Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 106,619 (2005)	1-Nov-2005

Q(β^-)=−5.69×10^3 *3*; S(n)=9.62×10^3 *4*; S(p)=1.82×10^3 *3*; Q(α)=5180 *5* 2012Wa38
Note: Current evaluation has used the following Q record −5690 30 *9620* 30 *1820* 30 *5180* 5 2003Au03.

^{185}Au Levels

Cross Reference (XREF) Flags

A ^{185}Hg ε decay
B (HI,xnγ)

E(level)[‡]	J$^\pi$[†]	$T_{1/2}$[h]	XREF	Comments
0.0[a]	5/2$^-$	4.25 min *6*	AB	%ε+%β^+=99.74 *6*; %α=0.26 *6* μ=+2.170 *17* $T_{1/2}$: weighted average of 4.3 min *2* (1953Ra02), 4.3 min *2* (1968De01), 4.3 min *1* (1968Si01), 4.2 min *2* (1970FiZZ), 4.2 min *3* (1970Ha18), and 4.2 min *1* (1995Bi01,1991Bi04). J$^\pi$: J from atomic beam (1980Ek04). Calculated μ≈2.3 (assuming a 5/2,1/2[541] Nilsson state mixed with the 5/2,3/2[532] by the Coriolis interaction) agrees with experimental μ. %α: From 1995Bi01. %α=0.10 *3* was deduced from an α-particle spectrum with ^{185}Hg and ^{185}Au (1970Ha18), and using evaluator's adopted %α(^{185}Hg)=6 *1*. 1970Ha18 report %α=0.093 *20*, using %α(^{185}Hg)=5.5 *7*. These values may have not been corrected for the ε decay of ^{185}Au (6.8 min), and for the atomic vacancies created by internal conversion (1991Bi04). %α=0.7 *1* (1991Bi04). μ: Resonance ionization mass spectroscopy (1989Wa11). Other values: +2.17 *3*, resonance ionization mass spectroscopy (1987Wa06, 1987Wa23); 2.22 *14*, static (low-temperature) nuclear orientation (1985Va07, 1989Ra17). Others: 1987WaZO, 1987VaZR, 1987Wo04. $<r^2>^{1/2}$=5.429 fm 4 for ^{185}Au based on a global fit to charge radius data for all nuclides (2004An14).
0.0+x		6.8 min *3*	AB	%ε+%β^+<100; %IT=? $T_{1/2}$: from multiscaling of delayed γ's (1970FiZZ). Other value: 7 min (1960Al20). ε decay was determined from observation of Pt K x-rays. A 145-keV γ ray (with ε or IT decay) was measured by 1970FiZZ.
8.9[a] *1*	(9/2)$^-$	4.8 ns *4*	AB	J$^\pi$: (E2) to 5/2$^-$; band structure. $T_{1/2}$: from ce ce(t) (1983Be48).
23.6[e] *1*	(1/2)$^+$		A	J$^\pi$: 23.6γ M2 to 5/2$^-$; band head of K^π=1/2$^+$ rotational band.
35.78 *5*	(3/2)$^-$	0.54 ns *5*	A	$T_{1/2}$: from ce ce(t) (1985Ab03). J$^\pi$: 35.7γ M1+E2 to (5/2)$^-$.
40.8[f] *1*	(3/2)$^+$	7 ns *2*	A	$T_{1/2}$: from ce ce(t) (1983Be48). J$^\pi$: 17.2γ M1+E2 to (1/2)$^+$; band head of K^π=3/2$^+$ rotational band.
107.5[b] *1*	(7/2)$^-$	0.37 ns *4*	AB	$T_{1/2}$: from ce ce(t) (1983Be48). J$^\pi$: 98.5γ M1 to (9/2)$^-$, 107.4γ M1+E2 to 5/2$^-$; band structure.
213.7[e] *1*	(3/2)$^+$		A	J$^\pi$: 190.1γ M1(+E2) to (1/2)$^+$; band structure.
220.1[&] *1*	(11/2$^-$)	26 ns *2*	AB	$T_{1/2}$: from ce ce(t). The large Weisskopf hindrance of 2.1×10^4 for the 211-keV M1 transition to the (9/2$^-$) level may be explained by a change from an oblate to a prolate nuclear shape between the initial and final states. Similar hindrances for this transition have been observed in other odd-A Au isotopes (1983Be48). J$^\pi$: 211.2γ M1 to (9/2$^-$). K^π=1/2$^-$, $h_{11/2}$ rotational band.

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Adopted Levels, Gammas (continued)

^{185}Au Levels (continued)

E(level)[‡]	Jπ[†]	$T_{1/2}$[h]	XREF	Comments
221.3[a] *1*	(13/2)$^-$	116 ps *+11−10*	AB	Jπ: 212.5γ E2 to (9/2)$^-$; band structure.
233.9[g] *1*	(5/2)$^+$		A	Jπ: 193.0γ M1+E2 to (3/2)$^+$, 210.4γ (E2) to (1/2)$^+$; band structure.
258.7 *7*	(3/2,5/2)$^-$		A	Jπ: 258.7γ M1 to 5/2$^-$, 223γ M1+E2 to (3/2)$^-$.
280.0 *1*	(1/2)$^-$		A	Jπ: 244.2γ M1 to (3/2)$^-$, 280γ (E2) to 5/2$^-$.
288.5 *1*	5/2$^-$		A	Jπ: 288.7γ E0+(M1) to 5/2$^-$.
291.1[e] *2*	(5/2)$^+$		A	Jπ: 250.3γ M1 to (3/2)$^+$; band structure.
301.2[b] *1*	(11/2)$^-$		AB	Jπ: 292.4γ M1+E2 to (9/2)$^-$, 193.7γ E2 to (7/2)$^-$.
322.0 *6*	(9/2)$^-$		A	Jπ: 313γ E0+M1 to (9/2)$^-$.
330.3 *1*	(7/2)$^-$		A	Jπ: 321.4γ M1(+E2) to (9/2$^-$), 330.2γ M1(+E2) to 5/2$^-$.
388.0 *1*	(3/2)$^-$		A	Jπ: 107.8γ M1+E2 to (1/2)$^-$; 388.3 M1 to 5/2$^-$.
429.8? *2*	3/2$^-$,5/2$^-$,7/2$^-$		A	Jπ: 429.8γ E2+M1 to 5/2$^-$.
439.5[f] *2*	(7/2)$^+$		A	Jπ: 206γ M1+E2 to (5/2)$^+$; band structure.
490.2 *3*	(7/2)$^-$		A	Jπ: 270γ E2 to (11/2$^-$), 199γ E1 to (5/2)$^+$.
535.5 *2*	(5/2,7/2,9/2)$^-$		A	Jπ: 205.2γ M1(+E2) to (7/2)$^-$.
544.0[a] *2*	(17/2)$^-$	13.5 ps *+10−8*	AB	Jπ: 322.7γ E2 to (13/2)$^-$; band structure.
572.1 *2*	3/2$^-$,5/2$^-$,7/2$^-$		A	Jπ: 283.4γ M1(+E2) to 5/2$^-$.
583.0[g] *2*	(9/2)$^+$		A	Jπ: 349.0γ E2 to (5/2)$^+$; band structure.
595.8 *2*	(1/2,3/2)$^-$		A	Jπ: 313.2γ M1(+E2) to (1/2)$^-$.
616.6[b] *2*	(15/2)$^-$		AB	Jπ: 315.3γ E2 to (11/2)$^-$; band structure.
648	(13/2)$^-$		A	Jπ: 426γ E0+M1 to (13/2)$^-$.
659.7 *3*	$^-$		A	Jπ: 124.1γ M1+E2 to (5/2,7/2,9/2)$^-$.
681.1 *2*	(13/2$^-$)		A	Jπ: 461.0γ M1+E2 to (11/2$^-$).
682.3[&] *3*	(15/2$^-$)		AB	Jπ: 462.2γ E2 to (11/2$^-$); band structure.
712.0 *3*	(11/2$^-$)		A	Jπ: 492γ E0+M1 to (11/2$^-$).
770	(9/2$^-$)		A	Jπ: γ to (7/2)$^-$ and (11/2$^-$) states.
776.5[c] *2*	(15/2$^-$)		AB	Jπ: The 530.2 γ from the (27/2$^-$) state of the K^π=5/2$^-$ band to the 1564.5 level and the 485.2 E2 γ from the 1994.6 level to the (23/2)$^-$ state of the K^π=5/2$^-$ band, and the 556.6 γ from the 1994.6 level to the (25/2)$^-$ state of the K^π=5/2$^-$ band establish the J^π's of the 1564.5 as (23/2$^-$) and 1994.6 as (27/2$^-$). From cascade information and band structure, plus 555.2 γ to (13/2$^-$) of the K^π=5/2$^-$ band, the J^π of this level is determined.
789.7[f] *3*	(11/2$^+$)		A	Jπ: 350γ (E2) to (7/2)$^+$; band structure.
836.3 *2*			A	
838.2 *3*			A	
860.3[d] *2*	(13/2$^+$)		AB	Jπ: 243.6 γ to (15/2)$^-$, 558.9 γ to (11/2)$^-$, 639.2 γ to (13/2)$^-$, which are members of the K=5/2$^-$ g. s. band. Band head of K^π=13/2$^+$ $i_{13/2}$ rotational band.
863.4 *3*	(1/2$^-$,3/2$^-$,5/2$^-$)		A	Jπ: 267.6γ M1+E2 to (1/2,3/2)$^-$.
953.8[a]	(21/2)$^-$	4.3 ps *4*	B	Jπ: 409.2γ E2 to (17/2)$^-$; band structure.
954.8 *2*			A	
1028.5 *2*	(13/2$^-$)		A	Jπ: 347γ (E0+M1) to (13/2$^-$).
1029.4[b]	(19/2)$^-$		B	Jπ: 412.7γ E2 to (15/2)$^-$; band structure.
1040.7[d] *2*	(17/2$^+$)		AB	Jπ: 424.1γ D to (15/2)$^-$, 180.5 E2 to (13/2$^+$); band structure.
1060.2 *2*			A	
1072.4 *3*	(3/2$^-$)		A	Jπ: Based on energy systematics of the same J^π=3/2$^-$ state in ^{187}Au (1056 keV) and ^{189}Au (1059 keV) (1988Ko22).
1136.2[c]	(19/2$^-$)		B	Jπ: 360.1γ to (15/2)$^-$; band structure.
1209.4[#] *3*	(17/2$^-$)		AB	Jπ: 527.1 γ to (15/2$^-$); possible (17/2$^-$) member of K^π=1/2$^-$, configuration=h11/2 (1986La08). (1988Ko22).
1229.3 *3*			A	
1233?	(5/2$^-$)		A	Jπ: By analogy with J^π=5/2$^-$ state in ^{189}Au(1254 keV) (1988Ko22).
1298.3 *3*			A	

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Adopted Levels, Gammas (continued)

^{185}Au Levels (continued)

E(level)[‡]	Jπ[†]	$T_{1/2}$[h]	XREF	Comments
1309.7 *2*			A	
1328.1[d]	(21/2$^+$)	16.2 ps *12*	B	Jπ: 287.3γ E2 to (17/2$^+$); band structure.
1396.9[&]	(19/2$^-$)		B	Jπ: 714.2 γ to (15/2$^-$); band structure.
1438.1[a]	(25/2)$^-$	<3.5 ps	B	Jπ: 484.3γ E2 to (21/2)$^-$; band structure.
1509.4[b]	(23/2)$^-$		B	Jπ: 480.0γ E2 to (19/2)$^-$; band structure.
1548.8[@]			B	
1564.5[c]	(23/2$^-$)		B	Jπ: See comments for 776.5 level.
1705.8[d]	(25/2$^+$)	4.8 ps *3*	B	Jπ: 377.7γ E2 to (21/2$^+$); band structure.
1761.2[#]			B	
1986.3[a]	(29/2)$^-$		B	Jπ: 548.2γ E2 to (25/2)$^-$; band structure.
1994.6[c]	(27/2$^-$)		B	Jπ: See comments for 776.5 level.
2025.2[&]			B	Jπ: possible (23/2$^-$) member of K^π=1/2$^-$, configuration=h11/2 (1986La08).
2095.0[b]	(27/2)$^-$		B	Jπ: 585.3γ to (23/2)$^-$; band structure.
2146.4[d]	(29/2$^+$)	2.77 ps *+10−12*	B	Jπ: 440.6γ E2 to (25/2$^+$); band structure.
2302.5[#]			B	
2503[c]	(31/2$^-$)		B	Jπ: 509γ to (27/2$^-$); band structure.
2561.7[@]			B	
2584.3[a]	(33/2)$^-$		B	Jπ: 598.0γ to (29/2)$^-$; band structure.
2619.3[d]	(33/2$^+$)	2.31 ps *+13−20*	B	Jπ: 472.9γ E2 to (29/2$^+$); band structure.
2687.0[b]	(31/2)$^-$		B	Jπ: 592.0γ to (27/2)$^-$; band structure.
2831.6[#]			B	
3037.3[@]			B	
3059[c]	(35/2$^-$)		B	Jπ: 555.5γ to (31/2$^-$); band structure.
3117.3[d]	(37/2$^+$)	<2.9 ps	B	Jπ: 498.0γ E2 to (33/2$^+$); band structure.
3225.1[a]	(37/2)$^-$		B	Jπ: 640.8γ to (33/2)$^-$; band structure.
3309.7[b]	(35/2)$^-$		B	Jπ: 622.7γ to (31/2)$^-$; band structure.
3365.0[#]			B	
3657[c]	(39/2$^-$)		B	XREF: B(3657.0). Jπ: 598.6γ to (35/2$^-$); band structure.
3657.3[d]	(41/2$^+$)		B	XREF: B(3657.3). Jπ: 540.0γ E2 to (37/2$^+$); band structure.
3898.1[a]	(41/2)$^-$		B	Jπ: 673.0γ to (37/2)$^-$; band structure.
3945.8[b]	(39/2)$^-$		B	Jπ: 636.1γ to (35/2)$^-$; band structure.
4244.7[d]	(45/2$^+$)		B	Jπ: 587.4γ to (41/2$^+$); band structure.
4293[c]	(43/2$^-$)		B	Jπ: 635.4γ to (39/2$^-$); band structure.
4612[a]	(45/2)$^-$		B	Jπ: 714γ to (41/2)$^-$; band structure.
4872.9[d]	(49/2$^+$)		B	Jπ: 628.2γ to (45/2$^+$); band structure.
4967[c]	(47/2$^-$)		B	Jπ: 674γ to (43/2$^-$); band structure.
5372[a]	(49/2)$^-$		B	Jπ: 760γ to (45/2)$^-$; band structure.
5545[d]	(53/2$^+$)		B	Jπ: 672γ to (49/2$^+$); band structure.
5695[c]	(51/2$^-$)		B	Jπ: 728γ to (47/2$^-$); band structure.
6273[d]	(57/2$^+$)		B	Jπ: 728γ to (53/2$^+$); band structure.
7038[d]	(61/2$^+$)		B	Jπ: 765γ to (57/2$^+$); band structure.

[†] Spin and parity arguments are based on the energy systematics of rotational bands in ^{185}Au, ^{187}Au, and ^{189}Au (1988Ko22), supplemented by γ-ray multipolarities and decay patterns, and γ(θ) and γγ(θ) measured in (HI,xnγ) reactions. Specific arguments based on γ-ray multipolarities are given with individual levels. ^{185}Au belongs to a transitional region where oblate

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Adopted Levels, Gammas (continued)

^{185}Au Levels (continued)

and prolate nuclear shapes coexist. Measurements of the hyperfine structure and isotope shift of ^{185}Au confirm its large ($\beta \approx 0.25$) g.s. prolate deformation (1989Wa11).

‡ From ^{185}Hg ε decay, except for levels populated by (HI,xnγ) only.

Band(A): $K^{\pi}=11/2^{-}$ rotational band. Configuration=h11/2. Prolate shape. $\alpha=+1/2$.

@ Band(a): $K^{\pi}=11/2^{-}$ rotational band. Configuration=h11/2. Prolate shape. $\alpha=-1/2$.

& Band(B): $K^{\pi}=1/2^{-}$ rotational band. Configuration=h11/2. Oblate shape.

[a] Band(C): $K^{\pi}=5/2^{-}$ g.s. rotational band. Configuration=h9/2. Prolate shape. $\alpha=+1/2$.

[b] Band(c): $K^{\pi}=5/2^{-}$ g.s. rotational band. Configuration=h9/2. Prolate shape. $\alpha=-1/2$.

[c] Band(D): $K^{\pi}=(1/2^{-})$ rotational band. Configuration=f7/2. Prolate shape.

[d] Band(E): $K^{\pi}=13/2^{+}$ rotational band. Configuration=i13/2. Prolate shape.

[e] Band(F): $K^{\pi}=1/2^{+}$ rotational band. Configuration=s1/2. Prolate shape.

[f] Band(G): $K^{\pi}=3/2^{+}$ rotational band. Configuration=d3/2. Prolate shape. $\alpha=+1/2$.

[g] Band(g): $K^{\pi}=3/2^{+}$ rotational band. Configuration=d3/2. Prolate shape. $\alpha=-1/2$.

[h] From recoil-distance method (2004Jo07), unless otherwise stated.

γ(^{185}Au)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ[@]	α[b]	Comments
8.9	(9/2)$^-$	8.9	100	0.0	5/2$^-$	(E2)		169000	B(E2)(W.u.)=200 *120* E_γ: from ce data, magnetic spectrometer (1983Be48,1987KiZV). Mult.: reported by 1987KiZV from ce data. B(E2)(W.u.)=200 *120* is consistent with the expected collective E2 character of this transition.
23.6	(1/2)$^+$	23.6 *1*	100	0.0	5/2$^-$	M2[&]		1.45×10^4	
35.78	(3/2)$^-$	35.75 *5*	100	0.0	5/2$^-$	M1+E2[&]	0.5	155	B(M1)(W.u.)=0.0029; B(E2)(W.u.)=920
40.8	(3/2)$^+$	17.17 *3*	100	23.6	(1/2)$^+$	M1+E2[&]	0.13 *6*	6.6×10^2 *38*	B(M1)(W.u.)=0.0009 *6*; B(E2)(W.u.)=22 *+24−17*
107.5	(7/2)$^-$	98.5 *1*	100 *30*	8.9	(9/2)$^-$	M1[&]		7.88	B(M1)(W.u.)=0.0053 *22*
		107.4 *1*	48 *12*	0.0	5/2$^-$	M1+E2[&]	1.2	4.84	B(M1)(W.u.)=0.0010; B(E2)(W.u.)=35
213.7	(3/2)$^+$	190.1 *1*	100	23.6	(1/2)$^+$	M1(+E2)[&]	0.5 *+3−5*	1.06 *16*	
220.1	(11/2$^-$)	211.2 *1*	100	8.9	(9/2)$^-$	M1[&]		0.905	B(M1)(W.u.)=4.7×10^{-5} *4*
221.3	(13/2)$^-$	212.5 *1*	100	8.9	(9/2)$^-$	E2[&]		0.309	B(E2)(W.u.)=0.86 *8*
233.9	(5/2)$^+$	193.0 *1*	100 *10*	40.8	(3/2)$^+$	M1+E2[&]	1.0	0.795	
		210.4 *1*	30 *3*	23.6	(1/2)$^+$	(E2)[&]		0.319	
258.7	(3/2,5/2)$^-$	222.8[d] *1*	100.0[d] *6*	35.78	(3/2)$^-$	M1+E2[&]	0.58	0.650	
		258.7 *1*	98 *10*	0.0	5/2$^-$	M1[&]		0.516	
280.0	(1/2)$^-$	244.2 *1*	100 *10*	35.78	(3/2)$^-$	M1[&]		0.605	
		280.1[#e] *2*	21.4 *24*	0.0	5/2$^-$	(E2)[&]		0.127	
288.5	5/2$^-$	181.0 *1*	43 *5*	107.5	(7/2)$^-$				
		288.7 *2*	100 *10*	0.0	5/2$^-$	E0+(M1)[&]		≈0.4[‡]	
291.1	(5/2)$^+$	250.3 *2*	100	40.8	(3/2)$^+$	M1[&]		0.565	
301.2	(11/2)$^-$	193.7 *1*	39 *4*	107.5	(7/2)$^-$	E2[&]		0.424	
		292.4 *2*	100 *10*	8.9	(9/2)$^-$	M1+E2[&]	1.5	0.191	
322.0	(9/2)$^-$	313.2	100 *10*	8.9	(9/2)$^-$	E0+M1[&]			
		322		0.0	5/2$^-$	E2[&]		0.084	
330.3	(7/2)$^-$	222.8[d] *1*	40[d] *4*	107.5	(7/2)$^-$	M1+E2[&]		0.5 *3*	
		321.4 *2*	49 *5*	8.9	(9/2)$^-$	M1+E2[&]		0.19 *10*	
		330.2 *2*	100 *10*	0.0	5/2$^-$	M1+E2[&]		0.17 *10*	
388.0	(3/2)$^-$	107.8 *1*	46 *15*	280.0	(1/2)$^-$	M1+E2[&]	0.58	5.52	
		129.1 *1*	100 *10*	258.7	(3/2,5/2)$^-$	M1+E2[&]	0.65	3.11	
		352.0		35.78	(3/2)$^-$				

$^{185}_{79}$Au$_{106}$-5

Adopted Levels, Gammas (continued)

γ(^{185}Au) (continued)

E$_i$(level)	J$^{\pi}_i$	E$_{\gamma}$[†]	I$_{\gamma}$[†]	E$_f$	J$^{\pi}_f$	Mult.[@]	δ[@]	α[b]	Comments
388.0	(3/2)$^-$	388.3 *2*	21.4 *23*	0.0	5/2$^-$	M1[&]		0.172	
429.8?	3/2$^-$,5/2$^-$,7/2$^-$	429.8[#e] *2*	100	0.0	5/2$^-$	E2+M1[&]			
439.5	(7/2)$^+$	205.7 *2*	48 *5*	233.9	(5/2)$^+$	M1+E2[&]		0.7 *4*	
		398.7 *2*	100 *10*	40.8	(3/2)$^+$	E2[&]		0.0464	
490.2	(7/2)$^-$	199.1		291.1	(5/2)$^+$	E1[&]		0.0734	
		270.1 *2*	100 *10*	220.1	(11/2$^-$)	E2[&]		0.142	
535.5	(5/2,7/2,9/2)$^-$	205.2 *2*	100	330.3	(7/2)$^-$	M1(+E2)[&]		0.7 *4*	
544.0	(17/2)$^-$	322.7 *2*	100	221.3	(13/2)$^-$	E2		0.0835	B(E2)(W.u.)=1.10 *8*
572.1	3/2$^-$,5/2$^-$,7/2$^-$	283.4 *2*	100 *10*	288.5	5/2$^-$	M1(+E2)[&]		0.26 *14*	
		572.2[c#e] *2*	37[c] *4*	0.0	5/2$^-$				
583.0	(9/2)$^+$	143[a]		439.5	(7/2)$^+$				
		292[a]		291.1	(5/2)$^+$				
		349.0 *2*	100 *10*	233.9	(5/2)$^+$	E2[&]		0.0668	
595.8	(1/2,3/2)$^-$	313.2	8	280.0	(1/2)$^-$	M1(+E2)[&]		0.20 *11*	
		572.2[c#e] *2*	30[c] *3*	23.6	(1/2)$^+$				
616.6	(15/2)$^-$	315.3 *2*	100 *10*	301.2	(11/2)$^-$	E2		0.0894	
		395.2 *2*	42 *4*	221.3	(13/2)$^-$	E2(+M1)[&]		0.11 *6*	
648	(13/2)$^-$	326		322.0	(9/2)$^-$	E2[&]		0.0811	
		426.6	100 *11*	221.3	(13/2)$^-$	E0+M1[&]			
659.7	$^-$	124.1 *2*	100	535.5	(5/2,7/2,9/2)$^-$	M1+E2[&]	0.65	3.51	
681.1	(13/2$^-$)	461.0 *2*	100	220.1	(11/2$^-$)	M1+E2[&]		0.07 *4*	
682.3	(15/2$^-$)	462.2 *2*	100	220.1	(11/2$^-$)	E2[&]		0.0317	
712.0	(11/2$^-$)	491.9 *2*	100	220.1	(11/2$^-$)	E0+M1[&]		0.21[‡] *6*	
770	(9/2$^-$)	280		490.2	(7/2)$^-$				
		550		220.1	(11/2$^-$)				
776.5	(15/2$^-$)	555.2 *2*	100	221.3	(13/2)$^-$				
789.7	(11/2$^+$)	350.2 *2*	100	439.5	(7/2)$^+$	(E2)[&]		0.0661	
836.3		827.3[#e] *2*	25 *3*	8.9	(9/2)$^-$				I$_{\gamma}$: mixed with a γ ray from ^{181}Os.
		836.3 *2*	100 *9*	0.0	5/2$^-$				
838.2		178.5 *1*	100 *11*	659.7	$^-$				
		302.9 *2*	73 *7*	535.5	(5/2,7/2,9/2)$^-$				
860.3	(13/2$^+$)	243.6 *2*	25 *12*	616.6	(15/2)$^-$				Doublet. The most intense member (M1+E2) is unplaced.
		558.9 *2*	100 *10*	301.2	(11/2)$^-$				
		639.2 *2*	19.1 *19*	221.3	(13/2)$^-$				
863.4	(1/2$^-$,3/2$^-$,5/2$^-$)	267.6[#e] *2*	100	595.8	(1/2,3/2)$^-$	M1+E2[&]			

$^{185}_{79}Au_{106}$-6

γ(^{185}Au) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[@]	α[b]	Comments
953.8	(21/2)−	409.2 *3*	100	544.0	(17/2)−	E2	0.0433	B(E2)(W.u.)=1.11 +*11*−*8*
954.8		653.6 *2*	25.6 *23*	301.2	(11/2)−			
		674.7 *2*	100 *9*	280.0	(1/2)−			
1028.5	(13/2−)	347.5 *2*	100 *10*	681.1	(13/2−)	(E0+M1)[&]	0.21[‡]	
		808.4[#e] *2*	9.8 *8*	220.1	(11/2−)			
1029.4	(19/2)−	412.7 *3*		616.6	(15/2)−	E2	0.0423	
		484.9 *3*		544.0	(17/2)−			
1040.7	(17/2+)	180.5 *2*		860.3	(13/2+)	E2	0.543	
		264.6		776.5	(15/2−)	D		Mult.: from γ(θ) (1986La08). Level scheme requires E1.
		424.1 *2*	100 *11*	616.6	(15/2)−	D		
1060.2		1036.6[#e] *2*	100	23.6	(1/2)+			
1072.4	(3/2−)	582.2 *2*	100	490.2	(7/2)−			
1136.2	(19/2−)	360.1[#]	100	776.5	(15/2−)			
1209.4	(17/2−)	527.1[#] *2*	100	682.3	(15/2−)			
1229.3		369.0 *2*	100	860.3	(13/2+)			
1233?	(5/2−)	743	100	490.2	(7/2)−			
1298.3		438.0 *3*	100	860.3	(13/2+)			
1309.7		1286.1[#e] *2*	100	23.6	(1/2)+			
1328.1	(21/2+)	287.3 *3*		1040.7	(17/2+)	E2	0.118	B(E2)(W.u.)<1.74
		299.0 *5*		1029.4	(19/2)−			
1396.9	(19/2−)	714.2 *3*	100	682.3	(15/2−)			
1438.1	(25/2)−	484.3 *3*	100	953.8	(21/2)−	E2	0.0282	B(E2)(W.u.)>0.59
1509.4	(23/2)−	480.0 *3*	71	1029.4	(19/2)−	E2	0.0288	
		555.6 *3*	100	953.8	(21/2)−			
1548.8		338.7[#]	100	1209.4	(17/2−)			
1564.5	(23/2−)	428.3	100	1136.2	(19/2−)			
1705.8	(25/2+)	196.4[e]		1509.4	(23/2)−			
		377.7 *3*		1328.1	(21/2+)	E2	0.0536	B(E2)(W.u.)<1.54
1761.2		212.4[#]		1548.8				
		364.1[#]		1396.9	(19/2−)			
		551.5[#]		1209.4	(17/2−)			
1986.3	(29/2)−	548.2 *3*	100	1438.1	(25/2)−	E2	0.0210	
1994.6	(27/2−)	429.6[#]		1564.5	(23/2−)			
		485.2 *3*	100	1509.4	(23/2)−	E2	0.0281	
		556.6 *3*	100	1438.1	(25/2)−			
2025.2		263.9[#]		1761.2				
		476[#]		1548.8				
		628.0[#]		1396.9	(19/2−)			

$\gamma(^{185}Au)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[@]	α[b]	Comments
2095.0	(27/2)$^-$	530.2[#]		1564.5	(23/2$^-$)	E2	0.0227	
		585.3[#]		1509.4	(23/2)$^-$			
2146.4	(29/2$^+$)	440.6 *3*	100	1705.8	(25/2$^+$)	E2	0.0357	B(E2)(W.u.)=1.19 *+5−4*
2302.5		277.3[#]		2025.2				
		541.2[#]		1761.2				
2503	(31/2$^-$)	509[#]	100	1994.6	(27/2$^-$)			
2561.7		259.2[#]		2302.5				
		536.5[#]		2025.2				
2584.3	(33/2)$^-$	598.0 *3*	100	1986.3	(29/2)$^-$			
2619.3	(33/2$^+$)	472.9 *3*	100	2146.4	(29/2$^+$)	E2	0.0299	B(E2)(W.u.)=1.01 *+10−6*
2687.0	(31/2)$^-$	592.0[#]	100	2095.0	(27/2)$^-$			
2831.6		269.9[#]	100	2561.7				
3037.3		205.7[#]		2831.6				
		476[#]		2561.7				
3059	(35/2$^-$)	555.5[#]	100	2503	(31/2$^-$)			
3117.3	(37/2$^+$)	498.0 *3*	100	2619.3	(33/2$^+$)	E2	0.0263	B(E2)(W.u.)>0.63
3225.1	(37/2)$^-$	640.8 *3*	100	2584.3	(33/2)$^-$			
3309.7	(35/2)$^-$	622.7[#]	100	2687.0	(31/2)$^-$			
3365.0		327[#]	100	3037.3				
3657	(39/2$^-$)	598.6[#]	100	3059	(35/2$^-$)			
3657.3	(41/2$^+$)	540.0 *3*	100	3117.3	(37/2$^+$)	E2	0.0217	
3898.1	(41/2)$^-$	673.0[#]	100	3225.1	(37/2)$^-$			
3945.8	(39/2)$^-$	636.1[#]	100	3309.7	(35/2)$^-$			
4244.7	(45/2$^+$)	587.4 *3*	100	3657.3	(41/2$^+$)			
4293	(43/2$^-$)	635.4[#]	100	3657	(39/2$^-$)			
4612	(45/2)$^-$	714[#]	100	3898.1	(41/2)$^-$			
4872.9	(49/2$^+$)	628.2[#]	100	4244.7	(45/2$^+$)			
4967	(47/2$^-$)	674[#]	100	4293	(43/2$^-$)			
5372	(49/2)$^-$	760[#e]	100	4612	(45/2)$^-$			
5545	(53/2$^+$)	672[#]	100	4872.9	(49/2$^+$)			
5695	(51/2$^-$)	728[d#e]	≤100[d]	4967	(47/2$^-$)			
6273	(57/2$^+$)	728[d#e]	≤100[d]	5545	(53/2$^+$)			
7038	(61/2$^+$)	765[#e]	100	6273	(57/2$^+$)			

$^{185}_{79}Au_{106}$-8

γ(^{185}Au) (continued)

† From ^{185}Hg ε decay, except for γ rays measured in (HI,xnγ) only.

‡ Experimental α(K).

Placement in level scheme is uncertain.

@ From $\gamma(\theta)$, $\gamma\gamma(\theta)$ in (HI,xnγ), unless otherwise specified. Quadrupole transitions are assumed to be stretched E2.

& From ce data in ^{185}Hg ε decay.

[a] From level energy differences (1988Pa15).

[b] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

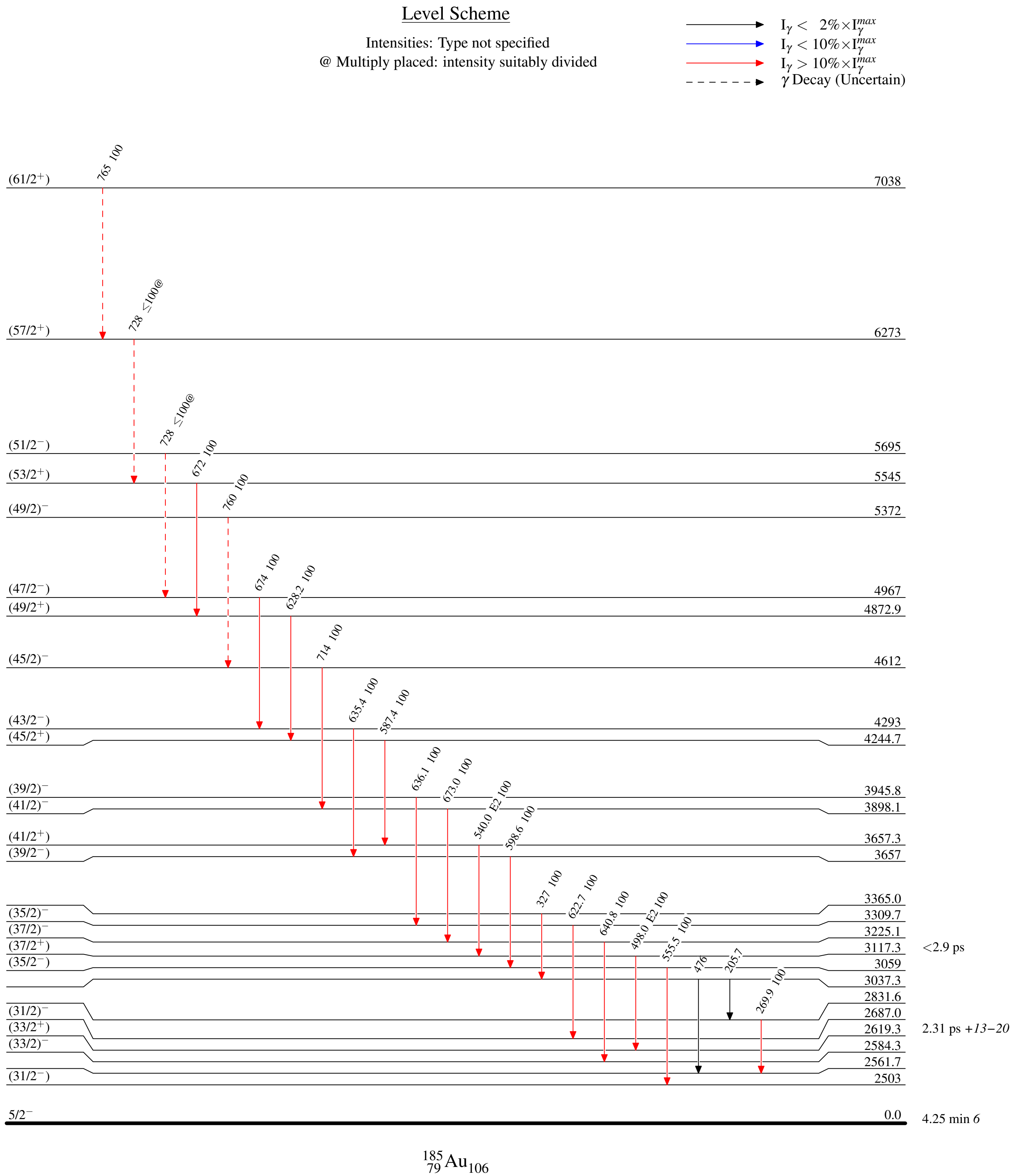
[c] Multiply placed with undivided intensity.

[d] Multiply placed with intensity suitably divided.

[e] Placement of transition in the level scheme is uncertain.

$^{185}_{79}$Au$_{106}$-9

Adopted Levels, Gammas



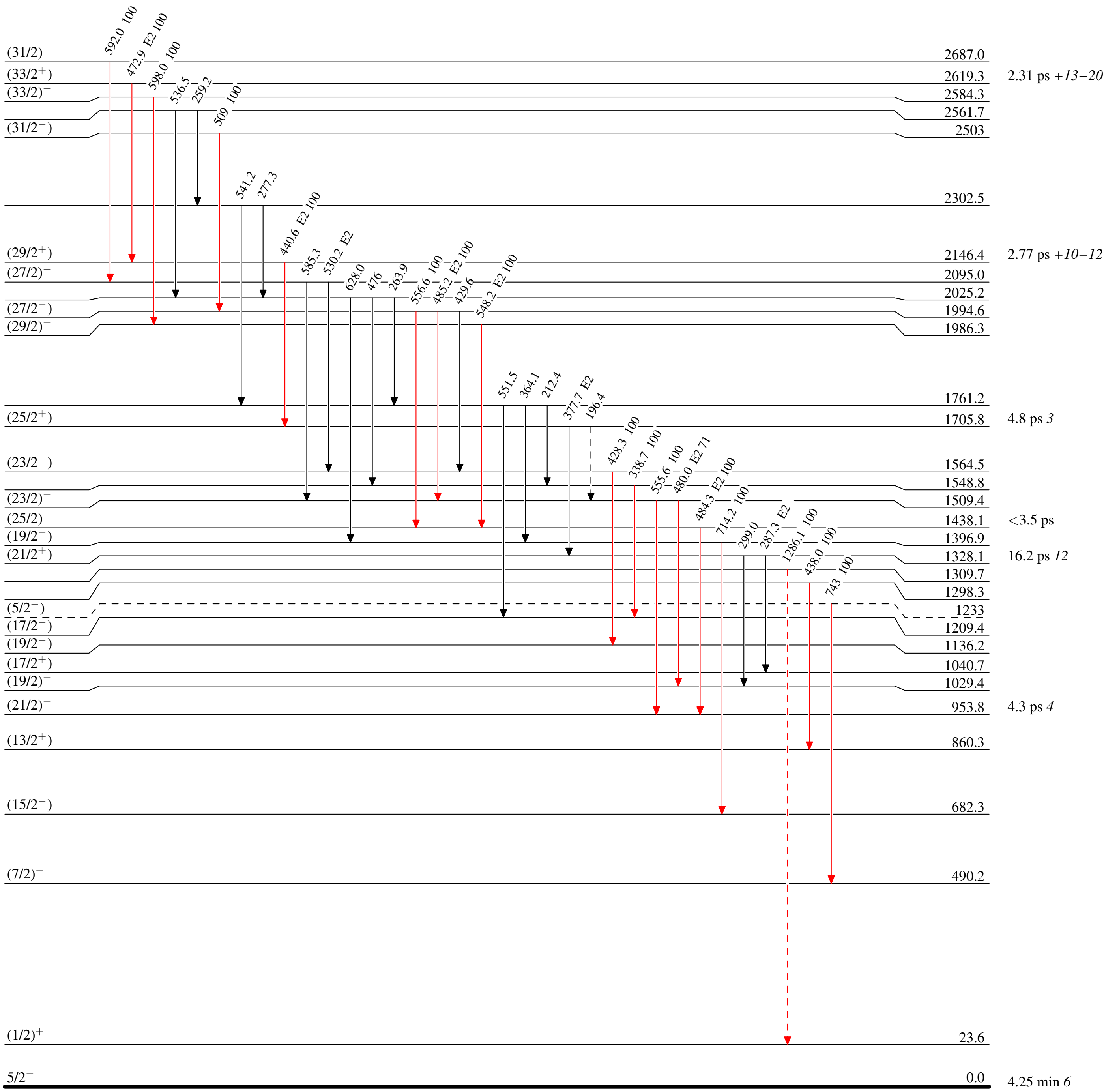
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
@ Multiply placed: intensity suitably divided

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



$^{185}_{79}Au_{106}$

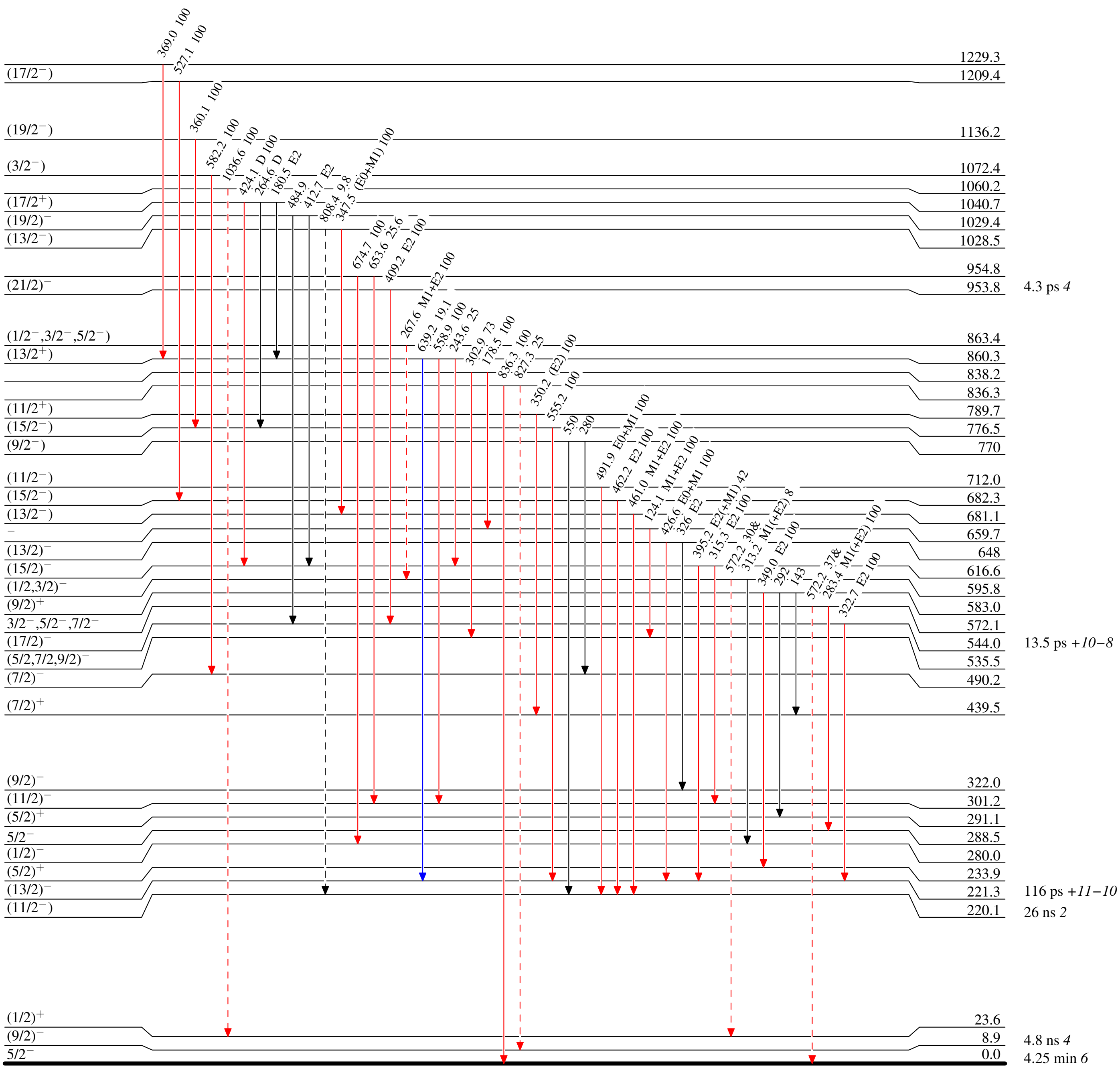
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)

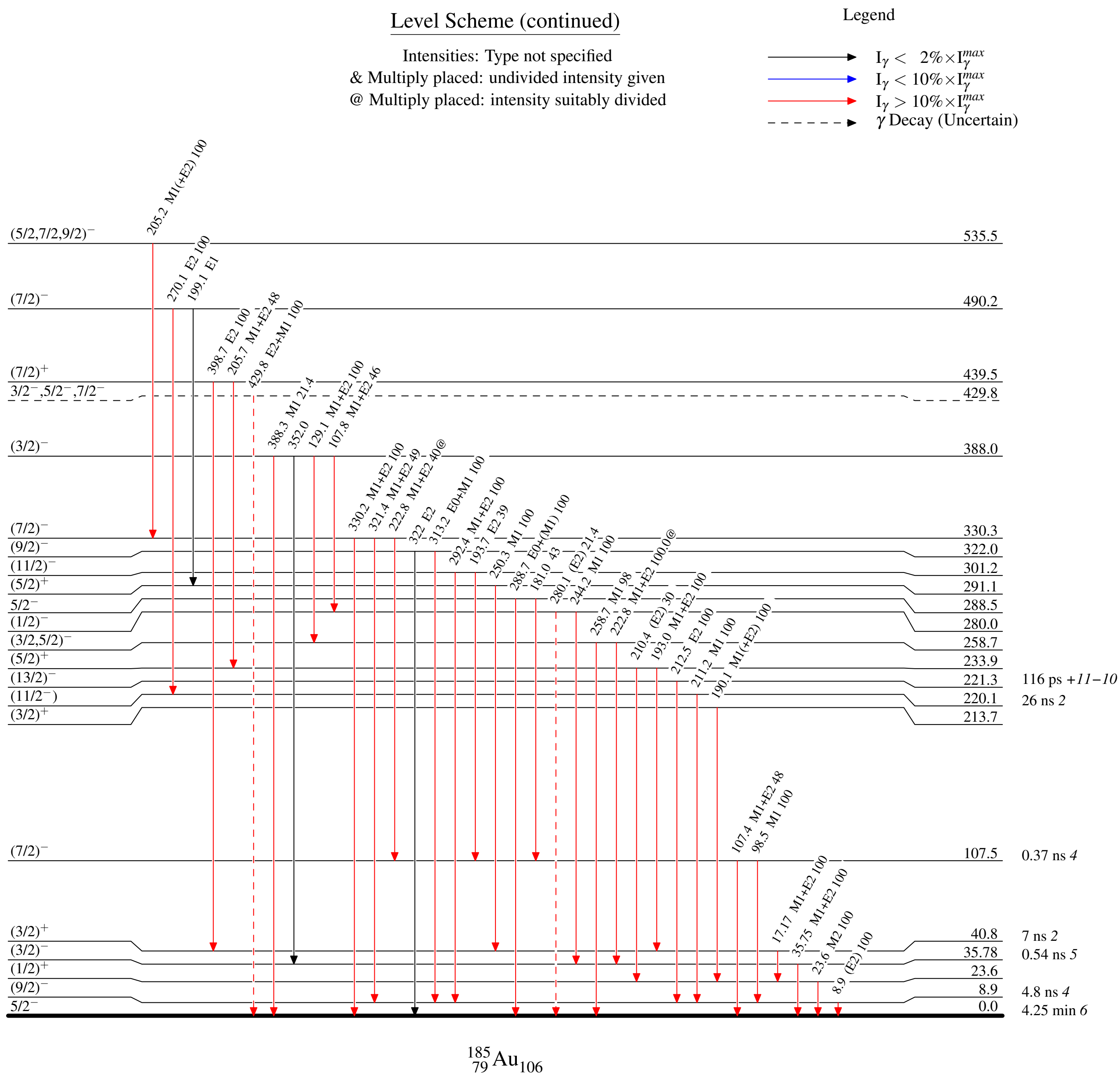


$^{185}_{79}Au_{106}$

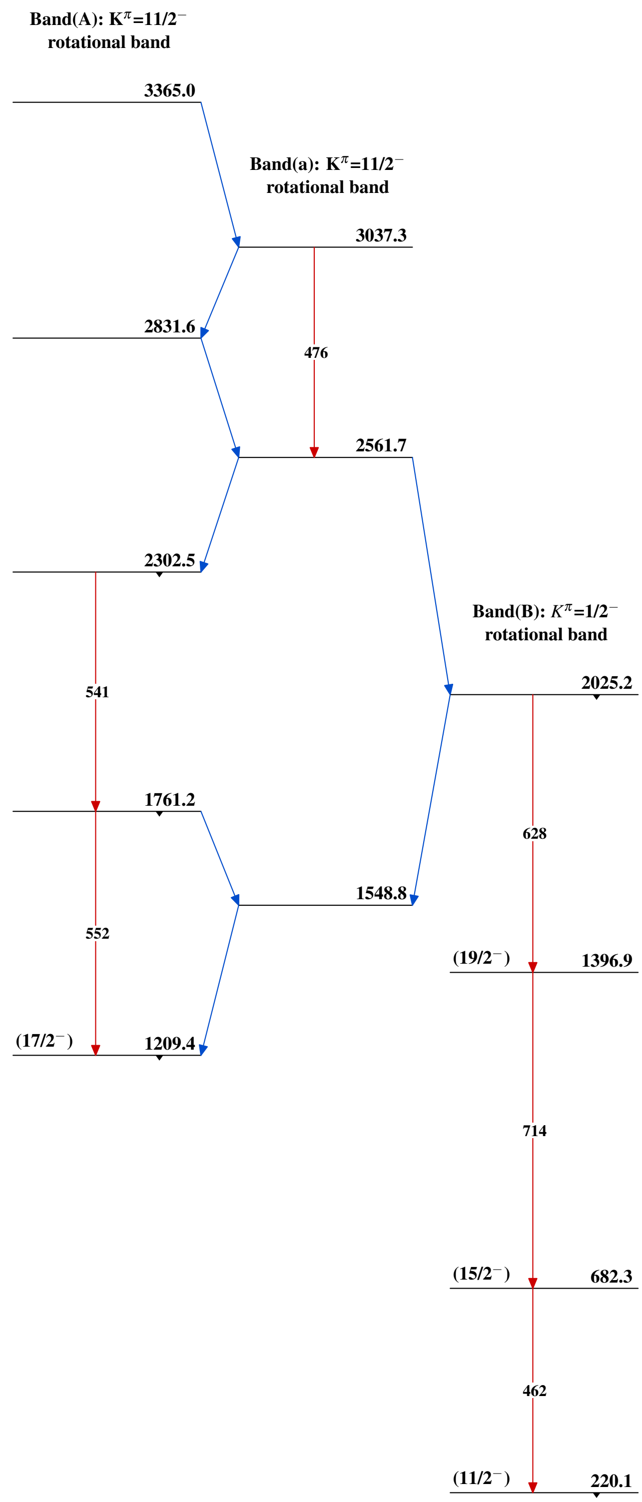
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

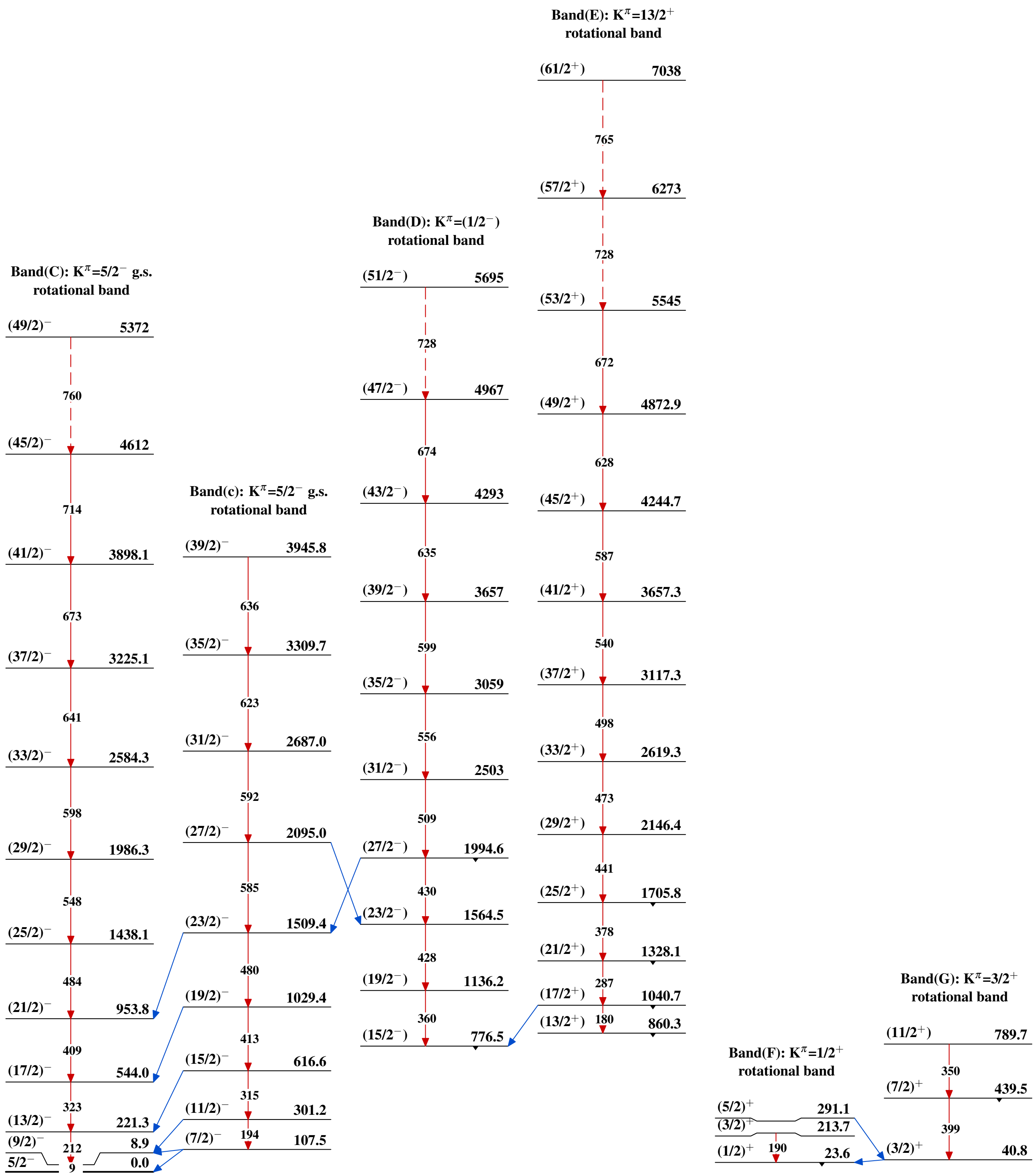


Adopted Levels, Gammas



$^{185}_{79}Au_{106}$

Adopted Levels, Gammas (continued)



$^{185}_{79}Au_{106}$

Adopted Levels, Gammas (continued)