Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 166, 1 (2020)	20-Apr-2020

Q(β^-)=−4549 *18*; S(n)=7251 *15*; S(p)=4164 *14*; Q(α)=5325 *10* 2017Wa10

^{205}Po Levels

Cross Reference (XREF) Flags

A ^{205}At ε decay
B ^{205}Po IT decay (57.4 ms)
C ^{209}Rn α decay
D ^{206}Pb(α,5nγ)
E ^{209}Bi(p,5nγ)

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0#	5/2$^-$	1.74 h *8*	ABCDE	%ε+%β^+=99.960 *12*; %α=0.040 *12* μ=+0.76 *6*; Q=0.17 %α: from %α(^{205}At)/%α(^{205}Po)=18.4% *16*/0.074% *16* (1961La02) and %α(^{205}At)=10% *2* (1974Ho27). Others: %α=0.58% *4* (1970Jo26) and 0.074% *16* (1951Ha83). J$^\pi$: Atomic beam (1961Ax02); π from μ. $T_{1/2}$: Unweighted average of 1.66 h *2* (1983He09) and 1.80 h *4* (1970DaZM); Others: 1.8 h *1* (1956Be97) and 1.8 h *2* (1967Ti04,1970Jo26). μ: Deduced using the nuclear magnetic resonance from oriented state technique (1983He09,2014StZZ). Q: Deduced using the atomic beam magnetic resonance technique (1961Ol01). $\Delta<r^2>$(205,208)=−0.185 *6* (1991Ko32) using the laser-induced fluorescence spectroscopy technique.
143.166@ *15*	1/2$^-$	310 ns *60*	A C	J$^\pi$: 143.166γ E2 to 5/2$^-$; unfavored α-decay. $T_{1/2}$: From $\alpha\gamma$(t) (1971Jo19) in ^{209}Rn α decay.
154.195& *11*	3/2$^-$		A C	J$^\pi$: 154.198γ M1(+E2) to 5/2$^-$, (11)γ to 1/2$^-$.
384.34 *6*	(3/2)$^-$		A C	J$^\pi$: 230.12γ (M1) to 3/2$^-$; 384.61γ M1+E2 to 5/2$^-$.
669.43 *4*	9/2$^-$		A	J$^\pi$: 669.41γ E2 to 5/2$^-$; direct feeding in ^{205}At ε decay (J$^\pi$=9/2$^-$).
719.28a *4*	9/2$^-$		AB DE	J$^\pi$: 719.3γ E2 to 5/2$^-$; direct feeding in ^{205}At ε decay (J$^\pi$=9/2$^-$).
783.00 *5*	7/2$^-$		A	J$^\pi$: 628.88γ E2 to 3/2$^-$; 782.80γ M1+E2 to 5/2$^-$; direct feeding in ^{205}At ε decay (J$^\pi$=9/2$^-$).
799.02 *15*	(5/2)$^-$		A	J$^\pi$: 644.86γ M1+E2 to 3/2$^-$.
806.45 *8*	(5/2)$^-$		A	J$^\pi$: 652.5γ M1+E2 to 5/2$^-$, 806.44γ M1+E2 to 3/2$^-$, 1342.3γ from (7/2)$^+$.
872.10 *7*	7/2$^-$		A	J$^\pi$: 202.6γ M1(+E2) to 9/2$^-$; 487.86γ E2 to (3/2)$^-$.
880.31b *4*	13/2$^+$	0.645 ms *20*	AB DE	%IT=100 μ=−0.95 *5* J$^\pi$: 161.03γ M2 to 9/2$^-$; direct feeding in ^{205}At ε decay (J$^\pi$=9/2$^-$). $T_{1/2}$: From 719γ(t) in 1973Fo07. Other: 0.644 ms in 1962Ha26. μ: deduced using differential perturbed angular distribution technique (1974BrXD,2014StZZ).
902.26 *10*	(7/2)$^-$		A	J$^\pi$: 748.5γ (E2) to the 3/2$^-$, 902.22γ M1+E2 to 5/2$^-$.
1030.38c *4*	(11/2)$^-$		A DE	J$^\pi$: 311.09γ M1+E2 to 9/2$^-$; population in ^{206}Pb(α,5nγ) favors higher J.
1167.81 *7*	7/2$^-$		A	J$^\pi$: 369γ M1+E2 to (5/2)$^-$; 448.61γ M1+E2 9/2$^-$.
1394.94 *9*	(9/2)$^-$		A	J$^\pi$: 364.6γ M1(+E2) to 11/2$^-$; 725.5γ M1+E2 to 9/2$^-$.
1400.80# *5*	9/2$^+$		A	J$^\pi$: 520.44γ E2 to 13/2$^+$, 617.8γ E1+M2 to 7/2$^-$.
1426.05 *7*	9/2$^-$		A	J$^\pi$: 395.70γ M1+E2 to 11/2$^-$, 553.94γ M1+E2 to 7/2$^-$.
1461.21d *21*	19/2$^-$	57.4 ms *9*	B DE	%IT=100

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Adopted Levels, Gammas (continued)

^{205}Po Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				Jπ: 580.9γ E3 to 13/2+.
				$T_{1/2}$: Weighted average of 57 ms *1*, from ce(580K)(t) in (1974Ro36), 58 ms *2* from 581γ(t) in 1973Fo07 and 62 ms *5*, from 581γ(t) in 1974Oh06.
1477.38 *21*			D	
1516.61[e] *21*	17/2+		D	Jπ: 636.3γ E2 to 13/2+.
1539.94 *7*	9/2+		A	Jπ: 659.63γ E2 to 13/2+; direct feeding in ^{205}At ε decay (Jπ=9/2−).
1553.17 *6*	(11/2)+		A	Jπ: 672.85γ M1+E2 to 13/2+; direct feeding in ^{205}At ε decay (Jπ=9/2−).
1633.30 *9*	5/2+		A	Jπ: 1479.16γ E1+M2 to 3/2−, 232.54γ to 9/2+ .
1651.35 *13*	7/2−		A	Jπ: 1651.22γ (M1) to 5/2−, 484.00γ M1+E2 to 7/2−, 1495.4γ to 3/2−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
1761.32 *17*	(7/2,9/2)−		A	Jπ: 859.2γ M1+E2 to (7/2)−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
1856.20 *11*	11/2+		A	Jπ: 317.0γ M1(+E2) to 9/2+, 976.00γ M1+E2 to 13/2+ direct feeding in ^{205}At ε decay (Jπ=9/2−).
1890.5[f] *3*	21/2+		D	Jπ: 373.9 E2 to 17/2+.
1908.38 *24*	(5/2+)		A	Jπ: 1754.7γ to 3/2−; 890γ from (9/2)+; no direct feeding in ^{205}At ε decay (Jπ=9/2−).
1912.00 *9*	9/2+		A	Jπ: 1031.69γ E2 to 13/2+, 744.26γ to 7/2−.
1954.05 *10*	(11/2)−		A	Jπ: 1171.04γ E2 to 7/2−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
2149.35 *15*	(7/2)+		A	Jπ: 516.04γ M1 to 5/2+; direct feeding in ^{205}At ε decay (Jπ=9/2−).
2187.88 *9*	(11/2)+		A	Jπ: 1307.6γ M1(+E2) to 13/2+; direct feeding in ^{205}At ε decay (Jπ=9/2−).
2224.7[g] *4*	25/2+	2.0 ns *7*	D	Jπ: 334.2 E2 to 21/2+.
				$T_{1/2}$: From γ(t) in 1985Ra18, obtained from a two-isomers fit to 334.2γ, 373.9γ and 636.3γ time spectra.
2355.56 *6*	9/2+		A	Jπ: 1475.36γ E2 to 13/2+, 1187.6γ to 7/2−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
2483.49 *7*	(7/2,9/2,11/2)+		A	Jπ: 127.93 M1(+E2) to 9/2+; direct feeding in ^{205}At ε decay (Jπ=9/2−).
2712.3[g] *4*	27/2+		D	Jπ: 487.6γ M1 to 25/2+.
2799.20 *15*	(9/2)+		A	Jπ: 649.5 M1+E2 to (7/2)+, 1768.79γ (E1) to (11/2)−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
2826.9 *4*	27/2+		D	Jπ: 602.2γ M1 to 25/2+.
2930.82 *19*	(9/2)+		A	Jπ: 1377.5γ M1(+E2) to (11/2)+; 2147.0γ to 7/2−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
2980.7 *4*	29/2+		D	Jπ: 756.0γ E2 to 25/2+.
3033.0 *5*	(7/2,9/2)		A	Jπ: 2363.3γ to 9/2−, 3033.5γ to 5/2−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
3046.72 *20*	7/2+		A	Jπ: 691.4γ M1(+E2) to 9/2+, 1413.43γ M1(+E2) to 5/2+; direct feeding in ^{205}At ε decay (Jπ=9/2−).
3052.2 *4*	(7/2)+		A	Jπ: 568.5γ M1+E2 to (7/2,9/2,11/2)+, 3052.0γ to 5/2−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
3087.2[h] *4*	29/2−	115 ns *10*	D	Jπ: 260.3γ E1 to 27/2+; γ′s to 27/2+ and 29/2+.
				$T_{1/2}$: From γ(t) in 1985Ra18.
3160.7 *5*	29/2+		D	Jπ: 448.4γ M1+E2 to 27/2+.
3170.9 *4*	(7/2)+		A	Jπ: 1537.2γ M1 to 5/2+, 1775.5γ to (9/2)−, 3172.0γ to 5/2−; direct feeding in ^{205}At ε decay (Jπ=9/2−).
3206.4 *5*	31/2+		D	Jπ: 225.7γ M1 to 29/2+.
3298.5 *4*	29/2+		D	Jπ: 471.6γ M1(+E2) to 27/2+, 1073.8γ E2 to 25/2+.
3368.1 *5*	31/2+		D	Jπ: 387.4γ M1 to 29/2+.
3508.9 *5*	31/2−		D	Jπ: 210.4γ E1 to 29/2+.
3868.8 *5*	33/2−		D	Jπ: 781.6γ E2 to 29/2−.
4093.3 *5*	33/2−		D	Jπ: 584.4γ M1 to 31/2−.
4136.8 *5*	(35/2+)		D	Jπ: 268.0γ (E1) to 33/2−.
4453.9 *6*	(37/2−)		D	Jπ: 360.6γ E2 to 33/2−.
4628.8 *6*	(37/2+)		D	Jπ: 492.0γ M1 to (35/2+).

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Adopted Levels, Gammas (continued)

^{205}Po Levels (continued)

† From least squares fit to Eγ.

‡ From the deduced γ-ray transition multipolarities, direct population in ^{205}At ε decay, and systematics of structures in neighboring nuclei. Specific arguments are given with most levels.

configuration=$\nu(f^{-1}_{5/2})$.

@ configuration=$\nu(p^{-1}_{1/2})$.

& configuration=$\nu(p^{-1}_{3/2})$.

a configuration=$\nu(f^{-1}_{5/2})\otimes\pi(h^{+2}_{9/2})_{2^+}$.

b configuration=$\nu(i^{-1}_{13/2})$.

c configuration=$\nu(f^{-1}_{5/2})\otimes\pi(h^{+2}_{9/2})_{4^+}$.

d configuration=$\nu(f^{-1}_{5/2})\otimes\pi(h^{+2}_{9/2})_{8^+}$.

e configuration=$\nu((f^{-2}_{5/2})_{2^+},i^{-1}_{13/2})$.

f configuration=$\nu((f^{-2}_{5/2})_{4^+},i^{-1}_{13/2})$.

g configuration=$\nu(f^{-1}_{5/2})\otimes\pi(h^{+1}_{9/2},i^{+1}_{13/2})_{11^-}$.

h configuration=$\nu(f^{-1}_{5/2},(i^{-2}_{13/2})_{12^+})$.

Adopted Levels, Gammas (continued)

γ(^{205}Po)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
143.166	1/2⁻	143.166 *17*	100 *7*	0.0	5/2⁻	E2		1.641	α(K)=0.324 *5*; α(L)=0.977 *14*; α(M)=0.260 *4* α(N)=0.0667 *10*; α(O)=0.01274 *18*; α(P)=0.001163 *17* B(E2)(W.u.)=0.16 *4* Mult.: α(K)exp=0.34 *5*, (α(L1)exp+α(L2)exp)=0.60 *8* and α(L3)exp=0.39 *5* (1982Ku20); α(L)exp=0.9 *7* (1971Jo19).
154.195	3/2⁻	(11.032 *19*)	0.42 *3*	143.166	1/2⁻	[M1,E2]		334	α(M)=253 *4* α(N)=65.3 *10*; α(O)=13.66 *21*; α(P)=1.76 *3* E_γ: Not observed directly, but required by the coincidence relationship in ^{205}At ε decay. The energy deduced from level energy diffrence.
		154.198 *12*	100 *8*	0.0	5/2⁻	M1(+E2)	≤0.22	3.19 *7*	α(K)=2.57 *7*; α(L)=0.470 *9*; α(M)=0.1113 *24* α(N)=0.0287 *6*; α(O)=0.00598 *12*; α(P)=0.000764 *11* Mult.: α(K)exp=2.69 *13* and α(M)exp=0.101 *15* (1982Ku20); α(K)exp=3.0 *6* (1971Jo19).
384.34	(3/2)⁻	230.12 *7*	25.4 *23*	154.195	3/2⁻	(M1)		1.051	α(K)=0.854 *12*; α(L)=0.1500 *21*; α(M)=0.0354 *5* α(N)=0.00911 *13*; α(O)=0.00191 *3*; α(P)=0.000246 *4* Mult.: α(K)exp≈1 (1982Ku20).
		384.61 *14*	100 *5*	0.0	5/2⁻	M1+E2	0.87 *13*	0.173 *16*	α(K)=0.136 *14*; α(L)=0.0284 *15*; α(M)=0.0068 *4* α(N)=0.00176 *9*; α(O)=0.000362 *19*; α(P)=4.4×10^{-5} *3* Mult.: α(K)exp=0.136 *12* (1982Ku20).
669.43	9/2⁻	669.41 *4*	100	0.0	5/2⁻	E2		0.01661	α(K)=0.01237 *18*; α(L)=0.00320 *5*; α(M)=0.000788 *11* α(N)=0.000202 *3*; α(O)=4.10×10^{-5} *6*; α(P)=4.73×10^{-6} *7* Mult.: α(K)exp=0.0117 *10* and α(M)exp=0.00084 *8* (1982Ku20); α(K)exp=0.015 *6* (1971Jo19).
719.28	9/2⁻	719.30 *4*	100	0.0	5/2⁻	E2		0.01426	α(K)=0.01077 *15*; α(L)=0.00264 *4*; α(M)=0.000647 *9* α(N)=0.0001662 *24*; α(O)=3.37×10^{-5} *5*; α(P)=3.94×10^{-6} *6* Mult.: α(K)exp=0.0109, α(L)exp=0.00270 *20*, α(M)exp=0.00066 *7* and α(N)exp=0.00022 *3* (1982Ku20); α(K)exp=0.011 *3* (1971Jo19); K/(L+M)=3.67 *53* (1970Ho15).
783.00	7/2⁻	113.3 *5*	≈0.55	669.43	9/2⁻	[M1+E2]		7.77 *15*	α(K)=6.30 *12*; α(L)=1.122 *22*; α(M)=0.265 *5* α(N)=0.0682 *13*; α(O)=0.0143 *3*; α(P)=0.00184 *4*
		628.88 *7*	100 *7*	154.195	3/2⁻	E2		0.0190	α(K)=0.01397 *20*; α(L)=0.00380 *6*; α(M)=0.000940 *14* α(N)=0.000241 *4*; α(O)=4.87×10^{-5} *7*; α(P)=5.57×10^{-6} *8* Mult.: α(K)exp=0.0175 *18* (1982Ku20); α(K)exp=0.025 *8* (1971Jo19).
		782.80 *12*	35.0 *15*	0.0	5/2⁻	M1+E2	2.8 *+12−6*	0.0151 *16*	α(K)=0.0118 *14*; α(L)=0.00250 *20*; α(M)=0.00060 *5* α(N)=0.000155 *12*; α(O)=3.18×10^{-5} *25*; α(P)=3.9×10^{-6} *4* Mult.: α(K)exp=0.0117 *12* (1982Ku20).
799.02	(5/2)⁻	414.65 *20*	89 *10*	384.34	(3/2)⁻	M1(+E2)	≤0.6	0.189 *22*	α(K)=0.153 *19*; α(L)=0.0276 *22*; α(M)=0.0065 *5* α(N)=0.00168 *13*; α(O)=0.00035 *3*; α(P)=4.5×10^{-5} *4* Mult.: α(K)exp=0.160 *23* (1982Ku20).

$^{205}_{84}Po_{121}$-4

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
799.02	(5/2)$^-$	644.86 *20*	100 *7*	154.195	3/2$^-$	M1+E2	0.59 *25*	0.053 *8*	α(K)=0.043 *7*; α(L)=0.0077 *9*; α(M)=0.00181 *20* α(N)=0.00047 *6*; α(O)=9.7×10^{-5} *11*; α(P)=1.24×10^{-5} *16* Mult.: α(K)exp=0.043 *6* (1982Ku20).
806.45	(5/2)$^-$	652.5 *7*	87 *23*	154.195	3/2$^-$	M1+E2	1.3 *+9−5*	0.034 *11*	α(K)=0.027 *10*; α(L)=0.0054 *13*; α(M)=0.0013 *3* α(N)=0.00034 *8*; α(O)=6.9×10^{-5} *17*; α(P)=8.6×10^{-6} *23* Mult.: α(K)exp=0.028 *8* (1982Ku20).
		806.44 *8*	100 *7*	0.0	5/2$^-$	M1+E2	0.4 *3*	0.033 *5*	α(K)=0.027 *4*; α(L)=0.0046 *6*; α(M)=0.00109 *14* α(N)=0.00028 *4*; α(O)=5.9×10^{-5} *8*; α(P)=7.6×10^{-6} *11* Mult.: α(K)exp=0.027 *4* (1982Ku20).
872.10	7/2$^-$	202.60 *20*	10.5 *13*	669.43	9/2$^-$	M1(+E2)	≤0.4	1.43 *8*	α(K)=1.15 *8*; α(L)=0.214 *3*; α(M)=0.0510 *9* α(N)=0.01312 *22*; α(O)=0.00273 *4*; α(P)=0.000346 *8* Mult.: α(K)exp=1.35 *22* and (α(L1)exp+α(L2)exp)=0.24 *4* (1982Ku20).
		487.86 *11*	17.7 *9*	384.34	(3/2)$^-$	E2		0.0341	α(K)=0.0233 *4*; α(L)=0.00808 *12*; α(M)=0.00203 *3* α(N)=0.000522 *8*; α(O)=0.0001041 *15*; α(P)=1.138×10^{-5} *16* Mult.: α(K)exp=0.019 *4* (1982Ku20).
		872.4 *5*	100 *15*	0.0	5/2$^-$	M1+E2	0.6 *5*	0.024 *6*	α(K)=0.020 *5*; α(L)=0.0035 *7*; α(M)=0.00081 *17* α(N)=0.00021 *5*; α(O)=4.4×10^{-5} *9*; α(P)=5.6×10^{-6} *12* Mult.: α(K)exp=0.020 *4* (1982Ku20).
880.31	13/2$^+$	161.030 *17*	100	719.28	9/2$^-$	M2		15.79	α(K)=10.91 *16*; α(L)=3.65 *6*; α(M)=0.933 *13* α(N)=0.244 *4*; α(O)=0.0503 *7*; α(P)=0.00619 *9* B(M2)(W.u.)=0.00076 *3* Mult.: α(K)exp=11.4 *12*,(α(L1)exp+α(L2)exp)=3.6 *4*, α(L3)exp=0.50 *6*, α(M)exp=1.09 *14* and α(N)exp=0.30 *4* (1982Ku20); α(K)exp=11.0 *10* (1971Jo19); (α(L1)exp+α(L2)exp)=2.3 (1985Ra18); K/L=2.95 *15* (1974Ro36); α(exp)=18.2 in 1962Ha26.
902.26	(7/2)$^-$	748.45 *30*	67 *9*	154.195	3/2$^-$	(E2)		0.01313	α(K)=0.00998 *14*; α(L)=0.00238 *4*; α(M)=0.000582 *9* α(N)=0.0001495 *21*; α(O)=3.04×10^{-5} *5*; α(P)=3.57×10^{-6} *5* Mult.: α(K)exp≤0.011 (1982Ku20).
		902.22 *10*	100 *5*	0.0	5/2$^-$	M1+E2	2.4 *9*	0.012 *3*	α(K)=0.0093 *25*; α(L)=0.0018 *4*; α(M)=0.00044 *9* α(N)=0.000113 *22*; α(O)=2.3×10^{-5} *5*; α(P)=2.9×10^{-6} *7* Mult.: α(K)exp=0.0093 *25* (1982Ku20).
1030.38	(11/2)$^-$	311.090 *25*	100 *5*	719.28	9/2$^-$	M1+E2	0.30 *23*	0.43 *5*	α(K)=0.35 *5*; α(L)=0.063 *4*; α(M)=0.0149 *8* α(N)=0.00383 *20*; α(O)=0.00080 *5*; α(P)=0.000102 *8* Mult.: α(K)exp=0.36 *4*, (α(L1)exp+α(L2)exp)=0.061 *9* and 0.0168 *21* (1982Ku20); α(K)exp=0.33 *5* (1971Jo19); α(K)exp=0.27 *3* (1985Ra18).
		360.91 *7*	28.2 *19*	669.43	9/2$^-$	M1+E2	1.00 *+26−21*	0.19 *3*	α(K)=0.147 *24*; α(L)=0.0328 *25*; α(M)=0.0080 *6* α(N)=0.00205 *14*; α(O)=0.00042 *3*; α(P)=5.0×10^{-5} *5* Mult.: α(K)exp=0.15 *2* and α(L)exp=0.030 *3* (1982Ku20); α(K)exp=0.29 *8* (1971Jo19).

$^{205}_{84}Po_{121}$-5

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
1167.81	7/2$^-$	369 *1*	10.9 *13*	799.02	(5/2)$^-$	M1+E2	1.5 *+5−4*	0.14 *4*	α(K)=0.10 *3*; α(L)=0.027 *3*; α(M)=0.0066 *7* α(N)=0.00170 *17*; α(O)=0.00034 *4*; α(P)=4.0×10^{-5} *6* Mult.: α(K)exp=0.105 *23* (1982Ku20).
		384.61[a]		783.00	7/2$^-$				E_γ: Overlaps with much stronger 384.61γ, depopulating the 384 keV level.
		448.61 *7*	100 *5*	719.28	9/2$^-$	M1+E2	0.60 *21*	0.136 *18*	α(K)=0.109 *15*; α(L)=0.0204 *18*; α(M)=0.0049 *4* α(N)=0.00125 *11*; α(O)=0.000260 *23*; α(P)=3.3×10^{-5} *4* Mult.: α(K)exp=0.116 *12* and α(L)exp=0.0196 *30* (1982Ku20); α(K)exp=0.08 *3* (1971Jo19).
		1167.40 *22*	12.5 *13*	0.0	5/2$^-$				
1394.94	(9/2)$^-$	364.60 *9*	100 *8*	1030.38	(11/2)$^-$	M1(+E2)	≤0.6	0.27 *3*	α(K)=0.22 *3*; α(L)=0.039 *3*; α(M)=0.0093 *6* α(N)=0.00240 *16*; α(O)=0.00050 *4*; α(P)=6.4×10^{-5} *6* Mult.: α(K)exp=0.25 *3*, α(L)exp=0.036 *5* and α(M)exp=0.015 *4* (1982Ku20).
		725.51 *30*	70 *4*	669.43	9/2$^-$	M1+E2	1.9 *+5−4*	0.021 *3*	α(K)=0.017 *3*; α(L)=0.0035 *4*; α(M)=0.00084 *9* α(N)=0.000215 *22*; α(O)=4.4×10^{-5} *5*; α(P)=5.4×10^{-6} *7* Mult.: α(K)exp=0.017 *2* (1982Ku20).
1400.80	9/2$^+$	520.44 *6*	100 *4*	880.31	13/2$^+$	E2		0.0292	α(K)=0.0204 *3*; α(L)=0.00661 *10*; α(M)=0.001657 *24* α(N)=0.000426 *6*; α(O)=8.51×10^{-5} *12*; α(P)=9.41×10^{-6} *14* Mult.: α(K)exp=0.0186 *17* and α(L)exp=0.0061 *6* (1982Ku20); α(K)exp=0.015 *8* (1971Jo19).
		528.90 *13*	16.2 *10*	872.10	7/2$^-$	E1+M2	0.18 *6*	0.019 *7*	α(K)=0.015 *6*; α(L)=0.0028 *12*; α(M)=0.0007 *3* α(N)=0.00017 *8*; α(O)=3.6×10^{-5} *16*; α(P)=4.6×10^{-6} *20* Mult.: α(K)exp=0.015 *4* (1982Ku20).
		617.80 *7*	49.7 *22*	783.00	7/2$^-$	E1+M2	0.14 *3*	0.0103 *17*	α(K)=0.0084 *14*; α(L)=0.0015 *3*; α(M)=0.00035 *7* α(N)=9.1×10^{-5} *18*; α(O)=1.9×10^{-5} *4*; α(P)=2.4×10^{-6} *5* Mult.: α(K)exp=0.0082 *9* (1982Ku20); α(K)exp≤0.009 (1971Jo19).
1426.05	9/2$^-$	395.70 *8*	68 *8*	1030.38	(11/2)$^-$	M1(+E2)	≤0.6	0.214 *24*	α(K)=0.173 *21*; α(L)=0.0314 *24*; α(M)=0.0074 *6* α(N)=0.00191 *14*; α(O)=0.00040 *3*; α(P)=5.1×10^{-5} *5* Mult.: α(K)exp=0.173 *24* and α(L)exp=0.033 *6* (1982Ku20).
		553.94 *7*	98 *7*	872.10	7/2$^-$	M1+E2	0.70 *22*	0.073 *11*	α(K)=0.059 *9*; α(L)=0.0110 *12*; α(M)=0.0026 *3* α(N)=0.00067 *7*; α(O)=0.000139 *15*; α(P)=1.76×10^{-5} *21* Mult.: α(K)exp=0.059 *8* (1982Ku20).
		756.82 *18*	100 *6*	669.43	9/2$^-$	E2(+M1)		0.0428	α(K)=0.0350 *5*; α(L)=0.00597 *9*; α(M)=0.001402 *20* α(N)=0.000361 *5*; α(O)=7.56×10^{-5} *11*; α(P)=9.79×10^{-6} *14* Mult.: α(K)exp=0.0078 *25* (1982Ku20).
1461.21	19/2$^-$	580.9[‡] *2*	100[‡]	880.31	13/2$^+$	E3		0.0696	B(E3)(W.u.)=0.000355 *6* α(K)=0.0397 *6*; α(L)=0.0223 *4*; α(M)=0.00580 *9* α(N)=0.001497 *21*; α(O)=0.000297 *5*; α(P)=3.16×10^{-5} *5* Mult.: α(K)exp=0.0420 *21* (1985Ra18), K/(L+M)=1.55 *16* (1974Ro36), α(K)exp=0.037 *6* and K/L=1.8 *3* (1974Oh06).

$^{205}_{84}Po_{121}$-6

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
1477.38		447.0[‡] *2*	100[‡]	1030.38	(11/2)$^-$				
1516.61	17/2$^+$	636.3[‡] *2*	100[‡]	880.31	13/2$^+$	E2		0.0185	α(K)=0.01366 *20*; α(L)=0.00368 *6*; α(M)=0.000909 *13* α(N)=0.000233 *4*; α(O)=4.71×10^{-5} *7*; α(P)=5.40×10^{-6} *8* Mult.: α(K)exp=0.0130 *7*; A_2=0.35 *2*, A_4=−0.06 *3* (1985Ra18).
1539.94	9/2$^+$	659.63 *6*	100	880.31	13/2$^+$	E2		0.01714	α(K)=0.01273 *18*; α(L)=0.00333 *5*; α(M)=0.000821 *12* α(N)=0.000211 *3*; α(O)=4.26×10^{-5} *6*; α(P)=4.91×10^{-6} *7* Mult.: α(K)exp=0.0137 *15* (1982Ku20).
1553.17	(11/2)$^+$	152.38 *7*	4.6 *6*	1400.80	9/2$^+$	[M1]		3.35	α(K)=2.72 *4*; α(L)=0.480 *7*; α(M)=0.1133 *16* α(N)=0.0292 *5*; α(O)=0.00610 *9*; α(P)=0.000789 *11*
		672.85 *5*	100 *5*	880.31	13/2$^+$	M1+E2	1.79 *+33−24*	0.0264 *24*	α(K)=0.0207 *20*; α(L)=0.0043 *3*; α(M)=0.00105 *7* α(N)=0.000269 *17*; α(O)=5.5×10^{-5} *4*; α(P)=6.7×10^{-6} *5* Mult.: α(K)exp=0.0208 *20* (1982Ku20); α(K)exp=0.018 *9* (1971Jo19).
1633.30	5/2$^+$	232.54 *20*	18 *5*	1400.80	9/2$^+$	[E2]		0.282	α(K)=0.1192 *17*; α(L)=0.1207 *18*; α(M)=0.0317 *5* α(N)=0.00814 *12*; α(O)=0.001573 *23*; α(P)=0.0001512 *22*
		760.5 *5*	17.0 *24*	872.10	7/2$^-$	[E1]		0.00449	α(K)=0.00372 *6*; α(L)=0.000589 *9*; α(M)=0.0001371 *20* α(N)=3.51×10^{-5} *5*; α(O)=7.29×10^{-6} *11*; α(P)=9.22×10^{-7} *13*
		1479.16 *10*	100 *7*	154.195	3/2$^-$	E1+M2	0.29 *9*	0.0028 *8*	α(K)=0.0022 *7*; α(L)=0.00036 *12*; α(M)=9.E−5 *3* α(N)=2.2×10^{-5} *8*; α(O)=4.6×10^{-6} *16*; α(P)=5.9×10^{-7} *20*; α(IPF)=0.000144 *7* Mult.: α(K)exp=0.0022 *5* (1982Ku20).
		1632.8 *3*	57 *4*	0.0	5/2$^-$	[E1]		1.42×10^{-3}	α(K)=0.000973 *14*; α(L)=0.0001475 *21*; α(M)=3.41×10^{-5} *5* α(N)=8.74×10^{-6} *13*; α(O)=1.83×10^{-6} *3*; α(P)=2.36×10^{-7} *4*; α(IPF)=0.000259 *4*
1651.35	7/2$^-$	484.00 *26*	41 *6*	1167.81	7/2$^-$	M1+E2	1.5 *4*	0.067 *16*	α(K)=0.051 *13*; α(L)=0.0118 *17*; α(M)=0.0029 *4* α(N)=0.00074 *10*; α(O)=0.000150 *21*; α(P)=1.8×10^{-5} *3* Mult.: α(K)exp=0.051 *8* (1982Ku20).
		845.2 *8*	72 *6*	806.45	(5/2)$^-$	M1(+E2)	≤0.4	0.0306 *16*	α(K)=0.0250 *14*; α(L)=0.00428 *20*; α(M)=0.00101

$^{205}_{84}Po_{121}$-7

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									5 α(N)=0.000259 *12*; α(O)=5.42×10^{-5} *25*; α(P)=7.0×10^{-6} *4* Mult.: α(K)exp=0.032 *5* (1982Ku20).
1651.35	7/2$^-$	932.0 *10*	36 *5*	719.28	9/2$^-$	(M1)		0.0250	α(K)=0.0204 *3*; α(L)=0.00346 *5*; α(M)=0.000812 *12* α(N)=0.000209 *3*; α(O)=4.38×10^{-5} *7*; α(P)=5.67×10^{-6} *9* Mult.: α(K)exp≈0.021 (1982Ku20). Value overlaps with that for 936.03γ.
		1495.4 *10*	32 *4*	154.195	3/2$^-$	[E2]		0.00351	α(K)=0.00280 *4*; α(L)=0.000494 *7*; α(M)=0.0001167 *17* α(N)=3.00×10^{-5} *5*; α(O)=6.22×10^{-6} *9*; α(P)=7.83×10^{-7} *11*; α(IPF)=6.10×10^{-5} *9*
		1651.22 *15*	100 *8*	0.0	5/2$^-$	(M1)		0.00594	α(K)=0.00471 *7*; α(L)=0.000785 *11*; α(M)=0.000184 *3* α(N)=4.73×10^{-5} *7*; α(O)=9.92×10^{-6} *14*; α(P)=1.289×10^{-6} *18*; α(IPF)=0.000204 *3* Mult.: α(K)exp≈0.0021 (1982Ku20).
1761.32	(7/2,9/2)$^-$	859.2 *4*	94 *20*	902.26	(7/2)$^-$	M1+E2	2.1 *9*	0.014 *5*	α(K)=0.011 *4*; α(L)=0.0022 *6*; α(M)=0.00052 *14* α(N)=0.00013 *4*; α(O)=2.7×10^{-5} *8*; α(P)=3.4×10^{-6} *10* Mult.: α(K)exp=0.011 *4* (1982Ku20).
		1091.84 *25*	65 *7*	669.43	9/2$^-$				
		1761.34 *25*	100 *6*	0.0	5/2$^-$				
1856.20	11/2$^+$	317.0 *10*	20.2 *24*	1539.94	9/2$^+$	M1(+E2)	≤0.6	0.39 *5*	α(K)=0.31 *4*; α(L)=0.058 *4*; α(M)=0.0139 *8* α(N)=0.00356 *19*; α(O)=0.00074 *5*; α(P)=9.4×10^{-5} *8* Mult.: From α(K)exp in ^{205}At ε decay.
		455.14 *18*	53 *3*	1400.80	9/2$^+$	M1+E2	0.38 *+20−33*	0.148 *16*	α(K)=0.120 *14*; α(L)=0.0214 *17*; α(M)=0.0051 *4* α(N)=0.00130 *10*; α(O)=0.000272 *21*; α(P)=3.5×10^{-5} *3* Mult.: From α(K)exp in ^{205}At ε decay.
		976.00 *12*	100 *4*	880.31	13/2$^+$	M1+E2	0.94 *+27−22*	0.0154 *19*	α(K)=0.0125 *16*; α(L)=0.00221 *24*; α(M)=0.00052 *6* α(N)=0.000134 *14*; α(O)=2.8×10^{-5} *3*; α(P)=3.6×10^{-6} *4* Mult.: From α(K)exp in ^{205}At ε decay.
1890.5	21/2$^+$	373.9[‡] *2*	100[‡]	1516.61	17/2$^+$	E2		0.0673	α(K)=0.0410 *6*; α(L)=0.0196 *3*; α(M)=0.00503 *8* α(N)=0.001292 *19*; α(O)=0.000254 *4*; α(P)=2.64×10^{-5} *4* Mult.: α(K)exp=0.0330 *17*; A_2=0.29 *2*, A_4=−0.09 *3* (1985Ra18).
1908.38	(5/2$^+$)	1101.84 *25*	100 *16*	806.45	(5/2)$^-$				
		1754.7 *10*	68 *10*	154.195	3/2$^-$				
1912.00	9/2$^+$	744.26 *30*	14.5 *12*	1167.81	7/2$^-$	[E1]		0.00468	α(K)=0.00387 *6*; α(L)=0.000615 *9*; α(M)=0.0001430 *20*

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									α(N)=3.66×10^{-5} *6*; α(O)=7.60×10^{-6} *11*; α(P)=9.60×10^{-7} *14*
1912.00	9/2$^+$	1031.69 *8*	100 *9*	880.31	13/2$^+$	E2		0.00693	α(K)=0.00548 *8*; α(L)=0.001097 *16*; α(M)=0.000263 *4* α(N)=6.75×10^{-5} *10*; α(O)=1.389×10^{-5} *20*; α(P)=1.698×10^{-6} *24* Mult.: α(K)exp=0.0066 *10* (1982Ku20); α(K)exp=0.008 *4* (1971Jo19).
		1194.0 *10*	6.6 *12*	719.28	9/2$^-$	[E1]		0.00200	α(K)=0.001654 *24*; α(L)=0.000254 *4*; α(M)=5.89×10^{-5} *9* α(N)=1.510×10^{-5} *22*; α(O)=3.15×10^{-6} *5*; α(P)=4.04×10^{-7} *6*; α(IPF)=1.30×10^{-5} *4*
		1242.2 *5*	15.1 *20*	669.43	9/2$^-$	[E1]		0.00188	α(K)=0.001544 *22*; α(L)=0.000237 *4*; α(M)=5.49×10^{-5} *8* α(N)=1.407×10^{-5} *20*; α(O)=2.93×10^{-6} *5*; α(P)=3.77×10^{-7} *6*; α(IPF)=2.84×10^{-5} *5*
1954.05	(11/2)$^-$	1171.04 *8*	100 *5*	783.00	7/2$^-$	E2		0.00544	α(K)=0.00435 *6*; α(L)=0.000827 *12*; α(M)=0.000197 *3* α(N)=5.06×10^{-5} *7*; α(O)=1.045×10^{-5} *15*; α(P)=1.293×10^{-6} *19*; α(IPF)=1.80×10^{-6} *3* Mult.: α(K)exp=0.0040 *6* (1982Ku20).
2149.35	(7/2)$^+$	516.04 *12*	100 *7*	1633.30	5/2$^+$	M1		0.1172	α(K)=0.0956 *14*; α(L)=0.01648 *23*; α(M)=0.00388 *6* α(N)=0.000998 *14*; α(O)=0.000209 *3*; α(P)=2.70×10^{-5} *4* Mult.: α(K)exp=0.0185 *21* and α(L)exp≈0.006 (1982Ku20); α(K)exp=0.10 *4* (1971Jo19).
		1342.3 *10*	10.4 *9*	806.45	(5/2)$^-$				
2187.88	(11/2)$^+$	792.5 *3*	49 *5*	1394.94	(9/2)$^-$	(E1)		0.00416	α(K)=0.00345 *5*; α(L)=0.000544 *8*; α(M)=0.0001265 *18* α(N)=3.24×10^{-5} *5*; α(O)=6.73×10^{-6} *10*; α(P)=8.52×10^{-7} *12* Mult.: α(K)exp=0.0207 (1982Ku20).
		1307.60 *8*	100 *6*	880.31	13/2$^+$	M1(+E2)	≤0.7	0.0095 *10*	α(K)=0.0077 *9*; α(L)=0.00131 *13*; α(M)=0.00031 *3* α(N)=7.9×10^{-5} *8*; α(O)=1.65×10^{-5} *17*; α(P)=2.14×10^{-6} *22*; α(IPF)=2.83×10^{-5} *24* Mult.: α(K)exp=0.0080 *8* (1982Ku20).
2224.7	25/2$^+$	334.2[‡] *2*	100[‡]	1890.5	21/2$^+$	E2		0.0919	B(E2)(W.u.)=0.9 *3* α(K)=0.0526 *8*; α(L)=0.0294 *5*; α(M)=0.00759 *11* α(N)=0.00195 *3*; α(O)=0.000382 *6*; α(P)=3.88×10^{-5} *6* Mult.: α(K)exp=0.0460 *23*; A_2=0.31 *2*, A_4=−0.08 *3* (1985Ra18).
2355.56	9/2$^+$	802.0 *8*	19 *3*	1553.17	(11/2)$^+$	(M1)		0.0368	α(K)=0.0301 *5*; α(L)=0.00513 *8*; α(M)=0.001204 *18* α(N)=0.000310 *5*; α(O)=6.49×10^{-5} *10*; α(P)=8.41×10^{-6} *12* Mult.: α(K)exp≈0.019 (1982Ku20).
		929.61 *14*	43 *3*	1426.05	9/2$^-$	(E1)		0.00310	α(K)=0.00257 *4*; α(L)=0.000402 *6*; α(M)=9.33×10^{-5} *13* α(N)=2.39×10^{-5} *4*; α(O)=4.97×10^{-6} *7*; α(P)=6.33×10^{-7} *9* Mult.: α(K)exp≈0.0046 (1982Ku20).
		955.3 *5*	17 *4*	1400.80	9/2$^+$	M1+E2	1.1 *+31−7*	0.015 *7*	α(K)=0.012 *6*; α(L)=0.0022 *8*; α(M)=0.00052 *19* α(N)=0.00013 *5*; α(O)=2.8×10^{-5} *10*; α(P)=3.5×10^{-6} *14* Mult.: α(K)exp=0.012 *5* (1982Ku20).
		961.05 *20*	25.6 *22*	1394.94	(9/2)$^-$	(E1)		0.00292	α(K)=0.00242 *4*; α(L)=0.000378 *6*; α(M)=8.77×10^{-5} *13*

$^{205}_{84}Po_{121}$-9

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									α(N)=2.25×10^{-5} *4*; α(O)=4.67×10^{-6} *7*; α(P)=5.96×10^{-7} *9*
									Mult.: α(K)exp≈0.0033 (1982Ku20).
2355.56	9/2$^+$	1187.6 *5*	11.1 *6*	1167.81	7/2$^-$	[E1]		0.00202	α(K)=0.001669 *24*; α(L)=0.000257 *4*; α(M)=5.95×10^{-5} *9*
									α(N)=1.525×10^{-5} *22*; α(O)=3.18×10^{-6} *5*; α(P)=4.08×10^{-7} *6*; α(IPF)=1.129×10^{-5} *21*
		1324.95 *8*	100 *6*	1030.38	(11/2)$^-$	E1+M2	0.32 *5*	0.0038 *6*	α(K)=0.0030 *5*; α(L)=0.00052 *9*; α(M)=0.000122 *22*
									α(N)=3.1×10^{-5} *6*; α(O)=6.5×10^{-6} *12*; α(P)=8.4×10^{-7} *15*; α(IPF)=5.71×10^{-5} *17*
									Mult.: α(K)exp=0.0030 *4* (1982Ku20).
		1475.36 *9*	67 *3*	880.31	13/2$^+$	E2		0.00359	α(K)=0.00287 *4*; α(L)=0.000508 *8*; α(M)=0.0001200 *17*
									α(N)=3.08×10^{-5} *5*; α(O)=6.39×10^{-6} *9*; α(P)=8.05×10^{-7} *12*; α(IPF)=5.51×10^{-5} *8*
									Mult.: α(K)exp=0.0030 *5* (1982Ku20).
		1637.0 *5*	14 *3*	719.28	9/2$^-$	[E1]		1.42×10^{-3}	α(K)=0.000969 *14*; α(L)=0.0001468 *21*; α(M)=3.40×10^{-5} *5*
									α(N)=8.70×10^{-6} *13*; α(O)=1.82×10^{-6} *3*; α(P)=2.35×10^{-7} *4*; α(IPF)=0.000262 *4*
		1685.5 *10*	18.6 *15*	669.43	9/2$^-$	[E1]		1.40×10^{-3}	α(K)=0.000923 *13*; α(L)=0.0001397 *20*; α(M)=3.23×10^{-5} *5*
									α(N)=8.28×10^{-6} *12*; α(O)=1.731×10^{-6} *25*; α(P)=2.24×10^{-7} *4*; α(IPF)=0.000297 *5*
2483.49	(7/2,9/2,11/2)$^+$	127.93 *4*	29.2 *22*	2355.56	9/2$^+$	M1(+E2)	≤0.5	5.2 *3*	α(K)=4.1 *5*; α(L)=0.87 *9*; α(M)=0.211 *25*
									α(N)=0.054 *7*; α(O)=0.0112 *12*; α(P)=0.00136 *7*
									Mult.: α(K)exp=4.3 *6* and (α(L1)exp+α(L2)exp)=0.56 *25* (1982Ku20).
		1082.72 *22*	100 *7*	1400.80	9/2$^+$	(M1)		0.01695	α(K)=0.01388 *20*; α(L)=0.00234 *4*; α(M)=0.000549 *8*
									α(N)=0.0001413 *20*; α(O)=2.96×10^{-5} *5*; α(P)=3.84×10^{-6} *6*
									Mult.: From α(K)exp in ^{205}At ε decay.
2712.3	27/2$^+$	487.6[‡] *2*	100[‡]	2224.7	25/2$^+$	M1		0.1362	α(K)=0.1111 *16*; α(L)=0.0192 *3*; α(M)=0.00451 *7*
									α(N)=0.001162 *17*; α(O)=0.000243 *4*; α(P)=3.15×10^{-5} *5*
									Mult.: α(K)exp=0.120 *6*; A_2=−0.38 *2*, A_4=−0.05 *2* (1985Ra18).

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
2799.20	(9/2)$^+$	649.5 *7*	89 *12*	2149.35	(7/2)$^+$	M1+E2	0.84 *+31−25*	0.045 *8*	α(K)=0.036 *7*; α(L)=0.0067 *9*; α(M)=0.00159 *20* α(N)=0.00041 *5*; α(O)=8.5×10^{-5} *11*; α(P)=1.07×10^{-5} *15* Mult.: α(K)exp=0.036 *6* (1982Ku20).
		890.0 *10*	41 *7*	1908.38	(5/2$^+$)				α(K)exp≈0.026 (1982Ku20).
		1246.2 *5*	96 *7*	1553.17	(11/2)$^+$	M1		0.01182	α(K)=0.00967 *14*; α(L)=0.001625 *23*; α(M)=0.000381 *6* α(N)=9.81×10^{-5} *14*; α(O)=2.05×10^{-5} *3*; α(P)=2.67×10^{-6} *4*; α(IPF)=1.559×10^{-5} *25* Mult.: α(K)exp=0.0113 *19* (1982Ku20).
		1374.0 *10*	37 *4*	1426.05	9/2$^-$				
		1398.3 *3*	100 *7*	1400.80	9/2$^+$	M1(+E2)	≤0.3	0.00864 *24*	α(K)=0.00703 *20*; α(L)=0.00118 *4*; α(M)=0.000277 *8* α(N)=7.11×10^{-5} *19*; α(O)=1.49×10^{-5} *4*; α(P)=1.93×10^{-6} *6*; α(IPF)=6.30×10^{-5} *16* Mult.: α(K)exp=0.0091 *10* (1982Ku20).
		1768.79 *20*	89 *5*	1030.38	(11/2)$^-$	(E1)		1.38×10^{-3}	α(K)=0.000852 *12*; α(L)=0.0001287 *18*; α(M)=2.98×10^{-5} *5* α(N)=7.63×10^{-6} *11*; α(O)=1.595×10^{-6} *23*; α(P)=2.06×10^{-7} *3*; α(IPF)=0.000357 *5* Mult.: α(K)exp≤0.0018 (1982Ku20).
		1928.5 *10*	33 *3*	872.10	7/2$^-$				
		2016.5 *10*	27 *5*	783.00	7/2$^-$				
2826.9	27/2$^+$	114.6 *2*		2712.3	27/2$^+$				E_γ: From ^{206}Pb(α,5nγ).
		602.2[‡] *2*	100[‡]	2224.7	25/2$^+$	M1		0.0779	α(K)=0.0636 *9*; α(L)=0.01092 *16*; α(M)=0.00257 *4* α(N)=0.000661 *10*; α(O)=0.0001383 *20*; α(P)=1.79×10^{-5} *3* Mult.: α(K)exp=0.085 *9*; A_2=−0.41 *5*, A_4=−0.10 *8* (1985Ra18).
2930.82	(9/2)$^+$	1377.5 *10*	27 *3*	1553.17	(11/2)$^+$	M1(+E2)	≤0.4	0.0088 *4*	α(K)=0.0072 *3*; α(L)=0.00121 *5*; α(M)=0.000283 *12* α(N)=7.3×10^{-5} *3*; α(O)=1.53×10^{-5} *7*; α(P)=1.98×10^{-6} *9*; α(IPF)=5.36×10^{-5} *20* Mult.: α(K)exp=0.011 *2* (1982Ku20).
		1531.3 *8*	27.0 *21*	1400.80	9/2$^+$				
		2028.5 *10*	10.5 *17*	902.26	(7/2)$^-$				
		2050.46 *20*	100 *5*	880.31	13/2$^+$				
		2147.0 *10*	14.7 *25*	783.00	7/2$^-$				
2980.7	29/2$^+$	756.0[‡] *2*	100[‡]	2224.7	25/2$^+$	E2		0.01286	α(K)=0.00979 *14*; α(L)=0.00232 *4*;

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Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									α(M)=0.000567 *8* α(N)=0.0001456 *21*; α(O)=2.96×10^{-5} *5*; α(P)=3.48×10^{-6} *5* Mult.: α(K)exp=0.0090 *9*; A_2=0.34 *4*, A_4=−0.02 *5* (1985Ra18).
3033.0	(7/2,9/2)	2160.8 *6*	100 *11*	872.10	7/2$^-$				
		2363.3 *7*	59 *11*	669.43	9/2$^-$				
		3033.5 *10*	62 *8*	0.0	5/2$^-$				
3046.72	7/2$^+$	691.4 *6*	98 *12*	2355.56	9/2$^+$	M1(+E2)	≤0.5	0.050 *4*	α(K)=0.041 *4*; α(L)=0.0071 *5*; α(M)=0.00167 *11* α(N)=0.00043 *3*; α(O)=9.0×10^{-5} *6*; α(P)=1.16×10^{-5} *9* Mult.: α(K)exp=0.046 *8* (1982Ku20).
		1413.43 *20*	100 *8*	1633.30	5/2$^+$	M1(+E2)	≤0.4	0.0083 *4*	α(K)=0.0067 *3*; α(L)=0.00113 *5*; α(M)=0.000265 *11* α(N)=6.8×10^{-5} *3*; α(O)=1.43×10^{-5} *6*; α(P)=1.85×10^{-6} *8*; α(IPF)=6.87×10^{-5} *25* Mult.: α(K)exp=0.0082 *11* (1982Ku20).
		3045.5 *10*	≈14	0.0	5/2$^-$				
3052.2	(7/2)$^+$	568.5 *7*	100 *17*	2483.49	(7/2,9/2,11/2)$^+$	M1+E2	1.3 *+6−4*	0.049 *13*	α(K)=0.038 *11*; α(L)=0.0079 *14*; α(M)=0.0019 *4* α(N)=0.00049 *8*; α(O)=0.000101 *18*; α(P)=1.24×10^{-5} *25* Mult.: From α(K)exp in ^{205}At ε decay.
		2180.7 *6*	20 *3*	872.10	7/2$^-$				
		2268.0 *10*	≈22	783.00	7/2$^-$				
		3052.0 *10*	≈11	0.0	5/2$^-$				
3087.2	29/2$^-$	106.5[‡] *2*	30[‡] *3*	2980.7	29/2$^+$	[E1]		0.387	α(K)=0.305 *5*; α(L)=0.0627 *10*; α(M)=0.01489 *23* α(N)=0.00377 *6*; α(O)=0.000749 *12*; α(P)=8.32×10^{-5} *13* B(E1)(W.u.)=1.89×10^{-7} *25*
		260.3[‡] *2*	75[‡] *8*	2826.9	27/2$^+$	E1		0.0436	α(K)=0.0354 *5*; α(L)=0.00625 *9*; α(M)=0.001471 *21* α(N)=0.000375 *6*; α(O)=7.64×10^{-5} *11*; α(P)=9.15×10^{-6} *13* B(E1)(W.u.)=3.2×10^{-8} *4* E_γ: The absence of prompt component in the 260γ(t) spectrum (1985Ra18) indicates that 260γ directly depopulates the isomer. Mult.: α(K)exp=0.0160 *16*; A_2=−0.14 *1*, A_4=−0.1 *2* (1985Ra18).
		374.8[‡] *2*	100[‡] *9*	2712.3	27/2$^+$	[E1]		0.0190	α(K)=0.01555 *22*; α(L)=0.00263 *4*; α(M)=0.000617 *9* α(N)=0.0001576 *23*; α(O)=3.24×10^{-5} *5*; α(P)=3.96×10^{-6} *6* B(E1)(W.u.)=1.45×10^{-8} *16*
3160.7	29/2$^+$	448.4[‡] *2*	100[‡]	2712.3	27/2$^+$	M1(+E2)		0.1703	α(K)=0.1389 *20*; α(L)=0.0240 *4*; α(M)=0.00566 *8*

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Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	δ[@]	α[&]	Comments
									α(N)=0.001456 *21*; α(O)=0.000305 *5*; α(P)=3.94×10^{-5} *6* Mult.: α(K)exp=0.140 *14*; A_2=−0.19 *7*, A_4=−0.06 *11* (1985Ra18).
3170.9	(7/2)$^+$	1262.5 *10*	34 *5*	1908.38	(5/2$^+$)	(M1)		0.01143 *17*	α(K)=0.00936 *14*; α(L)=0.001571 *23*; α(M)=0.000369 *6* α(N)=9.48×10^{-5} *14*; α(O)=1.99×10^{-5} *3*; α(P)=2.58×10^{-6} *4*; α(IPF)=1.92×10^{-5} *4* Mult.: α(K)exp≈0.0075 (1982Ku20).
		1410.0 *10*	23 *4*	1761.32	(7/2,9/2)$^-$				
		1537.2 *4*	100 *5*	1633.30	5/2$^+$	M1(+E2)	≤0.5	0.0067 *4*	α(K)=0.0054 *3*; α(L)=0.00090 *5*; α(M)=0.000210 *12* α(N)=5.4×10^{-5} *3*; α(O)=1.13×10^{-5} *7*; α(P)=1.47×10^{-6} *9*; α(IPF)=0.000128 *7* Mult.: α(K)exp=0.0061 *8* (1982Ku20).
		1775.5 *10*	28 *3*	1394.94	(9/2)$^-$				
		2142.0 *10*	19 *4*	1030.38	(11/2)$^-$				
		3172.0 *15*	≈12	0.0	5/2$^-$				
3206.4	31/2$^+$	225.7[‡] *2*	100[‡]	2980.7	29/2$^+$	M1		1.109	α(K)=0.901 *13*; α(L)=0.1584 *23*; α(M)=0.0373 *6* α(N)=0.00961 *14*; α(O)=0.00201 *3*; α(P)=0.000260 *4* Mult.: α(K)exp=1.02 *10* (1985Ra18).
3298.5	29/2$^+$	471.6[‡] *2*	96[‡] *11*	2826.9	27/2$^+$	M1(+E2)		0.1489	α(K)=0.1214 *17*; α(L)=0.0210 *3*; α(M)=0.00494 *7* α(N)=0.001271 *18*; α(O)=0.000266 *4*; α(P)=3.44×10^{-5} *5* Mult.: α(K)exp=0.030 *3* (1985Ra18).
		1073.8[‡] *2*	100[‡] *11*	2224.7	25/2$^+$	E2		0.00641	α(K)=0.00510 *8*; α(L)=0.001002 *14*; α(M)=0.000240 *4* α(N)=6.16×10^{-5} *9*; α(O)=1.268×10^{-5} *18*; α(P)=1.556×10^{-6} *22* Mult.: α(K)exp=0.0080 *8* (1985Ra18).
3368.1	31/2$^+$	387.4[‡] *2*	100[‡]	2980.7	29/2$^+$	M1		0.252	α(K)=0.205 *3*; α(L)=0.0357 *5*; α(M)=0.00841 *12* α(N)=0.00216 *3*; α(O)=0.000453 *7*; α(P)=5.86×10^{-5} *9* Mult.: α(K)exp=0.27 *3*; A_2=−0.27 *11*, A_4=0.02 *20* (1985Ra18).
3508.9	31/2$^-$	210.4[‡] *2*	100[‡]	3298.5	29/2$^+$	E1		0.0725	α(K)=0.0586 *9*; α(L)=0.01061 *15*; α(M)=0.00250 *4* α(N)=0.000638 *9*; α(O)=0.0001293 *19*; α(P)=1.525×10^{-5} *22* Mult.: α(K)exp=0.060 *6*; A_2=−0.28 *7*, A_4=0.12 *1* (1985Ra18).
3868.8	33/2$^-$	781.6[‡] *2*	100[‡]	3087.2	29/2$^-$	E2		0.01201	α(K)=0.00919 *13*; α(L)=0.00213 *3*; α(M)=0.000519 *8* α(N)=0.0001334 *19*; α(O)=2.72×10^{-5} *4*; α(P)=3.21×10^{-6} *5* Mult.: α(K)exp=0.0120 *12*; A_2=0.36 *3*, A_4=−0.08 *5* (1985Ra18).
4093.3	33/2$^-$	584.4[‡] *2*	100[‡]	3508.9	31/2$^-$	M1		0.0843	α(K)=0.0688 *10*; α(L)=0.01182 *17*; α(M)=0.00278 *4* α(N)=0.000716 *10*; α(O)=0.0001498 *21*; α(P)=1.94×10^{-5} *3* Mult.: α(K)exp=0.050 *5*; A_2=−0.12 *11*, A_4=0.4 *2* (1985Ra18).
4136.8	(35/2$^+$)	268.0[‡] *2*	100[‡]	3868.8	33/2$^-$	(E1)		0.0407	α(K)=0.0331 *5*; α(L)=0.00582 *9*; α(M)=0.001369 *20*

Adopted Levels, Gammas (continued)

γ(^{205}Po) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(N)=0.000349 *5*; α(O)=7.12×10^{-5} *10*; α(P)=8.54×10^{-6} *12* Mult.: α(K)exp<0.03 (1985Ra18). Note, that reported A_2=0.16 *5* and A_4=−0.05 *7* values (1985Ra18) are inconsistent with these expected for J to J-1 E1 transition.
4453.9	(37/2$^-$)	360.6[‡] *2*	100[‡]	4093.3	33/2$^-$	E2	0.0743	α(K)=0.0444 *7*; α(L)=0.0223 *4*; α(M)=0.00573 *9* α(N)=0.001472 *21*; α(O)=0.000289 *4*; α(P)=2.99×10^{-5} *5* Mult.: α(K)exp=0.057 *6* (1985Ra18).
4628.8	(37/2$^+$)	492.0[‡] *2*	100[‡]	4136.8	(35/2$^+$)	M1	0.1330	α(K)=0.1085 *16*; α(L)=0.0187 *3*; α(M)=0.00441 *7* α(N)=0.001134 *16*; α(O)=0.000237 *4*; α(P)=3.07×10^{-5} *5* Mult.: α(K)exp=0.11 *1* (1985Ra18).

[†] From ^{205}At ε decay, unless otherwise stated.
[‡] From ^{206}Pb(α,5nγ).
[#] From the conversion electron and angular distribution data in ^{205}At ε decay, ^{206}Pb(α,5nγ) and ^{209}Bi(p,5nγ) and the observed multiple decay branches. Specific comments are given with most levels.
[@] Using the briccmixing program and the α(K)exp, α(L)exp, α(M)exp, α(L12)exp data in ^{205}At ε decay (1982Ku20,1971Jo19).
[&] Additional information 1.
[a] Placement of transition in the level scheme is uncertain.

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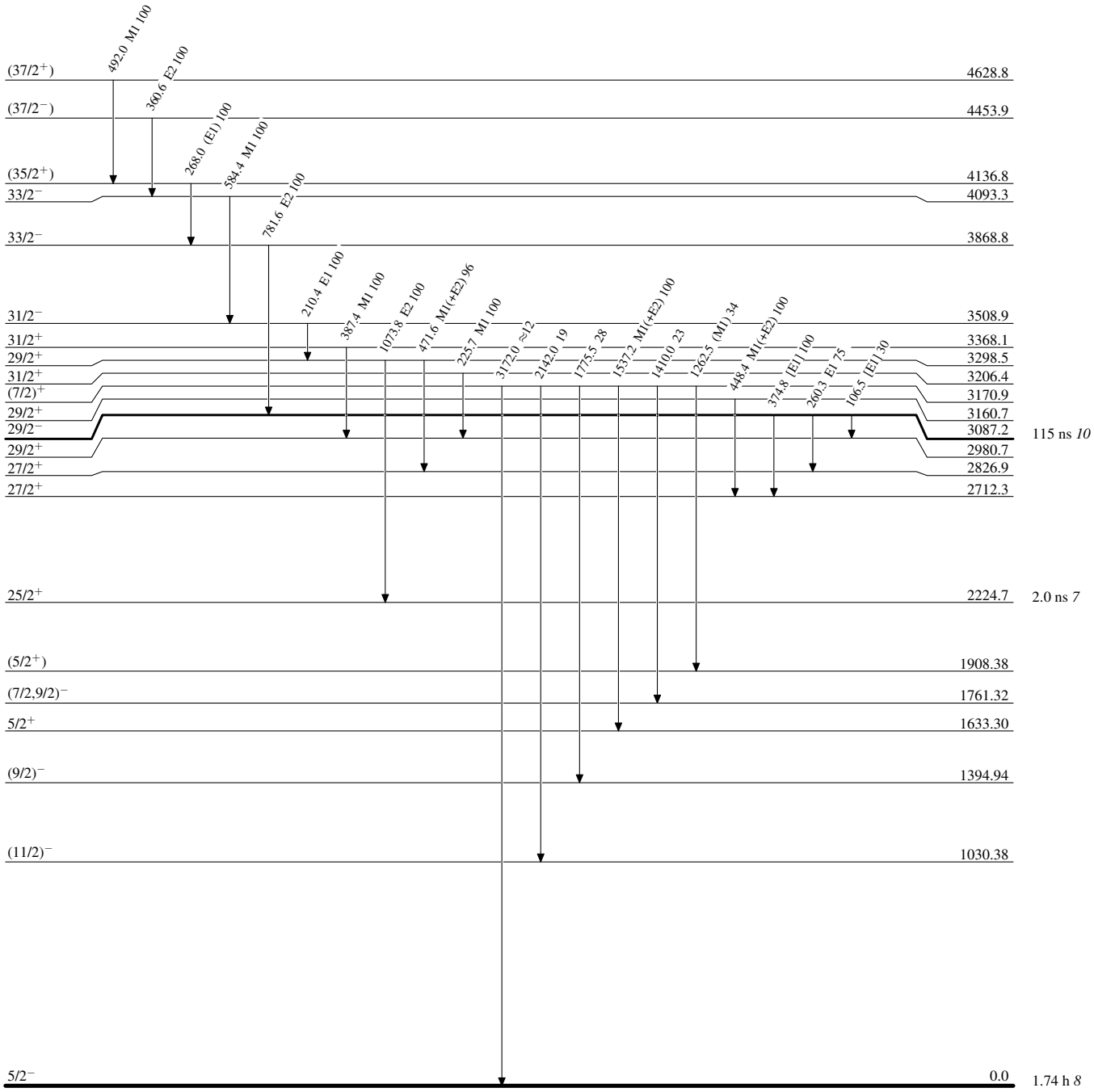
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



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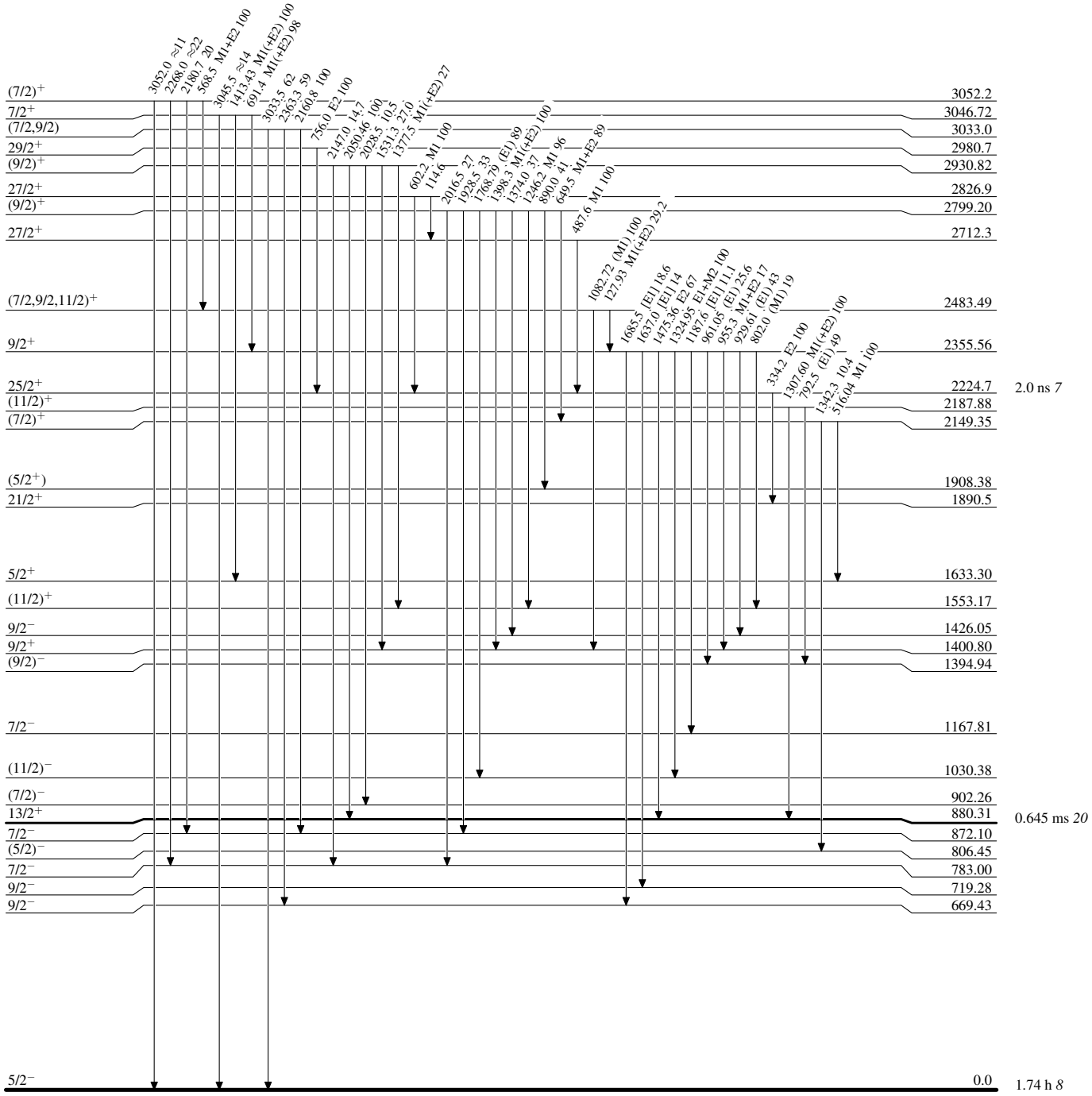
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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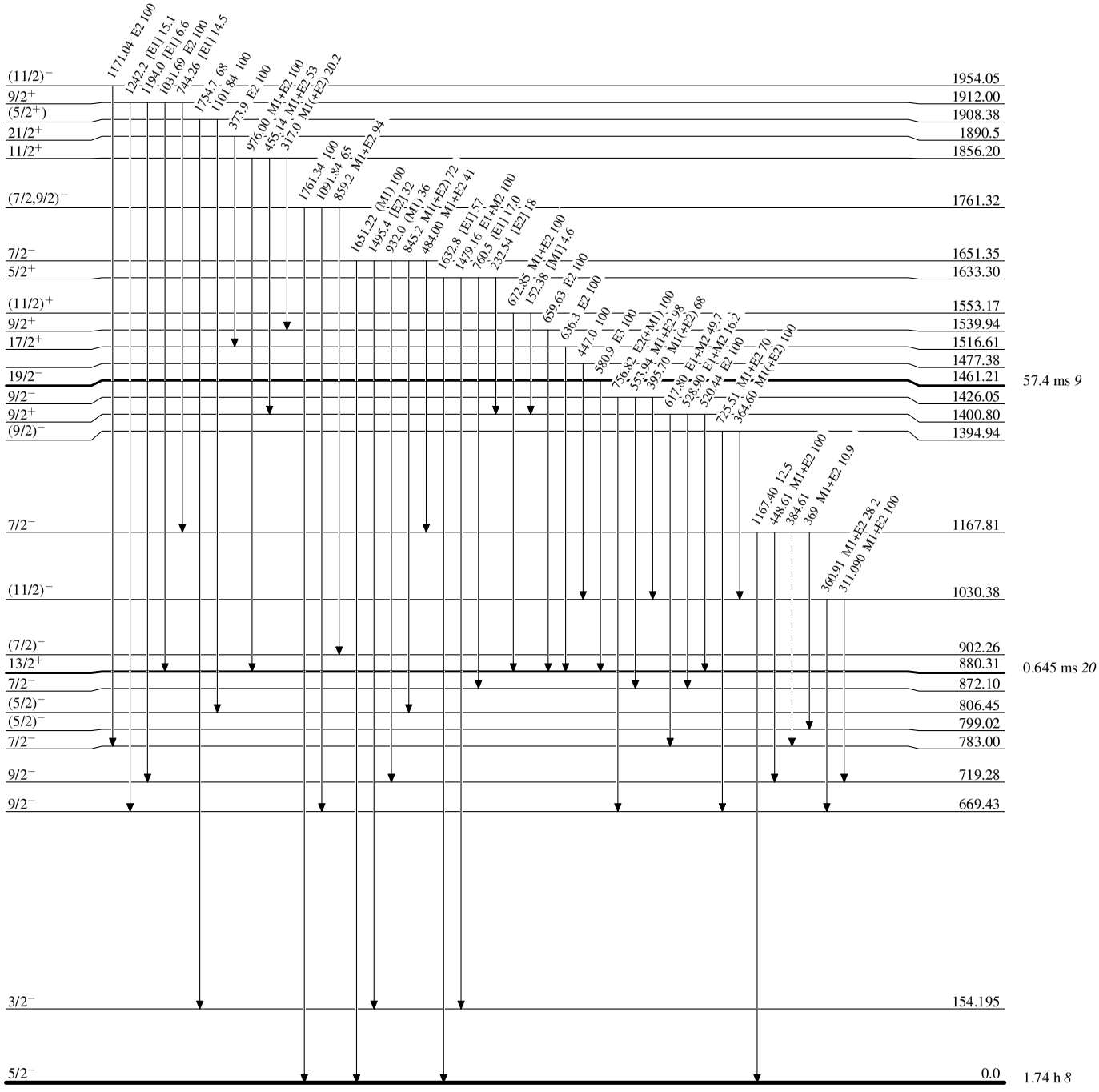
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{205}_{84}Po_{121}$

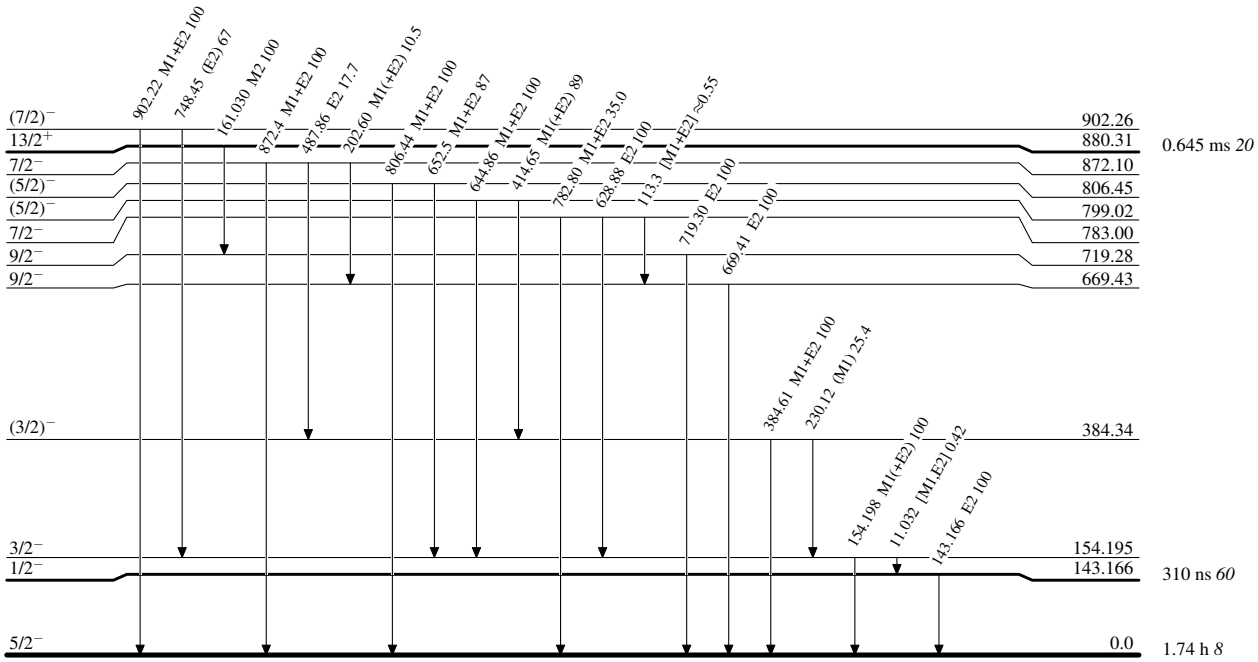
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



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