

Adopted Levels, Gammas

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

$Q(\beta^-) = -5688$ 24; $S(n) = 7577$ 29; $S(p) = 4065$ 29; $Q(\alpha) = 445 \times 10^1$ 3 2012Wa38

Other $Q(\beta^-)$: -4800 keV $+600-500$ (1991Gr12).

For the nuclear moments and changes in the charge-radii see 1989DuZY, 1988DiZX, 1988DiZW, 1989MeZZ, and 1990Di09.

¹⁹⁵Pb Levels

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

Cross Reference (XREF) Flags

A	¹⁹⁵ Bi ϵ decay	D	(HI,xn γ)
B	¹⁹⁹ Po α decay (5.47 min)	E	(HI,xn γ):SD
C	¹⁹⁹ Po α decay (4.17 min)		

E(level) ^{†‡}	J π &	T _{1/2} [#]	XREF	Comments
0.0	3/2 ⁻	≈15 min	AB E	$\% \epsilon + \% \beta^+ = 100$ E(level): deduced from ¹⁹⁹ Po α decay (5.2 min) and ¹⁹⁵ Bi ϵ decay. J π : HF(α)=1.30 from 3/2 ⁻ in ¹⁹⁹ Po α decay (5.2 min). T _{1/2} : from $\gamma(t)$ measurement (1982Hi04). $\% \epsilon, \% \beta^+$: no evidence of α decay observed (1977CoZM). See also isomeric (E=203, J π =13/2 ⁺) branching comments.
134.52 20 202.9 ^c 7	(5/2) ⁻ 13/2 ⁺	15.0 min 12	A E A CDE	J π : J from systematics (1980Sc26), π from M1(+E2) to 3/2 ⁻ . $\% \epsilon + \% \beta^+ = 100$ E(level): value deduced from ¹⁹⁹ Po α decay: E α (g.s.)=5952 2 and E α (4.2-min isomer)=6059 3 (1989Zh06), and E(13/2 ⁺)=310 2 in ¹⁹⁹ Po. HF(α)=1.2 from 13/2 ⁺ in ¹⁹⁹ Po α decay (4.2 min). T _{1/2} : from $\gamma(t)$ measurement (1982Hi04). Others: 16.4 min 3 (1974Ne16), 15.8 min 13 (1977WeZM), 14.8 min 4 (1977LiZG, 1978Li10), 17 min 1 (1957An53). $\% \epsilon, \% \beta^+$: no evidence of IT decay and α decay observed (1974Ne16, 1977CoZM). From systematics (1980Sc26), B(M4)(W.u.)(i13/2 to f5/2) lies in the range 1 to 3. If the ¹⁹⁵ Pb isomeric transition also lies in this range, then $\%IT=0.11$ 6. $\% \alpha < 0.01$ from extrapolation of log(T _{1/2} (α)) vs E α data for ¹⁸⁷ Pb and ¹⁹¹ Pb. $\mu = -1.1318$ 13 (1987Di06, 2011STZZ). μ : CFBLs, ²⁰⁷ Pb standard (1987Di06). Other: -1.128 7 (²⁰⁷ Pb standard, 1991Du07). Q=+0.306 15 (1991Du07, 2011STZZ). Q: CFBLs, ²⁰⁷ Pb standard (1991Du07). Other: +0.29 1 (1987Di06). Change of the mean-square charge radius $\Delta \langle r^2 \rangle = -0.664$ (fm) ² 13 (1989MeZZ).
329.29 16	1/2 ⁻ , 3/2 ⁻ , 5/2 ⁻		A	
829.9 4	(7/2) ⁻		A	
966.94 20	(3/2, 5/2) ⁻		A	
978.8 7	(11/2) ⁺		A E	
1009.86 24	(1/2 to 7/2) ⁻		A	J π : E2 to 3/2 ⁻ .
1010.7 7	(9/2) ⁺		A	
1093.0 8	13/2 ⁺		A	J π : E0 component in γ to 13/2 ⁺ .
1095.98 15	3/2 ⁻ , 5/2 ⁻ , 7/2 ⁻		A	J π : M1(+E2) γ to (5/2) ⁻ , E2 γ to 3/2 ⁻ .

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Adopted Levels, Gammas (continued)

^{195}Pb Levels (continued)				
E(level) ^{†‡}	J ^{π&}	T _{1/2} [#]	XREF	Comments
1120.3 5	9/2 ⁻ , (1/2 to 7/2) ⁻		A E	
1172.5 ^c 7	17/2 ⁺		DE	
1180.1 3	(1/2 to 7/2) ⁻		A	J ^π : M1 to (1/2,3/2,5/2) ⁻ .
1212.8 6	(1/2 to 7/2) ⁻		A	
1308.1 3	(3/2,5/2,7/2) ⁻		A	J ^π : M1 to (5/2) ⁻ .
1328.7 7	(9/2) ⁺		A	
1379.7 7	(11/2) ⁺		A	
1391.5 7	(7/2) ⁺		A	
1428.5 3	(3/2,5/2,7/2) ⁻		A	J ^π : M1,E2 to (5/2) ⁻ .
1443.2 3	(5/2 to 13/2) ⁺		A	
1566.8 8	(9/2,11/2) ⁺		A	
1644.9 7	(7/2 to 11/2) ⁺		A	J ^π : M1+E2 to (9/2) ⁺ .
1670.2 5	(3/2 to 11/2) ⁻		A	J ^π : E2 to (7/2) ⁻ .
1753.9 ^c 7	21/2 ⁺		DE	Configuration=((ν 1i _{13/2}) ⁻¹ (¹⁹⁶ Pb 4 ⁺))21/2 ⁺ (1986Pa18).
1759.0 7	21/2 ^{-a}	10.0 [@] μs 7	D	T _{1/2} : others: >6 μs (1978Ri01), >4 μs (1980AlZS), 10.0 μs (1978SaZE), 10.0 μs 7 (1976HeZD), 10.3 μs +90-40 (2003Gl05,2004Gl04).
1780.0 6	(⁻)		A	Configuration=((ν i _{13/2}) ⁻¹ (¹⁹⁶ Pb 5 ⁻))21/2 ⁻ (1986Pa18).
1884.0 7	(23/2 ⁻) ^a		D	J ^π : E2(+M1) to 7/2 ⁻ , (3/2,5/2) ⁻ .
2186.0 7	(23/2 ⁻) ^a		D	
2371.7 ^c 7	(25/2 ⁺)		DE	
2413.2 7	27/2 ^{-a}	2.3 ns 7	D	
2463.1 8	23/2 ^a		D	
2469.0 8	23/2 ⁺ a		D	
2571.7 8	25/2 ⁺ a		D	
2805.0 8	27/2 ^{-a}		D	
2814.9 7	29/2 ⁺ a		D	
2901.7 8	33/2 ⁺ a	95 ns 20	D	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 . μ=-2.57 10 (1985St16, 2011STZZ). μ: TDPAD (1985St16). Other: -3.05 28 (1983RaZW). Other: g=-0.185 17 (1983RaZW) assigned by authors to 29/2 ⁺ level.
2903.1 8	27/2 ⁺ a		D	
2968.0 ^d 8	27/2 ^{-a}		D	
3053.8 8	29/2 ⁺ a		D	
3063.5 9	29/2 ⁺ a		D	
3097.7 ^d 9	29/2 ^{-a}		D	
3150.3 8			D	
3361.8 ^d 9	31/2 ^{-a}		D	
3496.0 8			D	
3646.5 10	31/2 ⁺ a		D	
3734.5 ^d 9	33/2 ^{-a}		D	
3787.3 9	33/2 ⁺ a		D	
3868.2 10	33/2 ⁺ a		D	
3903.6 9			D	
4119.7 ^d 9	35/2 ^{-a}		D	
4199.1 9			D	
4411.4 10	35/2 ⁺ a		D	
4432.4 10			D	
4465.4 ^f 9	(33/2 ⁻) ^a		D	

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Adopted Levels, Gammas (continued) ^{195}Pb Levels (continued)

E(level) ^{†‡}	J ^π &	XREF	Comments
4499.7 ¹⁰		D	
4523.6 ¹⁰		D	
4559.2 ^f ¹⁰	(35/2 ⁻) ^a	D	
4566.2 ^d ¹⁰	(37/2 ⁻) ^a	D	
4692.7 ^f ¹¹	(37/2 ⁻) ^a	D	
4834.5 ¹⁰		D	
4865.3 ^f ¹²	(39/2 ⁻) ^a	D	
4966.7 ¹⁰	(39/2 ⁻) ^a	D	
5106.9 ^f ¹²	(41/2 ⁻) ^a	D	
5123.5 ^e ¹⁰	(39/2 ⁻) ^a	D	
5270.2 ^e ¹⁰	(41/2 ⁻) ^a	D	
5411.7 ^f ¹³	(43/2 ⁻) ^a	D	
5467.5 ^e ¹¹	(43/2 ⁻) ^a	D	
5702.3 ^e ¹²	(45/2 ⁻) ^a	D	
5769.8 ^f ¹³	(45/2 ⁻) ^a	D	
5978.2 ^e ¹³	(47/2 ⁻) ^a	D	
6143.7 ^f ¹³	(47/2 ⁻) ^a	D	
6307.9 ^e ¹³	(49/2 ⁻) ^a	D	
6528.7 ^f ¹³	(49/2 ⁻) ^a	D	
6674.0 ^e ¹⁴	(51/2 ⁻) ^a	D	
6906.5 ^f ¹³	(51/2 ⁻) ^a	D	
7090.6 ^e ¹⁵	(53/2 ⁻) ^a	D	
7280.5 ^f ¹⁴	(53/2 ⁻) ^a	D	
7538 ^e	(55/2 ⁻) ^a	D	
x ^g	(15/2 ⁻)	E	E(level): level energy held fixed In least-squares adjustment.
141.80+x ^g ²⁰	(19/2 ⁻)	E	
323.7+x ^g ³	(23/2 ⁻)	E	
545.8+x ^g ³	(27/2 ⁻)	E	
807.7+x ^g ⁴	(31/2 ⁻)	E	
1109.1+x ^g ⁴	(35/2 ⁻)	E	
1450.0+x ^g ⁴	(39/2 ⁻)	E	
1830.5+x ^g ⁴	(43/2 ⁻)	E	
2250.2+x ^g ⁵	(47/2 ⁻)	E	
2708.8+x ^g ⁵	(51/2 ⁻)	E	
3206.2+x ^g ⁶	(55/2 ⁻)	E	
3740.8+x ^g ⁶	(59/2 ⁻)	E	
4314.9+x ^g ¹⁰	(63/2 ⁻)	E	
4927.6+x ^g ¹⁰	(67/2 ⁻)	E	
5578.5+x ^g ¹¹	(71/2 ⁻)	E	
6267.5+x ^g ? ¹⁵	(75/2 ⁻)	E	
y ^h	(17/2 ⁻)	E	35% feeding to normal-deformed bands. This level is expected to populate 13/2 ⁻ member of the band from which 9% feeding to normal-deformed bands is estimated by 2005Jo10.
162.22+y ^h ¹⁵	(21/2 ⁻)	E	33% feeding to normal-deformed bands.
364.67+y ^h ²¹	(25/2 ⁻)	E	23% feeding to normal-deformed bands.
608.17+y ^h ²¹	(29/2 ⁻)	E	
892.90+y ^h ²¹	(33/2 ⁻)	E	
1218.41+y ^h ²²	(37/2 ⁻)	E	
1584.98+y ^h ²²	(41/2 ⁻)	E	
1992.77+y ^h ²⁵	(45/2 ⁻)	E	

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Adopted Levels, Gammas (continued) ^{195}Pb Levels (continued)

E(level) ^{†‡}	J^π &	XREF	E(level) ^{†‡}	J^π &	XREF
2441.5+y ^h 3	(49/2 ⁻)	E	4324.2+z ⁱ 6	J+22	E
2930.6+y ^h 4	(53/2 ⁻)	E	4940.2+z ⁱ 7	J+24	E
3461.0+y ^h 5	(57/2 ⁻)	E	5589.9+z ⁱ 9	J+26	E
4030.9+y ^h 6	(61/2 ⁻)	E	6274.3+z ⁱ 12	J+28	E
4641.6+y ^h 6	(65/2 ⁻)	E	u ^j	J1≈(17/2) ^b	E
5292.2+y ^h 7	(69/2 ⁻)	E	213.6+u ^j 4	J1+2	E
5981.2+y ^h 12	(73/2 ⁻)	E	471.2+u ^j 5	J1+4	E
z ⁱ	J≈(15/2) ^b	E	768.9+u ^j 5	J1+6	E
198.2+z ⁱ 4	J+2	E	1106.7+u ^j 6	J1+8	E
434.3+z ⁱ 5	J+4	E	1484.4+u ^j 6	J1+10	E
711.8+z ⁱ 5	J+6	E	1902.0+u ^j 6	J1+12	E
1029.4+z ⁱ 5	J+8	E	2356.2+u ^j 6	J1+14	E
1386.6+z ⁱ 5	J+10	E	2847.9+u ^j 7	J1+16	E
1782.7+z ⁱ 5	J+12	E	3376.5+u ^j 7	J1+18	E
2216.7+z ⁱ 5	J+14	E	3940.4+u ^j 8	J1+20	E
2688.2+z ⁱ 6	J+16	E	4541.0+u ^j 9	J1+22	E
3197.7+z ⁱ 6	J+18	E	5172.9+u ^j 10	J1+24	E
3743.2+z ⁱ 6	J+20	E			

[†] From level scheme and E γ 's using least-squares fit.

[‡] More accurate relative energies for the high-spin levels above the 13/2⁺ isomer are available in (HI,xn γ).

From RDM in (HI,xn γ), except as noted.

@ From delay coin (1981He07,1977He06).

& From γ -transition multipolarities in ^{195}Bi ε decay (1991Gr12), except as noted. For SD band J^π are obtained from band assignments and systematics in neighboring nuclei.

^a From $\gamma(\theta)$, γ -transition multipolarities, and J^π systematics of odd-Pb isotopes in (HI,xn γ) (1996Ka15,1986Pa18).

^b Estimated from rotational model (1995Fa11).

^c Band(A): yrast band.

^d Band(B): band-1.

^e Band(C): band-2.

^f Band(D): band-3.

^g Band(E): SD-1 band (1995Fa11,1998Va18,2005Jo10), $\alpha=-1/2$. Q(intrinsic)=19.5 +10-9 (centroid-shift method), 20.7 22 (line shape analysis) (1998Va18). Percent population=0.25 (1995Fa11). Favored $\alpha=-1/2$ signature of configuration= $\nu 5/2[752]$, from $\nu 7_3$ intruder orbital (1995Fa11,2005Jo10).

^h Band(e): SD-2 band (1995Fa11,1998Va18,2005Jo10), $\alpha=+1/2$. Q(intrinsic)=19.5 +9-10 (centroid-shift method), 20.2 21 (line shape analysis) (1998Va18). Percent population=0.25 (1995Fa11). Unfavored $\alpha=+1/2$ signature of configuration= $\nu 5/2[752]$, from $\nu 7_3$ intruder orbital (1995Fa11,2005Jo10).

ⁱ Band(F): SD-3 band (1995Fa11). percent population=0.25 (1995Fa11).

^j Band(G): SD-4 band (1995Fa11). percent population=0.1 (1995Fa11). SD-3 and SD-4 are proposed as signature partners with the neutron in the 9/2[624] or 5/2[512] orbital.

Adopted Levels, Gammas (continued)

$\gamma(^{195}\text{Pb})$

$E_i(\text{level})$	J_i^π	$E_\gamma^{\ddagger}$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	δ	$\alpha^\&$	Comments
134.52	(5/2) ⁻	134.4 3	100	0.0	3/2 ⁻	M1(+E2)		3.0 11	
329.29	1/2 ⁻ , 3/2 ⁻ , 5/2 ⁻	329.2 2	100	0.0	3/2 ⁻	M1		0.334	
829.9	(7/2) ⁻	695.4 3	100	134.52	(5/2) ⁻	M1		0.0459	
966.94	(3/2, 5/2) ⁻	831.7 7	100 7	134.52	(5/2) ⁻	M1(+E2)		0.019 10	
		967.0 2	17.9 13	0.0	3/2 ⁻	M1(+E2)		0.013 7	
978.8	(11/2) ⁺	776.2 3	100	202.9	13/2 ⁺	E2		0.01108	
1009.86	(1/2 to 7/2) ⁻	875.4 3	77 10	134.52	(5/2) ⁻	E2		0.00868	
		1009.8 3	100 7	0.0	3/2 ⁻	E2		0.00655	
1010.7	(9/2) ⁺	807.6 4	100	202.9	13/2 ⁺	E2		0.01021	
1093.0	13/2 ⁺	890.0 4	100	202.9	13/2 ⁺	E0+M1+E2		0.016 8	
1095.98	3/2 ⁻ , 5/2 ⁻ , 7/2 ⁻	766.6 2	20.0 16	329.29	1/2 ⁻ , 3/2 ⁻ , 5/2 ⁻				
		961.4 3	52.6 45	134.52	(5/2) ⁻	M1(+E2)		0.014 7	
		1096.1 2	100 10	0.0	3/2 ⁻	E2		0.00559	
1120.3	9/2 ⁻ , (1/2 to 7/2) ⁻	985.8 4	100	134.52	(5/2) ⁻	E2		0.00686	
1172.5	17/2 ⁺	969.6 # 2	100 #	202.9	13/2 ⁺	E2 #		0.00709	
1180.1	(1/2 to 7/2) ⁻	850.8 2	100	329.29	1/2 ⁻ , 3/2 ⁻ , 5/2 ⁻	M1		0.0272	
1212.8	(1/2 to 7/2) ⁻	1078.3 5	100	134.52	(5/2) ⁻	E2		0.00577	
1308.1	(3/2, 5/2, 7/2) ⁻	1173.6 2	100	134.52	(5/2) ⁻	M1		0.01193	
1328.7	(9/2) ⁺	317.7 5	1.5 10	1010.7	(9/2) ⁺	E0+M1+E2		0.23 14	
		498.8 5	43.9 36	829.9	(7/2) ⁻	E1		0.00961	
		1125.8 2	100 7	202.9	13/2 ⁺	E2		0.00531	
1379.7	(11/2) ⁺	286.4 6	37.2 43	1093.0	13/2 ⁺	M1		0.488	
		368.9 3	100 7	1010.7	(9/2) ⁺	M1(+E2)		0.15 9	
		401.3 4	10.6 32	978.8	(11/2) ⁺	E0+M1+E2		0.12 8	
		1176.5 5	78.7 64	202.9	13/2 ⁺	M1		0.01186	
1391.5	(7/2) ⁺	380.6 3	100 33	1010.7	(9/2) ⁺	M1+E2		0.14 9	
		412.7 2	87 13	978.8	(11/2) ⁺	E2		0.0475	
1428.5	(3/2, 5/2, 7/2) ⁻	1294.0 2	100	134.52	(5/2) ⁻	M1, E2		0.007 3	
1443.2	(5/2 to 13/2) ⁺	433.3 2	100	1009.86	(1/2 to 7/2) ⁻	E2		0.0419	
1566.8	(9/2, 11/2) ⁺	556.2 4	64 13	1010.7	(9/2) ⁺	M1+E2		0.05 3	
		587.6 6	100 11	978.8	(11/2) ⁺	M1+E2		0.05 3	
1644.9	(7/2 to 11/2) ⁺	634.2 2	100	1010.7	(9/2) ⁺	M1+E2		0.038 21	
1670.2	(3/2 to 11/2) ⁻	840.3 3	100	829.9	(7/2) ⁻	E2		0.00942	
1753.9	21/2 ⁺	581.4 # 2	100 #	1172.5	17/2 ⁺	E2 #		0.0207	
1759.0	21/2 ⁻	(5.1 #)		1753.9	21/2 ⁺				
		586.5 # 2		1172.5	17/2 ⁺	E3(+M2) #	4.5 # +26-10	0.067 4	I(γ +ce)(5.1 γ)/I(γ +ce)(586.5 γ)=(41 5)/(59 5) and I(γ +ce)(586.5 γ)=39.6 4 deduced from authors' values of B(E3), δ , α , and T _{1/2} =10.0 μ s 7. B(M2)(W.u.)=3.7 $\times$ 10 ⁻⁵ 22; B(E3)(W.u.)=1.19 18 α : E3 α (theory)'s mult. By 0.975 10 (Cf. 1990Ne01).

Adopted Levels, Gammas (continued)

$\gamma(^{195}\text{Pb})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ ‡	I_γ †	E_f	J_f^π	Mult. ‡	δ	α &	Comments
1780.0	($^-$)	684.0 5	100	1095.98	3/2 $^-$, 5/2 $^-$, 7/2 $^-$	E2(+M1)		0.031 17	
1884.0	(23/2 $^-$)	125.0# 1	100#	1759.0	21/2 $^-$	(E2)+M1#	≤ 0.65 #	4.6 4	
		130		1753.9	21/2 $^+$				
2186.0	(23/2 $^-$)	427.0# 2	100#	1759.0	21/2 $^-$	M1#		0.1657	
		432		1753.9	21/2 $^+$				
2371.7	(25/2 $^+$)	617.8# 2	100#	1753.9	21/2 $^+$				
2413.2	27/2 $^-$	227.1# 1		2186.0	(23/2 $^-$)	E2#		0.278	B(E2)(W.u.)=1.8 7
		529.2# 1		1884.0	(23/2 $^-$)	E2#		0.0257	B(E2)(W.u.)=0.054 18
2463.1	23/2	709.2 3	100	1753.9	21/2 $^+$				
2469.0	23/2 $^+$	6		2463.1	23/2				
		97.3 5	4.2 21	2371.7	(25/2 $^+$)	(M1)		10.18 21	
		715.2 2	100 13	1753.9	21/2 $^+$	M1		0.0426	
2571.7	25/2 $^+$	102.7 5	50 17	2469.0	23/2 $^+$	M1		8.74 18	
		199.9 5	67 17	2371.7	(25/2 $^+$)	M1		1.322 21	
		817.8 4	100 33	1753.9	21/2 $^+$	E2		0.00996	
2805.0	27/2 $^-$	233.3 2	100	2571.7	25/2 $^+$	E1		0.0536	
2814.9	29/2 $^+$	401.8# 1		2413.2	27/2 $^-$	E1#		0.01527	
		443.3# 2		2371.7	(25/2 $^+$)				
2901.7	33/2 $^+$	86.8# 3	100#	2814.9	29/2 $^+$	E2#		11.31 25	B(E2)(W.u.)=1.4 3
2903.1	27/2 $^+$	99#		2805.0	27/2 $^-$				
		331.4# 3	100# 18	2571.7	25/2 $^+$	M1#		0.328	
2968.0	27/2 $^-$	162.8# 5	10.3# 34	2805.0	27/2 $^-$	M1#		2.35	
		396.4# 2	100# 10	2571.7	25/2 $^+$	E1#		0.01573	
		596.4# 3	55# 14	2371.7	(25/2 $^+$)	E1#		0.00667	
3053.8	29/2 $^+$	682.1# 4	100#	2371.7	(25/2 $^+$)	E2#		0.01454	
3063.5	29/2 $^+$	160.4# 5	100#	2903.1	27/2 $^+$	M1#		2.45	
3097.7	29/2 $^-$	129.7# 4	100#	2968.0	27/2 $^-$	M1#		4.49 8	
3150.3		345.3# 4	100#	2805.0	27/2 $^-$	M1#		0.293	
3361.8	31/2 $^-$	264.0# 2	100#	3097.7	29/2 $^-$	M1#		0.611	
3496.0		345.3# 4	100# 20	3150.3		M1#		0.293	
		442.4# 5	80# 20	3053.8	29/2 $^+$				
3646.5	31/2 $^+$	583.0# 5	100#	3063.5	29/2 $^+$				
3734.5	33/2 $^-$	372.7# 2	100# 21	3361.8	31/2 $^-$	M1#		0.239	
		637.0# 5	8.8# 25	3097.7	29/2 $^-$	E2#		0.01687	
3787.3	33/2 $^+$	291.4# 5	22# 8	3496.0		#			
		733.3# 4	100# 20	3053.8	29/2 $^+$	E2#		0.01247	
3868.2	33/2 $^+$	221.5# 5	22# 8	3646.5	31/2 $^+$	(M1)#		0.993 16	

Adopted Levels, Gammas (continued) $\gamma(^{195}\text{Pb})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\ddagger$	$I_\gamma^\ddagger$	E_f	J_f^π	Mult. ‡	$\alpha\&$
3868.2	33/2 ⁺	804.6 [#] 4	100 [#] 22	3063.5	29/2 ⁺	E2 [#]	0.01029
3903.6		407.3 [#] 5	100 [#] 30	3496.0			
		754.0 [#] 5	30 [#] 7	3150.3			
4119.7	35/2 ⁻	385.2 [#] 3	100 [#] 21	3734.5	33/2 ⁻	M1 [#]	0.218
		757.7 [#] 5	16.3 [#] 5	3361.8	31/2 ⁻	E2 [#]	0.01165
4199.1		295.9 [#] 5	53 [#] 13	3903.6			
		412.1 [#] 5	93 [#] 27	3787.3	33/2 ⁺		
		703.0 [#] 5	100 [#] 27	3496.0			
4411.4	35/2 ⁺	543.1 [#] 4	100 [#] 22	3868.2	33/2 ⁺	M1 [#]	0.0876
		765.0 [#] 5	21 [#] 7	3646.5	31/2 ⁺		
4432.4		697.9 5	100	3734.5	33/2 ⁻		
4465.4	(33/2 ⁻)	54 [#]		4411.4	35/2 ⁺		
		266.7 [#] 5	75 [#] 25	4199.1			
		677.7 [#] 5	100 [#] 30	3787.3	33/2 ⁺		
4499.7		380.1 [#] 4	100 [#] 25	4119.7	35/2 ⁻		
		765.1 [#] 5	35 [#] 3	3734.5	33/2 ⁻		
4523.6		404.0 [#] 4	100 [#]	4119.7	35/2 ⁻		
4559.2	(35/2 ⁻)	93.8 [#] 5	100 [#] 30	4465.4	(33/2 ⁻)	M1 [#]	11.29 24
		361.9 [#] 5	95 [#] 30	4199.1		#	
4566.2	(37/2 ⁻)	446.3 [#] 4	100 [#] 20	4119.7	35/2 ⁻		
		832.0 [#] 5	24 [#] 8	3734.5	33/2 ⁻	E2 [#]	0.00961
4692.7	(37/2 ⁻)	133.5 [#] 4	100 [#]	4559.2	(35/2 ⁻)	M1 [#]	4.13 7
4834.5		402.1 [#] 5	100 [#]	4432.4			
4865.3	(39/2 ⁻)	172.6 [#] 4	100 [#]	4692.7	(37/2 ⁻)	M1 [#]	2.00
4966.7	(39/2)	400.6 [#] 5	100 [#]	4566.2	(37/2 ⁻)		
5106.9	(41/2 ⁻)	241.6 [#] 3	100 [#]	4865.3	(39/2 ⁻)	M1 [#]	0.780
5123.5	(39/2 ⁻)	288.9 [#] 5	43 [#] 14	4834.5			
		557.1 [#] 5	100 [#] 29	4566.2	(37/2 ⁻)		
		600.0 [#] 5	100 [#] 29	4523.6			
5270.2	(41/2 ⁻)	146.7 [#] 4	100 [#] 30	5123.5	(39/2 ⁻)	M1 [#]	3.16
		303.6 [#] 5	80 [#] 25	4966.7	(39/2)		
5411.7	(43/2 ⁻)	304.8 [#] 3	100 [#]	5106.9	(41/2 ⁻)	M1 [#]	0.412
5467.5	(43/2 ⁻)	197.3 [#] 4	100 [#]	5270.2	(41/2 ⁻)	M1 [#]	1.371
5702.3	(45/2 ⁻)	234.8 [#] 5	100 [#]	5467.5	(43/2 ⁻)	M1 [#]	0.844
5769.8	(45/2 ⁻)	358.0 [#] 3	100 [#] 23	5411.7	(43/2 ⁻)	M1 [#]	0.266

Adopted Levels, Gammas (continued)

$\gamma(^{195}\text{Pb})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\ddagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	$\alpha^\&$	Comments
5769.8	(45/2 ⁻)	663.0 [#] 5	11.5 [#] 31	5106.9	(41/2 ⁻)			
5978.2	(47/2 ⁻)	275.9 [#] 4	100 [#]	5702.3	(45/2 ⁻)	M1 [#]	0.541	
6143.7	(47/2 ⁻)	373.8 [#] 3	100 [#] 27	5769.8	(45/2 ⁻)	(M1) [#]	0.237	
		732.0 [#] 5	14.6 [#] 36	5411.7	(43/2 ⁻)			
6307.9	(49/2 ⁻)	329.7 [#] 4	100 [#]	5978.2	(47/2 ⁻)	M1 [#]	0.332	
6528.7	(49/2 ⁻)	384.8 [#] 4	100 [#] 25	6143.7	(47/2 ⁻)	(M1) [#]	0.219	
		759.0 5	17.5 50	5769.8	(45/2 ⁻)			
6674.0	(51/2 ⁻)	366.1 [#] 4	100 [#]	6307.9	(49/2 ⁻)	M1 [#]	0.250	
6906.5	(51/2 ⁻)	377.7 [#] 4	100 [#] 17	6528.7	(49/2 ⁻)	(M1) [#]	0.230	
		763.0 [#] 5	23 [#] 7	6143.7	(47/2 ⁻)			
7090.6	(53/2 ⁻)	416.6 [#] 4	100 [#]	6674.0	(51/2 ⁻)			
7280.5	(53/2 ⁻)	374.0 [#] 4	100 [#]	6906.5	(51/2 ⁻)	(M1) [#]	0.236	
7538	(55/2 ⁻)	446.0 ^{#a} 5	100 [#]	7090.6	(53/2 ⁻)			
141.80+x	(19/2 ⁻)	141.8 2	0.09 [@] 2	x	(15/2 ⁻)			E_γ : reported by 2005Jo10 only.
323.7+x	(23/2 ⁻)	181.94 18	0.35 [@] 2	141.80+x	(19/2 ⁻)			
545.8+x	(27/2 ⁻)	222.03 14	0.63 [@] 3	323.7+x	(23/2 ⁻)			
807.7+x	(31/2 ⁻)	261.96 10	0.87 [@] 3	545.8+x	(27/2 ⁻)			
1109.1+x	(35/2 ⁻)	301.33 10	0.99 [@] 3	807.7+x	(31/2 ⁻)			
1450.0+x	(39/2 ⁻)	340.93 9	1.00 [@] 4	1109.1+x	(35/2 ⁻)			
1830.5+x	(43/2 ⁻)	380.51 14	0.98 [@] 4	1450.0+x	(39/2 ⁻)			
2250.2+x	(47/2 ⁻)	419.72 19	0.94 [@] 4	1830.5+x	(43/2 ⁻)			
2708.8+x	(51/2 ⁻)	458.55 22	0.83 [@] 4	2250.2+x	(47/2 ⁻)			
3206.2+x	(55/2 ⁻)	497.39 22	0.65 [@] 5	2708.8+x	(51/2 ⁻)			
3740.8+x	(59/2 ⁻)	534.6 3	0.60 [@] 4	3206.2+x	(55/2 ⁻)			
4314.9+x	(63/2 ⁻)	574.1 8	0.38 [@] 6	3740.8+x	(59/2 ⁻)			
4927.6+x	(67/2 ⁻)	612.7 3	0.42 [@]	4314.9+x	(63/2 ⁻)			
5578.5+x	(71/2 ⁻)	650.9 4	0.35 [@]	4927.6+x	(67/2 ⁻)			
6267.5+x?	(75/2 ⁻)	689 ^a	0.10 [@]	5578.5+x	(71/2 ⁻)			
162.22+y	(21/2 ⁻)	162.20 15	0.44 [@] 4	y	(17/2 ⁻)			
364.67+y	(25/2 ⁻)	202.44 14	0.52 [@] 5	162.22+y	(21/2 ⁻)			
608.17+y	(29/2 ⁻)	243.49 3	0.90 [@] 6	364.67+y	(25/2 ⁻)			
892.90+y	(33/2 ⁻)	284.73 3	1.00 [@] 5	608.17+y	(29/2 ⁻)			
1218.41+y	(37/2 ⁻)	325.51 4	0.95 [@] 6	892.90+y	(33/2 ⁻)			
1584.98+y	(41/2 ⁻)	366.57 3	0.99 [@] 6	1218.41+y	(37/2 ⁻)			
1992.77+y	(45/2 ⁻)	407.79 11	0.99 [@] 6	1584.98+y	(41/2 ⁻)			

Adopted Levels, Gammas (continued)

$\gamma(^{195}\text{Pb})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\ddagger$	$I_\gamma^\dagger$	E_f	J_f^π	Comments
2441.5+y	(49/2 ⁻)	448.76 14	0.99@ 6	1992.77+y	(45/2 ⁻)	
2930.6+y	(53/2 ⁻)	489.09 19	0.87@ 6	2441.5+y	(49/2 ⁻)	
3461.0+y	(57/2 ⁻)	530.4 3	0.67@ 7	2930.6+y	(53/2 ⁻)	
4030.9+y	(61/2 ⁻)	569.9 4	0.57@ 7	3461.0+y	(57/2 ⁻)	
4641.6+y	(65/2 ⁻)	610.75 23	0.56@	4030.9+y	(61/2 ⁻)	
5292.2+y	(69/2 ⁻)	650.6 3	0.38@	4641.6+y	(65/2 ⁻)	
5981.2+y?	(73/2 ⁻)	689 ^a	0.10@	5292.2+y	(69/2 ⁻)	E_γ, I_γ : from figure 1 of 1995Fa11 .
198.2+z	J+2	198.2 4	0.28@	z	J $\approx$ (15/2)	
434.3+z	J+4	236.19 14	0.70@	198.2+z	J+2	
711.8+z	J+6	277.47 13	0.56@	434.3+z	J+4	
1029.4+z	J+8	317.60 12	0.62@	711.8+z	J+6	
1386.6+z	J+10	357.22 11	0.85@	1029.4+z	J+8	
1782.7+z	J+12	396.08 13	0.90@	1386.6+z	J+10	
2216.7+z	J+14	434.02 13	0.80@	1782.7+z	J+12	
2688.2+z	J+16	471.52 15	0.70@	2216.7+z	J+14	
3197.7+z	J+18	509.46 14	0.70@	2688.2+z	J+16	
3743.2+z	J+20	545.51 16	0.65@	3197.7+z	J+18	
4324.2+z	J+22	581.04 17	1.00@	3743.2+z	J+20	
4940.2+z	J+24	616.0 3	0.42@	4324.2+z	J+22	
5589.9+z	J+26	649.7 5	0.30@	4940.2+z	J+24	
6274.3+z	J+28	684.4 8	0.24@	5589.9+z	J+26	
213.6+u	J1+2	213.6 4	0.45@	u	J1 $\approx$ (17/2)	
471.2+u	J1+4	257.66 23	0.60@	213.6+u	J1+2	
768.9+u	J1+6	297.70 17	0.72@	471.2+u	J1+4	
1106.7+u	J1+8	337.83 16	1.00@	768.9+u	J1+6	
1484.4+u	J1+10	377.68 17	0.90@	1106.7+u	J1+8	
1902.0+u	J1+12	417.59 19	0.72@	1484.4+u	J1+10	
2356.2+u	J1+14	454.21 14	0.80@	1902.0+u	J1+12	
2847.9+u	J1+16	491.68 20	0.70@	2356.2+u	J1+14	
3376.5+u	J1+18	528.6 3	0.80@	2847.9+u	J1+16	
3940.4+u	J1+20	563.9 3	0.65@	3376.5+u	J1+18	
4541.0+u	J1+22	600.6 4	0.45@	3940.4+u	J1+20	
5172.9+u	J1+24	631.9 4	0.28@	4541.0+u	J1+22	

Adopted Levels, Gammas (continued)

$\gamma(^{195}\text{Pb})$ (continued)

[†] Relative photon branching renormalized to I_γ=100 for the strongest transition from each level.

[‡] From ^{195}Bi ε decay, except as noted.

[#] From (HI,xn γ).

[@] Relative transition intensity within the SD band.

[&] 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.

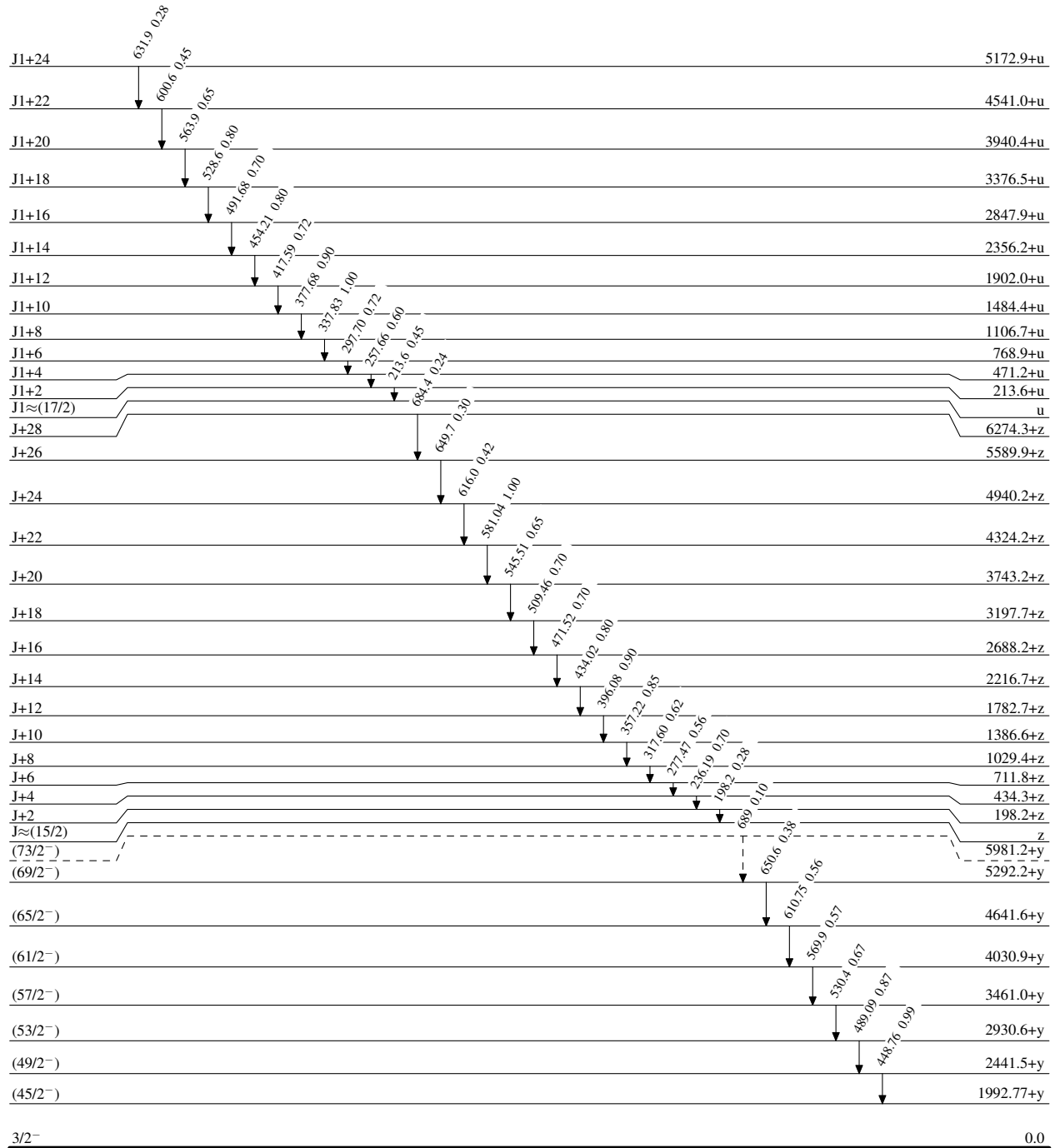
^a Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

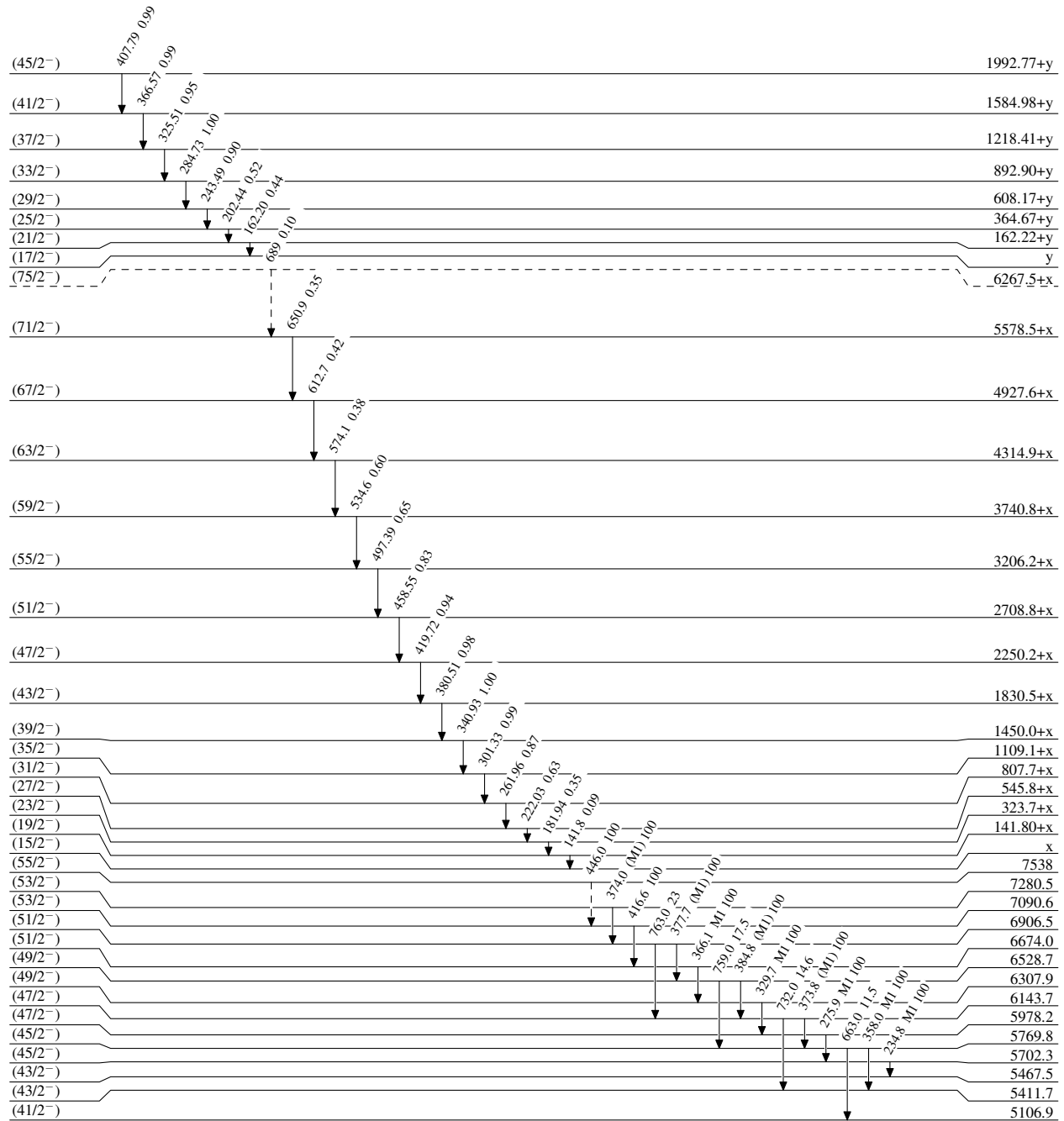
-----► γ Decay (Uncertain)


Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

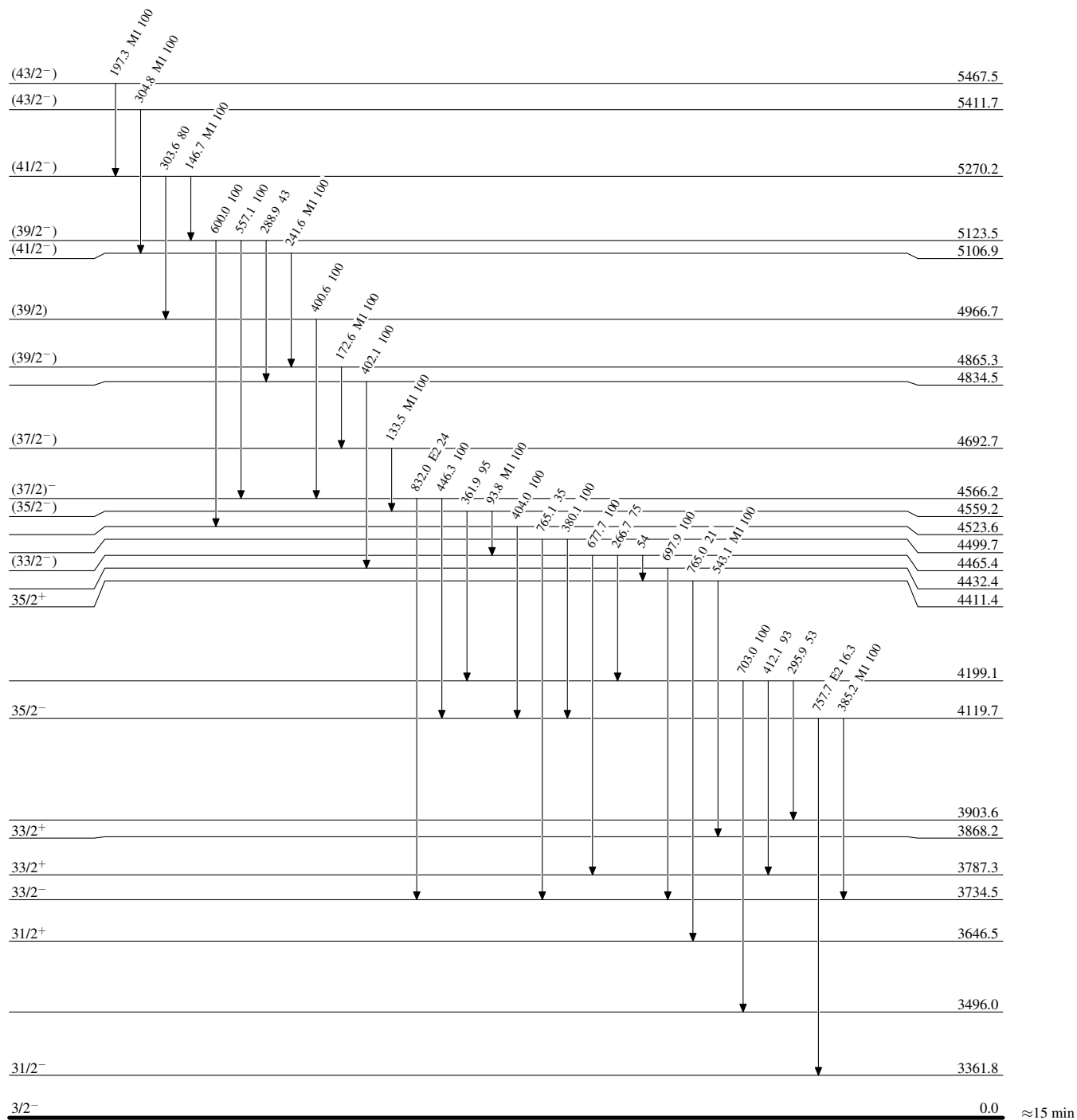
-----► γ Decay (Uncertain)3/2⁻

0.0

≈15 min

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

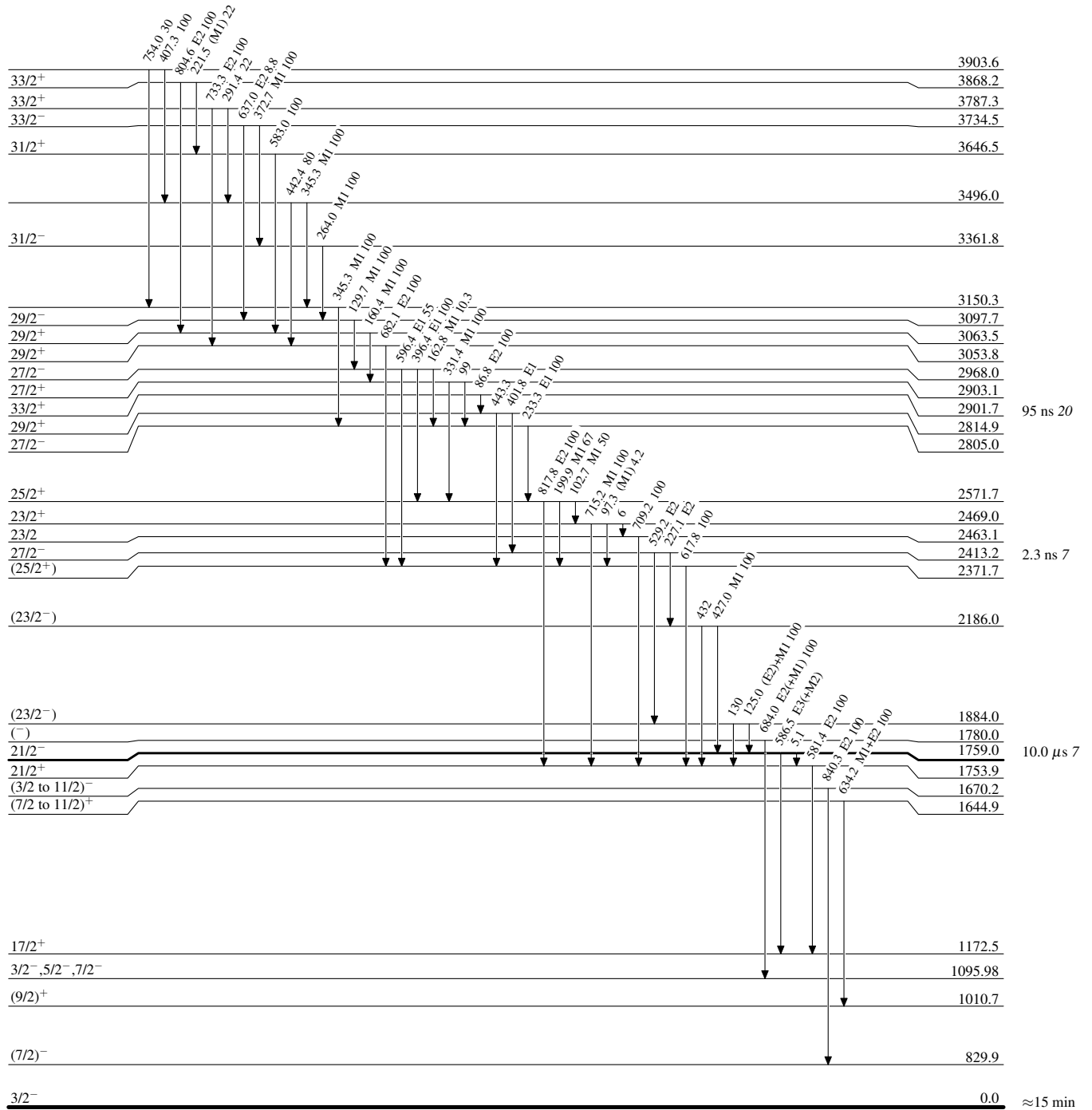


Adopted Levels, Gammas

Legend

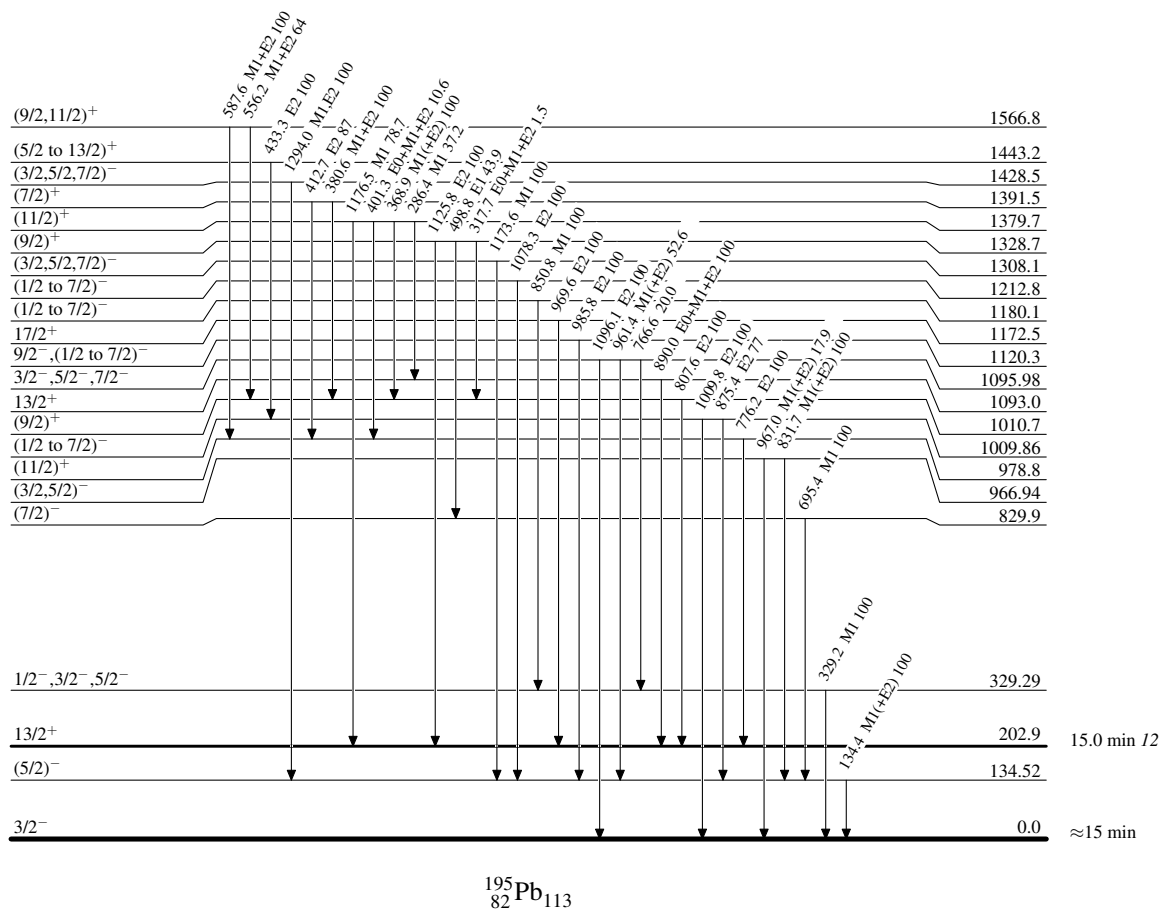
Level Scheme (continued)

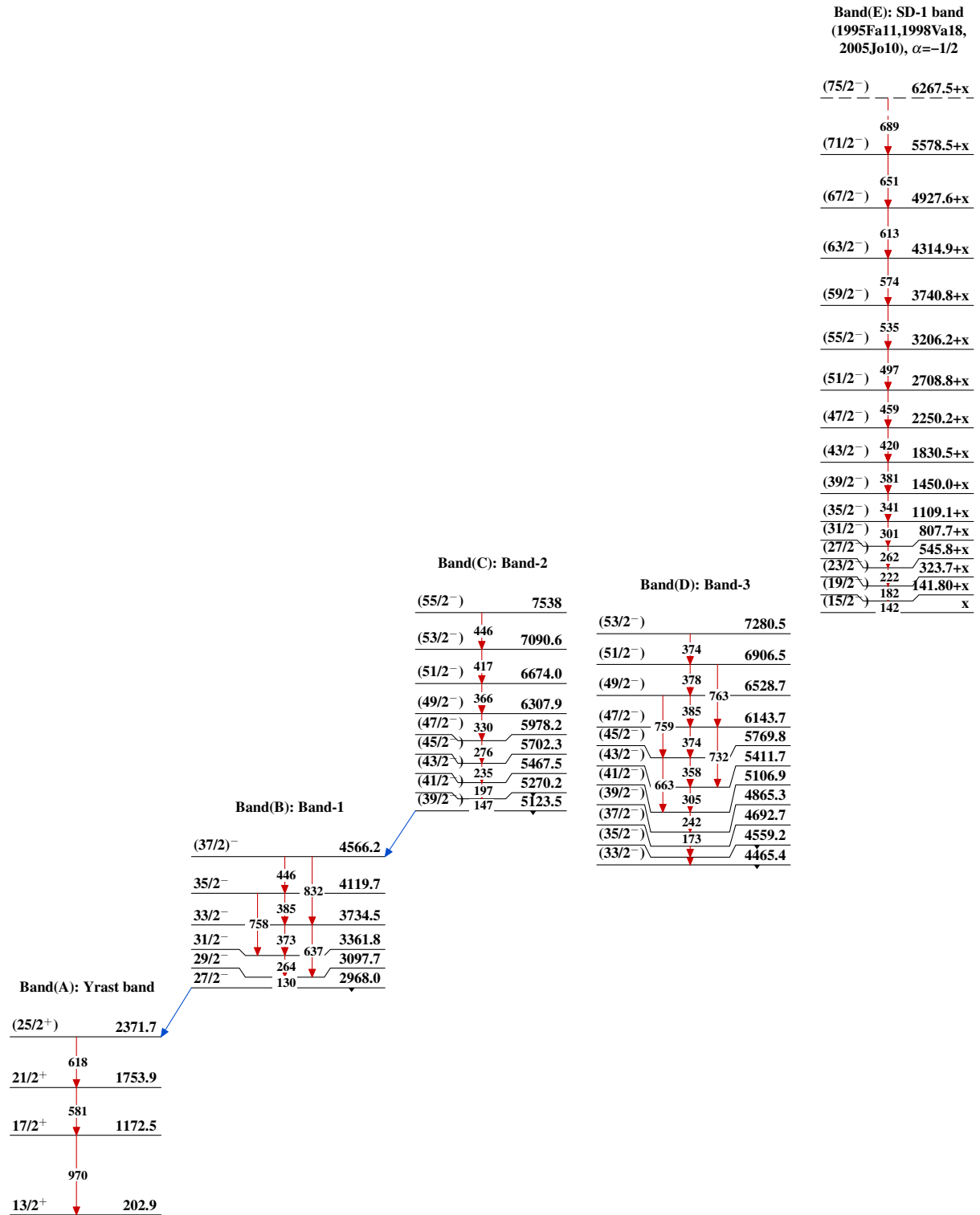
Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain)

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

 $^{195}_{82}\text{Pb}_{113}$

Adopted Levels, Gammas

Adopted Levels, Gammas (continued)

			Band(G): SD-4 band (1995Fa11)		
			J1+24		5172.9+u
			J1+22	632	4541.0+u
			J1+20	601	3940.4+u
			J1+18	564	3376.5+u
			J1+16	529	2847.9+u
			J1+14	492	2356.2+u
			J1+12	454	1902.0+u
			J1+10	418	1484.4+u
			J1+8	378	1106.7+u
			J1+6	338	768.9+u
			J1+4	298	471.2+u
			J1+2	258	213.6+u
			J1≈(17/2)	214	u
			Band(F): SD-3 band (1995Fa11)		
			J+28		6274.3+z
			J+26	684	5589.9+z
			J+24	650	4940.2+z
			J+22	616	4324.2+z
			J+20	581	3743.2+z
			J+18	546	3197.7+z
			J+16	509	2688.2+z
			J+14	472	2216.7+z
			J+12	434	1782.7+z
			J+10	396	1386.6+z
			J+8	357	1029.4+z
			J+6	318	711.8+z
			J+4	277	434.3+z
			J+2	236	198.2+z
			J≈(15/2)	198	z
			Band(e): SD-2 band (1995Fa11,1998Va18, 2005Jo10), α=+1/2		
(73/2 ⁻)		5981.2+y			
(69/2 ⁻)	689	5292.2+y			
(65/2 ⁻)	651	4641.6+y			
(61/2 ⁻)	611	4030.9+y			
(57/2 ⁻)	570	3461.0+y			
(53/2 ⁻)	530	2930.6+y			
(49/2 ⁻)	489	2441.5+y			
(45/2 ⁻)	449	1992.77+y			
(41/2 ⁻)	408	1584.98+y			
(37/2 ⁻)	367	1218.41+y			
(33/2 ⁻)	326	892.90+y			
(29/2 ⁻)	285	608.17+y			
(25/2 ⁻)	243	364.67+y			
(21/2 ⁻)	202	162.22+y			
(17/2 ⁻)	162	y			