Adopted Levels, Gammas

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

Q(β^-)=−5880 *25*; S(n)=9090 *12*; S(p)=5480 *30*; Q(α)=3150 *10* 2021Wa16

^{200}Pb Levels

Cross Reference (XREF) Flags

A	^{204}Po α decay	E	^{200}Hg(α,4nγ)
B	^{200}Bi ε decay (36.4 min)	F	^{203}Tl(p,4nγ)
C	^{200}Bi ε decay (31 min)	G	^{209}Bi(π^-,9nγ)
D	^{198}Hg(α,2nγ)	H	(HI,xnγ)

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0	0^+	21.5 h *4*	ABCDEFGH	%ε=100 $T_{1/2}$: From 1955Be12; Others: 18 h *3* (1950Ne77), 20 h *2* (1959Jo21) and 12.6 h *14* (1961Be25).
1026.61 *14*	2^+		BCDEFGH	J$^\pi$: 1026.5γ E2 to 0^+.
1488.93 *19*	4^+	0.33 ns *2*	BCDEFGH	J$^\pi$: 462.3γ E2 to 2^+. $T_{1/2}$: From $\gamma\gamma$(t) in ^{200}Bi ε decay (36.4 min) (1972Al44).
1625.5 *9*	0^+		C	J$^\pi$: 1625.5γ E0 to 0^+.
1739.35 *14*	$1,2^+$		C	J$^\pi$: 712.7γ to 2^+; 1739.5γ to 0^+.
1762.4 *3*	$(5)^+$		BC	J$^\pi$: 273.4γ M1 to 4^+; 788.6γ from $(5)^-$; non observation of γ to the 2^+ level at 1026.6 keV would argue against $J^\pi=3^+$ and 4^+.
1836.9 *3*	(3)		H	J$^\pi$: 348.1γ (D) to 4^+, 810.2γ (D) to 2^+; non observation of γ to 0^+ would argue against $J^\pi=2^+$.
1867.0 *9*	0^+		C	J$^\pi$: 1867.0γ E0 to 0^+.
1908.68 *23*	$(5)^-$	1.35 ns *6*	BCDEFGH	J$^\pi$: 419.77γ E1 to 4^+; strong population in ^{200}Bi ε decay (36.4 min) ($J^\pi=7^+$) requires J≥5. $T_{1/2}$: Weighted average of 1.32 ns *7* (1972Al44) in ^{200}Bi ε decay (36.4 min) and 1.40 ns *9* (1988Pa12) and 1.3 ns *1* (1989Su12) in (HI,xnγ). A mixture of configuration=$\nu(f^{-1}_{5/2},i^{-1}_{13/2})$ and configuration=$\nu(p^{-1}_{3/2},i^{-1}_{13/2})$.
2153.82 *25*	$(7)^-$	45.2 ns *7*	BCDEFGH	μ=−0.21 *10* (1985St16,2020StZV); Q=0.32 *2* (1979MaYQ,2021StZZ) J$^\pi$: 245.2γ E2 to $(5)^-$. $T_{1/2}$: Weighted average of 47.6 ns *25* (1972Kr08) and 44 ns *2* (1973Pa04) in ^{200}Bi ε decay (36.4 min), 43 ns *3* (1974Lu03), 40 ns *7* (1978Mc03) and 42 ns *4* (1985St16) in ^{198}Hg(α,2nγ), 46 ns *1* (1987Fa15) in ^{200}Hg(α,4nγ) and 44 ns *2* (1989Su12,1988Pa12) in (HI,xnγ); Other: 50 ns *10* (1972Is01) in ^{203}Tl(p,4nγ). μ: From g=−0.030 *15* in ^{198}Hg(α,2nγ) (1985St16) using time-dependent perturbed angular distribution technique. Q: From ^{198}Hg(α,2nγ) (1979MaYQ) using time-dependent perturbed angular distribution technique. A mixture of configuration=$\nu(f^{-1}_{5/2},i^{-1}_{13/2})$, configuration=$\nu(p^{-1}_{3/2},i^{-1}_{13/2})$ and configuration=$\nu(p^{-1}_{1/2},i^{-1}_{13/2})$.
2183.9 *8*	(9^-)	454 ns *9*	B DEFGH	μ=−0.257 *10* (1974Lu03,2020StZV); Q=0.40 *2* (1979MaYQ,2021StZZ) J$^\pi$: 29.5γ to $(7)^-$; μ; analogy to similar structures in ^{198}Pb, ^{202}Pb and ^{204}Pb. $T_{1/2}$: Weighted average of 480 ns *30* (1973Pa04) in ^{200}Bi ε decay (36.4 min), 480 ns *20* (1974Lu03) and 480 ns *60* (1978Mc03) and 445 ns *15* (1985St16) in ^{198}Hg(α,2nγ), 424 ns *10* (1987Fa15) in ^{200}Hg(α,4nγ), and 480 ns *20* (1988Pa12), 480 ns *30* (1989Su12) and 476 ns *12* (2018La03) in (HI,xnγ); Others: 540 ns *30* (1972Is01) in ^{203}Tl(p,4nγ) and ≈500 ns (1973Dj01) in

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Adopted Levels, Gammas (continued)

^{200}Pb Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	XREF	Comments
				^{198}Hg(α,2nγ).
				μ: From g=−0.0285 *11* in ^{198}Hg(α,2nγ) (1974Lu03) using the time-dependent perturbed angular distribution technique. Others: μ=−0.25 *4* in ^{198}Hg(α,2nγ) (1985St16) and −0.27 *3* in (HI,xnγ) (1975Yo04).
				Q: From ^{198}Hg(α,2nγ) (1979MaYQ) using time-dependent perturbed angular distribution technique.
				Configuration=$\nu(f^{-1}_{5/2},i^{-1}_{13/2})$.
2183.9+x[a]			H	Additional information 1.
2257.0 *3*	(6)$^-$		B	J$^{\pi}$: 103.3γ M1 to 7$^-$; 348.3γ M1+E2 to (5)$^-$.
2268.2 *3*	(7)$^-$		B E	J$^{\pi}$: 83.8γ E2 to (9$^-$); 114.4γ M1 to (7)$^-$.
2354.9 *3*	(6,7)$^-$		B	J$^{\pi}$: 98.1γ M1 to (6)$^-$; 201.1γ M1 (7)$^-$.
2494.0+x[a] *4*			H	
2551.4 *3*	(5,6)$^-$		B	J$^{\pi}$: 294.43γ M1 to (6)$^-$; 788.6γ to (5$^+$).
2699.4 *3*	(6,7,8)$^-$		B	J$^{\pi}$: 545.5 M1 to (7)$^-$.
2960.9 *8*	(10$^+$)		DE GH	J$^{\pi}$: 777.0γ E1 to (9$^-$), 45.4γ from (12$^+$).
3002.8 *4*	(6,7,8)$^-$		B	J$^{\pi}$: 648.0γ M1 to (6,7)$^-$.
3006.3 *9*	(12$^+$)	198 ns *3*	DE H	μ=−1.839 *6*; Q=0.79 *3* (1979Ma37,2021StZZ)
				J$^{\pi}$: μ; analogy to similar structures in ^{198}Pb, ^{202}Pb and ^{204}Pb.
				$T_{1/2}$: Weighted average of 194 ns *6* (1979Ma37) in ^{198}Hg(α,2nγ), 202 ns *5* (1987Fa15) in ^{200}Hg(α,4nγ), and 199 ns *5* (1989Su12) and 195 ns *8* (2018La03) in (HI,xnγ); Others: 180 ns *30* (1978Mc03) in ^{198}Hg(α,2nγ), 152 ns *30* (1988Pa12), 160 ns *30* (1973Pa03) and 158 ns *30* (1975Yo04) in (HI,xnγ).
				μ: Weighted average of −1.849 *12* (1988Ro08), −1.836 *7* (1987Fa15) and −1.81 *2* (1983St15) using time-dependent perturbed angular distribution technique.
				Q: Using time-dependent perturbed angular distribution technique, normalized to Q=0.51 *2* in ^{206}Pb.
				Configuration=$\nu(i^{-2}_{13/2})$.
3020.2+x[a] *4*			H	
3181.8 *9*	(11$^-$)		E H	J$^{\pi}$: 997.9γ E2 to (9$^-$).
3192.0 *5*			B	
3396.0 *11*	(12)		E H	J$^{\pi}$: 214.2γ D to (11$^-$).
3483.2 *4*	(6,7)$^-$		B	J$^{\pi}$: 480.4γ M1 to (6,7,8)$^-$; 931.7γ to (5)$^-$.
3550.6+x[a] *6*			H	
3830.0 *10*	(13$^+$)		E	J$^{\pi}$: 823.7γ (M1) to (12$^+$).
3867.9 *10*	(14$^+$)		E H	J$^{\pi}$: 861.6γ E2 to (12$^+$).
3873.5 *12*	(13$^+$)		E	J$^{\pi}$: 867.2γ M1+E2 to (12$^+$).
3885.8+x[a] *6*			H	
4068.1 *9*	(14$^+$)		E	J$^{\pi}$: 1061.8γ E2 to (12$^+$).
4146.0 *11*	(16$^+$)	3.1 ns *3*	E H	J$^{\pi}$: 278.1γ E2 to (14$^+$).
				$T_{1/2}$: From 1989Su12 in (HI,xnγ). Other: 5 ns *1* (1987Fa15) in ^{200}Hg(α,4nγ).
				Configuration=$\nu(i^{-2}_{13/2})\otimes 4^+$.
4254.5 *12*	(15)		E	J$^{\pi}$: 386.6γ D to (14$^+$).
4342.9 *11*	(16$^+$)		E H	J$^{\pi}$: 196.7γ M1 to (16$^+$); relative population of this level in (HI,xnγ) and ^{200}Hg(α,4nγ).
4342.9+y[@]			H	Additional information 2.
4443.5+y[@] *5*			H	
4566.8+y[@] *7*			H	
4727.1+y[@] *9*			H	
4935.7+y[@] *10*			H	

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Adopted Levels, Gammas (continued)

^{200}Pb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
5008.6 *11*	(17$^-$)		E H	Jπ: 665.6γ and 862.7γ E1 to (16$^+$); relative population of this level in (HI,xnγ) and ^{200}Hg(α,4nγ). Configuration=ν($f^{-1}_{5/2}$,$i^{-3}_{13/2}$).
5076.3 *14*	(19$^-$)	72.4 ns *26*	E H	μ=−1.79 *13* (1987Fa15,2020StZV) Jπ: 67.7γ E2 to (17$^-$); μ. $T_{1/2}$: Weighted average of 67 ns *5* (1987Fa15) in ^{200}Hg(α,4nγ), and 87 ns *18* (2018La03), 73 ns *4* (1989Su12), 77 ns *5* (1988Pa12) and 60 ns *15* (1973Pa03) in (HI,xnγ). Configuration=ν($f^{-1}_{5/2}$,$i^{-3}_{13/2}$).
5148.5 *12*	(18)		E	Jπ: 139.9γ D to (17$^-$).
5198.2+y[@] *12*			H	
5437.0 *17*			E	
5517.7+y[@] *13*			H	
5753.9 *17*	(20$^-$)		E	Jπ: 677.6γ (M1) to (19$^-$).
5801.9 *14*	(21$^-$)		E H	Jπ: 725.4γ E2 to (19$^-$).
5892.4+y[@] *14*			H	
6076.1 *15*			H	
6161.6 *15*			H	
6161.6+z[#]			H	Additional information 3.
6161.6+u[&]			H	Additional information 4.
6279.0 *14*			H	
6321.8+y[@] *15*			H	
6374.1+z[#] *5*			H	
6399.1+u[&] *5*			H	
6614.4+z[#] *7*			H	
6680.4+u[&] *7*			H	
6800.5 *14*			H	
6802.4+y[@] *15*			H	
6897.7+z[#] *9*			H	
6948.8 *15*	(25$^-$)	58 ns *4*	H	Jπ: From 1988Pa12 in (HI,xnγ), based on systematics and shell model. $T_{1/2}$: From 1988Pa12 in (HI,xnγ). Configuration=ν($f^{-1}_{5/2}$,$i^{-5}_{13/2}$).
7015.0+u[&] *9*			H	
7227.3+z[#] *10*			H	
7335.4+y[@] *16*			H	
7396.4+u[&] *10*			H	
7607.4+z[#] *12*			H	
7819.9+u[&] *12*			H	
7917.5+y[@] *17*			H	
8046.2+z[#] *13*			H	
8171.0 *16*			H	
8437.4 *16*			H	
8549.8+y[@] *17*			H	
8631.0 *17*			H	

[†] From a least-squares fit to Eγ.

[‡] From deduced γ ray transition multipolarities, using α(K)exp, α(L)exp and subshell ratios in ^{200}Bi ε decay (36.4 min), ^{198}Hg(α,2nγ), ^{203}Tl(p,4nγ) and (HI,xnγ); γ(θ) in ^{200}Hg(α,4nγ) and DCO in (HI,xnγ).

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Adopted Levels, Gammas (continued)

^{200}Pb Levels (continued)

Band(A): Band 2 in 1994Ba43. Oblate deformed band.
@ Band(B): Band 1 in 1994Ba43. Oblate deformed band.
& Band(C): Band 3 in 1994Ba43. Oblate deformed band.
a Band(D): Group 1 in 1994Ba43.

Adopted Levels, Gammas (continued)

γ(^{200}Pb)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. †	δ	α [a]	Comments
1026.61	2^+	1026.49 *17*	100	0.0	0^+	E2		0.00633 *9*	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=0.0051 *3* and K/L(exp)=5.0 *4* (1970Ha14) and α(L)exp=0.00095 *27* (1972Kr08) in ^{200}Bi ε decay (36.4 min); α(K)exp=0.0057 *10* in ^{203}Tl(p,4nγ); α(K)exp=0.0042 *9* in ^{198}Hg(α,2nγ); γ(θ) in ^{200}Hg(α,4nγ); α(K)exp=0.0032 *15* in (HI,xnγ).
1488.93	4^+	462.34 *13*	100	1026.61	2^+	E2		0.0356 *5*	α(K)=0.02454 *34*; α(L)=0.00831 *12*; α(M)=0.002076 *29* α(N)=0.000526 *7*; α(O)=9.89×10^{-5} *14*; α(P)=7.46×10^{-6} *10* B(E2)(W.u.)=1.13 *7* Mult.: α(K)exp=0.0238 *16* and K/L(exp)=2.94 *23* (1970Ha14), and α(K)exp=0.0266 *13* (1973Pa04); α(K)exp=0.028 *6* (1972Kr08) in ^{200}Bi ε decay (36.4 min); α(K)exp=0.0247 *25* and α(L)exp=0.0093 *14* in ^{203}Tl(p,4nγ); α(K)exp=0.025 *3* in ^{198}Hg(α,2nγ); γ(θ) in ^{200}Hg(α,4nγ); α(K)exp=0.034 *5* in (HI,xnγ).
1625.5	0^+	1625.5 *9*		0.0	0^+	E0			E_γ,Mult.: From ce in ^{200}Bi ε decay (31 min) (1987Va09).
1739.35	$1,2^+$	712.70 *10*	41.9 *23*	1026.61	2^+				E_γ,I_γ: From ^{200}Bi ε decay (31 min) (1978LiZM).
		1739.5 *2*	100 *5*	0.0	0^+				E_γ,I_γ: From ^{200}Bi ε decay (31 min) (1978LiZM).
1762.4	$(5)^+$	273.39 *20*	100	1488.93	4^+	M1+E2	0.44 *33*	0.49 *8*	α(K)=0.39 *8*; α(L)=0.073 *5*; α(M)=0.0174 *9* α(N)=0.00441 *23*; α(O)=0.00087 *6*; α(P)=8.8×10^{-5} *13* Mult.: α(K)exp=0.39 *8* and K/L(exp)=4.5 *13* (1970Ha14); α(K)exp=0.6 *3* (1973Pa04) in ^{200}Bi ε decay (36.4 min). δ: From α(K)exp in ^{200}Bi ε decay (36.4 min) (1970Ha14).
1836.9	(3)	348.1 *3*		1488.93	4^+	(D)			E_γ,Mult.: From 2014ChZW in (HI,xnγ). ΔEγ estimated by the evaluator.
		810.2 *3*		1026.61	2^+	(D)			E_γ,Mult.: From 2014ChZW in (HI,xnγ). ΔEγ estimated by the evaluator.
1867.0	0^+	1867.0 *9*		0.0	0^+	E0			E_γ,Mult.: From ce in ^{200}Bi ε decay (31 min) (1987Va09).
1908.68	$(5)^-$	419.77 *13*	100	1488.93	4^+	E1		0.01388 *19*	α(K)=0.01144 *16*; α(L)=0.001869 *26*; α(M)=0.000435 *6* α(N)=0.0001098 *15*; α(O)=2.148×10^{-5} *30*; α(P)=2.070×10^{-6} *29* B(E1)(W.u.)=1.95×10^{-6} *9* Mult.: α(K)exp<0.015; α(L)exp<0.0022 (1970Ha14); α(K)exp=0.013 *3* (1973Pa04) in ^{200}Bi ε decay (36.4 min); α(K)exp=0.023 *4* in (HI,xnγ); α(K)exp=0.012 *2* in ^{198}Hg(α,2nγ); γ(θ) in ^{200}Hg(α,4nγ).
2153.82	$(7)^-$	245.15 *13*	100	1908.68	$(5)^-$	E2		0.2162 *30*	α(K)=0.1046 *15*; α(L)=0.0835 *12*; α(M)=0.02164 *31*

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

Adopted Levels, Gammas (continued)

γ(^{200}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[a]	Comments
									α(N)=0.00547 *8*; α(O)=0.000996 *14*; α(P)=5.51×10^{-5} *8* B(E2)(W.u.)=0.167 *3* Mult.: α(K)exp=0.108 *8* and K/L(exp)=1.27 *6* (1970Ha14); K/L=1.28 *15* (1973Pa04); α(K)exp=0.12 *2* (1972Kr08) in ^{200}Bi ε decay (36.4 min); α(K)exp=0.11 *1*, α(L1)exp+α(L2)exp=0.077 *10* and α(L3)exp=0.030 *5* in (HI,xnγ); α(K)exp=0.107 *14* in ^{198}Hg(α,2nγ); γ(θ) in ^{200}Hg(α,4nγ).
2183.9	(9$^-$)	29.5[‡] *10*	100[‡]	2153.82	(7)$^-$	[E2]		2.1×10^3 *4*	α(L)=1.60×10^3 *30*; α(M)=4.2×10^2 *8* α(N)=105 *19*; α(O)=18.5 *34*; α(P)=0.60 *11* B(E2)(W.u.)=0.38 *10* E_γ: From ce(M) in (HI,xnγ) (1988Pa12).
2257.0	(6)$^-$	103.25 *17*	52	2153.82	(7)$^-$	M1		8.54 *13*	α(K)=6.95 *10*; α(L)=1.212 *18*; α(M)=0.284 *4* α(N)=0.0723 *11*; α(O)=0.01440 *21*; α(P)=0.001538 *23* Mult.: α(L1)exp≈1.9 (1973Pa04).
		348.33 *17*	100	1908.68	(5)$^-$	M1+E2	0.86 *+26−21*	0.195 *28*	α(K)=0.153 *25*; α(L)=0.0320 *24*; α(M)=0.0077 *5* α(N)=0.00195 *13*; α(O)=0.000380 *28*; α(P)=3.6×10^{-5} *4* Mult.,δ: α(K)exp=0.153 *24* (1970Ha14).
2268.2	(7)$^-$	83.8	35 *18*	2183.9	(9$^-$)	E2		13.35 *19*	α(L)=9.94 *14*; α(M)=2.63 *4* α(N)=0.661 *9*; α(O)=0.1176 *16*; α(P)=0.00442 *6* E_γ: From ce(L) in ^{200}Bi ε decay (36.4 min) (1973Pa04). Mult.: (α(L1)exp+α(L2)exp)/α(L3)exp=1.2 *3* in ^{200}Bi ε decay (36.4 min) (1973Pa04).
		114.40 *16*	100	2153.82	(7)$^-$	M1		6.37 *9*	α(K)=5.19 *8*; α(L)=0.902 *13*; α(M)=0.2115 *31* α(N)=0.0538 *8*; α(O)=0.01072 *16*; α(P)=0.001144 *17* Mult.: α(K)exp=7.7 *3* and K/L(exp)=5.0 *5* (1973Pa04); A_2=0.19 *9* and A_4=0.06 *13* in ^{200}Hg(α,4nγ) (1987Fa15) consistent with J to J transition.
2354.9	(6,7)$^-$	98.1 *3*	33	2257.0	(6)$^-$	M1		9.87 *16*	α(K)=8.04 *13*; α(L)=1.405 *23*; α(M)=0.330 *5* α(N)=0.0838 *14*; α(O)=0.01670 *28*; α(P)=0.001783 *30* Mult.: α(L1)exp≈2.2 in ^{200}Bi ε decay (36.4 min) (1973Pa04).
		201.11 *17*	100	2153.82	(7)$^-$	M1		1.289 *18*	α(K)=1.053 *15*; α(L)=0.1810 *26*; α(M)=0.0424 *6* α(N)=0.01078 *15*; α(O)=0.002149 *31*; α(P)=0.0002297 *33* Mult.: α(K)exp=1.27 *26* (1970Ha14) and α(K)exp=1.3 *5* and K/L>1.5 (1973Pa04) in ^{200}Bi ε decay (36.4 min).
2494.0+x		310.1[‡] *5*	100[‡]	2183.9+x					
2551.4	(5,6)$^-$	294.43 *21*	90	2257.0	(6)$^-$	M1		0.449 *6*	α(K)=0.367 *5*; α(L)=0.0627 *9*; α(M)=0.01468 *21* α(N)=0.00373 *5*; α(O)=0.000744 *11*; α(P)=7.95×10^{-5} *11* Mult.: α(K)exp=0.42 *12* K/L(exp)=5.9 *18* (1970Ha14); α(K)exp=0.35 *10* (1973Pa04) in ^{200}Bi ε decay (36.4 min).

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

Adopted Levels, Gammas (continued)

γ(^{200}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
2551.4	(5,6)$^-$	642.7 *8*	80	1908.68	(5)$^-$			
		788.6 *7*	100	1762.4	(5)$^+$			
2699.4	(6,7,8)$^-$	344.6 *5*	11	2354.9	(6,7)$^-$			
		545.50 *17*	100	2153.82	(7)$^-$	M1	0.0858 *12*	α(K)=0.0703 *10*; α(L)=0.01182 *17*; α(M)=0.00276 *4* α(N)=0.000702 *10*; α(O)=0.0001400 *20*; α(P)=1.500×10^{-5} *21* Mult.: α(K)exp<0.102; α(L)exp=0.015 *3* (1970Ha14) in ^{200}Bi ε decay (36.4 min).
2960.9	(10$^+$)	777.0[‡] *2*	100[‡]	2183.9	(9$^-$)	E1	0.00399 *6*	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=0.0038 *14* in ^{198}Hg(α,2nγ) (1978Mc03); γ(θ) in ^{200}Hg(α,4nγ) (1987Fa15); α(K)exp=0.0027 *17* in (HI,xnγ) (1988Pa12).
3002.8	(6,7,8)$^-$	303.41 *18*	85	2699.4	(6,7,8)$^-$	M1	0.414 *6*	α(K)=0.338 *5*; α(L)=0.0577 *8*; α(M)=0.01351 *19* α(N)=0.00343 *5*; α(O)=0.000685 *10*; α(P)=7.32×10^{-5} *10* Mult.: α(K)exp=0.33 *7* (1970Ha14), α(K)exp=0.28 *10* (1973Pa04) and α(K)exp=0.36 *6* (1972Kr08) in ^{200}Bi ε decay (36.4 min).
		648.0 *4*	100	2354.9	(6,7)$^-$	M1	0.0546 *8*	α(K)=0.0448 *6*; α(L)=0.00749 *11*; α(M)=0.001749 *25* α(N)=0.000444 *6*; α(O)=8.87×10^{-5} *12*; α(P)=9.52×10^{-6} *13* Mult.: α(K)exp=0.045 *8* (1970Ha14) in ^{200}Bi ε decay (36.4 min).
3006.3	(12$^+$)	45.4[‡] *4*	100[‡]	2960.9	(10$^+$)	[E2]	257 *12*	α(L)=191 *9*; α(M)=50.3 *23* α(N)=12.7 *6*; α(O)=2.24 *10*; α(P)=0.0764 *34* B(E2)(W.u.)=0.83 *6* E_γ: Average of 45.9 keV *7* and 45.2 keV *5*, determined from γ-ce coincidence data in 1988Pa12 and 1989Su12, respectively [(HI,xnγ)].
3020.2+x		526.3 *5*		2494.0+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* E_γ: From (HI,xnγ).
		836.3 *5*		2183.9+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* E_γ: From (HI,xnγ).
3181.8	(11$^-$)	997.9[‡] *5*	100[‡]	2183.9	(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*
3192.0		836.9 *5*	100	2354.9	(6,7)$^-$			
		935.3 *7*	93	2257.0	(6)$^-$			
3396.0	(12)	214.2[#] *5*	100[#]	3181.8	(11$^-$)	D[&]		α(K)=0.5 *4*; α(L)=0.149 *5*; α(M)=0.0369 *12*; α(N+..)=0.01125 *23* α(N)=0.0093 *3*; α(O)=0.00177 *5*; α(P)=0.00014 *6*
3483.2	(6,7)$^-$	480.43 *24*	89	3002.8	(6,7,8)$^-$	M1	0.1200 *17*	α(K)=0.0984 *14*; α(L)=0.01659 *23*; α(M)=0.00388 *5*

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

Adopted Levels, Gammas (continued)

$\gamma(^{200}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
								α(N)=0.000985 *14*; α(O)=0.0001965 *28*; α(P)=2.105×10^{-5} *30* Mult.: α(K)exp=0.100 *15* (1970Ha14) in ^{200}Bi ε decay (36.4 min).
3483.2	(6,7)$^-$	931.7 *5*	100	2551.4	(5,6)$^-$			
3550.6+x		530.4[‡] *5*	100[‡]	3020.2+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*
3830.0	(13$^+$)	823.7[#] *5*	100[#]	3006.3	(12$^+$)	(M1)[&]	0.0293 *4*	α(K)=0.02408 *34*; α(L)=0.00399 *6*; α(M)=0.000932 *13* α(N)=0.0002367 *33*; α(O)=4.72×10^{-5} *7*; α(P)=5.08×10^{-6} *7*
3867.9	(14$^+$)	861.6[‡] *5*	100[‡]	3006.3	(12$^+$)	E2	0.00894 *13*	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* Mult.: α(K)exp=0.0066 *9* (1988Pa12), DCO=1.00 *14* (1994Ba43) in (HI,xnγ); $\gamma(\theta)$ in ^{200}Hg(α,4nγ) (1987Fa15).
3873.5	(13$^+$)	867.2[#] *7*	100[#]	3006.3	(12$^+$)	M1+E2[&]	0.017 *8*	α(K)=0.014 *7*; α(L)=0.0025 *10*; α(M)=5.8×10^{-4} *23* α(N)=1.5×10^{-4} *6*; α(O)=2.9×10^{-5} *12*; α(P)=3.0×10^{-6} *14*
3885.8+x		335.2 *5*		3550.6+x		[M1(+E2)][@]	0.20 *12*	α(K)=0.15 *10*; α(L)=0.034 *9*; α(M)=0.0083 *19* α(N)=0.0021 *5*; α(O)=4.1×10^{-4} *11*; α(P)=3.8×10^{-5} *18* E_γ: From (HI,xnγ).
		865.6 *5*		3020.2+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* E_γ: From (HI,xnγ).
4068.1	(14$^+$)	1061.8[#] *2*	100[#]	3006.3	(12$^+$)	E2[&]	0.00593 *8*	α(K)=0.00475 *7*; α(L)=0.000901 *13*; α(M)=0.0002140 *30* α(N)=5.42×10^{-5} *8*; α(O)=1.062×10^{-5} *15*; α(P)=1.035×10^{-6} *15*
4146.0	(16$^+$)	278.1[‡] *2*	100[‡]	3867.9	(14$^+$)	E2	0.1453 *21*	B(E2)(W.u.)=1.38 *14* 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) in (HI,xnγ); $\gamma(\theta)$ in ^{200}Hg(α,4nγ) (1987Fa15).
4254.5	(15)	386.6[#] *5*	100[#]	3867.9	(14$^+$)	D[&]		α(K)=0.11 *7*; α(L)=0.023 *8*; α(M)=0.0054 *16*; α(N+..)=0.0017 *6* α(N)=0.0014 *5*; α(O)=0.00027 *9*; α(P)=2.5×10^{-5} *13*
4342.9	(16$^+$)	196.7[‡] *5*	100[‡]	4146.0	(16$^+$)	M1	1.372 *22*	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 (HI,xnγ), using total α using intensity balances (1988Pa12) and K/L in 1989Su12.
4443.5+y		100.6[‡] *5*	100[‡]	4342.9+y		(M1+E2)[@]	7.7 *15*	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*
4566.8+y		123.3[‡] *5*	100[‡]	4443.5+y		M1(+E2)[@]	3.9 *13*	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*

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

Adopted Levels, Gammas (continued)

γ(^{200}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
4727.1+y		160.3[‡] *5*	100[‡]	4566.8+y		M1(+E2)[@]	1.7 *7*	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*
4935.7+y		208.6[‡] *5*	100[‡]	4727.1+y		M1(+E2)[@]	0.8 *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*
5008.6	(17$^-$)	665.6[‡] *3*	76[‡] *28*	4342.9	(16$^+$)	E1[&]	0.00537 *8*	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.: From DCO=0.66 *3* (1994Ba43) and small α(K)exp (1988Pa12) in (HI,xnγ).
		862.7[‡] *3*	100[‡] *32*	4146.0	(16$^+$)	E1[&]	0.00328 *5*	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.: From α(K)exp=0.0066 *9*, doublet in (HI,xnγ) (1988Pa12).
5076.3	(19$^-$)	67.7[‡] *8*	100[‡]	5008.6	(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* B(E2)(W.u.)=2.08 *19* E_γ: Weighted average of 68.5 keV *5* and 66.9 keV *5*, determined from γ-ce coincidence data in 1988Pa12 and 1989Su12, respectively (HI,xnγ). Mult.: From L12/L3=1.3 *2* and L12(M+N+O)=1.8 *5* in (HI,xnγ) (1988Pa12).
5148.5	(18)	139.9[#] *5*	100[#]	5008.6	(17$^-$)	D[&]		α(K)=1.7 *13*; α(L)=0.72 *21*; α(M)=0.18 *7*; α(N+..)=0.055 *18* α(N)=0.046 *16*; α(O)=0.0085 *25*; α(P)=0.00056 *9*
5198.2+y		262.5[‡] *5*	100[‡] *14*	4935.7+y		M1(+E2)[@]	0.39 *22*	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*
5437.0		360.7[#] *10*	100[#]	5076.3	(19$^-$)			
5517.7+y		319.5[‡] *5*	100[‡]	5198.2+y		M1(+E2)[@]	0.23 *13*	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*
5753.9	(20$^-$)	677.6[#] *10*	100[#]	5076.3	(19$^-$)	(M1)[&]	0.0486 *7*	α(K)=0.0399 *6*; α(L)=0.00666 *10*; α(M)=0.001555 *23* α(N)=0.000395 *6*; α(O)=7.88×10^{-5} *11*; α(P)=8.46×10^{-6} *12*
5801.9	(21$^-$)	725.6[‡] *4*	100[‡]	5076.3	(19$^-$)	E2[@&]	0.01273 *18*	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*
5892.4+y		374.7[‡] *5*	100[‡]	5517.7+y		M1(+E2)[@]	0.15 *9*	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*
6076.1		274.1[‡] *5*	100[‡]	5801.9	(21$^-$)	D,Q[@]		
6161.6		359.7[‡] *5*	100[‡]	5801.9	(21$^-$)	D[@]		
6279.0		477.1[‡] *5*	25[‡] *17*	5801.9	(21$^-$)			
		1202.7[‡] *5*	100[‡] *38*	5076.3	(19$^-$)			

$^{200}_{82}Pb_{118}$-9

Adopted Levels, Gammas (continued)

γ(^{200}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
6321.8+y		429.4[‡] *5*	100[‡]	5892.4+y		M1(+E2)[@]	0.10 *6*	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*
6374.1+z		212.5[‡] *5*	100[‡]	6161.6+z		M1(+E2)[@]	0.7 *4*	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*
6399.1+u		237.5[‡] *5*	100[‡]	6161.6+u				
6614.4+z		240.3[‡] *5*	100[‡]	6374.1+z		M1(+E2)[@]	0.51 *28*	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*
6680.4+u		281.3[‡] *5*	100[‡]	6399.1+u				
6800.5		521.6[‡] *5*	28[‡] *12*	6279.0				
		638.9[‡] *5*	100[‡] *28*	6161.6		D,Q[@]		
		724.3[‡] *4*	80[‡] *20*	6076.1		D		
		998.6[‡] *5*	15[‡] *8*	5801.9	(21$^-$)			
6802.4+y		480.6[‡] *5*	100[‡]	6321.8+y		M1(+E2)[@]	0.08 *4*	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*
6897.7+z		283.3[#] *5*	100[#]	6614.4+z		M1(+E2)[@]	0.32 *18*	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*
6948.8	(25$^-$)	148.3[‡] *5*	100[‡]	6800.5		E1,E2		α(K)=0.322 *5*; α(L)=0.712 *15*; α(M)=0.188 *4*; α(N+..)=0.0562 *12* α(N)=0.0473 *10*; α(O)=0.00849 *18*; α(P)=0.000377 *8* Mult.: From (HI,xnγ), where DCO=0.94 *25* (1994Ba43) supports Mult=E2, but α(T)exp=0.141 *22* in 1988Pa12 favors Mult=E1.
7015.0+u		334.6[‡] *5*	100[‡]	6680.4+u				
7227.3+z		329.6[‡] *5*	100[‡]	6897.7+z		M1(+E2)[@]	0.21 *12*	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*
7335.4+y		533.0 *5*		6802.4+y		M1(+E2)[@]	0.058 *33*	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* E_γ: From (HI,xnγ).
		1014.2[b] *10*		6321.8+y				E_γ: From (HI,xnγ).
7396.4+u		381.4[‡] *5*	100[‡]	7015.0+u				
7607.4+z		380.1[‡] *5*	100[‡]	7227.3+z		M1(+E2)[@]	0.14 *8*	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*
7819.9+u		423.5[‡] *5*	100[‡]	7396.4+u				
7917.5+y		582.1[‡] *5*	100[‡]	7335.4+y		M1(+E2)[@]	0.046 *26*	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*
8046.2+z		438.8[‡] *5*	100[‡]	7607.4+z		M1(+E2)[@]	0.10 *6*	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*

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

Adopted Levels, Gammas (continued)

$\gamma(^{200}Pb)$ (continued)

E_i(level)	E_γ †	I_γ †	E_f	J^π_f	Mult. †	Comments
8171.0	1222.2‡ *5*	100‡	6948.8	(25$^-$)		
8437.4	1488.6‡ *5*	100‡	6948.8	(25$^-$)	D@	
8549.8+y	632.4 *5*		7917.5+y			E_γ: From (HI,xnγ).
	1214.3 *10*		7335.4+y			E_γ: From (HI,xnγ).
8631.0	193.6‡ *5*	100‡	8437.4			

† From ^{200}Bi ε decay (36.4 min), unless otherwise stated.
‡ From (HI,xnγ).
# From ^{200}Hg(α,4nγ).
@ From DCO and the apparent band structures in (HI,xnγ) (1994Ba43).
& From $\gamma(\theta)$ and the apparent band structures in ^{200}Hg(α,4nγ) (1987Fa15).
a Additional information 5.
b Placement of transition in the level scheme is uncertain.

$^{200}_{82}Pb_{118}$-11

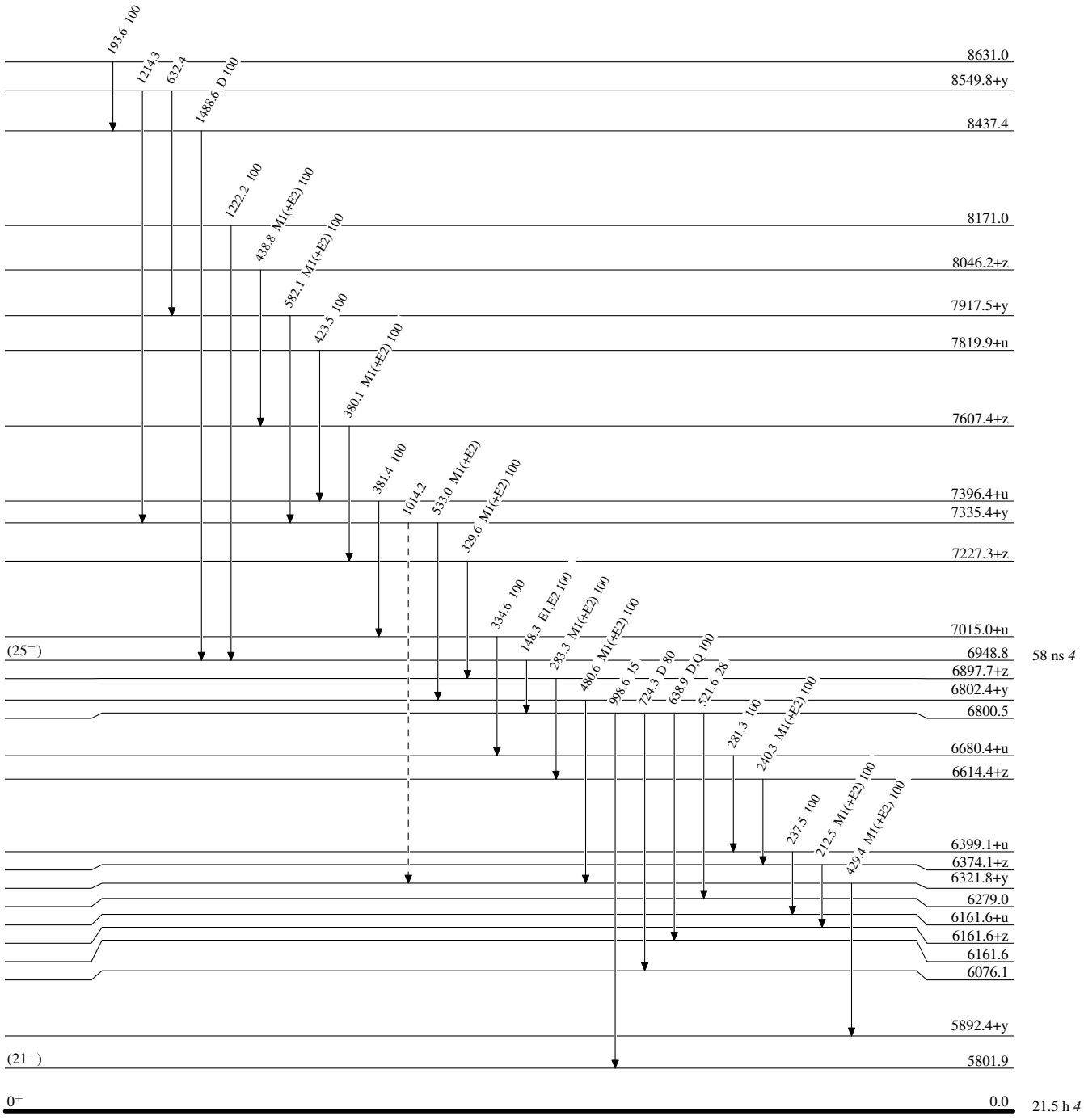
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)

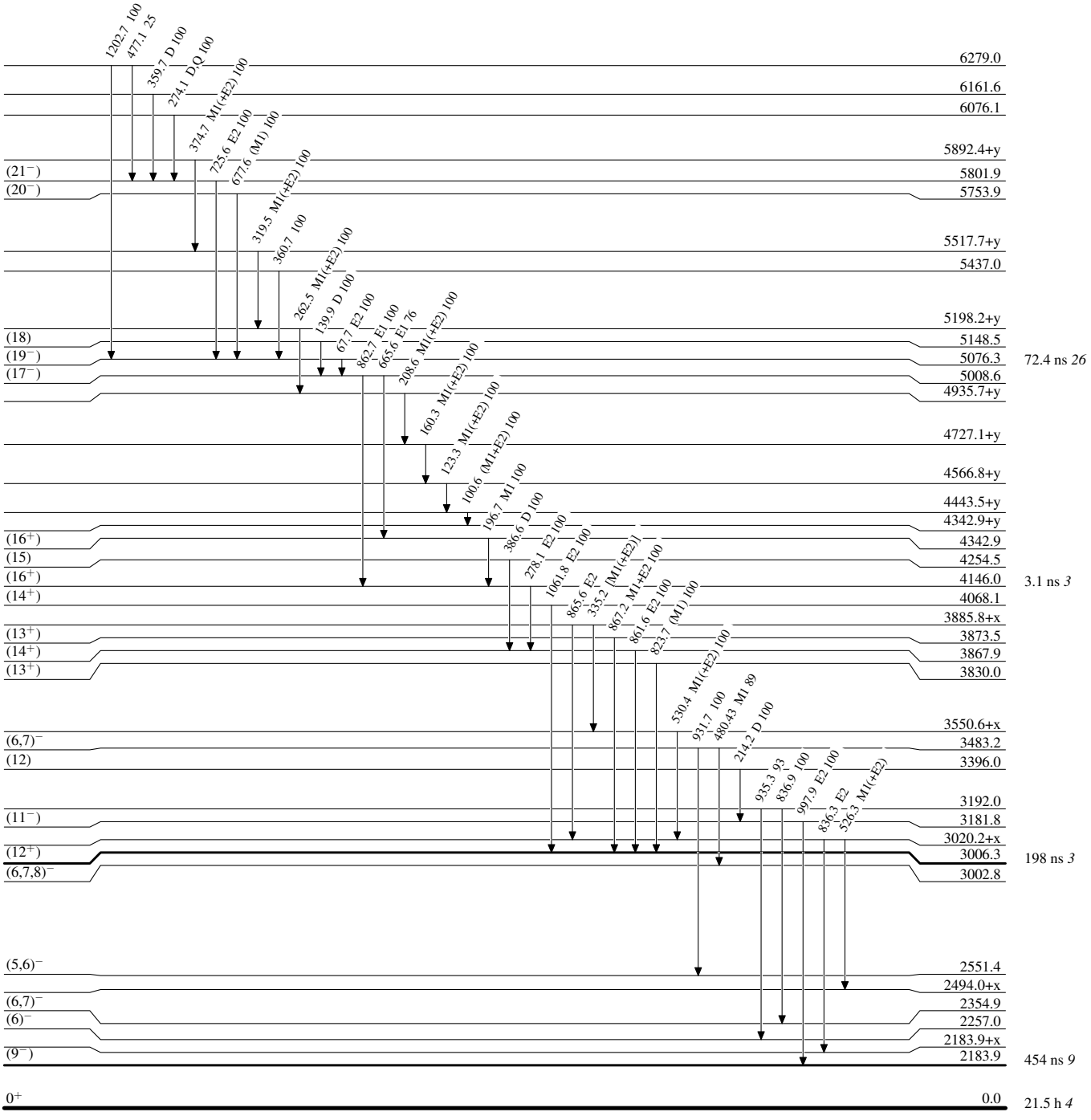


$^{200}_{82}Pb_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

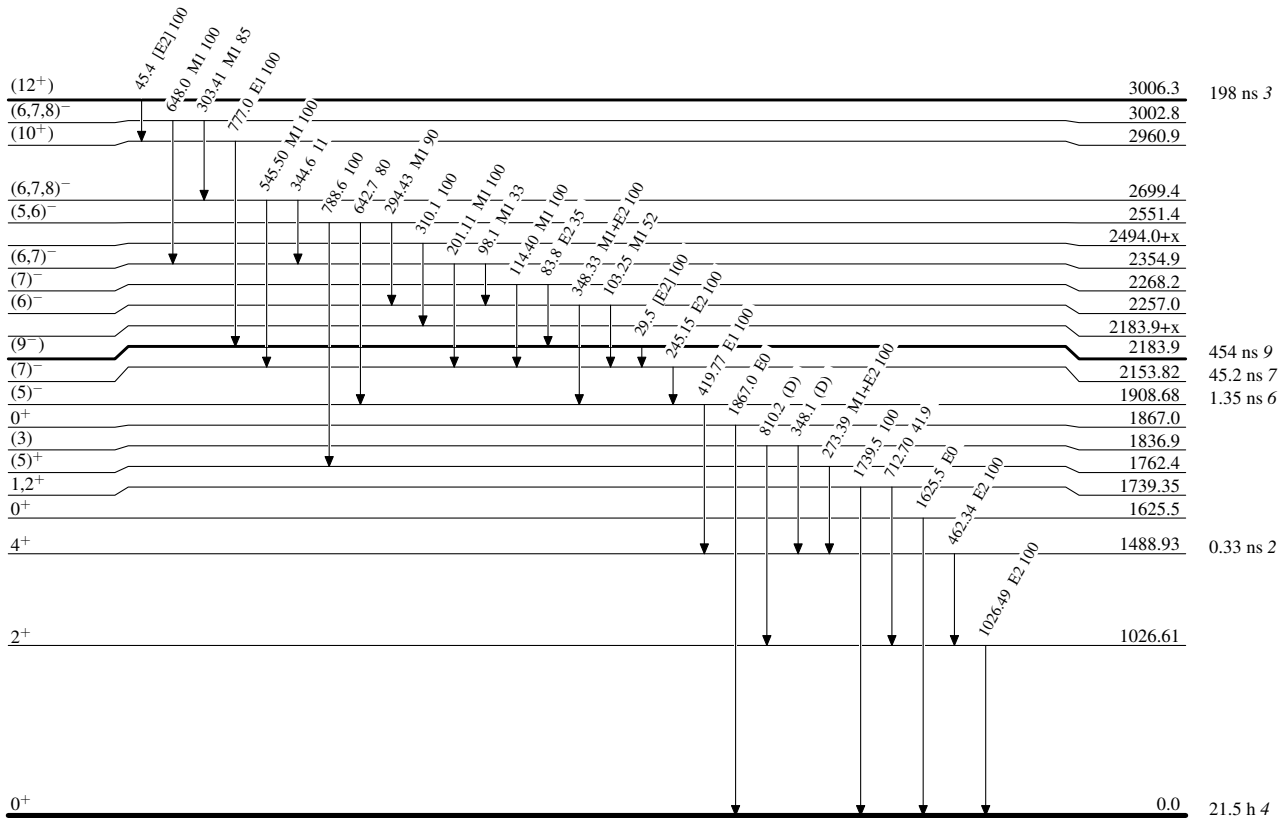


$^{200}_{82}Pb_{118}$

Adopted Levels, Gammas

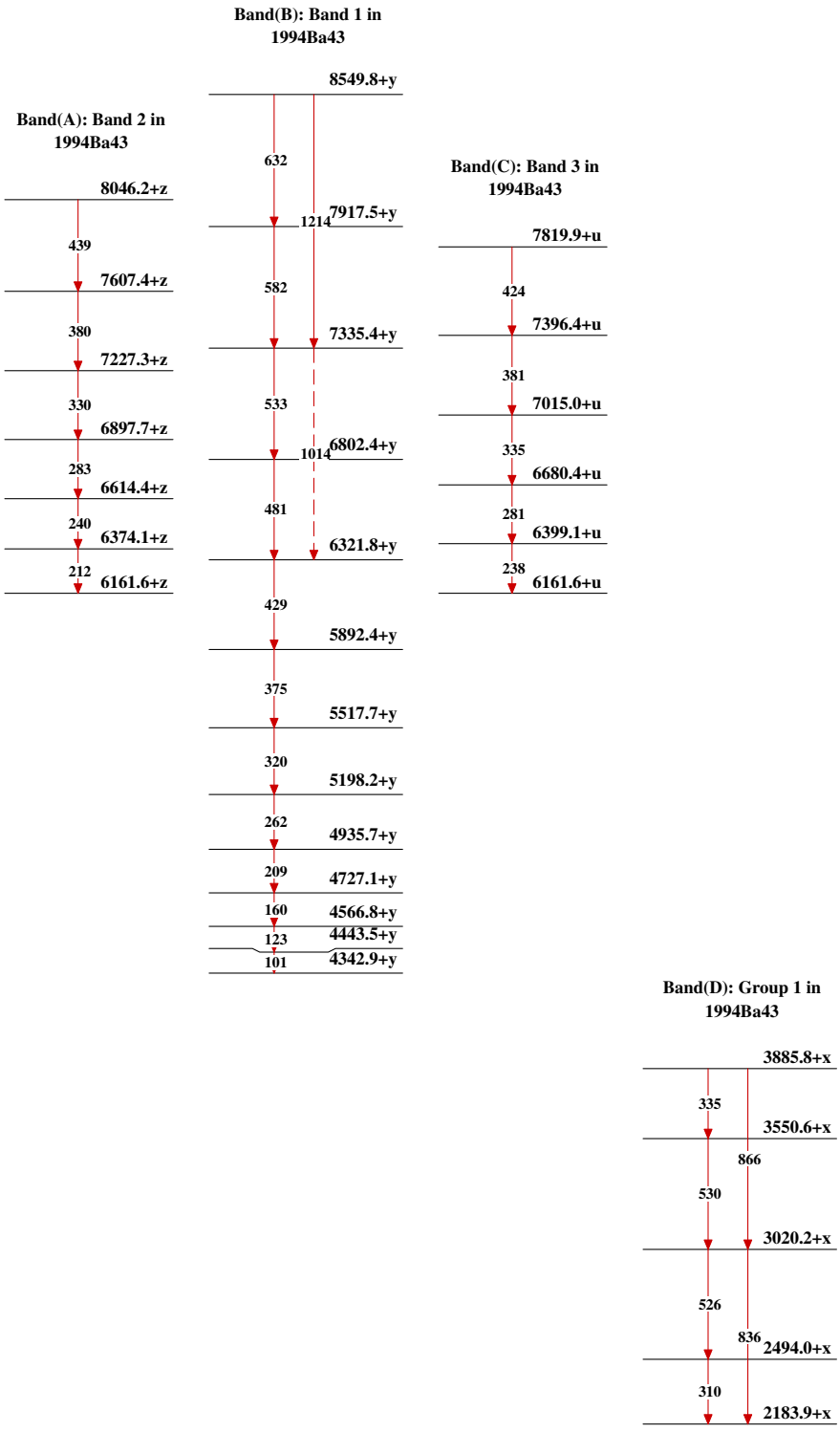
Level Scheme (continued)

Intensities: Relative photon branching from each level



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

Adopted Levels, Gammas



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