^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

Parent: ^{202}Bi: E=0; $J^\pi=5^+$; $T_{1/2}$=1.71 h *4*; Q(ε)=5190 *15*; %ε+%β^+ decay=100

1974Go32: Mass separated ^{202}Bi source. Measured: Eγ, Iγ, ce, $\gamma\gamma$ coin.

1985Dz05: ^{202}Bi accumulated from chemically and mass separated source of ^{202}Po. Measured: Ice_K.

Others: 1970DaZM, 1970Ha14, 1973Pa03.

$\gamma^\pm\approx1\%$ (1974Go32).

^{202}Pb Levels

E(level)†	Jπ‡	$T_{1/2}$‡	E(level)†	Jπ‡
0.0	0^+	5.25×10^4 y *28*	2386.82 *7*	5^-
960.67 *5*	2^+	≤0.1 ns	2517.28 *8*	3^-
1382.84 *6*	4^+	1.97 ns *2*	2609.58 *7*	5^-
1623.06 *7*	4^+		2618.88 *8*	$4^-,5^-,6^-$
1915.12 *7*	4^+		2750.50 *13*	6^+
1965.14 *7*	4^+		2898.76 *7*	5^-
2040.32 *7*	5^-		2916.53 *8*	$4^-,5^-$
2185.06 *8*	3^+		2967.61 *8*	$4^-,5^-$
2208.43 *8*	7^-	65.3 ns *4*	3285.79 *7*	4^-
2235.42 *9*	6^+		3682.22 *10*	$4^-,5^-$
2289.24 *8*	6^-		3723.52 *9*	4^-
2324.93 *9*	$4^+,5^+$		3820.87 *8*	5^-
2360.46 *8*	$4^-,5^-$			

† From a least-squares fit to Eγ.

‡ From Adopted Levels.

ε,β^+ radiations

E(decay)	E(level)	Iβ+ ‡	Iε‡	Log *ft*	I(ε+β+)†‡	Comments
(1369 *15*)	3820.87		2.35 *24*	7.20 *5*	2.35 *24*	εK=0.7950 *2*; εL=0.15410 *16*; εM+=0.05075 *7*
(1467 *15*)	3723.52		1.44 *13*	7.47 *5*	1.44 *13*	εK=0.7961 *2*; εL=0.1531 *2*; εM+=0.05037 *6*
(1508 *15*)	3682.22	0.00126 *19*	2.18 *16*	7.32 *4*	2.18 *16*	av Eβ=240.9 *68*; εK=0.7964 *2*; εL=0.1528 *2*; εM+=0.05023 *6*
(1904 *15*)	3285.79	0.039 *3*	6.6 *4*	7.05 *3*	6.6 *4*	av Eβ=416.5 *68*; εK=0.7957 *2*; εL=0.1494 *2*; εM+=0.04896 *5*
(2222 *15*)	2967.61	0.15 *1*	8.5 *5*	7.08 *3*	8.7 *5*	av Eβ=555.8 *66*; εK=0.7883 *6*; εL=0.14635 *17*; εM+=0.04787 *6*
(2274 *15*)	2916.53	0.015 *4*	0.73 *20*	8.16 *12*	0.75 *20*	av Eβ=578.1 *66*; εK=0.7865 *6*; εL=0.14579 *17*; εM+=0.04767 *6*
(2291 *15*)	2898.76	0.063 *7*	2.9 *3*	7.57 *5*	3.0 *3*	av Eβ=585.9 *66*; εK=0.7858 *6*; εL=0.14558 *18*; εM+=0.04760 *6*
(2440 *15*)	2750.50	0.025 *6*	0.80 *20*	8.19 *12*	0.82 *21*	av Eβ=650.7 *66*; εK=0.7791 *8*; εL=0.14377 *20*; εM+=0.04698 *7*
(2571 *15*)	2618.88	0.31 *2*	7.4 *5*	7.27 *3*	7.7 *5*	av Eβ=708.4 *66*; εK=0.7718 *10*; εL=0.14196 *22*; εM+=0.04637 *8*
(2580 *15*)	2609.58	0.17 *2*	3.9 *6*	7.55 *7*	4.1 *6*	av Eβ=712.5 *66*; εK=0.7712 *10*; εL=0.14183 *22*; εM+=0.04632 *8*
(2673 *15*)	2517.28	0.010 *4*	0.7 *3*	9.75[1u] *19*	0.7 *3*	av Eβ=751.3 *63*; εK=0.7835 *3*; εL=0.1524 *2*; εM+=0.05025 *6*
(2803 *15*)	2386.82	0.32 *4*	5.0 *6*	7.52 *5*	5.3 *6*	av Eβ=810.3 *66*; εK=0.7555 *12*; εL=0.1383 *3*; εM+=0.04513 *9*

Continued on next page (footnotes at end of table)

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

ϵ,β^+ radiations (continued)

E(decay)	E(level)	Iβ^+ ‡	Iε‡	Log *ft*	I($\varepsilon+\beta^+$)†‡	Comments
(2830 *15*)	2360.46	0.257 *17*	3.77 *23*	7.65 *3*	4.03 *25*	av Eβ=821.9 *66*; εK=0.7534 *13*; εL=0.1378 *3*; εM+=0.04498 *9*
(2865 *15*)	2324.93	0.14 *3*	2.0 *4*	7.94 *9*	2.1 *4*	av Eβ=837.5 *66*; εK=0.7504 *13*; εL=0.1372 *3*; εM+=0.04477 *9*
(2901 *15*)	2289.24	0.40 *5*	5.2 *7*	7.53 *6*	5.6 *7*	av Eβ=853.2 *66*; εK=0.7474 *13*; εL=0.1366 *3*; εM+=0.04456 *10*
(2955 *15*)	2235.42	0.125 *19*	1.49 *22*	8.09 *7*	1.61 *24*	av Eβ=876.9 *67*; εK=0.7426 *14*; εL=0.1356 *3*; εM+=0.04422 *10*
(2982 *15*)	2208.43	0.14 *2*	5.3 *7*	9.06^{1u} *6*	5.4 *7*	av Eβ=880.6 *63*; εK=0.7763 *5*; εL=0.14920 *17*; εM+=0.04909 *6*
(3150 *15*)	2040.32	1.28 *22*	11.3 *19*	7.27 *8*	12.6 *21*	av Eβ=962.9 *67*; εK=0.7235 *16*; εL=0.1317 *4*; εM+=0.04293 *11*
(3225 *15*)	1965.14	0.19 *3*	1.55 *21*	8.15 *6*	1.74 *24*	av Eβ=996.2 *67*; εK=0.7155 *17*; εL=0.1301 *4*; εM+=0.04240 *11*
(3275 *15*)	1915.12	0.76 *7*	5.6 *5*	7.60 *5*	6.4 *6*	av Eβ=1018.3 *67*; εK=0.7100 *17*; εL=0.1290 *4*; εM+=0.04204 *11*
(3567 *15*)	1623.06	0.95 *12*	4.9 *6*	7.74 *6*	5.8 *7*	av Eβ=1148.0 *67*; εK=0.6747 *20*; εL=0.1221 *4*; εM+=0.03978 *13*
(3807 *15*)	1382.84	2.0 *6*	8.0 *24*	7.59 *13*	10 *3*	av Eβ=1255.2 *67*; εK=0.6427 *21*; εL=0.1160 *4*; εM+=0.03777 *13*

† From the decay scheme using intensity balance considerations.
‡ Absolute intensity per 100 decays.

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$

Iγ normalization: Deduced using ΣI(γ+ce)[g.s.]=100%. No direct g.s. feeding is expected, since the transition (5^+ to 0^+) is L=5 forbidden.

E_γ [†]	I_γ [†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
80.75 *13*	0.76 *11*	2289.24	6^-	2208.43	7^-	M1		3.23 *5*	α(L)=2.47 *4*; α(M)=0.580 *9* α(N)=0.1474 *22*; α(O)=0.0294 *4*; α(P)=0.00314 *5* %Iγ=0.76 *11* Mult.: α(L12)exp=2.5 *5*, α(L3)exp<0.8. α(M)exp=0.55 *13* (1985Dz05).
97.58 *13*	0.24 *4*	2386.82	5^-	2289.24	6^-	M1		10.02 *15*	α(K)=8.16 *12*; α(L)=1.427 *21*; α(M)=0.335 *5* α(N)=0.0851 *12*; α(O)=0.01696 *25*; α(P)=0.001811 *26* %Iγ=0.24 *4* Mult.: α(L12)exp=1.4 *6*, α(L3)exp<0.3. α(L12)exp=1.3 *3* (1985Dz05).
125.21 *8*	1.20 *18*	2040.32	5^-	1915.12	4^+	E1		0.2500 *35*	α(K)=0.2001 *28*; α(L)=0.0382 *5*; α(M)=0.00899 *13* α(N)=0.002251 *32*; α(O)=0.000426 *6*; α(P)=3.43×10^{-5} *5* %Iγ=1.19 *18* Mult.: α(L12)exp<0.21.
[x]127.71 *14*	0.10 *2*								%Iγ=0.099 *20*
[x]158.16 *15*	0.35 *5*					M1		2.53 *4*	α(K)=2.068 *29*; α(L)=0.357 *5*; α(M)=0.0837 *12* α(N)=0.02128 *30*; α(O)=0.00424 *6*; α(P)=0.000453 *6* %Iγ=0.35 *5* Mult.: α(K)exp=1.6 *5*, α(L12)exp=0.40 *6*. α(K)exp=2.3 *7* (1985Dz05).
168.11 *4*	4.8 *3*	2208.43	7^-	2040.32	5^-	E2		0.797 *11*	α(K)=0.2485 *35*; α(L)=0.409 *6*; α(M)=0.1074 *15* α(N)=0.0271 *4*; α(O)=0.00487 *7*; α(P)=0.0002271 *32* %Iγ=4.77 *30* Mult.: α(K)exp=0.32 *7*, α(L3)exp=0.142 *11*. α(K)exp=0.27 *3*, α(L3)exp=0.140 *23* (1985Dz05).
[x]195.63 *10*	0.29 *5*					M1		1.393 *20*	α(K)=1.137 *16*; α(L)=0.1957 *28*; α(M)=0.0459 *6* α(N)=0.01165 *16*; α(O)=0.002323 *33*; α(P)=0.0002483 *35* %Iγ=0.29 *5* Mult.: From α(K)exp=1.2 *3*, K/L≈7.
[x]198.09 *15*	0.09 *2*					M1		1.345 *19*	α(K)=1.098 *16*; α(L)=0.1889 *27*; α(M)=0.0443 *6* α(N)=0.01125 *16*; α(O)=0.002243 *32*; α(P)=0.0002397 *34* %Iγ=0.089 *20* Mult.: From α(K)exp=1.7 *7*, K/L>2.
[x]204.75 *15*	0.27 *4*								%Iγ=0.27 *4* α(L)exp<0.3.
[x]216.00 *10*	0.23 *3*					M1		1.056 *15*	α(K)=0.863 *12*; α(L)=0.1482 *21*; α(M)=0.0347 *5* α(N)=0.00882 *12*; α(O)=0.001759 *25*; α(P)=0.0001880 *26* %Iγ=0.228 *30* Mult.: From α(K)exp=0.8 *3*, K/L>2.
222.79 *5*	0.70 *10*	2609.58	5^-	2386.82	5^-	M1+E2	0.26 *25*	0.93 *10*	α(K)=0.75 *10*; α(L)=0.1351 *26*; α(M)=0.0318 *4*

$^{202}_{82}Pb_{120}$-3

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ[†]	I_γ[†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
									α(N)=0.00809 *11*; α(O)=0.001604 *30*; α(P)=0.000166 *14* %Iγ=0.70 *10* Mult.: α(K)exp=0.72 *12*, K/L≈5. α(K)exp=0.80 *16* (1985Dz05).
232.06 *5*	0.34 *5*	2618.88	4$^-$,5$^-$,6$^-$	2386.82	5$^-$	M1(+E2)	≤0.4	0.82 *4*	α(K)=0.67 *4*; α(L)=0.1201 *20*; α(M)=0.0283 *4* α(N)=0.00719 *10*; α(O)=0.001426 *24*; α(P)=0.000148 *6* %Iγ=0.34 *5* Mult.: α(K)exp=0.70 *25*, K/L>3. α(K)exp=0.88 *22* (1985Dz05).
240.18 *4*	4.5 *3*	1623.06	4$^+$	1382.84	4$^+$	M1(+E2)	<0.5	0.73 *6*	α(K)=0.59 *5*; α(L)=0.1082 *25*; α(M)=0.0256 *4* α(N)=0.00650 *11*; α(O)=0.001285 *29*; α(P)=0.000132 *8* %Iγ=4.47 *30* Mult.: α(L12)exp=0.126 *12*, α(L3)exp<0.004. α(L12)exp=0.120 *14* (1985Dz05). δ: From adopted gammas.
248.92 *4*	3.09 *18*	2289.24	6$^-$	2040.32	5$^-$	M1+E2	0.39 *+9−11*	0.646 *31*	α(K)=0.519 *29*; α(L)=0.0969 *19*; α(M)=0.0230 *4* α(N)=0.00583 *9*; α(O)=0.001151 *22*; α(P)=0.000117 *5* %Iγ=3.07 *18* Mult.: α(K)exp=0.51 *3*, K/L>2.5. α(K)exp=0.55 *6* (1985Dz05).
[x]285.58 *12*	0.22 *3*					M1		0.488 *7*	α(K)=0.399 *6*; α(L)=0.0682 *10*; α(M)=0.01596 *22* α(N)=0.00406 *6*; α(O)=0.000809 *11*; α(P)=8.65×10^{-5} *12* %Iγ=0.218 *30* Mult.: From α(K)exp=0.38 *8*, K/L>1.5.
291.93 *9*	0.26 *4*	1915.12	4$^+$	1623.06	4$^+$	M1+E2	0.5 *4*	0.39 *8*	α(K)=0.31 *8*; α(L)=0.060 *6*; α(M)=0.0142 *11* α(N)=0.00360 *27*; α(O)=0.00071 *7*; α(P)=7.1×10^{-5} *13* %Iγ=0.26 *4* Mult.: α(K)exp=0.30 *12*, K/L>2. α(K)exp=0.31 *10* (1985Dz05).
[x]316.3 *4*	0.10 *3*								%Iγ=0.099 *30*
318.0 *5*	0.10 *3*	3285.79	4$^-$	2967.61	4$^-$,5$^-$	[M1]		0.364 *5*	α(K)=0.298 *4*; α(L)=0.0507 *7*; α(M)=0.01188 *17* α(N)=0.00302 *4*; α(O)=0.000602 *9*; α(P)=6.44×10^{-5} *9* %Iγ=0.099 *30*
320.14 *5*	3.14 *18*	2360.46	4$^-$,5$^-$	2040.32	5$^-$	M1		0.357 *5*	α(K)=0.292 *4*; α(L)=0.0498 *7*; α(M)=0.01166 *16* α(N)=0.00296 *4*; α(O)=0.000591 *8*; α(P)=6.32×10^{-5} *9* %Iγ=3.12 *18* Mult.: α(K)exp=0.28 *4*. α(K)exp=0.30 *3* (1985Dz05).
342.04 *11*	0.43 *6*	1965.14	4$^+$	1623.06	4$^+$	M1+E2	0.72 *+38−33*	0.22 *5*	α(K)=0.18 *4*; α(L)=0.035 *4*; α(M)=0.0084 *8* α(N)=0.00214 *21*; α(O)=0.00042 *5*; α(P)=4.1×10^{-5} *7* %Iγ=0.43 *6* Mult.: α(K)exp=0.15 *5*, K/L≈6. α(K)exp=0.23 *7* (1985Dz05).

$^{202}_{82}Pb_{120}$-4

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ †	I_γ †@	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	δ‡	α#	Comments
346.47 *6*	4.6 *3*	2386.82	5^-	2040.32	5^-	M1+E2	0.19 *14*	0.281 *14*	α(K)=0.229 *12*; α(L)=0.0395 *13*; α(M)=0.00926 *27* α(N)=0.00235 *7*; α(O)=0.000468 *15*; α(P)=4.97×10^{-5} *22* %Iγ=4.57 *30* Mult.: α(K)exp=0.229 *12*. α(K)exp=0.257 *23* (1985Dz05). δ: From α(K)exp=0.229 *12*.
348.77 *17*	0.6 *2*	2967.61	$4^-,5^-$	2618.88	$4^-,5^-,6^-$	M1(+E2)	≤0.7	0.249 *34*	α(K)=0.201 *31*; α(L)=0.0365 *30*; α(M)=0.0086 *6* α(N)=0.00219 *16*; α(O)=0.000433 *35*; α(P)=4.5×10^{-5} *5* %Iγ=0.60 *20* Mult.: α(K)exp=0.26 *8*. α(K)exp≈0.32 (1985Dz05).
358.05 *13*	0.30 *5*	2967.61	$4^-,5^-$	2609.58	5^-	M1+E2	1.22 *+42−28*	0.148 *25*	α(K)=0.113 *23*; α(L)=0.0266 *22*; α(M)=0.0065 *5* α(N)=0.00164 *12*; α(O)=0.000316 *26*; α(P)=2.8×10^{-5} *4* %Iγ=0.30 *5* Mult.: α(K)exp=0.103 *24* (1985Dz05). α(K)exp=0.17 *6*, K/L>1.5 (1974Go32).
369.27 *6*	0.50 *7*	3285.79	4^-	2916.53	$4^-,5^-$	M1(+E2)	≤0.5	0.225 *18*	α(K)=0.183 *16*; α(L)=0.0321 *17*; α(M)=0.0076 *4* α(N)=0.00192 *9*; α(O)=0.000381 *20*; α(P)=4.00×10^{-5} *29* %Iγ=0.50 *7* Mult.: α(K)exp=0.18 *4*, K/L≈6. α(K)exp=0.22 *4* (1985Dz05).
386.86 *13*	0.14 *2*	3285.79	4^-	2898.76	5^-	M1(+E2)	≤1.1	0.17 *4*	α(K)=0.14 *4*; α(L)=0.026 *4*; α(M)=0.0061 *9* α(N)=0.00155 *22*; α(O)=0.00031 *5*; α(P)=3.1×10^{-5} *7* %Iγ=0.139 *20* Mult.: α(K)exp=0.15 *5*, K/L≈4.
[x]412.27 *18*	0.29 *5*								%Iγ=0.29 *5*
417.25 *12*	0.42 *6*	2040.32	5^-	1623.06	4^+	[E1]		0.01406 *20*	α(K)=0.01159 *16*; α(L)=0.001895 *27*; α(M)=0.000441 *6* α(N)=0.0001113 *16*; α(O)=2.177×10^{-5} *31*; α(P)=2.097×10^{-6} *29* %Iγ=0.42 *6*
422.13 *4*	84.3 *25*	1382.84	4^+	960.67	2^+	E2		0.0448 *6*	α(K)=0.0299 *4*; α(L)=0.01119 *16*; α(M)=0.00281 *4* α(N)=0.000712 *10*; α(O)=0.0001333 *19*; α(P)=9.64×10^{-6} *14* %Iγ=83.7 *25* Mult.: α(K)exp=0.0296 *8*, K/L=2.68 *9*. ce(K)(422)/ce(K)(960)=3.9 *4* (1957Mc40).
[x]438.22 *5*	1.56 *24*								%Iγ=1.55 *24*
[x]504.23 *22*	0.28 *5*								%Iγ=0.28 *5*
[x]514.42 *9*	1.63 *24*								%Iγ=1.62 *24*
529.61 *10*	0.41 *6*	2916.53	$4^-,5^-$	2386.82	5^-	M1(+E2)	≤1.2	0.073 *20*	α(K)=0.059 *17*; α(L)=0.0106 *22*; α(M)=0.0025 *5* α(N)=0.00064 *12*; α(O)=0.000126 *26*; α(P)=1.30×10^{-5}

$^{202}_{82}Pb_{120}$-5

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ[†]	I_γ[†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
									33 %Iγ=0.41 *6* Mult.: α(K)exp=0.068 *25*, K/L<2.5. α(K)exp=0.09 *3* (1985Dz05).
532.34 *10*	0.44 *7*	1915.12	4^+	1382.84	4^+	[M1]		0.0915 *13*	α(K)=0.0750 *11*; α(L)=0.01261 *18*; α(M)=0.00295 *4* α(N)=0.000749 *10*; α(O)=0.0001494 *21*; α(P)=1.601×10^{-5} *22* %Iγ=0.44 *7*
534.7 *5*	0.17 *3*	3820.87	5^-	3285.79	4^-	[M1]		0.0904 *13*	α(K)=0.0741 *11*; α(L)=0.01246 *18*; α(M)=0.00291 *4* α(N)=0.000740 *11*; α(O)=0.0001476 *21*; α(P)=1.582×10^{-5} *23* %Iγ=0.169 *30*
569.27 *4*	4.8 *3*	2609.58	5^-	2040.32	5^-	M1+E2	0.58 *9*	0.0628 *33*	α(K)=0.0511 *28*; α(L)=0.0090 *4*; α(M)=0.00212 *9* α(N)=0.000538 *22*; α(O)=0.000107 *4*; α(P)=1.11×10^{-5} *6* %Iγ=4.77 *30* Mult.: α(K)exp=0.049 *3*, K/L=6.3 *1*. α(K)exp=0.056 *5* (1985Dz05).
578.56 *4*	7.4 *4*	2618.88	4^-,5^-,6^-	2040.32	5^-	M1+E2	0.21 *16*	0.071 *4*	α(K)=0.058 *4*; α(L)=0.0099 *5*; α(M)=0.00231 *11* α(N)=0.000586 *28*; α(O)=0.000117 *6*; α(P)=1.25×10^{-5} *7* %Iγ=7.4 *4* Mult.: α(K)exp=0.0566 *22*, K/L=6.4 *8*. α(K)exp=0.064 *5*, α(L)exp=0.0108 *12* (1985Dz05).
582.33 *8*	0.97 *15*	1965.14	4^+	1382.84	4^+	M1+E2	0.46 *28*	0.063 *9*	α(K)=0.052 *8*; α(L)=0.0089 *10*; α(M)=0.00209 *24* α(N)=0.00053 *6*; α(O)=0.000106 *12*; α(P)=1.11×10^{-5} *15* %Iγ=0.96 *15* Mult.: α(K)exp=0.047 *11*, K/L>3.0. α(K)exp=0.056 *11* (1985Dz05).
591.5 *3*	0.14 *2*	2916.53	4^-,5^-	2324.93	4^+,5^+	[E1]		0.00678 *10*	α(K)=0.00562 *8*; α(L)=0.000890 *12*; α(M)=0.0002064 *29* α(N)=5.21×10^{-5} *7*; α(O)=1.027×10^{-5} *14*; α(P)=1.022×10^{-6} *14* %Iγ=0.139 *20*
[x]599.30 *10*	0.53 *8*								%Iγ=0.53 *8*
[x]632.00 *17*	0.18 *3*								%Iγ=0.179 *30*
644.44 *5*	0.67 *10*	2609.58	5^-	1965.14	4^+	E1		0.00572 *8*	α(K)=0.00475 *7*; α(L)=0.000746 *10*; α(M)=0.0001729 *24* α(N)=4.37×10^{-5} *6*; α(O)=8.61×10^{-6} *12*; α(P)=8.64×10^{-7} *12* %Iγ=0.67 *10* Mult.: α(K)exp≤0.0075 (1985Dz05). Also: α(K)exp<0.015 (1974Go32).
657.49 *4*	61.0 *18*	2040.32	5^-	1382.84	4^+	E1		0.00550 *8*	α(K)=0.00456 *6*; α(L)=0.000716 *10*; α(M)=0.0001659 *23* α(N)=4.19×10^{-5} *6*; α(O)=8.27×10^{-6} *12*; α(P)=8.31×10^{-7} *12* %Iγ=60.6 *18* Mult.: α(K)exp=0.445 *14*, K/L=5.8 *7*. α(K)exp=0.0049 *4*, α(L)exp=0.00082 *9* (1985Dz05).
662.55 *11*	1.32 *20*	1623.06	4^+	960.67	2^+	E2		0.01546 *22*	α(K)=0.01168 *16*; α(L)=0.00287 *4*; α(M)=0.000700 *10*

$^{202}_{82}Pb_{120}$-6

^{202}Bi ε+β$^+$ decay 1974Go32,1985Dz05 (continued)

γ(^{202}Pb) (continued)

E_γ[†]	I_γ[†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
									α(N)=0.0001773 *25*; α(O)=3.40×10^{-5} *5*; α(P)=2.95×10^{-6} *4* %Iγ=1.31 *20*
[x]666.60 *11*	0.85 *13*								Mult.: α(K)exp=0.016 *5*, K/L≈5. α(K)exp=0.017 *5* (1985Dz05). %Iγ=0.84 *13*
[x]671.01 *12*	0.45 *7*								%Iγ=0.45 *7*
676.19 *5*	1.9 *3*	3285.79	4$^-$	2609.58	5$^-$	M1(+E2)	≤0.5	0.0455 *35*	α(K)=0.0372 *29*; α(L)=0.0063 *4*; α(M)=0.00147 *9* α(N)=0.000374 *24*; α(O)=7.5×10^{-5} *5*; α(P)=7.9×10^{-6} *6* %Iγ=1.89 *30*
690.33 *17*	0.19 *3*	2898.76	5$^-$	2208.43	7$^-$	E2		0.01415 *20*	Mult.: α(K)exp=0.039 *10*, K/L>4.0. α(K)exp=0.042 *9* (1985Dz05). α(K)=0.01077 *15*; α(L)=0.00257 *4*; α(M)=0.000625 *9* α(N)=0.0001583 *22*; α(O)=3.05×10^{-5} *4*; α(P)=2.68×10^{-6} *4* %Iγ=0.189 *30*
702.2 *4*	1.0 *3*	2324.93	4$^+$,5$^+$	1623.06	4$^+$	M1(+E2)	≤0.8	0.038 *6*	Mult.: α(K)exp<0.028. α(K)=0.031 *5*; α(L)=0.0054 *7*; α(M)=0.00126 *16* α(N)=0.00032 *4*; α(O)=6.3×10^{-5} *8*; α(P)=6.7×10^{-6} *10* %Iγ=0.99 *30*
[x]705.6 *5*	0.22 *7*								Mult.: α(K)exp=0.03 *1*. α(K)exp=0.042 *13* (1985Dz05). %Iγ=0.22 *7*
714.63 *25*	0.27 *4*	3682.22	4$^-$,5$^-$	2967.61	4$^-$,5$^-$	M1(+E2)	≤0.5	0.0394 *30*	α(K)=0.0323 *25*; α(L)=0.00545 *35*; α(M)=0.00127 *8* α(N)=0.000324 *20*; α(O)=6.4×10^{-5} *4*; α(P)=6.9×10^{-6} *5* %Iγ=0.27 *4*
[x]717.1 *3*	0.17 *3*								Mult.: α(K)exp=0.044 *14*. α(K)exp=0.035 *9* (1985Dz05). %Iγ=0.169 *30*
[x]763.85 *14*	0.55 *9*								%Iγ=0.55 *9*
768.57 *10*	0.68 *10*	3285.79	4$^-$	2517.28	3$^-$	M1(+E2)	≤0.34	0.0338 *13*	α(K)=0.0278 *11*; α(L)=0.00464 *16*; α(M)=0.00108 *4* α(N)=0.000275 *9*; α(O)=5.49×10^{-5} *19*; α(P)=5.87×10^{-6} *22* %Iγ=0.68 *10*
783.54 *25*	0.33 *5*	3682.22	4$^-$,5$^-$	2898.76	5$^-$	M1(+E2)	≤0.6	0.0304 *30*	Mult.: α(K)exp=0.036 *8*, K/L>4. α(K)exp=0.032 *6* (1985Dz05). α(K)=0.0249 *25*; α(L)=0.0042 *4*; α(M)=0.00098 *8* α(N)=0.000249 *21*; α(O)=5.0×10^{-5} *4*; α(P)=5.3×10^{-6} *5* %Iγ=0.33 *5*
[x]788.4 *5*	0.75 *11*								Mult.: α(K)exp=0.03 *1*. α(K)exp=0.028 *7* (1985Dz05). %Iγ=0.75 *11*
802.25 *8*	0.42 *6*	2185.06	3$^+$	1382.84	4$^+$	M1+E2	0.7 *6*	0.024 *7*	α(K)=0.020 *6*; α(L)=0.0034 *8*; α(M)=0.00081 *18* α(N)=0.00021 *5*; α(O)=4.1×10^{-5} *10*; α(P)=4.3×10^{-6} *11* %Iγ=0.42 *6*
825.4 *3*	0.22 *8*	2208.43	7$^-$	1382.84	4$^+$	E3		0.02440 *34*	Mult.: α(K)exp=0.020 *5* (1985Dz05). α(K)exp<0.025 (1974Go32). α(K)=0.01708 *24*; α(L)=0.00552 *8*; α(M)=0.001379 *19* α(N)=0.000351 *5*; α(O)=6.70×10^{-5} *9*; α(P)=5.71×10^{-6} *8* %Iγ=0.22 *8*
852.57 *7*	2.30 *14*	2235.42	6$^+$	1382.84	4$^+$	E2		0.00914 *13*	Mult.: α(K)exp=0.05 *3* (1985Dz05). α(K)=0.00716 *10*; α(L)=0.001503 *21*; α(M)=0.000361 *5*

$^{202}_{82}Pb_{120}$-7

^{202}Bi ε+β$^+$ decay 1974Go32,1985Dz05 (continued)

γ(^{202}Pb) (continued)

E_γ †	I_γ †@	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	δ‡	α#	Comments
									α(N)=9.14×10^{-5} *13*; α(O)=1.776×10^{-5} *25*; α(P)=1.654×10^{-6} *23* %Iγ=2.28 *14* Mult.: From α(K)exp=0.0083 *17*. α(K)exp=0.0091 *18* (1985Dz05).
858.42 *5*	1.65 *25*	2898.76	5$^-$	2040.32	5$^-$	[M1]		0.0263 *4*	α(K)=0.02165 *30*; α(L)=0.00359 *5*; α(M)=0.000837 *12* α(N)=0.0002126 *30*; α(O)=4.24×10^{-5} *6*; α(P)=4.56×10^{-6} *6* %Iγ=1.64 *25*
x871.3 *3*	0.14 *2*								%Iγ=0.139 *20*
876.21 *6*	1.07 *16*	2916.53	4$^-$,5$^-$	2040.32	5$^-$	M1+E2	1.3 *+10−5*	0.015 *4*	α(K)=0.0119 *33*; α(L)=0.0021 *5*; α(M)=0.00051 *11* α(N)=0.000129 *28*; α(O)=2.5×10^{-5} *6*; α(P)=2.6×10^{-6} *7* %Iγ=1.06 *16* Mult.: α(K)exp=0.012 *3* (1985Dz05).
899.00 *11*	0.34 *5*	3285.79	4$^-$	2386.82	5$^-$	M1(+E2)	≤0.4	0.0223 *11*	α(K)=0.0183 *9*; α(L)=0.00305 *14*; α(M)=0.000713 *31* α(N)=0.000181 *8*; α(O)=3.61×10^{-5} *16*; α(P)=3.87×10^{-6} *19* %Iγ=0.34 *5* Mult.: α(K)exp=0.020 *5*. α(K)exp=0.021 *4* (1985Dz05).
904.24 *9*	0.30 *5*	3820.87	5$^-$	2916.53	4$^-$,5$^-$	M1+E2	2.9 *11*	0.0097 *19*	α(K)=0.0077 *16*; α(L)=0.00150 *24*; α(M)=0.00036 *5* α(N)=9.0×10^{-5} *14*; α(O)=1.77×10^{-5} *28*; α(P)=1.72×10^{-6} *33* %Iγ=0.30 *5* Mult.: From α(K)exp=0.0077 *16* (1985Dz05).
x915.2 *3*	0.15 *2*								%Iγ=0.149 *20*
927.28 *4*	7.2 *4*	2967.61	4$^-$,5$^-$	2040.32	5$^-$	M1		0.02159 *30*	α(K)=0.01776 *25*; α(L)=0.00294 *4*; α(M)=0.000684 *10* α(N)=0.0001739 *24*; α(O)=3.47×10^{-5} *5*; α(P)=3.73×10^{-6} *5* %Iγ=7.2 *4* Mult.: α(K)exp=0.0186 *10*, K/L=5.4 *6*. α(K)exp=0.0192 *18* (1985Dz05).
942.07 *7*	1.2 *2*	2324.93	4$^+$,5$^+$	1382.84	4$^+$	M1+E2	0.6 *5*	0.017 *4*	α(K)=0.0141 *32*; α(L)=0.0024 *5*; α(M)=0.00056 *11* α(N)=0.000142 *27*; α(O)=2.8×10^{-5} *5*; α(P)=3.0×10^{-6} *6* %Iγ=1.19 *20* Mult.: α(K)exp=0.014 *3* (1985Dz05).
954.47 *6*	7.9 *5*	1915.12	4$^+$	960.67	2$^+$	E2		0.00730 *10*	α(K)=0.00579 *8*; α(L)=0.001150 *16*; α(M)=0.000274 *4* α(N)=6.95×10^{-5} *10*; α(O)=1.356×10^{-5} *19*; α(P)=1.295×10^{-6} *18* %Iγ=7.8 *5* Mult.: α(K)exp=0.0058 *3*, K/L=4.90 *22*. α(K)exp=0.0061 *7*, α(L)exp=0.00118 *24* (1985Dz05).
960.67 *5*	100	960.67	2$^+$	0.0	0$^+$	E2		0.00720 *10*	α(K)=0.00572 *8*; α(L)=0.001132 *16*; α(M)=0.000270 *4* α(N)=6.84×10^{-5} *10*; α(O)=1.336×10^{-5} *19*; α(P)=1.278×10^{-6} *18* %Iγ=99.285 *10* Mult.: α(K)exp=0.00585 *28*, K/L=4.90 *22*.

$^{202}_{82}Pb_{120}$-8

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ [†]	I_γ [†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	δ [‡]	α [#]	Comments
983.63 *6*	0.89 *13*	2898.76	5^-	1915.12	4^+	E1		0.00258 *4*	α(K)=0.002151 *30*; α(L)=0.000328 *5*; α(M)=7.57×10^{-5} *11* α(N)=1.915×10^{-5} *27*; α(O)=3.80×10^{-6} *5*; α(P)=3.92×10^{-7} *5* %Iγ=0.88 *13* Mult.: α(K)exp=0.0055 *14* (1985Dz05). α(K)exp<0.005 (1974Go32).
[x]997.9 *4*	0.30 *5*								%Iγ=0.30 *5*
1004.44 *8*	0.86 *13*	1965.14	4^+	960.67	2^+	E2		0.00660 *9*	α(K)=0.00526 *7*; α(L)=0.001022 *14*; α(M)=0.0002432 *34* α(N)=6.16×10^{-5} *9*; α(O)=1.205×10^{-5} *17*; α(P)=1.163×10^{-6} *16* %Iγ=0.85 *13* Mult.: α(K)exp=0.0065 *20*. α(K)exp=0.0070 *17* (1985Dz05).
[x]1035.18 *10*	0.5 *2*								%Iγ=0.50 *20*
[x]1052.86 *13*	0.31 *5*								%Iγ=0.31 *5*
[x]1062.84 *18*	0.14 *2*								%Iγ=0.139 *20*
1072.59 *13*	0.84 *13*	3682.22	4^-,5^-	2609.58	5^-	M1(+E2)	≤0.5	0.0140 *9*	α(K)=0.0115 *8*; α(L)=0.00190 *12*; α(M)=0.000443 *27* α(N)=0.000113 *7*; α(O)=2.25×10^{-5} *14*; α(P)=2.41×10^{-6} *16* %Iγ=0.83 *13* Mult.: α(K)exp=0.012 *4*. α(K)exp=0.014 *3* (1985Dz05).
[x]1103.63 *13*	0.38 *6*								%Iγ=0.38 *6*
[x]1108.7 *3*	0.19 *6*								%Iγ=0.19 *6*
[x]1111.82 *20*	0.24 *8*								%Iγ=0.24 *8*
[x]1117.4 *2*	0.17 *3*								%Iγ=0.169 *30*
1127.45 *11*	0.32 *5*	2750.50	6^+	1623.06	4^+	(E2)		0.00528 *7*	α(K)=0.00425 *6*; α(L)=0.000789 *11*; α(M)=0.0001868 *26* α(N)=4.74×10^{-5} *7*; α(O)=9.29×10^{-6} *13*; α(P)=9.15×10^{-7} *13*; α(IPF)=4.52×10^{-7} *7* %Iγ=0.32 *5* Mult.: α(K)exp=0.0094 *24* (1985Dz05).
1134.33 *11*	0.21 *3*	2517.28	3^-	1382.84	4^+	E1		2.00×10^{-3} *3*	α(K)=0.001670 *23*; α(L)=0.0002527 *35*; α(M)=5.82×10^{-5} *8* α(N)=1.473×10^{-5} *21*; α(O)=2.92×10^{-6} *4*; α(P)=3.04×10^{-7} *4*; α(IPF)=2.74×10^{-6} *4* %Iγ=0.209 *30* Mult.: α(K)exp≤0.0048 *7* (1985Dz05).
[x]1144.27 *20*	0.50 *8*								%Iγ=0.50 *8*
[x]1150.71 *9*	0.40 *6*								%Iγ=0.40 *6*
[x]1163.5 *4*	0.18 *3*								%Iγ=0.179 *30*
1164.9 *4*	0.16 *2*	3682.22	4^-,5^-	2517.28	3^-				%Iγ=0.159 *20*
[x]1173.62 *17*	0.15 *5*								%Iγ=0.15 *5*
[x]1192.9 *3*	0.10 *2*								%Iγ=0.099 *20*
[x]1197.53 *16*	0.20 *3*								%Iγ=0.199 *30*
1206.25 *7*	0.58 *9*	3723.52	4^-	2517.28	3^-	M1(+E2)	≤0.3	0.01075 *30*	α(K)=0.00885 *25*; α(L)=0.00145 *4*; α(M)=0.000339 *9* α(N)=8.61×10^{-5} *23*; α(O)=1.72×10^{-5} *5*; α(P)=1.85×10^{-6} *5*;

$^{202}_{82}Pb_{120}$-9

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ [†]	I_γ [†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	δ [‡]	α [#]	Comments
									α(IPF)=7.73×10^{-6} *18* %Iγ=0.58 *9* Mult.: From α(K)exp=0.013 *3*. α(K)exp=0.015 *3* (1985Dz05).
1211.52 *10*	0.22 *3*	3820.87	5$^-$	2609.58	5$^-$	M1(+E2)	≤0.7	0.0099 *10*	α(K)=0.0081 *9*; α(L)=0.00134 *13*; α(M)=0.000312 *30* α(N)=7.9×10^{-5} *8*; α(O)=1.58×10^{-5} *16*; α(P)=1.69×10^{-6} *18*; α(IPF)=8.1×10^{-6} *6* %Iγ=0.218 *30* Mult.: From α(K)exp=0.011 *3* (1985Dz05).
1224.24 *10*	1.57 *23*	2185.06	3$^+$	960.67	2$^+$	M1+E2	1.0 *+8–4*	0.0076 *16*	α(K)=0.0062 *13*; α(L)=0.00105 *20*; α(M)=0.00024 *5* α(N)=6.2×10^{-5} *12*; α(O)=1.23×10^{-5} *24*; α(P)=1.30×10^{-6} *28*; α(IPF)=8.5×10^{-6} *13* %Iγ=1.56 *23* Mult.: α(K)exp=0.0061 *13* (1985Dz05).
1226.7 *4*	0.45 *15*	2609.58	5$^-$	1382.84	4$^+$	E1+M2	0.51 *+20–22*	0.0066 *30*	α(K)=0.0054 *24*; α(L)=9.E−4 *4*; α(M)=2.2×10^{-4} *10* α(N)=5.5×10^{-5} *27*; α(O)=1.1×10^{-5} *5*; α(P)=1.2×10^{-6} *6*; α(IPF)=1.97×10^{-5} *28* %Iγ=0.45 *15* Mult.: α(K)exp=0.0053 *24* (1985Dz05).
[x]1236.08 *10*	0.59 *9*								%Iγ=0.59 *9*
1245.48 *5*	2.81 *17*	3285.79	4$^-$	2040.32	5$^-$	M1(+E2)	≤0.28	0.00995 *25*	α(K)=0.00818 *21*; α(L)=0.001343 *33*; α(M)=0.000313 *8* α(N)=7.95×10^{-5} *19*; α(O)=1.59×10^{-5} *4*; α(P)=1.71×10^{-6} *4*; α(IPF)=1.471×10^{-5} *31* %Iγ=2.79 *17* Mult.: α(K)exp=0.0099 *20*. α(K)exp=0.0107 *12*, α(L)exp=0.0021 *4* (1985Dz05).
[x]1291.2 *3*	0.10 *2*								%Iγ=0.099 *20*
1295.35 *13*	0.20 *3*	3682.22	4$^-$,5$^-$	2386.82	5$^-$	[M1]		0.00920 *13*	α(K)=0.00756 *11*; α(L)=0.001238 *17*; α(M)=0.000288 *4* α(N)=7.32×10^{-5} *10*; α(O)=1.462×10^{-5} *20*; α(P)=1.575×10^{-6} *22*; α(IPF)=2.63×10^{-5} *4* %Iγ=0.199 *30*
[x]1313.59 *15*	0.18 *3*								%Iγ=0.179 *30*
1336.48 *20*	0.26 *4*	3723.52	4$^-$	2386.82	5$^-$	M1+E2	1.8 *8*	0.0050 *12*	α(K)=0.0040 *10*; α(L)=0.00069 *16*; α(M)=0.00016 *4* α(N)=4.1×10^{-5} *9*; α(O)=8.1×10^{-6} *19*; α(P)=8.4×10^{-7} *21*; α(IPF)=2.6×10^{-5} *4* %Iγ=0.26 *4* Mult.: α(K)exp=0.004 *10* (1985Dz05).
[x]1350.85 *8*	0.40 *6*								%Iγ=0.40 *6*
[x]1358.55 *16*	0.40 *6*								%Iγ=0.40 *6*
1363.14 *20*	0.20 *3*	3723.52	4$^-$	2360.46	4$^-$,5$^-$	M1(+E2)	≤0.8	0.0073 *9*	α(K)=0.0059 *7*; α(L)=0.00098 *11*; α(M)=0.000228 *25*

$^{202}_{82}Pb_{120}$-10

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ [†]	I_γ [†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[#]	Comments
								α(N)=5.8×10^{-5} *6*; α(O)=1.15×10^{-5} *13*; α(P)=1.23×10^{-6} *15*; α(IPF)=4.4×10^{-5} *4* %Iγ=0.199 *30* Mult.: From α(K)exp=0.0080 *23* (1985Dz05).
1367.5 *4*	0.5 *2*	2750.50	6$^+$	1382.84	4$^+$	E2	0.00370 *5*	α(K)=0.00299 *4*; α(L)=0.000522 *7*; α(M)=0.0001228 *17* α(N)=3.11×10^{-5} *4*; α(O)=6.14×10^{-6} *9*; α(P)=6.21×10^{-7} *9*; α(IPF)=2.83×10^{-5} *4* %Iγ=0.50 *20* Mult.: α(K)exp=0.0034 *16* (1985Dz05).
[x]1375.43 *16*	0.16 *2*							%Iγ=0.159 *20*
1382.8 *5*	3.3×10^{-5} *5*	1382.84	4$^+$	0.0	0$^+$	E4	0.01446 *20*	α(K)=0.01072 *15*; α(L)=0.00283 *4*; α(M)=0.000697 *10* α(N)=0.0001775 *25*; α(O)=3.44×10^{-5} *5*; α(P)=3.21×10^{-6} *5* %Iγ=3.3×10^{-5} *5* E_γ,I_γ,Mult.: From adopted gammas.
[x]1420.72 *10*	0.60 *9*							%Iγ=0.60 *9*
[x]1433.44 *15*	0.29 *4*							%Iγ=0.29 *4*
[x]1439.17 *21*	0.16 *2*							%Iγ=0.159 *20*
[x]1487.10 *13*	0.22 *3*							%Iγ=0.218 *30*
[x]1495.08 *11*	0.16 *2*							%Iγ=0.159 *20*
[x]1512.8 *6*	0.25 *8*							%Iγ=0.25 *8*
1515.89 *20*	0.73 *11*	2898.76	5$^-$	1382.84	4$^+$	E1	1.39×10^{-3} *2*	α(K)=0.001016 *14*; α(L)=0.0001515 *21*; α(M)=3.49×10^{-5} *5* α(N)=8.82×10^{-6} *12*; α(O)=1.755×10^{-6} *25*; α(P)=1.847×10^{-7} *26*; α(IPF)=0.0001810 *25* %Iγ=0.73 *11* Mult.: α(K)exp≤0.0014 (1985Dz05).
[x]1523.68 *20*	0.27 *4*							%Iγ=0.27 *4*
[x]1526.9 *3*	0.17 *6*							%Iγ=0.17 *6*
1556.69 *7*	1.9 *3*	2517.28	3$^-$	960.67	2$^+$	E1	1.37×10^{-3} *2*	α(K)=0.000971 *14*; α(L)=0.0001448 *20*; α(M)=3.33×10^{-5} *5* α(N)=8.43×10^{-6} *12*; α(O)=1.677×10^{-6} *23*; α(P)=1.766×10^{-7} *25*; α(IPF)=0.0002091 *29* %Iγ=1.89 *30* Mult.: α(K)exp=0.0012 *3* (1985Dz05).
[x]1563.35 *17*	0.18 *3*							%Iγ=0.179 *30*
1584.9 *5*	0.7 *2*	2967.61	4$^-$,5$^-$	1382.84	4$^+$	(E1)	1.35×10^{-3} *2*	α(K)=0.000943 *13*; α(L)=0.0001404 *20*; α(M)=3.23×10^{-5} *5* α(N)=8.17×10^{-6} *11*; α(O)=1.627×10^{-6} *23*; α(P)=1.714×10^{-7} *24*; α(IPF)=0.0002290 *32* %Iγ=0.70 *20* Mult.: α(K)exp=0.0037 *13* (1985Dz05).

$^{202}_{82}Pb_{120}$-11

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ [†]	I_γ [†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	δ [‡]	α [#]	Comments
1584.9 *5*	0.7 *2*	3820.87	5^-	2235.42	6^+	E1+M2	0.63 *22*	0.0047 *16*	α(K)=0.0037 *13*; α(L)=6.2×10^{-4} *24*; α(M)=1.5×10^{-4} *6* α(N)=3.7×10^{-5} *14*; α(O)=7.4×10^{-6} *28*; α(P)=7.9×10^{-7} *30*; α(IPF)=0.000180 *24* %Iγ=0.70 *20* Mult.: α(K)exp=0.0037 *13* (1985Dz05).
[x]1615.25 *15*	0.16 *2*								%Iγ=0.159 *20*
[x]1619.65 *15*	0.23 *3*								%Iγ=0.228 *30*
[x]1623.34 *15*	0.18 *3*								%Iγ=0.179 *30*
1635.55 *17*	0.17 *3*	3820.87	5^-	2185.06	3^+	[M2]		0.01204 *17*	α(K)=0.00976 *14*; α(L)=0.001691 *24*; α(M)=0.000397 *6* α(N)=0.0001010 *14*; α(O)=2.014×10^{-5} *28*; α(P)=2.154×10^{-6} *30*; α(IPF)=7.18×10^{-5} *10* %Iγ=0.169 *30*
[x]1695.0 *4*	0.14 *2*								%Iγ=0.139 *20*
[x]1715.94 *20*	0.08 *2*								%Iγ=0.079 *20*
[x]1730.9 *3*	0.3 *1*								%Iγ=0.30 *10*
[x]1754.1 *4*	0.18 *6*								%Iγ=0.18 *6*
[x]1757.5 *3*	0.37 *5*								%Iγ=0.37 *5*
1780.53 *8*	0.68 *10*	3820.87	5^-	2040.32	5^-	M1(+E2)	≤0.7	0.00405 *33*	α(K)=0.00313 *25*; α(L)=0.00051 *4*; α(M)=0.000118 *9* α(N)=3.00×10^{-5} *24*; α(O)=6.0×10^{-6} *5*; α(P)=6.4×10^{-7} *5*; α(IPF)=0.000261 *19* %Iγ=0.68 *10* Mult.: α(K)exp=0.0040 *9* (1985Dz05).
[x]1790.55 *18*	0.26 *4*								%Iγ=0.26 *4*
[x]1807.95 *10*	0.40 *6*								%Iγ=0.40 *6*
[x]1813.7 *2*	0.15 *5*								%Iγ=0.15 *5*
[x]1833.25 *13*	0.28 *4*								%Iγ=0.28 *4*
[x]1839.6 *3*	0.07 *1*								%Iγ=0.070 *10*
[x]1848.73 *14*	0.20 *3*								%Iγ=0.199 *30*
[x]1858.80 *15*	0.15 *2*								%Iγ=0.149 *20*
[x]1882.22 *20*	0.28 *4*								%Iγ=0.28 *4*
[x]1956.97 *16*	0.36 *5*								%Iγ=0.36 *5*
[x]1989.75 *20*	0.21 *3*								%Iγ=0.209 *30*
[x]1998.36 *20*	0.11 *2*								%Iγ=0.109 *20*
[x]2003.13 *20*	0.08 *2*								%Iγ=0.079 *20*
[x]2016.5 *3*	0.08 *2*								%Iγ=0.079 *20*
2059.5 *3*	0.36 *5*	3682.22	4^-,5^-	1623.06	4^+	[E1]		1.30×10^{-3} *2*	α(K)=0.000612 *9*; α(L)=9.03×10^{-5} *13*; α(M)=2.075×10^{-5} *29* α(N)=5.25×10^{-6} *7*; α(O)=1.047×10^{-6} *15*; α(P)=1.111×10^{-7} *16*; α(IPF)=0.000572 *8* %Iγ=0.36 *5*

$^{202}_{82}Pb_{120}$-12

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

E_γ [†]	I_γ [†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	α [#]	Comments
2100.46 *25*	0.20 *3*	3723.52	4^-	1623.06	4^+	[E1]	1.31×10^{-3} *2*	α(K)=0.000593 *8*; α(L)=8.74×10^{-5} *12*; α(M)=2.008×10^{-5} *28* α(N)=5.08×10^{-6} *7*; α(O)=1.013×10^{-6} *14*; α(P)=1.076×10^{-7} *15*; α(IPF)=0.000600 *8* %Iγ=0.199 *30*
[x]2153.21 *14*	0.20 *3*							%Iγ=0.199 *30*
2198.03 *25*	0.10 *2*	3820.87	5^-	1623.06	4^+	[E1]	1.32×10^{-3} *2*	α(K)=0.000551 *8*; α(L)=8.11×10^{-5} *11*; α(M)=1.863×10^{-5} *26* α(N)=4.72×10^{-6} *7*; α(O)=9.40×10^{-7} *13*; α(P)=1.000×10^{-7} *14*; α(IPF)=0.000666 *9* %Iγ=0.099 *20*
[x]2277.28 *15*	0.16 *2*							%Iγ=0.159 *20*
[x]2286.4 *3*	0.07 *1*							%Iγ=0.070 *10*
[x]2322.55 *13*	0.22 *3*							%Iγ=0.218 *30*
2340.5 *15*	0.20 *7*	3723.52	4^-	1382.84	4^+	[E1]	1.35×10^{-3} *2*	α(K)=0.000498 *7*; α(L)=7.32×10^{-5} *10*; α(M)=1.681×10^{-5} *24* α(N)=4.25×10^{-6} *6*; α(O)=8.49×10^{-7} *12*; α(P)=9.04×10^{-8} *13*; α(IPF)=0.000761 *11* %Iγ=0.20 *7*
[x]2365.9 *4*	0.06 *1*							%Iγ=0.060 *10*
[x]2435.3 *5*	0.07 *1*							%Iγ=0.070 *10*
[x]2559.6 *5*	0.11 *2*							%Iγ=0.109 *20*
[x]2640.8 *4*	0.04 *1*							%Iγ=0.040 *10*
[x]2660.86 *13*	0.12 *2*							%Iγ=0.119 *20*
[x]2685.1 *6*	0.03 *1*							%Iγ=0.030 *10*
[x]2734.7 *3*	0.04 *1*							%Iγ=0.040 *10*
[x]2779.64 *25*	0.04 *1*							%Iγ=0.040 *10*
[x]2784.44 *22*	0.06 *1*							%Iγ=0.060 *10*
[x]2868.63 *23*	0.04 *1*							%Iγ=0.040 *10*
[x]2945.0 *3*	0.06 *1*							%Iγ=0.060 *10*
[x]2966.92 *20*	0.12 *2*							%Iγ=0.119 *20*
[x]3058.7 *4*	0.07 *1*							%Iγ=0.070 *10*
[x]3138.9 *4*	0.04 *1*							%Iγ=0.040 *10*
[x]3210.77 *15*	0.12 *2*							%Iγ=0.119 *20*
[x]3217.2 *4*	0.024 *4*							%Iγ=0.024 *4*
[x]3236.7 *4*	0.04 *1*							%Iγ=0.040 *10*
[x]3244.29 *20*	0.08 *2*							%Iγ=0.079 *20*
[x]3259.4 *4*	0.03 *1*							%Iγ=0.030 *10*
[x]3266.7 *5*	0.08 *2*							%Iγ=0.079 *20*
[x]3316.54 *16*	0.13 *2*							%Iγ=0.129 *20*
[x]3322.23 *20*	0.08 *2*							%Iγ=0.079 *20*
[x]3359.9 *5*	0.023 *3*							%Iγ=0.0228 *30*
[x]3406.6 *4*	0.024 *4*							%Iγ=0.024 *4*
[x]3498.6 *5*	0.10 *2*							%Iγ=0.099 *20*
[x]3520.73 *25*	0.02 *1*							%Iγ=0.020 *10*

$^{202}_{82}Pb_{120}$-13

^{202}Bi $\varepsilon+\beta^+$ decay 1974Go32,1985Dz05 (continued)

$\gamma(^{202}Pb)$ (continued)

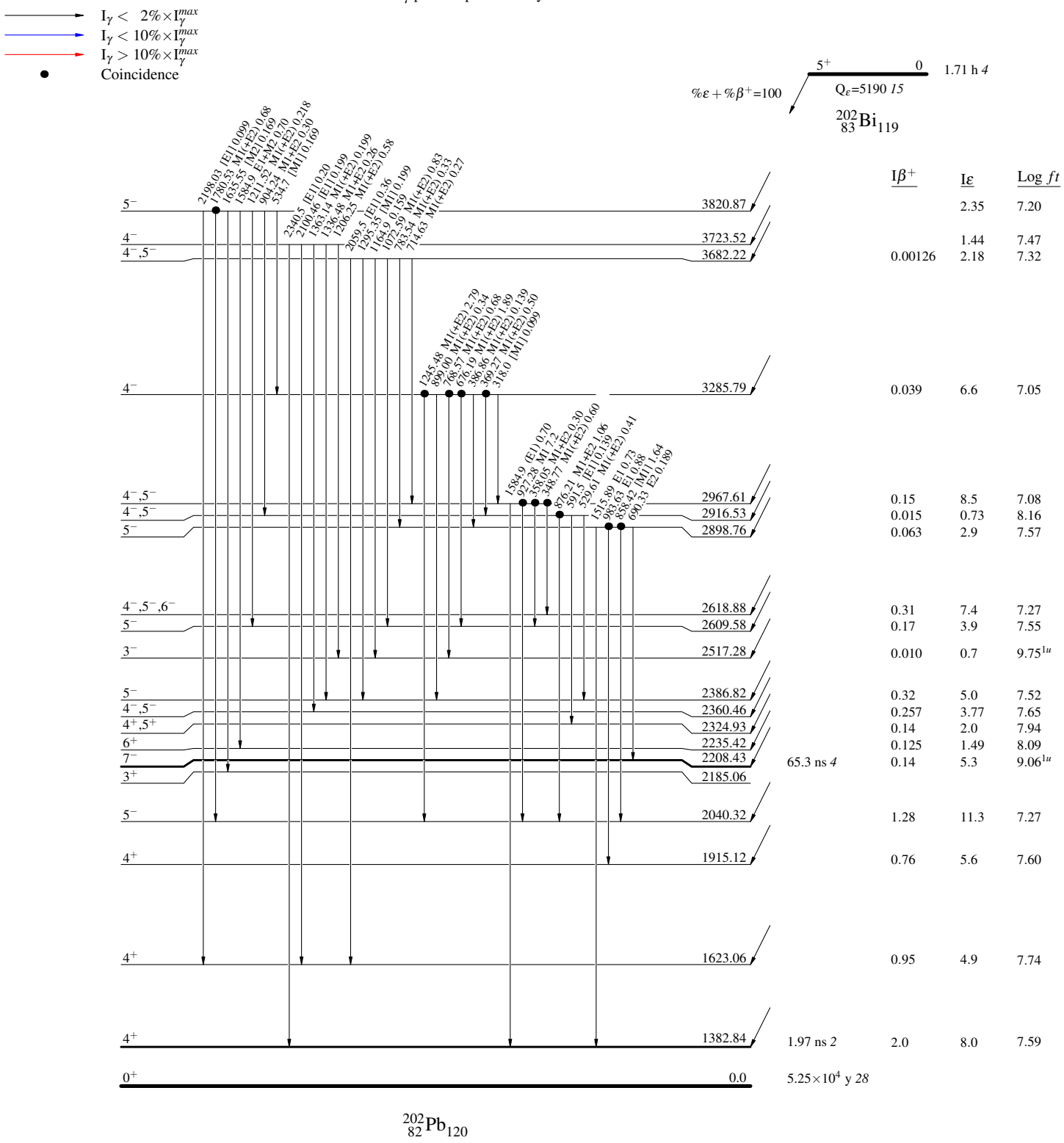
† From 1974Go32, unless otherwise stated.
‡ From α(K)exp, α(L)exp and subshell ratios in 1974Go32 and 1985Dz05, unless otherwise stated. δ values were determined using the briccmixing code.
# Additional information 1.
@ For absolute intensity per 100 decays, multiply by 0.99285 *10*.
x γ ray not placed in level scheme.

$^{202}_{82}Pb_{120}$-14

^{202}Bi ε decay 1974Go32,1985Dz05

Decay Scheme

Intensities: I_γ per 100 parent decays



$^{202}_{82}Pb_{120}$

^{202}Bi ε decay 1974Go32,1985Dz05

Decay Scheme (continued)

Intensities: I_γ per 100 parent decays