(586.5 γ)=39.6 *4* deduced from authors' (1986Pa18) values of B(E3), δ, α, and $T_{1/2}$=10.0 μs *7*.
(6[†])		2469.4	$23/2^+$	2463.4	23/2					
(54[†])		4465.8	$(33/2^-)$	4411.7	$35/2^+$					
(86.8[‡] *3*)		2902.1	$33/2^+$	2815.3	$29/2^+$	E2		11.31 *25*	41.8 *40*	ce(L)/(γ+ce)=0.684 *11*; ce(M)/(γ+ce)=0.181 *5*; ce(N+)/(γ+ce)=0.0540 *16* $I_{(\gamma+ce)}$: pure E2 transition assumed (1986Pa18). α: α(L1)exp+α(L2)exp=4.0 *8*, α(L1)exp+α(L2)exp/α(L3)exp=1.30 *+80−30* (1986Pa18); α(exp)=8.8 *20* deduced from the intensity balance (1986Pa16).
93.8 *5*	2.0 *6*	4559.5	$(35/2^-)$	4465.8	$(33/2^-)$	M1[&]		11.29 *24*		α(K)=9.18 *19*; α(L)=1.61 *4*; α(M)=0.378 *8*; α(N+..)=0.1173 *25*
97.3 *5*	1.0 *5*	2469.4	$23/2^+$	2372.0	$(25/2^+)$	(M1)[&]		10.18 *21*		α(K)=8.29 *17*; α(L)=1.45 *3*; α(M)=0.340 *7*; α(N+..)=0.1055 *22*
(99[†])		2903.5	$27/2^+$	2805.3	$27/2^-$					
102.7 *5*	3 *1*	2572.0	$25/2^+$	2469.4	$23/2^+$	M1[&]		8.74 *18*		α(K)=7.11 *14*; α(L)=1.240 *25*; α(M)=0.291 *6*; α(N+..)=0.0903 *18*
125.0[‡] *1*		1884.4	$(23/2^-)$	1759.4	$21/2^-$	(E2)+M1	≤0.65	4.6 *4*	19.9 *14*	ce(K)/(γ+ce)=0.63 *4*; ce(L)/(γ+ce)=0.148 *22*; ce(M)/(γ+ce)=0.036 *7*; ce(N+)/(γ+ce)=0.0110 *20* ce(K)/(γ+ce)=0.63 *4*; ce(L)/(γ+ce)=0.148 *24*; ce(M)/(γ+ce)=0.036 *7*; ce(N)/(γ+ce)=0.0118 *23* α: α(exp)=4.63 *60* deduced from the intensity balance (1986Pa18). δ: from α(L1)exp+α(L2)exp=0.82 *10*.
129.7 *4*	7 *2*	3098.1	$29/2^-$	2968.4	$27/2^-$	M1		4.49 *8*		α(K)=3.66 *6*; α(L)=0.634 *11*; α(M)=0.1486 *25*; α(N+..)=0.0461 *8* ce(K)/(γ+ce)=0.670; ce(L)/(γ+ce)=0.116; ce(M)/(γ+ce)=0.0272; ce(N)/(γ+ce)=0.0090 $\gamma(\theta)$: A_2=−0.2 *1* (1996Ka15).
130		1884.4	$(23/2^-)$	1754.2	$21/2^+$					
133.5 *4*	5 *1*	4693.0	$(37/2^-)$	4559.5	$(35/2^-)$	M1		4.13 *7*		α(K)=3.37 *6*; α(L)=0.583 *10*; α(M)=0.1368 *23*; α(N+..)=0.0424 *7* ce(K)/(γ+ce)=0.660; ce(L)/(γ+ce)=0.114; ce(M)/(γ+ce)=0.0268; ce(N)/(γ+ce)=0.0089 $\gamma(\theta)$: A_2=−0.2 *1* (1996Ka15).
146.8 *5*	2.0 *6*	5270.6	$(41/2^-)$	5123.8	$(39/2^-)$	M1		3.15 *6*		α(K)=2.57 *5*; α(L)=0.445 *8*; α(M)=0.1043 *18*;

$^{195}_{82}Pb_{113}$-3

(HI,xnγ) **1996Ka15,1986Pa18 (continued)**

γ(^{195}Pb) (continued)

E_γ	I_γ [#]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α [a]	$I_{(\gamma+ce)}$ [#]	Comments
									α(N+..)=0.0324 *6* ce(K)/(γ+ce)=0.624; ce(L)/(γ+ce)=0.108; ce(M)/(γ+ce)=0.0253; ce(N)/(γ+ce)=0.0084 γ(θ): A_2=−0.2 *1* (1996Ka15).
160.4 *5*	4 *1*	3063.9	29/2$^+$	2903.5	27/2$^+$	M1&	2.45		α(K)=2.00 *4*; α(L)=0.346 *6*; α(M)=0.0810 *14*; α(N+..)=0.0251 *5* ce(K)/(γ+ce)=0.585; ce(L)/(γ+ce)=0.101; ce(M)/(γ+ce)=0.0237; ce(N)/(γ+ce)=0.00781 γ(θ): A_2=−0.3 *1* (1996Ka15).
162.8 *5*	3 *1*	2968.4	27/2$^-$	2805.3	27/2$^-$	M1&	2.35		α(K)=1.92 *4*; α(L)=0.331 *6*; α(M)=0.0777 *13*; α(N+..)=0.0241 *4*
172.6 *4*	8 *2*	4865.6	(39/2$^-$)	4693.0	(37/2$^-$)	M1	2.00		α(K)=1.63 *3*; α(L)=0.281 *5*; α(M)=0.0658 *11*; α(N+..)=0.0204 *4* ce(K)/(γ+ce)=0.550; ce(L)/(γ+ce)=0.095; ce(M)/(γ+ce)=0.0222; ce(N)/(γ+ce)=0.00731 γ(θ): A_2=−0.15 *5* (1996Ka15).
197.3 *4*	5 *1*	5467.9	(43/2$^-$)	5270.6	(41/2$^-$)	M1&	1.371		α(K)=1.119 *17*; α(L)=0.193 *3*; α(M)=0.0451 *7*; α(N+..)=0.01400 *22*
199.9 *5*	4 *1*	2572.0	25/2$^+$	2372.0	(25/2$^+$)	M1&	1.322 *21*		α(K)=1.079 *17*; α(L)=0.186 *3*; α(M)=0.0435 *7*; α(N+..)=0.01349 *22*
221.5 *5*	2.0 *7*	3868.5	33/2$^+$	3646.9	31/2$^+$	(M1)	0.993 *16*		α(K)=0.811 *13*; α(L)=0.1392 *22*; α(M)=0.0326 *5*; α(N+..)=0.01012 *16*
227.1‡ *1*		2413.5	27/2$^-$	2186.4	(23/2$^-$)	E2	0.278	11.8 *20*	ce(K)/(γ+ce)=0.0980 *13*; ce(L)/(γ+ce)=0.0893 *12*; ce(M)/(γ+ce)=0.0232 *4*; ce(N+)/(γ+ce)=0.00699 *10* ce(K)/(γ+ce)=0.099; ce(L)/(γ+ce)=0.090; ce(M)/(γ+ce)=0.0234; ce(N)/(γ+ce)=0.00749 α: α(K)exp≤0.130 *30*; α(L1)exp+α(L2)exp=0.079 *19* (1986Pa18).
233.3 *2*	13 *2*	2805.3	27/2$^-$	2572.0	25/2$^+$	E1&	0.0536		α(K)=0.0437 *7*; α(L)=0.00759 *11*; α(M)=0.00178 *3*; α(N+..)=0.000541 *8* ce(K)/(γ+ce)=0.0417; ce(L)/(γ+ce)=0.00726; ce(M)/(γ+ce)=0.00169; ce(N)/(γ+ce)=0.00054 γ(θ): A_2=−0.3 *1* (1996Ka15).
234.8 *5*	6 *1*	5702.7	(45/2$^-$)	5467.9	(43/2$^-$)	M1&	0.844		α(K)=0.690 *11*; α(L)=0.1183 *18*; α(M)=0.0277 *5*; α(N+..)=0.00860 *13*
241.6 *3*	14 *3*	5107.2	(41/2$^-$)	4865.6	(39/2$^-$)	M1	0.780		α(K)=0.637 *10*; α(L)=0.1092 *16*; α(M)=0.0256 *4*; α(N+..)=0.00794 *12* ce(K)/(γ+ce)=0.364; ce(L)/(γ+ce)=0.0627; ce(M)/(γ+ce)=0.0147; ce(N)/(γ+ce)=0.00477 γ(θ): A_2=−0.3 *1* (1996Ka15).
264.0 *2*	23 *5*	3362.1	31/2$^-$	3098.1	29/2$^-$	M1	0.611		α(K)=0.499 *7*; α(L)=0.0854 *12*; α(M)=0.0200 *3*; α(N+..)=0.00621 *9* ce(K)/(γ+ce)=0.316; ce(L)/(γ+ce)=0.0542; ce(M)/(γ+ce)=0.0127; ce(N)/(γ+ce)=0.00412 γ(θ): A_2=−0.3 *1* (1996Ka15).
266.7 *5*	1.5 *5*	4465.8	(33/2$^-$)	4199.5					
275.9 *4*	8 *2*	5978.6	(47/2$^-$)	5702.7	(45/2$^-$)	M1	0.541		α(K)=0.442 *7*; α(L)=0.0756 *11*; α(M)=0.0177 *3*; α(N+..)=0.00549 *8* ce(K)/(γ+ce)=0.293; ce(L)/(γ+ce)=0.0502; ce(M)/(γ+ce)=0.0118; ce(N)/(γ+ce)=0.00381 γ(θ): A_2=−0.3 *1* (1996Ka15).
288.9 *5*	0.9 *3*	5123.8	(39/2$^-$)	4834.9					
291.4 *5*	1.1 *4*	3787.6	33/2$^+$	3496.3					

$^{195}_{82}Pb_{113}$-4

(HI,xnγ) 1996Ka15,1986Pa18 (continued)

γ(^{195}Pb) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	α[a]	Comments
295.9 *5*	0.8 *2*	4199.5		3903.9				
303.6 *5*	1.6 *5*	5270.6	(41/2$^-$)	4967.1	(39/2)			
304.8 *3*	16 *3*	5412.1	(43/2$^-$)	5107.2	(41/2$^-$)	M1	0.412	α(K)=0.337 *5*; α(L)=0.0575 *9*; α(M)=0.01345 *20*; α(N+..)=0.00417 *6* ce(K)/(γ+ce)=0.244; ce(L)/(γ+ce)=0.0417; ce(M)/(γ+ce)=0.0098; ce(N)/(γ+ce)=0.00317 γ(θ): A_2=−0.3 *1* (1996Ka15).
329.7 *4*	7 *2*	6308.3	(49/2$^-$)	5978.6	(47/2$^-$)	M1	0.332	α(K)=0.272 *4*; α(L)=0.0463 *7*; α(M)=0.01084 *16*; α(N+..)=0.00336 *5* ce(K)/(γ+ce)=0.209; ce(L)/(γ+ce)=0.0357; ce(M)/(γ+ce)=0.0084; ce(N)/(γ+ce)=0.00271 γ(θ): A_2=−0.4 *1* (1996Ka15).
331.4 *3*	11 *2*	2903.5	27/2$^+$	2572.0	25/2$^+$	M1	0.328	α(K)=0.268 *4*; α(L)=0.0457 *7*; α(M)=0.01069 *16*; α(N+..)=0.00332 *5* ce(K)/(γ+ce)=0.207; ce(L)/(γ+ce)=0.0353; ce(M)/(γ+ce)=0.00827; ce(N)/(γ+ce)=0.00268 γ(θ): A_2=−0.3 *1* (1996Ka15).
345.3 *4*	5 *1*	3150.6		2805.3	27/2$^-$	M1	0.293	α(K)=0.240 *4*; α(L)=0.0408 *6*; α(M)=0.00956 *14*; α(N+..)=0.00296 *5* ce(K)/(γ+ce)=0.190; ce(L)/(γ+ce)=0.0324; ce(M)/(γ+ce)=0.00760; ce(N)/(γ+ce)=0.00246 γ(θ): A_2=−0.4 *1* (1996Ka15).
345.3 *4*	5 *1*	3496.3		3150.6		M1	0.293	α(K)=0.240 *4*; α(L)=0.0408 *6*; α(M)=0.00956 *14*; α(N+..)=0.00296 *5* ce(K)/(γ+ce)=0.190; ce(L)/(γ+ce)=0.0324; ce(M)/(γ+ce)=0.00760; ce(N)/(γ+ce)=0.00246 γ(θ): A_2=−0.4 *1* (1996Ka15).
358.0 *3*	13 *3*	5770.1	(45/2$^-$)	5412.1	(43/2$^-$)	M1	0.266	α(K)=0.218 *3*; α(L)=0.0370 *6*; α(M)=0.00866 *13*; α(N+..)=0.00269 *4* ce(K)/(γ+ce)=0.177; ce(L)/(γ+ce)=0.0300; ce(M)/(γ+ce)=0.00704; ce(N)/(γ+ce)=0.00228 γ(θ): A_2=−0.3 *1* (1996Ka15).
361.9 *5*	1.9 *6*	4559.5	(35/2$^-$)	4199.5				
366.1 *4*	5 *1*	6674.4	(51/2$^-$)	6308.3	(49/2$^-$)	M1	0.250	α(K)=0.205 *3*; α(L)=0.0348 *5*; α(M)=0.00815 *12*; α(N+..)=0.00253 *4* ce(K)/(γ+ce)=0.168; ce(L)/(γ+ce)=0.0286; ce(M)/(γ+ce)=0.00670; ce(N)/(γ+ce)=0.00217 γ(θ): A_2=−0.3 *1* (1996Ka15).
372.7 *2*	24 *5*	3734.8	33/2$^-$	3362.1	31/2$^-$	M1	0.239	α(K)=0.195 *3*; α(L)=0.0332 *5*; α(M)=0.00776 *11*; α(N+..)=0.00241 *4* ce(K)/(γ+ce)=0.162; ce(L)/(γ+ce)=0.0276; ce(M)/(γ+ce)=0.00645; ce(N)/(γ+ce)=0.00209 γ(θ): A_2=−0.3 *1* (1996Ka15).
373.8 *3*	≈11	6144.0	(47/2$^-$)	5770.1	(45/2$^-$)	(M1)	0.237	α(K)=0.194 *3*; α(L)=0.0329 *5*; α(M)=0.00770 *11*; α(N+..)=0.00239 *4*
374.0 *4*	≈4	7280.8	(53/2$^-$)	6906.8	(51/2$^-$)	(M1)	0.236	α(K)=0.193 *3*; α(L)=0.0329 *5*; α(M)=0.00769 *11*; α(N+..)=0.00239 *4*
377.7 *4*	6 *1*	6906.8	(51/2$^-$)	6529.0	(49/2$^-$)	(M1)	0.230	α(K)=0.188 *3*; α(L)=0.0320 *5*; α(M)=0.00749 *11*; α(N+..)=0.00232 *4*
380.1 *4*	4 *1*	4500.1		4120.0	35/2$^-$			
384.8 *4*	8 *2*	6529.0	(49/2$^-$)	6144.0	(47/2$^-$)	(M1)	0.219	α(K)=0.179 *3*; α(L)=0.0304 *5*; α(M)=0.00712 *11*; α(N+..)=0.00221 *4*
385.2 *3*	19 *4*	4120.0	35/2$^-$	3734.8	33/2$^-$	M1	0.218	α(K)=0.179 *3*; α(L)=0.0303 *5*; α(M)=0.00710 *10*; α(N+..)=0.00220 *4* ce(K)/(γ+ce)=0.151; ce(L)/(γ+ce)=0.0256; ce(M)/(γ+ce)=0.00600; ce(N)/(γ+ce)=0.00194 γ(θ): A_2=−0.4 *1* (1996Ka15).

$^{195}_{82}Pb_{113}$-5

(HI,xnγ) **1996Ka15,1986Pa18 (continued)**

γ(^{195}Pb) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	α[a]	$I_{(\gamma+ce)}$[#]	Comments
396.4 *2*	29 *3*	2968.4	$27/2^-$	2572.0	$25/2^+$	E1	0.01573		α(K)=0.01295 *19*; α(L)=0.00213 *3*; α(M)=0.000496 *7*; α(N+..)=0.0001518 *22* ce(K)/(γ+ce)=0.0128; ce(L)/(γ+ce)=0.00211; ce(M)/(γ+ce)=0.00049; ce(N)/(γ+ce)=0.00016 γ(θ): A_2=−0.3 *1* (1996Ka15).
400.6 *5*	3.6 *1*	4967.1	(39/2)	4566.6	$(37/2)^-$				
401.8‡ *1*		2815.3	$29/2^+$	2413.5	$27/2^-$	E1	0.01527	35.5 *5*	ce(K)/(γ+ce)=0.01239 *18*; ce(L)/(γ+ce)=0.00203 *3*; ce(M)/(γ+ce)=0.000473 *7*; ce(N+)/(γ+ce)=0.0001450 *21* ce(K)/(γ+ce)=0.0125; ce(L)/(γ+ce)=0.00204; ce(M)/(γ+ce)=0.00047; ce(N)/(γ+ce)=0.00015 γ(θ): A_2=−0.17; A_4=+0.05 (1986Pa18). α: α(K)exp=0.0154 *20* (1986Pa18).
402.1 *5*	1.9 *6*	4834.9		4432.8					
404.0 *4*	6 *1*	4524.0		4120.0	$35/2^-$				
407.3 *5*	2.7 *8*	3903.9		3496.3					
412.1 *5*	1.4 *4*	4199.5		3787.6	$33/2^+$				
416.6 *4*	4 *1*	7091.0	$(53/2^-)$	6674.4	$(51/2^-)$				
427.0‡ *2*		2186.4	$(23/2^-)$	1759.4	$21/2^-$	M1	0.1657	11.8 *20*	ce(K)/(γ+ce)=0.1164 *15*; ce(L)/(γ+ce)=0.0197 *3*; ce(M)/(γ+ce)=0.00461 *7*; ce(N+)/(γ+ce)=0.001429 *21* ce(K)/(γ+ce)=0.120; ce(L)/(γ+ce)=0.0203; ce(M)/(γ+ce)=0.00475; ce(N)/(γ+ce)=0.00154 α: α(K)exp=0.154 *20*; α(exp)=0.170 *10* deduced from intensity balance (1986Pa18).
432		2186.4	$(23/2^-)$	1754.2	$21/2^+$				
442.4 *5*	4 *1*	3496.3		3054.2	$29/2^+$				
443.3‡ *2*		2815.3	$29/2^+$	2372.0	$(25/2^+)$			2.8‡ *5*	
446.0[b] *5*	2.5 *7*	7538	$(55/2^-)$	7091.0	$(53/2^-)$				
446.3 *4*	5 *1*	4566.6	$(37/2)^-$	4120.0	$35/2^-$				
529.2‡ *1*		2413.5	$27/2^-$	1884.4	$(23/2^-)$	E2	0.0257	19.9‡ *12*	ce(K)/(γ+ce)=0.01800 *25*; ce(L)/(γ+ce)=0.00533 *8*; ce(M)/(γ+ce)=0.001320 *19*; ce(N+)/(γ+ce)=0.000403 *6* ce(K)/(γ+ce)=0.0181; ce(L)/(γ+ce)=0.00540 α: α(K)exp=0.0174 *23* (1986Pa18). γ(θ): A_2=+0.14; A_4=−0.10 (1986Pa18).
543.1 *4*	9 *2*	4411.7	$35/2^+$	3868.5	$33/2^+$	M1	0.0876		α(K)=0.0718 *11*; α(L)=0.01207 *17*; α(M)=0.00282 *4*; α(N+..)=0.000875 *13* ce(K)/(γ+ce)=0.0681; ce(L)/(γ+ce)=0.0115 γ(θ): A_2=−0.25 *5* (1996Ka15).
557.1 *5*	1.2 *4*	5123.8	$(39/2^-)$	4566.6	$(37/2)^-$				
581.3 *2*	98 *9*	1754.2	$21/2^+$	1172.90	$17/2^+$	E2	0.0207	100	α(K)=0.01521 *22*; α(L)=0.00415 *6*; α(M)=0.001020 *15*; α(N+..)=0.000312 *5* ce(K)/(γ+ce)=0.0149; ce(L)/(γ+ce)=0.00411 α(K)exp=0.0156 *10*; α(L1)exp+α(L2)exp=0.0055 *21* (1986Pa18). γ(θ): A_2=+0.37; A_4=+0.002 (1986Pa18).

$^{195}_{82}Pb_{113}$-6

(HI,xnγ) 1996Ka15,1986Pa18 (continued)

γ(^{195}Pb) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ	α[a]	$I_{(\gamma+ce)}$[#]	Comments
583.0 *5*	1.8 *5*	3646.9	31/2$^+$	3063.9	29/2$^+$					
586.5[‡] *2*		1759.4	21/2$^-$	1172.90	17/2$^+$	E3(+M2)	4.5 *+26−10*	0.067 *4*	39.6[‡] *4*	ce(K)/(γ+ce)=0.039 *4*; ce(L)/(γ+ce)=0.0176 *4* α(K)exp=0.047 *7*; α(L)exp=0.0213 *27*; α(L1)exp+α(L2)exp/α(L3)exp=6.05 *100* (1986Pa18). δ: from E3+(5 +- 3%)M2. α: E3 α(theory)′s mult. By 0.975 *10* (Cf. 1990Ne01).
596.4 *3*	16 *4*	2968.4	27/2$^-$	2372.0	(25/2$^+$)	E1		0.00671		α(K)=0.00553 *8*; α(L)=0.000875 *13*; α(M)=0.000203 *3*; α(N+..)=6.24×10^{-5} *9* α=0.00671; ce(K)/(γ+ce)=0.00550; ce(L)/(γ+ce)=0.00087 γ(θ): A_2=−0.25 *5* (1996Ka15).
600.0 *5*	2.1 *6*	5123.8	(39/2$^-$)	4524.0						
617.8 *2*	41 *4*	2372.0	(25/2$^+$)	1754.2	21/2$^+$	E2		0.0180	42 *4*	ce(K)/(γ+ce)=0.01321 *19*; ce(L)/(γ+ce)=0.00343 *5*; ce(M)/(γ+ce)=0.000839 *12*; ce(N+)/(γ+ce)=0.000257 *4* ce(K)/(γ+ce)=0.0132; ce(L)/(γ+ce)=0.00346 γ(θ): A_2=+0.3 *1* (1996Ka15).
637.0 *5*	2.1 *6*	3734.8	33/2$^-$	3098.1	29/2$^-$	E2		0.01687		α(K)=0.01265 *18*; α(L)=0.00320 *5*; α(M)=0.000783 *11*; α(N+..)=0.000240 *4*
663.0 *5*	1.5 *4*	5770.1	(45/2$^-$)	5107.2	(41/2$^-$)					
677.7 *5*	2.0 *6*	4465.8	(33/2$^-$)	3787.6	33/2$^+$					
682.1 *4*	9 *2*	3054.2	29/2$^+$	2372.0	(25/2$^+$)	E2		0.01454		α(K)=0.01104 *16*; α(L)=0.00266 *4*; α(M)=0.000647 *10*; α(N+..)=0.000198 *3* α(K)=0.0111; α(L)=0.00269 γ(θ): A_2=+0.2 *1* (1996Ka15).
697.9 *5*	4 *1*	4432.8		3734.8	33/2$^-$					
703.0 *5*	1.5 *4*	4199.5		3496.3						
709.2 *3*	17 *3*	2463.4	23/2	1754.2	21/2$^+$					γ(θ): A_2=−0.05 *5* (1996Ka15).
715.2 *2*	24 *3*	2469.4	23/2$^+$	1754.2	21/2$^+$	M1		0.0426		α(K)=0.0350 *5*; α(L)=0.00583 *9*; α(M)=0.001362 *19*; α(N+..)=0.000422 *6* ce(K)/(γ+ce)=0.0347; ce(L)/(γ+ce)=0.00580 γ(θ): A_2=−0.12 *5* (1996Ka15).
732.0 *5*	1.6 *4*	6144.0	(47/2$^-$)	5412.1	(43/2$^-$)					
733.3 *4*	5 *1*	3787.6	33/2$^+$	3054.2	29/2$^+$	E2		0.01247		α(K)=0.00958 *14*; α(L)=0.00220 *3*; α(M)=0.000532 *8*; α(N+..)=0.0001632 *23* ce(K)/(γ+ce)=0.0095; ce(L)/(γ+ce)=0.00219 γ(θ): A_2=+0.3 *1* (1996Ka15).
754.0 *5*	0.8 *2*	3903.9		3150.6						
757.7 *5*	3.1 *1*	4120.0	35/2$^-$	3362.1	31/2$^-$	E2		0.01165		α(K)=0.00899 *13*; α(L)=0.00202 *3*; α(M)=0.000488 *7*; α(N+..)=0.0001498 *22*
759.0 *5*	1.3 *4*	6529.0	(49/2$^-$)	5770.1	(45/2$^-$)					
763.0 *5*	1.4 *4*	6906.8	(51/2$^-$)	6144.0	(47/2$^-$)					

$^{195}_{82}Pb_{113}$-7

(HI,xnγ) 1996Ka15,1986Pa18 (continued)

γ(^{195}Pb) (continued)

E_γ	I_γ [#]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	α [a]	$I_{(\gamma+ce)}$ [#]	Comments
765.0 *5*	1.9 *6*	4411.7	$35/2^+$	3646.9	$31/2^+$				
765.1 *5*	1.4 *4*	4500.1		3734.8	$33/2^-$				
804.6 *4*	9 *2*	3868.5	$33/2^+$	3063.9	$29/2^+$	E2	0.01029		α(K)=0.00801 *12*; α(L)=0.001737 *25*; α(M)=0.000418 *6*; α(N+..)=0.0001284 *18* ce(K)/(γ+ce)=0.00797; ce(L)/(γ+ce)=0.00174 γ(θ): A_2=+0.12 *5* (1996Ka15).
817.8 *4*	6 *2*	2572.0	$25/2^+$	1754.2	$21/2^+$	E2	0.00996		α(K)=0.00776 *11*; α(L)=0.001668 *24*; α(M)=0.000401 *6*; α(N+..)=0.0001232 *18* ce(K)/(γ+ce)=0.00773; ce(L)/(γ+ce)=0.00167 γ(θ): A_2=+0.3 *1* (1996Ka15).
832.0 *5*	1.2 *4*	4566.6	$(37/2)^-$	3734.8	$33/2^-$	E2	0.00961		α(K)=0.00751 *11*; α(L)=0.001599 *23*; α(M)=0.000384 *6*; α(N+..)=0.0001180 *17*
969.9 *2*	>100	1172.90	$17/2^+$	203	$13/2^+$	E2	0.00715	>100	ce(K)/(γ+ce)=0.00559 *8*; ce(L)/(γ+ce)=0.001102 *16*; ce(M)/(γ+ce)=0.000263 *4*; ce(N+)/(γ+ce)=8.08×10^{-5} *12* α=0.00715; ce(K)/(γ+ce)=0.00562; ce(L)/(γ+ce)=0.00111 α(K)exp=0.0059 *4* (1986Pa18). γ(θ): A_2=+0.12; A_4=−0.02 (1986Pa18).

† Not observed.
‡ From 1986Pa18.
# Relative intensity renormalized to I(γ+ce)(581 γ)=100 (1996Ka15), except as noted.
@ From experimental conversion coefficients compared to theoretical calculations and γ(θ) (1996Ka15).
& Determined from total intensity balance (1996Ka15).
a Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
b Placement of transition in the level scheme is uncertain.

$^{195}_{82}Pb_{113}$-8

(HI,xnγ) 1996Ka15,1986Pa18

Level Scheme

Intensities: Relative I_γ

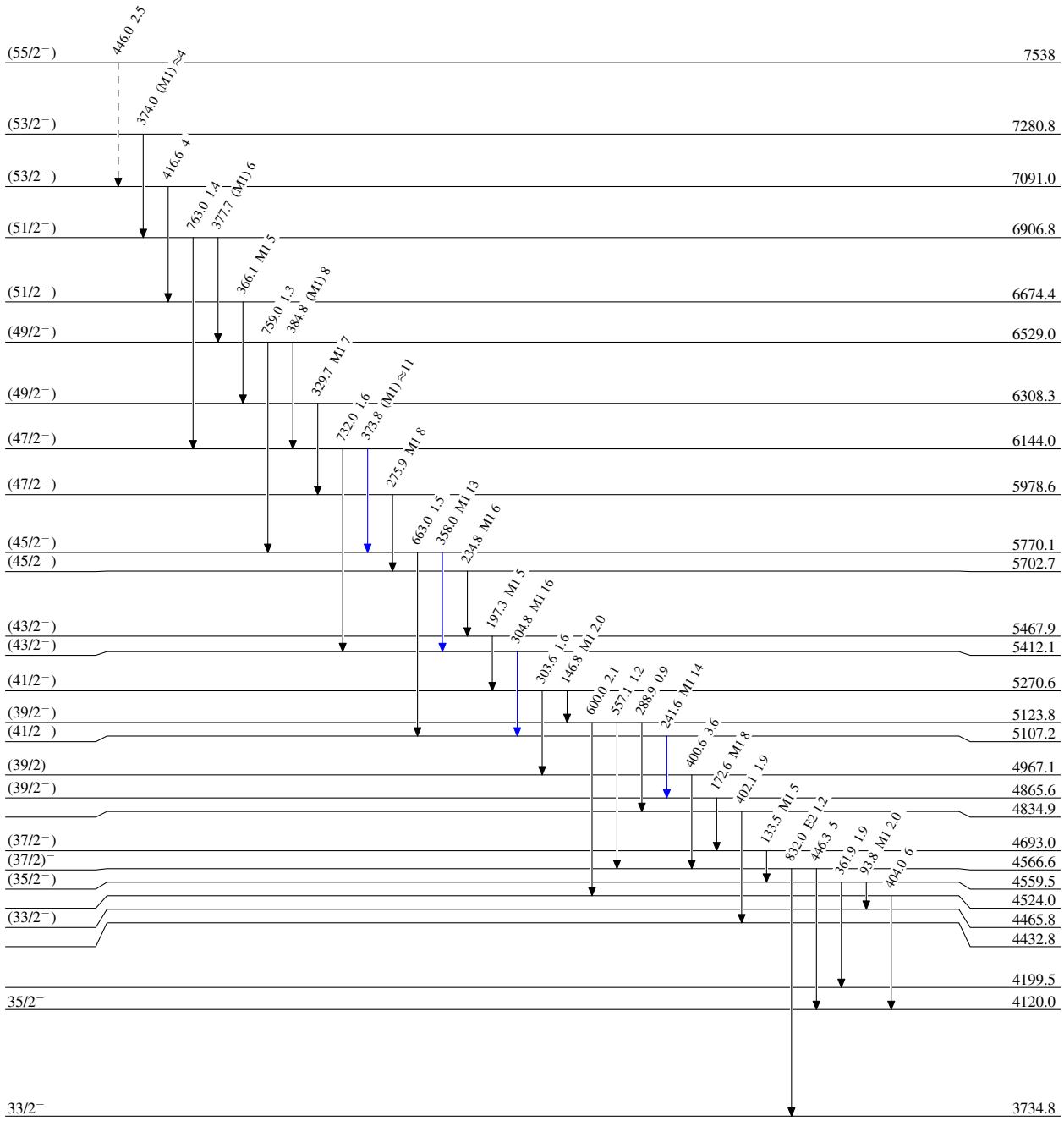
Legend

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

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

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

γ Decay (Uncertain)

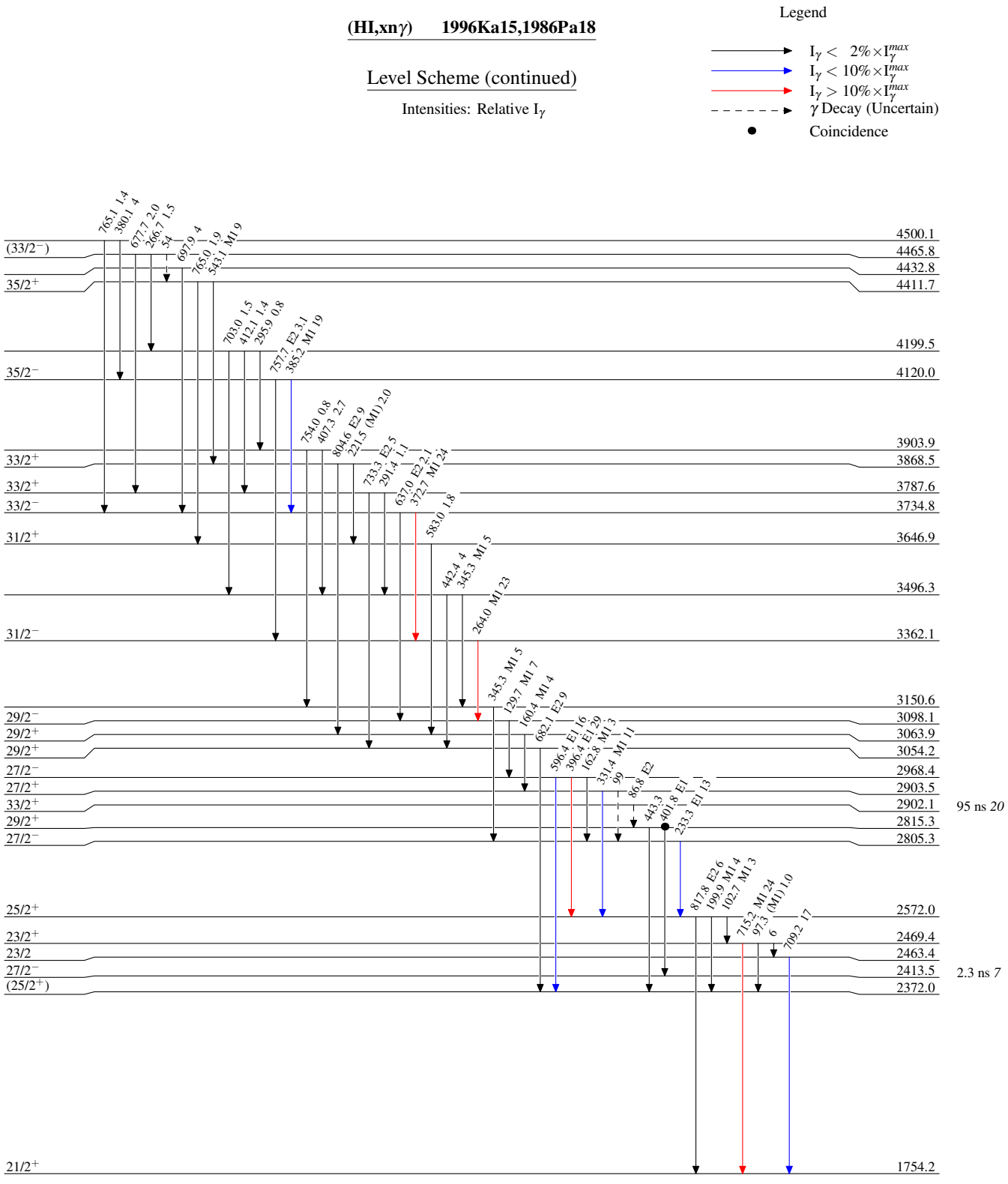


$^{195}_{82}Pb_{113}$

(HI,xnγ) 1996Ka15,1986Pa18

Level Scheme (continued)

Intensities: Relative I_γ

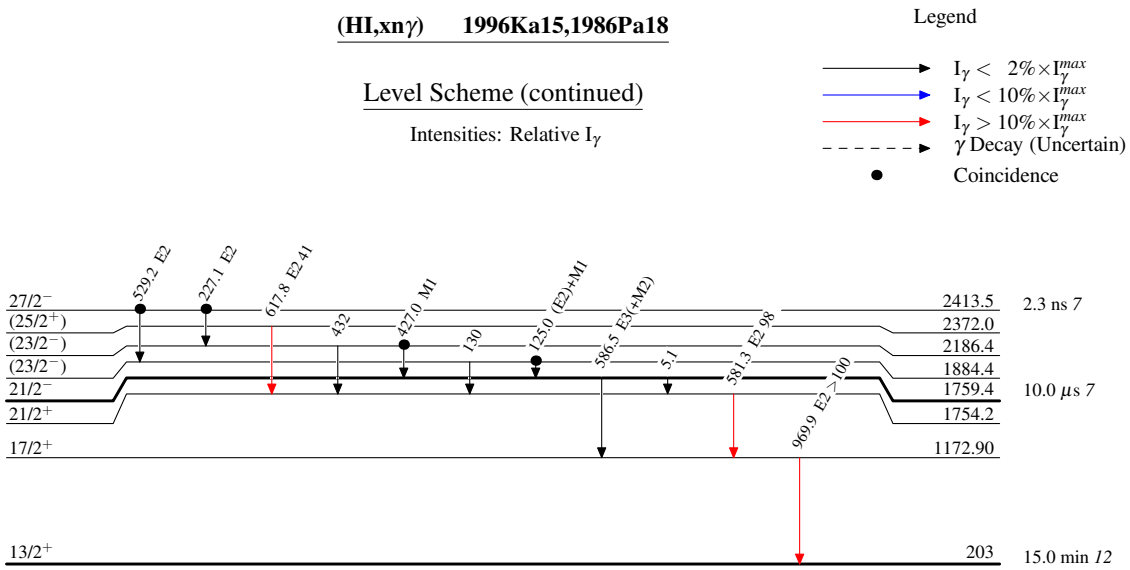


$^{195}_{82}Pb_{113}$

(HI,xnγ) 1996Ka15,1986Pa18

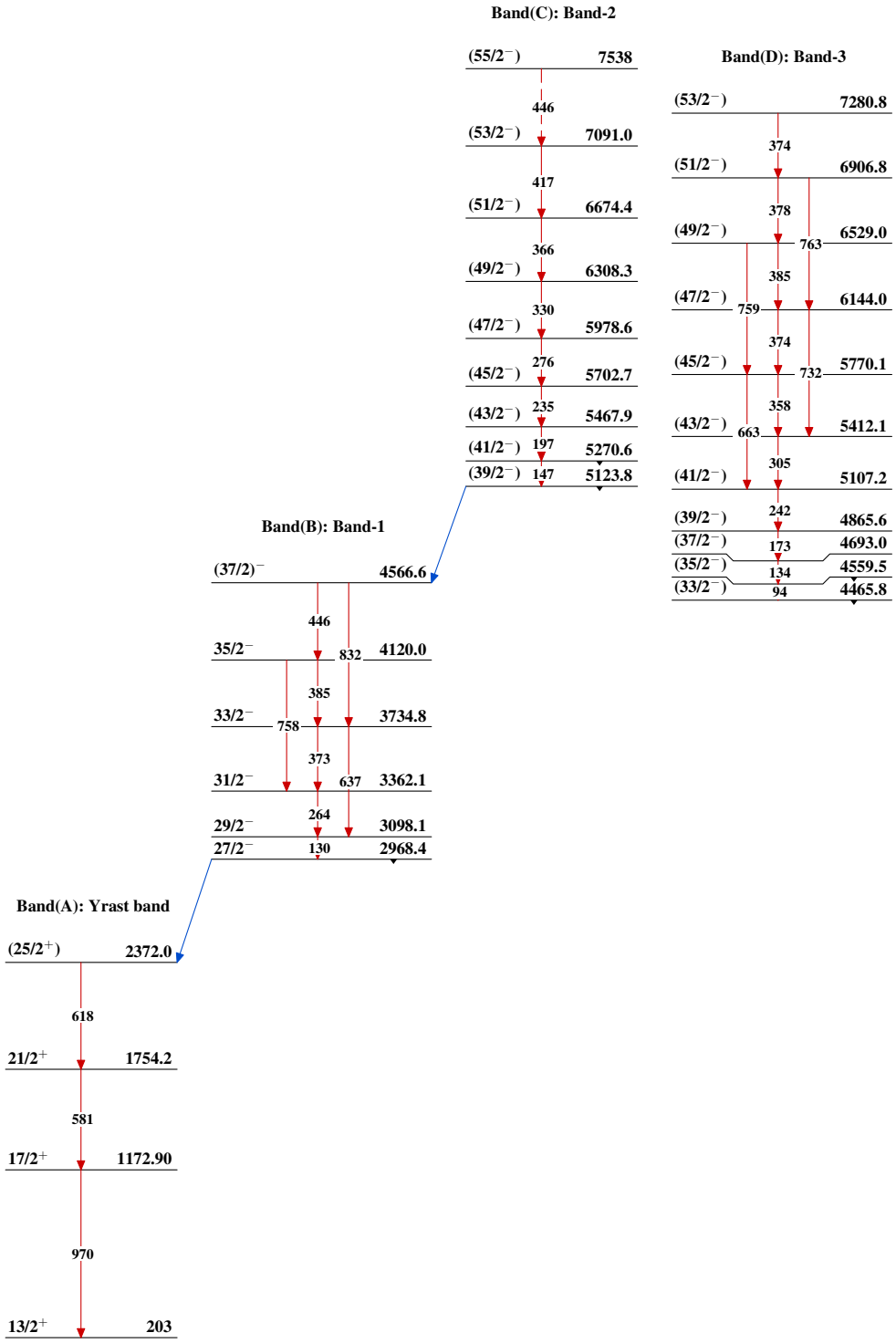
Level Scheme (continued)

Intensities: Relative I_γ



$^{195}_{82}Pb_{113}$

(HI,xnγ) 1996Ka15,1986Pa18



$^{195}_{82}Pb_{113}$