Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Juutinen, D. J. Hartley	NDS 150, 1 (2018)	1-Feb-2018

Q(β^-)=−2169 *13*; S(n)=7415 *23*; S(p)=2975 *24*; Q(α)=4815 *28* 2017Wa10

^{188}Au Levels

Cross Reference (XREF) Flags

- A ^{188}Hg ε decay (3.25 min)
- B ^{173}Yb(^{19}F,4nγ) E=93 MeV
- C ^{173}Yb(^{19}F,4nγ) E=86 MeV

E(level)†	J$^\pi$	$T_{1/2}$	XREF	Comments
0.0	1$^-$	8.84 min *6*	A	%ε+%β^+=100 μ=−0.067 *28* (1989Wa11) μ: LASER-resonance ionization mass spectroscopy (1989Wa11,1987Wa06, 1987Wa23). Other: 0.069 *24* (atomic beam magnetic resonance,1980Ek04). $\Delta<r^2>(^{197}Au,^{188}Au)$=−0.347 fm^2 *9* (1989Wa11,1987Wa06,1987Wa23). Other: 1988LeZV. J$^\pi$: J from atomic-beam magnetic resonance (1976Ek01,1978Ek05,1980Ek04) and resonance ionization mass spectroscopy (1989Wa11). π is from μ and systematics. $T_{1/2}$: From β-265.6γ(t) and β-339.9γ(t) in 1972Fi12,1970Fi16. Others: 8.8 min (1978CoYZ), 9.0 min *4* (1970Jo02), 9 min *1* (1969Na10), and 8 min (1960Po07). configuration: $\pi(s_{1/2}/d_{3/2})^{-1}\otimes\nu(p_{1/2})^{-1}$.
16.00 *7*	(2)$^-$	0.67 ns *8*	A	J$^\pi$: 16γ M1+E2 to 1$^-$, no ε feeding from 0$^+$. $T_{1/2}$: From (ce(M) 16γ)(ce(L) 66γ, ce(L) 98γ, ce(K) 190γ)(t) (1985Ab03).
82.70 *8*	1$^+$	1.4 ns *2*	A	J$^\pi$: 82.7γ (E1) to 1$^-$, 66.7γ (E1) to (2)$^-$; strong direct feeding in ^{188}Hg ε decay (J^π=0$^+$). $T_{1/2}$: From (ce(L) 66γ)(KLL Auger)(t) (1985Ab03).
114.20 *8*	(1)$^-$		A	J$^\pi$: 114.2γ M1+E2 to 1$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
114.80 *8*	(2)$^-$	0.22 ns *2*	A	J$^\pi$: 114.8γ M1+E2 to 1$^-$; weak population, if any, in ^{188}Hg ε decay (J^π=0$^+$) would argue against J=0,1. $T_{1/2}$: From (ce(K) 115γ)(ce(K) 190γ, γ)(t) (1985Ab03).
172.0 *1*	(1)$^-$		A	J$^\pi$: 155.8γ M1+E2 to (2)$^-$, 172.1γ M1+E2 to 1$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
217.50 *13*	(1)$^+$		A	J$^\pi$: 134.8γ M1+E2 to 1$^+$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
297.1 *3*	(0,1)$^-$		A	J$^\pi$: 182.9γ M1+E2 to (1)$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
304.89 *9*	(1)$^-$		A	J$^\pi$: 190.1γ M1+E2 to (2)$^-$, 190.7γ M1+E2 to (1)$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
442.7 *4*	(0,1)$^+$		A	J$^\pi$: 225.2γ M1+E2 to (1)$^+$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
447.10 *23*	(0,1)$^+$		A	J$^\pi$: 364.4γ M1+E2 to 1$^+$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
566.6 *3*	(1)$^-$		A	J$^\pi$: 451.8γ M1+E2 to (2)$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
567.26 *18*	(0,1)$^-$		A	J$^\pi$: 202.4γ E2(+M1) to (1)$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
606.02 *20*	(2)$^+$		A	J$^\pi$: 606.0γ E1 to 1$^-$; weak population, if any, in ^{188}Hg ε decay (J^π=0$^+$) would argue against J=0,1.
859.8 *3*	(2)$^+$		A	J$^\pi$: 253.8γ M1+E2 to (2)$^+$; weak population, if any, in ^{188}Hg ε decay (J^π=0$^+$) would argue against J=0,1.
961.3 *1*	(0$^-$,1)		A	J$^\pi$: 944.9γ to (2)$^-$, 961.3γ to 1$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
1012.1 *3*	(1)$^+$		A	J$^\pi$: 152.3γ M1+E2 to (2)$^+$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
1047.75 *22*	(1)		A	J$^\pi$: 1031.8γ to (2)$^-$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
1103.0 *3*	(1)$^+$		A	J$^\pi$: 243.2γ M1+E2 to (2)$^+$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
1123.4 *3*	(1)		A	J$^\pi$: 1040.7γ to 1$^+$, 263.5γ to (2)$^+$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
1205.0 *3*	(1)$^+$		A	J$^\pi$: 102.0γ M1+E2 to (1)$^+$, 345.2γ to (2)$^+$; direct feeding in ^{188}Hg ε decay (J^π=0$^+$).
0.0+x‡	(11$^-$)	>400 ns	BC	Additional information 1.

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Adopted Levels, Gammas (continued)

^{188}Au Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				E(level): estimated by evaluators as 250 keV *100*, based on known high-spin isomers in neighboring odd-odd Au nuclei. The excitation energy of the $\pi(h_{11/2})^{-1}$ orbital in neighboring odd-Z Au isotopes is 223.9 keV (^{187}Au) and 247.2 keV (^{189}Au), while that for the $\nu(i_{13/2})^{-1}$ one in ^{189}Hg (N=109) is unknown, but it is located at 140.8 keV in ^{193}Hg (N=113). Jπ: Tentative assignment, based on proposed configuration. $T_{1/2}$: Lower experimental limit from the $\gamma\gamma$t measurement in 1992Ja01. configuration: $\pi(h_{11/2})^{-1}\otimes\nu(i_{13/2})^{-1}$, based on similar signature splitting characteristics of bands in nearby odd-odd Au nuclei and B(M1)/B(E2) analysis.
314.76+x[‡] *10*	(12$^-$)		BC	Jπ: 314.8γ M1+E2 to (11$^-$), band member.
447.74+x[‡] *10*	(13$^-$)		BC	Jπ: 447.7γ E2 to (11$^-$) and 133.4γ M1+E2 to (12$^-$), band member.
804.28+x[‡] *12*	(14$^-$)		BC	Jπ: 489.5γ E2 to (12$^-$), 356.6γ M1+E2 to (13$^-$), band member.
1170.41+x[‡] *12*	(15$^-$)		BC	Jπ: 722.6γ E2 to (13$^-$), 366.3γ M1+E2 to (14$^-$), band member.
1535.97+x[‡] *13*	(16$^-$)		BC	Jπ: 731.6γ E2 to (14$^-$), 365.7γ M1+E2 to (15$^-$); band member.
1692.09+x[#] *15*	(15$^+$)		BC	Jπ: 887.8γ E1 to (14$^-$).
1912.69+x[#] *18*	(16$^+$)		BC	Jπ: 220.6γ to (15$^+$), band member.
1958.39+x[#] *18*	(17$^+$)		BC	Jπ: 266.3γ E2 to (15$^+$), 422.5γ E1 to (16$^-$), band member.
1965.17+x[‡] *15*	(17$^-$)		BC	Jπ: 794.7γ E2 to (15$^-$), 429.7γ M1+E2 to (16$^-$), band member.
2217.99+x[#] *20*	(18$^+$)		BC	Jπ: 259.6γ M1+E2 to (17$^+$).
2243.07+x *17*	(18$^-$)		BC	Jπ: 707.1γ E2 to (16$^-$), 278.1γ M1+E2 to (17$^-$).
2255.3+x *4*			C	
2258.1+x *4*	(18$^+$)		BC	Jπ: 299.8γ M1+E2 to (17$^+$).
2258.1+y[@]	(20$^+$)		C	Additional information 2. E(level): this level is assumed to decay via two low-energy transitions to two (18$^+$) levels at 2217.99+x and 2258.1+x. The γ-rays are expected to be highly converted and lower than the energy threshold of the γ-detector array. This state could be an isomer. Jπ: Based on similarity to structures observed in ^{190,192}Au.
2344.5+x[‡] *3*	(18$^-$)		BC	Jπ: 808.6γ E2 to (16$^-$), 379.6γ M1+E2 to (17$^-$), band member.
2448.6+x *7*			C	
2501.5+x[#] *4*	(19$^+$)		C	Jπ: 283.7γ to (18$^+$), 542.8γ to (17$^+$); band member.
2503.8+x[‡] *3*	(19$^-$)		BC	Jπ: 159.6γ M1+E2 to (18$^-$), 538.5γ E2 to (17$^-$); band member.
2534.9+y *7*			C	
2734.6+y[@] *3*	(21$^+$)		BC	Jπ: 476.4γ M1+E2 to (20$^+$), band member.
2753.1+x *8*			C	
2790.50+y[@] *10*	(22$^+$)		BC	Jπ: 532.3γ E2 to (20$^+$), band member.
2808.0+x[‡] *5*	(20$^-$)		BC	Jπ: 304.4γ M1+E2 to (19$^-$), band member.
2823.8+x[#] *7*	(20$^+$)		C	Jπ: 322.3γ to (19$^+$); band member.
2873.4+x *4*	(20$^-$)		BC	Jπ: 630.3γ E2 to (18$^-$).
2938.1+x *8*			C	
3013.9+x[‡] *5*	(21$^-$)		BC	Jπ: 206.1γ M1+E2 to (20$^-$); band member.
3130.4+y *6*			C	
3143.1+x *5*			C	
3310.59+y[@] *22*	(23$^+$)		BC	Jπ: 520.1γ M1+E2 to (22$^+$) (2790.50+y).
3417.9+x[‡] *6*	(22$^-$)		B	Jπ: 404.0γ to (21$^-$), 609.8γ E2 to (20$^-$); band member. E(level): Level not reported in 2010Fa19.
3547.6+x *6*			C	
3567.6+y[@] *3*	(24$^+$)		BC	Jπ: 777.1γ E2 to (22$^+$).
3575.3+x *7*			C	
3735.2+x *6*			BC	

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Adopted Levels, Gammas (continued)

^{188}Au Levels (continued)

E(level)[†]	J$^\pi$	XREF	Comments
3808.9+x[‡] *11*	(23$^-$)	B	E(level): Level not reported in 2010Fa19. J$^\pi$: 795γ to (21$^-$); band member.
4127.6+y[@] *5*	(25$^+$)	BC	J$^\pi$: 560.1γ to (23$^+$); band member.
4216.2+x *7*		BC	
4385.9+y[@] *4*	(26$^+$)	BC	J$^\pi$: 818.1γ E2 to (24$^+$); band member.
4473.4+x *9*		C	
z[&]	J	C	Additional information 3. E(level): Excitation energy and bandhead spin of this band are unknown.
86.8+z[&] *3*	J+1	C	J$^\pi$: 87.1γ M1+E2 to J, band member.
359.9+z[&] *3*	J+2	C	J$^\pi$: 359.8γ E2 to J, 273.1γ M1+E2 to J+1, band member.
457.1+z[&] *3*	J+3	C	J$^\pi$: 370.3γ E2 to J+1, 97.7γ M1+E2 to J+2, band member.
729.5+z[&] *5*	J+4	C	J$^\pi$: 272.4γ M1+E2 to J+3, band member.
794.8+z[&] *3*	J+5	C	J$^\pi$: 337.7γ E2 to J+3, band member.
1215.7+z[&] *4*	J+6	C	J$^\pi$: 420.8γ M1+E2 to J+5, band member.
1287.9+z[&] *4*	J+7	C	J$^\pi$: 493.1γ E2 to J+5, band member.
1806.0+z[&] *5*	J+8	C	J$^\pi$: 590.2γ E2 to J+6, 518.2γ M1+E2 to J+7, band member.
1885.2+z[&] *4*	J+9	C	J$^\pi$: 597.3γ E2 to J+7, band member.
2483.2+z[&] *5*	J+10	C	J$^\pi$: Band member.
2572.4+z[&] *5*	J+11	C	J$^\pi$: 687.2γ E2 to J+9, band member.
3328.9+z[&] *7*	J+13	C	J$^\pi$: 756.5γ E2 to J+11, band member.
u[a]	(10$^-$)	C	Additional information 4. E(level): Excitation energy of band is unknown. J$^\pi$: (10$^-$) suggested by 2010Fa19 based on proposed configuration. The assignment is tentative.
328.3+u[a] *4*	(12$^-$)	C	J$^\pi$: 328.3γ E2 to (10$^-$), band member.
356.0+u[a] *4*	(11$^-$)	C	J$^\pi$: 356.1γ M1+E2 to (10$^-$), band member.
688.2+u[a] *5*	(13$^-$)	C	J$^\pi$: 332.2γ E2 to (11$^-$), 359.8γ M1+E2 to (12$^-$), band member.
777.8+u[a] *4*	(14$^-$)	C	J$^\pi$: 449.5γ E2 to (12$^-$), band member.
1104.6+u[a] *5*	(15$^-$)	C	J$^\pi$: 416.4γ E2 to (13$^-$), 326.9γ M1+E2 to (14$^-$), band member.
1296.3+u[a] *6*	(16$^-$)	C	J$^\pi$: 518.4γ E2 to (14$^-$), band member.
1600.1+u[a] *6*	(17$^-$)	C	J$^\pi$: 495.5γ E2 to (15$^-$), band member.
1872.2+u[a] *8*	(18$^-$)	C	J$^\pi$: 575.9γ E2 to (16$^-$), band member.
2165.7+u[a] *8*	(19$^-$)	C	J$^\pi$: 565.6γ E2 to (17$^-$), band member.
2502.9+u[a] *9*	(20$^-$)	C	J$^\pi$: 630.7γ E2 to (18$^-$), band member.
2790.3+u[a] *10*	(21$^-$)	C	J$^\pi$: 624.6γ to (19$^-$), band member.

[†] From least-squares fit to Eγ.

[‡] Band(A): $\pi(h_{11/2})^{-1}\otimes\nu(i^{-1}_{13/2})$.

[#] Band(B): $\pi(h_{11/2})^{-1}\otimes\nu(i^{-2}_{13/2},(p_{3/2}$ or $f_{5/2})^{-1})$.

[@] Band(C): $\pi h^{-1}_{11/2}\otimes\nu(i^{-2}_{13/2},h^{-1}_{9/2})$.

[&] Band(D): Possible configurations: $\pi(h_{9/2})^{-1}\otimes\nu(p_{3/2}$ or $f_{5/2})^{-1})$ or $\pi(h_{11/2})^{-1}\otimes\nu(h_{9/2})^{-1}$.

[a] Band(E): Possible configuration: $\pi(h_{9/2})^{-1}\otimes\nu(i_{13/2})^{-1}$. Suggested in 2010Fa19, but the observed signature splitting systematics are not consistent with this assignment.

Adopted Levels, Gammas (continued)

γ(^{188}Au)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ[#]	α[&]	Comments
16.00	(2)$^-$	16.0[‡] *1*	100[‡]	0.0	1$^-$	M1+E2	0.044 *3*	352 *13*	B(M1)(W.u.)=0.023 *3*; B(E2)(W.u.)=69 *13* α(L)=268 *10*; α(M)=64.2 *25* α(N)=15.9 *6*; α(O)=2.85 *10*; α(P)=0.158 *4* Mult.: From M1/M2/M3=100/21/17 in 1985Ab03.
82.70	1$^+$	66.7[‡] *1*	100[‡] *5*	16.00	(2)$^-$	(E1)		0.248	B(E1)(W.u.)=0.00038 *6* α(L)=0.190 *3*; α(M)=0.0446 *7* α(N)=0.01086 *16*; α(O)=0.00182 *3*; α(P)=7.01×10^{-5} *11* Mult.: L1/L2/L3=100/54/68 in 1985Ab03 allows E1 or M1+E2 with δ=0.38 *2*.
		82.7[‡] *1*	4.1[‡] *4*	0.0	1$^-$	(E1)		0.659	B(E1)(W.u.)=8.1×10^{-6} *15* α(K)=0.521 *8*; α(L)=0.1060 *16*; α(M)=0.0248 *4* α(N)=0.00605 *9*; α(O)=0.001027 *15*; α(P)=4.27×10^{-5} *6* Mult.: L1/L2/L3=100/41/34 in 1985Ab03 allows E1 or M1+E2 with δ=0.36 *2*.
114.20	(1)$^-$	98.2[‡] *1*	24[‡] *6*	16.00	(2)$^-$	M1+E2	<0.03	7.64	α(K)=6.27 *9*; α(L)=1.058 *16*; α(M)=0.246 *4* α(N)=0.0612 *9*; α(O)=0.01124 *17*; α(P)=0.000758 *11* Mult.: from α(K)exp=7.6 (1985Ab03). Other: α(L)exp=0.51 (1970Fi16).
		114.2[‡] *1*	100[‡] *6*	0.0	1$^-$	M1+E2	2.02 *+18−12*	3.40 *7*	α(K)=1.26 *10*; α(L)=1.61 *4*; α(M)=0.415 *11* α(N)=0.1021 *25*; α(O)=0.0166 *4*; α(P)=0.000151 *11* Mult.: from K/L3=2.0 (1985Ab03).
114.80	(2)$^-$	98.8[‡] *1*	32[‡] *3*	16.00	(2)$^-$	M1+E2	<0.17	7.48	α(K)=6.08 *12*; α(L)=1.07 *4*; α(M)=0.251 *11* α(N)=0.062 *3*; α(O)=0.0114 *4*; α(P)=0.000736 *14* B(E2)(W.u.)<5.3 Mult.: from α(K)exp=8.3 (1985Ab03).
		114.8[‡] *1*	100[‡] *4*	0.0	1$^-$	M1+E2	0.34 *2*	4.69	B(M1)(W.u.)=0.0070 *8*; B(E2)(W.u.)=25 *4* α(K)=3.65 *7*; α(L)=0.790 *17*; α(M)=0.188 *5* α(N)=0.0468 *11*; α(O)=0.00832 *18*; α(P)=0.000440 *8* Mult.: from K/L3=44.5 (1985Ab03).
172.0	(1)$^-$	155.8[‡] *1*	100[‡] *15*	16.00	(2)$^-$	M1+E2	0.94 *18*	1.52 *12*	α(K)=1.04 *15*; α(L)=0.361 *19*; α(M)=0.089 *6* α(N)=0.0221 *14*; α(O)=0.00377 *18*; α(P)=0.000122 *18* Mult.: from α(K)exp=1.15 in 1985Ab03. Other: α(L)exp=0.59 in 1970Fi16.
		172.1[‡] *1*	14[‡] *3*	0.0	1$^-$	M1+E2	<0.3	1.51 *5*	α(K)=1.23 *5*; α(L)=0.215 *5*; α(M)=0.0503 *13* α(N)=0.0125 *4*; α(O)=0.00229 *5*; α(P)=0.000147 *6* Mult.: from α(K)exp=1.4 in 1985Ab03.
217.50	(1)$^+$	134.8[‡] *1*	100[‡]	82.70	1$^+$	M1+E2	0.68 *2*	2.59 *5*	α(K)=1.84 *4*; α(L)=0.569 *10*; α(M)=0.140 *3* α(N)=0.0346 *7*; α(O)=0.00595 *11*; α(P)=0.000219 *5* Mult.: from K/L3=10.4 (1985Ab03); α(L)exp=0.20 (1970Fi16).
297.1	(0,1)$^-$	182.9[‡] *3*	100[‡] *10*	114.20	(1)$^-$	M1+E2	1.9 *+3−2*	0.68 *4*	α(K)=0.40 *4*; α(L)=0.215 *4*; α(M)=0.0543 *12*

$^{188}_{79}Au_{109}$-4

Adopted Levels, Gammas (continued)

γ(^{188}Au) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult.[@]	δ[#]	α[&]	Comments
									α(N)=0.0134 *3*; α(O)=0.00223 *4*; α(P)=4.5×10^{-5} *5* Mult.: from α(K)exp=0.4 in 1985Ab03.
297.1	(0,1)$^-$	297.1[‡a] *3*	59[‡] *12*	0.0	1$^-$	[M1+E2]		0.341	α(K)=0.281 *4*; α(L)=0.0463 *7*; α(M)=0.01073 *16* α(N)=0.00267 *4*; α(O)=0.000492 *7*; α(P)=3.33×10^{-5} *5*
304.89	(1)$^-$	190.1[‡] *1*	100[‡] *5*	114.80	(2)$^-$	M1+E2	0.06 *3*	1.168	α(K)=0.960 *14*; α(L)=0.1603 *23*; α(M)=0.0372 *6* α(N)=0.00927 *14*; α(O)=0.001704 *24*; α(P)=0.0001147 *17* Mult.: from α(K)exp=1.0, L12/L3=104 (1985Ab03), α(L)exp=0.10 (1970Fi16).
		190.7[‡] *1*	4.5[‡] *11*	114.20	(1)$^-$	M1+E2	>0.7	0.68 *25*	α(K)=0.45 *26*; α(L)=0.178 *11*; α(M)=0.045 *4* α(N)=0.0110 *10*; α(O)=0.00186 *9*; α(P)=5.1×10^{-5} *32* Mult.: from L2/L3=1.7 in 1985Ab03.
		304.9[‡a] *3*	1.1[‡] *3*	0.0	1$^-$				
442.7	(0,1)$^+$	225.2[‡] *3*	100[‡]	217.50	(1)$^+$	M1+E2	<0.2	0.721 *14*	α(K)=0.592 *13*; α(L)=0.0996 *15*; α(M)=0.0231 *4* α(N)=0.00576 *9*; α(O)=0.001057 *16*; α(P)=7.05×10^{-5} *16* Mult.: from α(K)exp=0.73 in 1985Ab03.
447.10	(0,1)$^+$	229.6[‡] *3*	100[‡] *10*	217.50	(1)$^+$	M1+E2	<0.18	0.685 *13*	α(K)=0.562 *11*; α(L)=0.0943 *14*; α(M)=0.0219 *4* α(N)=0.00546 *8*; α(O)=0.001002 *15*; α(P)=6.70×10^{-5} *13* Mult.: from α(K)exp=0.94 in 1985Ab03.
		364.4[‡] *3*	99[‡] *10*	82.70	1$^+$	M1+E2	<0.6	0.178 *19*	α(K)=0.145 *17*; α(L)=0.0250 *16*; α(M)=0.0058 *4* α(N)=0.00145 *9*; α(O)=0.000265 *17*; α(P)=1.71×10^{-5} *20* Mult.: from α(K)exp=0.15 in 1985Ab03.
566.6	(1)$^-$	451.8[‡] *3*	100[‡]	114.80	(2)$^-$	M1+E2	<0.3	0.107 *4*	α(K)=0.088 *3*; α(L)=0.0146 *4*; α(M)=0.00337 *9* α(N)=0.000840 *21*; α(O)=0.000154 *4*; α(P)=1.04×10^{-5} *4* Mult.: from α(K)exp=0.10 in 1985Ab03.
567.26	(0,1)$^-$	262.4[‡] *2*	100[‡] *5*	304.89	(1)$^-$	E2(+M1)	3.5 *+12−7*	0.178 *13*	α(K)=0.110 *12*; α(L)=0.0520 *10*; α(M)=0.01308 *21* α(N)=0.00323 *6*; α(O)=0.000541 *10*; α(P)=1.19×10^{-5} *15* Mult.: from α(K)exp=0.11 in 1985Ab03.
		567.2[‡] *3*	38[‡] *5*	0.0	1$^-$	M1+E2	<0.5	0.057 *5*	α(K)=0.047 *4*; α(L)=0.0077 *5*; α(M)=0.00178 *11* α(N)=0.00044 *3*; α(O)=8.1×10^{-5} *5*; α(P)=5.5×10^{-6} *5* Mult.: from α(K)exp=0.05 in 1985Ab03.
606.02	(2)$^+$	523.3[‡] *3*	100[‡] *13*	82.70	1$^+$	M1+E2	<0.5	0.070 *6*	α(K)=0.057 *5*; α(L)=0.0095 *6*; α(M)=0.00221 *13* α(N)=0.00055 *4*; α(O)=0.000101 *6*; α(P)=6.7×10^{-6} *6* Mult.: from α(K)exp=0.06 in 1985Ab03.
		606.0[‡] *3*	60[‡] *7*	0.0	1$^-$	E1		0.00576	α(K)=0.00481 *7*; α(L)=0.000737 *11*; α(M)=0.0001691 *24* α(N)=4.19×10^{-5} *6*; α(O)=7.61×10^{-6} *11*; α(P)=4.82×10^{-7} *7* Mult.: from α(K)exp<0.006 in 1985Ab03.
859.8	(2)$^+$	253.8[‡] *3*	100[‡]	606.02	(2)$^+$	M1+E2	0.57 *19*	0.44 *5*	α(K)=0.35 *5*; α(L)=0.0682 *19*; α(M)=0.0161 *4* α(N)=0.00401 *9*; α(O)=0.000721 *22*; α(P)=4.1×10^{-5} *5* Mult.: from α(K)exp=0.35 in 1985Ab03.

$^{188}_{79}Au_{109}$-5

Adopted Levels, Gammas (continued)

γ(^{188}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ[#]	α[&]	Comments
961.3	(0⁻,1)	944.9[‡] *3*	59[‡] *15*	16.00	(2)⁻				
		961.3[‡] *3*	100[‡] *24*	0.0	1⁻				
1012.1	(1)⁺	152.3[‡] *1*	45[‡] *10*	859.8	(2)⁺	M1+E2	1.08 *16*	1.54 *10*	α(K)=1.00 *12*; α(L)=0.408 *17*; α(M)=0.102 *5* α(N)=0.0251 *13*; α(O)=0.00425 *17*; α(P)=0.000117 *15* Mult.: from α(K)exp=1.0 in 1985Ab03.
		406.1[‡] *3*	100[‡] *25*	606.02	(2)⁺	(M1+E2)		0.1467	α(K)=0.1210 *18*; α(L)=0.0198 *3*; α(M)=0.00458 *7* α(N)=0.001142 *17*; α(O)=0.000210 *3*; α(P)=1.428×10^{-5} *21* Mult.: from α(K)exp<0.2 in 1985Ab03.
1047.75	(1)	1031.8[‡] *3*	36[‡] *9*	16.00	(2)⁻				
		1047.7[‡] *3*	100[‡] *8*	0.0	1⁻				
1103.0	(1)⁺	243.2[‡] *3*	100[‡]	859.8	(2)⁺	M1+E2	<0.21	0.582 *12*	α(K)=0.478 *11*; α(L)=0.0802 *12*; α(M)=0.0186 *3* α(N)=0.00464 *7*; α(O)=0.000852 *13*; α(P)=5.69×10^{-5} *13* Mult.: from α(K)exp=0.63 in 1985Ab03.
1123.4	(1)	263.5 *3*		859.8	(2)⁺				Eγ: From ^{188}Hg ε decay.
		1040.7[‡] *3*	100[‡]	82.70	1⁺				
1205.0	(1)⁺	102.0[‡] *1*	30[‡] *8*	1103.0	(1)⁺	M1+E2	<0.2	6.82 *11*	α(K)=5.53 *13*; α(L)=0.99 *5*; α(M)=0.231 *12* α(N)=0.058 *3*; α(O)=0.0105 *5*; α(P)=0.000668 *15* Mult.: from α(K)exp=6.9 in 1985Ab03.
		192.9[‡] *1*	32[‡] *8*	1012.1	(1)⁺	[M1+E2]		1.124	α(K)=0.924 *13*; α(L)=0.1538 *22*; α(M)=0.0357 *5* α(N)=0.00889 *13*; α(O)=0.001634 *23*; α(P)=0.0001104 *16*
		345.2[‡] *3*	100[‡] *11*	859.8	(2)⁺	[M1+E2]		0.227	α(K)=0.187 *3*; α(L)=0.0307 *5*; α(M)=0.00712 *11* α(N)=0.00177 *3*; α(O)=0.000326 *5*; α(P)=2.21×10^{-5} *4*
314.76+x	(12⁻)	314.8 *1*	100	0.0+x	(11⁻)	M1+E2		0.291	α(K)=0.240 *4*; α(L)=0.0395 *6*; α(M)=0.00916 *13* α(N)=0.00228 *4*; α(O)=0.000420 *6*; α(P)=2.84×10^{-5} *4*
447.74+x	(13⁻)	133.4 *3*	10.5 *12*	314.76+x	(12⁻)	M1+E2		3.18	α(K)=2.61 *4*; α(L)=0.438 *7*; α(M)=0.1016 *16* α(N)=0.0253 *4*; α(O)=0.00465 *8*; α(P)=0.000314 *5*
		447.7 *1*	100 *8*	0.0+x	(11⁻)	E2		0.0340	α(K)=0.0241 *4*; α(L)=0.00748 *11*; α(M)=0.00184 *3* α(N)=0.000456 *7*; α(O)=7.82×10^{-5} *11*; α(P)=2.66×10^{-6} *4*
804.28+x	(14⁻)	356.6 *1*	100 *7*	447.74+x	(13⁻)	M1+E2		0.208	α(K)=0.1713 *24*; α(L)=0.0281 *4*; α(M)=0.00652 *10* α(N)=0.001623 *23*; α(O)=0.000299 *5*; α(P)=2.03×10^{-5} *3*
		489.5 *3*	11.1 *15*	314.76+x	(12⁻)	E2		0.0272	α(K)=0.0198 *3*; α(L)=0.00564 *8*; α(M)=0.001380 *20* α(N)=0.000342 *5*; α(O)=5.90×10^{-5} *9*; α(P)=2.19×10^{-6} *3*
1170.41+x	(15⁻)	366.3 *1*	34 *5*	804.28+x	(14⁻)	M1+E2		0.193	α(K)=0.1594 *23*; α(L)=0.0262 *4*; α(M)=0.00606 *9* α(N)=0.001509 *22*; α(O)=0.000278 *4*; α(P)=1.88×10^{-5} *3*
		722.6 *1*	100 *8*	447.74+x	(13⁻)	E2		0.01117	α(K)=0.00872 *13*; α(L)=0.00187 *3*; α(M)=0.000446 *7* α(N)=0.0001107 *16*; α(O)=1.96×10^{-5} *3*; α(P)=9.69×10^{-7} *14*
1535.97+x	(16⁻)	365.7 *1*	86 *10*	1170.41+x	(15⁻)	M1+E2		0.194	α(K)=0.1601 *23*; α(L)=0.0263 *4*; α(M)=0.00609 *9* α(N)=0.001516 *22*; α(O)=0.000279 *4*; α(P)=1.89×10^{-5} *3*
		731.6 *1*	100 *10*	804.28+x	(14⁻)	E2		0.01088	α(K)=0.00851 *12*; α(L)=0.00181 *3*; α(M)=0.000432 *6* α(N)=0.0001072 *15*; α(O)=1.90×10^{-5} *3*; α(P)=9.45×10^{-7} *14*

$^{188}_{79}Au_{109}$-6

Adopted Levels, Gammas (continued)

γ(^{188}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[&]	Comments
1692.09+x	(15$^+$)	887.8 *1*	100	804.28+x	(14$^-$)	E1	0.00275	α(K)=0.00230 *4*; α(L)=0.000344 *5*; α(M)=7.86×10^{-5} *11* α(N)=1.95×10^{-5} *3*; α(O)=3.56×10^{-6} *5*; α(P)=2.35×10^{-7} *4*
1912.69+x	(16$^+$)	220.6 *1*	100	1692.09+x	(15$^+$)	M1+E2	0.773	α(K)=0.636 *9*; α(L)=0.1056 *15*; α(M)=0.0245 *4* α(N)=0.00610 *9*; α(O)=0.001122 *16*; α(P)=7.59×10^{-5} *11*
1958.39+x	(17$^+$)	266.3 *1*	100 *10*	1692.09+x	(15$^+$)	E2	0.1470	α(K)=0.0833 *12*; α(L)=0.0480 *7*; α(M)=0.01218 *18* α(N)=0.00301 *5*; α(O)=0.000499 *7*; α(P)=8.77×10^{-6} *13*
		422.5 *3*	85 *10*	1535.97+x	(16$^-$)	E1	0.01233	α(K)=0.01023 *15*; α(L)=0.001617 *23*; α(M)=0.000372 *6* α(N)=9.21×10^{-5} *13*; α(O)=1.661×10^{-5} *24*; α(P)=1.003×10^{-6} *15*
1965.17+x	(17$^-$)	429.7 *3*	62 *14*	1535.97+x	(16$^-$)	M1+E2	0.1262	α(K)=0.1041 *15*; α(L)=0.01702 *24*; α(M)=0.00394 *6* α(N)=0.000981 *14*; α(O)=0.000181 *3*; α(P)=1.227×10^{-5} *18*
		794.7 *1*	100 *14*	1170.41+x	(15$^-$)	E2	0.00914	α(K)=0.00722 *11*; α(L)=0.001469 *21*; α(M)=0.000349 *5* α(N)=8.65×10^{-5} *13*; α(O)=1.541×10^{-5} *22*; α(P)=8.01×10^{-7} *12*
2217.99+x	(18$^+$)	259.6 *1*	100	1958.39+x	(17$^+$)	M1+E2	0.493	α(K)=0.406 *6*; α(L)=0.0672 *10*; α(M)=0.01557 *22* α(N)=0.00388 *6*; α(O)=0.000713 *10*; α(P)=4.83×10^{-5} *7*
2243.07+x	(18$^-$)	278.1 *5*	32 *7*	1965.17+x	(17$^-$)	M1+E2	0.408	α(K)=0.336 *5*; α(L)=0.0555 *9*; α(M)=0.01287 *20* α(N)=0.00321 *5*; α(O)=0.000590 *9*; α(P)=3.99×10^{-5} *6*
		707.1 *1*	100 *18*	1535.97+x	(16$^-$)	E2	0.01170	α(K)=0.00911 *13*; α(L)=0.00198 *3*; α(M)=0.000473 *7* α(N)=0.0001173 *17*; α(O)=2.07×10^{-5} *3*; α(P)=1.012×10^{-6} *15*
2255.3+x		342.6 *3*	100	1912.69+x	(16$^+$)	M1+E2	0.232	α(K)=0.191 *3*; α(L)=0.0314 *5*; α(M)=0.00727 *11* α(N)=0.00181 *3*; α(O)=0.000333 *5*; α(P)=2.26×10^{-5} *4*
2258.1+x	(18$^+$)	299.8 *4*	100	1958.39+x	(17$^+$)	M1+E2	0.333	α(K)=0.274 *4*; α(L)=0.0452 *7*; α(M)=0.01047 *16* α(N)=0.00261 *4*; α(O)=0.000480 *7*; α(P)=3.25×10^{-5} *5*
2344.5+x	(18$^-$)	379.6 *5*	37 *11*	1965.17+x	(17$^-$)	M1+E2	0.176 *3*	α(K)=0.1449 *21*; α(L)=0.0238 *4*; α(M)=0.00550 *8* α(N)=0.001370 *20*; α(O)=0.000252 *4*; α(P)=1.712×10^{-5} *25*
		808.6 *3*	100 *21*	1535.97+x	(16$^-$)	E2	0.00882	α(K)=0.00698 *10*; α(L)=0.001407 *20*; α(M)=0.000334 *5* α(N)=8.28×10^{-5} *12*; α(O)=1.476×10^{-5} *21*; α(P)=7.74×10^{-7} *11*
2448.6+x		205.7	100	2243.07+x	(18$^-$)			
2501.5+x	(19$^+$)	243.4 *5*	40 *20*	2258.1+x	(18$^+$)			
		283.7 *5*	60 *20*	2217.99+x	(18$^+$)			
		542.8 *5*	100 *20*	1958.39+x	(17$^+$)			
2503.8+x	(19$^-$)	159.6 *5*	31 *7*	2344.5+x	(18$^-$)	M1+E2	1.91 *4*	α(K)=1.57 *3*; α(L)=0.263 *5*; α(M)=0.0609 *11* α(N)=0.0152 *3*; α(O)=0.00279 *5*; α(P)=0.000189 *4*
		538.5 *3*	100 *23*	1965.17+x	(17$^-$)	E2	0.0216	α(K)=0.01606 *23*; α(L)=0.00423 *6*; α(M)=0.001027 *15* α(N)=0.000254 *4*; α(O)=4.42×10^{-5} *7*; α(P)=1.78×10^{-6} *3*
2534.9+y		276.8 *5*	100	2258.1+x	(18$^+$)			
2734.6+y	(21$^+$)	476.4 *3*	100	2258.1+y	(20$^+$)	M1+E2	0.0961	α(K)=0.0793 *12*; α(L)=0.01291 *19*; α(M)=0.00299 *5* α(N)=0.000744 *11*; α(O)=0.0001370 *20*; α(P)=9.32×10^{-6} *14*
2753.1+x		304.5 *5*	100	2448.6+x		M1+E2		
2790.50+y	(22$^+$)	532.3 *1*	100	2258.1+y	(20$^+$)	E2	0.0222	α(K)=0.01647 *23*; α(L)=0.00437 *7*; α(M)=0.001064 *15* α(N)=0.000264 *4*; α(O)=4.58×10^{-5} *7*; α(P)=1.83×10^{-6} *3*
2808.0+x	(20$^-$)	304.4 *3*	100	2503.8+x	(19$^-$)	M1+E2	0.319	α(K)=0.262 *4*; α(L)=0.0433 *7*; α(M)=0.01003 *15* α(N)=0.00250 *4*; α(O)=0.000460 *7*; α(P)=3.11×10^{-5} *5*

$^{188}_{79}Au_{109}$-7

Adopted Levels, Gammas (continued)

γ(^{188}Au) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. @	α &	Comments
2823.8+x	(20$^+$)	322.3 *5*	100	2501.5+x	(19$^+$)			
2873.4+x	(20$^-$)	630.3 *3*	100	2243.07+x	(18$^-$)	E2	0.01506	α(K)=0.01152 *17*; α(L)=0.00269 *4*; α(M)=0.000648 *10* α(N)=0.0001607 *23*; α(O)=2.82×10^{-5} *4*; α(P)=1.280×10^{-6} *18*
2938.1+x		185.1 *5*	100	2753.1+x				
3013.9+x	(21$^-$)	206.1 *3*	100 *20*	2808.0+x	(20$^-$)	M1+E2	0.934 *14*	α(K)=0.768 *12*; α(L)=0.1277 *19*; α(M)=0.0296 *5* α(N)=0.00738 *11*; α(O)=0.001357 *20*; α(P)=9.17×10^{-5} *14*
		509.8 *5*	20 *7*	2503.8+x	(19$^-$)			
3130.4+y		395.8 *5*	100	2734.6+y	(21$^+$)	M1+E2	0.1572 *23*	α(K)=0.1296 *19*; α(L)=0.0212 *3*; α(M)=0.00491 *7* α(N)=0.001224 *18*; α(O)=0.000225 *4*; α(P)=1.530×10^{-5} *22*
3143.1+x		205.1		2938.1+x				
		269.8 *5*	100 *20*	2873.4+x	(20$^-$)	M1+E2		
		694.5		2448.6+x		E2		
3310.59+y	(23$^+$)	520.1 *3*	100	2790.50+y	(22$^+$)	M1+E2	0.0762	α(K)=0.0629 *9*; α(L)=0.01023 *15*; α(M)=0.00237 *4* α(N)=0.000589 *9*; α(O)=0.0001085 *16*; α(P)=7.39×10^{-6} *11*
3417.9+x	(22$^-$)	404.0 *3*	100 *33*	3013.9+x	(21$^-$)			
		609.8 *4*	57 *12*	2808.0+x	(20$^-$)	E2	0.01622	α(K)=0.01234 *18*; α(L)=0.00295 *5*; α(M)=0.000712 *10* α(N)=0.0001765 *25*; α(O)=3.09×10^{-5} *5*; α(P)=1.371×10^{-6} *20*
3547.6+x		404.7 *5*	100 *25*	3143.1+x		M1+E2		
		674.1 *5*	75 *10*	2873.4+x	(20$^-$)			
3567.6+y	(24$^+$)	257.1 *5*	20 *10*	3310.59+y	(23$^+$)			
		777.1 *3*	100 *10*	2790.50+y	(22$^+$)	E2	0.00958	α(K)=0.00755 *11*; α(L)=0.001554 *22*; α(M)=0.000369 *6* α(N)=9.16×10^{-5} *13*; α(O)=1.629×10^{-5} *23*; α(P)=8.37×10^{-7} *12*
3575.3+x		432.2 *5*	100	3143.1+x		M1+E2		
3735.2+x		861.8 *5*	100	2873.4+x	(20$^-$)			
3808.9+x	(23$^-$)	795 *1*	100	3013.9+x	(21$^-$)			
4127.6+y	(25$^+$)	560.1 *5*	100	3567.6+y	(24$^+$)			
4216.2+x		481.0 *5*	100	3735.2+x				
4385.9+y	(26$^+$)	258.7 *5*	60 *20*	4127.6+y	(25$^+$)			
		818.1 *5*	100 *20*	3567.6+y	(24$^+$)	E2	0.00861	α(K)=0.00682 *10*; α(L)=0.001367 *20*; α(M)=0.000324 *5* α(N)=8.04×10^{-5} *12*; α(O)=1.434×10^{-5} *21*; α(P)=7.56×10^{-7} *11*
4473.4+x		257.2 *5*	100	4216.2+x				
86.8+z	J+1	87.1 *5*	100	z	J	M1+E2	10.76 *23*	α(K)=8.81 *19*; α(L)=1.50 *4*; α(M)=0.347 *8* α(N)=0.0865 *19*; α(O)=0.0159 *4*; α(P)=0.001073 *24*
359.9+z	J+2	273.1 *1*	100	86.8+z	J+1	M1+E2	0.429	α(K)=0.353 *5*; α(L)=0.0584 *9*; α(M)=0.01353 *19* α(N)=0.00337 *5*; α(O)=0.000620 *9*; α(P)=4.20×10^{-5} *6*
		359.8 *3*	58 *13*	z	J	E2	0.0607	α(K)=0.0400 *6*; α(L)=0.01565 *23*; α(M)=0.00391 *6* α(N)=0.000965 *14*; α(O)=0.0001632 *24*; α(P)=4.35×10^{-6} *7*
457.1+z	J+3	97.7 *5*	14.3 *13*	359.9+z	J+2	M1+E2	7.75 *16*	α(K)=6.36 *13*; α(L)=1.072 *22*; α(M)=0.249 *5* α(N)=0.0620 *13*; α(O)=0.01140 *24*; α(P)=0.000769 *16*
		370.3 *1*	100	86.8+z	J+1	E2	0.0561	α(K)=0.0374 *6*; α(L)=0.01415 *20*; α(M)=0.00352 *5* α(N)=0.000871 *13*; α(O)=0.0001476 *21*; α(P)=4.07×10^{-6} *6*
729.5+z	J+4	272.4 *3*	100	457.1+z	J+3	M1+E2	0.432 *7*	α(K)=0.356 *5*; α(L)=0.0588 *9*; α(M)=0.01363 *20* α(N)=0.00340 *5*; α(O)=0.000625 *9*; α(P)=4.23×10^{-5} *6*

$^{188}_{79}Au_{109}$-8

Adopted Levels, Gammas (continued)

γ(^{188}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[&]	Comments
794.8+z	J+5	337.7 *1*	100	457.1+z	J+3	E2	0.0725	α(K)=0.0466 *7*; α(L)=0.0196 *3*; α(M)=0.00492 *7* α(N)=0.001215 *17*; α(O)=0.000204 *3*; α(P)=5.03×10^{-6} *7*
1215.7+z	J+6	420.8 *3*	100	794.8+z	J+5	M1+E2	0.1335	α(K)=0.1101 *16*; α(L)=0.0180 *3*; α(M)=0.00417 *6* α(N)=0.001038 *15*; α(O)=0.000191 *3*; α(P)=1.298×10^{-5} *19*
1287.9+z	J+7	493.1 *1*	100	794.8+z	J+5	E2	0.0267	α(K)=0.0195 *3*; α(L)=0.00552 *8*; α(M)=0.001349 *19* α(N)=0.000334 *5*; α(O)=5.77×10^{-5} *8*; α(P)=2.15×10^{-6} *3*
1806.0+z	J+8	518.2 *5*	100 *22*	1287.9+z	J+7	M1+E2	0.0770	α(K)=0.0635 *9*; α(L)=0.01033 *15*; α(M)=0.00239 *4* α(N)=0.000595 *9*; α(O)=0.0001095 *16*; α(P)=7.46×10^{-6} *11*
		590.2 *5*	67 *22*	1215.7+z	J+6	E2	0.01747	α(K)=0.01322 *19*; α(L)=0.00324 *5*; α(M)=0.000783 *12* α(N)=0.000194 *3*; α(O)=3.39×10^{-5} *5*; α(P)=1.468×10^{-6} *21*
1885.2+z	J+9	597.3 *1*	100	1287.9+z	J+7	E2	0.01700	α(K)=0.01289 *18*; α(L)=0.00313 *5*; α(M)=0.000756 *11* α(N)=0.000187 *3*; α(O)=3.28×10^{-5} *5*; α(P)=1.432×10^{-6} *20*
2483.2+z	J+10	598.0 *5*	100 *40*	1885.2+z	J+9			
		677.1 *5*	100 *40*	1806.0+z	J+8			
2572.4+z	J+11	687.2 *3*	100	1885.2+z	J+9	E2	0.01245	α(K)=0.00965 *14*; α(L)=0.00213 *3*; α(M)=0.000511 *8* α(N)=0.0001266 *18*; α(O)=2.24×10^{-5} *4*; α(P)=1.072×10^{-6} *15*
3328.9+z	J+13	756.5 *5*	100	2572.4+z	J+11	E2	0.01014	α(K)=0.00796 *12*; α(L)=0.001663 *24*; α(M)=0.000396 *6* α(N)=9.82×10^{-5} *14*; α(O)=1.744×10^{-5} *25*; α(P)=8.83×10^{-7} *13*
328.3+u	(12$^-$)	328.3 *3*	100	u	(10$^-$)	E2	0.0786	α(K)=0.0498 *7*; α(L)=0.0218 *4*; α(M)=0.00546 *8* α(N)=0.001348 *20*; α(O)=0.000226 *4*; α(P)=5.37×10^{-6} *8*
356.0+u	(11$^-$)	356.1 *5*	100	u	(10$^-$)	M1+E2	0.209 *8*	ce(K)/(γ+ce)=0.1423 *18*; ce(L)/(γ+ce)=0.0234 *4*; ce(M)/(γ+ce)=0.00541 *8* ce(N)/(γ+ce)=0.001348 *20*; ce(O)/(γ+ce)=0.000248 *4*; ce(P)/(γ+ce)=1.683×10^{-5} *25* α(K)=0.1719 *25*; α(L)=0.0282 *4*; α(M)=0.00654 *10* α(N)=0.001630 *24*; α(O)=0.000300 *5*; α(P)=2.03×10^{-5} *3*
688.2+u	(13$^-$)	332.2 *5*	100 *25*	356.0+u	(11$^-$)	E2	0.0760	α(K)=0.0484 *7*; α(L)=0.0208 *4*; α(M)=0.00522 *8* α(N)=0.001290 *20*; α(O)=0.000217 *4*; α(P)=5.22×10^{-6} *8*
		359.8 *5*	100 *25*	328.3+u	(12$^-$)	M1+E2	0.203	α(K)=0.1672 *25*; α(L)=0.0275 *4*; α(M)=0.00636 *10* α(N)=0.001585 *23*; α(O)=0.000292 *5*; α(P)=1.98×10^{-5} *3*
777.8+u	(14$^-$)	449.5 *3*	100	328.3+u	(12$^-$)	E2	0.0336	α(K)=0.0239 *4*; α(L)=0.00738 *11*; α(M)=0.00182 *3* α(N)=0.000450 *7*; α(O)=7.72×10^{-5} *11*; α(P)=2.64×10^{-6} *4*
1104.6+u	(15$^-$)	326.9 *5*	33 *17*	777.8+u	(14$^-$)	M1+E2	0.263	α(K)=0.217 *4*; α(L)=0.0357 *6*; α(M)=0.00826 *12* α(N)=0.00206 *3*; α(O)=0.000379 *6*; α(P)=2.57×10^{-5} *4*
		416.4 *5*	100 *17*	688.2+u	(13$^-$)	E2	0.0410	α(K)=0.0284 *4*; α(L)=0.00949 *14*; α(M)=0.00234 *4* α(N)=0.000580 *9*; α(O)=9.91×10^{-5} *15*; α(P)=3.12×10^{-6} *5*
1296.3+u	(16$^-$)	518.4 *5*	100	777.8+u	(14$^-$)	E2	0.0237	α(K)=0.01744 *25*; α(L)=0.00473 *7*; α(M)=0.001154 *17* α(N)=0.000286 *4*; α(O)=4.96×10^{-5} *7*; α(P)=1.93×10^{-6} *3*
1600.1+u	(17$^-$)	303.7 *5*	20 *6*	1296.3+u	(16$^-$)			
		495.5 *5*	100 *20*	1104.6+u	(15$^-$)	E2	0.0264	α(K)=0.0192 *3*; α(L)=0.00543 *8*; α(M)=0.001328 *19* α(N)=0.000329 *5*; α(O)=5.69×10^{-5} *9*; α(P)=2.13×10^{-6} *3*
1872.2+u	(18$^-$)	575.9 *5*	100	1296.3+u	(16$^-$)	E2	0.0185	α(K)=0.01392 *20*; α(L)=0.00347 *5*; α(M)=0.000841 *12* α(N)=0.000208 *3*; α(O)=3.64×10^{-5} *6*; α(P)=1.546×10^{-6} *22*

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Adopted Levels, Gammas (continued)

γ(^{188}Au) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. @	α &	Comments
2165.7+u	(19$^-$)	565.6 *5*	100	1600.1+u	(17$^-$)	E2	0.0193	α(K)=0.01446 *21*; α(L)=0.00366 *6*; α(M)=0.000887 *13* α(N)=0.000220 *4*; α(O)=3.83×10^{-5} *6*; α(P)=1.605×10^{-6} *23*
2502.9+u	(20$^-$)	630.7 *5*	100	1872.2+u	(18$^-$)	E2	0.01503	α(K)=0.01151 *17*; α(L)=0.00269 *4*; α(M)=0.000647 *10* α(N)=0.0001604 *23*; α(O)=2.82×10^{-5} *4*; α(P)=1.279×10^{-6} *18*
2790.3+u	(21$^-$)	624.6 *5*	100	2165.7+u	(19$^-$)			

† From 2010Fa19 (^{173}Yb(^{19}F,4nγ) E=86 MeV), unless otherwise noted.
‡ From ^{188}Hg ε decay.
# From ce data in ^{188}Hg ε decay using the BrIccMixing code.
@ For levels populated in (^{19}F,4nγ), assignments are from γ(θ) data (1992Ja01) and $R_{ADO}(\gamma)=I\gamma(40°)/I\gamma(98°)$ ratios (2010Fa19). $R_{ADO} > 1$ are expected for ΔJ = 2 E2 transitions, while $R_{ADO} < 1$ are expected for ΔJ = 1 dipole transitions. For levels populated in ^{188}Hg ε decay, assignments are from ce data.
& Additional information 5.
a Placement of transition in the level scheme is uncertain.

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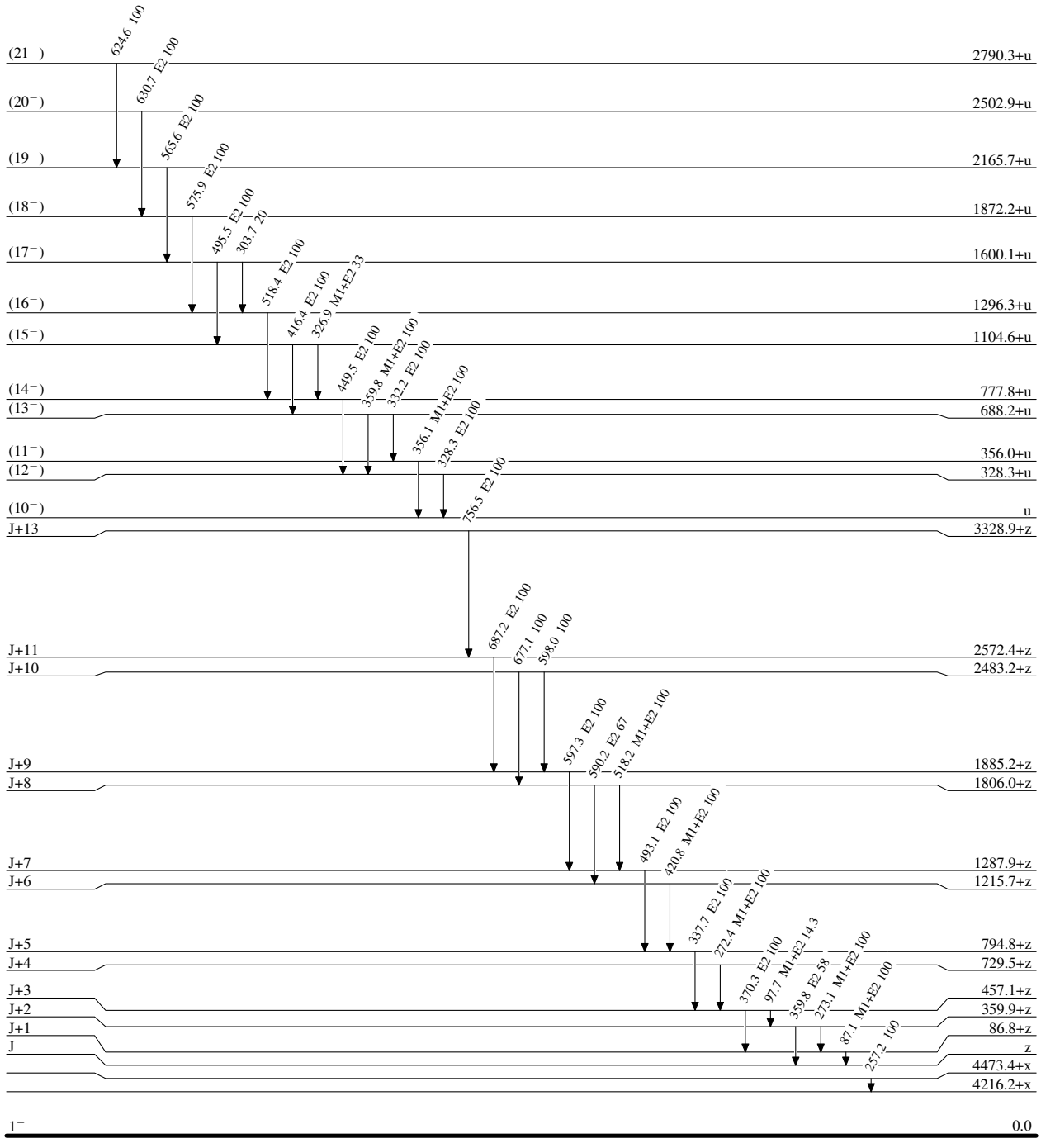
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



8.84 min *6*

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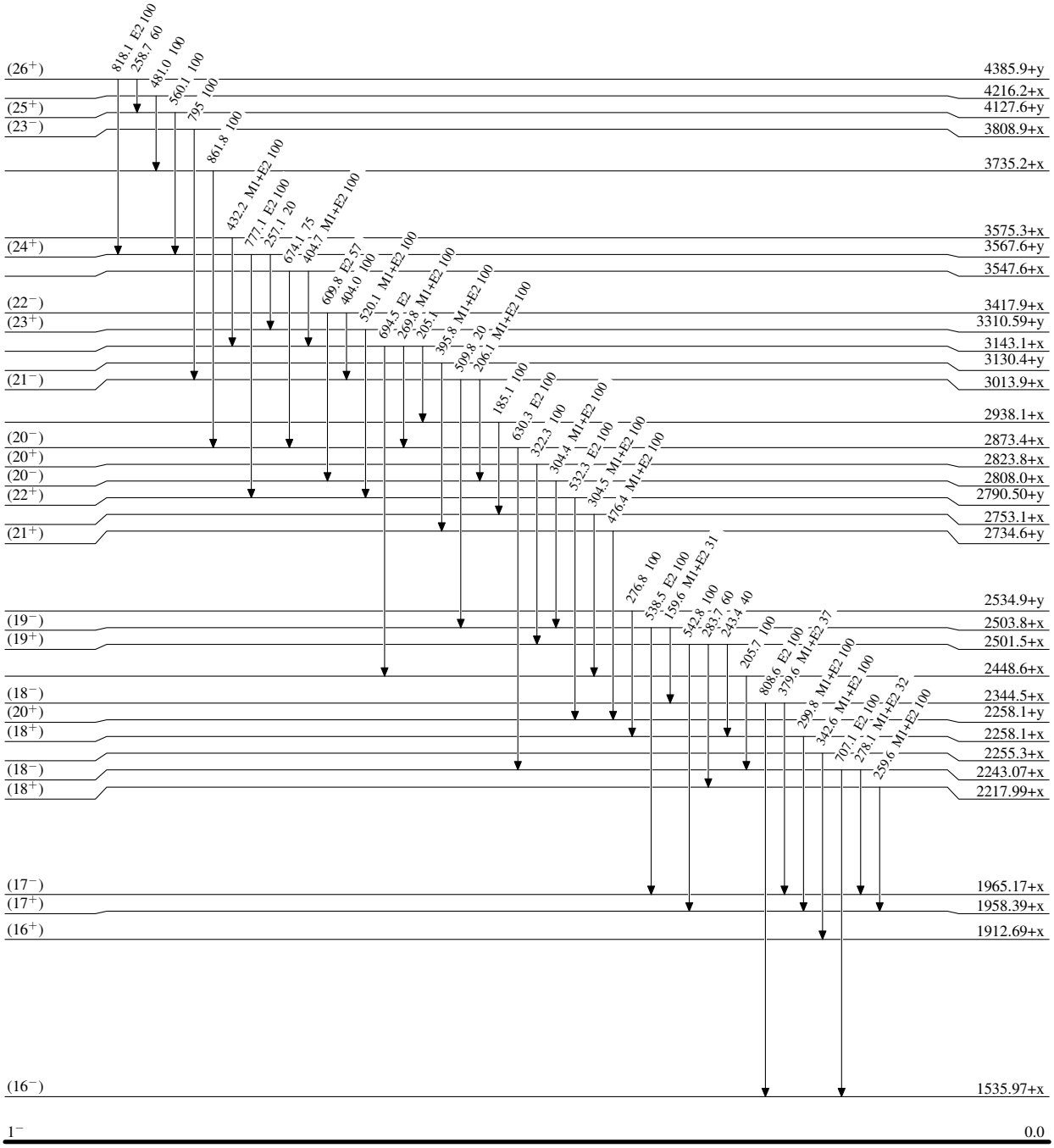
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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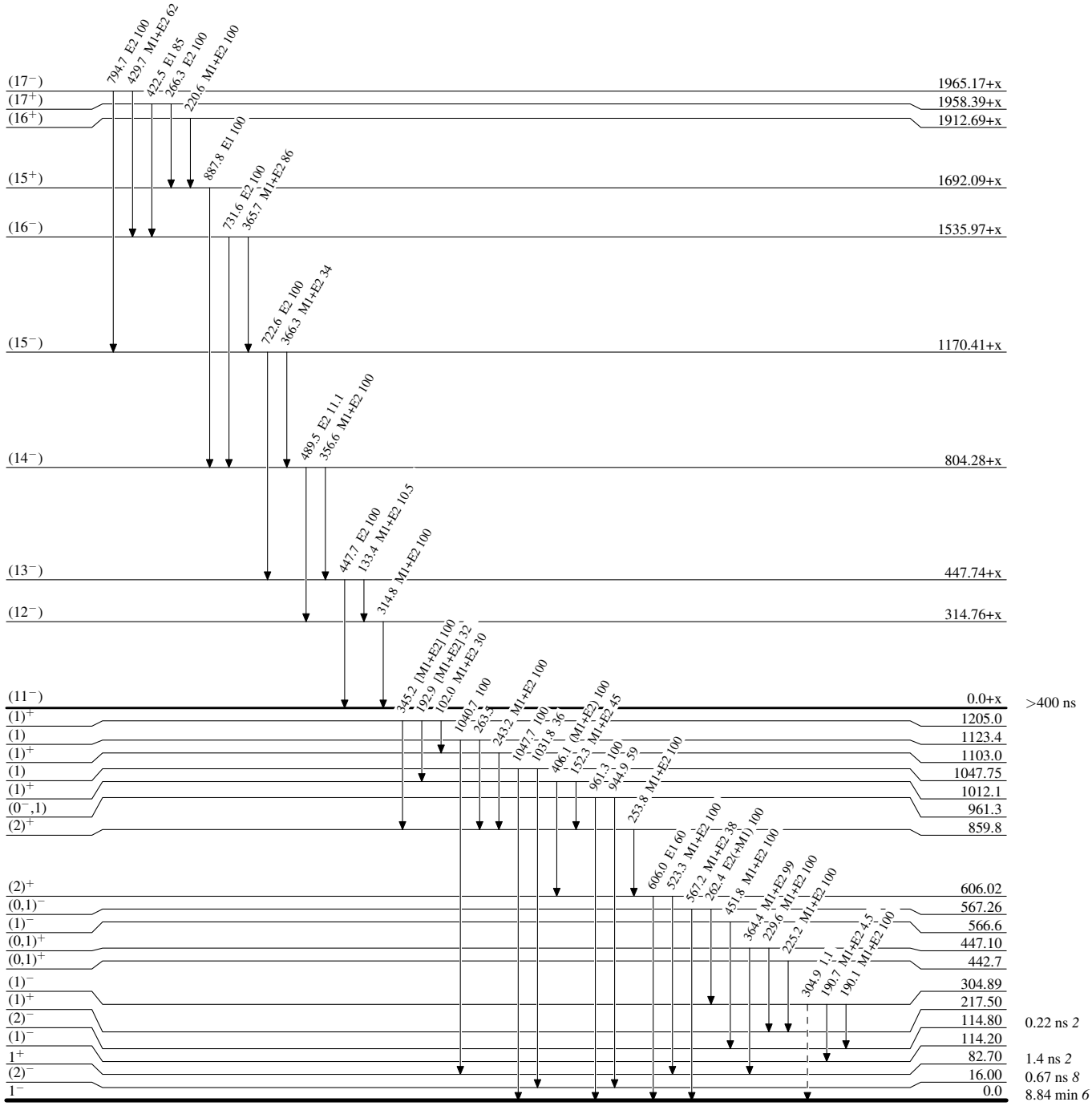
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{188}_{79}Au_{109}$

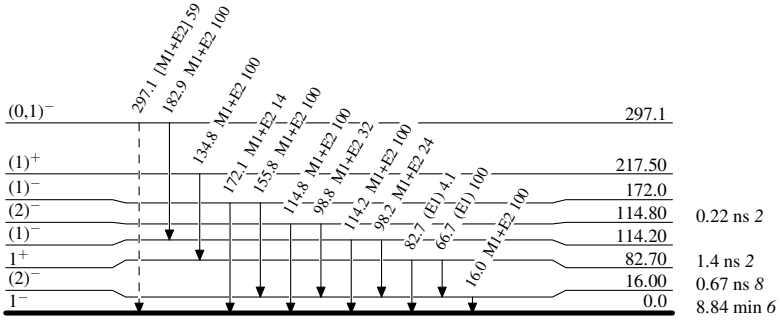
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



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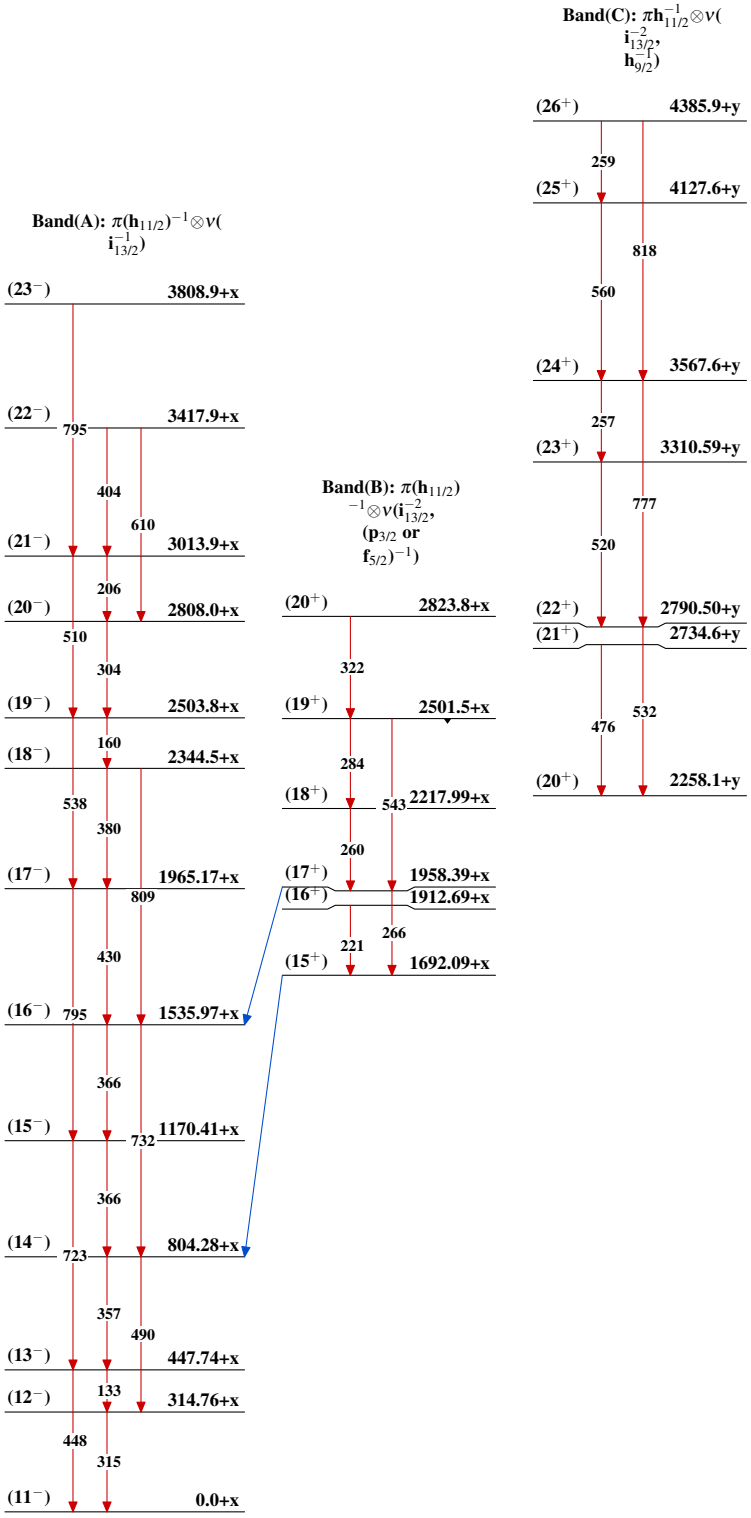
Adopted Levels, Gammas



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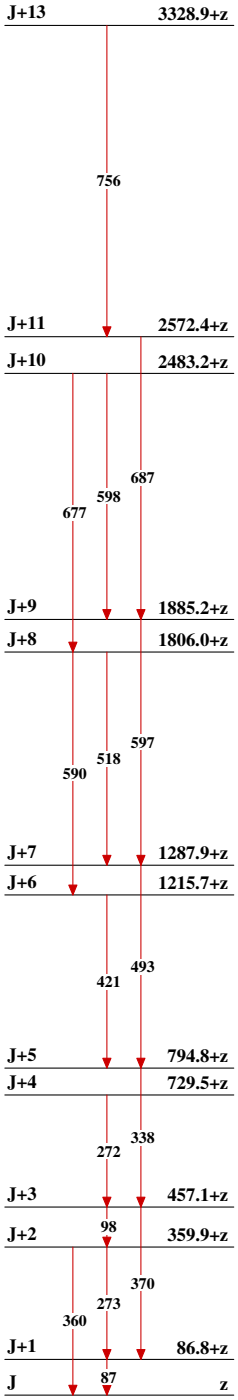
Adopted Levels, Gammas (continued)

Band(D): Possible configurations:
$\pi(h_{9/2})^{-1}\otimes\nu(p_{3/2}$ **or**
$f_{5/2})^{-1}$**) or**
$\pi(h_{11/2})^{-1}\otimes\nu(h_{9/2})^{-1}$



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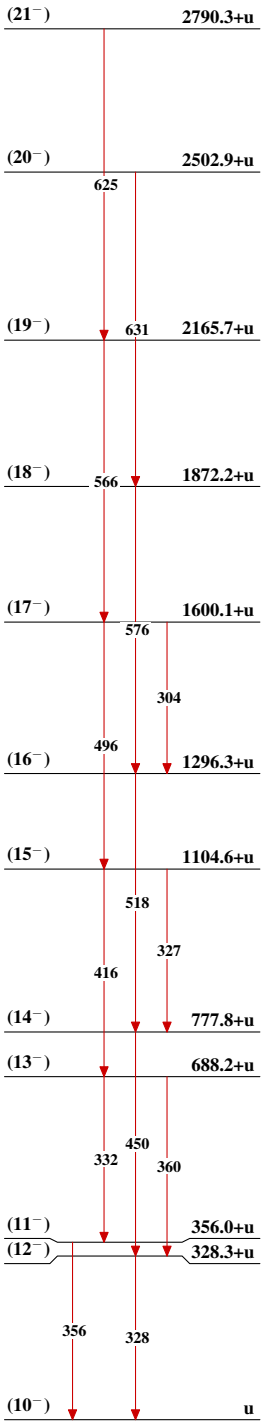
Adopted Levels, Gammas (continued)

Band(E): Possible configuration:
$\pi(h_{9/2})^{-1} \otimes \nu(i_{13/2})^{-1}$



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