Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 177, 509, 2021	4-Jul-2021

Q(β^-)=−5148 *12*; S(n)=7441 *10*; S(p)=3849 *15*; Q(α)=5496 *5* 2021Wa16

^{203}Po Levels

Cross Reference (XREF) Flags

- A ^{203}Po IT decay (45 s)
- B ^{203}At ε decay
- C ^{207}Rn α decay
- D ^{204}Pb(α,5nγ)

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0#	5/2$^-$	36.7 min *5*	ABCD	%α=0.11 *2*; %ε+%β^+=99.89 *2* μ=+0.74 *5*; Q=+0.17 *10* %α: From 1967Le21. Others: 0.02% (1961Be25,1963Be28), 0.5% *1* (1970DaZM), and 0.025% *3* (1970Jo26). J$^\pi$: From hyperfine splitting in 2013Se03,2014Se07 and atomic beam in 1961Ax02; π from μ. $T_{1/2}$: From γ(t) in 1970DaZM. Others (from α(t)): 29 min *1* (1967Le21), 33 min *2* (1967Ti04), 33 min *1* (1970Jo26), 36.0 min 25 (1970DaZM), and 47 min *5* from growth of ^{203}Bi daughter (1951Ka03). μ: Recommended in 2019StZV from 2014Se07 using resonance ionization spectroscopy technique. Others: (+)0.739 *56* (1991Wo04) and (+)0.742 *26* (1987VaZH). Q: From 2014Se07 using resonance ionization spectroscopy technique. $\delta\langle r^2\rangle(^{203}Po,^{210}Po)$=−0.425 fm^2 *13* (2013Se03).
62.51@ *11*	3/2$^-$		ABCD	XREF: C(60). J$^\pi$: 62.6γ M1+E2 to 5/2$^-$; systematics of similar structures in neighboring nuclei.
133 *4*	(1/2$^-$)		C	J$^\pi$: Unfavored α decay from the ^{207}Rn g.s. (J^π=5/2$^-$); systematics of similar structures in neighboring ^{201}Po (at 141 keV) and ^{205}Po (at 143 keV) nuclei. configuration: Dominant $\nu(p^{-1}_{1/2})$.
531.84 *11*	(5/2)$^-$		B	J$^\pi$: 469.4γ M1 to 3/2$^-$, 531.9γ E2+M1 to 5/2$^-$; systematics of similar structures in neighboring nuclei.
639.33& *11*	7/2$^-$		AB D	J$^\pi$: 577.0γ E2 to 3/2$^-$; 639.4γ M1 to 5/2$^-$.
641.64a *14*	13/2$^+$	45 s *2*	AB D	%IT=100 μ=−0.97 *7*; Q=+1.22 *20* %IT=100 from 1986Fa04. Note, that %ε+%β^+=4.3% *15* branch was quoted in 1976Ko13, but it was not adopted in the present evaluation. The reported 261.5-, 577.0- and 904.9-keV γ rays in the daughter nucleus ^{203}Bi (1976Ko13), that were used to determine the %ε+%β^+ branching ratio, are not assigned to ^{203}Bi. J$^\pi$: From hyperfine splitting in 2013Se03,2014Se07; π from μ; 641.5γ M4 to 5/2$^-$. $T_{1/2}$: From 1986Fa04. Other: 1.2 min *2* (1969MoZV) and ≈1 min (1976Ko13). μ: Recommended in 2019StZV from 2014Se07 using resonance ionization spectroscopy technique. Q: From 2014Se07, using the resonance ionization spectroscopy technique. $\delta\langle r^2\rangle(^{203}Po,^{210}Po)$=−0.352 fm^2 *13* (2013Se03).
686.46 *15*	(5/2)$^-$		B	J$^\pi$: 623.9γ M1+E2 to 3/2$^-$; 686.5γ to 5/2$^-$.
719.03 *12*	7/2$^-$		B	J$^\pi$: 656.4γ (E2) to 3/2$^-$; 719.0γ to 5/2$^-$; 410.2γ E1 from 9/2$^+$.
803.20& *20*	9/2$^-$		B	J$^\pi$: 803.2γ E2 to 5/2$^-$.
1029.28 *17*	(7/2)$^-$		B	J$^\pi$: 389.9γ E2+M1 to 7/2$^-$; 497.5γ to (5/2)$^-$; direct feeding in ^{203}At ε decay (J^π=9/2$^-$).

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Adopted Levels, Gammas (continued)

^{203}Po Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
1056.27 *15*	$(7/2,9/2)^-$		B D	Jπ: 417.0γ E2+M1 to $7/2^-$; 1056.2γ to $5/2^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1112.77 *15*	$(7/2)^-$		B	Jπ: 1112.6γ M1(+E2) to $5/2^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1129.27 *16*	$9/2^+$		B	Jπ: 410.2γ E1 to $(7/2)^-$; 487.7γ to $13/2^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1153.62 *13*	$(7/2)^-$		B	Jπ: 434.5γ M1(+E2) to $(7/2)^-$; 621.7γ M1+E2 to $(5/2)^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1174.87 *15*	$(9/2)^-$		B	Jπ: 535.7γ M1(+E2) to $7/2^-$; 1174.7γ to $5/2^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1254.8[b] *5*	$17/2^+$		D	Jπ: 613.3γ E2 to $13/2^+$.
1280.34 *22*	$(11/2)^+$		B	Jπ: 151.1γ to $9/2^+$; 638.8γ to $13/2^+$.
1369.13 *23*	$(7/2,9/2)^-$		B	Jπ: 650.1γ M1(+E2) to $(7/2)^-$.
1379.62 *20*	$(9/2)^+$		B D	Jπ: 738.1γ (E2) to $13/2^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1428.6 *3*	$(7/2^-)$		B	Jπ: 1366.1γ to $3/2^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1526.6 *3*	$(7/2,9/2)^+$		B	Jπ: 397.3γ M1(+E2) to $9/2^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1527.84 *23*	$(7/2,9/2^-)$		B	Jπ: 996.0γ to $(5/2)^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1542.8 *3*	(7/2,9/2)		B	Jπ: 486.5γ to $(7/2)^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1624.36 *19*	$(9/2,11/2)^+$		B	Jπ: 495.0γ M1(+E2) to $9/2^+$; 982.9γ to $13/2^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1671.28 *21*	$(11/2)^+$		B	Jπ: 291.7γ M1(+E2) to $(9/2,11/2)^+$; 1029.7γ M1+E2 to $13/2^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1698.1 *3*	$(7/2,9/2)^+$		B	Jπ: 318.5γ M1+E2 to $(9/2)^+$.
1720.9[c] *7*	$21/2^+$		D	Jπ: 466.1γ E2 to $17/2^+$.
1766.53 *23*	(7/2,9/2)		B	Jπ: 1047.5γ to $7/2^-$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1863.6 *3*	(7/2,9/2)		B	Jπ: 484.0γ to $(9/2)^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
1975.8 *3*	$(9/2)^+$		B D	Jπ: 596.2γ E2 to $(9/2)^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
2010.2 *4*	$(7/2,9/2)^+$		B	Jπ: 630.6γ M1 to $(9/2)^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
2043.2 *3*	$(7/2,9/2)^+$		B	Jπ: 663.6γ M1(+E2) to $(9/2)^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
2057.0[d] *8*	$25/2^+$		D	Jπ: 335.6γ E2 to $21/2^+$.
2078.9 *8*	$21/2^+$		D	Jπ: 357.9γ M1 (J to J) to $21/2^+$.
2158.3 *6*		>200 ns	D	$T_{1/2}$: From 182.5γ(t), 596.5γ(t) and 738.2γ(t) in ^{204}Pb(α,5nγ) (1986Fa04).
2187.0 *3*	(7/2,9/2)		B	Jπ: 807.4γ to $(9/2)^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
2276.4 *10*			D	
2406.4 *8*	$25/2^+$		D	Jπ: 349.0γ M1 (J to J) to $25/2^+$; 685.6γ to $21/2^+$.
2488.1 *8*	$23/2^+$		D	Jπ: 409.2γ M1 to $(21/2^+)$; 767.3γ to $21/2^+$.
2502.4 *8*	$23/2^+$		D	Jπ: 781.6γ (M1) to $21/2^+$.
2526.1[e] *10*	$27/2^+$		D	Jπ: 469.1γ M1 to $25/2^+$.
2530.5 *3*	(7/2,9/2)		B	Jπ: 807.4γ to $(9/2)^+$; direct feeding in ^{203}At ε decay ($J^\pi=9/2^-$).
2792.3[f] *8*	$25/2^-$	12 ns *2*	D	Jπ: 304.3γ E1 to $23/2^+$; 385.7γ E1 (J to J) to $25/2^+$. $T_{1/2}$: From 1986Fa04, using 304.3γ(t), 335γ(t), 288γ(t) and 767γ(t).
2824.8[f] *11*	$29/2^-$	7 ns *2*	D	Jπ: 298.7γ (E1) to $27/2^+$.
2870.7[e] *10*	$29/2^+$		D	Jπ: 813.7γ E2 to $25/2^+$.
3017.5 *10*	$(29/2^+)$		D	Jπ: 960.5γ E2 to $25/2^+$.
3070.3 *11*	$(29/2^+)$		D	Jπ: 544.2γ (M1) to $27/2^+$.
3111.7 *11*			D	
3235.9 *11*	$31/2^+$		D	Jπ: 365.2γ M1 to $29/2^+$.
3241.0 *11*	$(33/2)^+$		D	Jπ: 370.3γ E2 to $29/2^+$.
3381.7 *12*			D	
3430.4 *10*	$29/2^-$		D	Jπ: 638.1γ (E2) to $25/2^-$.
3717.3 *11*			D	
3881.3 *11*	$(31/2)^-$		D	Jπ: 450.9γ M1 to $29/2^-$.
4358.2 *12*	$(35/2^-)$		D	Jπ: 476.9γ (E2) to $(31/2^-)$.

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Adopted Levels, Gammas (continued)

^{203}Po Levels (continued)

† From a least-squares fit to Eγ. ΔEγ=0.5 keV was assumed for γ-ray tranisitions without uncertainties.
‡ From deduced transition multipolarities, feeding pattern in ^{203}At ε decay, and multiple level decay branches.
# Configuration=$\nu(f_{5/2}^{-1})$.
@ Configuration=$\nu(p_{3/2}^{-1})$.
& Dominant configuration=$\nu(f_{5/2}^{-1})\otimes 2^+$.
a Configuration=$\nu(i_{13/2}^{-1})$.
b Dominant configuration=$\nu(i_{13/2}^{-1})\otimes 2^+$.
c Dominant configuration=$\nu(i_{13/2}^{-1})\otimes 4^+$.
d Admixture between configuration=$\nu(i_{13/2}^{-1})\otimes 6^+$ and configuration=$\nu(i_{13/2}^{-1})\otimes 8^+$.
e Dominant configuration=$\nu(i_{13/2}^{-1})\otimes 8^+$.
f Dominant configuration=$\nu(f_{5/2}^{-3},i_{13/2}^{-2})$.

Adopted Levels, Gammas (continued)

γ(^{203}Po)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
62.51	3/2$^-$	62.6 *2*	100	0	5/2$^-$	M1+E2	0.52 *8*	20 *3*	α(L)=15.0 *22*; α(M)=3.8 *6* α(N)=0.98 *15*; α(O)=0.19 *3*; α(P)=0.0196 *23* Mult.,δ: α(L)exp=15 *2* in ^{203}At ε decay (1987Se04).
531.84	(5/2)$^-$	469.4 *2*	15.2 *13*	62.51	3/2$^-$	M1(+E2)	≤0.6	0.136	α(K)=0.110 *13*; α(L)=0.0196 *17*; α(M)=0.0046 *4* α(N)=0.00119 *10*; α(O)=0.000249 *21*; α(P)=3.2×10^{-5} *3* Mult.,δ: α(K)exp=0.15 *4* in ^{203}At ε decay (1987Se04).
		531.9 *2*	100 *3*	0	5/2$^-$	M1+E2	1.5 *−5+8*	0.052	α(K)=0.041 *14*; α(L)=0.0090 *18*; α(M)=0.0022 *4* α(N)=0.00056 *10*; α(O)=0.000114 *22*; α(P)=1.4×10^{-5} *3* Mult.,δ: α(K)exp=0.040 *10* in ^{203}At ε decay (1987Se04).
639.33	7/2$^-$	577.0 *2*	9.80 *20*	62.51	3/2$^-$	E2		0.0230	α(K)=0.01657 *24*; α(L)=0.00486 *7*; α(M)=0.001209 *17* α(N)=0.000311 *5*; α(O)=6.24×10^{-5} *9*; α(P)=7.03×10^{-6} *10* Mult.: α(K)exp=0.020 *10* in ^{203}At ε decay (1987Se04).
		639.4 *2*	100	0	5/2$^-$	M1		0.0666	α(K)=0.0544 *8*; α(L)=0.00931 *13*; α(M)=0.00219 *3* α(N)=0.000563 *8*; α(O)=0.0001180 *17*; α(P)=1.527×10^{-5} *22* Mult.: α(K)exp=0.08 *2* in ^{203}At ε decay (1987Se04).
641.64	13/2$^+$	(2.3 *2*)	3.1×10^{-11} *2*	639.33	7/2$^-$	[E3]		4.×10^{11} *3*	B(E3)(W.u.)=0.0051 *+44−23* E_γ: From level energy differences. I_γ: From I(γ+ce) in ^{203}Po IT decay.
		641.5 *2*	100	0	5/2$^-$	M4		0.857	α(K)=0.573 *8*; α(L)=0.211 *3*; α(M)=0.0552 *8* α(N)=0.01441 *21*; α(O)=0.00294 *5*; α(P)=0.000348 *5* B(M4)(W.u.)=3.12 *+18−21* Mult.: α(L)exp=0.25 *3* in ^{203}At ε decay (1987Se04); α(K)exp=0.61 *2* in ^{203}Po IT decay, ^{204}Pb(α,5nγ) (1986Fa04).
686.46	(5/2)$^-$	623.9 *2*	100 *4*	62.51	3/2$^-$	M1+E2	0.8 *5*	0.051 *16*	α(K)=0.041 *14*; α(L)=0.0076 *19*; α(M)=0.0018 *5* α(N)=0.00046 *11*; α(O)=9.6×10^{-5} *24*; α(P)=1.2×10^{-5} *4* Mult.,δ: α(K)exp=0.040 *10* in ^{203}At ε decay (1987Se04).
		686.5 *2*	60 *2*	0	5/2$^-$				
719.03	7/2$^-$	656.4 *2*	100 *1*	62.51	3/2$^-$	(E2)		0.01732	α(K)=0.01285 *18*; α(L)=0.00338 *5*; α(M)=0.000832 *12* α(N)=0.000214 *3*; α(O)=4.32×10^{-5} *6*; α(P)=4.98×10^{-6} *7* Mult.: α(K)exp=0.020 *10* in ^{203}At ε decay (1987Se04).
		719.0 *2*	51.9 *15*	0	5/2$^-$	M1(+E2)	≤0.4	0.0466 *25*	ce(K)/(γ+ce)=0.0363 *20*; ce(L)/(γ+ce)=0.0063 *3*; ce(M)/(γ+ce)=0.00147 *7* ce(N)/(γ+ce)=0.000378 *18*; ce(O)/(γ+ce)=7.9×10^{-5} *4*; ce(P)/(γ+ce)=1.02×10^{-5} *5* α(K)=0.0380 *21*; α(L)=0.0065 *3*; α(M)=0.00154 *7* α(N)=0.000396 *18*; α(O)=8.3×10^{-5} *4*; α(P)=1.07×10^{-5} *6* Mult.,δ: α(L)exp=0.008 *2* in ^{203}At ε decay (1987Se04).
803.20	9/2$^-$	803.2 *2*	100	0	5/2$^-$	E2		0.01136	α(K)=0.00873 *13*; α(L)=0.00199 *3*; α(M)=0.000484 *7* α(N)=0.0001244 *18*; α(O)=2.54×10^{-5} *4*; α(P)=3.01×10^{-6} *5* Mult.: α(K)exp=0.008 *3* in ^{203}At ε decay (1987Se04).
1029.28	(7/2)$^-$	389.9 *2*	91.9 *11*	639.33	7/2$^-$	E2+M1	2.5 *−5+9*	0.086 *12*	α(K)=0.060 *11*; α(L)=0.0195 *12*; α(M)=0.0049 *3*

$^{203}_{84}Po_{119}$-4

Adopted Levels, Gammas (continued)

γ(^{203}Po) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									α(N)=0.00125 *7*; α(O)=0.000251 *15*; α(P)=2.78×10^{-5} *22* Mult.: α(K)exp=0.059 *9* in ^{203}At ε decay (1987Se04).
1029.28	(7/2)$^-$	497.5 *2*	100 *3*	531.84	(5/2)$^-$				
1056.27	(7/2,9/2)$^-$	417.0 *2*	100 *3*	639.33	7/2$^-$	E2+M1	2.0 *−4+6*	0.082 *13*	α(K)=0.060 *11*; α(L)=0.0166 *13*; α(M)=0.0041 *3* α(N)=0.00106 *8*; α(O)=0.000214 *17*; α(P)=2.44×10^{-5} *24* Mult.,δ: α(K)exp=0.060 *10* in ^{203}At ε decay (1987Se04); Other:α(K)exp=0.030 *15* in ^{204}Pb(α,5nγ) (1986Fa04).
		1056.2 *2*	3.8 *8*	0	5/2$^-$				
1112.77	(7/2)$^-$	581.1 *2*	17 *3*	531.84	(5/2)$^-$	M1		0.0856	α(K)=0.0699 *10*; α(L)=0.01200 *17*; α(M)=0.00282 *4* α(N)=0.000726 *11*; α(O)=0.0001521 *22*; α(P)=1.97×10^{-5} *3* Mult.: α(K)exp=0.08 *2* in ^{203}At ε decay (1987Se04).
		1112.6 *2*	100.0 *14*	0	5/2$^-$	M1(+E2)		0.01580	α(K)=0.01294 *19*; α(L)=0.00218 *3*; α(M)=0.000512 *8* α(N)=0.0001317 *19*; α(O)=2.76×10^{-5} *4*; α(P)=3.58×10^{-6} *5*; α(IPF)=4.59×10^{-7} *8* Mult.,δ: α(K)exp=0.009 *2* in ^{203}At ε decay (1987Se04).
1129.27	9/2$^+$	410.2 *2*	26.8 *9*	719.03	7/2$^-$	E1		0.01560	α(K)=0.01280 *18*; α(L)=0.00214 *3*; α(M)=0.000502 *7* α(N)=0.0001284 *18*; α(O)=2.64×10^{-5} *4*; α(P)=3.25×10^{-6} *5* Mult.: α(K)exp=0.020 *10* in ^{203}At ε decay (1987Se04).
		487.7 *2*	100 *9*	641.64	13/2$^+$				
1153.62	(7/2)$^-$	434.5 *2*	57 *4*	719.03	7/2$^-$	M1(+E2)	≤0.6	0.167 *19*	α(K)=0.135 *17*; α(L)=0.0243 *20*; α(M)=0.0057 *5* α(N)=0.00148 *11*; α(O)=0.000308 *25*; α(P)=3.9×10^{-5} *4* Mult.,δ: α(K)exp=0.14 *2* in ^{203}At ε decay (1987Se04).
		621.7 *2*	100 *4*	531.84	(5/2)$^-$	M1+E2	1.3 *−5+13*	0.039 *13*	α(K)=0.031 *11*; α(L)=0.0062 *15*; α(M)=0.0015 *4* α(N)=0.00038 *9*; α(O)=7.9×10^{-5} *19*; α(P)=1.0×10^{-5} *3* Mult.,δ: α(K)exp=0.03 *1* in ^{203}At ε decay (1987Se04).
		1153.8 *2*	75 *7*	0	5/2$^-$				
1174.87	(9/2)$^-$	535.7 *2*	100 *5*	639.33	7/2$^-$	M1(+E2)	≤0.23	0.1041 *25*	Mult.,δ: α(K)exp=0.10 *1* in ^{203}At ε decay (1987Se04).
		1174.7 *2*	50.0 *25*	0	5/2$^-$				
1254.8	17/2$^+$	613.3[‡]	100[‡]	641.64	13/2$^+$	E2		0.0201	α(K)=0.01468 *21*; α(L)=0.00408 *6*; α(M)=0.001011 *15* α(N)=0.000260 *4*; α(O)=5.23×10^{-5} *8*; α(P)=5.95×10^{-6} *9* Mult.: α(K)exp=0.0202; A_2=0.35 *2*, A_4=−0.04 in ^{204}Pb(α,5nγ) (1986Fa04).
1280.34	(11/2)$^+$	151.1 *3*	43 *10*	1129.27	9/2$^+$				
		638.8 *3*	100 *33*	641.64	13/2$^+$				
1369.13	(7/2,9/2)$^-$	650.1 *2*	100	719.03	7/2$^-$	M1(+E2)	≤0.7	0.056 *8*	α(K)=0.046 *7*; α(L)=0.0080 *9*; α(M)=0.00189 *21* α(N)=0.00049 *6*; α(O)=0.000102 *12*; α(P)=1.31×10^{-5} *16* Mult.,δ: α(K)exp=0.050 *11* in ^{203}At ε decay (1987Se04).
1379.62	(9/2)$^+$	99.3 *3*		1280.34	(11/2)$^+$				
		738.1 *2*	100	641.64	13/2$^+$	(E2)		0.01351	α(K)=0.01025 *15*; α(L)=0.00247 *4*; α(M)=0.000604 *9* α(N)=0.0001551 *22*; α(O)=3.15×10^{-5} *5*; α(P)=3.69×10^{-6} *6* Mult.: α(K)exp=0.08 *2* in ^{203}At ε decay (1987Se04).

$^{203}_{84}Po_{119}$-5

Adopted Levels, Gammas (continued)

γ(^{203}Po) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.#	δ@	α&	Comments
1428.6	(7/2$^-$)	1366.1 *3*	100	62.51	3/2$^-$				
1526.6	(7/2,9/2)$^+$	397.3 *2*	100	1129.27	9/2$^+$	M1(+E2)	≤0.7	0.21 *3*	α(K)=0.17 *3*; α(L)=0.030 *3*; α(M)=0.0072 *7* α(N)=0.00186 *17*; α(O)=0.00039 *4*; α(P)=4.9×10^{-5} *6* Mult.,δ: α(L)exp=0.041 *11* in ^{203}At ε decay (1987Se04).
1527.84	(7/2,9/2$^-$)	996.0 *2*	100	531.84	(5/2)$^-$				
1542.8	(7/2,9/2)	486.5 *3*	100	1056.27	(7/2,9/2)$^-$				
1624.36	(9/2,11/2)$^+$	495.0 *2*	45.3 *16*	1129.27	9/2$^+$	M1(+E2)	≤0.4	0.124 *7*	α(K)=0.101 *6*; α(L)=0.0177 *8*; α(M)=0.00417 *18* α(N)=0.00107 *5*; α(O)=0.000224 *10*; α(P)=2.89×10^{-5} *14* Mult.,δ: α(K)exp=0.12 *2* in ^{203}At ε decay (1987Se04).
		982.9 *2*	100 *5*	641.64	13/2$^+$				
1671.28	(11/2)$^+$	291.7 *2*	29.8 *18*	1379.62	(9/2)$^+$	M1(+E2)	≤1.3	0.42 *13*	α(K)=0.33 *12*; α(L)=0.069 *9*; α(M)=0.0166 *18* α(N)=0.0043 *5*; α(O)=0.00088 *11*; α(P)=0.000107 *21* Mult.,δ: α(L)exp=0.07 *1* in ^{203}At ε decay (1987Se04).
		1029.7 *2*	100.0 *18*	641.64	13/2$^+$	M1+E2	1.4 *+10−5*	0.011 *3*	α(K)=0.0090 *23*; α(L)=0.0016 *4*; α(M)=0.00039 *8* α(N)=9.9×10^{-5} *20*; α(O)=2.1×10^{-5} *5*; α(P)=2.6×10^{-6} *6* Mult.,δ: α(K)exp=0.009 *2* in ^{203}At ε decay (1987Se04).
1698.1	(7/2,9/2)$^+$	318.5 *2*	100	1379.62	(9/2)$^+$	M1+E2	0.5 *3*	0.36 *7*	α(K)=0.29 *6*; α(L)=0.056 *5*; α(M)=0.0133 *11* α(N)=0.0034 *3*; α(O)=0.00071 *7*; α(P)=8.9×10^{-5} *11* Mult.,δ: α(K)exp=0.29 *5* in ^{203}At ε decay (1987Se04).
1720.9	21/2$^+$	466.1‡	100‡	1254.8	17/2$^+$	E2		0.0381	α(K)=0.0256 *4*; α(L)=0.00934 *13*; α(M)=0.00236 *4* α(N)=0.000606 *9*; α(O)=0.0001205 *17*; α(P)=1.305×10^{-5} *19* Mult.: α(K)exp=0.0202; A_2=0.35 *2*, A_4=−0.04 in ^{204}Pb(α,5nγ) (1986Fa04).
1766.53	(7/2,9/2)	1047.5 *2*	100	719.03	7/2$^-$				
1863.6	(7/2,9/2)	484.0 *2*	100	1379.62	(9/2)$^+$				
1975.8	(9/2)$^+$	596.2 *2*	100	1379.62	(9/2)$^+$	E2		0.0214	α(K)=0.01553 *22*; α(L)=0.00442 *7*; α(M)=0.001098 *16* α(N)=0.000282 *4*; α(O)=5.67×10^{-5} *8*; α(P)=6.43×10^{-6} *9* Mult.: α(K)exp=0.02 *1* in ^{203}At ε decay (1987Se04).
2010.2	(7/2,9/2)$^+$	630.6 *3*	100	1379.62	(9/2)$^+$	M1(+E2)	≤0.6	0.062 *7*	α(K)=0.051 *6*; α(L)=0.0089 *8*; α(M)=0.00209 *18* α(N)=0.00054 *5*; α(O)=0.000113 *10*; α(P)=1.45×10^{-5} *14* Mult.,δ: α(K)exp=0.09 *3* in ^{203}At ε decay (1987Se04).
2043.2	(7/2,9/2)$^+$	663.6 *2*	100	1379.62	(9/2)$^+$	M1(+E2)	≤0.4	0.057 *4*	α(K)=0.047 *3*; α(L)=0.0081 *4*; α(M)=0.00190 *9* α(N)=0.000490 *22*; α(O)=0.000102 *5*; α(P)=1.32×10^{-5} *7* Mult.,δ: α(K)exp=0.062 *12* in ^{203}At ε decay (1987Se04).
2057.0	25/2$^+$	335.6‡	100‡	1720.9	21/2$^+$	E2		0.0908	α(K)=0.0521 *8*; α(L)=0.0289 *5*; α(M)=0.00747 *11* α(N)=0.00192 *3*; α(O)=0.000376 *6*; α(P)=3.83×10^{-5} *6* Mult.: α(K)exp=0.0534 (used as normalization for the conversion electron measurement) and A_2=0.34 *3*, A_4=−0.03 *5* in ^{204}Pb(α,5nγ) (1986Fa04).
2078.9	21/2$^+$	357.9‡	100‡	1720.9	21/2$^+$	M1		0.312	α(K)=0.254 *4*; α(L)=0.0443 *7*; α(M)=0.01043 *16*

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Adopted Levels, Gammas (continued)

γ(^{203}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(N)=0.00269 *4*; α(O)=0.000562 *9*; α(P)=7.27×10^{-5} *11* Mult.: α(K)exp=0.21 *6*; A_2=0.38 *5*, A_4=0.03 *7* in ^{204}Pb(α,5nγ) (1986Fa04).
2158.3		182.5[‡]	100[‡]	1975.8	(9/2)$^+$			A_2=0.14 *5*, A_4=−0.14 *8* in ^{204}Pb(α,5nγ) (1986Fa04).
2187.0	(7/2,9/2)	807.4 *2*	100	1379.62	(9/2)$^+$			
2276.4		219.4[‡]	100[‡]	2057.0	25/2$^+$			
2406.4	25/2$^+$	349.0[‡]	94[‡]	2057.0	25/2$^+$	M1	0.335	α(K)=0.272 *4*; α(L)=0.0474 *7*; α(M)=0.01118 *17* α(N)=0.00288 *5*; α(O)=0.000602 *9*; α(P)=7.78×10^{-5} *12* Mult.: α(K)exp=0.22 *10*; A_2=0.27 *7*, A_4=−0.01 *11* in ^{204}Pb(α,5nγ) (1986Fa04).
		685.6[‡]	100[‡]	1720.9	21/2$^+$			
2488.1	23/2$^+$	409.2[‡]	27[‡]	2078.9	21/2$^+$	M1	0.218	α(K)=0.177 *3*; α(L)=0.0308 *5*; α(M)=0.00725 *11* α(N)=0.00186 *3*; α(O)=0.000390 *6*; α(P)=5.05×10^{-5} *8* Mult.: α(K)exp=0.20 *8*; A_2<0 in ^{204}Pb(α,5nγ) (1986Fa04).
		767.3[‡]	100[‡]	1720.9	21/2$^+$	M1	0.0413	α(K)=0.0338 *5*; α(L)=0.00576 *9*; α(M)=0.001352 *19* α(N)=0.000348 *5*; α(O)=7.29×10^{-5} *11*; α(P)=9.44×10^{-6} *14* Mult.: α(K)exp=0.033 *7*; A_2<0 in ^{204}Pb(α,5nγ) (1986Fa04).
2502.4	23/2$^+$	781.6[‡]	100[‡]	1720.9	21/2$^+$	(M1)	0.0394	α(K)=0.0322 *5*; α(L)=0.00548 *8*; α(M)=0.001288 *19* α(N)=0.000331 *5*; α(O)=6.94×10^{-5} *10*; α(P)=8.99×10^{-6} *13* Mult.: α(K)exp=0.015 *7*; A_2=−0.44 *14*, A_4=0.12 *22* in ^{204}Pb(α,5nγ) (1986Fa04).
2526.1	27/2$^+$	469.1[‡]	100[‡]	2057.0	25/2$^+$	M1	0.1510	α(K)=0.1231 *18*; α(L)=0.0213 *3*; α(M)=0.00501 *8* α(N)=0.001289 *19*; α(O)=0.000270 *4*; α(P)=3.49×10^{-5} *5* Mult.: α(K)exp=0.095 *20*; A_2=−0.39 *15*, A_4=−0.04 *8* in ^{204}Pb(α,5nγ) (1986Fa04).
2530.5	(7/2,9/2)	1150.9 *2*	100	1379.62	(9/2)$^+$			
2792.3	25/2$^-$	290.0[‡]	61[‡]	2502.4	23/2$^+$	(E1)	0.0339	α(K)=0.0276 *4*; α(L)=0.00480 *7*; α(M)=0.001130 *17* α(N)=0.000288 *5*; α(O)=5.89×10^{-5} *9*; α(P)=7.10×10^{-6} *11* B(E1)(W.u.)=1.78×10^{-7} *+45−38* Mult.: α(K)exp<0.12; A_2=0.05 *8*, A_4=0.13 *12* in ^{204}Pb(α,5nγ) (1986Fa04).
		304.3[‡]	100[‡]	2488.1	23/2$^+$	E1	0.0303	α(K)=0.0247 *4*; α(L)=0.00428 *7*; α(M)=0.001006 *15* α(N)=0.000257 *4*; α(O)=5.25×10^{-5} *8*; α(P)=6.35×10^{-6} *10* B(E1)(W.u.)=2.5×10^{-7} *+6−4* Mult.: α(K)exp<0.05; A_2=−0.23 *9*, A_4=0.10 *13* in ^{204}Pb(α,5nγ) (1986Fa04).
		385.7[‡]	62[‡]	2406.4	25/2$^+$	E1	0.0178	α(K)=0.01461 *21*; α(L)=0.00246 *4*; α(M)=0.000578 *9* α(N)=0.0001476 *22*; α(O)=3.03×10^{-5} *5*; α(P)=3.72×10^{-6} *6* B(E1)(W.u.)=7.7×10^{-8} *+19−16* Mult.: α(K)exp<0.02; A_2=0.24 *2*, A_4=0.10 *2* in ^{204}Pb(α,5nγ) (1986Fa04).
2824.8	29/2$^-$	298.7[‡]	100[‡]	2526.1	27/2$^+$	(E1)	0.0317	α(K)=0.0258 *4*; α(L)=0.00448 *7*; α(M)=0.001052 *16* α(N)=0.000269 *4*; α(O)=5.49×10^{-5} *8*; α(P)=6.63×10^{-6} *10* B(E1)(W.u.)=1.02×10^{-6} *+40−23* Mult.: α(K)exp<0.06; A_2<0 in ^{204}Pb(α,5nγ) (1986Fa04).

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Adopted Levels, Gammas (continued)

γ(^{203}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]	Comments
2870.7	29/2$^+$	813.7[‡]	100[‡]	2057.0	25/2$^+$	E2	0.01106	α(K)=0.00852 *12*; α(L)=0.00193 *3*; α(M)=0.000468 *7* α(N)=0.0001203 *17*; α(O)=2.45×10^{-5} *4*; α(P)=2.92×10^{-6} *4* Mult.: α(K)exp=0.015 *5*; A_2=0.39 *4*, A_4=−0.04 *5* in ^{204}Pb(α,5nγ) (1986Fa04).
3017.5	(29/2$^+$)	960.5[‡]	100[‡]	2057.0	25/2$^+$	E2	0.00796	α(K)=0.00625 *9*; α(L)=0.001293 *19*; α(M)=0.000311 *5* α(N)=7.99×10^{-5} *12*; α(O)=1.640×10^{-5} *23*; α(P)=1.99×10^{-6} *3* Mult.: α(K)exp=0.03 *2*; A_2>0 in ^{204}Pb(α,5nγ) (1986Fa04).
3070.3	(29/2$^+$)	544.2[‡]	100[‡]	2526.1	27/2$^+$	(M1)	0.1018	α(K)=0.0831 *12*; α(L)=0.01430 *21*; α(M)=0.00336 *5* α(N)=0.000865 *13*; α(O)=0.000181 *3*; α(P)=2.34×10^{-5} *4* Mult.: A_2=−0.53 *9*, A_4=−0.10 *15* in ^{204}Pb(α,5nγ) (1986Fa04).
3111.7		585.6[‡]	100[‡]	2526.1	27/2$^+$			
3235.9	31/2$^+$	365.2[‡]	100[‡]	2870.7	29/2$^+$	M1	0.296	α(K)=0.241 *4*; α(L)=0.0419 *6*; α(M)=0.00987 *15* α(N)=0.00254 *4*; α(O)=0.000532 *8*; α(P)=6.88×10^{-5} *10* Mult.: α(K)exp=0.21 *5*; A_2=−0.49 *6*, A_4=−0.04 *10* in ^{204}Pb(α,5nγ) (1986Fa04).
3241.0	(33/2)$^+$	370.3[‡]	100[‡]	2870.7	29/2$^+$	E2	0.0691	α(K)=0.0419 *6*; α(L)=0.0203 *3*; α(M)=0.00521 *8* α(N)=0.001337 *20*; α(O)=0.000263 *4*; α(P)=2.73×10^{-5} *4* Mult.: α(K)exp<0.05; A_2=0.44 *9*, A_4=−0.08 *13* in ^{204}Pb(α,5nγ) (1986Fa04).
3381.7		140.7[‡]	100[‡]	3241.0	(33/2)$^+$			
3430.4	29/2$^-$	638.1[‡]	100[‡]	2792.3	25/2$^-$	(E2)	0.0184	α(K)=0.01358 *19*; α(L)=0.00365 *6*; α(M)=0.000902 *13* α(N)=0.000232 *4*; α(O)=4.68×10^{-5} *7*; α(P)=5.36×10^{-6} *8* Mult.: A_2=0.024 *3*, A_4=−0.04 *4*, inconsistent with stretched E2, in ^{204}Pb(α,5nγ) (1986Fa04).
3717.3		846.6[‡]	100[‡]	2870.7	29/2$^+$			
3881.3	(31/2)$^-$	450.9[‡]	100[‡]	3430.4	29/2$^-$	M1	0.1678	α(K)=0.1368 *20*; α(L)=0.0237 *4*; α(M)=0.00557 *8* α(N)=0.001434 *21*; α(O)=0.000300 *5*; α(P)=3.88×10^{-5} *6* Mult.: α(K)exp=0.13 *2*; A_2>0 in ^{204}Pb(α,5nγ) (1986Fa04).
4358.2	(35/2$^-$)	476.9[‡]	100[‡]	3881.3	(31/2)$^-$	(E2)	0.0360	α(K)=0.0244 *4*; α(L)=0.00868 *13*; α(M)=0.00219 *4* α(N)=0.000562 *9*; α(O)=0.0001119 *17*; α(P)=1.218×10^{-5} *18* Mult.: α(K)exp<0.02; A_2≈0 in ^{204}Pb(α,5nγ) (1986Fa04).

[†] From ^{203}At ε decay, unless otherwise stated.
[‡] From ^{204}Pb(α,5nγ).
[#] From α(K)exp and α(L)exp in ^{203}At ε decay; γ(θ), α(K)exp and the observed multiple decay branches in ^{204}Pb(α,5nγ).
[@] From α(K)exp and α(L)exp in ^{203}At ε decay.
[&] Additional information 1.

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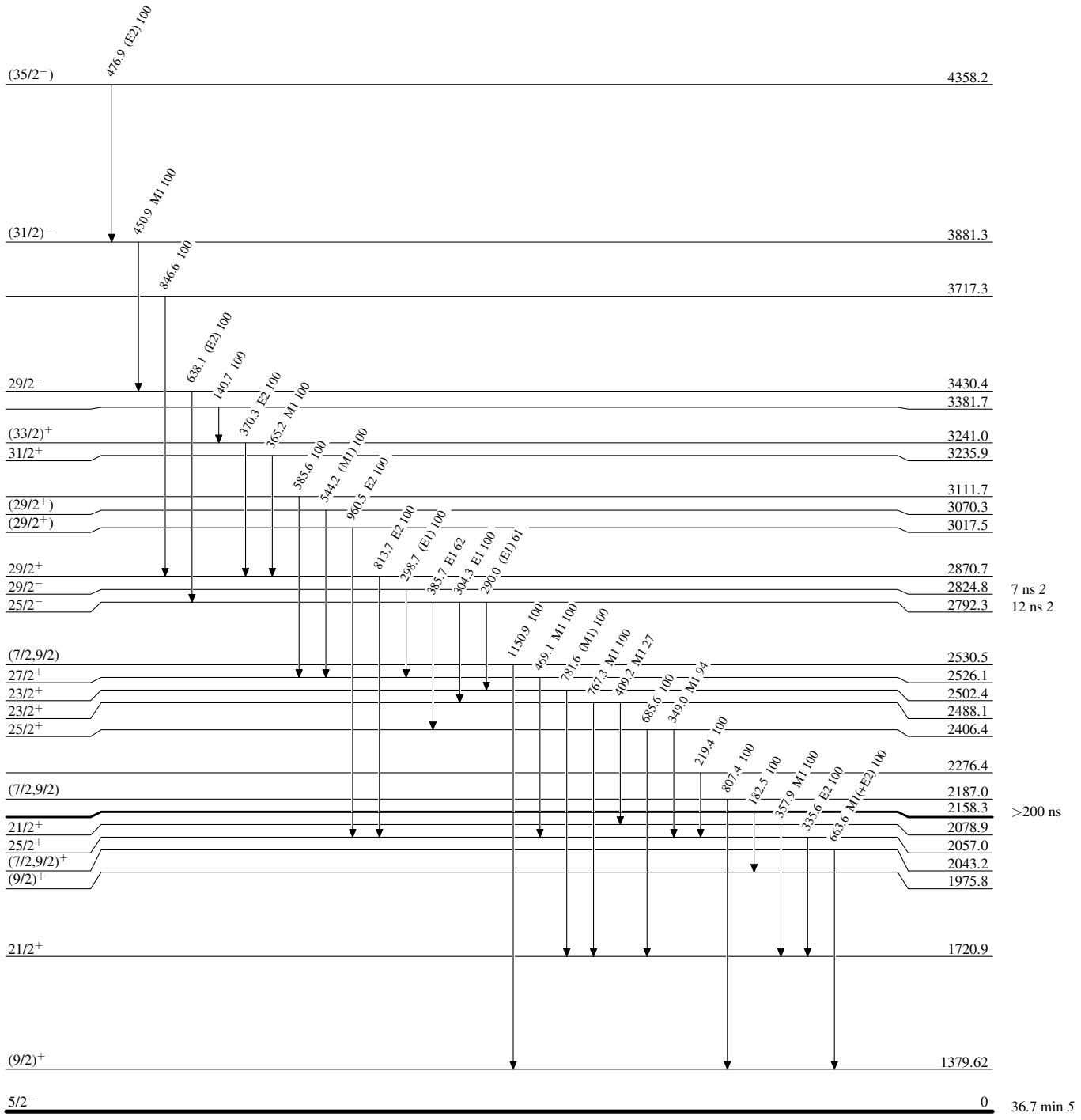
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



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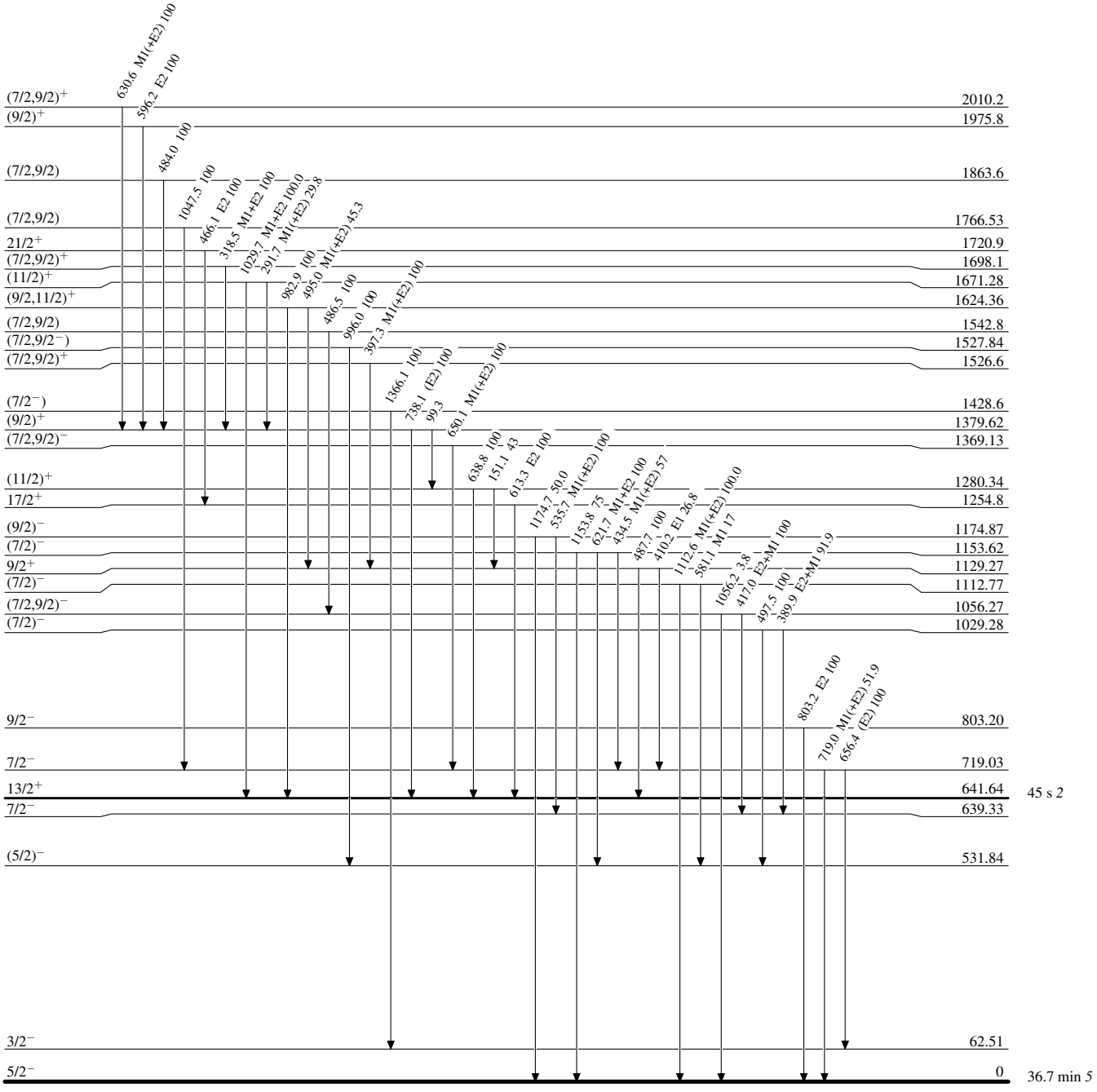
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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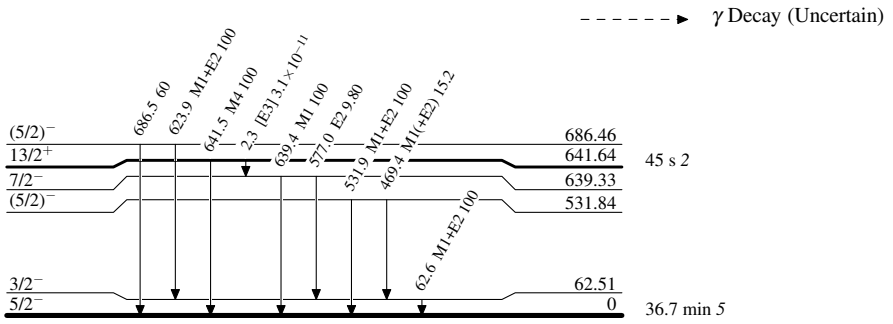
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



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