Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 111,275 (2010)	1-Oct-2009

Q(β^-)=−3970 *25*; S(n)=8201 *25*; S(p)=1.84×10^3 *3*; Q(α)=5234 *5* 2012Wa38
Note: Current evaluation has used the following Q record −3970 24 *8203* 25 *1835* 27 5234 *5* 2003Au03,2009AuZZ.
For isotope shift data, see 1988Kr18, 1997Le22.

^{184}Au Levels

Cross Reference (XREF) Flags

- A ^{184}Hg ε decay
- B ^{184}Au IT decay
- C ^{165}Ho(^{24}Mg,5nγ)
- D ^{159}Tb(^{29}Si,4nγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[e]	5$^+$	20.6 s *9*	AB D	%ε+%β^+=100; %α≤0.016 μ=+2.07 *2* (1997Le22,1998Ro27,2000Sa58) Q=+4.65 *26* (1997Le22,1998Ro27,2000Sa58) $\Delta\langle r^2\rangle$(197,184)=−0.064 *12* (1997Le22,1998Ro27), LASER spectroscopy. $\langle r^2\rangle^{1/2}$(charge)=5.430 *4* (2004An14). μ, Q: from LASER resonance ionization. Other μ: 2.0 to 4.0 from g=0.4-0.8 (1992Ro21), time-resolved on-line nuclear orientation. See also 1992St16. %α=0.013 *3* (1995Bi01). Other value: ≤0.022 *3* (1970Ha18). However, it is unclear whether the isomeric state or the g.s. (or both) contribute to the observed α decay. β=+0.264 *14*, deduced by 1997Le22 from Q. J$^\pi$: J=5 from hfs spectrum in resonance ionization spectroscopy; M3 68γ from π=+ 68 level. Likely configuration=(π 3/2[532])+(ν 7/2[514]), consistent with observed μ (1997Le22). T$_{1/2}$: weighted average of 21 s *1* (1997Za03; two-component fit to 222γ(t) and 362γ(t)) and 19 s *2* (1992Ro21). Other: 12 s *2* (1990Ed01); reason for discrepancy not known.
0.0+y[@]	(8$^-$)		CD	
0.0+z[d]	(5$^+$)		CD	
68.46 *4*	2$^+$	47.6 s *14*	AB	%ε+%β^+=70 *10*; %IT=30 *10* (1994RoZY); %α≤0.016 (1995Bi01) μ=+1.44 *2* (1997Le22,1998Ro27,2000Sa58) Q=+1.90 *16* (1997Le22,1998Ro27,2000Sa58) %α=0.013 *3* (1995Bi01). Other value: ≤0.022 *3* (1970Ha18). However, it is unclear whether the isomeric state or the g.s. (or both) contribute to the observed α decay. μ, Q: from LASER resonance ionization spectroscopy. Other μ: +1.813 *19* x (J/(J+1/2)), i.e., 1.450 *15* (1988Kr18); 1.3 *3* (1992Ro21) from g=0.65 *14*, time-resolved on-line nuclear orientation. See also 1992St16. β=+0.221 *17*, deduced by 1997Le22 from Q. J$^\pi$: J=2 from hfs spectrum in resonance ionization spectroscopy; π=+ based on M1(159γ)-M1(263γ) cascade from π=+ 491 level. Likely configuration=(π 3/2[532])+(ν 1/2[521]), consistent with observed μ (1997Le22). T$_{1/2}$: weighted average of 48 s *1* (1997Za03; 68γ(t)), 45.8 s *18* (1995Bi01; α(t)), 45 s *1* (1992Ro21; observed 363γ in Pt), 53.0 s *14* (1972Fi12; 163, 273, 362, 487 γ and ce lines), 47 s *3* (1970Ha18; α(t)). The unweighted average is 47.8 s *14*. Other: 60 s *6* (1969Ha03; observed 163γ, 273γ, 362γ in ^{184}Pt). See also the ^{184}Au ε decay data set. $\Delta\langle r^2\rangle$(197,184)=−0.100 *12* (1997Le22,1998Ro27), resonance ionization spectroscopy. Others: −0.137 *7* if J=3 (1988Kr18, resonance ionization mass spectrometry and pulsed LASER induced desorption); agrees well with datum from 1997Le22 after adjustment

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Adopted Levels, Gammas (continued)

^{184}Au Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				for adopted J=2; see also 1990Hi08. $\Delta<r^2>(^{184}Au^g,^{184}Au^m)=-0.036$ *3* (1997Le22,1998Ro27).
71.88 *8*	$2^+,3^+$		A	J^{π}: E1 156γ from 3^- 228; M1 260γ from $1^+,2^+$ 331 level.
80.6+y[&] *8*	(9^-)		D	
83.5[e] *8*	(6^+)		CD	
86.51 *8*	$(2,3)^+$		A	J^{π}: M1 18γ to 2^+ 68 level; (M1+E2) 42γ from 3^- 228.
129.13 *8*	$(1,2)^+$		A	J^{π}: M1 61γ to 2^+ 68 level; (M1) 362γ from 1^+ 491 level.
146.48 *11*	4^+[#]		A	
156.8+y[@] *8*	(10^-)		D	
161.1+z[d] *10*	(7^+)		CD	
186.9[e] *8*	(7^+)		CD	
228.40 *7*	3^-[#]	69 ns *6*	A	Q≈0.75 from TDPAC but a $J^{\pi}=1^-$ state was assumed (1989Ra17). $T_{1/2}$: from 157γ-237γ(t) (1994Ib01) in ε decay. Other $T_{1/2}$: 67 ns *8* (H. Haas (1978), private communication to authors of 1994Ib01); 36 ns *6* (1978Ne10).
242.87 *10*	$(\le3)^+$		A	J^{π}: M1 114γ to $(1,2)^+$ 129 level.
254.25 *7*	2^-		A	J^{π}: E1 237γ from 1^+ 491; M1+E2 26γ to 3^- 228 level.
301.86? *16*	$(1^-,2^-,3^-)$		A	J^{π}: possible M1 48γ to $(2)^-$ 254.
306.91 *11*	$(1)^+$		A	J^{π}: M1 238γ to 2^+ 68 level; log *ft* from 0^+ probably ≈5.3.
311.0[e] *10*	(8^+)		CD	
320.51 *10*	2^+[#]	<2 ns	A	$T_{1/2}$: from γ delayed coin (1978Ne10) in ε decay.
331.40 *8*	$1^+,2^+$		A	J^{π}: M1 159γ from 1^+ 491 level; M1 263γ to 2^+ 68.
354.8+y[&] *8*	(11^-)		CD	
364.19 *9*	1^+		A	J^{π}: M1(+E2) 127γ from 1^+ 491 level; M1 296γ to 2^+ 68; log *ft*=5.6 from 0^+ in ε decay rules out 2^+.
381.49 *9*	$1^+,2^+$		A	J^{π}: M1(+E0) 109γ from 1^+ 491 level; M1 313γ to 2^+ 68.
409.70 *22*			A	J^{π}: 181γ to (3^-) 228 level.
434.0+z[d] *15*	(9^+)		CD	
456.9[e] *11*	(9^+)		CD	
477.34 *19*	$(\le3)^+$		A	J^{π}: M1 348γ to $(1,2)^+$ 129 level.
478.3+y[@] *11*	(12^-)		CD	
486.09 *22*	$\le3^+$		A	J^{π}: M1 105γ to $1^+,2^+$ 381 level.
490.91 *7*	1^+	<2 ns	A	J^{π}: log *ft*=4.3 from 0^+ in ε decay; allowed unhindered transition. $T_{1/2}$: from γ delayed coin in ε decay (1978Ne10).
600.60? *22*			A	J^{π}: possible 372γ to $(3)^-$ 228 level.
623.6[e] *11*	(10^+)		CD	
742.7+y[&] *10*	(13^-)		CD	
799.6+z[d] *18*	(11^+)		CD	
810.7[e] *12*	(11^+)		CD	
848.4[f] *12*	(9^+)		D	
869.1+y[b] *21*	(11^-)		D	
919.2+y[@] *11*	(14^-)		CD	
1016.6+y[a] *18*	(12^-)		D	
1016.9[f] *13*	(10^+)		D	
1017.1[e] *12*	(12^+)		CD	
1174.5[f] *12*	(11^+)		D	J^{π}: (M1+E2) 551γ to (10^+) 624; 158γ to (12^+) 1017.
1180.5+y[b] *18*	(13^-)		D	
1220.4+y[&] *12*	(15^-)		CD	
1231.0+y[c] *14*	(14)		D	
1240.4+z[d] *20*	(13^+)		CD	

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Adopted Levels, Gammas (continued)

^{184}Au Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	XREF	Comments
1241.8[e] *13*	(13$^+$)	CD	
1291.1[f] *14*	(12$^+$)	CD	
1370.3+y[a] *16*	(14$^-$)	D	
1436.4[f] *13*	(13$^+$)	CD	
1453.2+y[@] *13*	(16$^-$)	CD	
1483.6[e] *13*	(14$^+$)	CD	
1571.8+y[b] *16*	(15$^-$)	D	
1588.3[f] *14*	(14$^+$)	CD	
1740.9+z[d] *23*	(15$^+$)	CD	
1742.5[e] *14*	(15$^+$)	CD	
1756.1+y[c] *14*	(16)	D	
1771.1+y[&] *16*	(17$^-$)	CD	
1794.2+y[a] *14*	(16$^-$)	D	
1797.9[f] *13*	(15$^+$)	CD	
1979.0[f] *14*	(16$^+$)	CD	J$^{\pi}$: stretched Q 495γ to (14$^+$) 1484.
2015.0+y[b] *15*	(17$^-$)	D	
2018.4[e] *17*	(16$^+$)	CD	
2065.8+y[@] *16*	(18$^-$)	CD	
2205.7+y[c] *15*		D	
2237.7[f] *14*	(17$^+$)	CD	
2254.2+y[a] *15*	(18$^-$)	D	
2287.9+z[d] *25*	(17$^+$)	CD	
2306.3[e] *17*	(17$^+$)	CD	
2382.2+y[&] *16*	(19$^-$)	D	
2447.0[f] *15*	(18$^+$)	CD	
2505.0+y[b] *15*	(19$^-$)	D	
2608.0[e] *20*	(18$^+$)	D	
2726.6[f] *16*	(19$^+$)	CD	
2732.2+y[@] *18*	(20$^-$)	D	
2766.7+y[a] *15*	(20$^-$)	D	
2875+z[d] *3*	(19$^+$)	D	
2921.1[e] *20*	(19$^+$)	D	
2964.9[f] *16*	(20$^+$)	CD	
3037.1+y[b] *18*	(21$^-$)	D	
3040.0+y[&] *19*	(21$^-$)	D	
3243.9[f] *17*	(21$^+$)	CD	
3250.1[e] *22*	(20$^+$)	D	
3320.4+y[a] *18*	(22$^-$)	D	
3396.3+y[@] *21*	(22$^-$)	D	
3509+z[d] *3*	(21$^+$)	D	
3525.5[f] *18*	(22$^+$)	CD	
3575.1[e] *22*	(21$^+$)	D	
3597.0+y[b] *21*	(23$^-$)	D	
3752.7+y[&] *21*	(23$^-$)	D	
3811.0[f] *18*	(23$^+$)	CD	
3915.6+y[a] *21*	(24$^-$)	D	

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Adopted Levels, Gammas (continued)

^{184}Au Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
3939.1[e] *24*	(22+)	D	4818.0[f] *20*	(26+)	D	482.2+x[g] *13*	(12−)	D
4078.3+y[@] *23*	(24−)	D	4852.6+y[b] *25*	(27−)	D	662.2+x[h] *13*	(13−)	D
4140.4[f] *19*	(24+)	D	5172.5[f] *22*	(27+)	D	1005.7+x[g] *14*	(14−)	D
4196.8+y[b] *23*	(25−)	D	5247.8+y[a] *25*	(28−)	D	1315.7+x[h] *15*	(15−)	D
4205+z[d] *3*	(23+)	D	5543+y[@] *3*	(28−)	D	1635.5+x[g] *15*	(16−)	D
4233.6[e] *25*	(23+)	D	5552.0[f] *22*	(28+)	D	1958.6+x[h] *16*	(17−)	D
4453.6[f] *19*	(25+)	D	5576+y[b] *3*	(29−)	D	2283.7+x[g] *17*	(18−)	D
4494.7+y[&] *24*	(25−)	D	5950.5[f] *24*	(29+)	D	2620.8+x[h] *17*	(19−)	D
4556.1+y[a] *23*	(26−)	D	6322.3[f] *25*	(30+)	D	2968.4+x[g] *18*	(20−)	D
4656[e] *3*	(24+)	D	0.0+x[g]		D	3324.6+x[h] *19*	(21−)	D
4795.1+y[@] *25*	(26−)	D	176.5+x[h] *10*	(11−)	D	3716.1+x[g] *19*	(22−)	D

† From least-squares fit to adopted Eγ; ΔE=1 keV was assigned to Eγ data for which authors did not state an uncertainty.

‡ Values given without comment are from ^{165}Ho(^{24}Mg,5nγ) and/or ^{159}Tb(^{29}Si,4nγ). They are tentative values based on observed band properties (moments of inertia, alignments, in-band B(M1)/B(E2) ratios, etc.) compared with those for bands in nearby isotopes and isotones (e.g., ^{182}Ir, ^{183}Pt, ^{186}Au, ^{188}Au) and supported by cranking-model calculations.

M1(170γ)-E1(92γ)-E1(82γ)−M1(+E2)(147γ) cascade from 1^+ 491 level to 5^+ g.s. establishes $J^\pi=2^+$ for 321 level, 3^- for 228 level and 4^+ for 146 level.

@ Band(A): (ν 9/2[624])⊗(π $h_{9/2}$), α=0 band (2005Zh30). Exhibits staggering of D transition energies typical of the semidecoupled structures observed in ^{182}Ir and $i_{13/2}$ bands in ^{181}Os and ^{183}Pt. Alignment consistent with sum of alignments for (ν $i_{13/2}$, ^{183}Pt) and (π $h_{9/2}$, ^{183}Au). The evaluator does not adopt the suggestion by 2004Ve10 that all J values in this band should Be 1ℏ lower than those proposed in 1996Ib01 which are already 1ℏ lower than the values adopted here based on 2005Zh30.

& Band(a): (ν 9/2[624])⊗(π $h_{9/2}$), α=1 band (2005Zh30). See comment on signature partner band.

a Band(B): π=(−), α=0 band (2005Zh30).

b Band(b): π=(−), α=1 band (2005Zh30).

c Band(C): band fragment (2005Zh30).

d Band(D): (ν 1/2[521])⊗(π $h_{9/2}$), α=1 band (1996Ib01). Doubly-decoupled band, closely resembling that in ^{182}Ir and in other neighboring nuclides.

e Band(E): ν 7/2[514]+π 3/2[532] band (2004Zh38). Prolate K^π=5+? g.s. band; however, the high rigidity of the band favors K=4 instead. J values are based only on a comparison of high-J transition energies with those in the analogous band in ^{182}Ir; note, however, that the ^{182}Ir band exhibits much lower transition energies at low J.

f Band(F): (ν $i_{13/2}$)⊗(π $i_{13/2}$) band (2004Zh38). Staggered band, suggesting coupling of the staggered (ν $i_{13/2}$) excitation (known in this region) to a completely decoupled structure; in ^{186}Au, the latter structure is suggested to Be (π $i_{13/2}$), and the bands in ^{184}Au and ^{186}Au display similar structure.

g Band(G): π $h^{-1}_{11/2}$⊗ν $i^{-1}_{13/2}$, α=0 band. K^π=11−? oblate band; from 2004Zh16 only. Analogous to 11^- bands in odd-odd isotopes from ^{186}Au though ^{194}Au.

h Band(g): π $h^{-1}_{11/2}$⊗ν $i^{-1}_{13/2}$, K^π=11−?,α=1 band. Oblate band; from 2004Zh16 and 2005Zh30. Analogous to 11^- bands in odd-odd isotopes from ^{186}Au though ^{194}Au.

$\gamma(^{184}Au)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[‡]	α[&]	Comments
68.46	2^+	68.46 4	100	0.0	5^+	M3		3.19×10^3	B(M3)(W.u.)=0.018 6 Mult.: from ce subshell ratios in IT decay.
71.88	$2^+,3^+$	3.4 2	100	68.46	2^+	(M1)			Mult.: N1 and O conversion lines observed in ε decay.
80.6+y	(9^-)	80.6[#]	100	0.0+y	(8^-)				
83.5	(6^+)	83.6[#]	100	0.0	5^+	(M1+E2)			Mult.: from unenumerated DCO data and intensity balance information in (^{29}Si,4nγ).
86.51	$(2,3)^+$	18.1 2	100	68.46	2^+	M1		198 8	
129.13	$(1,2)^+$	42.7 1	7.3 15	86.51	$(2,3)^+$	M1(+E2)		1.4×10^2 13	
		57.3 2	15 8	71.88	$2^+,3^+$	E2+M1	≈1.2	≈40.9	
		60.6 1	100 15	68.46	2^+	M1		5.60	
146.48	4^+	74.5[a] 2	29[a] 17	71.88	$2^+,3^+$	[M1,E2]		11 8	
		146.5 4	100 33	0.0	5^+	M1(+E2)		1.8 7	
156.8+y	(10^-)	76.2[#]		80.6+y	(9^-)				
		156.8[#]		0.0+y	(8^-)				
161.1+z	(7^+)	161.1[@]	100	0.0+z	(5^+)				
186.9	(7^+)	103.6[#]	100	83.5	(6^+)				
		186.8[#]		0.0	5^+	(E2)			Mult.: Q intraband γ from (^{29}Si,4nγ).
228.40	3^-	81.9 1	5.9 8	146.48	4^+	E1		0.670	B(E1)(W.u.)=2.4×10^{-7} 5
		141.8 1	3.1 4	86.51	$(2,3)^+$	(E1+M2)	0.39	2.42	B(E1)(W.u.)=2.1×10^{-8} 4; B(M2)(W.u.)=0.73 13
		156.5 1	100 10	71.88	$2^+,3^+$	E1		0.1335	B(E1)(W.u.)=5.8×10^{-7} 9
		160.0 1	2.3 5	68.46	2^+	(E1)		0.1262	B(E1)(W.u.)=1.2×10^{-8} 3
242.87	$(\leq3)^+$	113.7 1	100	129.13	$(1,2)^+$	M1		5.02	
254.25	2^-	25.86 6	100 11	228.40	3^-	M1+E2	0.041 +11−15	74 4	
		182.5 2	32 11	71.88	$2^+,3^+$	E1		0.0906	
		185.8 1	63 11	68.46	2^+	(E1)		0.0866	
301.86?	$(1^-,2^-,3^-)$	47.6[b] 2	42 10	254.25	2^-	M1		11.39 22	
		59.0[b] 2	100 20	242.87	$(\leq3)^+$	(E1)		0.346 6	
306.91	$(1)^+$	220.4 1	14.4 17	86.51	$(2,3)^+$	M1		0.775	
		238.4 2	100 17	68.46	2^+	M1		0.624	
311.0	(8^+)	124.0[@]		186.9	(7^+)				
		227.6[#]		83.5	(6^+)				
320.51	2^+	92.0 1	100	228.40	3^-	E1		0.511	B(E1)(W.u.)>8.7×10^{-5}
331.40	$1^+,2^+$	244.8 2	10.5 23	86.51	$(2,3)^+$	[M1,E2]		0.39 20	
		259.5 1	100 12	71.88	$2^+,3^+$	M1		0.494	
		262.9 1	72 9	68.46	2^+	M1		0.476	
354.8+y	(11^-)	197.3[@]		156.8+y	(10^-)				

$^{184}_{79}Au_{105}$-5

γ(^{184}Au) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$^\pi_f$	Mult.[†]	α[&]	Comments
354.8+y	(11⁻)	274.2[#]		80.6+y	(9⁻)			
364.19	1⁺	277.7 2	15 3	86.51	(2,3)⁺	M1	0.410	
		295.7 1	100 15	68.46	2⁺	M1	0.345	
381.49	1⁺,2⁺	50.1 1	21 3	331.40	1⁺,2⁺	M1	9.80	
		74.5[a] 2	100[a] 12	306.91	(1)⁺	M1	3.07	
		127.3 2	82 12	254.25	2⁻	E1	0.225	
		138.5 2	18 6	242.87	(≤3)⁺	M1	2.86	
		294.8 3	61 18	86.51	(2,3)⁺	(M1)	0.348	
		313.1 2	100 15	68.46	2⁺	M1	0.296	
409.70		181.3 2	100	228.40	3⁻	E1,E2		
434.0+z	(9⁺)	272.9[@]	100	161.1+z	(7⁺)			
456.9	(9⁺)	145.9[#]		311.0	(8⁺)			
		270.0[#]		186.9	(7⁺)			
477.34	(≤3)⁺	234.5 3	100 23	242.87	(≤3)⁺	(M1+E2)	0.44 22	
		348.2 2	82 14	129.13	(1,2)⁺	M1	0.222	
478.3+y	(12⁻)	123.4[#]		354.8+y	(11⁻)			
		321.5[#]		156.8+y	(10⁻)			
486.09	≤3⁺	104.6 2	93 20	381.49	1⁺,2⁺	M1	6.38	
		184.1[b] 2	100 33	301.86?	(1⁻,2⁻,3⁻)	M2	6.76	
490.91	1⁺	109.4 1	1.5 3	381.49	1⁺,2⁺	M1(+E0)	≈18	α: approximate value; from α(K)exp x 1.3.
		126.7 1	1.3 3	364.19	1⁺	M1(+E2)	2.8 9	
		159.4 1	6.0 8	331.40	1⁺,2⁺	M1	1.92	B(M1)(W.u.)>3.7×10^{-5}
		170.3 1	2.4 4	320.51	2⁺	M1	1.595	B(M1)(W.u.)>1.2×10^{-5}
		236.7 1	100 10	254.25	2⁻	E1	0.0476	B(E1)(W.u.)>1.8×10^{-6}
		248.0 2	0.9 3	242.87	(≤3)⁺	[M1,E2]	0.37 19	
		362.0 2	2.5 10	129.13	(1,2)⁺	(M1)	0.200	B(M1)(W.u.)>1.3×10^{-6}
		404.7 2	2.2 3	86.51	(2,3)⁺			
		419.6 4	0.5 2	71.88	2⁺,3⁺			
		422.7 2	4.2 6	68.46	2⁺			
600.60?		372.2[b] 2	100	228.40	3⁻			
623.6	(10⁺)	166.6[#]		456.9	(9⁺)			
		312.6[#]		311.0	(8⁺)			
742.7+y	(13⁻)	263.7[@]		478.3+y	(12⁻)			
		387.8[@]		354.8+y	(11⁻)			
799.6+z	(11⁺)	365.6[#]	100	434.0+z	(9⁺)			
810.7	(11⁺)	187.1[#]		623.6	(10⁺)	(M1+E2)		Mult.: D+Q from DCO ratio in (^{29}Si,4nγ) for intraband γ.
		353.8[#]		456.9	(9⁺)			

$^{184}_{79}$Au$_{105}$-6

$\gamma(^{184}$Au) (continued)

E_i(level)	J^{π}_i	E_γ[†]	I_γ[†]	E_f	J^{π}_f	Mult.[†]	Comments
848.4	(9$^+$)	225.0[#]		623.6	(10$^+$)		
		537.3[#]		311.0	(8$^+$)		
919.2+y	(14$^-$)	176.5[#]		742.7+y	(13$^-$)		
		440.5[#]		478.3+y	(12$^-$)		
1016.9	(10$^+$)	560.0[#]	100	456.9	(9$^+$)		
1017.1	(12$^+$)	206.5[#]		810.7	(11$^+$)		
		393.5[#]		623.6	(10$^+$)		
1174.5	(11$^+$)	157.0		1017.1	(12$^+$)		
		157.7		1016.9	(10$^+$)		
		326.3		848.4	(9$^+$)		
		550.9		623.6	(10$^+$)	(M1+E2)	Mult.,δ: D+Q from DCO in (^{29}Si,4nγ); δ<0. Significant mixing favors $\Delta\pi$=no.
1180.5+y	(13$^-$)	163.8[#]		1016.6+y	(12$^-$)		
		311.4[#]		869.1+y	(11$^-$)		
1220.4+y	(15$^-$)	300[@]		919.2+y	(14$^-$)		
		476.9[@]		742.7+y	(13$^-$)		
1231.0+y	(14)	488.2[#]	100	742.7+y	(13$^-$)		
1240.4+z	(13$^+$)	440.8[@]	100	799.6+z	(11$^+$)		
1241.8	(13$^+$)	224.9[#]		1017.1	(12$^+$)		
		430.9[#]		810.7	(11$^+$)		
1291.1	(12$^+$)	116.4[#]	100	1174.5	(11$^+$)		
1370.3+y	(14$^-$)	353.7[#]		1016.6+y	(12$^-$)		
1436.4	(13$^+$)	145.2[#]		1291.1	(12$^+$)		
		261.7[#]		1174.5	(11$^+$)		
1453.2+y	(16$^-$)	232.8[#]		1220.4+y	(15$^-$)		
		534.1[#]		919.2+y	(14$^-$)		
1483.6	(14$^+$)	242.6[#]		1241.8	(13$^+$)		
		466.7[#]		1017.1	(12$^+$)		
1571.8+y	(15$^-$)	201.5[#]		1370.3+y	(14$^-$)		
		391.3[#]		1180.5+y	(13$^-$)		
1588.3	(14$^+$)	151.8[#]		1436.4	(13$^+$)		
		297.1[#]		1291.1	(12$^+$)		
1740.9+z	(15$^+$)	500.5[@]	100	1240.4+z	(13$^+$)		
1742.5	(15$^+$)	260[@]		1483.6	(14$^+$)		

$^{184}_{79}$Au$_{105}$-7

Adopted Levels, Gammas (continued)

$\gamma(^{184}Au)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[†]	Comments
1742.5	(15$^+$)	499.9[#]		1241.8	(13$^+$)		
1756.1+y	(16)	525.0[#]		1231.0+y	(14)		
		535.6[#]		1220.4+y	(15$^-$)		
1771.1+y	(17$^-$)	317.9[#]		1453.2+y	(16$^-$)		
		550.7[#]		1220.4+y	(15$^-$)		
1794.2+y	(16$^-$)	424.0[#]		1370.3+y	(14$^-$)		
		563.2[#]		1231.0+y	(14)		
		573.8[#]		1220.4+y	(15$^-$)		
1797.9	(15$^+$)	209.5[#]		1588.3	(14$^+$)		
		361.4[#]		1436.4	(13$^+$)		
		556.3[#]		1241.8	(13$^+$)		
1979.0	(16$^+$)	181.2[#]		1797.9	(15$^+$)		
		390.6[#]		1588.3	(14$^+$)		
		495.1[#]		1483.6	(14$^+$)	Q	Mult.: from DCO in (^{29}Si,4nγ).
2015.0+y	(17$^-$)	221[#]		1794.2+y	(16$^-$)		
		259[#]		1756.1+y	(16)		
		443.1[#]		1571.8+y	(15$^-$)		
2018.4	(16$^+$)	534.8[#]	100	1483.6	(14$^+$)		
2065.8+y	(18$^-$)	611.6[@]	100	1453.2+y	(16$^-$)		
2205.7+y		449.3[#]	100	1756.1+y	(16)		
2237.7	(17$^+$)	258.7[#]		1979.0	(16$^+$)		
		439.6[#]		1797.9	(15$^+$)		
		495.6		1742.5	(15$^+$)		
2254.2+y	(18$^-$)	460.1[#]		1794.2+y	(16$^-$)		
		498.2[#]		1756.1+y	(16)		
2287.9+z	(17$^+$)	547[@]	100	1740.9+z	(15$^+$)		
2306.3	(17$^+$)	563.8[#]	100	1742.5	(15$^+$)		
2382.2+y	(19$^-$)	316.7[#]		2065.8+y	(18$^-$)		
		611.1[#]		1771.1+y	(17$^-$)		
2447.0	(18$^+$)	209.5[#]		2237.7	(17$^+$)		
		467.8[#]		1979.0	(16$^+$)		
2505.0+y	(19$^-$)	251[#]		2254.2+y	(18$^-$)		
		299[#]		2205.7+y			

$^{184}_{79}Au_{105}$-8

Adopted Levels, Gammas (continued)

$\gamma(^{184}Au)$ (continued)

E_i(level)	J^{π}_i	E_{γ}†	I_{γ}†	E_f	J^{π}_f
2505.0+y	(19⁻)	490.2#		2015.0+y	(17⁻)
2608.0	(18⁺)	589.6#	100	2018.4	(16⁺)
2726.6	(19⁺)	279.6#		2447.0	(18⁺)
		489.1#		2237.7	(17⁺)
2732.2+y	(20⁻)	666.7#	100	2065.8+y	(18⁻)
2766.7+y	(20⁻)	512.5#		2254.2+y	(18⁻)
		561.0#		2205.7+y	
		701.2#		2065.8+y	(18⁻)
2875+z	(19⁺)	586.1#	100	2287.9+z	(17⁺)
2921.1	(19⁺)	614.8#	100	2306.3	(17⁺)
2964.9	(20⁺)	238.3#		2726.6	(19⁺)
		517.8#		2447.0	(18⁺)
3037.1+y	(21⁻)	532.1#	100	2505.0+y	(19⁻)
3040.0+y	(21⁻)	657.8#	100	2382.2+y	(19⁻)
3243.9	(21⁺)	278.8#		2964.9	(20⁺)
		517.4#		2726.6	(19⁺)
3250.1	(20⁺)	642.1#	100	2608.0	(18⁺)
3320.4+y	(22⁻)	553.7#	100	2766.7+y	(20⁻)
3396.3+y	(22⁻)	664.1#	100	2732.2+y	(20⁻)
3509+z	(21⁺)	633.7#	100	2875+z	(19⁺)
3525.5	(22⁺)	281.6#		3243.9	(21⁺)
		560.6#		2964.9	(20⁺)
3575.1	(21⁺)	654.0#	100	2921.1	(19⁺)
3597.0+y	(23⁻)	559.9#	100	3037.1+y	(21⁻)
3752.7+y	(23⁻)	712.7#	100	3040.0+y	(21⁻)
3811.0	(23⁺)	285.7#		3525.5	(22⁺)
		567.0#		3243.9	(21⁺)
3915.6+y	(24⁻)	595.2#	100	3320.4+y	(22⁻)
3939.1	(22⁺)	689.0#	100	3250.1	(20⁺)
4078.3+y	(24⁻)	682#	100	3396.3+y	(22⁻)
4140.4	(24⁺)	329.5#		3811.0	(23⁺)
		614.8#		3525.5	(22⁺)
4196.8+y	(25⁻)	599.8#	100	3597.0+y	(23⁻)
4205+z	(23⁺)	696.0#	100	3509+z	(21⁺)
4233.6	(23⁺)	658.5#	100	3575.1	(21⁺)
4453.6	(25⁺)	313.1#		4140.4	(24⁺)
		642.6#		3811.0	(23⁺)
4494.7+y	(25⁻)	742#	100	3752.7+y	(23⁻)
4556.1+y	(26⁻)	640.5#	100	3915.6+y	(24⁻)
4656	(24⁺)	717.0#	100	3939.1	(22⁺)
4795.1+y	(26⁻)	716.8#	100	4078.3+y	(24⁻)
4818.0	(26⁺)	364.4#		4453.6	(25⁺)
		677.7#		4140.4	(24⁺)
4852.6+y	(27⁻)	655.8#	100	4196.8+y	(25⁻)
5172.5	(27⁺)	718.9#	100	4453.6	(25⁺)
5247.8+y	(28⁻)	691.7#	100	4556.1+y	(26⁻)
5543+y	(28⁻)	748#	100	4795.1+y	(26⁻)
5552.0	(28⁺)	734.0#	100	4818.0	(26⁺)
5576+y	(29⁻)	723#	100	4852.6+y	(27⁻)
5950.5	(29⁺)	778.0#	100	5172.5	(27⁺)
6322.3	(30⁺)	770.3#	100	5552.0	(28⁺)
176.5+x	(11⁻)	176.5#	100	0.0+x	
482.2+x	(12⁻)	305.8#	100	176.5+x	(11⁻)
662.2+x	(13⁻)	180.1#		482.2+x	(12⁻)
		485.6#		176.5+x	(11⁻)
1005.7+x	(14⁻)	343.6#		662.2+x	(13⁻)
		523.5#		482.2+x	(12⁻)
1315.7+x	(15⁻)	310.2#		1005.7+x	(14⁻)
		653.4#		662.2+x	(13⁻)
1635.5+x	(16⁻)	319.8#		1315.7+x	(15⁻)
		629.8#		1005.7+x	(14⁻)
1958.6+x	(17⁻)	323.2#		1635.5+x	(16⁻)
		642.8#		1315.7+x	(15⁻)
2283.7+x	(18⁻)	325.2#		1958.6+x	(17⁻)

$^{184}_{79}Au_{105}$-9

Adopted Levels, Gammas (continued)

$\gamma(^{184}Au)$ (continued)

E_i(level)	J_i^π	E_γ†	E_f	J_f^π	E_i(level)	J_i^π	E_γ†	E_f	J_f^π	E_i(level)	J_i^π	E_γ†	E_f	J_f^π
2283.7+x	(18^-)	648.3#	1635.5+x	(16^-)	2968.4+x	(20^-)	347.8#	2620.8+x	(19^-)	3324.6+x	(21^-)	703.5#	2620.8+x	(19^-)
2620.8+x	(19^-)	337.2#	2283.7+x	(18^-)			684.7#	2283.7+x	(18^-)	3716.1+x	(22^-)	391.3#	3324.6+x	(21^-)
		662.0#	1958.6+x	(17^-)	3324.6+x	(21^-)	356.2#	2968.4+x	(20^-)			748.0#	2968.4+x	(20^-)

† From ε decay, except as noted.

‡ From ^{184}Hg ε decay.

From ^{159}Tb(^{29}Si,4nγ); uncertainty unstated by authors.

@ From (^{24}Mg,5nγ); uncertainty unstated by authors.

& 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.

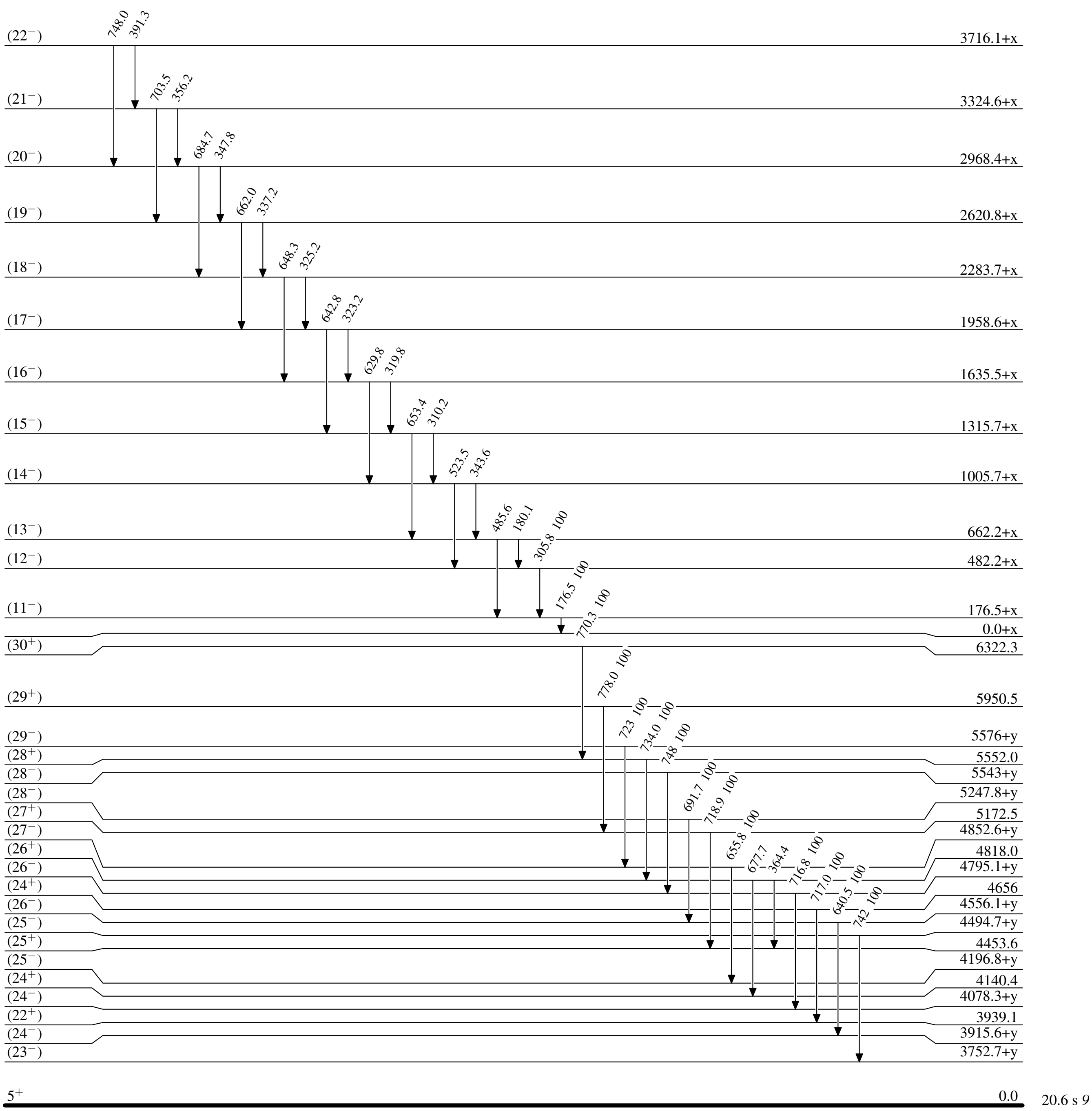
^{a} Multiply placed with intensity suitably divided.

^{b} Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

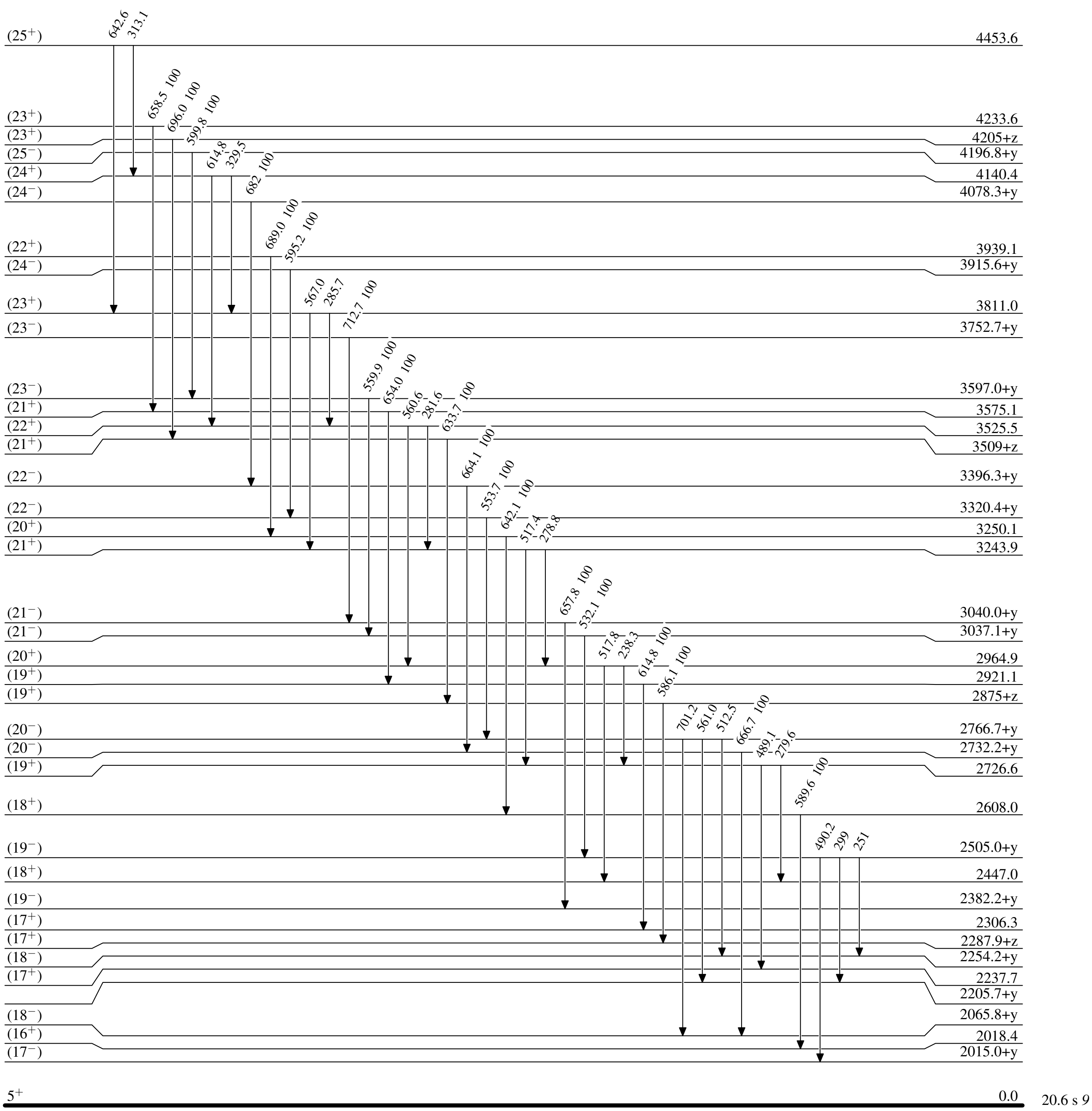


$^{184}_{79}Au_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

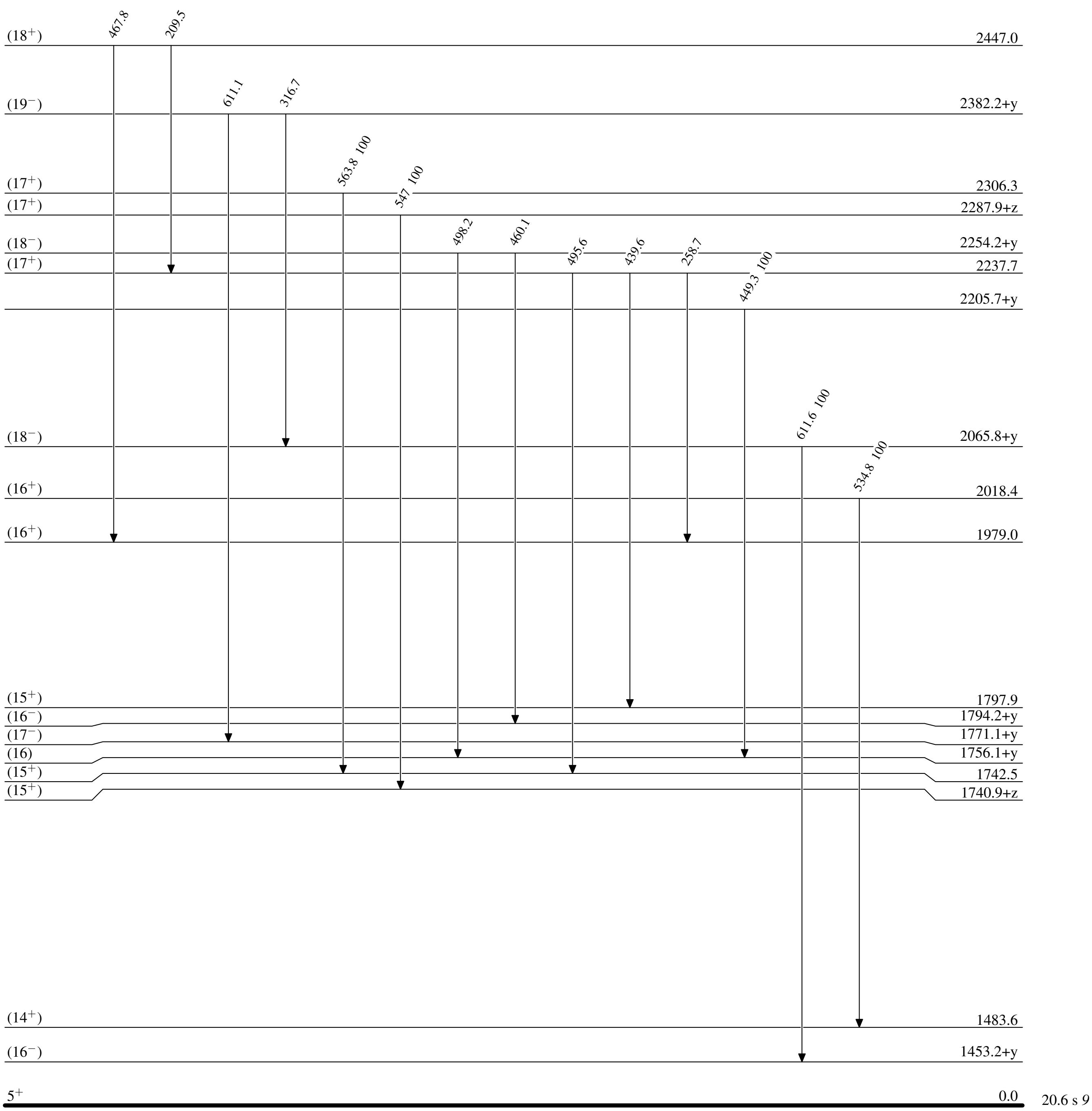


$^{184}_{79}Au_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

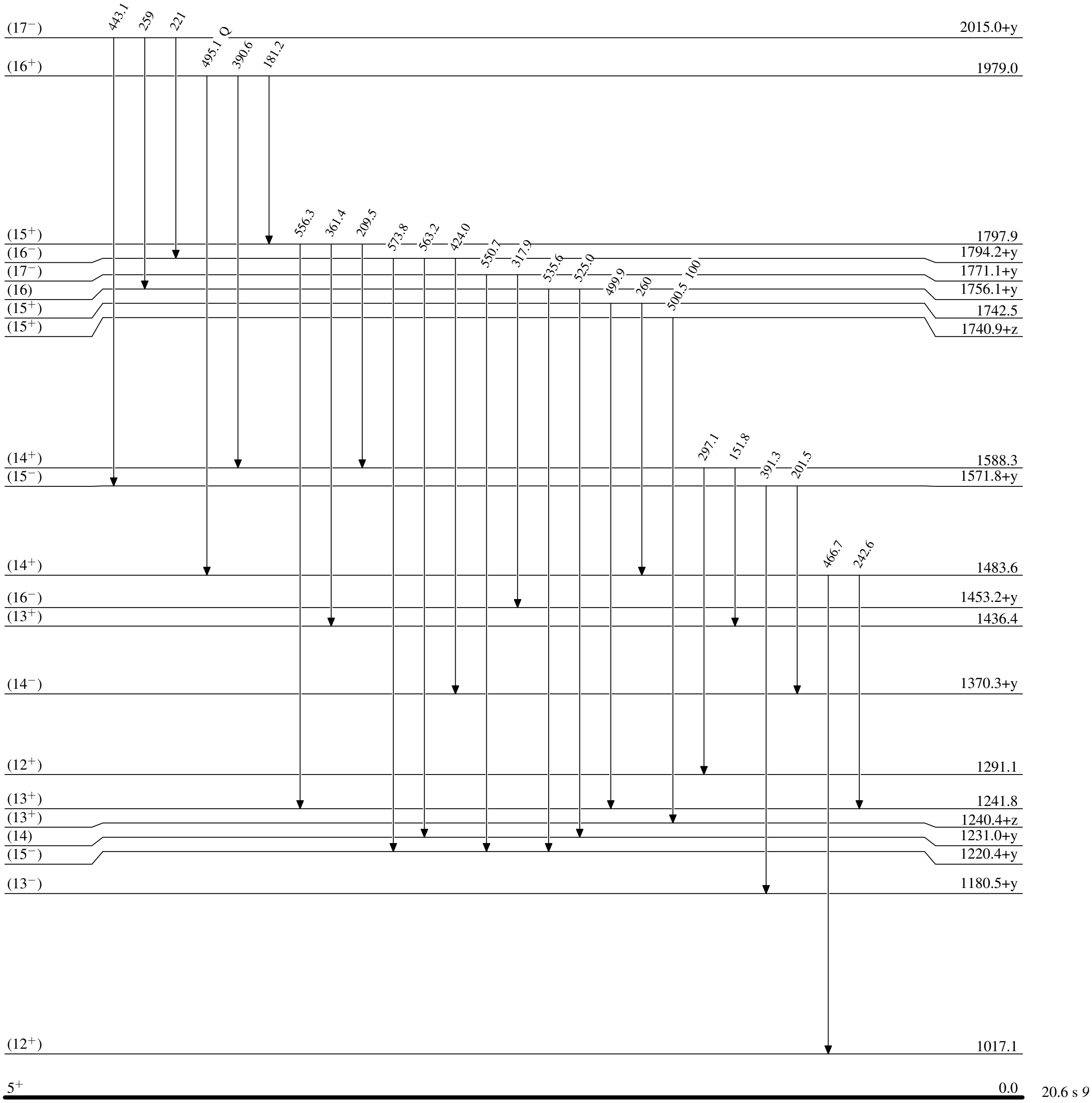


$^{184}_{79}Au_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{184}_{79}Au_{105}$

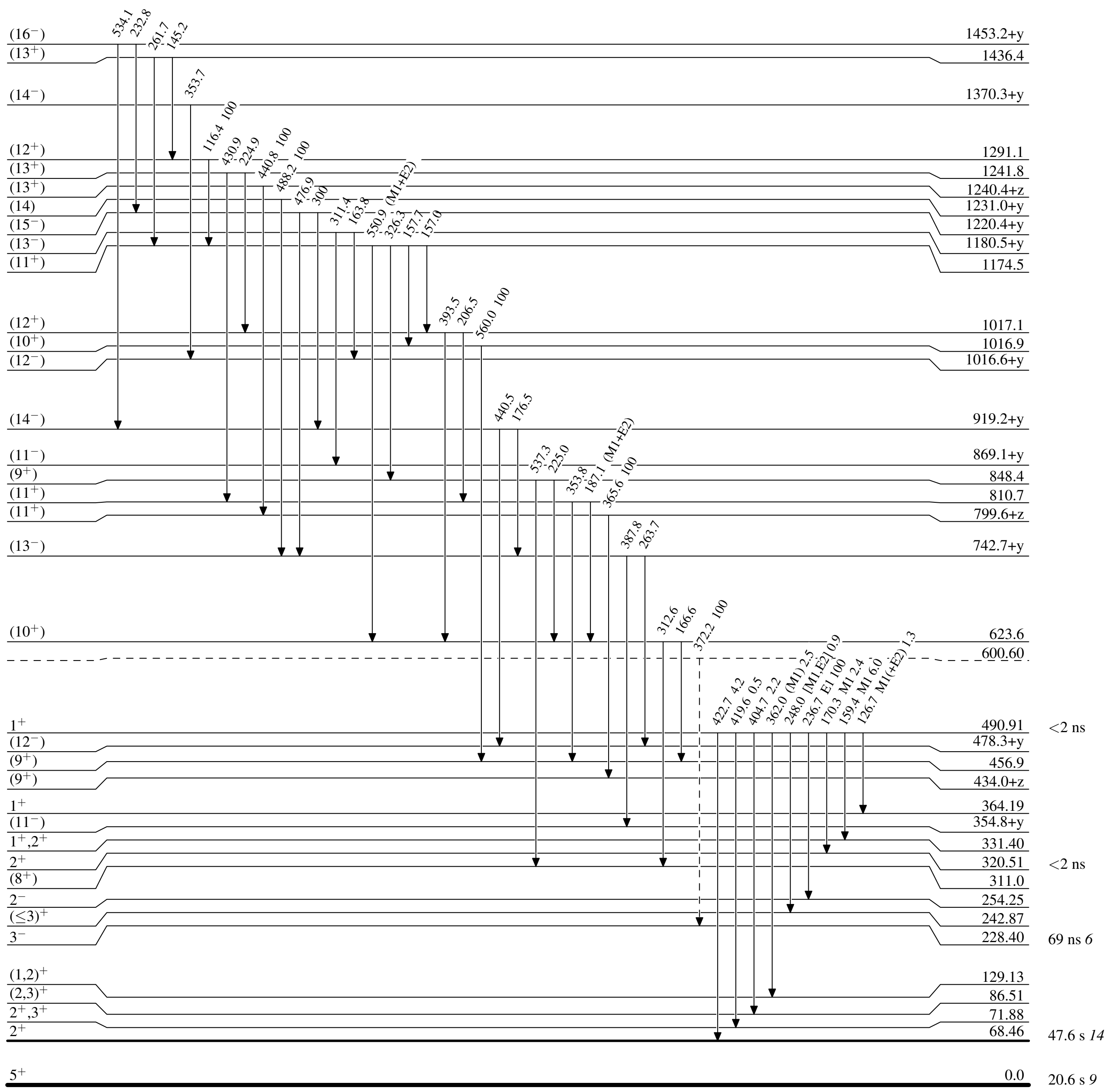
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - ► γ Decay (Uncertain)

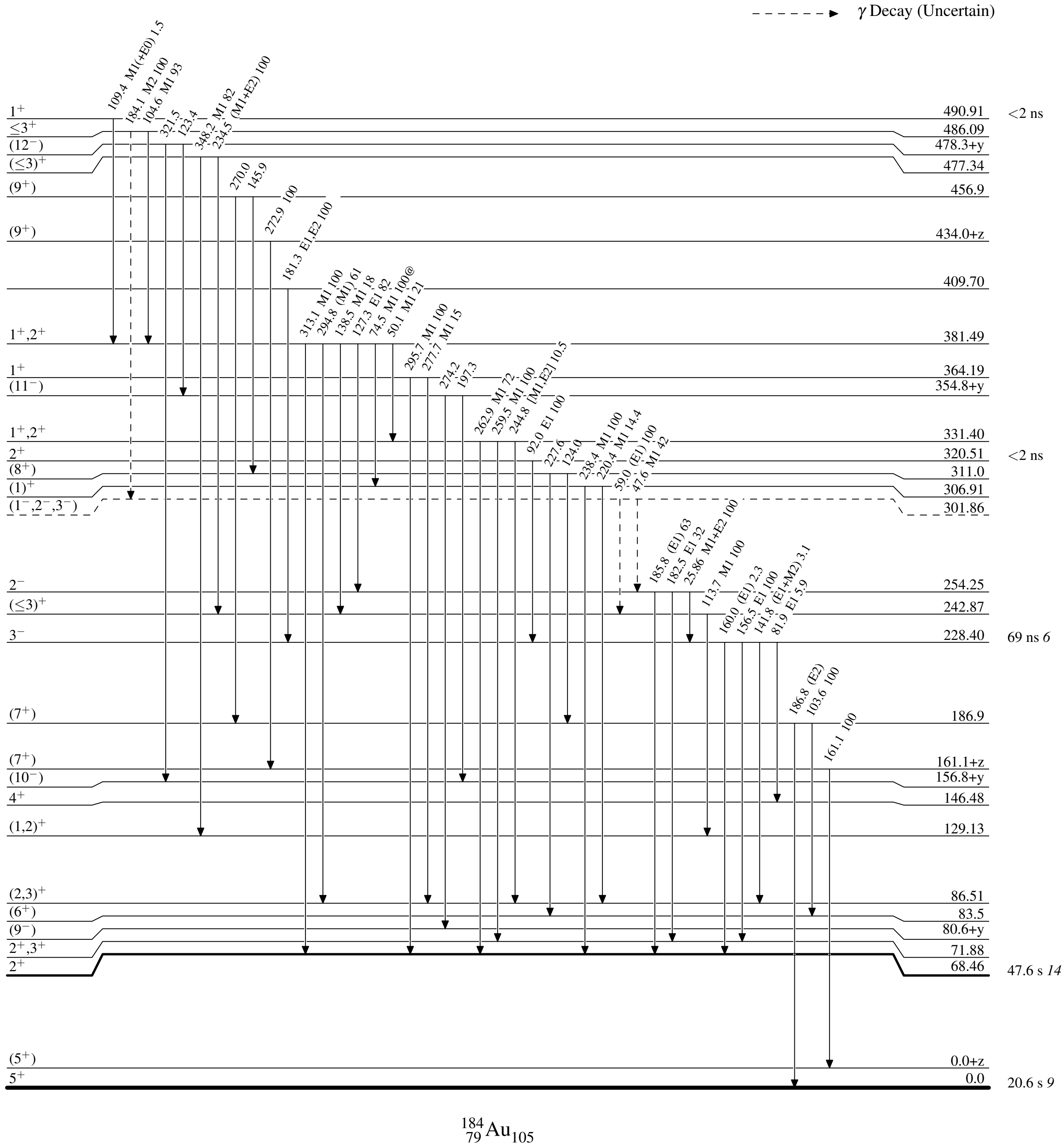


$^{184}_{79}Au_{105}$

Adopted Levels, Gammas

Level Scheme (continued)

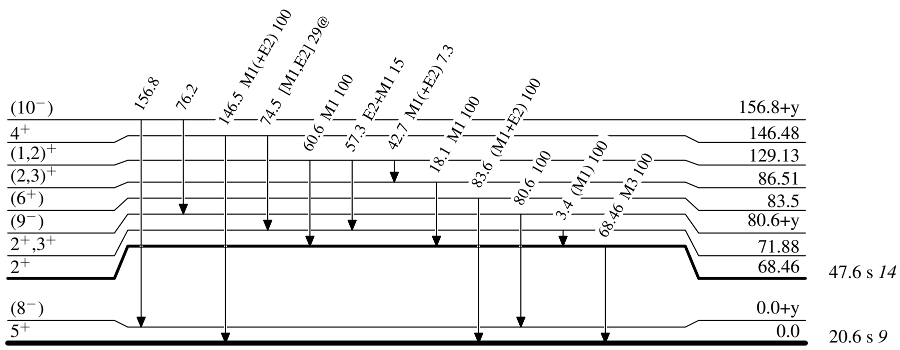
Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

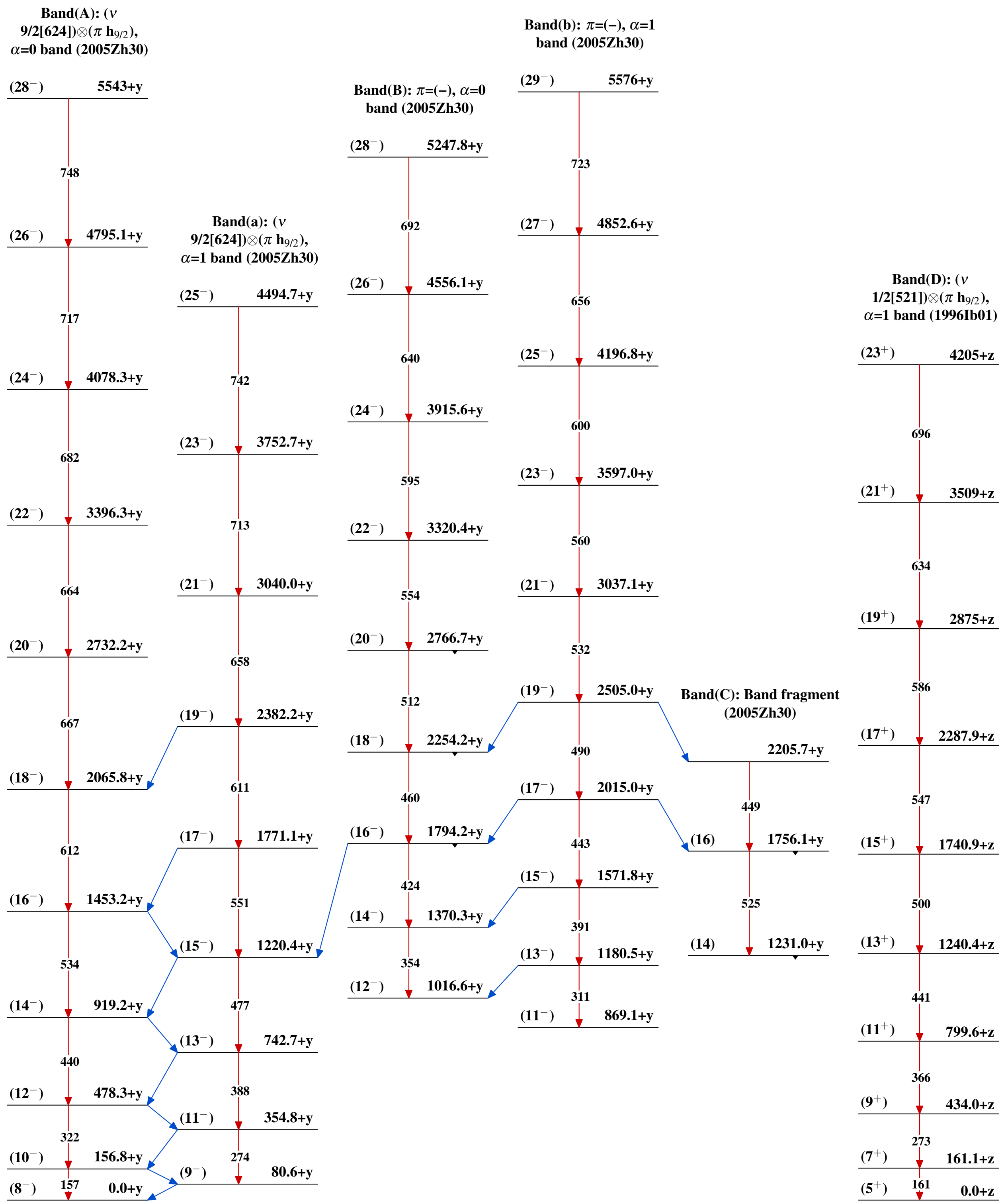
Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



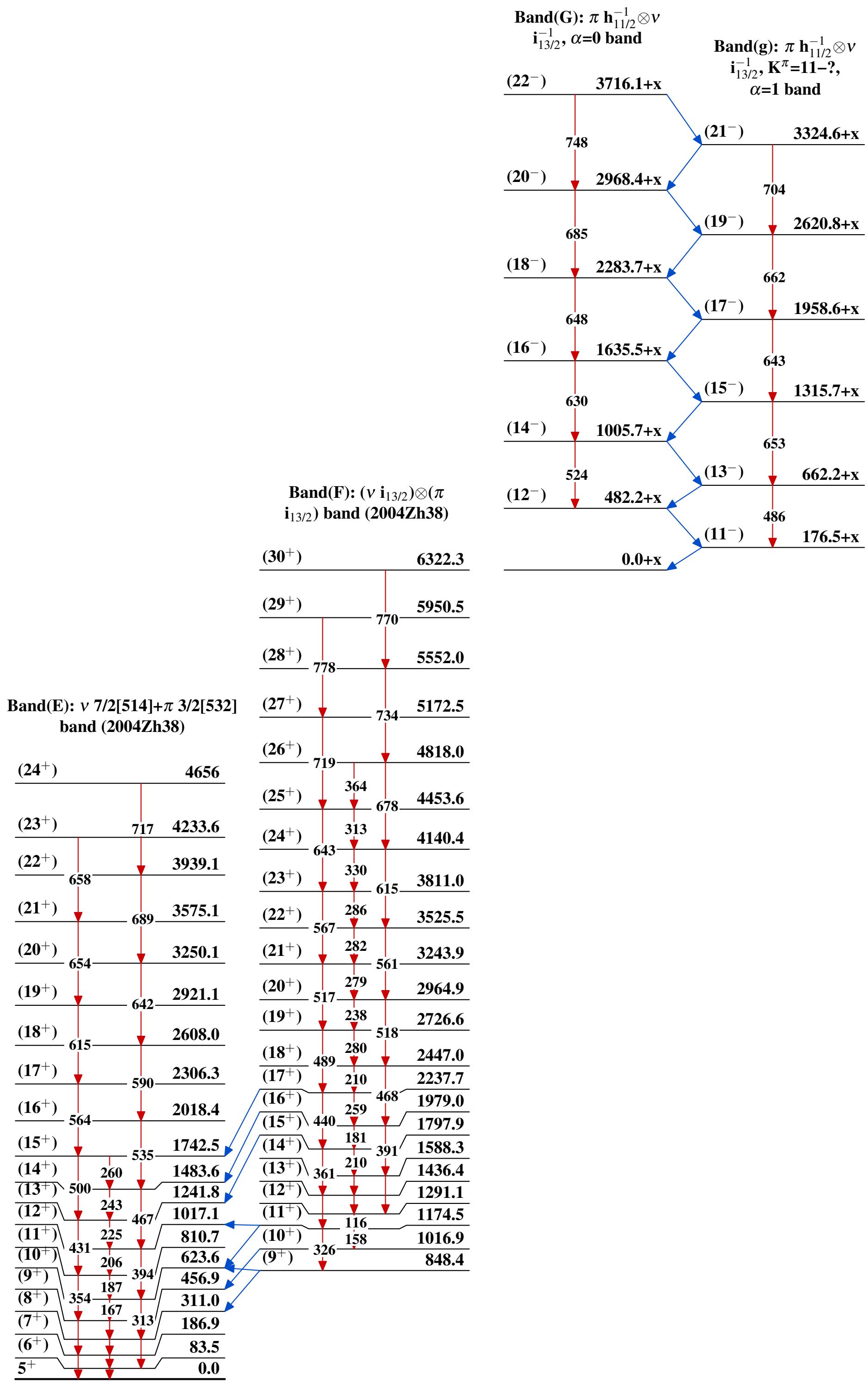
$^{184}_{79}Au_{105}$

Adopted Levels, Gammas



$^{184}_{79}Au_{105}$

Adopted Levels, Gammas (continued)



$^{184}_{79}Au_{105}$