Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

Q(β^-)=−4.91×10^3 *3*; S(n)=9.38×10^3 *3*; S(p)=2.45×10^3 *4*; Q(α)=4.75×10^3 *3* 2012Wa38
Note: Current evaluation has used the following Q record.
Q(β^-)=−4890 *30*; S(n)=9360 *30*; S(p)=2430 *30*; Q(α)=4770 *30* 2003Au03

Transition quadrupole moment Q_t is related to the level lifetime by $Q_t(J\rightarrow J\text{-}2)=0.906\sqrt{(p_\gamma(J\rightarrow J-2)/(\sqrt{(\tau\times E_\gamma^5(J\rightarrow J\text{-}2))}\times\text{<JK20 I J-2K>})}$ [eb] and is reported by 1995Wa18 for some levels.

1968Si01 searched for the α decay in gold isotopes and tentatively assigned a 4.69 MeV 2 α line to ^{187}Au. The measurement shows either very weak or no α branch.

^{187}Au Levels

Cross Reference (XREF) Flags

- A ^{187}Au IT decay (2.3 s)
- B ^{187}Hg ε decay (1.9 min)
- C ^{187}Hg ε decay (2.4 min)
- D ^{172}Yb(^{19}F,4nγ)

E(level)†	Jπ‡	$T_{1/2}$@	XREF	Comments
0.0h	1/2(+)	8.3 min *2*	ABCD	%ε+%β+=100; %α=0.003 syst μ=+0.531 *12* Jπ: spin from atomic beam (1976Ek01), parity from μ and configuration=π 1/2+[431] − main component of the oblate orbital arising mainly from the $d_{3/2}$ subshell (1990Sa21). $T_{1/2}$: weighted average of 8.4 min *3* (1983Gn01), 8.0 min *4* (1979Be51), and 8.5 min 7 (1973Se13); Other: 8 min (1960Al20) − measured in ^{187}Au ε decay. μ: from 1990Sa21 (Laser spectroscopy). Other values: +0.535 *15* (1989Wa11-Laser spectroscopy), +0.54 *3* (1987Wa06-Laser spectroscopy), and +0.72 *7* (1980Ek04-Atomic beam magnetic resonance). Δ<r^2>(^{187}Au,^{197}Au)=−0.365 *10* (1990Sa21); <r^2>$^{1/2}$(^{187}Au)=5.400 *6* fm (2004An14).
19.53h *9*	3/2(+)#	6.5 ns *7*	ABCD	Jπ: For prolate, configuration: 3/2+[402] (19.5 keV level) and configuration:1/2+[400] (g.s.) B(M1)=0.0018; and for oblate, configuration: 3/2+[431] (19.5 keV) and configuration:1/2+[431] (g.s.) B(M1)=0.59, calculated by 1978Bo05. $T_{1/2}$: weighted average of 6 ns *1* (ce(19.5L)(t) − 1978Bo05) and 7 ns *1* (ce(220K)-ce(19.5M)(t)−1986Be07).
120.33& *14*	9/2(−)#	2.3 s *1*	ABCD	%IT=100 $T_{1/2}$: from ce(t) (IT decay − 1983Br26) − The uncertainty is at 95% confidence level.
171.81e *15*	(5/2−)	1.1 ns *1*	BCD	$T_{1/2}$: from ce(271.1K)-ce(51.2L)(t)−1983Be48. Jπ: from systematics of neighboring odd-A Au isotopes.
203.29 *9*	(3/2+)		BC	Jπ: 183.7γ M1+E2 to 3/2(+) state, 203.4γ M1 to 1/2(+) state.
223.90f *14*	(11/2−)	48 ns *2*	BCD	$T_{1/2}$: from γ-ce(103.3M)(t)-(^{187}Hg ε decay-1983Be48). Other value: 50 ns *5* from γγ(t) (^{19}F,4nγ). Jπ: 103.4γ M1+E2 to 9/2(−), populated in ^{172}Yb(^{19}F,4nγ).
240.19h *9*	(5/2+)		BCD	Jπ: 240.3γ E2 to 1/2(+), 220.8γ M1+E2 to 3/2(+).
274.91 *16*	(1/2−)		B	Jπ: 103.3γ (E2) to (5/2−).

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Adopted Levels, Gammas (continued)

^{187}Au Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[@]	XREF	Comments
290.97 *10*	(5/2$^+$)		BC	Jπ: 271.5γ M1+E2 to 3/2$^{(+)}$.
325.64 *15*	(7/2$^-$)		BC	Jπ: 153.7γ M1+E2 to (5/2$^-$) state, 205.4γ M1+E2 to 9/2$^{(-)}$ state.
353.66[&] *15*	(13/2$^-$)	56 ps *5*	CD	Q_t=6.08 eb 31 (1995Wa18). Jπ: 233.4γ E2 to 9/2$^{(-)}$ state.
428.12 *16*	(3/2$^-$)		B	Jπ: 153.3γ M1+E2 to (1/2$^-$) state, 256.4γ M1+E2 to (5/2$^-$) state.
443.20[e] *16*	9/2$^{(-)}$		CD	Jπ: 322.9γ E0+M1+E2 to 9/2$^{(-)}$, 271.2γ E2 to (5/2$^-$) state.
456.13 *15*	(5/2$^-$)		B	Jπ: 130.4γ M1+E2 to (7/2$^-$), 284.5γ E0+M1+E2 to (5/2$^-$) state.
476.60 *13*	(7/2$^-$)		BC	Jπ: 252.5γ E2 to (11/2$^-$), 236.3γ E1 to (5/2$^+$) state.
495.33 *11*	(7/2$^+$)		BC	Jπ: 255.2γ M1+E2 to (5/2$^+$), 476.0γ E2 to 3/2$^{(+)}$ state.
496.73[a] *15*	(11/2$^-$)		CD	Jπ: 376.3γ M1+E2 to 9/2$^{(-)}$ state.
503.73 *10*	(3/2$^+$)		B	Jπ: 503.6γ (M1) to 1/2$^{(+)}$ state, 484.3γ M1 to 3/2$^{(+)}$ state.
546.08 *14*	(1/2$^-$)		B	Jπ: 270.9γ E0+M1 to (1/2$^-$) state, 545.9γ E1 to 1/2$^{(+)}$ state.
590.80 *12*	(3/2$^+$)		BC	Jπ: 571.4γ M1+E2 to 3/2$^{(+)}$ state, 591.0γ M1 to 1/2$^{(+)}$ state.
595.31 *12*	(3/2$^+$)		B	Jπ: 391.9γ (E0+M1+E2) to (3/2$^+$) state.
598.17 *16*	(7/2$^-$)		BC	Jπ: 426.1γ M1+E2 to (5/2$^-$) state, 478.0γ E2+M1 to 9/2$^{(-)}$ state.
619.77 *16*	(11/2$^-$)		C	Jπ: 499.4γ E2+M1 to 9/2$^{(-)}$, 265.9γ E2+M1 to (13/2$^-$).
633.59 *12*	(7/2$^+$)		BC	Jπ: 393.4γ M1 to (5/2$^+$), 429.9γ (E2) to (3/2$^+$).
638.60 *11*	(5/2$^+$)		B	Jπ: 435.5γ M1+E2 to (3/2$^+$) state, 347.9γ to (5/2$^+$) state.
673.24[f] *17*	(15/2$^-$)		CD	Jπ: 449.2γ E2 to (11/2$^-$), population in ^{172}Yb(^{19}F,4nγ).
674.11 *22*	(9/2$^-$,11/2$^-$)		C	Jπ: 450.1γ (M1) to (11/2$^-$).
687.12 *12*	(5/2$^+$)		BC	Jπ: 667.8γ M1 to 3/2$^{(+)}$, 446.9γ M1 to (5/2$^+$).
688.59[&] *18*	(17/2$^-$)	9.5 ps *10*	CD	Q_t=6.31 eb 35 (1995Wa18). Jπ: 334.8γ E2 to (13/2$^-$) state.
705.9 *3*			B	
710.44[h] *13*	(9/2$^+$)		CD	Jπ: 470.3γ E2 to (5/2$^+$) state.
732.89 *17*	(5/2$^-$)		B	Jπ: 457.8γ (E2) to (1/2$^-$) state.
741.86[e] *18*	(13/2$^-$)		CD	Jπ: 298.6γ E2 to 9/2$^{(-)}$, 388.1γ E0+M1+E2 to (13/2$^-$).
749.29 *17*	(13/2$^-$)		C	Jπ: 525.4γ M1+E2 to (11/2$^-$).
754.55 *16*	(3/2$^-$)		B	Jπ: 326.2γ M1 to (3/2$^-$), 298.4γ M1+E2 to (5/2$^-$), 428.6γ E2 to (7/2$^-$).
755.27 *20*	(9/2$^-$)		C	Jπ: 429.6γ M1+E2 to (7/2$^-$).
767.08 *14*	(9/2$^+$)		C	Jπ: 271.6γ E2+M1 to (7/2$^+$), 476.3γ E2 to (5/2$^+$).
778.41 *16*	(1/2,3/2,5/2)$^+$		B	Jπ: 275.4γ M1+E2 to (3/2$^+$).
815.81[a] *17*	(15/2$^-$)		CD	Jπ: 462.1γ M1+E2 to (13/2$^-$), 319.2γ E2 to (11/2$^-$).
822.42 *16*	(5/2$^+$)		BC	Jπ: 582.4γ M1+E2 to (5/2$^+$), 327.0γ M1+E2 to (7/2$^+$).
829.03 *18*	(11/2$^-$)		C	Jπ: 385.8γ M1 to 9/2$^{(-)}$, 475.4γ M1 to (13/2$^-$).
840.11 *18*	(9/2$^-$)		C	Jπ: 363.3γ M1 to (7/2$^-$) and 616.4γ M1 to (11/2$^-$).
877.23 *17*	(5/2$^-$)		B	Jπ: 278.7γ M1 to (7/2$^-$).
880.00 *19*	(7/2$^+$)		C	Jπ: 289.5γ (E2) to (3/2$^+$), 192.6γ (E2+M1) to (5/2$^+$).
881.20 *18*	(11/2$^-$)		C	Jπ: 657.3γ E0+M1+E2 to (11/2$^-$), 131.8γ E2+M1 to (13/2$^-$).
934.36 *20*	(5/2$^+$)		C	Jπ: 693.8γ M1+E2 to (5/2$^+$), 438.9γ E2+M1 to (7/2$^+$).
948.18 *25*	(1/2$^-$,3/2$^-$)		B	Jπ: 402.1γ (M1+E2) to (1/2$^-$).
950.23 *20*	(7/2$^-$,9/2$^-$)		C	Jπ: 829.9γ M1+E2 to 9/2$^{(-)}$, 351.9γ M1 to (7/2$^-$).
956.44 *16*	(13/2$^-$)		C	Jπ: 459.4γ E2+M1 to (11/2$^-$), 602.9γ M1+E2 to (13/2$^-$), 836.2γ E2 to 9/2$^{(-)}$.
965.5 *5*	(7/2$^+$)		C	Jπ: 331.9γ M1+E2 to (7/2$^+$).
967.98 *17*	(11/2$^+$)		C	Jπ: 472.8γ E2 to (7/2$^+$), 257.4γ E2+M1 to (9/2$^+$).
975.31 *17*	(3/2$^-$)		B	Jπ: 700.3γ M1 to (1/2$^-$), 519.4γ M1 to (5/2$^-$).
984.92 *19*	(9/2$^-$)		C	Jπ: 659.4γ M1+E2 to (7/2$^-$), 813.3γ E2 to (5/2$^-$).
993.14 *19*	(15/2$^-$)		C	Jπ: 639.4γ M1+E2 to (13/2$^-$), 373.6γ (E2) to (11/2$^-$).
994.29 *22*			B	
1015.32 *19*	(7/2$^+$)		C	Jπ: 424.1γ (E2) to (3/2$^+$), 520.1γ M1 to (7/2$^+$).
1047.5 *5*			C	
1056.05 *11*	(3/2$^-$)		B	Jπ: 579.3γ (E2) to (7/2$^-$), 1036.1γ (E1) to 3/2$^{(+)}$, 1056.0γ (E1) to 1/2$^{(+)}$.
1102.4[&] *8*	(21/2$^-$)	3.5 ps *3*	D	Q_t=6.17 eb 31 (1995Wa18).

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Adopted Levels, Gammas (continued)

^{187}Au Levels (continued)

E(level)†	Jπ‡	XREF	Comments
			Jπ: 413.8γ Q to (17/2⁻).
1120.4 *4*		C	
1120.93 *16*	(11/2⁺)	C	Jπ: 410.6γ M1 to (9/2⁺), 625.4γ E2 to (7/2⁺).
1121.59[b] *17*	(13/2⁺)	CD	Jπ: 625.0γ E1 to (11/2⁻), 501.9γ E1 to (11/2⁻), 768.0γ E1 to (13/2⁻).
1126.6 *4*	(7/2,9/2,11/2)⁻	C	Jπ: 683.5γ M1+E2 to 9/2⁽⁻⁾, 371.3γ (E2+M1) to (9/2⁻).
1147.70 *19*	(11/2⁻,13/2⁻)	C	Jπ: 650.9γ E2+M1 to (11/2⁻), 331.8γ (M1) to (15/2⁻), 1027.3γ to 9/2⁽⁻⁾.
1148.5 *5*	(11/2⁺)	C	Jπ: 653.2γ E2 to (7/2⁺).
1149.23[h] *19*	(13/2⁺)	CD	Jπ: 438.8γ E2 to (9/2⁺), 455.3γ (E2) from (17/2⁺).
1155.9 *3*	(11/2⁻)	C	Jπ: 659.2γ M1 to (11/2⁻), 712.7γ M1+E2 to 9/2⁽⁻⁾, 830.1γ (E2) to (7/2⁻).
1158.88 *25*	(17/2⁻)	C	Jπ: 470.2γ M1+E2 to (17/2⁻), 805.5γ (E2) to (13/2⁻).
1161.2[&] *5*		B	
1164.47 *21*	(11/2⁺)	C	Jπ: 196.9γ E2+M1 to (11/2⁺), 669.1γ E2 to (7/2⁺).
1166.8[e] *4*	(17/2⁻)	CD	Jπ: 425.0γ (E2) to (13/2⁻), 478.1γ E0+M1+E2 to (17/2⁻).
1184.9 *5*	(7/2⁻,9/2⁻)	C	Jπ: 586.7γ M1+E2 to (7/2⁻).
1187.06 *21*	(13/2⁻)	C	Jπ: 963.2γ E2+M1 to (11/2⁻), 437.9γ E0+M1+E2 to (13/2⁻).
1197.64 *19*	(11/2⁻)	CD	Jπ: 448.3γ M1+E2 to (13/2⁻), 524.5 E2 to (15/2⁻). In (^{19}F,4nγ) Jπ=17/2⁻ for this level.
1205.15 *16*	(9/2⁺)	C	Jπ: 709.9γ E2(+M1) to (7/2⁺), 914.0γ (E2) to (5/2⁺).
1228.7 *3*	(9/2⁻)	C	Jπ: 388.5γ M1 to (9/2⁻), 751.9γ M1+E2 to (7/2⁻), 479.6γ (E2) to (13/2⁻).
1232.5[a] *3*	(19/2⁻)	CD	Jπ: 544.0γ M1(+E2) to (17/2⁻), 416.9γ (E2) to (15/2⁻).
1233.90 *24*		B	
1237.60 *24*	(5/2⁻)	B	Jπ: 761.0γ (M1) to (7/2⁻).
1249.39 *25*	(11/2⁻)	C	Jπ: 895.8γ E2(+M1) to (13/2⁻), 629.6γ M1+E2 to (11/2⁻).
1260.40 *24*	(3/2⁻)	B	Jπ: 783.8γ (E2) to (7/2⁻).
1276.86 *23*	(7/2⁻,9/2⁻)	C	Jπ: 678.9γ M1 to (7/2⁻), 1156.9 M1 to (9/2⁻).
1280.01 *17*	(11/2⁺)	C	Jπ: 569.5γ E2+M1 to (9/2⁺), 646.3γ E2 to (7/2⁺).
1291.28 *25*	(3/2⁻)	B	Jπ: 745.2γ E2+M1 to (1/2⁻).
1304.5 *3*	(9/2⁺,11/2⁺)	C	Jπ: 594.2γ E2(+M1) to (9/2⁺), 537.3γ M1+E2 to (9/2⁺).
1316.1 *3*	(17/2⁻)	CD	Jπ: 642.7γ M1+E2 to (15/2⁻), 566.9γ to (13/2⁻).
1316.79 *18*	(9/2⁻)	C	Jπ: 1196.6γ E2+M1 to 9/2⁽⁻⁾, 360.4γ E2 to (13/2⁻).
1357.56 *25*	(15/2⁻)	C	Jπ: 1004.2γ M1 to (13/2⁻), 860.7γ E2 to 11/2⁻.
1362.69 *21*		B	
1367.2 *3*	(15/2⁻)	C	Jπ: 551.1γ M1 to (15/2⁻), 1014.2γ M1+E2 to (13/2⁻).
1369.50 *21*	(7/2⁺)	C	Jπ: 736.3γ M1 to (7/2⁺), 778.8γ (E2) to (3/2⁺).
1380.61[b] *19*	(17/2⁺)	CD	Jπ: 564.8γ E1 to (15/2⁻), 259.2γ E2 to (13/2⁺).
1393.34 *23*	(13/2⁻)	C	Jπ: 436.6γ M1+E2 to (13/2⁻), 578.8γ M1 to (15/2⁻).
1397.8 *5*		C	
1398.2 *3*	(15/2⁺)	C	Jπ: 430.2γ E2 to (11/2⁺).
1400.2 *5*	(13/2⁻,15/2⁻)	C	Jπ: 584.4γ M1+E2 to (15/2⁻).
1405.25 *20*	(13/2⁺)	C	Jπ: 283.7γ M1+E2 to (13/2⁺), 1181.4γ (E1) to (11/2⁻).
1405.4 *5*		C	
1405.56[f] *25*	(19/2⁻)	CD	Jπ: 732.1γ E2 to (15/2⁻).
1415.8 *9*	(17/2⁻,19/2,21/2⁺)	D	Jπ: 727γ to (17/2⁻) and 699γ from (21/2⁺).
1418.5 *3*	(13/2⁻)	C	Jπ: 669.2γ M1 to (13/2⁻), 537.5γ M1+E2 to (11/2⁻).
1419.69 *23*	(5/2⁺)	B	Jπ: 786.1γ (M1+E2) to (7/2⁺).
1420.6 *3*	(9/2⁺,11/2⁺)	C	Jπ: 653.9γ M1+E2 to (9/2⁺), 710.3γ M1+E2 to (9/2⁺).
1420.7 *5*	(11/2⁻)	C	Jπ: 747.5γ E2 to (15/2⁻).
1464.3 *5*		C	
1470.98 *20*	(13/2⁺,15/2⁺)	C	Jπ: 349.5γ M1 to (11/2⁺), 781.5γ to (17/2⁻), 90.5γ to (17/2⁺).
1498.3 *5*	(5/2⁺)	B	Jπ: 1003.0γ to (7/2⁺).
1540.7 *4*	(13/2⁻,15/2⁻)	C	Jπ: 791.3γ M1 to (13/2⁻), 867.5γ M1 to (15/2⁻).
1557.4 *3*		C	
1562.7 *5*		C	
1568.1 *3*	(11/2,13/2,15/2)⁺	C	Jπ: 446.5γ E2+M1 to (13/2⁺).

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Adopted Levels, Gammas (continued)

^{187}Au Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[@]	XREF	Comments
1589.58 *18*	(11/2$^+$,13/2$^+$)		C	Jπ: 467.7γ E2+M1 to 13/2$^+$, 1365.8γ E1 to (11/2$^-$).
1590.0 *4*	(11/2$^-$,13/2$^-$)		C	Jπ: 392.5γ E2+M1 to (11/2$^-$), 840.5γ E2+M1 to (13/2$^-$).
1593.8[&] *11*	(25/2$^-$)	1.4 ps *2*	D	Q_t=6.2 eb 4 (1995Wa18). Jπ: 491.6γ E2 to (21/2$^-$).
1600.8 *3*			C	
1604.5[h] *5*	(17/2$^+$)		CD	Jπ: 455.3γ (E2) to (13/2$^+$).
1637.47 *23*			C	
1684.8[e] *11*	(21/2$^-$)		D	Jπ: 518γ to (17/2$^-$), band member.
1697.0[b] *7*	(21/2$^+$)	7.5 ps *6*	D	Q_t=8.05 eb 37 (1995Wa18). Jπ: 316.4γ Q to (17/2$^+$), band member.
1711.0 *3*			C	
1737.50 *22*			B	
1739.5[a] *8*	(23/2$^-$)		D	Jπ: 637γ to (21/2$^-$), band member.
1751.80 *22*			B	
1776.1 *5*			B	
1778.8 *5*	(11/2$^-$)		C	Jπ: 963.0γ (E2) to (15/2$^-$).
1786.4 *4*			B	
1791.4 *5*			C	
1799.5 *11*			D	
1807.55 *21*	(15/2$^-$)		C	Jπ: 1058γ M1 to (13/2$^-$), 1583.8γ E2 to (11/2$^-$).
1811.1 *4*			B	
1815.87 *23*	(15/2$^-$)		C	Jπ: 1066.6γ E2+M1 to (13/2$^-$).
1816.2 *4*	(11/2$^-$)		C	Jπ: 1339.5γ (E2) to (7/2$^-$).
1819.8 *5*			C	
1842.77 *20*	(5/2$^+$)		B	Jπ: 1347.3γ to (7/2$^+$), 1639.5γ to (3/2$^+$).
1864.0 *5*			C	
1876.3 *5*			B	
1905.3 *3*	(15/2$^-$)		C	Jπ: 1023.8γ (E2) to (11/2$^-$), 1232.3γ (M1) to (15/2$^-$).
1918.07 *14*			B	
1919.21 *24*	(3/2$^-$)		B	Jπ: 1442.6γ to (7/2$^-$).
1930.4 *4*	(17/2$^-$)		C	Jπ: 1181.2γ E2 to (13/2$^-$), 1257.0γ (M1+E2) to (15/2$^-$).
1994.3 *5*	(11/2$^-$)		C	Jπ: 1321.1γ to (15/2$^-$).
1995.19 *24*	(5/2$^-$)		B	Jπ: 1518.6γ M1 to (7/2$^-$).
1997.3 *4*			B	
2007.3 *8*			D	
2029.7 *5*			C	
2051.6 *4*			B	
2052.6 *9*			D	
2065.7 *5*			C	
2068.81 *19*			B	
2073.2 *5*			C	
2082.0 *5*			C	
2094.6 *3*			B	
2095.81 *20*			B	
2097.5[b] *9*	(25/2$^+$)	2.1 ps *3*	D	Q_t=8.4 eb 5 (1995Wa18). Jπ: 400.4γ Q to (21/2$^+$), band member.
2099.6 *5*			C	
2102.26 *20*			B	
2103.30 *22*			B	
2115.1[g] *8*	(21/2$^+$)		D	Jπ: 709.8γ (E1) to (19/2$^-$), band member.
2116.14 *23*			B	
2117.1 *5*			C	
2121.16 *20*			B	
2121.58 *22*			B	
2127.80 *22*			B	

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Adopted Levels, Gammas (continued)

^{187}Au Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[@]	XREF	Comments
2142.24 *19*			B	
2145.4 *4*			C	
2149.7 *5*	(13/2$^-$)		C	Jπ: 1461.1γ E2 to (17/2$^-$).
2154.41 *18*	(3/2$^-$)		B	Jπ: 1726.6γ to (3/2$^-$), 1608.1γ to (1/2$^-$), 1421.5γ to (5/2$^-$).
2154.89 *12*			B	
2160.6[&] *15*	(29/2$^-$)	<1.94 ps	D	Jπ: 566.8γ (E2) to (25/2$^-$).
2172.32 *21*			B	
2173.06 *12*			B	
2178.10 *23*			B	
2178.91 *24*	(3/2$^-$)		B	Jπ: 1702.3γ to (7/2$^-$).
2180.0 *5*	(9/2$^+$)		C	Jπ: 1357.6γ to (5/2$^+$).
2183.8 *5*			C	
2184.87 *21*			B	
2186.04 *24*			C	
2191.3 *5*			C	
2193.1 *5*	(5/2$^+$)		B	Jπ: 1697.8γ to (7/2$^+$).
2196.2[f] *9*	(23/2$^-$)		D	Jπ: 790.6γ (E2) to (19/2$^-$).
2201.84 *24*			C	
2206.0 *3*			C	
2206.6 *4*			C	
2221.7 *5*			C	
2223.31 *25*			C	
2230.0 *3*			B	
2237.57 *20*	(13/2$^-$)		C	Jπ: 1740.9γ to (11/2$^-$), 920.7γ to (9/2$^-$).
2237.77 *22*			C	
2246.43 *25*	(13/2$^-$)		C	Jπ: 1626.7γ to (11/2$^-$), 1430.3γ to (15/2$^-$).
2246.8[e] *15*	(25/2$^-$)		D	Jπ: 562γ to (21/2$^-$), band member.
2248.1 *5*			C	
2253.20 *19*			B	
2253.26 *22*			C	
2262.8 *5*			C	
2266.2 *5*			C	
2268.12 *20*	(13/2$^-$)		C	Jπ: 1914.2γ to (13/2$^-$), 1579.5γ to (17/2$^-$).
2279.9 *4*			C	
2281.7[g] *10*	(23/2$^+$)	<10 ns	D	Jπ: 166.7γ M1+E2 to (21/2$^+$), band member. $T_{1/2}$: From (^{19}F,4nγ).
2282.96 *25*			B	
2285.0 *5*			C	
2288.9 *5*			C	
2291.0 *6*	(11/2$^+$)		C	
2292.8[d] *11*	(27/2$^-$)		D	Jπ: 699.1γ (M1+E2) to (25/2$^-$), band member.
2293.10 *21*			B	
2300.24 *18*			C	
2300.33 *16*			C	
2300.70 *20*			C	
2306.1 *5*			C	
2306.8 *5*			C	
2313.5 *4*	(13/2$^+$)		C	Jπ: 724.1γ (M1) to (11/2,13/2)$^+$, 932.7γ E2 to (17/2$^+$).
2319.1 *4*			C	
2319.16 *21*	(15/2$^-$)		C	Jπ: 1630.9γ (M1) to (17/2$^-$), 1503.6γ (E2+M1) to (15/2$^-$), 1362.6γ to (13/2$^-$).
2319.2 *3*			C	
2321.9 *20*			B	
2327.87 *23*			C	
2334.0 *5*			C	
2334.8 *4*			B	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{187}Au Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[@]	XREF	Comments
2337.2 *3*			C	
2342.9 *3*			C	
2343.2 *3*			C	
2345.7 *4*	(11/2$^+$)		C	Jπ: 1196.1γ to (13/2$^+$), 1466.1γ to (7/2$^+$).
2345.87 *21*			B	
2348.9 *5*			C	
2350.5 *3*			C	
2354.1 *5*			C	
2354.5[a] *13*	(27/2$^-$)		D	Jπ: 615γ to (23/2$^-$), band member.
2365.3 *5*	(13/2$^-$)		C	Jπ: 1616.0γ to (13/2$^-$).
2369.0 *5*	(13/2$^+$)		C	Jπ: 988.4γ to (17/2$^+$).
2384.6 *5*			C	
2389.1 *5*			C	
2389.9 *4*			C	
2395.7 *3*	(13/2$^+$)		C	Jπ: 1646.4γ to (13/2$^-$).
2396.0 *4*	(15/2$^+$)		C	Jπ: 1274.3γ to (13/2$^+$), 1707.6γ to (17/2$^-$).
2400.7 *5*			C	
2400.8 *4*			C	
2403.2 *3*			B	
2410.9 *4*			C	
2431.07 *20*			B	
2431.3[g] *14*	(25/2$^+$)	24 ns *3*	D	Jπ: 149.6γ (M1+E2) to (23/2$^+$), band member. $T_{1/2}$: From (^{19}F,4nγ).
2471.0 *5*	(11/2$^-$)		C	Jπ: 1154.2γ (E2+M1) to (9/2$^-$).
2474.1 *5*			C	
2486.0 *20*			B	
2504.3 *4*			B	
2513.6 *5*			C	
2524.3 *3*			B	
2541.4 *5*			C	
2551.0 *5*			C	
2551.7 *14*			D	
2564.8?[g] *11*	(27/2$^+$)		D	Jπ: 133.7γ D+Q to (25/2$^+$), band member.
2568.4[b] *14*	(29/2$^+$)	0.97 ps *14*	D	Q_t=8.3 eb 6 (1995Wa18). Jπ: 470.9γ (Q) to (25/2$^+$).
2572.7 *5*			C	
2581.0 *9*	(25/2$^-$)		D	Jπ: 384.7γ to (23/2$^-$).
2606.7 *5*			C	
2625.3 *5*			C	
2633.0 *5*			C	
2669.4[c] *18*	(31/2$^-$)	100 ns *5*	D	μ=−3.9 *5* Jπ: 508.8γ (M1+E2) to (29/2$^-$). μ: deduced by the evaluator from g=0.25 *3* (1997Pe26). The g factor is measured using time differential perturbed angular distribution. $T_{1/2}$: From (^{19}F,4nγ).
2670.2 *13*			D	
2671.8? *18*			D	
2688.3 *5*			C	
2749.2 *5*			C	
2768.1 *5*			C	
2792.8[d] *15*	(31/2$^-$)		D	Jπ: 500.0γ to (27/2$^-$).
2798.7[&] *18*	(33/2$^-$)		D	Jπ: 638.1γ Q to (29/2$^-$).
2827.9 *5*			C	
2966.3[c] *20*	(33/2$^-$)		D	Jπ: 297.1γ (M1+E2) to (31/2$^-$), band member.
3013.5[a] *16*	(31/2$^-$)		D	Jπ: 659γ to (27/2$^-$), band member.

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Adopted Levels, Gammas (continued)

^{187}Au Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[@]	XREF	Comments
3039.3[b] *17*	(33/2$^+$)	<2.56 ps	D	Jπ: 470.9γ (Q) to (29/2$^+$), band member.
3056.6?[g] *15*	(31/2$^+$)		D	Jπ: 491.8γ to (27/2$^+$), band member.
3129.0[c] *20*	(35/2$^-$)		D	Jπ: 162.7γ D+Q to (33/2$^-$), 459.4γ Q to (31/2$^-$), band member.
3189.8? *21*			D	
3345.9[d] *18*	(35/2$^-$)		D	Jπ: 553.1γ to (31/2$^-$).
3353.3 *21*	(35/2$^-$)		D	Jπ: 387γ to (33/2$^-$).
3482.3[c] *20*	(37/2$^-$)		D	Jπ: 353.4γ (M1+E2) to (35/2$^-$), band member.
3483.1[b] *20*	(37/2$^+$)		D	Jπ: 443.8γ Q to (33/2$^+$), band member.
3503.4[&] *21*	(37/2$^-$)		D	Jπ: 704.7γ Q to (33/2$^-$).
3762.0[c] *21*	(39/2$^-$)		D	Jπ: 279.7γ (M1+E2) to (37/2$^-$), band member.
3810.7[g] *18*	(35/2$^+$)		D	Jπ: 754.1γ Q to 31/2$^+$, band member.
3977.4[d] *21*	(39/2$^-$)		D	Jπ: 631.5γ to (35/2$^-$).
3993.7[b] *22*	(41/2$^+$)		D	Jπ: 510.6γ to (37/2$^+$), band member.
4015.2 *21*	(39/2$^-$)		D	Jπ: 533γ to (37/2$^-$), 662γ to (35/2$^-$), 886γ to (35/2$^-$).
4225.5[c] *21*	(41/2$^-$)		D	Jπ: 463.6γ (M1+E2) to (39/2$^-$), 743.2γ to (37/2$^-$), band member.
4263.7[&] *23*	(41/2$^-$)		D	Jπ: 760.3γ to 37/2$^-$.
4317.7 *21*			D	
4506.6[c] *21*	(43/2$^-$)		D	Jπ: 281.0γ D+Q to (41/2$^-$), band member.
4550.3 *22*	(43/2$^-$)		D	Jπ: 788.1γ to (39/2$^-$).
4577.0[g] *20*	(39/2$^+$)		D	Jπ: 766.4γ to (35/2$^+$), band member.
4593.2[b] *25*	(45/2$^+$)		D	Jπ: 599.5γ to (41/2$^+$), band member.
4651.0 *20*	(39/2$^+$)		D	Jπ: 840.3γ to (35/2$^+$), band member.
4657.1 *21*	(43/2$^-$)		D	Jπ: 895.1γ Q to (39/2$^-$).
4690.4[d] *23*	(43/2$^-$)		D	Jπ: 713γ to (39/2$^-$), band member.
4788.6[g] *21*	(43/2$^+$)		D	Jπ: 211.6γ Q to (39/2$^+$), band member.
4851.1 *22*	(47/2$^-$)		D	Jπ: 344.5γ Q to (43/2$^-$).
5041.2[&] *25*	(45/2$^-$)		D	Jπ: 777.5γ to (41/2$^-$).
5127.6 *22*			D	
5254.6 *23*			D	
5281[b] *3*	(49/2$^+$)		D	Jπ: 688.3γ to (45/2$^+$), band member.
5351.6 *24*			D	
5375.8[g] *23*	(47/2$^+$)		D	Jπ: 587.2γ Q to (43/2$^+$), band member.
5519.5 *24*	(51/2$^-$)		D	Jπ: 668.4γ Q to (47/2$^-$).
5746.1 *24*			D	
5782.8[g] *25*	(49/2$^+$)		D	Jπ: 407.0γ to (47/2$^+$), band member.
5815.8 *25*			D	
5868.6 *24*			D	
5980.8 *25*			D	
6054[b] *3*	(53/2$^+$)		D	Jπ: 773γ to (49/2$^+$), band member.
6129 *3*	(53/2,55/2$^-$)		D	Jπ: 609.4γ to (51/2$^-$).
6250 *3*			D	
6400[g] *3*	(51/2$^+$)		D	Jπ: 617.6γ to (49/2$^+$), band member.
6505 *3*			D	
6594 *3*			D	
6914[b] *3*	(57/2$^+$)		D	Jπ: 860γ to (53/2$^+$), band member.
7220 *3*			D	

[†] From a least-squares adjustment to the γ-ray energies. ΔE=0.5 keV assumed for missing γ-ray uncertainty. The 1857.8γ from 2184.9 keV level is ignored during the least-squares adjustment (σ>3).

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Adopted Levels, Gammas (continued)

^{187}Au Levels (continued)

‡ Levels with $J^{\pi} \geq 11/2^{-}$ populated in ^{172}Yb(^{19}F,4nγ) reaction, assigned by 1989Jo02 from angular distribution data and rotational band relationships.
# From E3 and M1+E2 cascade to $1/2^{(+)}$ from 2.3-s isomer gives $9/2^{(-)}$ and $3/2^{(+)}$ for 120.3 and 19.5 keV levels, respectively.
@ From reported lifetime in 1995Wa18, except otherwise noted. Lifetime in 1995Wa18 is measured using the Recoil Distance Method.
& Band(A): $1/2^{-}[541]$, α=+1/2.
a Band(B): $1/2^{-}[541]$, α=−1/2.
b Band(C): $1/2^{+}[660]$.
c Band(D): isomeric band.
d Band(E): π $f_{7/2}$.
e Band(F): Band 5.
f Band(G): π $h_{11/2}$.
g Band(H): Band 7.
h Band(I): Band 9.

Adopted Levels, Gammas (continued)

γ(^{187}Au)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	Comments
19.53	$3/2^{(+)}$	19.5 *4*	100	0.0	$1/2^{(+)}$	(M1+E2)		$7.\times10^3$ *6*	B(M1)(W.u.)<0.0027 *4*
120.33	$9/2^{(-)}$	101.0 *2*	100	19.53	$3/2^{(+)}$	E3		120.4 *22*	B(E3)(W.u.)=0.0195 *10*
171.81	$(5/2^-)$	51.2 *4*	100	120.33	$9/2^{(-)}$	[E2]		112 *5*	B(E2)(W.u.)=204 *22*
203.29	$(3/2^+)$	183.7 *4*	1.4 *6*	19.53	$3/2^{(+)}$	M1+E2	2.3 *4*	0.63 *5*	
		203.4 *2*	100 *7*	0.0	$1/2^{(+)}$	M1		0.969	
223.90	$(11/2^-)$	103.4 *2*	100	120.33	$9/2^{(-)}$	M1+E2	0.0 *5*	6.6 *5*	B(M1)(W.u.)=5.5×10^{-5} *5*
240.19	$(5/2^+)$	36.9		203.29	$(3/2^+)$				
		220.8 *2*	71 *5*	19.53	$3/2^{(+)}$	M1+E2	2.54 *18*	0.336 *11*	
		240.3 *2*	100 *8*	0.0	$1/2^{(+)}$	E2		0.203	
274.91	$(1/2^-)$	103.3 *2*	100	171.81	$(5/2^-)$	(E2)		4.55 *8*	
290.97	$(5/2^+)$	50.7 *4*	0.23 *6*	240.19	$(5/2^+)$				
		271.5 *2*	100 *10*	19.53	$3/2^{(+)}$	M1+E2	0.0 *3*	0.44 *3*	
		291.0 *4*	2.3 *7*	0.0	$1/2^{(+)}$				
325.64	$(7/2^-)$	153.7 *4*	38 *5*	171.81	$(5/2^-)$	M1+E2	0.65 *10*	1.78 *9*	
		205.4 *2*	100 *10*	120.33	$9/2^{(-)}$	M1+E2	0.73 *23*	0.73 *9*	
353.66	$(13/2^-)$	233.4[‡] *2*	100[‡]	120.33	$9/2^{(-)}$	E2		0.224	B(E2)(W.u.)=188 *17*
428.12	$(3/2^-)$	102.3 *4*	1.1 *5*	325.64	$(7/2^-)$				
		153.3 *2*	100 *12*	274.91	$(1/2^-)$	M1+E2	2.3 *4*	1.15 *7*	
		256.4 *2*	88 *7*	171.81	$(5/2^-)$	M1+E2	1.6 *5*	0.26 *6*	
443.20	$9/2^{(-)}$	117.5[‡] *4*	4[‡] *1*	325.64	$(7/2^-)$	E2+M1	5 *3*	2.8 *3*	
		271.2[‡] *2*	56[‡] *5*	171.81	$(5/2^-)$	E2		0.1389	
		322.9[‡] *2*	100[‡]	120.33	$9/2^{(-)}$	E0+M1+E2		≈0.83	δ: %E0≈76. α: Estimated by the evaluator from α(K)exp=0.66 *17* (1988Pa15), α(K)exp=0.62 *7* (1998Ru04).
456.13	$(5/2^-)$	130.4 *2*	22 *5*	325.64	$(7/2^-)$	M1+E2	1.0 *4*	2.6 *4*	
		181.4 *2*	41 *11*	274.91	$(1/2^-)$	E2		0.526	
		284.5 *2*	100 *11*	171.81	$(5/2^-)$	E0+M1+E2		≈0.67	α: Estimated by the evaluator from α(K)exp=0.52 *6* (1998Ru04).
		335.7 *2*	18 *5*	120.33	$9/2^{(-)}$				
476.60	$(7/2^-)$	185.7 *2*	19 *4*	290.97	$(5/2^+)$				
		236.3 *2*	27.1 *19*	240.19	$(5/2^+)$	E1		0.0478	
		252.5 *2*	100 *14*	223.90	$(11/2^-)$	E2		0.1737	
495.33	$(7/2^+)$	255.2 *2*	27.9 *18*	240.19	$(5/2^+)$	M1+E2	0.3 *7*	0.49 *15*	
		292.2 *4*	4.0 *9*	203.29	$(3/2^+)$	E2		0.1107	
		476.0 *2*	100 *9*	19.53	$3/2^{(+)}$	E2		0.0291	
496.73	$(11/2^-)$	143.0[‡] *2*	5.0[‡] *5*	353.66	$(13/2^-)$	M1		2.61	
		171.7[‡] *4*	1.3[‡] *4*	325.64	$(7/2^-)$				
		376.3[‡] *2*	100.0[‡] *22*	120.33	$9/2^{(-)}$	M1+E2	0.6 *3*	0.147 *24*	
503.73	$(3/2^+)$	212.7 *2*	21 *5*	290.97	$(5/2^+)$	E2+M1	1.6 *4*	0.46 *8*	
		263.8 *2*	21 *5*	240.19	$(5/2^+)$	(M1)		0.472	

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Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	Comments
503.73	(3/2$^+$)	300.3 *2*	45 *2*	203.29	(3/2$^+$)	(E2+M1)		0.22 *12*	
		484.3 *2*	74 *10*	19.53	3/2$^{(+)}$	M1		0.0920	
		503.6 *2*	100 *4*	0.0	1/2$^{(+)}$	(M1)		0.0830	
546.08	(1/2$^-$)	89.7 *4*	1.5 *7*	456.13	(5/2$^-$)	E2		8.25 *20*	
		270.9 *2*	76 *10*	274.91	(1/2$^-$)	E0+M1		≈0.77	α: Estimated by the evaluator from α(K)exp=0.59 *7* (1998Ru04).
		374.2 *2*	100 *15*	171.81	(5/2$^-$)	(E2)		0.0545	
		545.9 *2*	20 *3*	0.0	1/2$^{(+)}$	E1			
590.80	(3/2$^+$)	299.6 *2*	31 *5*	290.97	(5/2$^+$)	M1+E2	1.5 *7*	0.17 *7*	
		350.0 *4*	16 *3*	240.19	(5/2$^+$)	(M1+E2)	1.2 *9*	0.13 *8*	
		387.7 *4*	9.4 *20*	203.29	(3/2$^+$)	(E0+M1+E2)		≈0.28	α: Estimated by the evaluator from α(K)exp=0.22 *8* (1998Ru04).
		571.4 *2*	100 *16*	19.53	3/2$^{(+)}$	M1+E2	1.2 *3*	0.036 *6*	
		591.0 *2*	34 *5*	0.0	1/2$^{(+)}$	M1		0.0546	
595.31	(3/2$^+$)	304.5 *4*	21 *2*	290.97	(5/2$^+$)	(M1)		0.319	
		355.3 *2*	25 *7*	240.19	(5/2$^+$)	(M1)		0.210	
		391.9 *2*	100 *18*	203.29	(3/2$^+$)	(E0+M1+E2)		≈0.26	α: Estimated by the evaluator from α(K)exp=0.20 *3* (1998Ru04).
		575.8 *2*	35 *8*	19.53	3/2$^{(+)}$				
		595.2 *2*	29 *8*	0.0	1/2$^{(+)}$	(M1)		0.0536	
598.17	(7/2$^-$)	142.7 *4*	4.3 *14*	456.13	(5/2$^-$)	M1+E2	3.6 *7*	1.36 *6*	
		170.4 *4*	4.3 *14*	428.12	(3/2$^-$)				
		272.1 *2*	24 *4*	325.64	(7/2$^-$)	M1		0.433	
		426.1 *2*	100 *14*	171.81	(5/2$^-$)	M1+E2	0.5 *4*	0.111 *23*	
		478.0 *2*	81 *4*	120.33	9/2$^{(-)}$	E2+M1	1.0 *7*	0.06 *3*	
619.77	(11/2$^-$)	176.5[‡] *4*	1.5[‡] *5*	443.20	9/2$^{(-)}$	M1+E2		1.0 *5*	
		265.9[‡] *4*	5.6[‡] *10*	353.66	(13/2$^-$)	E2+M1		0.30 *16*	
		294.5[‡] *4*	3.1[‡] *5*	325.64	(7/2$^-$)	E2		0.1081	
		499.4[‡] *2*	100[‡] *5*	120.33	9/2$^{(-)}$	E2+M1	1.5 *4*	0.044 *9*	
633.59	(7/2$^+$)	129.7 *4*	5.3 *14*	503.73	(3/2$^+$)				
		138.5 *4*	3.4 *7*	495.33	(7/2$^+$)				
		342.6 *4*	10.6 *21*	290.97	(5/2$^+$)	E2+M1	0.8 *4*	0.17 *4*	
		393.4 *2*	100 *4*	240.19	(5/2$^+$)	M1		0.1597	
		429.9 *4*	12.7 *21*	203.29	(3/2$^+$)	(E2)		0.0377	
		614.1 *2*	21 *10*	19.53	3/2$^{(+)}$				
638.60	(5/2$^+$)	347.9 *2*	12.2 *22*	290.97	(5/2$^+$)	(M1)		0.222	
		398.3 *2*	73 *6*	240.19	(5/2$^+$)				
		435.5 *2*	100 *11*	203.29	(3/2$^+$)	M1+E2	0.65 *23*	0.096 *13*	
		619.0 *2*	33 *6*	19.53	3/2$^{(+)}$	(M1)		0.0484	
		638.7 *2*	38 *6*	0.0	1/2$^{(+)}$				
673.24	(15/2$^-$)	449.2[‡] *2*	100[‡]	223.90	(11/2$^-$)	E2		0.0337	

$^{187}_{79}Au_{108}$-10

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	Comments
674.11	(9/2⁻,11/2⁻)	450.1[‡] *2*	100[‡] *15*	223.90	(11/2⁻)	(M1)		0.1116	
687.12	(5/2⁺)	192.3 *4*	30 *7*	495.33	(7/2⁺)	M1+E2	2.1 *4*	0.56 *6*	
		395.9 *4*	40 *10*	290.97	(5/2⁺)	M1		0.1571	
		446.9 *2*	100 *7*	240.19	(5/2⁺)	M1		0.1138	
		483.7 *2*	80 *10*	203.29	(3/2⁺)	E2(+M1)	2.2 *5*	0.039 *6*	
		667.8 *2*	80 *10*	19.53	3/2(+)	M1		0.0397	
		686.7 *4*	30 *7*	0.0	1/2(+)				
688.59	(17/2⁻)	334.8[‡] *2*	100[‡]	353.66	(13/2⁻)	E2		0.0743	B(E2)(W.u.)=208 *22*
705.9		159.8 *2*	100	546.08	(1/2⁻)				
710.44	(9/2⁺)	215.3[‡] *4*	2.2[‡] *4*	495.33	(7/2⁺)	M1+E2	0.7 *8*	0.65 *20*	
		419.5[‡] *4*	1.5[‡] *4*	290.97	(5/2⁺)	(E2)		0.0402	
		470.3[‡] *2*	100.0[‡] *7*	240.19	(5/2⁺)	E2		0.0300	
732.89	(5/2⁻)	276.6 *2*	53 *8*	456.13	(5/2⁻)	(M1)		0.414	
		407.8 *2*	87 *6*	325.64	(7/2⁻)	M1		0.1451	
		457.8 *2*	100 *22*	274.91	(1/2⁻)	(E2)		0.0321	
741.86	(13/2⁻)	122.0[‡] *4*	4.5[‡] *15*	619.77	(11/2⁻)	M1+E2	2.2 *10*	2.6 *5*	
		245.1[‡] *4*	11.1[‡] *20*	496.73	(11/2⁻)	E2+M1	1.2 *3*	0.35 *6*	
		298.6[‡] *2*	100[‡] *4*	443.20	9/2(⁻)	E2		0.1038	
		388.1[‡] *2*	30.3[‡] *20*	353.66	(13/2⁻)	E0+M1+E2		≈1.0	δ: %E0=81 *4* (1988Pa15). α: Estimated by the evaluator from α(K)exp=0.77 *7*, weighted average of α(K)exp=0.96 *11* (1998Ru04) and α(K)exp=0.64 *9* (1988Pa15).
		621.8[‡] *4*	17.2[‡] *20*	120.33	9/2(⁻)	E2		0.01552	
749.29	(13/2⁻)	525.4[‡] *2*	100[‡]	223.90	(11/2⁻)	M1+E2	0.8 *4*	0.054 *13*	
754.55	(3/2⁻)	156.7 *4*	8 *5*	598.17	(7/2⁻)	E2		0.891 *15*	
		208.4 *2*	56 *11*	546.08	(1/2⁻)	(M1+E2)	1.0 *6*	0.62 *21*	
		298.4 *2*	92 *13*	456.13	(5/2⁻)	M1+E2	0.7 *15*	0.26 *12*	
		326.2 *2*	100 *11*	428.12	(3/2⁻)	M1		0.264	
		428.6 *2*	43 *14*	325.64	(7/2⁻)	E2		0.0380	
		480.1 *2*	57 *8*	274.91	(1/2⁻)	M1+E2	0.7 *8*	0.073 *24*	
		582.6 *4*	30 *9*	171.81	(5/2⁻)				
755.27	(9/2⁻)	258.7[‡] *4*	14[‡] *5*	496.73	(11/2⁻)	(M1)		0.498	
		429.6[‡] *2*	100[‡] *19*	325.64	(7/2⁻)	M1+E2	1.1 *4*	0.078 *20*	
		583.4[‡] *4*	19[‡] *5*	171.81	(5/2⁻)				
		634.9[‡] *4*	19[‡] *5*	120.33	9/2(⁻)				
767.08	(9/2⁺)	133.7[‡] *4*	17[‡] *7*	633.59	(7/2⁺)	E2+M1	2.2 *7*	1.89 *22*	
		271.6[‡] *2*	100[‡] *12*	495.33	(7/2⁺)	E2+M1	2.1 *7*	0.19 *5*	
		476.3[‡] *2*	86[‡] *10*	290.97	(5/2⁺)	E2		0.0291	

$^{187}_{79}Au_{108}$-11

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	Comments
767.08	(9/2$^+$)	526.7[‡] *4*	45[‡] *5*	240.19	(5/2$^+$)	(E2)		0.0228	
778.41	(1/2,3/2,5/2)$^+$	275.4 *2*	100 *7*	503.73	(3/2$^+$)	M1+E2	2.7 *4*	0.167 *12*	
		758.1 *2*	78 *7*	19.53	3/2$^{(+)}$	(M1)		0.0287	
		778.6 *4*	67 *15*	0.0	1/2$^{(+)}$				
815.81	(15/2$^-$)	127.4[‡] *4*	6.8[‡] *17*	688.59	(17/2$^-$)	E2+M1	3.1 *14*	2.1 *3*	
		196.0[‡] *4*	5.5[‡] *17*	619.77	(11/2$^-$)	E2		0.401 *7*	
		319.2[‡] *2*	59.3[‡] *17*	496.73	(11/2$^-$)	E2		0.0853	
		462.1[‡] *2*	100[‡] *5*	353.66	(13/2$^-$)	M1+E2	1.1 *3*	0.064 *12*	
822.42	(5/2$^+$)	327.0 *4*	30 *3*	495.33	(7/2$^+$)	M1+E2	0.7 *12*	0.20 *9*	
		582.4 *2*	100 *7*	240.19	(5/2$^+$)	M1+E2	0.4 *7*	0.051 *16*	
		618.7 *4*	23.3 *10*	203.29	(3/2$^+$)	M1		0.0484	
829.03	(11/2$^-$)	332.3[‡] *4*	70[‡] *9*	496.73	(11/2$^-$)	M1		0.252	
		385.8[‡] *2*	100[‡] *13*	443.20	9/2$^{(-)}$	M1		0.1683	
		475.4[‡] *2*	87[‡] *13*	353.66	(13/2$^-$)	M1		0.0966	
		503.0[‡] *4*	26[‡] *6*	325.64	(7/2$^-$)				
		709.2[‡] *4*	82[‡] *13*	120.33	9/2$^{(-)}$	(E2+M1)	0.8 *12*	0.025 *10*	
840.11	(9/2$^-$)	363.3[‡] *2*	68[‡] *6*	476.60	(7/2$^-$)	M1		0.198	
		616.4[‡] *2*	100[‡] *10*	223.90	(11/2$^-$)	M1		0.0489	
877.23	(5/2$^-$)	278.7 *2*	100 *14*	598.17	(7/2$^-$)	M1		0.406	
		330.9 *2*	100 *9*	546.08	(1/2$^-$)				
		421.5 *2*	100 *12*	456.13	(5/2$^-$)	(M1)		0.1329	
		551.8 *2*	50 *21*	325.64	(7/2$^-$)	M1		0.0653	
880.00	(7/2$^+$)	192.6[‡] *4*	52[‡] *13*	687.12	(5/2$^+$)	(E2+M1)	2.0 *7*	0.57 *12*	
		289.5[‡] *4*	100[‡] *13*	590.80	(3/2$^+$)	(E2)		0.1139	
		384.6[‡] *4*	54.8[‡] *13*	495.33	(7/2$^+$)	E2+M1	2.4 *8*	0.068 *16*	
881.20	(11/2$^-$)	131.8[‡] *4*	7.8[‡] *14*	749.29	(13/2$^-$)	E2+M1	2.3 *7*	1.97 *20*	
		207.8[‡] *4*	6.4[‡] *14*	673.24	(15/2$^-$)	(E2)		0.329	
		404.6[‡] *4*	7.8[‡] *21*	476.60	(7/2$^-$)	(E2)		0.0442	
		657.3[‡] *2*	100[‡] *7*	223.90	(11/2$^-$)	E0+M1+E2		≈0.07	α: Estimated by the evaluator from α(K)exp=0.057 *7*, weighted average of α(K)exp=0.069 *11* (1998Ru04), α(K)exp=0.039 *8* (1978Bo05), and α(K)exp=0.10 *2* (1988Pa15).
934.36	(5/2$^+$)	247.6[‡] *4*	81[‡] *11*	687.12	(5/2$^+$)	M1+E2	1.2 *5*	0.34 *10*	
		343.6[‡] *4*	69[‡] *8*	590.80	(3/2$^+$)	M1+E2	1.0 *5*	0.15 *5*	
		438.9[‡] *4*	83[‡] *6*	495.33	(7/2$^+$)	E2+M1	1.8 *5*	0.055 *12*	
		643.5[‡] *4*	33[‡] *6*	290.97	(5/2$^+$)	M1(+E2)	0.2 *4*	0.043 *7*	
		693.8[‡] *4*	100[‡] *11*	240.19	(5/2$^+$)	M1+E2	0.8 *6*	0.027 *9*	

$^{187}_{79}Au_{108}$-12

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]
948.18	(1/2⁻,3/2⁻)	402.1 *2*	100	546.08	(1/2⁻)	(M1+E2)	0.9 *11*	0.10 *5*
950.23	(7/2⁻,9/2⁻)	351.9[‡] *4*	35[‡] *4*	598.17	(7/2⁻)	M1		0.215
		829.9[‡] *2*	100[‡] *9*	120.33	9/2[(−)]	M1+E2	1.1 *4*	0.015 *4*
956.44	(13/2⁻)	140.7[‡] *4*	3.2[‡] *11*	815.81	(15/2⁻)	(M1+E2)	0.0 *3*	2.74 *13*
		336.7[‡] *2*	49[‡] *2*	619.77	(11/2⁻)	M1+E2	0.60 *18*	0.198 *20*
		459.4[‡] *2*	100[‡] *4*	496.73	(11/2⁻)	E2+M1	0.9 *7*	0.07 *3*
		513.0[‡] *4*	12[‡] *3*	443.20	9/2[(−)]			
		602.9[‡] *2*	50[‡] *3*	353.66	(13/2⁻)	M1+E2	0.9 *3*	0.036 *7*
		836.2[‡] *2*	77[‡] *4*	120.33	9/2[(−)]	E2		
965.5	(7/2⁺)	331.9[‡] *4*	100[‡]	633.59	(7/2⁺)	M1+E2		0.16 *9*
967.98	(11/2⁺)	257.4[‡] *4*	16.4[‡] *9*	710.44	(9/2⁺)	E2+M1	1.8 *6*	0.24 *6*
		472.8[‡] *2*	100.0[‡] *18*	495.33	(7/2⁺)	E2		0.0296
975.31	(3/2⁻)	429.5 *4*	11.9 *3*	546.08	(1/2⁻)	(M1)		0.1264
		519.4 *4*	14 *3*	456.13	(5/2⁻)	M1		0.0765
		700.3 *2*	100 *10*	274.91	(1/2⁻)	M1		0.0352
		803.5 *4*	7.3 *13*	171.81	(5/2⁻)	E2+M1	2.4 *24*	0.011 *14*
984.92	(9/2⁻)	487.7[‡] *4*	58[‡] *8*	496.73	(11/2⁻)	E2+M1	1.2 *7*	0.053 *25*
		659.4[‡] *2*	100[‡] *12*	325.64	(7/2⁻)	M1+E2	0.5 *11*	0.036 *15*
		813.3[‡] *4*	29[‡] *4*	171.81	(5/2⁻)	E2		
		864.4[‡] *4*	50[‡] *4*	120.33	9/2[(−)]	E2+M1	0.9 *8*	0.015 *6*
993.14	(15/2⁻)	304.6[‡] *4*	4.6[‡] *12*	688.59	(17/2⁻)	(M1)		0.319
		373.6[‡] *4*	11.0[‡] *17*	619.77	(11/2⁻)	(E2)		0.0547
		496.5[‡] *4*	2.3[‡] *11*	496.73	(11/2⁻)			
		639.4[‡] *2*	100[‡] *3*	353.66	(13/2⁻)	M1+E2	0.85 *18*	0.032 *4*
994.29		791.0 *2*	100	203.29	(3/2⁺)			
1015.32	(7/2⁺)	135.4[‡] *4*	45[‡] *15*	880.00	(7/2⁺)			
		328.1 *4*	0.95 *11*	687.12	(5/2⁺)	M1		0.260
		381.7[‡] *4*	75[‡] *15*	633.59	(7/2⁺)	(M1)		0.1732
		424.1[‡] *4*	100[‡] *20*	590.80	(3/2⁺)	(E2)		0.0390
		520.1[‡] *4*	75[‡] *15*	495.33	(7/2⁺)	M1		0.0762
1047.5		550.8[‡] *4*	100[‡]	496.73	(11/2⁻)			
1056.05	(3/2⁻)	579.3 *2*	100 *8*	476.60	(7/2⁻)	(E2)		0.0182
		764.4 *4*	19 *4*	290.97	(5/2⁺)			
		816.1 *2*	31 *5*	240.19	(5/2⁺)			
		853.3 *2*	38 *5*	203.29	(3/2⁺)			
		1036.1 *2*	35 *12*	19.53	3/2[(+)]	(E1)		
		1056.0 *2*	96 *29*	0.0	1/2[(+)]	(E1)		

$^{187}_{79}Au_{108}$-13

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]
1102.4	(21/2⁻)	413.8[#]	100	688.59	(17/2⁻)	Q		
1120.4		433.4[‡] *4*	100[‡]	687.12	(5/2⁺)			
1120.93	(11/2⁺)	154.0[‡] *4*	8[‡] *3*	967.98	(11/2⁺)	(E2)		0.950 *17*
		410.6[‡] *2*	100[‡] *6*	710.44	(9/2⁺)	M1		0.1425
		486.4[‡] *4*	49[‡] *6*	633.59	(7/2⁺)	E2		0.0276
		625.4[‡] *2*	76[‡] *6*	495.33	(7/2⁺)	E2		0.01532
1121.59	(13/2⁺)	292.1[‡] *4*	5.5[‡] *8*	829.03	(11/2⁻)	E1		0.0287
		305.4[‡] *4*	11.9[‡] *16*	815.81	(15/2⁻)	(E1)		0.0258
		501.9[‡] *2*	24.6[‡] *16*	619.77	(11/2⁻)	E1		
		625.0[‡] *2*	100[‡] *3*	496.73	(11/2⁻)	E1		
		768.0[‡] *2*	31.3[‡] *16*	353.66	(13/2⁻)	E1		
1126.6	(7/2,9/2,11/2)⁻	371.3[‡] *4*	100[‡] *21*	755.27	(9/2⁻)	(E2+M1)	2.8 *6*	0.070 *8*
		683.5[‡] *4*	93[‡] *14*	443.20	9/2[(−)]	M1+E2	0.6 *3*	0.031 *5*
1147.70	(11/2⁻,13/2⁻)	331.8[‡] *4*	24[‡] *9*	815.81	(15/2⁻)	(M1)		0.253
		527.8[‡] *2*	96[‡] *9*	619.77	(11/2⁻)	M1+E2	0.8 *3*	0.054 *10*
		650.9[‡] *2*	100[‡] *9*	496.73	(11/2⁻)	E2+M1	1.3 *5*	0.025 *7*
		795.0[‡] *4*	35[‡] *4*	353.66	(13/2⁻)	(M1)		0.0254
		1027.3[‡] *4*	13[‡] *4*	120.33	9/2[(−)]			
1148.5	(11/2⁺)	653.2[‡] *4*	100[‡]	495.33	(7/2⁺)	E2		0.01391
1149.23	(13/2⁺)	181.0[‡] *4*	4.5[‡] *10*	967.98	(11/2⁺)	E2+M1	6.1 *10*	0.551 *13*
		381.8[‡] *4*	8.5[‡] *20*	767.08	(9/2⁺)	(E2)		0.0516
		438.8[‡] *2*	100[‡] *3*	710.44	(9/2⁺)	E2		0.0358
1155.9	(11/2⁻)	659.2[‡] *4*	52[‡] *10*	496.73	(11/2⁻)	M1		0.0411
		712.7[‡] *4*	100[‡] *10*	443.20	9/2[(−)]	M1+E2	0.6 *9*	0.028 *10*
		830.1[‡] *4*	55[‡] *10*	325.64	(7/2⁻)	(E2)		
1158.88	(17/2⁻)	342.8[‡] *4*	74[‡] *10*	815.81	(15/2⁻)	(E2)		0.0695
		417.1[‡] *4*	85[‡] *21*	741.86	(13/2⁻)	(E2)		0.0408
		470.2[‡] *4*	95[‡] *21*	688.59	(17/2⁻)	M1+E2	0.5 *13*	0.09 *4*
		805.5[‡] *4*	100[‡] *21*	353.66	(13/2⁻)	(E2)		
1161.2		565.9 *4*	100	595.31	(3/2⁺)			
1164.47	(11/2⁺)	148.8[‡] *4*	37[‡] *7*	1015.32	(7/2⁺)	(E2)		1.080 *19*
		196.9[‡] *4*	27[‡] *7*	967.98	(11/2⁺)	E2+M1	1.6 *6*	0.58 *15*
		284.2[‡] *4*	30[‡] *7*	880.00	(7/2⁺)	E2		0.1204
		669.1[‡] *4*	100[‡] *10*	495.33	(7/2⁺)	E2		0.01319
1166.8	(17/2⁻)	425.0[‡] *4*	100[‡] *25*	741.86	(13/2⁻)	(E2)		0.0388

$^{187}_{79}Au_{108}$-14

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	Comments
1166.8	(17/2⁻)	478.1[‡] *4*	16[‡] *6*	688.59	(17/2⁻)	E0+M1+E2		≈0.31	α: Estimated by the evaluator from α(K)exp=0.24 *10*.
1184.9	(7/2⁻,9/2⁻)	586.7[‡] *4*	100[‡]	598.17	(7/2⁻)	M1+E2	1.0 *7*	0.037 *16*	
1187.06	(13/2⁻)	305.8[‡] *4*	51[‡] *6*	881.20	(11/2⁻)	M1+E2	1.1 *3*	0.20 *4*	
		437.9[‡] *4*	11[‡] *3*	749.29	(13/2⁻)	E0+M1+E2		≈0.29	α: Estimated by the evaluator from α(K)exp=0.22 *7*.
		513.6[‡] *4*	21[‡] *3*	673.24	(15/2⁻)	(E2+M1)	0.9 *8*	0.054 *24*	
		963.2[‡] *2*	100[‡] *9*	223.90	(11/2⁻)	E2+M1	1.7 *6*		
1197.64	(11/2⁻)	448.3[‡] *2*	100[‡] *12*	749.29	(13/2⁻)	M1+E2	1.0 *9*	0.07 *4*	
		524.5[‡] *2*	87[‡] *10*	673.24	(15/2⁻)	E2		0.0230	
		721.7[‡] *4*	12[‡] *4*	476.60	(7/2⁻)	(E2)		0.01120	
		973.9[‡] *4*	45[‡] *5*	223.90	(11/2⁻)	M1+E2	0.7 *6*	0.012 *3*	
1205.15	(9/2⁺)	382.8[‡] *4*	28[‡] *3*	822.42	(5/2⁺)	E2		0.0512	
		494.6[‡] *4*	19[‡] *3*	710.44	(9/2⁺)	M1		0.0870	
		709.9[‡] *2*	100[‡] *8*	495.33	(7/2⁺)	E2(+M1)	2.3 *6*	0.0152 *22*	
		914.0[‡] *4*	22[‡] *6*	290.97	(5/2⁺)	(E2)			
1228.7	(9/2⁻)	388.5[‡] *4*	100[‡] *14*	840.11	(9/2⁻)	M1		0.1652	
		479.6[‡] *4*	79[‡] *14*	749.29	(13/2⁻)	(E2)		0.0286	
		751.9[‡] *4*	86[‡] *14*	476.60	(7/2⁻)	M1+E2	0.9 *10*	0.021 *9*	
1232.5	(19/2⁻)	416.9[‡] *4*	83[‡] *17*	815.81	(15/2⁻)	(E2)		0.0408	
		544.0[‡] *4*	100[‡] *17*	688.59	(17/2⁻)	M1(+E2)	0.4 *21*	0.06 *4*	
1233.90		757.3 *2*	100	476.60	(7/2⁻)				
1237.60	(5/2⁻)	761.0 *2*	100	476.60	(7/2⁻)	(M1)		0.0284	
1249.39	(11/2⁻)	629.6[‡] *4*	67[‡] *18*	619.77	(11/2⁻)	M1+E2	0.9 *3*	0.032 *6*	
		753.1[‡] *4*	42[‡] *12*	496.73	(11/2⁻)	M1		0.0292	
		805.7[‡] *4*	40[‡] *9*	443.20	9/2⁽⁻⁾	M1+E2	0.6 *13*	0.020 *9*	
		895.8[‡] *4*	100[‡] *12*	353.66	(13/2⁻)	E2(+M1)	3.2 *8*		
1260.40	(3/2⁻)	783.8 *2*	100	476.60	(7/2⁻)	(E2)			
1276.86	(7/2⁻,9/2⁻)	678.9[‡] *4*	100[‡] *21*	598.17	(7/2⁻)	M1		0.0381	
		780.0[‡] *4*	29[‡] *7*	496.73	(11/2⁻)				
		951.0[‡] *4*	46[‡] *11*	325.64	(7/2⁻)	M1+E2		0.011 *5*	
		1156.9[‡] *4*	64[‡] *14*	120.33	9/2⁽⁻⁾	M1			
1280.01	(11/2⁺)	569.5[‡] *4*	60[‡] *5*	710.44	(9/2⁺)	E2+M1	0.9 *4*	0.042 *11*	
		646.3[‡] *2*	100[‡] *10*	633.59	(7/2⁺)	(E2)		0.01424	
		785.3[‡] *4*	32[‡] *7*	495.33	(7/2⁺)	E2			
		1056.1[‡] *4*	30[‡] *10*	223.90	(11/2⁻)	(E1)			
1291.28	(3/2⁻)	745.2 *2*	100	546.08	(1/2⁻)	E2+M1	1.8 *8*	0.015 *6*	

$^{187}_{79}Au_{108}$-15

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]
1304.5	(9/2$^+$,11/2$^+$)	537.3[‡] *4*	92[‡] *8*	767.08	(9/2$^+$)	M1+E2	0.9 *10*	0.048 *22*
		594.2[‡] *4*	100[‡] *8*	710.44	(9/2$^+$)	E2(+M1)	3.1 *4*	0.0206 *10*
1316.1	(17/2$^-$)	566.9[‡] *4*	26[‡] *5*	749.29	(13/2$^-$)			
		642.7[‡] *4*	100[‡] *8*	673.24	(15/2$^-$)	M1+E2	1.3 *9*	0.025 *15*
1316.79	(9/2$^-$)	360.4[‡] *4*	52[‡] *8*	956.44	(13/2$^-$)	E2		0.0604
		366.5[‡] *4*	38[‡] *6*	950.23	(7/2$^-$,9/2$^-$)	E2+M1	1.2 *7*	0.11 *6*
		873.6[‡] *4*	40[‡] *8*	443.20	9/2$^{(-)}$	M1		0.0199
		962.9[‡] *4*	42[‡] *8*	353.66	(13/2$^-$)	E2		
		1092.5[‡] *4*	38[‡] *6*	223.90	(11/2$^-$)	M1+E2	0.9 *8*	
		1196.6[‡] *2*	100[‡] *8*	120.33	9/2$^{(-)}$	E2+M1	1.2 *5*	
1357.56	(15/2$^-$)	364.0[‡] *4*	41[‡] *12*	993.14	(15/2$^-$)	E2+M1	1.0 *7*	0.13 *6*
		542.0[‡] *4*	47[‡] *12*	815.81	(15/2$^-$)	M1+E2	0.8 *10*	0.050 *19*
		860.7[‡] *4*	100[‡] *12*	496.73	(11/2$^-$)	E2		
		1004.2[‡] *4*	41[‡] *9*	353.66	(13/2$^-$)	M1		0.01398
1362.69		1343.3 *2*	100	19.53	3/2$^{(+)}$			
1367.2	(15/2$^-$)	551.1[‡] *4*	77[‡] *15*	815.81	(15/2$^-$)	M1		0.0655
		624.9[‡] *4*	38[‡] *12*	741.86	(13/2$^-$)	M1		0.0472
		1014.2[‡] *4*	100[‡] *23*	353.66	(13/2$^-$)	M1+E2	1.0 *9*	
1369.50	(7/2$^+$)	546.7[‡] *4*	54[‡] *9*	822.42	(5/2$^+$)	(M1)		0.0669
		659.1[‡] *4*	59.1[‡] *9*	710.44	(9/2$^+$)	E2(+M1)	2.9 *9*	0.017 *3*
		736.3[‡] *4*	45[‡] *9*	633.59	(7/2$^+$)	M1		0.0309
		778.8[‡] *4*	100[‡] *9*	590.80	(3/2$^+$)	(E2)		
1380.61	(17/2$^+$)	148.3 *4*	15 *5*	1232.5	(19/2$^-$)			
		259.2[‡] *4*	36[‡] *5*	1121.59	(13/2$^+$)	E2		0.1600
		387.5 *4*	13 *4*	993.14	(15/2$^-$)	(E1)		0.01494
		499.0[‡] *4*	24[‡] *5*	881.20	(11/2$^-$)			
		564.8[‡] *2*	100[‡] *5*	815.81	(15/2$^-$)	E1		
		692.1 *4*	8 *3*	688.59	(17/2$^-$)	(E1)		
1393.34	(13/2$^-$)	436.6[‡] *4*	100[‡] *14*	956.44	(13/2$^-$)	M1+E2	0.8 *6*	0.09 *3*
		578.8[‡] *4*	48[‡] *14*	815.81	(15/2$^-$)	M1		0.0576
		651.2[‡] *4*	34[‡] *7*	741.86	(13/2$^-$)	M1		0.0424
		773.3[‡] *4*	48[‡] *7*	619.77	(11/2$^-$)	M1		0.0272
		896.2[‡] *4*	45[‡] *10*	496.73	(11/2$^-$)	M1		0.0187
1397.8		1044.1[‡] *4*	100[‡]	353.66	(13/2$^-$)			
1398.2	(15/2$^+$)	430.2[‡] *2*	100[‡]	967.98	(11/2$^+$)	E2		0.0376

$^{187}_{79}Au_{108}$-16

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	$I_{(\gamma+ce)}$	Comments
1400.2	(13/2$^-$,15/2$^-$)	584.4[‡] *4*	100[‡] *15*	815.81	(15/2$^-$)	M1+E2	0.8 *8*	0.041 *15*		
1405.25	(13/2$^+$)	283.7[‡] *2*	100[‡] *14*	1121.59	(13/2$^+$)	M1+E2	0.49 *23*	0.34 *4*		
		785.5[‡] *4*	11[‡] *4*	619.77	(11/2$^-$)					
		908.5[‡] *4*	36[‡] *4*	496.73	(11/2$^-$)					
		1051.4[‡] *4*	34[‡] *5*	353.66	(13/2$^-$)	(E1)				
		1181.4[‡] *4*	64[‡] *7*	223.90	(11/2$^-$)	(E1)				
1405.4		656.1[‡] *4*	100[‡]	749.29	(13/2$^-$)					
1405.56	(19/2$^-$)	89.0[#]	10.5	1316.1	(17/2$^-$)					I_γ: From (^{19}F,4nγ).
		732.1[‡] *4*	100[‡]	673.24	(15/2$^-$)	E2		0.01087		
1415.8	(17/2$^-$,19/2,21/2$^+$)	727[#]	100	688.59	(17/2$^-$)					
1418.5	(13/2$^-$)	537.5[‡] *4*	76.2[‡] *19*	881.20	(11/2$^-$)	M1+E2	0.9 *10*	0.048 *22*		
		669.2[‡] *4*	100[‡] *14*	749.29	(13/2$^-$)	M1		0.0395		
		745.1[‡] *4*	95[‡] *9*	673.24	(15/2$^-$)	E2+M1	0.8 *11*	0.022 *8*		
1419.69	(5/2$^+$)	786.1 *2*	100	633.59	(7/2$^+$)	(M1+E2)	0.8 *13*	0.020 *8*		
1420.6	(9/2$^+$,11/2$^+$)	653.9[‡] *4*	66.7[‡] *17*	767.08	(9/2$^+$)	M1+E2	1.2 *7*	0.025 *11*		
		710.3[‡] *4*	100[‡] *8*	710.44	(9/2$^+$)	M1+E2	1.2 *4*	0.021 *5*		
1420.7	(11/2$^-$)	747.5[‡] *4*	100[‡]	673.24	(15/2$^-$)	E2		0.01040		
1464.3		1110.6[‡] *4*	100[‡]	353.66	(13/2$^-$)					
1470.98	(13/2$^+$,15/2$^+$)	90.5[‡] *4*	[‡]	1380.61	(17/2$^+$)				3 *1*	
		349.5[‡] *2*	100[‡]	1121.59	(13/2$^+$)	M1		0.219		
		781.5[‡] *4*	7.8[‡] *22*	688.59	(17/2$^-$)					
1498.3	(5/2$^+$)	1003.0 *4*	100	495.33	(7/2$^+$)					
1540.7	(13/2$^-$,15/2$^-$)	791.3[‡] *4*	100[‡] *20*	749.29	(13/2$^-$)	M1		0.0257		
		867.5[‡] *4*	90[‡] *30*	673.24	(15/2$^-$)	M1		0.0203		
1557.4		790.5[‡] *4*	80[‡] *20*	767.08	(9/2$^+$)					
		846.8[‡] *4*	100[‡] *20*	710.44	(9/2$^+$)					
1562.7		1066.0[‡] *4*	100[‡]	496.73	(11/2$^-$)					
1568.1	(11/2,13/2,15/2)$^+$	446.5[‡] *2*	100[‡]	1121.59	(13/2$^+$)	E2+M1	1.3 *3*	0.064 *11*		
1589.58	(11/2$^+$,13/2$^+$)	467.7[‡] *4*	48[‡] *9*	1121.59	(13/2$^+$)	E2+M1	1.1 *7*	0.06 *3*		
		761.1[‡] *4*	29[‡] *5*	829.03	(11/2$^-$)	(E1)				
		969.7[‡] *4*	21[‡] *7*	619.77	(11/2$^-$)	(E1)				
		1236.6[‡] *4*	48[‡] *7*	353.66	(13/2$^-$)	(E1)				
		1365.8[‡] *2*	100[‡] *14*	223.90	(11/2$^-$)	E1				
1590.0	(11/2$^-$,13/2$^-$)	392.5[‡] *4*	73[‡] *20*	1197.64	(11/2$^-$)	E2+M1	1.3 *7*	0.09 *5*		
		840.5[‡] *4*	100[‡] *20*	749.29	(13/2$^-$)	E2+M1	0.6 *10*	0.018 *7*		

$^{187}_{79}Au_{108}$-17

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	Comments
1593.8	(25/2⁻)	491.6[#]	100	1102.4	(21/2⁻)	(E2)		0.0269	B(E2)(W.u.)=2.2×10^2 *3*
1600.8		480.6[‡] *4*	100[‡] *12*	1120.4					
		632.8[‡] *4*	54[‡] *12*	967.98	(11/2⁺)				
		890.3[‡] *4*	31[‡] *8*	710.44	(9/2⁺)				
1604.5	(17/2⁺)	455.3[‡] *4*	100[‡]	1149.23	(13/2⁺)	(E2)		0.0326	
1637.47		515.9[‡] *4*	32[‡] *7*	1121.59	(13/2⁺)				
		1283.8[‡] *2*	100[‡] *14*	353.66	(13/2⁻)				
1684.8	(21/2⁻)	518[#]	100	1166.8	(17/2⁻)				
1697.0	(21/2⁺)	316.4[#]	100	1380.61	(17/2⁺)	Q			
		464.5[#]	48	1232.5	(19/2⁻)				
1711.0		1214.6[‡] *4*	30[‡] *11*	496.73	(11/2⁻)				
		1357.2[‡] *4*	100[‡] *11*	353.66	(13/2⁻)				
1737.50		1534.2 *2*	100	203.29	(3/2⁺)				
1739.5	(23/2⁻)	507.0[#]		1232.5	(19/2⁻)				
		637[#]		1102.4	(21/2⁻)				
1751.80		1548.5 *2*	100	203.29	(3/2⁺)				
1776.1		1230.0 *4*	100	546.08	(1/2⁻)				
1778.8	(11/2⁻)	963.0[‡] *4*	100[‡]	815.81	(15/2⁻)	(E2)			
1786.4		1583.1 *4*	100	203.29	(3/2⁺)				
1791.4		1294.7[‡] *4*	100[‡]	496.73	(11/2⁻)				
1799.5		567[#]		1232.5	(19/2⁻)				
1807.55	(15/2⁻)	1058.0[‡] *4*	25[‡] *5*	749.29	(13/2⁻)	M1		0.01225	
		1134.0[‡] *4*	25[‡] *7*	673.24	(15/2⁻)	M1		0.01028	
		1583.8[‡] *2*	100[‡] *10*	223.90	(11/2⁻)	E2			
1811.1		1607.8 *4*	100	203.29	(3/2⁺)				
1815.87	(15/2⁻)	1066.6[‡] *2*	100[‡] *7*	749.29	(13/2⁻)	E2+M1	1.7 *5*		
		1142.5[‡] *4*	30[‡] *7*	673.24	(15/2⁻)	(E2+M1)	1.6 *10*		
		1592.0[‡] *4*	15[‡] *7*	223.90	(11/2⁻)				
1816.2	(11/2⁻)	1339.5[‡] *4*	100[‡]	476.60	(7/2⁻)	(E2)			
1819.8		1146.6[‡] *4*	100[‡]	673.24	(15/2⁻)				
1842.77	(5/2⁺)	1347.3 *4*	68 *14*	495.33	(7/2⁺)				
		1639.5 *2*	100 *23*	203.29	(3/2⁺)				
1864.0		1368.7[‡] *4*	100[‡]	495.33	(7/2⁺)				
1876.3		1381.0 *4*	100	495.33	(7/2⁺)				
1905.3	(15/2⁻)	1023.8[‡] *4*	33[‡] *11*	881.20	(11/2⁻)	(E2)			
		1232.3[‡] *4*	37[‡] *7*	673.24	(15/2⁻)	(M1)			

$^{187}_{79}Au_{108}$-18

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ
1905.3	(15/2⁻)	1681.5[‡] *4*	100[‡] *15*	223.90	(11/2⁻)		
1918.07		1284.6 *2*	24.0 *13*	633.59	(7/2⁺)		
		1422.5 *4*	9.7 *19*	495.33	(7/2⁺)		
		1627.1 *2*	100 *12*	290.97	(5/2⁺)		
		1714.7 *2*	19.5 *19*	203.29	(3/2⁺)		
1919.21	(3/2⁻)	1442.6 *2*	100	476.60	(7/2⁻)		
1930.4	(17/2⁻)	1181.2[‡] *4*	100[‡] *10*	749.29	(13/2⁻)	E2	
		1257.0[‡] *4*	42[‡] *10*	673.24	(15/2⁻)	(M1+E2)	0.4 *23*
1994.3	(11/2⁻)	1321.1[‡] *4*	100[‡]	673.24	(15/2⁻)		
1995.19	(5/2⁻)	1518.6 *2*	100	476.60	(7/2⁻)	M1	
1997.3		1794.0 *4*	100	203.29	(3/2⁺)		
2007.3		602[#]		1405.56	(19/2⁻)		
		691[#]		1316.1	(17/2⁻)		
2029.7		1676.0[‡] *4*	100[‡]	353.66	(13/2⁻)		
2051.6		1848.3 *4*	100	203.29	(3/2⁺)		
2052.6		736.4[#]	100	1316.1	(17/2⁻)		
2065.7		1392.5[‡] *4*	100[‡]	673.24	(15/2⁻)		
2068.81		1093.5 *2*	100 *16*	975.31	(3/2⁻)		
		1522.9 *2*	69 *12*	546.08	(1/2⁻)		
		1640.5 *2*	97 *28*	428.12	(3/2⁻)		
2073.2		1576.5[‡] *4*	100[‡]	496.73	(11/2⁻)		
2082.0		1728.3[‡] *4*	100[‡]	353.66	(13/2⁻)		
2094.6		732.5 *4*	63 *11*	1362.69			
		1455.4 *4*	100 *11*	638.60	(5/2⁺)		
2095.81		1549.6 *2*	74 *14*	546.08	(1/2⁻)		
		1667.8 *2*	100 *17*	428.12	(3/2⁻)		
2097.5	(25/2⁺)	358[#]		1739.5	(23/2⁻)		
		400.4[#]	100	1697.0	(21/2⁺)	Q	
2099.6		1277.2[‡] *4*	100[‡]	822.42	(5/2⁺)		
2102.26		1556.2 *2*	100 *15*	546.08	(1/2⁻)		
		1674.1 *2*	52 *15*	428.12	(3/2⁻)		
2103.30		1900.0 *2*	100	203.29	(3/2⁺)		
2115.1	(21/2⁺)	699[#]	18	1415.8	(17/2⁻,19/2,21/2⁺)		
		709.8[#]	100	1405.56	(19/2⁻)	(E1)	
2116.14		1620.8 *2*	100	495.33	(7/2⁺)		
2117.1		995.5[‡] *4*	100[‡]	1121.59	(13/2⁺)		
2121.16		1575.1 *2*	100 *15*	546.08	(1/2⁻)		
		1693.0 *2*	46 *10*	428.12	(3/2⁻)		
2121.58		1830.6 *2*	100	290.97	(5/2⁺)		

$^{187}_{79}Au_{108}$-19

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[&]	Comments
2127.80		1924.5 *2*	100	203.29	(3/2$^+$)			
2142.24		1646.7 *2*	100 *43*	495.33	(7/2$^+$)			
		1902.3 *4*	43 *10*	240.19	(5/2$^+$)			
		1939.5 *4*	95 *19*	203.29	(3/2$^+$)			
2145.4		996.1[‡] *4*	100[‡] *14*	1149.23	(13/2$^+$)			
		1435.0[‡] *4*	57[‡] *14*	710.44	(9/2$^+$)			
2149.7	(13/2$^-$)	1461.1[‡] *4*	100[‡]	688.59	(17/2$^-$)	E2		
2154.41	(3/2$^-$)	1179.0 *2*	62 *9*	975.31	(3/2$^-$)			
		1421.5 *2*	25 *4*	732.89	(5/2$^-$)			
		1608.1 *2*	29 *5*	546.08	(1/2$^-$)			
		1726.6 *2*	100 *18*	428.12	(3/2$^-$)			
2154.89		1516.8 *2*	33 *7*	638.60	(5/2$^+$)			
		1650.5 *2*	57 *7*	503.73	(3/2$^+$)			
		1863.7 *2*	100 *16*	290.97	(5/2$^+$)			
		1914.9 *2*	37 *9*	240.19	(5/2$^+$)			
		1951.7 *2*	37 *8*	203.29	(3/2$^+$)			
2160.6	(29/2$^-$)	566.8[#]	100	1593.8	(25/2$^-$)	(E2)	0.0192	B(E2)(W.u.)>76
2172.32		1196.9 *2*	52 *6*	975.31	(3/2$^-$)			
		1744.3 *2*	100 *17*	428.12	(3/2$^-$)			
2173.06		1539.6 *4*	17 *3*	633.59	(7/2$^+$)			
		1669.3 *2*	38 *5*	503.73	(3/2$^+$)			
		1678.2 *2*	100 *32*	495.33	(7/2$^+$)			
		1882.3 *2*	85 *8*	290.97	(5/2$^+$)			
		1932.5 *2*	38 *6*	240.19	(5/2$^+$)			
		1969.4 *2*	82 *15*	203.29	(3/2$^+$)			
2178.10		1544.5 *2*	100	633.59	(7/2$^+$)			
2178.91	(3/2$^-$)	1702.3 *2*	100	476.60	(7/2$^-$)			
2180.0	(9/2$^+$)	1357.6[‡] *4*	100[‡]	822.42	(5/2$^+$)			
2183.8		1564.0[‡] *4*	100[‡]	619.77	(11/2$^-$)			
2184.87		1452.2 *2*	91 *27*	732.89	(5/2$^-$)			
		1728.5 *2*	100 *27*	456.13	(5/2$^-$)			
		1857.8 *2*	82 *18*	325.64	(7/2$^-$)			
2186.04		2065.7[‡] *2*	100[‡]	120.33	9/2$^{(-)}$			
2191.3		1069.7[‡] *4*	100[‡]	1121.59	(13/2$^+$)			
2193.1	(5/2$^+$)	1697.8 *4*	100	495.33	(7/2$^+$)			
2196.2	(23/2$^-$)	790.6[#]	100	1405.56	(19/2$^-$)	(E2)		
2201.84		2081.5[‡] *2*	100[‡]	120.33	9/2$^{(-)}$			
2206.0		1532.8[‡] *2*	100[‡]	673.24	(15/2$^-$)			
2206.6		1237.9[‡] *4*	100[‡] *25*	967.98	(11/2$^+$)			
		1496.8[‡] *4*	50[‡] *13*	710.44	(9/2$^+$)			

$^{187}_{79}Au_{108}$-20

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[&]
2221.7		1601.9[‡] *4*	100[‡]	619.77	(11/2$^-$)		
2223.31		1999.4[‡] *2*	100[‡]	223.90	(11/2$^-$)		
2230.0		1407.6 *2*	100	822.42	(5/2$^+$)		
2237.57	(13/2$^-$)	647.9[‡] *4*	28[‡] *7*	1590.0	(11/2$^-$,13/2$^-$)		
		920.7[‡] *4*	31[‡] *5*	1316.79	(9/2$^-$)		
		1244.7[‡] *4*	16[‡] *5*	993.14	(15/2$^-$)		
		1617.8[‡] *4*	21[‡] *5*	619.77	(11/2$^-$)		
		1740.9[‡] *2*	100[‡] *10*	496.73	(11/2$^-$)		
		1883.5[‡] *4*	31[‡] *7*	353.66	(13/2$^-$)		
2237.77		648.1[‡] *4*	4.4[‡] *17*	1590.0	(11/2$^-$,13/2$^-$)		
		1563.6[‡] *4*	5.0[‡] *17*	674.11	(9/2$^-$,11/2$^-$)		
		2013.9[‡] *2*	100[‡] *11*	223.90	(11/2$^-$)		
2246.43	(13/2$^-$)	657.0[‡] *4*	50[‡] *21*	1590.0	(11/2$^-$,13/2$^-$)		
		1253.4[‡] *4*	71[‡] *21*	993.14	(15/2$^-$)		
		1430.3[‡] *4*	93[‡] *21*	815.81	(15/2$^-$)		
		1626.7[‡] *4*	100[‡] *21*	619.77	(11/2$^-$)		
2246.8	(25/2$^-$)	562[#]	100	1684.8	(21/2$^-$)		
2248.1		1894.4[‡] *4*	100[‡]	353.66	(13/2$^-$)		
2253.20		1431.2 *4*	26 *7*	822.42	(5/2$^+$)		
		2013.0 *2*	100 *18*	240.19	(5/2$^+$)		
		2049.5 *4*	26 *4*	203.29	(3/2$^+$)		
2253.26		1372.3[‡] *4*	7.9[‡] *24*	881.20	(11/2$^-$)		
		1580.0[‡#] *4*	7.9[‡] *24*	673.24	(15/2$^-$)		
		2029.3[‡] *2*	100[‡] *3*	223.90	(11/2$^-$)		
2262.8		1589.6[‡] *4*	100[‡]	673.24	(15/2$^-$)		
2266.2		1117.0[‡] *4*	100[‡]	1149.23	(13/2$^+$)		
2268.12	(13/2$^-$)	679.7[‡] *4*	9[‡] *3*	1589.58	(11/2$^+$,13/2$^+$)		
		1579.5[‡] *2*	100[‡] *7*	688.59	(17/2$^-$)		
		1914.2[‡] *2*	68[‡] *7*	353.66	(13/2$^-$)		
2279.9		1399.6[‡] *4*	75[‡] *25*	880.00	(7/2$^+$)		
		1606.9[‡] *4*	100[‡] *25*	673.24	(15/2$^-$)		
2281.7	(23/2$^+$)	166.7[#]	100	2115.1	(21/2$^+$)	(M1+E2)	1.2 *5*
		229[#]		2052.6			
2282.96		1957.3 *2*	100	325.64	(7/2$^-$)		
2285.0		1317.0[‡] *4*	100[‡]	967.98	(11/2$^+$)		
2288.9		1332.5[‡] *4*	100[‡]	956.44	(13/2$^-$)		

$^{187}_{79}Au_{108}$-21

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[&]
2291.0	(11/2$^+$)	1325.5[‡] *4*	100[‡]	965.5	(7/2$^+$)		
2292.8	(27/2$^-$)	553.1[#]	100	1739.5	(23/2$^-$)		
		699.1[#]	50	1593.8	(25/2$^-$)	(M1+E2)	0.024 *12*
2293.10		1318.0 *2*	86 *21*	975.31	(3/2$^-$)		
		1746.8 *2*	100 *19*	546.08	(1/2$^-$)		
2300.24		880.3[‡] *4*	28[‡] *4*	1420.7	(11/2$^-$)		
		930.9[‡] *4*	32[‡] *4*	1369.50	(7/2$^+$)		
		995.9[‡] *4*	32[‡] *4*	1304.5	(9/2$^+$,11/2$^+$)		
		1020.3[‡] *4*	76[‡] *8*	1280.01	(11/2$^+$)		
		1095.1[‡] *2*	100[‡] *12*	1205.15	(9/2$^+$)		
		1135.5[‡] *4*	72[‡] *4*	1164.47	(11/2$^+$)		
		1589.0[‡] *4*	18[‡] *4*	710.44	(9/2$^+$)		
2300.33		1023.7[‡] *4*	6.2[‡] *6*	1276.86	(7/2$^-$,9/2$^-$)		
		1315.4[‡] *2*	17.0[‡] *13*	984.92	(9/2$^-$)		
		1350.0[‡] *4*	4.2[‡] *8*	950.23	(7/2$^-$,9/2$^-$)		
		1545.3[‡] *4*	3.2[‡] *8*	755.27	(9/2$^-$)		
		1680.8[‡] *4*	1.9[‡] *6*	619.77	(11/2$^-$)		
		1803.6[‡] *2*	2.9[‡] *8*	496.73	(11/2$^-$)		
		1857.2[‡] *2*	9.8[‡] *8*	443.20	9/2$^{(-)}$		
		2179.9[‡] *2*	100[‡] *2*	120.33	9/2$^{(-)}$		
2300.70		493.2[‡] *4*	5.7[‡] *13*	1807.55	(15/2$^-$)		
		1103.9[‡] *4*	5.1[‡] *8*	1197.64	(11/2$^-$)		
		1419.6 *4*	9.8 *17*	881.20	(11/2$^-$)		
		1627.2[‡] *4*	3.4[‡] *8*	673.24	(15/2$^-$)		
		2076.6[‡] *2*	100[‡] *8*	223.90	(11/2$^-$)		
2306.1		1952.4[‡] *4*	100[‡]	353.66	(13/2$^-$)		
2306.8		1425.6[‡] *4*	100[‡]	881.20	(11/2$^-$)		
2313.5	(13/2$^+$)	724.1 *4*	28 *11*	1589.58	(11/2$^+$,13/2$^+$)	(M1)	0.0323
		932.7[‡] *4*	100[‡] *11*	1380.61	(17/2$^+$)	E2	
2319.1		1169.8[‡] *4*	100[‡] *22*	1149.23	(13/2$^+$)		
		1608.8[‡] *4*	89[‡] *22*	710.44	(9/2$^+$)		
2319.16	(15/2$^-$)	608.4[‡] *4*	53[‡] *10*	1711.0			
		848.1[‡] *2*	47[‡] *8*	1470.98	(13/2$^+$,15/2$^+$)		
		913.5[‡] *2*	100[‡] *19*	1405.56	(19/2$^-$)		
		1362.6[‡] *4*	94[‡] *6*	956.44	(13/2$^-$)		

$^{187}_{79}Au_{108}$-22

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ
2319.16	(15/2$^-$)	1503.6[‡] *4*	39[‡] *8*	815.81	(15/2$^-$)	(E2+M1)	2.3 *21*
		1630.9[‡] *4*	29[‡] *8*	688.59	(17/2$^-$)	(M1)	
2319.2		502.9[‡] *4*	55[‡] *10*	1816.2	(11/2$^-$)		
		900.7[‡] *4*	76[‡] *14*	1418.5	(13/2$^-$)		
		1570.0[‡] *4*	100[‡] *14*	749.29	(13/2$^-$)		
2321.9		2047 *2*	100	274.91	(1/2$^-$)		
2327.87		1974.3[‡] *4*	43.5[‡] *6*	353.66	(13/2$^-$)		
		2207.5[‡] *2*	100[‡] *10*	120.33	9/2$^{(-)}$		
2334.0		1184.8[‡] *4*	100[‡]	1149.23	(13/2$^+$)		
2334.8		2131.5 *4*	100	203.29	(3/2$^+$)		
2337.2		1587.9[‡] *2*	100[‡]	749.29	(13/2$^-$)		
2342.9		632.0[‡] *4*	65[‡] *9*	1711.0			
		871.9[‡] *4*	100[‡] *12*	1470.98	(13/2$^+$,15/2$^+$)		
		1989.1[‡] *4*	59[‡] *12*	353.66	(13/2$^-$)		
2343.2		1594.3[‡] *4*	34[‡] *3*	749.29	(13/2$^-$)		
		1669.0[‡] *2*	100[‡] *9*	674.11	(9/2$^-$,11/2$^-$)		
2345.7	(11/2$^+$)	1196.1[‡] *4*	45[‡] *14*	1149.23	(13/2$^+$)		
		1466.1[‡] *4*	100[‡] *18*	880.00	(7/2$^+$)		
2345.87		1850.5 *2*	100 *26*	495.33	(7/2$^+$)		
		2142.7 *4*	30 *7*	203.29	(3/2$^+$)		
2348.9		1467.7[‡] *4*	100[‡]	881.20	(11/2$^-$)	M1	
2350.5		1229.3[‡] *4*	53[‡] *8*	1120.93	(11/2$^+$)		
		1853.8[‡] *4*	21[‡] *8*	496.73	(11/2$^-$)		
		1997.0[‡] *4*	100[‡] *11*	353.66	(13/2$^-$)		
2354.1		1156.5[‡] *4*	100[‡]	1197.64	(11/2$^-$)		
2354.5	(27/2$^-$)	615[#]	100	1739.5	(23/2$^-$)		
2365.3	(13/2$^-$)	1616.0[‡] *4*	100[‡]	749.29	(13/2$^-$)		
2369.0	(13/2$^+$)	988.4[‡] *4*	100[‡]	1380.61	(17/2$^+$)		
2384.6		1889.3[‡] *4*	100[‡]	495.33	(7/2$^+$)		
2389.1		1715.9[‡] *4*	100[‡]	673.24	(15/2$^-$)		
2389.9		1009.4[‡] *4*	100[‡] *10*	1380.61	(17/2$^+$)		
		1701.2[‡] *4*	70[‡] *10*	688.59	(17/2$^-$)		
2395.7	(13/2$^+$)	1646.4[‡] *2*	100[‡]	749.29	(13/2$^-$)		
2396.0	(15/2$^+$)	1274.3[‡] *4*	77[‡] *31*	1121.59	(13/2$^+$)		
		1707.6[‡] *4*	100[‡] *23*	688.59	(17/2$^-$)		

$^{187}_{79}Au_{108}$-23

Adopted Levels, Gammas (continued)

γ(^{187}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	δ	α[&]	Comments
2400.7		1651.4[‡] *4*	100[‡]	749.29	(13/2$^-$)				
2400.8		1584.8[‡] *4*	35[‡] *15*	815.81	(15/2$^-$)				
		2047.3[‡] *4*	100[‡] *20*	353.66	(13/2$^-$)				
2403.2		2163.0 *4*	100 *22*	240.19	(5/2$^+$)				
		2199.9 *4*	39 *11*	203.29	(3/2$^+$)				
2410.9		1661.4[‡] *4*	100[‡] *10*	749.29	(13/2$^-$)				
		1737.9[‡] *4*	32[‡] *6*	673.24	(15/2$^-$)				
2431.07		1935.7 *2*	100 *22*	495.33	(7/2$^+$)				
		2227.9 *4*	22 *5*	203.29	(3/2$^+$)				
2431.3	(25/2$^+$)	149.6	100	2281.7	(23/2$^+$)	(M1+E2)		1.7 *7*	
2471.0	(11/2$^-$)	1154.2[‡] *4*	100[‡]	1316.79	(9/2$^-$)	(E2+M1)			
2474.1		1315.2[‡] *4*	100[‡]	1158.88	(17/2$^-$)				
2486.0		2486 *2*	100	0.0	1/2$^{(+)}$				
2504.3		2301.0 *4*	100	203.29	(3/2$^+$)				
2513.6		1764.3[‡] *4*	100[‡]	749.29	(13/2$^-$)				
2524.3		2028.9 *4*	100 *22*	495.33	(7/2$^+$)				
		2321.1 *4*	78 *22*	203.29	(3/2$^+$)				
2541.4		2187.7[‡] *4*	100[‡]	353.66	(13/2$^-$)				
2551.0		2197.3[‡] *4*	100[‡]	353.66	(13/2$^-$)				
2551.7		270[#]	100	2281.7	(23/2$^+$)				
2564.8?	(27/2$^+$)	133.7[#]	100	2431.3	(25/2$^+$)	D+Q			
2568.4	(29/2$^+$)	470.9[#]	100	2097.5	(25/2$^+$)	(Q)		0.0299	
2572.7		1899.5[‡] *4*	100[‡]	673.24	(15/2$^-$)				
2581.0	(25/2$^-$)	150[#]		2431.3	(25/2$^+$)				
		384.7[#]		2196.2	(23/2$^-$)				
2606.7		2253.0[‡] *4*	100[‡]	353.66	(13/2$^-$)				
2625.3		1952.0[‡] *4*	100[‡]	673.24	(15/2$^-$)				
2633.0		1804.0[‡] *4*	100[‡]	829.03	(11/2$^-$)				
2669.4	(31/2$^-$)	508.8	100	2160.6	(29/2$^-$)	(M1+E2)	1.1	0.0501	B(M1)(W.u.)=(7.2×10^{-7} *4*); B(E2)(W.u.)=(0.00136 *7*)
2670.2		474[#]	100	2196.2	(23/2$^-$)				
2671.8?		425[#]	100	2246.8	(25/2$^-$)				
2688.3		2334.6[‡] *4*	100[‡]	353.66	(13/2$^-$)				
2749.2		2395.5[‡] *4*	100[‡]	353.66	(13/2$^-$)				
2768.1		2414.4[‡] *4*	100[‡]	353.66	(13/2$^-$)				
2792.8	(31/2$^-$)	500.0[#]	100	2292.8	(27/2$^-$)				
2798.7	(33/2$^-$)	638.1[#]	100	2160.6	(29/2$^-$)	Q			
2827.9		2474.2[‡] *4*	100[‡]	353.66	(13/2$^-$)				

$^{187}_{79}Au_{108}$-24

Adopted Levels, Gammas (continued)

$\gamma(^{187}Au)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]	α[&]
2966.3	(33/2$^-$)	297.1[#]	100	2669.4	(31/2$^-$)	(M1+E2)	0.22 *12*
3013.5	(31/2$^-$)	659[#]	100	2354.5	(27/2$^-$)		
3039.3	(33/2$^+$)	470.9[#]	100	2568.4	(29/2$^+$)	(Q)	0.0298
3056.6?	(31/2$^+$)	491.8[#]	100	2564.8?	(27/2$^+$)		
3129.0	(35/2$^-$)	162.7[#]	70	2966.3	(33/2$^-$)	D+Q	
		459.4[#]	100	2669.4	(31/2$^-$)	Q	
3189.8?		518[#]	100	2671.8?			
3345.9	(35/2$^-$)	553.1[#]	100	2792.8	(31/2$^-$)		
3353.3	(35/2$^-$)	387[#]	100	2966.3	(33/2$^-$)		
3482.3	(37/2$^-$)	353.4[#]	100	3129.0	(35/2$^-$)	(M1+E2)	0.14 *8*
		516.0[#]	15	2966.3	(33/2$^-$)		
3483.1	(37/2$^+$)	443.8[#]	100	3039.3	(33/2$^+$)	Q	
3503.4	(37/2$^-$)	704.7[#]	100	2798.7	(33/2$^-$)	Q	0.01179
3762.0	(39/2$^-$)	279.7[#]	100	3482.3	(37/2$^-$)	(M1+E2)	0.26 *14*
		632.9[#]	43	3129.0	(35/2$^-$)		
3810.7	(35/2$^+$)	754.1[#]	100	3056.6?	(31/2$^+$)	Q	
3977.4	(39/2$^-$)	631.5[#]	100	3345.9	(35/2$^-$)		
3993.7	(41/2$^+$)	510.6[#]	100	3483.1	(37/2$^+$)		
4015.2	(39/2$^-$)	533[#]		3482.3	(37/2$^-$)		
		662[#]		3353.3	(35/2$^-$)		
		886[#]		3129.0	(35/2$^-$)		
4225.5	(41/2$^-$)	463.6[#]	100	3762.0	(39/2$^-$)	(M1+E2)	0.07 *4*
		743.2[#]		3482.3	(37/2$^-$)		
4263.7	(41/2$^-$)	760.3[#]	100	3503.4	(37/2$^-$)		
4317.7		507[#]	100	3810.7	(35/2$^+$)		
4506.6	(43/2$^-$)	281.0[#]	18	4225.5	(41/2$^-$)	D+Q	
		744.6[#]	100	3762.0	(39/2$^-$)		
4550.3	(43/2$^-$)	325[#]		4225.5	(41/2$^-$)		
		788.1[#]	100	3762.0	(39/2$^-$)		
4577.0	(39/2$^+$)	766.4[#]	100	3810.7	(35/2$^+$)		
4593.2	(45/2$^+$)	599.5[#]	100	3993.7	(41/2$^+$)		
4651.0	(39/2$^+$)	840.3[#]	100	3810.7	(35/2$^+$)		
4657.1	(43/2$^-$)	431.6[#]	29	4225.5	(41/2$^-$)		
		642[#]		4015.2	(39/2$^-$)		
		895.1[#]	100	3762.0	(39/2$^-$)	Q	

$^{187}_{79}Au_{108}$-25

Adopted Levels, Gammas (continued)

$\gamma(^{187}Au)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[@]
4690.4	(43/2$^-$)	713[#]	100	3977.4	(39/2$^-$)	
4788.6	(43/2$^+$)	137.6[#]		4651.0	(39/2$^+$)	
		211.6[#]	100	4577.0	(39/2$^+$)	Q
4851.1	(47/2$^-$)	194.1[#]	88	4657.1	(43/2$^-$)	
		344.5[#]	100	4506.6	(43/2$^-$)	Q
5041.2	(45/2$^-$)	777.5[#]	100	4263.7	(41/2$^-$)	
5127.6		577.4[#]	100	4550.3	(43/2$^-$)	
		621[#]		4506.6	(43/2$^-$)	
5254.6		466[#]	100	4788.6	(43/2$^+$)	
5281	(49/2$^+$)	688.3[#]	100	4593.2	(45/2$^+$)	
5351.6		845[#]	100	4506.6	(43/2$^-$)	
5375.8	(47/2$^+$)	587.2[#]	100	4788.6	(43/2$^+$)	Q
5519.5	(51/2$^-$)	668.4[#]	100	4851.1	(47/2$^-$)	Q
5746.1		895[#]		4851.1	(47/2$^-$)	
5782.8	(49/2$^+$)	407.0[#]	100	5375.8	(47/2$^+$)	
5815.8		440[#]	100	5375.8	(47/2$^+$)	
5868.6		741[#]	100	5127.6		
5980.8		605[#]	100	5375.8	(47/2$^+$)	
6054	(53/2$^+$)	773[#]	100	5281	(49/2$^+$)	
6129	(53/2,55/2$^-$)	609.4[#]	100	5519.5	(51/2$^-$)	
6250		730[#]	100	5519.5	(51/2$^-$)	
6400	(51/2$^+$)	617.6[#]	100	5782.8	(49/2$^+$)	
6505		636[#]	100	5868.6		
6594		465[#]	100	6129	(53/2,55/2$^-$)	
6914	(57/2$^+$)	860[#]	100	6054	(53/2$^+$)	
7220		819.6[#]	100	6400	(51/2$^+$)	

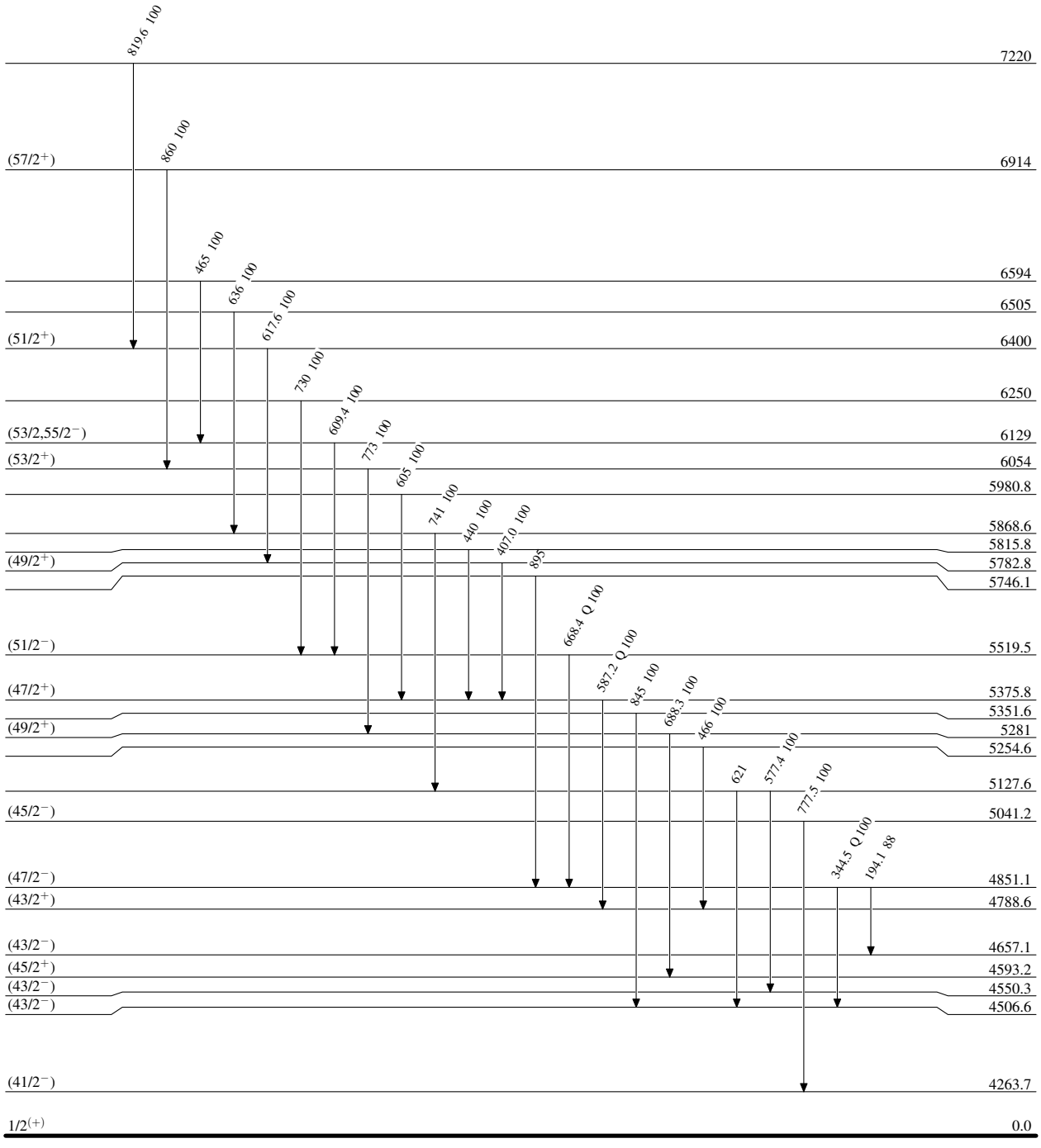
[†] From ^{187}Hg ε decay (2.4 min), except otherwise noted.
[‡] From ^{187}Hg ε decay (1.9 min).
[#] From ^{172}Yb(^{19}F,4nγ).
[@] Assignment from ce measurements in ^{187}Hg ε decay (2.4 min & 1.9 min), except otherwise noted.
[&] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$^{187}_{79}Au_{108}$-26

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

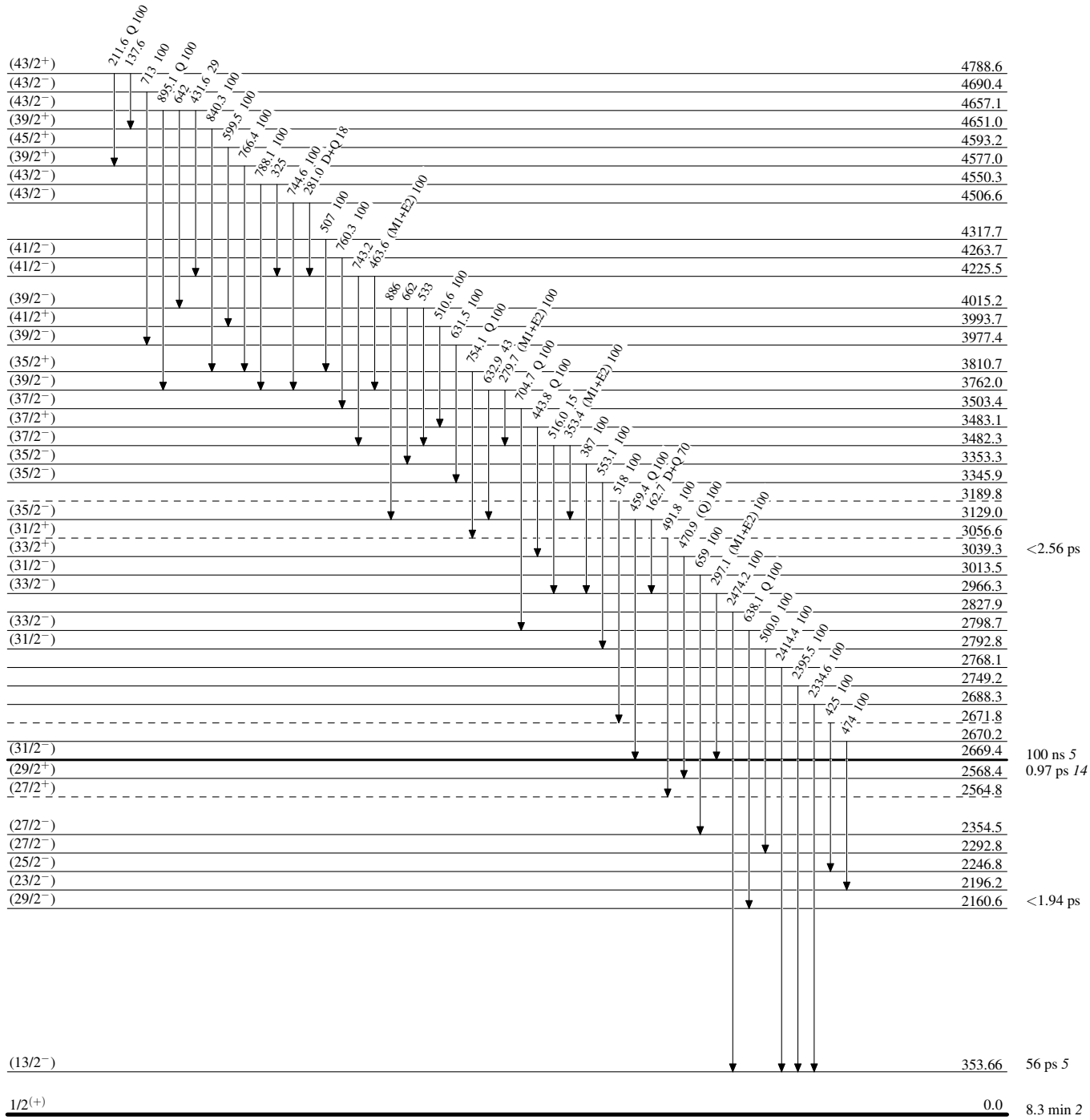


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

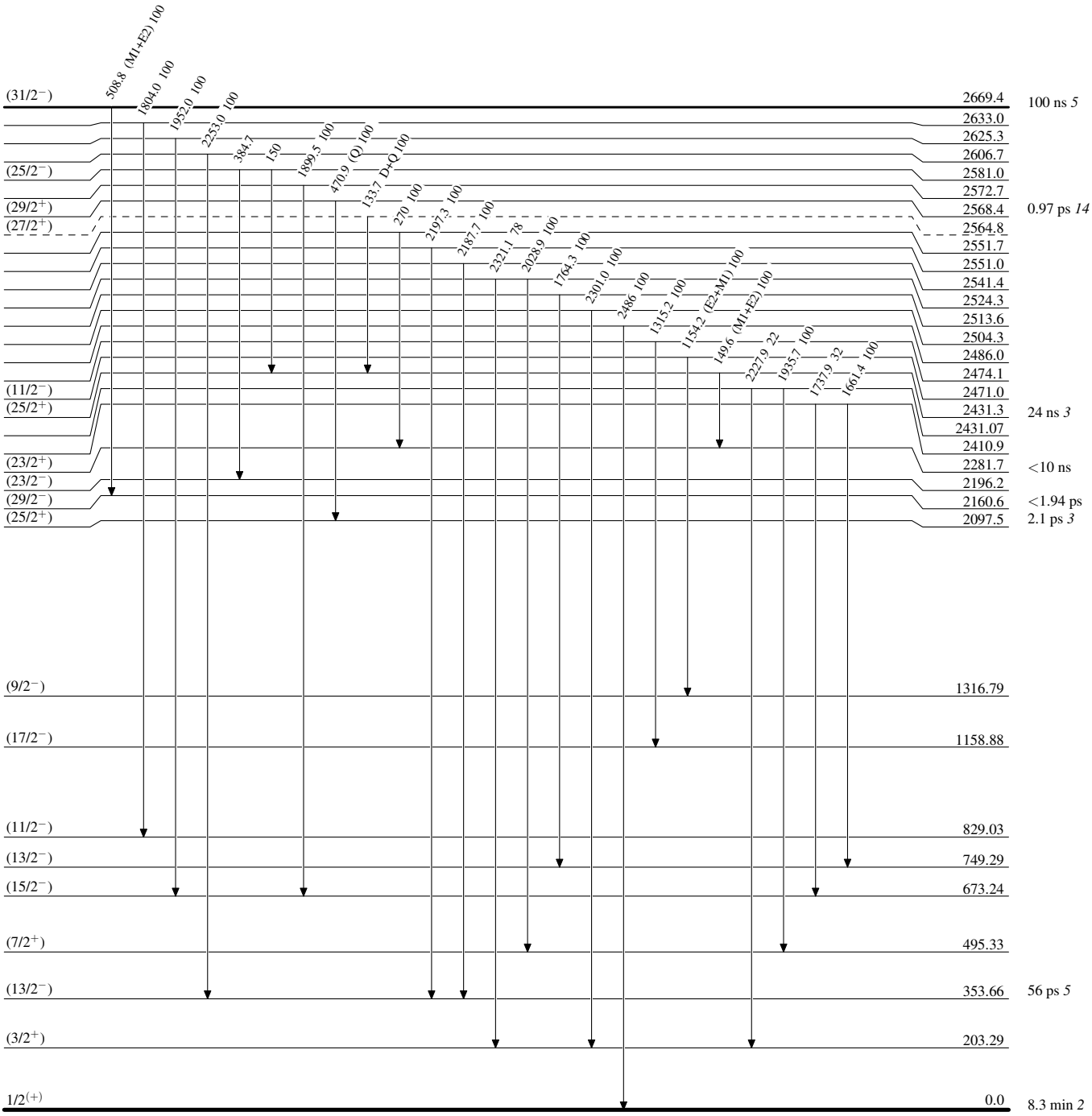


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

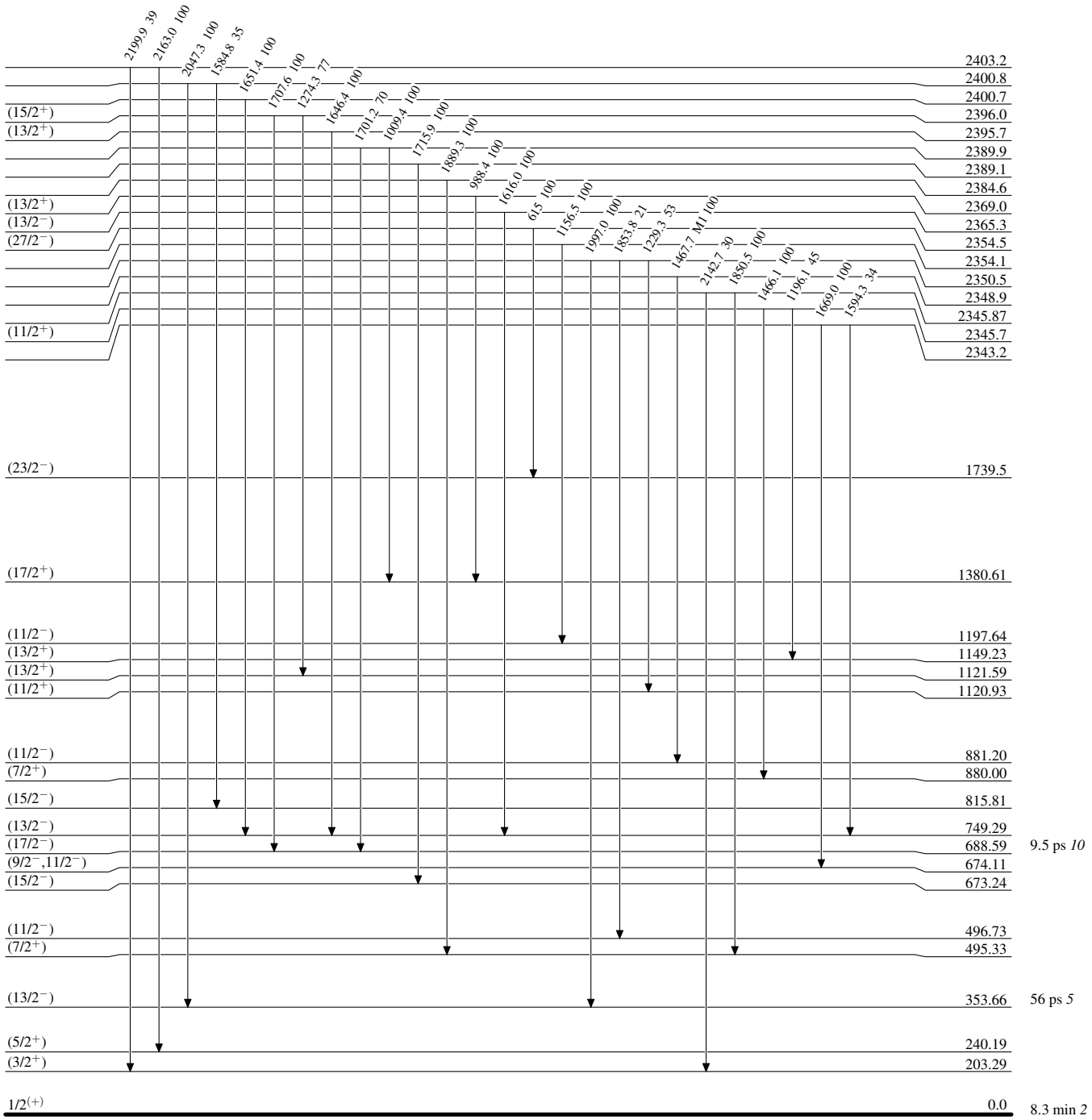


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

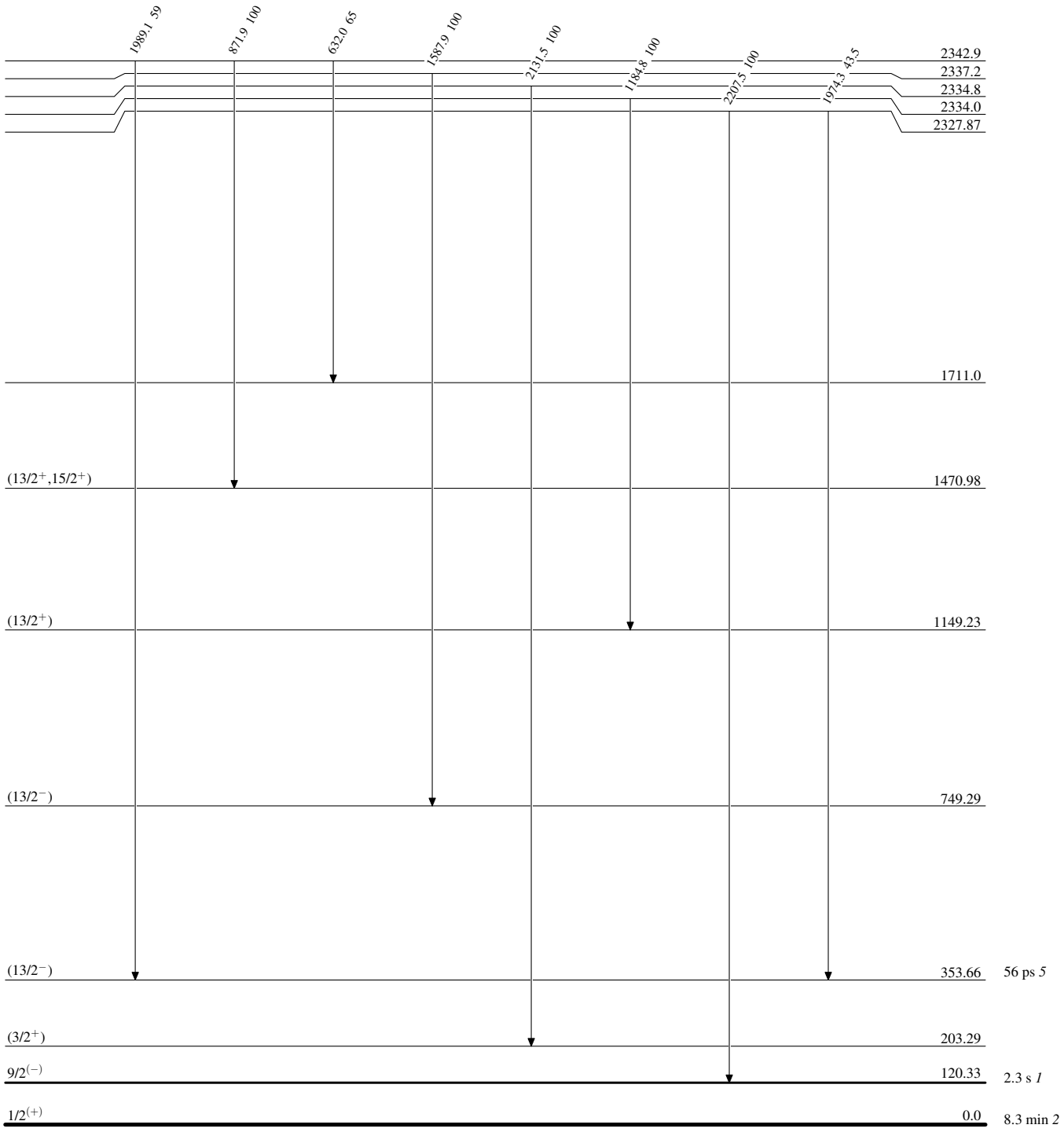


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

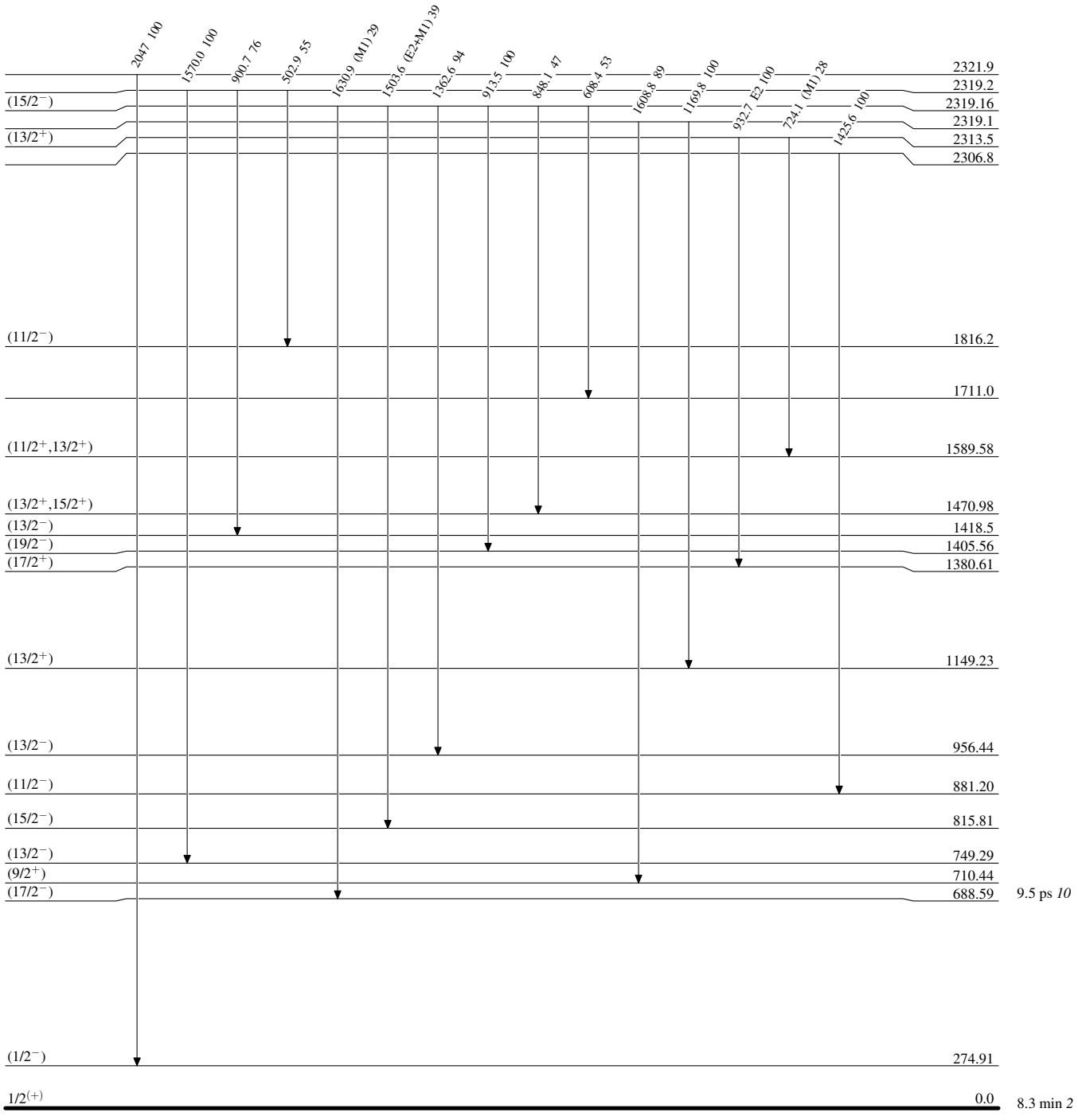


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

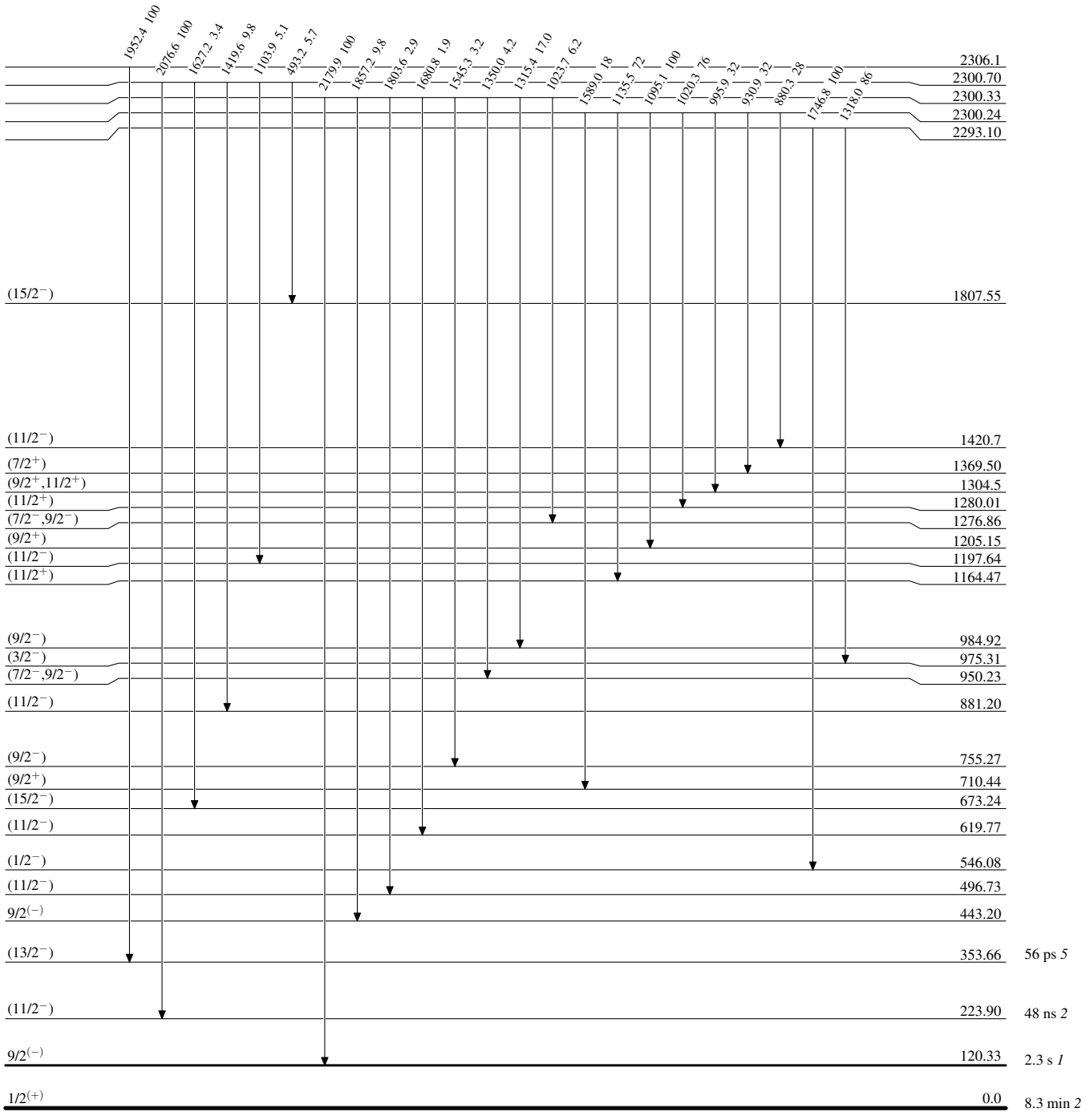


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

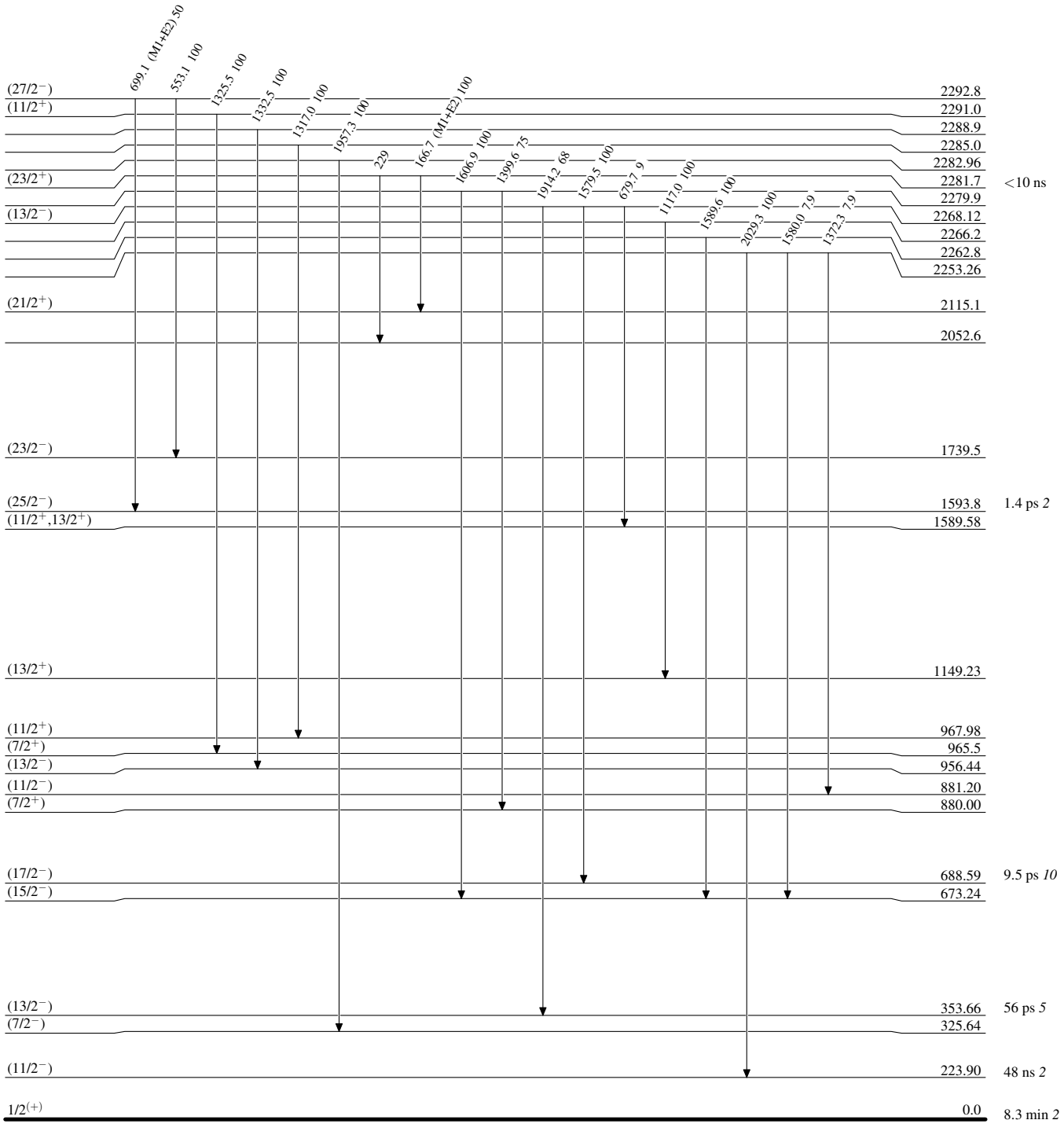


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

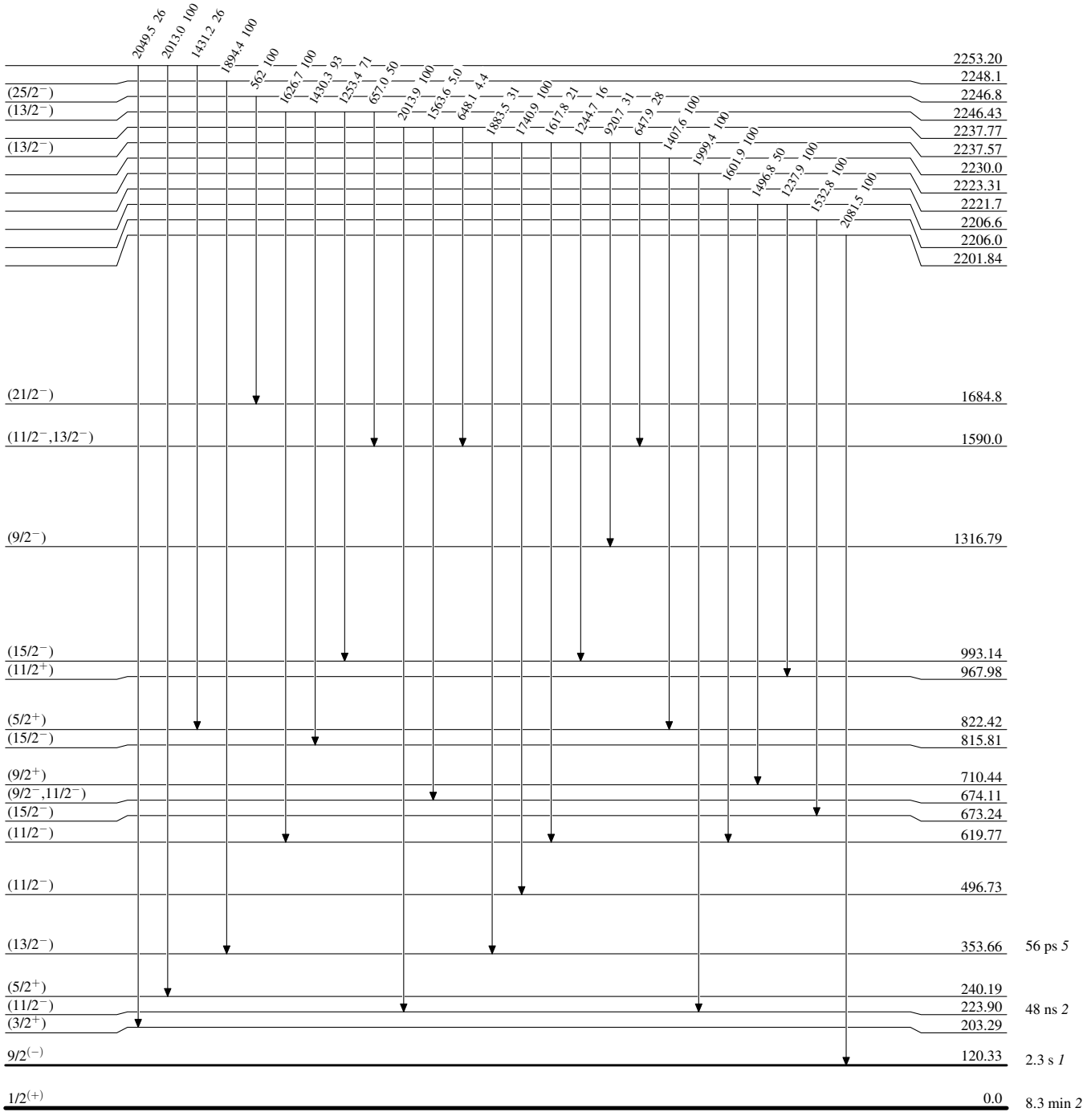


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

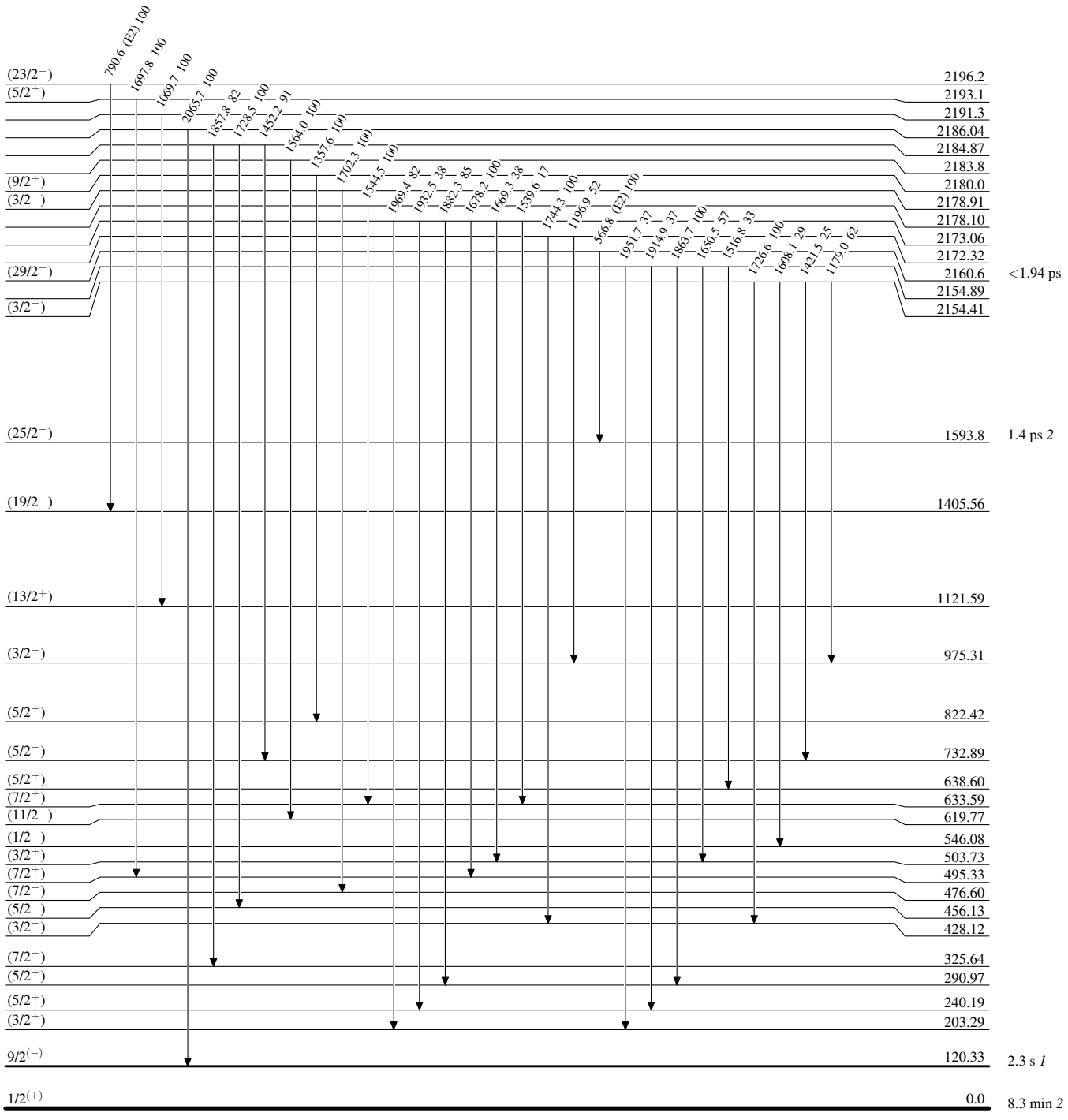


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

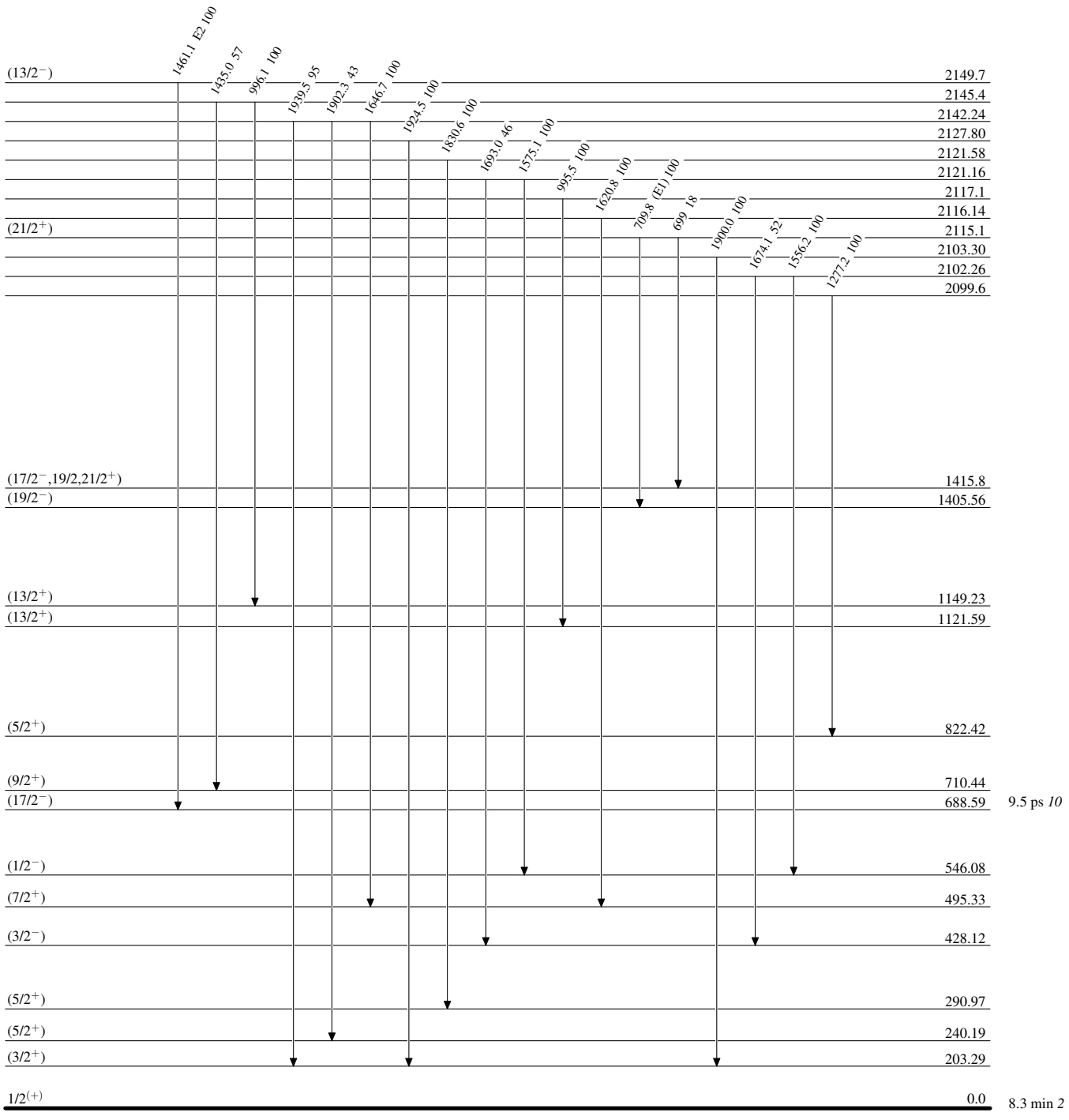


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

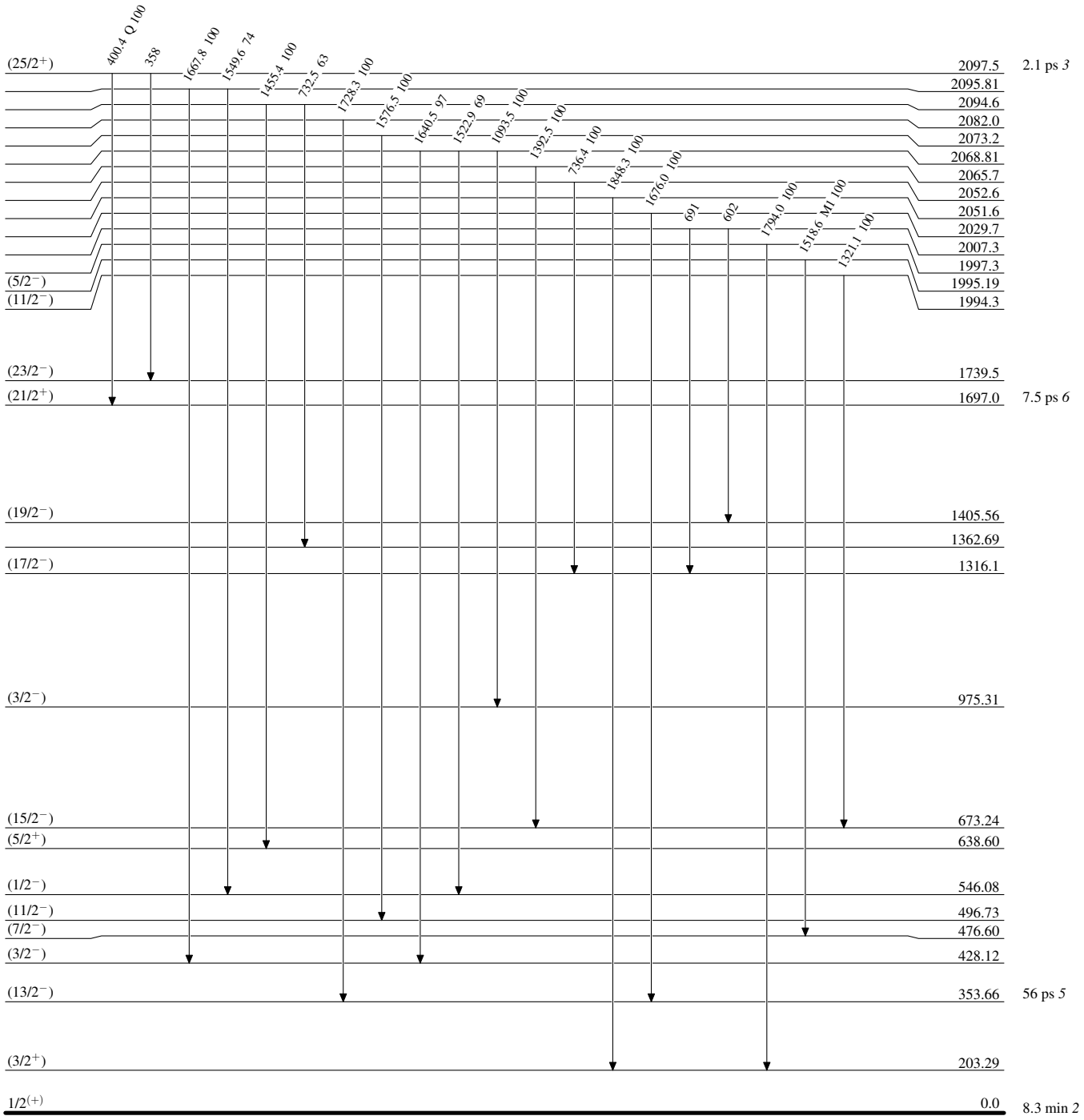


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

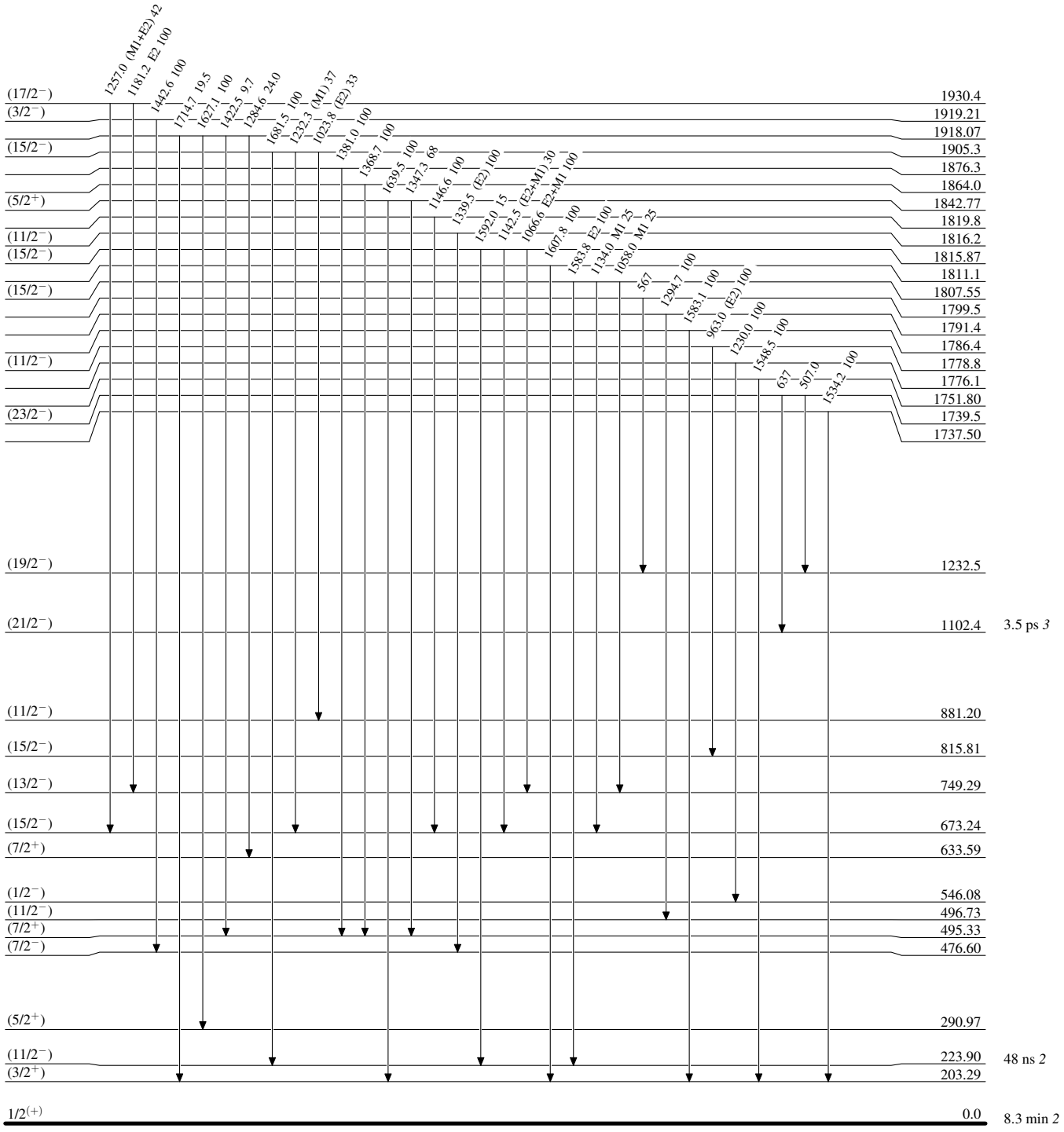


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

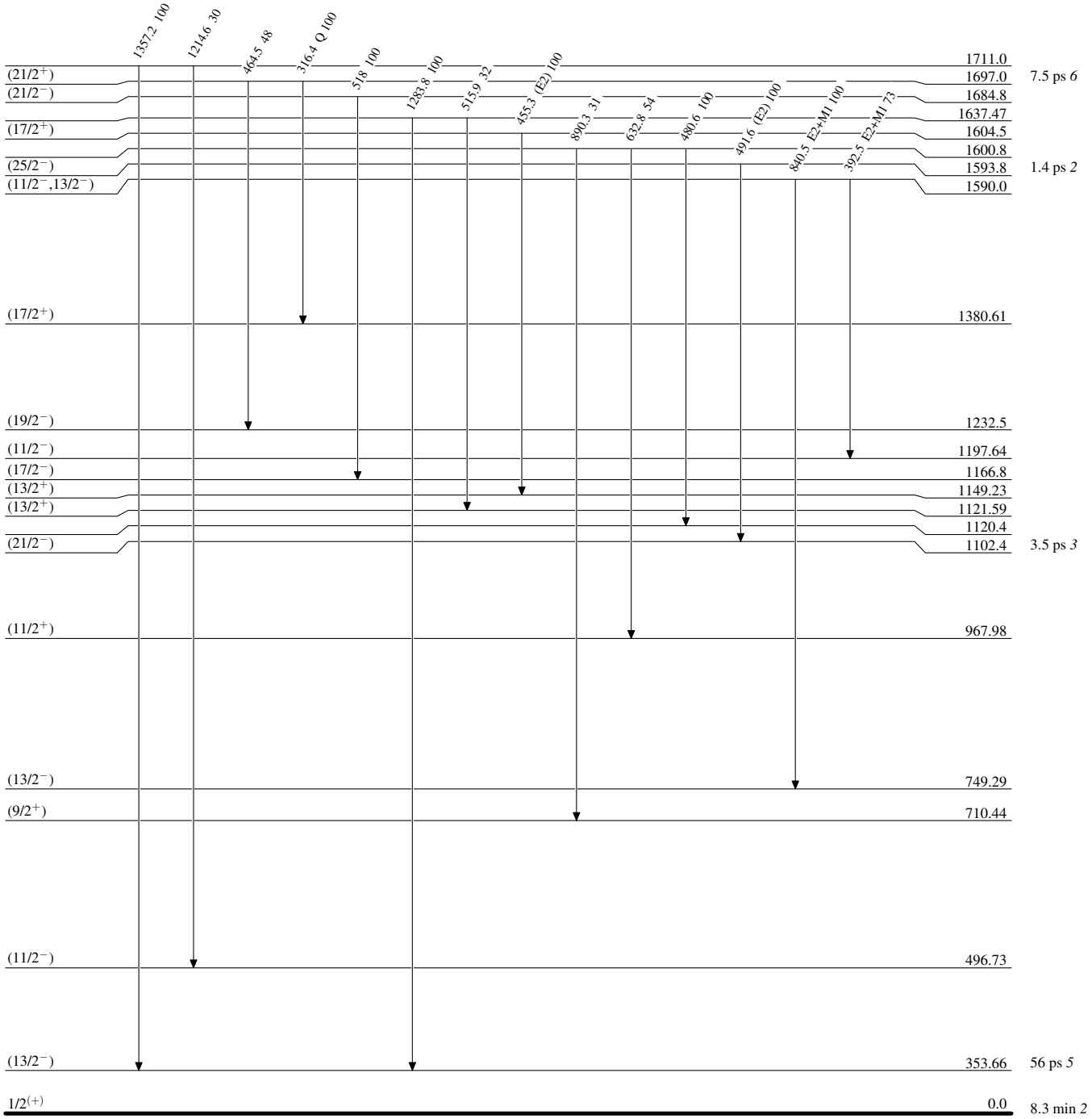


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

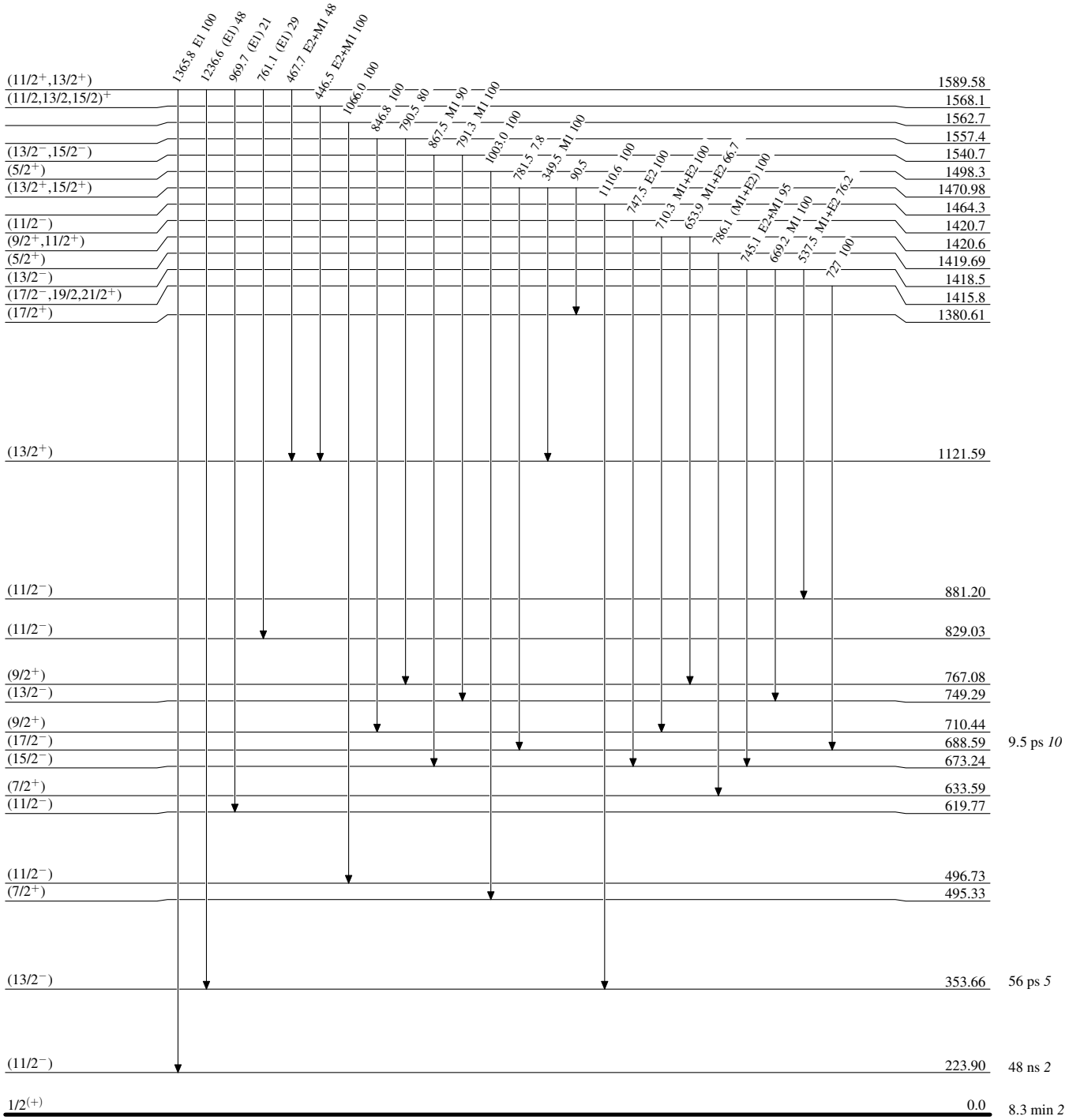


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

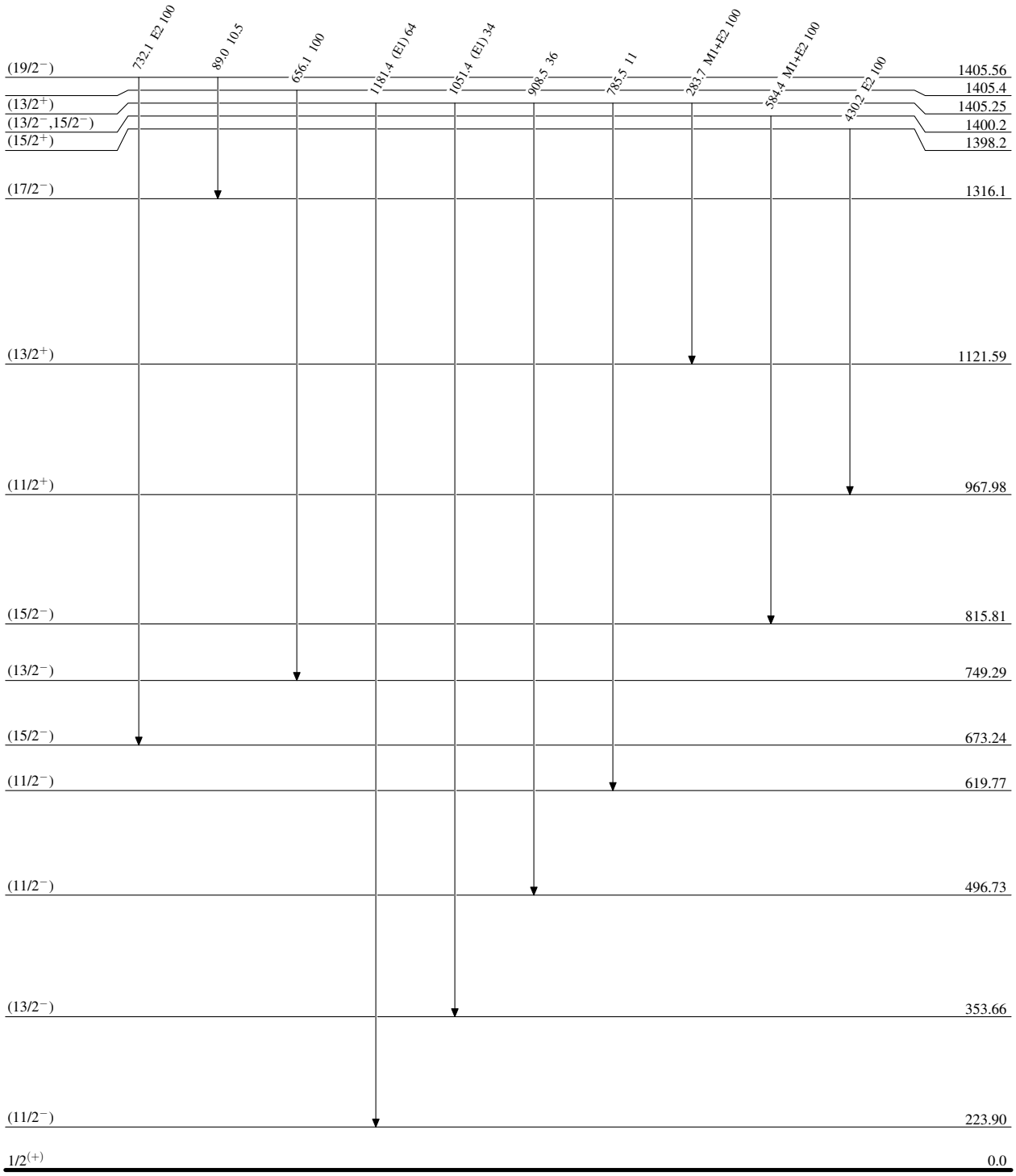


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

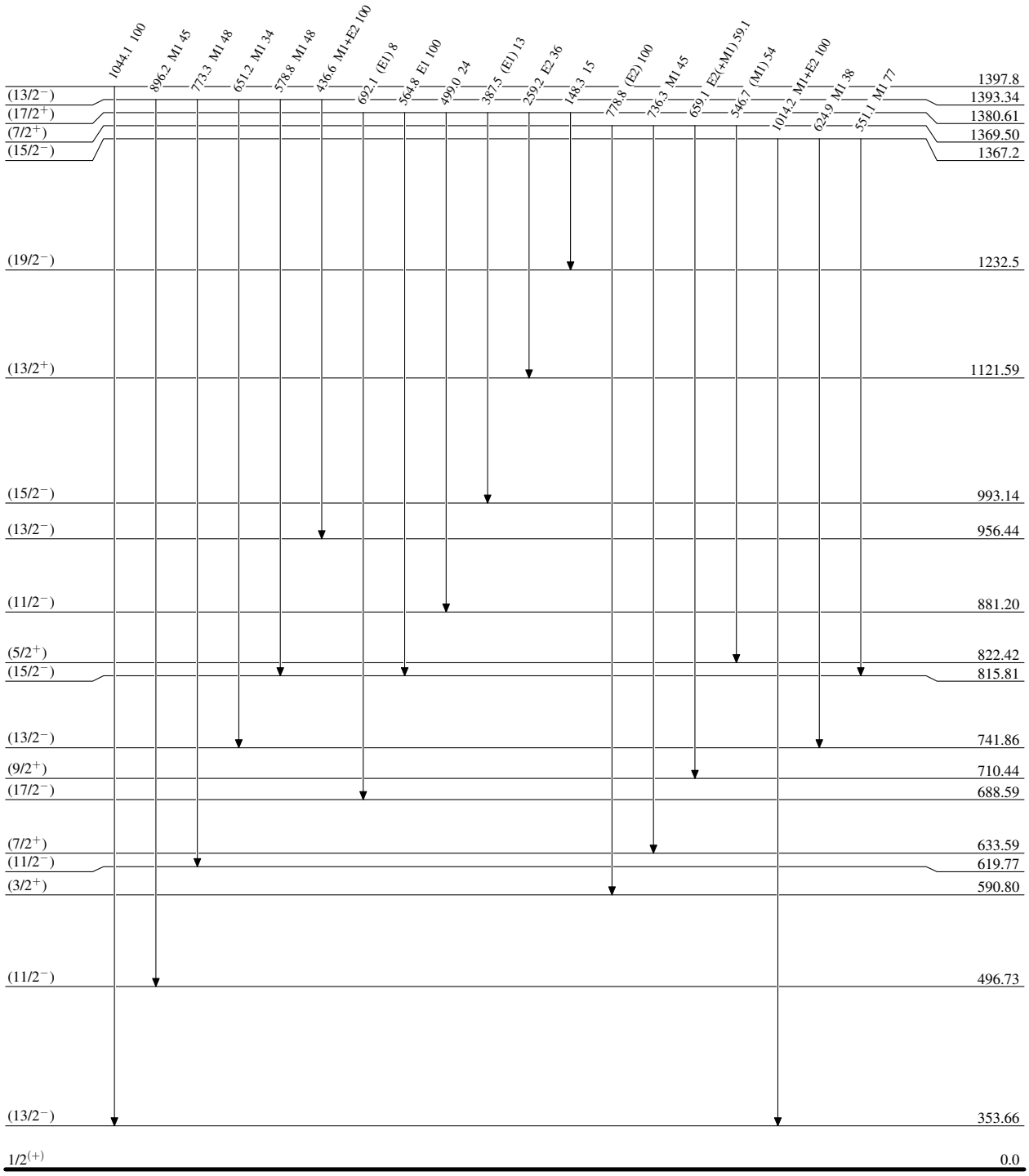


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

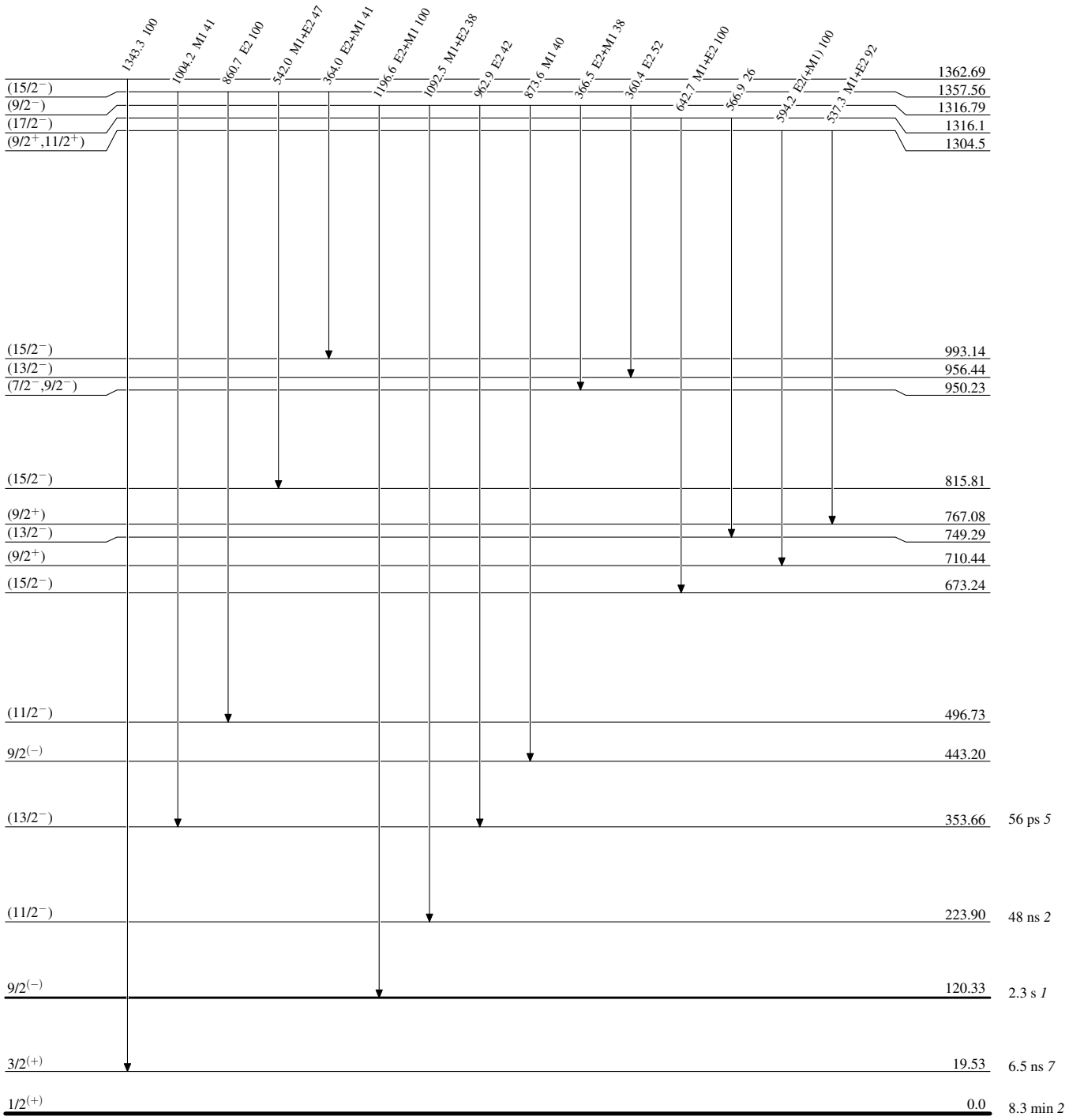


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

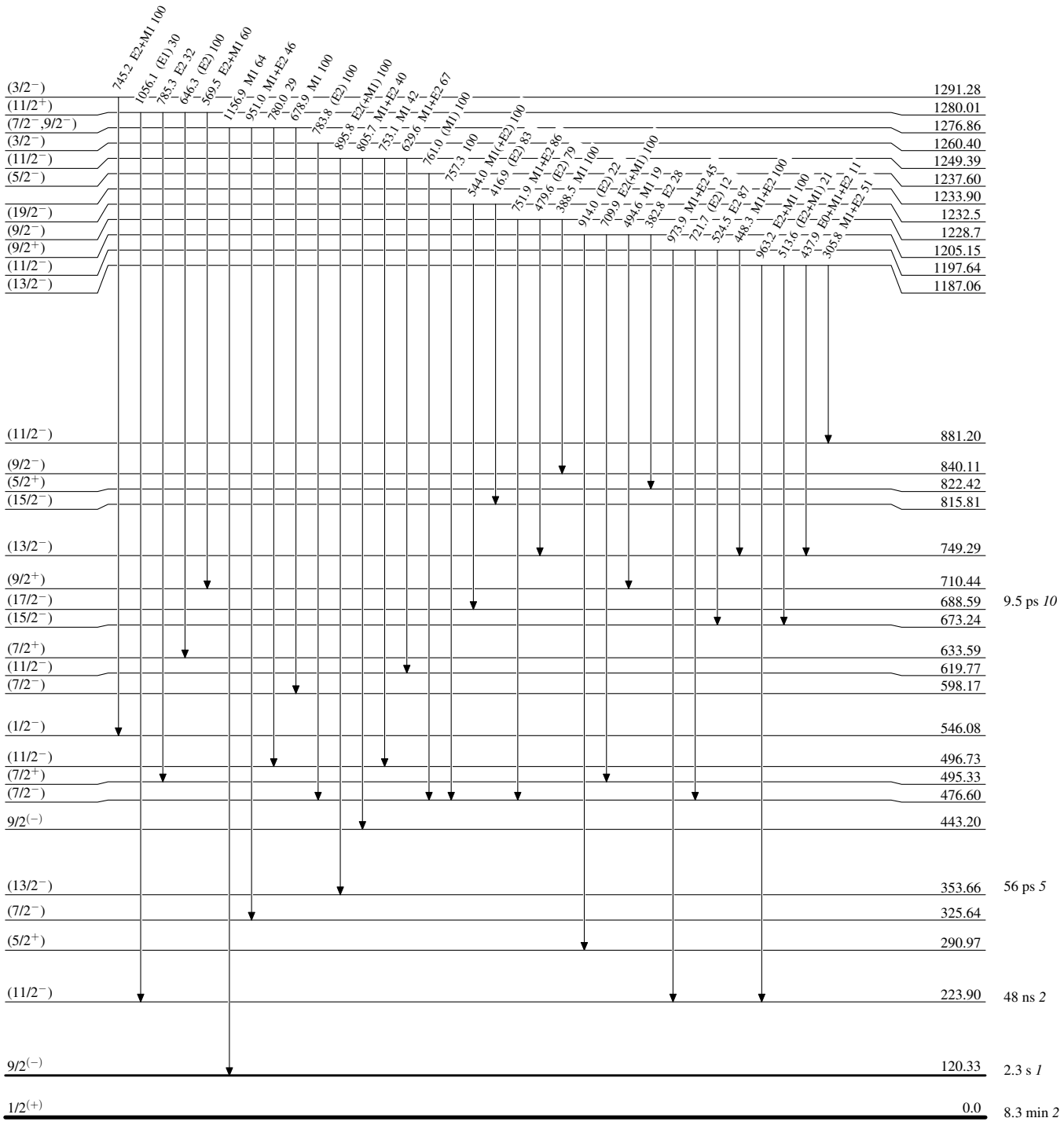


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

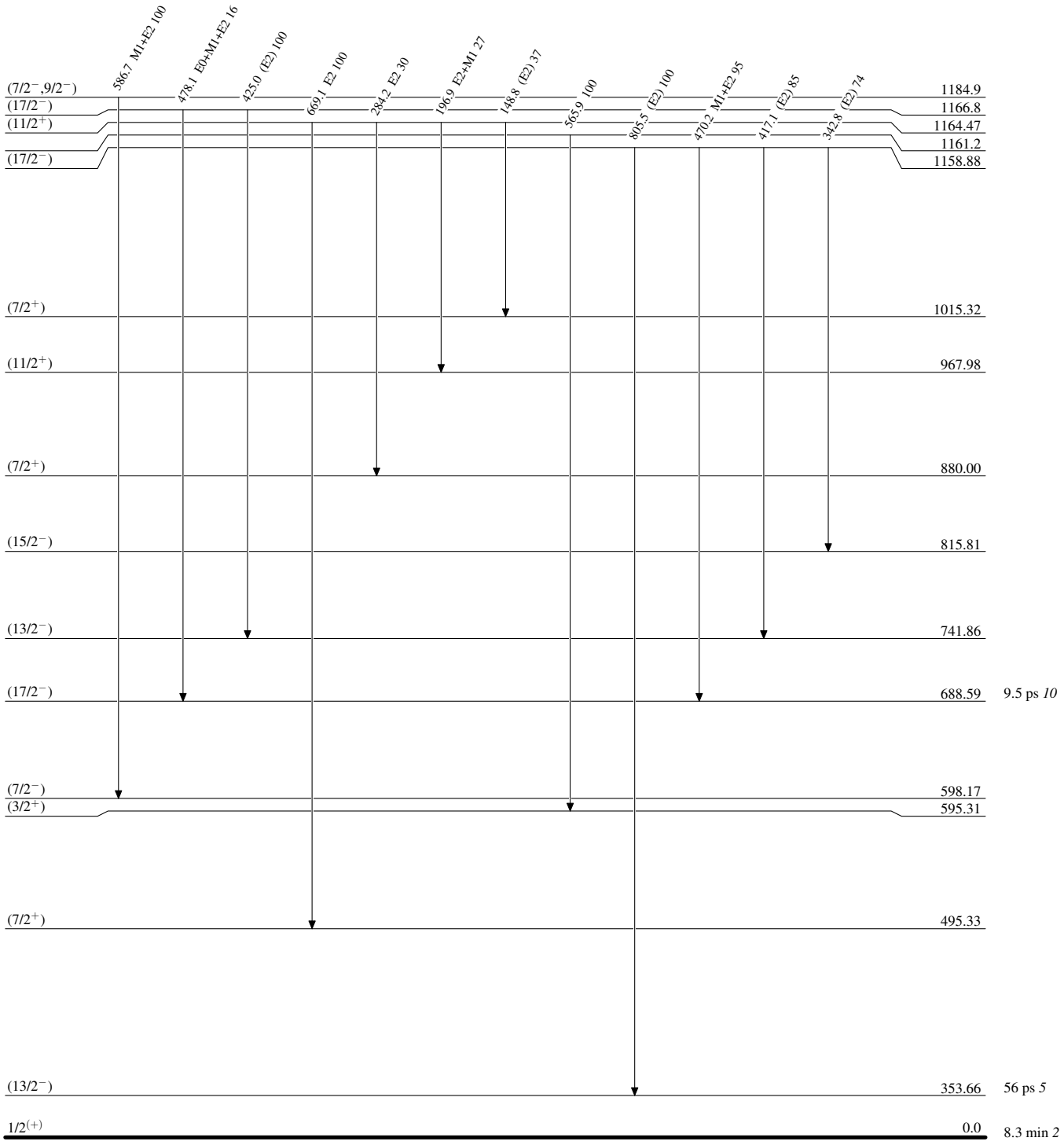


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

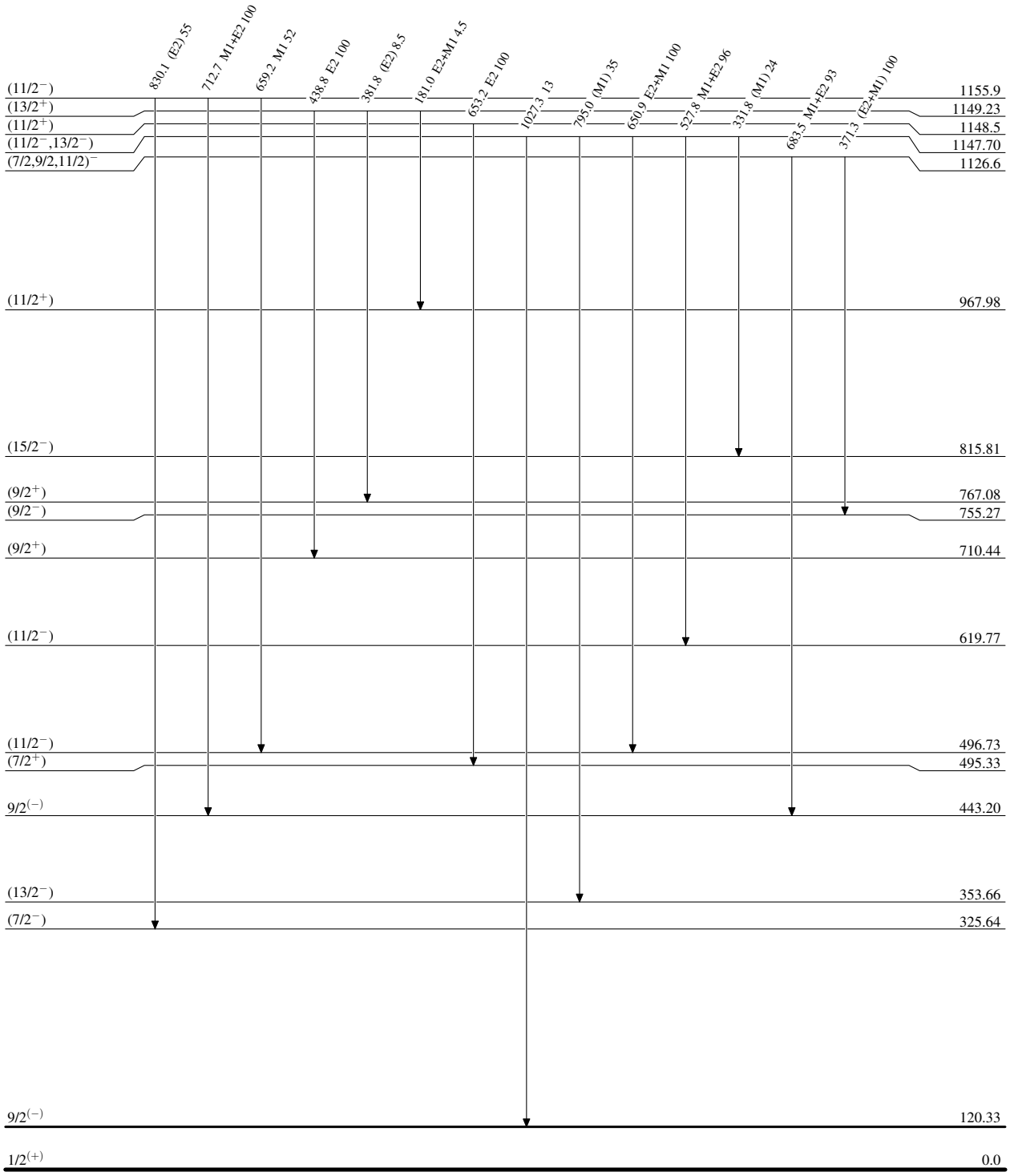


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

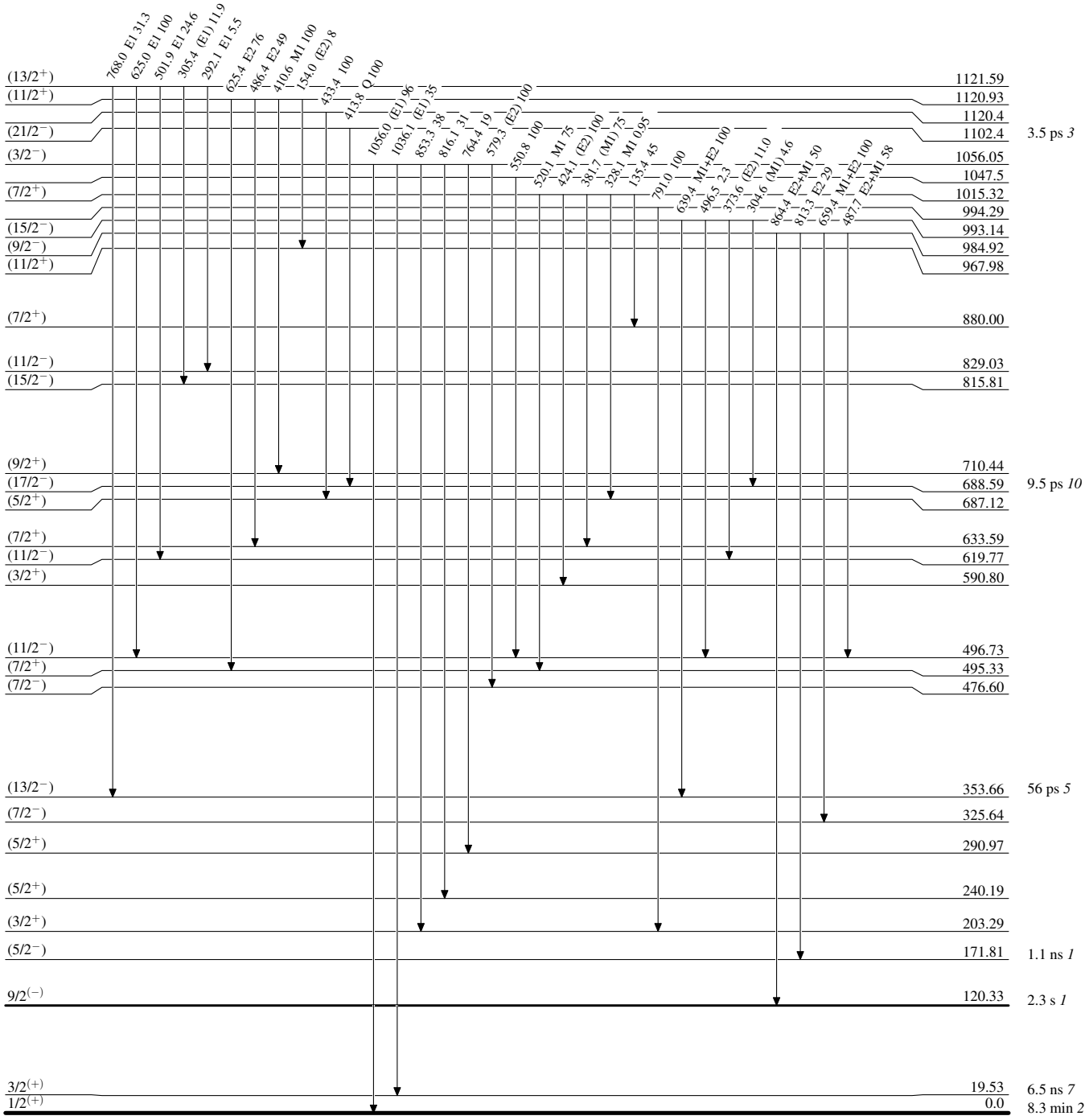


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

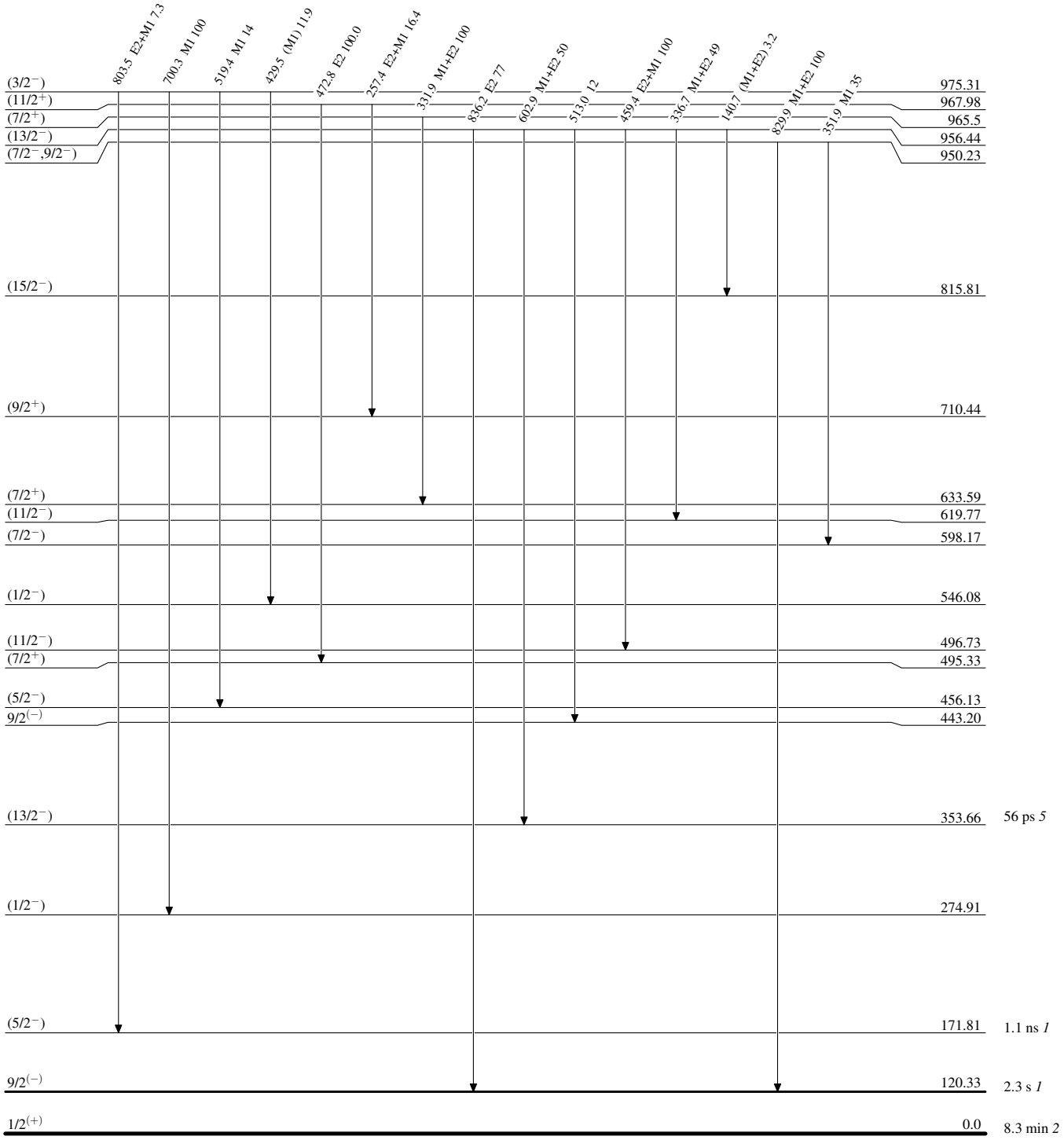


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

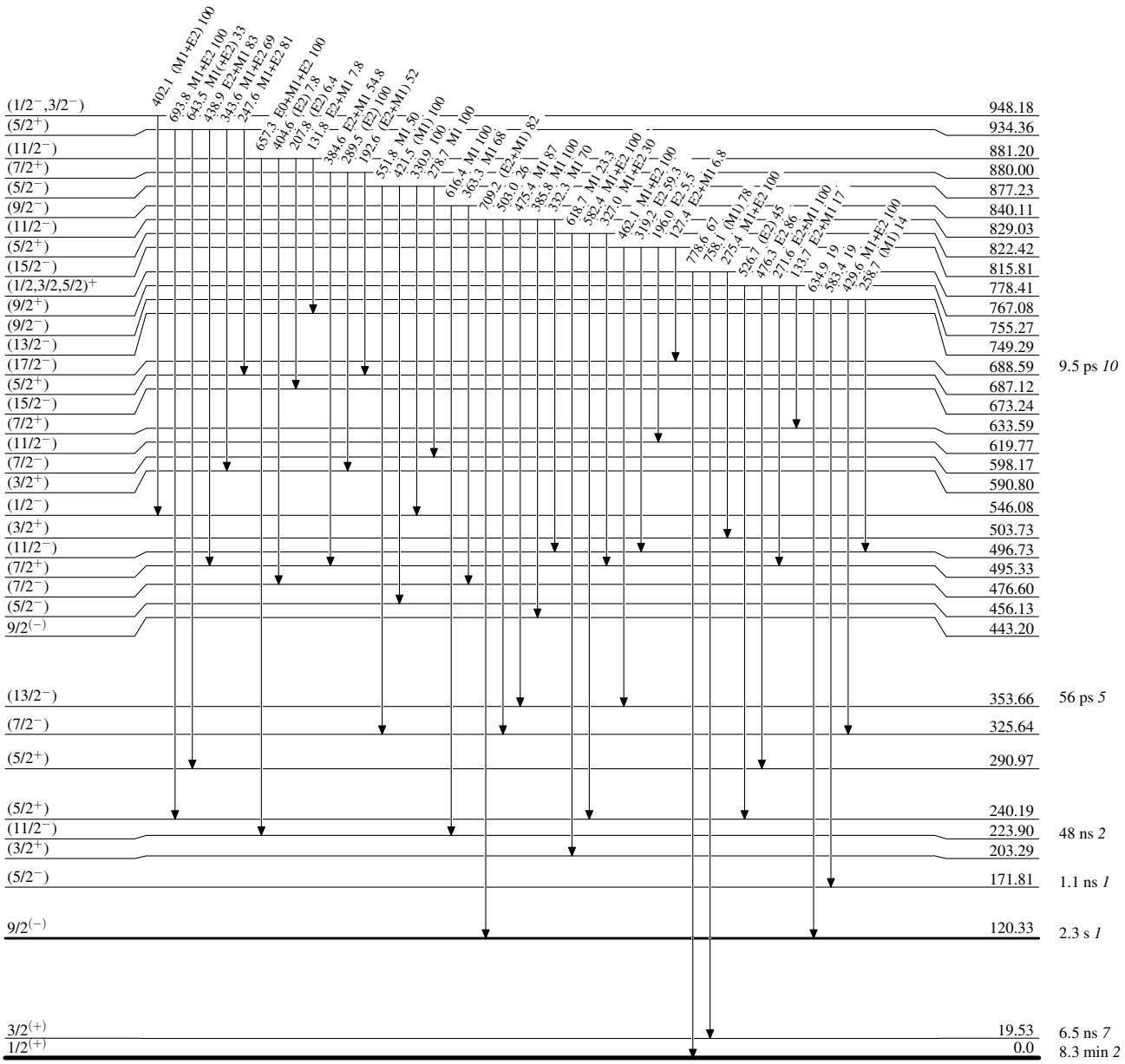


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

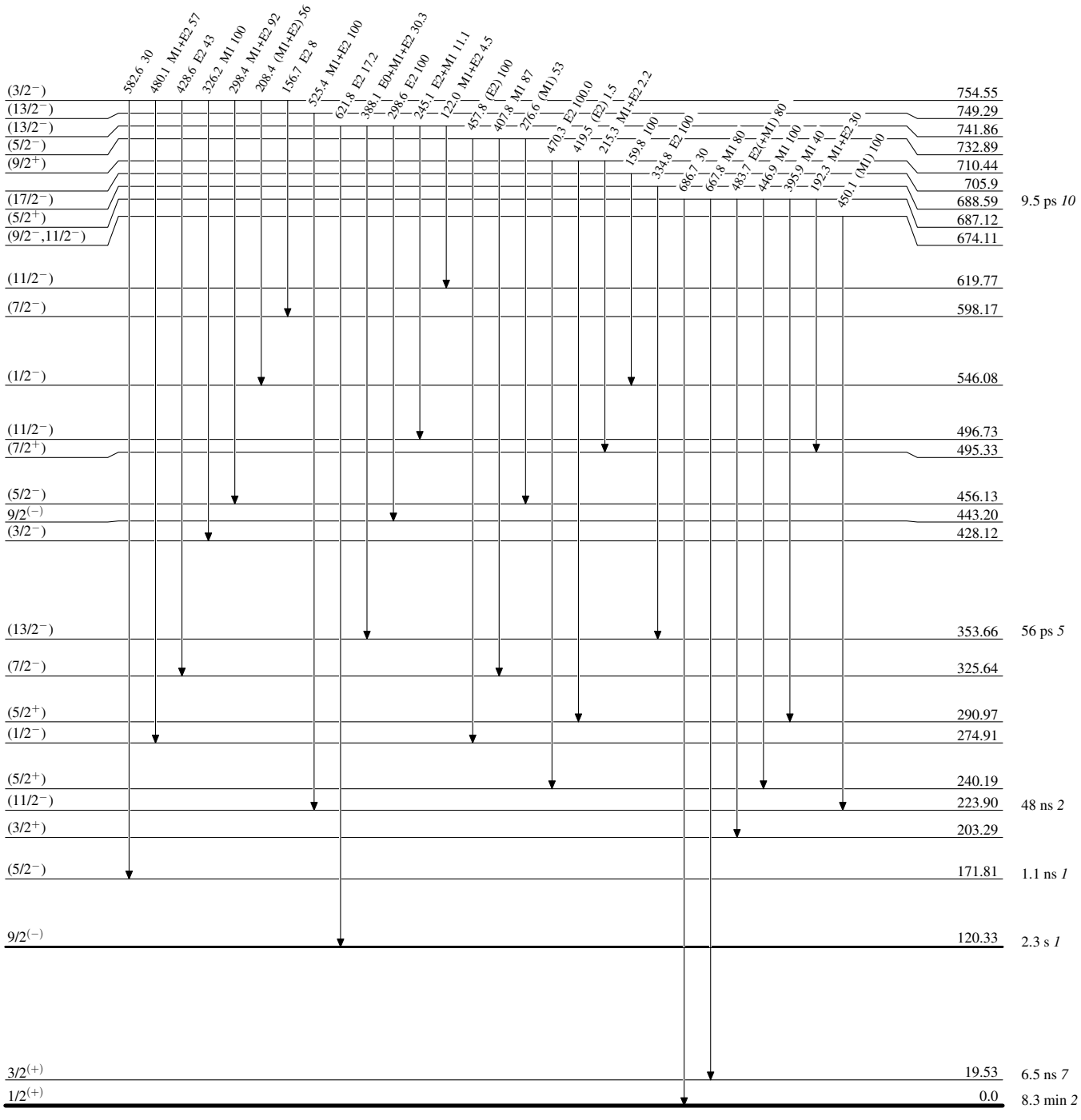


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

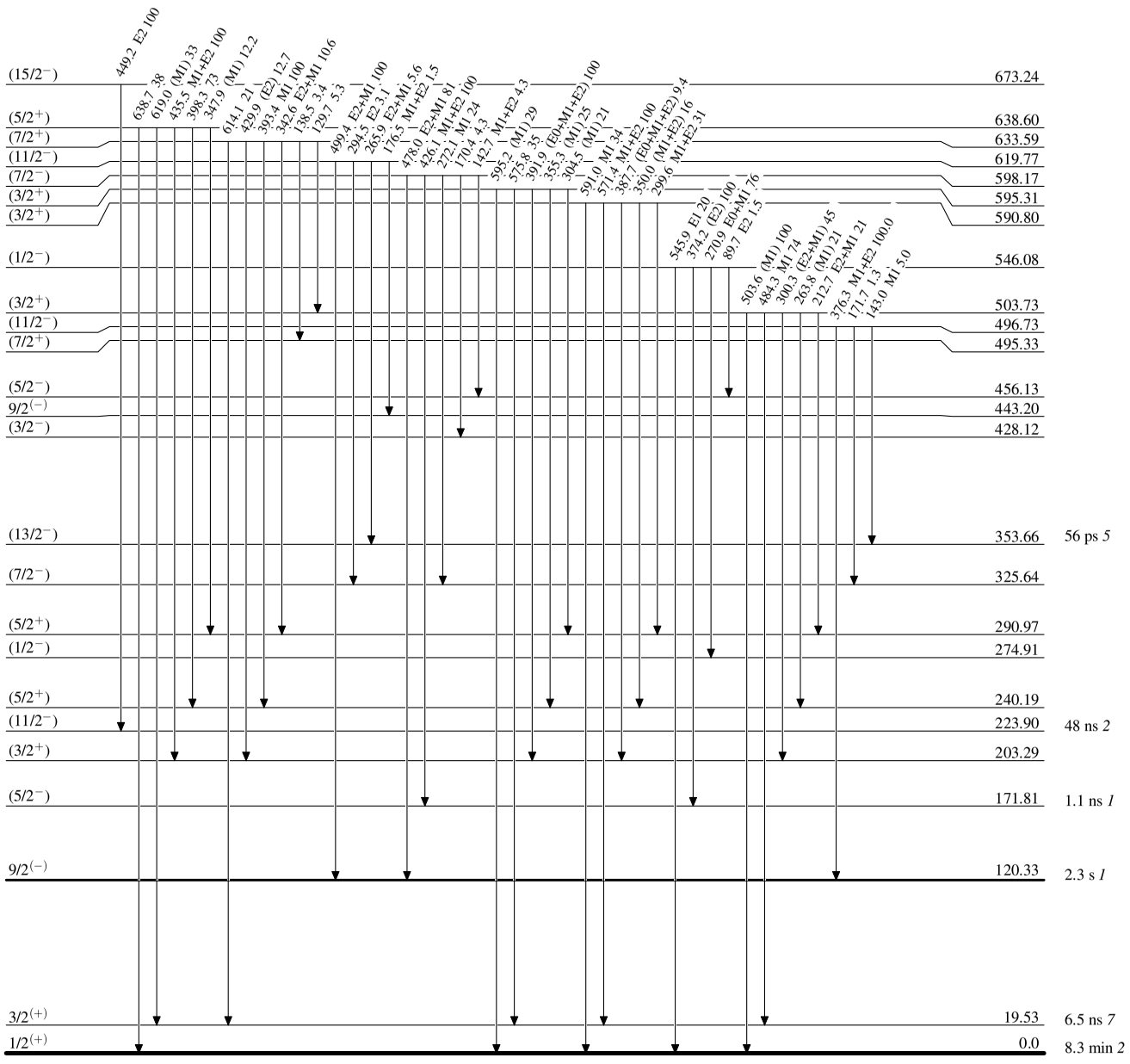


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

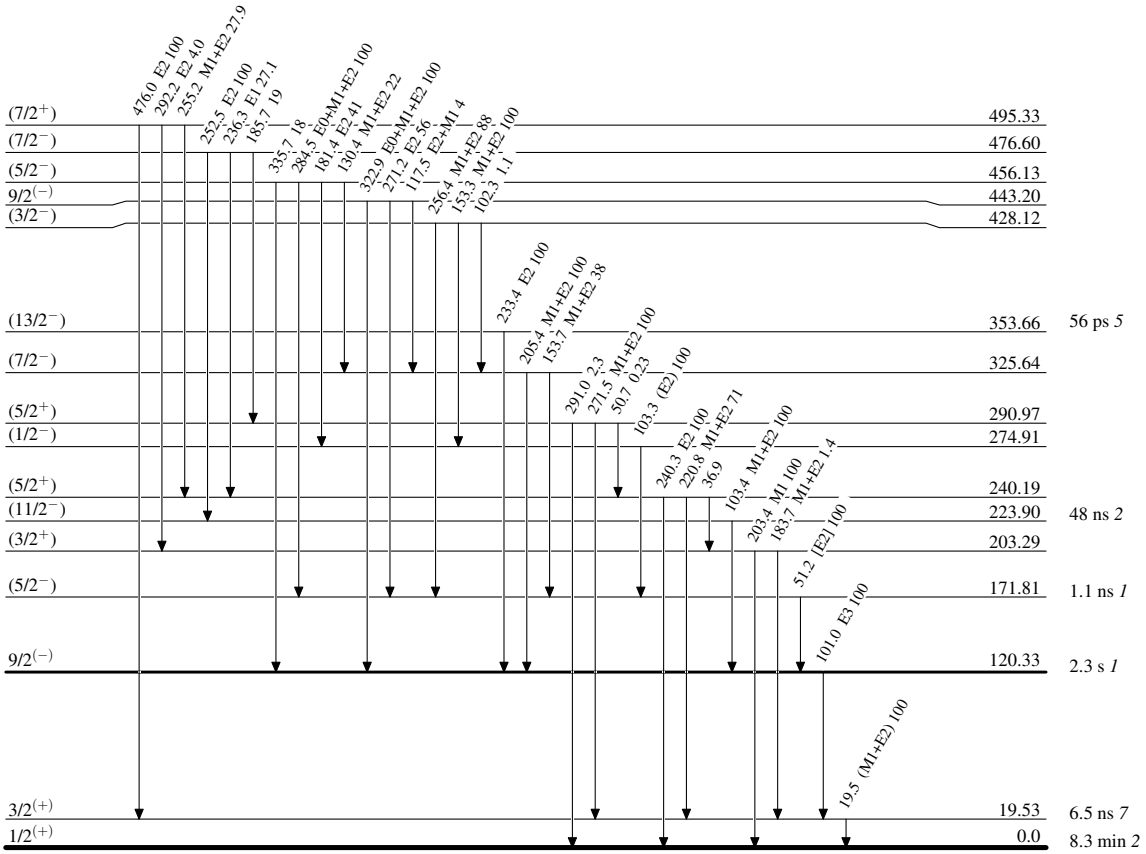


$^{187}_{79}Au_{108}$

Adopted Levels, Gammas

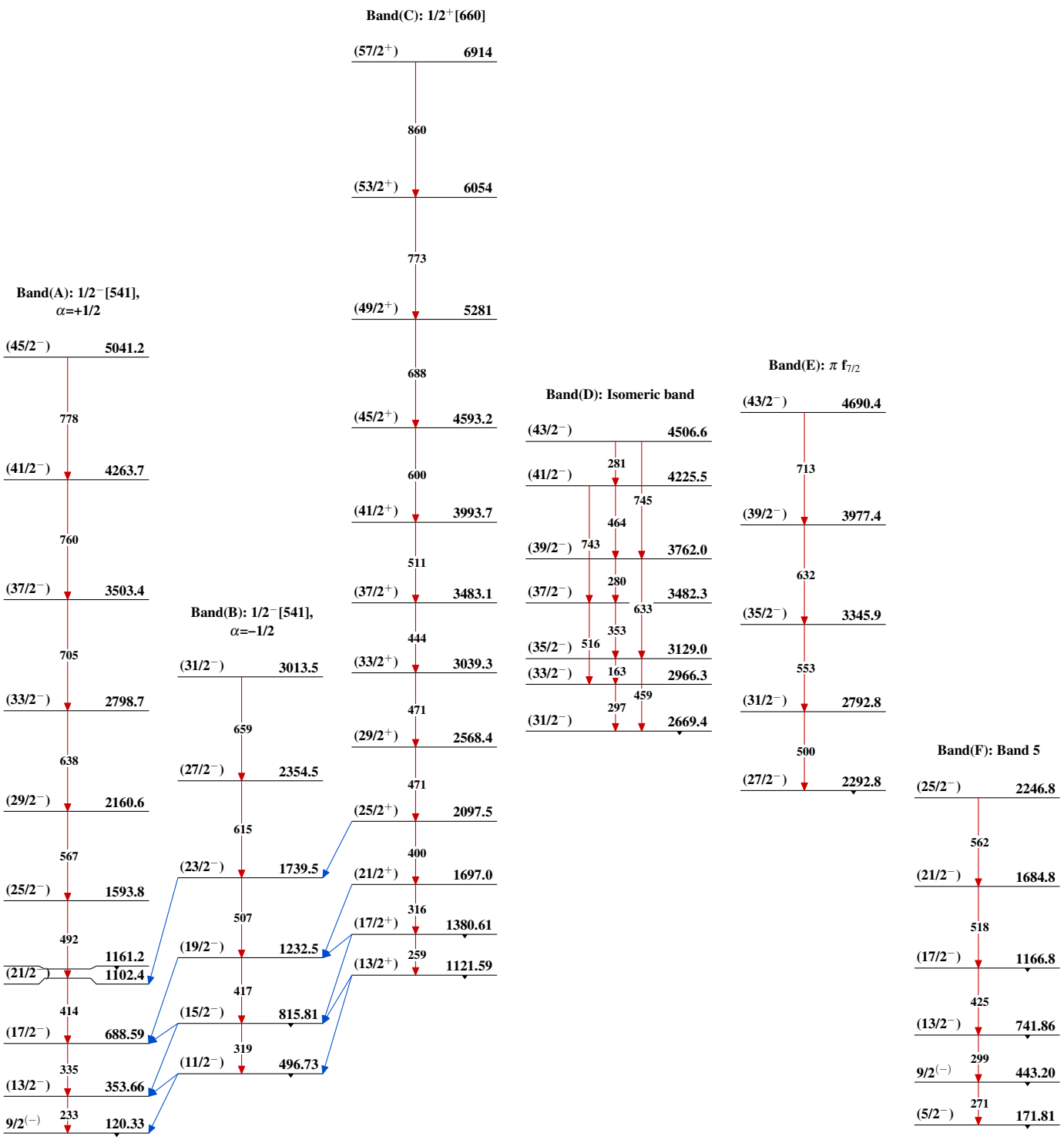
Level Scheme (continued)

Intensities: Relative photon branching from each level



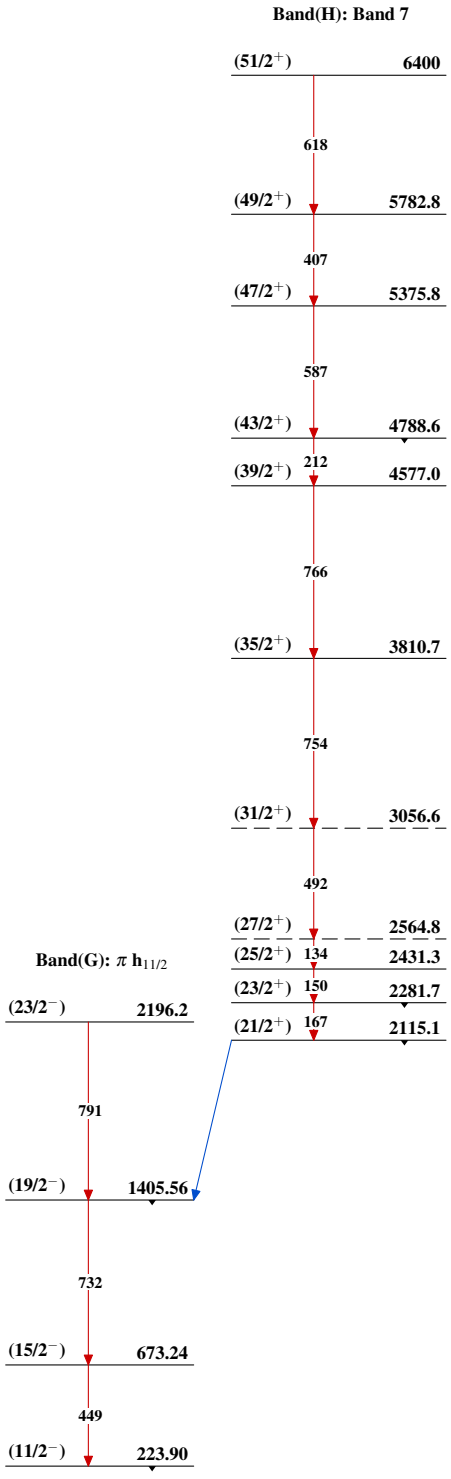
$^{187}_{79}Au_{108}$

Adopted Levels, Gammas



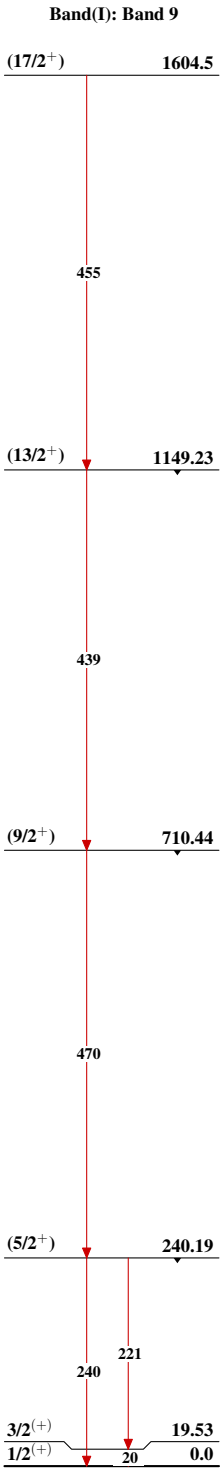
$^{187}_{79}Au_{108}$

Adopted Levels, Gammas (continued)



$^{187}_{79}Au_{108}$

Adopted Levels, Gammas (continued)



$^{187}_{79}Au_{108}$

^{187}Au IT decay (2.3 s) 1983Br26,1978Bo05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

Parent: ^{187}Au: E=120.6 *2*; $J^\pi=9/2^{(-)}$; $T_{1/2}$=2.3 s *1*; %IT decay=100.0

1983Br26: On-line mass-separated sources of ^{187m}Au from ^{178}Hf(^{14}N,5n) reaction, E=103 MeV, on natural Hf foils at Oak Ridge Isochronous Cyclotron UNISOR facility.

1978Bo05: On-line mass separated ^{187}Hg from Au(p,xn)Hg; Detector: Ge(Li), Si(Li); Measured Eγ, Iγ, α, $\gamma\gamma$ coin, ceG-coin, Gce (t), deduced levels, J, π, mult.

^{187}Au Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	$1/2^{(+)}$		
19.5 *2*	$3/2^{(+)}$†‡	6 ns *1*	$T_{1/2}$: From Ce(19.5L)(t) (1978Bo05).
120.6 *2*	$9/2^-$‡	2.3 s *1*	$T_{1/2}$: From Ce(t)−1983Br26. The uncertainty is at 95% confidence level.

† For (prolate) configuration: $3/2^+[402]$ (19.5 keV level) and configuration:$1/2^+[400]$ (g.s.) B(M1)=0.0018; and for (oblate) configuration: $3/2^+[431]$ (19.5 keV) and configuration:$1/2^+[431]$ (g.s.) B(M1)=0.59, calculated by 1978Bo05.

‡ The hindrance of 101.1γ E3 isomeric transition is consistent with the analogous h9/2 to d3/2 E3 transitions in ^{191}Tl to ^{201}Tl.

$\gamma(^{187}Au)$

E_γ†	I_γ‡#	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α@	$I_{(\gamma+ce)}$#	Comments
19.5 *4*		19.5	$3/2^{(+)}$	0.0	$1/2^{(+)}$	(M1+E2)	$7.\times10^3$ *6*		α(L)=5.E3 5; α(M)=1.3×10^3 *13*; α(N+..)=4.E2 4 α(N)=3.E2 3; α(O)=5.E1 5; α(P)=0.083 *6* Mult.: Assigned from an estimated M/N subshell ratio, observing a conversion electron spectrum (fig 5-1978Bo05) by the evaluator.
101.1 *2*	0.83 *2*	120.6	$9/2^-$	19.5	$3/2^{(+)}$	E3	119.7 *22*	100	α(K)=0.927 *14*; α(L)=87.3 *16*; α(M)=24.5 *5*; α(N+..)=7.07 *13* α(N)=6.10 *11*; α(O)=0.970 *18*; α(P)=0.00184 *3* Mult.: α(L)exp=75 *20*, L1/L2<0.1, L2/L3≈1.3 (1978Bo05).

† From 1978Bo05.

‡ Deduced from TI/(1+CC).

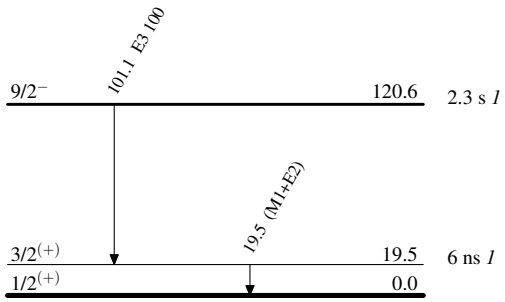
Absolute intensity per 100 decays.

@ 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.

^{187}Au IT decay (2.3 s) 1983Br26,1978Bo05

Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0



$^{187}_{79}Au_{108}$

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

Parent: ^{187}Hg: E=0.0; $J^\pi=3/2^{(-)}$; $T_{1/2}$=1.9 min *3*; Q(ε)=4890 *30*; %ε+%$β^+$ decay=100.0

^{187}Hg-$T_{1/2}$: 2.4 min in 1998Ru04, not measured (e-mail communication with Dr. Dubravka Rupnik).

Other references: 1995Ru07, 1988Pa15, 1988Ko22, 1986Be07, 1983Be48, 1975Ho03, and 1970Du09.

1998Ru04,1994RuZX,1995Ru07: Mass separated ^{187}Hg^g were obtained from the ^{187}Tl^{m,g} decay produced through ^{176}Hf(^{19}F,8n); Detector: Ge(Li), Se(Li); Measured: Eγ, Iγ, α(K)exp, γγ t, ce-γ-t, γ-x-t, and ce-x-t.

1978Bo05: On line mass separated ^{187}Hg from Au(p,xn)Hg; Detector: Ge(Li), Si(Li); Measured Eγ, Iγ, α, γγ coin, ce-γ coin, γ-ce-t, deduced levels, J, π, mult. Decay scheme includes both the metastable (1.9 min) and ground (2.4 min) states decay data together.

1988Pa15,1988Ko22: Mass-separated ^{187}Hg^g produced from ^{180}W(^{14}N,7n), E=160 MeV, 187Tl $β^+$ decay; ^{187}Hg^m from ^{180}W(^{12}C,5n), E=120 MeV; Measured: γγ(t), γ-x-t, γ-ce-t, ce-x-t.

1986Be07,1983Be48: ^{187}Hg produced from Au(p,xn), measured level $T_{1/2}$ by ce-ce(t), γ-ce(t).

1975Ho03, 1970Du09: Measured total absorption spectrum of ^{187}Hg ε decay. The spectrum (Fig. 3 of 1975Ho03) indicates level population in the ^{187}Hg ε Decay upto ≈4500 keV. 1970Du09 shows the total absorption of the ^{187}Hg decay upto ≈3000 keV (Fig. 8e – 1970Du09).

The ^{187}Hg decay scheme is presented as constructed by 1998Ru04.

^{187}Au Levels

E(level)[†]	J^π[‡]	$T_{1/2}$	Comments
0.0	$1/2^{(+)}$	8.3 min *2*	$T_{1/2}$: From Adopted Levels.
19.53[#] *9*	$3/2^{(+)}$	6.5 ns *7*	$T_{1/2}$: weighted average of 6 ns *1* ce(19.5L)(t)–1978Bo05 and 7 ns *1* (ce(220K)-ce(19.5M)(t)–1986Be07).
120.43[&] *15*	$9/2^{(-)}$	2.3 s *1*	$T_{1/2}$: From ce(t)–1983Br26. The uncertainty is at 95% confidence level (^{187}Au IT decay).
171.86[&] *17*	$(5/2^-)$	1.1 ns *1*	$T_{1/2}$: from ce(271.1K)-ce(51.2L)(t)–1983Be48.
203.28[#] *9*	$(3/2^+)$		
223.96[@] *19*	$(11/2^-)$	48 ns *2*	$T_{1/2}$: from γ-ce(103.3M)(t)–1983Be48. Other value: 50 ns *8* (γ-ce(103.3L(t)–1978Bo05).
240.17[#] *9*	$(5/2^+)$		
274.96[&] *17*	$(1/2^-)$		
290.98[#] *10*	$(5/2^+)$		
325.71[&] *17*	$(7/2^-)$		
428.17[&] *17*	$(3/2^-)$		
456.17[&] *17*	$(5/2^-)$		
476.59[@] *14*	$(7/2^-)$		
495.32[#] *12*	$(7/2^+)$		
503.73[#] *10*	$(3/2^+)$		
546.13[&] *16*	$(1/2^-)$		
590.80[#] *12*	$(3/2^+)$		
595.31[#] *12*	$(3/2^+)$		
598.24[&] *18*	$(7/2^-)$		
633.53[#] *13*	$(7/2^+)$		
638.60[#] *11*	$(5/2^+)$		
687.10[#] *13*	$(5/2^+)$		
705.9 *3*			
732.94[&] *19*	$(5/2^-)$		
754.58[&] *18*	$(3/2^-)$		

Continued on next page (footnotes at end of table)

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

^{187}Au Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
778.41# *16*	(1/2,3/2,5/2)+	1811.1# *4*		2154.88# *12*	
822.36# *18*	(5/2+)	1842.76 *20*	(5/2+)	2172.39& *22*	
877.29& *18*	(5/2−)	1876.3# *5*		2173.05# *12*	
948.2& *3*	(1/2−,3/2−)	1918.05# *14*		2178.04# *24*	
975.39& *18*	(3/2−)	1919.19@ *24*	(3/2−)	2178.90@ *24*	(3/2−)
994.29# *22*		1995.19@ *24*	(5/2−)	2184.92& *22*	
1056.04@ *11*	(3/2−)	1997.3# *4*		2193.1 *5*	(5/2+)
1161.2# *5*		2051.6# *4*		2230.0# *3*	
1233.89@ *24*		2068.87& *20*		2253.18# *19*	
1237.59@ *24*	(5/2−)	2094.6# *3*		2283.0& *3*	
1260.39@ *24*	(3/2−)	2095.85& *21*		2293.17 *21*	
1291.3& *3*	(3/2−)	2102.30& *21*		2322.0& *20*	
1362.69 *21*		2103.29# *22*		2334.8# *4*	
1419.63 *24*	(5/2+)	2116.13# *24*		2345.86# *21*	
1498.3 *5*	(5/2+)	2121.20& *21*		2403.2# *3*	
1737.49# *22*		2121.59# *23*		2431.07# *21*	
1751.79# *22*		2127.79# *22*		2486.0# *20*	
1776.1 *5*		2142.23# *19*		2504.3# *4*	
1786.4# *4*		2154.46& *19*	(3/2−)	2524.3# *3*	

† From a least-squares fit to the γ-ray energies ignoring 1857.8γ from the 2184.9 keV level.
‡ From Adopted Levels.
# $s_{1/2}\otimes d_{3/2}\otimes d_{5/2}$ bands.
@ $h_{11/2}$ bands.
& $h_{9/2}\otimes f_{7/2}$ bands.

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. &	δ b	α c	$I_{(\gamma+ce)}$ †	Comments
19.5 *4*		19.53	$3/2^{(+)}$	0.0	$1/2^{(+)}$	(M1+E2) a		$7.\times10^3$ *6*		α(L)=5.E3 5; α(M)=1.3×10^3 *13*; α(N+..)=4.E2 4 α(N)=3.E2 3; α(O)=5.E1 5; α(P)=0.083 *9*
36.9		240.17	$(5/2^+)$	203.28	$(3/2^+)$	[M1+E2]		$3.\times10^2$ *3*	15 *5*	ce(L)/(γ+ce)=0.7 *5*; ce(M)/(γ+ce)=0.19 *23*; ce(N+)/(γ+ce)=0.05 *7* ce(N)/(γ+ce)=0.05 *6*; ce(O)/(γ+ce)=0.008 *10*; ce(P)/(γ+ce)=3.E−5 *4*
50.7 *4*	0.19 *5*	290.98	$(5/2^+)$	240.17	$(5/2^+)$	[E2]		117 *3*	22 *6*	ce(L)/(γ+ce)=0.744 *13*; ce(M)/(γ+ce)=0.193 *6*; ce(N+)/(γ+ce)=0.0548 *18* ce(N)/(γ+ce)=0.0473 *16*; ce(O)/(γ+ce)=0.0075 *3*; ce(P)/(γ+ce)=7.37×10^{-6} *24* I_γ: Deduced by the evaluator from TI/(1+α).
51.2 *4*		171.86	$(5/2^-)$	120.43	$9/2^{(-)}$	[E2]		112 *3*		ce(L)/(γ+ce)=0.744 *13*; ce(M)/(γ+ce)=0.193 *6*; ce(N+)/(γ+ce)=0.0548 *18* ce(N)/(γ+ce)=0.0473 *16*; ce(O)/(γ+ce)=0.0075 *3*; ce(P)/(γ+ce)=7.42×10^{-6} *24* I_γ: could not be found using gated spectra in ^{187}Hg^g ε decay (1998Ru04).
89.7‡ *4*	0.4 *2*	546.13	$(1/2^-)$	456.17	$(5/2^-)$	E2		8.25 *20*		α(K)=0.683 *10*; α(L)=5.67 *15*; α(M)=1.47 *4*; α(N+..)=0.421 *11* α(N)=0.362 *10*; α(O)=0.0579 *15*; α(P)=0.0001261 *24* Mult.: From α(L)exp=7 *4* (1998Ru04).
101.0 *2*	5.8 *5*	120.43	$9/2^{(-)}$	19.53	$3/2^{(+)}$	E3		120.4 *22*	699 *55*	ce(K)/(γ+ce)=0.00762 *18*; ce(L)/(γ+ce)=0.723 *10*; ce(M)/(γ+ce)=0.203 *5*; ce(N+)/(γ+ce)=0.0585 *15* ce(N)/(γ+ce)=0.0505 *13*; ce(O)/(γ+ce)=0.00803 *21*; ce(P)/(γ+ce)=1.52×10^{-5} *4* I_γ: Deduced by the evaluator from I(γ+ce)/(1+α). Iγ=6.5 *13* (1978Bo05). Mult.: α(L)exp=75 *20*, L1/L2<0.1, L2/L3≈1.3 (1978Bo05).
102.3‡ *4*	0.2 *1*	428.17	$(3/2^-)$	325.71	$(7/2^-)$					
103.3‡ *2*	23 *3*	274.96	$(1/2^-)$	171.86	$(5/2^-)$	(E2)		4.55 *8*		α(K)=0.645 *10*; α(L)=2.93 *5*; α(M)=0.761 *13*; α(N+..)=0.217 *4* α(N)=0.187 *4*; α(O)=0.0300 *5*; α(P)=8.69×10^{-5} *13* Mult.: 1998Ru04 assigned 81%M1+E2 from α(L1)exp+α(L2)exp=1.5 *5*, decay scheme requires E2.
103.4 *2*	8.7 *4*	223.96	$(11/2^-)$	120.43	$9/2^{(-)}$	M1+E2	0.0 *5*	6.6 *5*		α(K)=5.4 *10*; α(L)=0.9 *4*; α(M)=0.21 *11*; α(N+..)=0.06 *3* α(N)=0.05 *3*; α(O)=0.010 *4*; α(P)=0.00065 *12* α(K)exp=5.5 *10* (1978Bo05); α(L1)exp+α(L2)exp=0.99 *8* (1998Ru04).
129.7 *4*	0.75 *20*	633.53	$(7/2^+)$	503.73	$(3/2^+)$					α(K)exp=2.0 *7*, implies Mult: M1+E2.

$^{187}_{79}Au_{108}$-3

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ [b]	α [c]	Comments
130.4[‡] *2*	4.0 *10*	456.17	(5/2⁻)	325.71	(7/2⁻)	M1+E2	1.0 *4*	2.6 *4*	α(K)=1.6 *6*; α(L)=0.73 *13*; α(M)=0.18 *4*; α(N+..)=0.053 *10* α(N)=0.046 *9*; α(O)=0.0076 *13*; α(P)=0.00019 *7* α(K)exp=1.6 *4*.
138.5 *4*	0.49 *10*	633.53	(7/2⁺)	495.32	(7/2⁺)				α(K)exp=0.6 *3*, implies Mult: M1+E2.
142.7[‡] *4*	0.6 *2*	598.24	(7/2⁻)	456.17	(5/2⁻)	M1+E2	3.6 *7*	1.3 *13*	α(K)=0.5 *17*; α(L)=0.6 *3*; α(M)=0.17 *9*; α(N+..)=0.048 *24* α(N)=0.041 *21*; α(O)=0.007 *3*; α(P)=5.E−5 *21* α(K)exp=0.5 *3*.
153.3[‡] *2*	17.8 *22*	428.17	(3/2⁻)	274.96	(1/2⁻)	M1+E2	2.3 *4*	1.15 *7*	α(K)=0.55 *9*; α(L)=0.455 *13*; α(M)=0.116 *4*; α(N+..)=0.0335 *11* α(N)=0.0287 *10*; α(O)=0.00471 *13*; α(P)=6.1×10^{-5} *11* α(K)exp=0.55 *17*.
153.7 *2*	15.9 *19*	325.71	(7/2⁻)	171.86	(5/2⁻)	M1+E2	0.65 *10*	1.78 *8*	α(K)=1.32 *10*; α(L)=0.348 *14*; α(M)=0.085 *4*; α(N+..)=0.0248 *11* α(N)=0.0210 *10*; α(O)=0.00365 *13*; α(P)=0.000157 *12* α(K)exp=1.32 *9*.
156.7[‡] *4*	0.5 *3*	754.58	(3/2⁻)	598.24	(7/2⁻)	E2		0.891 *15*	α(K)=0.304 *5*; α(L)=0.441 *8*; α(M)=0.1139 *21*; α(N+..)=0.0326 *6* α(N)=0.0281 *5*; α(O)=0.00454 *9*; α(P)=3.12×10^{-5} *5*
159.8[@] *2*	2.1 *5*	705.9		546.13	(1/2⁻)				
170.4[‡] *4*	0.6 *2*	598.24	(7/2⁻)	428.17	(3/2⁻)				
181.4[‡] *2*	7.5 *20*	456.17	(5/2⁻)	274.96	(1/2⁻)	E2		0.526	α(K)=0.215 *3*; α(L)=0.233 *4*; α(M)=0.0600 *9*; α(N+..)=0.0172 *3* α(N)=0.01478 *22*; α(O)=0.00241 *4*; α(P)=2.20×10^{-5} *4* Mult.: From α(K)exp=0.22 *8* (1998Ru04).
183.2 *4*	0.6 *2*	687.10	(5/2⁺)	503.73	(3/2⁺)	(M1)		1.299 *20*	α(K)=1.067 *17*; α(L)=0.178 *3*; α(M)=0.0412 *7*; α(N+..)=0.01229 *19* α(N)=0.01028 *16*; α(O)=0.00189 *3*; α(P)=0.0001277 *20* α(K)exp=1.2 *6* V.
183.7 *4*	1.4 *6*	203.28	(3/2⁺)	19.53	3/2$^{(+)}$	M1+E2	2.3 *4*	0.63 *5*	α(K)=0.34 *5*; α(L)=0.214 *5*; α(M)=0.0543 *13*; α(N+..)=0.0157 *4* α(N)=0.0134 *4*; α(O)=0.00222 *5*; α(P)=3.8×10^{-5} *7* Mult.: α(K)exp=0.34 *10*.
185.7 *2*	3.9 *9*	476.59	(7/2⁻)	290.98	(5/2⁺)	E1		0.0868	α(K)=0.0709 *11*; α(L)=0.01216 *18*; α(M)=0.00282 *4*; α(N+..)=0.000823 *12* α(N)=0.000694 *10*; α(O)=0.0001223 *18*; α(P)=6.37×10^{-6} *9* α(K)exp=0.07 *2*.
192.3 *4*	0.9 *2*	687.10	(5/2⁺)	495.32	(7/2⁺)	M1+E2	2.1 *4*	0.56 *6*	α(K)=0.32 *6*; α(L)=0.177 *4*; α(M)=0.0447 *11*; α(N+..)=0.0129 *3* α(N)=0.0110 *3*; α(O)=0.00184 *4*; α(P)=3.6×10^{-5} *7* α(K)exp=0.33 *17*.
203.4 *2*	100 *7*	203.28	(3/2⁺)	0.0	1/2$^{(+)}$	M1		0.969	α(K)=0.797 *12*; α(L)=0.1325 *19*; α(M)=0.0307 *5*; α(N+..)=0.00916 *13* α(N)=0.00766 *11*; α(O)=0.001408 *20*; α(P)=9.52×10^{-5} *14* α(K)exp=0.8 *1* (1998Ru04), Other: α(K)exp=0.65 *15* (1978Bo05).
205.4 *2*	42 *4*	325.71	(7/2⁻)	120.43	9/2$^{(-)}$	M1+E2	0.73 *23*	0.73 *9*	α(K)=0.56 *10*; α(L)=0.1319 *23*; α(M)=0.0318 *10*; α(N+..)=0.00934 *23* α(N)=0.00788 *22*; α(O)=0.001389 *22*; α(P)=6.6×10^{-5} *12* α(K)exp=0.56 *10*.

$^{187}_{79}Au_{108}$-4

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[b]	α[c]	Comments
208.4[‡] *2*	3.5 *7*	754.58	(3/2⁻)	546.13	(1/2⁻)	(M1+E2)	1.0 *6*	0.62 *21*	α(K)=0.45 *22*; α(L)=0.127 *3*; α(M)=0.0309 *17*; α(N+..)=0.0090 *4* α(N)=0.0077 *4*; α(O)=0.001328 *21*; α(P)=5.E−5 *3* α(K)exp=0.46 *21* (using the running gate method – 1998Ru04).
212.7[@] *2*	2.0 *5*	503.73	(3/2⁺)	290.98	(5/2⁺)	E2+M1	1.6 *4*	0.46 *8*	α(K)=0.30 *8*; α(L)=0.1184 *18*; α(M)=0.0295 *6*; α(N+..)=0.00857 *16* α(N)=0.00730 *15*; α(O)=0.001234 *18*; α(P)=3.4×10^{-5} *9* α(K)exp=0.3 *1*.
220.8 *2*	47 *3*	240.17	(5/2⁺)	19.53	3/2$^{(+)}$	M1+E2	2.54 *18*	0.336 *11*	α(K)=0.200 *10*; α(L)=0.1024 *15*; α(M)=0.0258 *4*; α(N+..)=0.00747 *11* α(N)=0.00638 *10*; α(O)=0.001064 *16*; α(P)=2.20×10^{-5} *12* α(K)exp=0.203 *29* (1998Ru04); α(K)exp=0.28 *6* (1978Bo05).
236.3 *2*	5.7 *4*	476.59	(7/2⁻)	240.17	(5/2⁺)	E1		0.0478	α(K)=0.0392 *6*; α(L)=0.00655 *10*; α(M)=0.001516 *22*; α(N+..)=0.000444 *7* α(N)=0.000374 *6*; α(O)=6.64×10^{-5} *10*; α(P)=3.63×10^{-6} *6* α(K)exp=0.05 *2*.
240.3 *2*	66 *5*	240.17	(5/2⁺)	0.0	1/2$^{(+)}$	E2		0.203	α(K)=0.1076 *16*; α(L)=0.0722 *11*; α(M)=0.0184 *3*; α(N+..)=0.00530 *8* α(N)=0.00454 *7*; α(O)=0.000749 *11*; α(P)=1.119×10^{-5} *16* α(K)exp=0.12 *3* (1978Bo05) and 0.12 *2* (1998Ru04).
252.5 *2*	21 *3*	476.59	(7/2⁻)	223.96	(11/2⁻)	E2		0.1737	α(K)=0.0951 *14*; α(L)=0.0592 *9*; α(M)=0.01506 *22*; α(N+..)=0.00434 *7* α(N)=0.00372 *6*; α(O)=0.000615 *9*; α(P)=9.94×10^{-6} *14* α(K)exp=0.09 *2* (1998Ru04).
255.2 *2*	6.3 *4*	495.32	(7/2⁺)	240.17	(5/2⁺)	M1+E2	0.3 *7*	0.49 *15*	α(K)=0.40 *14*; α(L)=0.069 *6*; α(M)=0.0162 *9*; α(N+..)=0.0048 *3* α(N)=0.00402 *22*; α(O)=0.00073 *7*; α(P)=4.7×10^{-5} *17* α(K)exp=0.40 *6*, δ from 78%M1 (1998Ru04).
256.4[‡] *2*	15.7 *13*	428.17	(3/2⁻)	171.86	(5/2⁻)	M1+E2	1.6 *5*	0.26 *6*	α(K)=0.18 *6*; α(L)=0.060 *3*; α(M)=0.0147 *4*; α(N+..)=0.00429 *14* α(N)=0.00364 *11*; α(O)=0.00062 *3*; α(P)=2.1×10^{-5} *7* α(K)exp=0.18 *6*.
263.8[‡] *2*	2.0 *5*	503.73	(3/2⁺)	240.17	(5/2⁺)	(M1)		0.472	α(K)=0.388 *6*; α(L)=0.0642 *9*; α(M)=0.01489 *21*; α(N+..)=0.00444 *7* α(N)=0.00371 *6*; α(O)=0.000682 *10*; α(P)=4.62×10^{-5} *7* α(K)exp=0.53 *20* (using the running gate method – 1998Ru04).
270.9[‡] *2*	19.9 *25*	546.13	(1/2⁻)	274.96	(1/2⁻)	E0+M1		≈0.77	Mult.: From α(K)exp=0.59 *7* (using the running gate method – 1998Ru04). E0+M1(+E2) in 1998Ru04, 270.9γ is a 1/2⁻ to 1/2⁻ transition and so E2 component is forbidden and dropped out by the evaluator. α: Estimated by the evaluator from the α(K)exp value.
271.5 *2*	83 *8*	290.98	(5/2⁺)	19.53	3/2$^{(+)}$	M1+E2	0.0 *3*	0.44 *3*	α(K)=0.359 *24*; α(L)=0.0593 *15*; α(M)=0.0138 *3*; α(N+..)=0.00410 *9* α(N)=0.00343 *8*; α(O)=0.000630 *17*; α(P)=4.3×10^{-5} *3* α(K)exp=0.42 *8*.
272.1 *2*	3.3 *6*	598.24	(7/2⁻)	325.71	(7/2⁻)	M1		0.433	α(K)=0.357 *5*; α(L)=0.0590 *9*; α(M)=0.01367 *20*; α(N+..)=0.00407

$^{187}_{79}Au_{108}$-5

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. &	δ b	α c	Comments
									6 α(N)=0.00341 *5*; α(O)=0.000626 *9*; α(P)=4.24×10^{-5} *6* α(K)exp=0.37 *8* (using the running gate method – 1998Ru04).
275.4‡ *2*	2.7 *5*	778.41	(1/2,3/2,5/2)$^+$	503.73	(3/2$^+$)	M1+E2	2.7 *4*	0.167 *12*	α(K)=0.109 *11*; α(L)=0.0439 *9*; α(M)=0.01098 *19*; α(N+..)=0.00318 *6* α(N)=0.00271 *5*; α(O)=0.000458 *10*; α(P)=1.21×10^{-5} *13* α(K)exp=0.11 *3*, δ 76%E2 (1998Ru04).
276.6‡ *2*	4.8 *7*	732.94	(5/2$^-$)	456.17	(5/2$^-$)	(M1)		0.414	α(K)=0.341 *5*; α(L)=0.0564 *8*; α(M)=0.01306 *19*; α(N+..)=0.00389 *6* α(N)=0.00325 *5*; α(O)=0.000599 *9*; α(P)=4.05×10^{-5} *6* α(K)exp=0.4 *1*.
278.7‡ *2*	4.2 *6*	877.29	(5/2$^-$)	598.24	(7/2$^-$)	M1		0.406	α(K)=0.334 *5*; α(L)=0.0552 *8*; α(M)=0.01279 *18*; α(N+..)=0.00381 *6* α(N)=0.00319 *5*; α(O)=0.000586 *9*; α(P)=3.97×10^{-5} *6* α(K)exp=0.36 *7*.
284.5‡ *2*	18.4 *21*	456.17	(5/2$^-$)	171.86	(5/2$^-$)	E0+M1+E2		≈0.67	α(K)exp=0.52 *6* (using the running gate method – 1998Ru04). α: Estimated by the evaluator from the α(K)exp value.
291.0 *4*	1.9 *6*	290.98	(5/2$^+$)	0.0	1/2$^{(+)}$				
292.2 *4*	0.9 *2*	495.32	(7/2$^+$)	203.28	(3/2$^+$)	E2		0.1107	α(K)=0.0662 *10*; α(L)=0.0336 *5*; α(M)=0.00848 *13*; α(N+..)=0.00245 *4* α(N)=0.00209 *4*; α(O)=0.000349 *6*; α(P)=7.04×10^{-6} *11* εK(exp)=0.07 *2*.
298.4‡ *2*	5.8 *8*	754.58	(3/2$^-$)	456.17	(5/2$^-$)	M1+E2	0.7 *15*	0.26 *12*	α(K)=0.21 *11*; α(L)=0.041 *8*; α(M)=0.0097 *14*; α(N+..)=0.0029 *5* α(N)=0.0024 *4*; α(O)=0.00043 *9*; α(P)=2.4×10^{-5} *14* α(K)exp=0.21 *15*.
299.6 *2*	3.0 *5*	590.80	(3/2$^+$)	290.98	(5/2$^+$)	M1+E2	1.5 *7*	0.17 *7*	α(K)=0.13 *7*; α(L)=0.035 *5*; α(M)=0.0086 *9*; α(N+..)=0.0025 *3* α(N)=0.00212 *22*; α(O)=0.00037 *5*; α(P)=1.5×10^{-5} *8* α(K)exp=0.13 *7*.
300.3‡ *2*	4.2 *2*	503.73	(3/2$^+$)	203.28	(3/2$^+$)	(E2+M1)	3 *3*	0.12 *21*	α(K)=0.08 *19*; α(L)=0.032 *14*; α(M)=0.008 *3*; α(N+..)=0.0023 *9* α(N)=0.0020 *7*; α(O)=0.00033 *15*; α(P)=9.E−6 *24* α(K)exp=0.08 *4*.
304.5‡ *4*	1.8 *2*	595.31	(3/2$^+$)	290.98	(5/2$^+$)	(M1)		0.319	α(K)=0.262 *4*; α(L)=0.0433 *7*; α(M)=0.01003 *15*; α(N+..)=0.00299 *5* α(N)=0.00250 *4*; α(O)=0.000460 *7*; α(P)=3.11×10^{-5} *5* α(K)exp=0.25 *15*.
326.2‡ *2*	6.3 *7*	754.58	(3/2$^-$)	428.17	(3/2$^-$)	M1		0.264	α(K)=0.218 *3*; α(L)=0.0359 *5*; α(M)=0.00831 *12*;

$^{187}_{79}Au_{108}$-6

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.&	δ b	α c	Comments
									α(N+..)=0.00248 *4* α(N)=0.00207 *3*; α(O)=0.000381 *6*; α(P)=2.58×10^{-5} *4* α(K)exp=0.21 *5*.
327.0 *4*	0.9 *1*	822.36	(5/2$^+$)	495.32	(7/2$^+$)	M1+E2	0.7 *12*	0.20 *9*	α(K)=0.16 *8*; α(L)=0.031 *7*; α(M)=0.0074 *13*; α(N+..)=0.0022 *4* α(N)=0.0018 *4*; α(O)=0.00033 *7*; α(P)=1.9×10^{-5} *10* α(K)exp=0.16 *9*.
330.9‡ *2*	4.2 *4*	877.29	(5/2$^-$)	546.13	(1/2$^-$)				
335.7‡ *2*	3.3 *9*	456.17	(5/2$^-$)	120.43	9/2$^{(-)}$				
342.6 *4*	1.5 *3*	633.53	(7/2$^+$)	290.98	(5/2$^+$)	E2+M1	0.8 *4*	0.17 *4*	α(K)=0.13 *4*; α(L)=0.026 *4*; α(M)=0.0063 *7*; α(N+..)=0.00185 *21* α(N)=0.00155 *17*; α(O)=0.00028 *4*; α(P)=1.6×10^{-5} *5* α(K)exp=0.13 *4*.
347.9‡ *2*	1.1 *2*	638.60	(5/2$^+$)	290.98	(5/2$^+$)	(M1)		0.222	α(K)=0.183 *3*; α(L)=0.0301 *5*; α(M)=0.00697 *10*; α(N+..)=0.00208 *3* α(N)=0.001736 *25*; α(O)=0.000319 *5*; α(P)=2.17×10^{-5} *3* α(K)exp=0.20 *7*.
350.0 *4*	1.5 *3*	590.80	(3/2$^+$)	240.17	(5/2$^+$)	(M1+E2)	1.2 *9*	0.13 *8*	α(K)=0.10 *7*; α(L)=0.022 *7*; α(M)=0.0054 *13*; α(N+..)=0.0016 *4* α(N)=0.0013 *4*; α(O)=0.00023 *7*; α(P)=1.1×10^{-5} *9* α(K)exp=0.10 *6*.
355.3‡ *2*	2.1 *6*	595.31	(3/2$^+$)	240.17	(5/2$^+$)	(M1)		0.210	α(K)=0.1730 *25*; α(L)=0.0284 *4*; α(M)=0.00658 *10*; α(N+..)=0.00196 *3* α(N)=0.001640 *23*; α(O)=0.000302 *5*; α(P)=2.05×10^{-5} *3* α(K)exp=0.20 *8* (1998Ru04).
374.2‡ *2*	26 *4*	546.13	(1/2$^-$)	171.86	(5/2$^-$)	(E2)		0.0545	α(K)=0.0365 *6*; α(L)=0.01364 *20*; α(M)=0.00340 *5*; α(N+..)=0.000986 *14* α(N)=0.000839 *12*; α(O)=0.0001423 *20*; α(P)=3.97×10^{-6} *6* α(K)exp=0.04 *2* (1998Ru04).
387.7 *4*	0.9 *2*	590.80	(3/2$^+$)	203.28	(3/2$^+$)	(E0+M1+E2)		≈0.28	α(K)exp=0.22 *8* (using the running gate method – 1998Ru04). α: Estimated by the evaluator from the α(K)exp value.
391.9‡ *2*	8.4 *15*	595.31	(3/2$^+$)	203.28	(3/2$^+$)	(E0+M1+E2)		≈0.26	α(K)exp=0.20 *3* (using the running gate method – 1998Ru04). α: Estimated by the evaluator from the α(K)exp value.
393.4 *2*	14.2 *6*	633.53	(7/2$^+$)	240.17	(5/2$^+$)	M1		0.1597	α(K)=0.1317 *19*; α(L)=0.0216 *3*; α(M)=0.00499 *7*; α(N+..)=0.001489 *21* α(N)=0.001244 *18*; α(O)=0.000229 *4*; α(P)=1.555×10^{-5} *22* α(K)exp=0.15 *3*.
395.9 *4*	1.2 *3*	687.10	(5/2$^+$)	290.98	(5/2$^+$)	M1		0.1571	α(K)=0.1295 *19*; α(L)=0.0212 *3*; α(M)=0.00491 *7*; α(N+..)=0.001463 *21* α(N)=0.001223 *18*; α(O)=0.000225 *4*; α(P)=1.529×10^{-5} *22* α(K)exp=0.14 *6* (using the running gate method – 1998Ru04).
398.3‡ *2*	6.6 *5*	638.60	(5/2$^+$)	240.17	(5/2$^+$)				α(K)exp=0.21 *10* and mult shown >M1 in 1998Ru04.
402.1‡ *2*	3.3 *6*	948.2	(1/2$^-$,3/2$^-$)	546.13	(1/2$^-$)	(M1+E2)	0.9 *11*	0.10 *5*	α(K)=0.08 *5*; α(L)=0.016 *5*; α(M)=0.0038 *10*; α(N+..)=0.0011 *3*

$^{187}_{79}Au_{108}$-7

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[b]	α[c]	Comments
									α(N)=0.00094 *24*; α(O)=0.00017 *5*; α(P)=1.0×10^{-5} *5* α(K)exp=0.08 *5*.
407.8[‡] *2*	7.8 *5*	732.94	(5/2$^-$)	325.71	(7/2$^-$)	M1		0.1451	α(K)=0.1196 *17*; α(L)=0.0196 *3*; α(M)=0.00453 *7*; α(N+..)=0.001351 *19* α(N)=0.001129 *16*; α(O)=0.000208 *3*; α(P)=1.412×10^{-5} *20* α(K)exp=0.12 *3*.
421.5[‡] *2*	4.2 *5*	877.29	(5/2$^-$)	456.17	(5/2$^-$)	(M1)		0.1329	α(K)=0.1096 *16*; α(L)=0.0179 *3*; α(M)=0.00415 *6*; α(N+..)=0.001236 *18* α(N)=0.001033 *15*; α(O)=0.000190 *3*; α(P)=1.292×10^{-5} *19* α(K)exp=0.10 *2*.
426.1 *2*	14 *2*	598.24	(7/2$^-$)	171.86	(5/2$^-$)	M1+E2	0.5 *4*	0.111 *23*	α(K)=0.091 *20*; α(L)=0.0157 *22*; α(M)=0.0037 *5*; α(N+..)=0.00109 *15* α(N)=0.00091 *12*; α(O)=0.000166 *23*; α(P)=1.06×10^{-5} *24* α(K)exp=0.09 *2*.
428.6[‡] *2*	2.7 *9*	754.58	(3/2$^-$)	325.71	(7/2$^-$)	E2		0.0380	α(K)=0.0266 *4*; α(L)=0.00862 *13*; α(M)=0.00213 *3*; α(N+..)=0.000619 *9* α(N)=0.000526 *8*; α(O)=9.01×10^{-5} *13*; α(P)=2.93×10^{-6} *5* α(K)exp=0.026 *15*.
429.5[‡] *4*	1.8 *5*	975.39	(3/2$^-$)	546.13	(1/2$^-$)	(M1)		0.1264	α(K)=0.1042 *15*; α(L)=0.01704 *25*; α(M)=0.00394 *6*; α(N+..)=0.001175 *17* α(N)=0.000982 *14*; α(O)=0.000181 *3*; α(P)=1.229×10^{-5} *18* α(K)exp=0.12 *4*.
429.9 *4*	1.8 *3*	633.53	(7/2$^+$)	203.28	(3/2$^+$)	(E2)		0.0377	α(K)=0.0264 *4*; α(L)=0.00854 *13*; α(M)=0.00211 *3*; α(N+..)=0.000613 *9* α(N)=0.000521 *8*; α(O)=8.92×10^{-5} *13*; α(P)=2.91×10^{-6} *5* α(K)exp=0.025 *15*.
435.5[‡] *2*	9 *1*	638.60	(5/2$^+$)	203.28	(3/2$^+$)	M1+E2	0.65 *23*	0.096 *13*	α(K)=0.078 *11*; α(L)=0.0140 *13*; α(M)=0.0033 *3*; α(N+..)=0.00097 *9* α(N)=0.00081 *7*; α(O)=0.000148 *14*; α(P)=9.2×10^{-6} *14* α(K)exp=0.078 *12*.
446.9 *2*	3.0 *2*	687.10	(5/2$^+$)	240.17	(5/2$^+$)	M1		0.1138	α(K)=0.0938 *14*; α(L)=0.01532 *22*; α(M)=0.00354 *5*; α(N+..)=0.001056 *15* α(N)=0.000883 *13*; α(O)=0.0001625 *23*; α(P)=1.105×10^{-5} *16* α(K)exp=0.09 *3*.
457.8[‡] *2*	9 *2*	732.94	(5/2$^-$)	274.96	(1/2$^-$)	(E2)		0.0321	α(K)=0.0229 *4*; α(L)=0.00696 *10*; α(M)=0.001711 *24*; α(N+..)=0.000499 *7* α(N)=0.000423 *6*; α(O)=7.28×10^{-5} *11*; α(P)=2.53×10^{-6} *4* α(K)exp=0.04 *3*.
476.0 *2*	22.6 *21*	495.32	(7/2$^+$)	19.53	3/2$^{(+)}$	E2		0.0291	α(K)=0.0210 *3*; α(L)=0.00616 *9*; α(M)=0.001509 *22*; α(N+..)=0.000440 *7* α(N)=0.000373 *6*; α(O)=6.44×10^{-5} *9*; α(P)=2.32×10^{-6} *4* α(K)exp=0.024 *5*.
478.0 *2*	11.4 *5*	598.24	(7/2$^-$)	120.43	9/2$^{(-)}$	E2+M1	1.0 *7*	0.06 *3*	α(K)=0.050 *25*; α(L)=0.009 *3*; α(M)=0.0022 *7*; α(N+..)=0.00066 *19*

$^{187}_{79}Au_{108}$-8

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. &	δ b	α c	Comments
									α(N)=0.00055 *16*; α(O)=0.00010 *3*; α(P)=6.E−6 *3* α(K)exp=0.05 *2*.
480.1‡ *2*	3.6 *5*	754.58	(3/2⁻)	274.96	(1/2⁻)	M1+E2	0.7 *8*	0.073 *24*	α(K)=0.059 *21*; α(L)=0.0105 *25*; α(M)=0.0024 *6*; α(N+..)=0.00073 *17* α(N)=0.00061 *14*; α(O)=0.00011 *3*; α(P)=6.9×10^{-6} *25* α(K)exp=0.06 *2*.
483.7 *2*	2.4 *3*	687.10	(5/2⁺)	203.28	(3/2⁺)	E2(+M1)	2.2 *5*	0.039 *6*	α(K)=0.030 *5*; α(L)=0.0070 *6*; α(M)=0.00168 *13*; α(N+..)=0.00049 *4* α(N)=0.00042 *4*; α(O)=7.3×10^{-5} *7*; α(P)=3.4×10^{-6} *6* α(K)exp=0.03 *1*.
484.3‡ *2*	6.9 *9*	503.73	(3/2⁺)	19.53	3/2(+)	M1		0.0920	α(K)=0.0759 *11*; α(L)=0.01236 *18*; α(M)=0.00286 *4*; α(N+..)=0.000852 *12* α(N)=0.000712 *10*; α(O)=0.0001311 *19*; α(P)=8.92×10^{-6} *13* α(K)exp=0.08 *3*.
503.6‡ *2*	9.3 *4*	503.73	(3/2⁺)	0.0	1/2(+)	(M1)		0.0830	α(K)=0.0685 *10*; α(L)=0.01114 *16*; α(M)=0.00258 *4*; α(N+..)=0.000768 *11* α(N)=0.000642 *9*; α(O)=0.0001181 *17*; α(P)=8.04×10^{-6} *12* α(K)exp=0.08 *4*.
519.4‡ *2*	2.1 *5*	975.39	(3/2⁻)	456.17	(5/2⁻)	M1		0.0765	α(K)=0.0632 *9*; α(L)=0.01026 *15*; α(M)=0.00237 *4*; α(N+..)=0.000707 *10* α(N)=0.000591 *9*; α(O)=0.0001088 *16*; α(P)=7.41×10^{-6} *11* α(K)exp=0.07 *4*.
545.9‡ *2*	5.1 *9*	546.13	(1/2⁻)	0.0	1/2(+)	E1		0.00714 *10*	α=0.00714 *10*; α(K)=0.00594 *9*; α(L)=0.000919 *13*; α(M)=0.000211 *3*; α(N+..)=6.23×10^{-5} *9* α(N)=5.23×10^{-5} *8*; α(O)=9.47×10^{-6} *14*; α(P)=5.93×10^{-7} *9* α(K)exp=0.008 *3*.
551.8‡ *2*	2.1 *9*	877.29	(5/2⁻)	325.71	(7/2⁻)	M1		0.0653	α(K)=0.0539 *8*; α(L)=0.00875 *13*; α(M)=0.00202 *3*; α(N+..)=0.000603 *9* α(N)=0.000504 *7*; α(O)=9.27×10^{-5} *13*; α(P)=6.32×10^{-6} *9* α(K)exp=0.05 *3*.
565.9@ *4*	1.3 *4*	1161.2		595.31	(3/2⁺)				
571.4 *2*	9.6 *15*	590.80	(3/2⁺)	19.53	3/2(+)	M1+E2	1.2 *3*	0.036 *6*	α(K)=0.029 *5*; α(L)=0.0054 *7*; α(M)=0.00126 *15*; α(N+..)=0.00037 *5* α(N)=0.00031 *4*; α(O)=5.7×10^{-5} *7*; α(P)=3.3×10^{-6} *6* α(K)exp=0.029 *5*.
575.8‡ *2*	2.9 *7*	595.31	(3/2⁺)	19.53	3/2(+)				α(K)exp=0.09 *6*.
579.3‡ *2*	7.8 *6*	1056.04	(3/2⁻)	476.59	(7/2⁻)	(E2)		0.0182	α(K)=0.01374 *20*; α(L)=0.00341 *5*; α(M)=0.000826 *12*; α(N+..)=0.000242 *4* α(N)=0.000205 *3*; α(O)=3.58×10^{-5} *5*; α(P)=1.527×10^{-6} *22* α(K)exp=0.019 *10*.
582.4 *2*	3.0 *2*	822.36	(5/2⁺)	240.17	(5/2⁺)	M1+E2	0.4 *7*	0.051 *16*	α(K)=0.042 *14*; α(L)=0.0070 *18*; α(M)=0.0016 *4*; α(N+..)=0.00048 *12* α(N)=0.00040 *10*; α(O)=7.4×10^{-5} *19*; α(P)=4.9×10^{-6} *17* α(K)exp=0.043 *7*.
582.6‡ *4*	1.9 *6*	754.58	(3/2⁻)	171.86	(5/2⁻)				

$^{187}_{79}Au_{108}$-9

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[b]	α[c]	Comments
591.0 *2*	3.3 *5*	590.80	(3/2$^+$)	0.0	1/2$^{(+)}$	M1		0.0546	α(K)=0.0451 *7*; α(L)=0.00730 *11*; α(M)=0.001687 *24*; α(N+..)=0.000503 *7* α(N)=0.000420 *6*; α(O)=7.74×10^{-5} *11*; α(P)=5.28×10^{-6} *8* α(K)exp=0.05 *2*.
595.2[‡] *2*	2.4 *7*	595.31	(3/2$^+$)	0.0	1/2$^{(+)}$	(M1)		0.0536	α(K)=0.0443 *7*; α(L)=0.00716 *10*; α(M)=0.001656 *24*; α(N+..)=0.000493 *7* α(N)=0.000412 *6*; α(O)=7.59×10^{-5} *11*; α(P)=5.18×10^{-6} *8* α(K)exp=0.05 *2*.
614.1 *2*	3.0 *14*	633.53	(7/2$^+$)	19.53	3/2$^{(+)}$				α(K)exp=0.03 *2*, implies Mult: M1+E2.
618.7 *4*	0.7 *3*	822.36	(5/2$^+$)	203.28	(3/2$^+$)	M1		0.0484	α(K)=0.0400 *6*; α(L)=0.00647 *10*; α(M)=0.001495 *21*; α(N+..)=0.000446 *7* α(N)=0.000372 *6*; α(O)=6.86×10^{-5} *10*; α(P)=4.68×10^{-6} *7* α(K)exp=0.05 *2*.
619.0[‡] *2*	3.0 *5*	638.60	(5/2$^+$)	19.53	3/2$^{(+)}$	(M1)		0.0484	α(K)=0.0400 *6*; α(L)=0.00646 *9*; α(M)=0.001493 *21*; α(N+..)=0.000445 *7* α(N)=0.000372 *6*; α(O)=6.85×10^{-5} *10*; α(P)=4.68×10^{-6} *7* α(K)exp=0.05 *2*.
638.7[‡] *2*	3.4 *5*	638.60	(5/2$^+$)	0.0	1/2$^{(+)}$				
667.8 *2*	2.4 *3*	687.10	(5/2$^+$)	19.53	3/2$^{(+)}$	M1		0.0397	α(K)=0.0329 *5*; α(L)=0.00530 *8*; α(M)=0.001224 *18*; α(N+..)=0.000365 *6* α(N)=0.000305 *5*; α(O)=5.61×10^{-5} *8*; α(P)=3.84×10^{-6} *6* α(K)exp=0.04 *2*.
686.7 *4*	0.9 *2*	687.10	(5/2$^+$)	0.0	1/2$^{(+)}$				
700.3[‡] *2*	15.1 *15*	975.39	(3/2$^-$)	274.96	(1/2$^-$)	M1		0.0352	α(K)=0.0291 *4*; α(L)=0.00468 *7*; α(M)=0.001081 *16*; α(N+..)=0.000322 *5* α(N)=0.000269 *4*; α(O)=4.96×10^{-5} *7*; α(P)=3.39×10^{-6} *5* α(K)exp=0.030 *4*.
732.5[@] *4*	1.2 *2*	2094.6		1362.69					α(K)exp=0.03 *2*.
745.2[‡] *2*	2.1 *2*	1291.3	(3/2$^-$)	546.13	(1/2$^-$)	E2+M1	1.8 *8*	0.015 *6*	α(K)=0.012 *5*; α(L)=0.0023 *6*; α(M)=0.00053 *14*; α(N+..)=0.00016 *4* α(N)=0.00013 *4*; α(O)=2.4×10^{-5} *7*; α(P)=1.4×10^{-6} *6* α(K)exp=0.012 *5*.
757.3[‡] *2*	2.9 *4*	1233.89		476.59	(7/2$^-$)				α(K)exp=0.011 *6*, mult (E2+M1) (1998Ru04).
758.1[@] *2*	2.1 *6*	778.41	(1/2,3/2,5/2)$^+$	19.53	3/2$^{(+)}$	(M1)			α(K)exp=0.03 *2*.
761.0[‡] *2*	3.5 *5*	1237.59	(5/2$^-$)	476.59	(7/2$^-$)	(M1)		0.0284	α(K)=0.0235 *4*; α(L)=0.00377 *6*; α(M)=0.000870 *13*; α(N+..)=0.000259 *4* α(N)=0.000217 *3*; α(O)=3.99×10^{-5} *6*; α(P)=2.73×10^{-6} *4* α(K)exp=0.020 *7*.
764.4[‡] *4*	1.5 *3*	1056.04	(3/2$^-$)	290.98	(5/2$^+$)				
778.6[@] *4*	1.8 *2*	778.41	(1/2,3/2,5/2)$^+$	0.0	1/2$^{(+)}$				

$^{187}_{79}Au_{108}$-10

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[b]	α[c]	Comments
783.8[‡] *2*	2.2 *4*	1260.39	(3/2$^-$)	476.59	(7/2$^-$)	(E2)		0.00941 *14*	α=0.00941 *14*; α(K)=0.00742 *11*; α(L)=0.001520 *22*; α(M)=0.000361 *5*; α(N+..)=0.0001064 α(N)=8.96×10^{-5} *13*; α(O)=1.595×10^{-5} *23*; α(P)=8.23×10^{-7} *12* α(K)exp=0.008 *4*.
786.1[@] *2*	2.0 *3*	1419.63	(5/2$^+$)	633.53	(7/2$^+$)	(M1+E2)	0.8 *13*	0.020 *8*	α(K)=0.016 *6*; α(L)=0.0027 *9*; α(M)=0.00063 *19*; α(N+..)=0.00019 *6* α(N)=0.00016 *5*; α(O)=2.9×10^{-5} *9*; α(P)=1.9×10^{-6} *8* α(K)exp=0.016 *9*.
791.0[‡] *2*	3.3 *2*	994.29		203.28	(3/2$^+$)				α(K)exp=0.05 *3*.
803.5[‡] *4*	1.1 *2*	975.39	(3/2$^-$)	171.86	(5/2$^-$)	E2+M1	2.4 *24*	0.011 *14*	α(K)=0.009 *12*; α(L)=0.0017 *16*; α(M)=0.0004 *4*; α(N+..)=0.00012 *11* α(N)=0.00010 *9*; α(O)=1.8×10^{-5} *17*; α(P)=1.0×10^{-6} *14* α(K)exp=0.009 *4*.
816.1[‡] *2*	2.4 *4*	1056.04	(3/2$^-$)	240.17	(5/2$^+$)				
853.3[‡] *2*	3.0 *4*	1056.04	(3/2$^-$)	203.28	(3/2$^+$)				
1003.0[@] *4*	1.5 *2*	1498.3	(5/2$^+$)	495.32	(7/2$^+$)				
1036.1[‡] *2*	2.7 *9*	1056.04	(3/2$^-$)	19.53	3/2$^{(+)}$	(E1)		0.00207 *3*	α=0.00207 *3*; α(K)=0.001738 *25*; α(L)=0.000257 *4*; α(M)=5.87×10^{-5} *9*; α(N+..)=1.742×10^{-5} *25* α(N)=1.457×10^{-5} *21*; α(O)=2.67×10^{-6} *4*; α(P)=1.780×10^{-7} *25* α(K)exp=0.003 *2*.
1056.0[‡] *2*	7.5 *23*	1056.04	(3/2$^-$)	0.0	1/2$^{(+)}$	(E1)		0.00200 *3*	α=0.00200 *3*; α(K)=0.001680 *24*; α(L)=0.000248 *4*; α(M)=5.67×10^{-5} *8*; α(N+..)=1.681×10^{-5} *24* α(N)=1.407×10^{-5} *20*; α(O)=2.57×10^{-6} *4*; α(P)=1.721×10^{-7} *24* α(K)exp=0.0020 *8*.
1093.5[@] *2*	3.2 *5*	2068.87		975.39	(3/2$^-$)				α(K)exp=0.015 *10*.
1179.0[@] *2*	6.6 *10*	2154.46	(3/2$^-$)	975.39	(3/2$^-$)				α(K)exp=0.008 *3* M1.
1196.9[@] *2*	4.2 *5*	2172.39		975.39	(3/2$^-$)				α(K)exp=0.009 *7*.
1230.0[@] *4*	1.1 *2*	1776.1		546.13	(1/2$^-$)				α(K)exp=0.01 *1*.
1284.6[@] *2*	3.7 *2*	1918.05		633.53	(7/2$^+$)				
1318.0[@] *2*	3.6 *9*	2293.17		975.39	(3/2$^-$)				
1343.3[@] *2*	3.9 *6*	1362.69		19.53	3/2$^{(+)}$				
1347.3[@] *4*	1.5 *3*	1842.76	(5/2$^+$)	495.32	(7/2$^+$)				
1381.0[@] *4*	1.1 *2*	1876.3		495.32	(7/2$^+$)				
1407.6[@] *2*	3.5 *7*	2230.0		822.36	(5/2$^+$)				
1421.5[@] *2*	2.7 *4*	2154.46	(3/2$^-$)	732.94	(5/2$^-$)				
1422.5[@] *4*	1.5 *3*	1918.05		495.32	(7/2$^+$)				
1431.2[@] *4*	1.5 *4*	2253.18		822.36	(5/2$^+$)				
1442.6[@] *2*	4.8 *4*	1919.19	(3/2$^-$)	476.59	(7/2$^-$)				

$^{187}_{79}Au_{108}$-11

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [&]	α [c]	Comments
1452.2 [@] *2*	3.0 *9*	2184.92		732.94	(5/2$^-$)			
1455.4 [@] *4*	1.9 *2*	2094.6		638.60	(5/2$^+$)			
1516.8 [@] *2*	4.5 *9*	2154.88		638.60	(5/2$^+$)			
1518.6 [@] *2*	3.0 *4*	1995.19	(5/2$^-$)	476.59	(7/2$^-$)	M1	0.00504 *7*	α=0.00504 *7*; α(K)=0.00410 *6*; α(L)=0.000644 *9*; α(M)=0.0001483 *21*; α(N+..)=0.0001565 *2* α(N)=3.69×10^{-5} *6*; α(O)=6.81×10^{-6} *10*; α(P)=4.71×10^{-7} *7*; α(IPF)=0.0001123 *16* α(K)exp=0.005 *3*.
1522.9 [@] *2*	2.2 *4*	2068.87		546.13	(1/2$^-$)			
1534.2 [@] *2*	3.0 *4*	1737.49		203.28	(3/2$^+$)			
1539.6 [@] *4*	1.0 *2*	2173.05		633.53	(7/2$^+$)			
1544.5 [@] *2*	2.7 *4*	2178.04		633.53	(7/2$^+$)			
1548.5 [@] *2*	2.7 *6*	1751.79		203.28	(3/2$^+$)			
1549.6 [@] *2*	7.1 *13*	2095.85		546.13	(1/2$^-$)			
1556.2 [@] *2*	6.0 *9*	2102.30		546.13	(1/2$^-$)			
1575.1 [@] *2*	7.1 *11*	2121.20		546.13	(1/2$^-$)			
1583.1 [@] *4*	1.5 *2*	1786.4		203.28	(3/2$^+$)			
1607.8 [@] *4*	1.8 *4*	1811.1		203.28	(3/2$^+$)			
1608.1 [@] *2*	3.1 *5*	2154.46	(3/2$^-$)	546.13	(1/2$^-$)			
1620.8 [@] *2*	2.0 *2*	2116.13		495.32	(7/2$^+$)			
1627.1 [@] *2*	15.4 *19*	1918.05		290.98	(5/2$^+$)			
1639.5 [@] *2*	2.2 *5*	1842.76	(5/2$^+$)	203.28	(3/2$^+$)			
1640.5 [@] *2*	3.1 *9*	2068.87		428.17	(3/2$^-$)			
1646.7 [@] *2*	2.1 *9*	2142.23		495.32	(7/2$^+$)			
[x]1647.3 [#] *5*	4.7 [#] *9*							
1650.5 [@] *2*	7.8 *9*	2154.88		503.73	(3/2$^+$)			
1667.8 [@] *2*	9.6 *16*	2095.85		428.17	(3/2$^-$)			
1669.3 [@] *2*	2.3 *4*	2173.05		503.73	(3/2$^+$)			
1674.1 [@] *2*	3.1 *9*	2102.30		428.17	(3/2$^-$)			
1678.2 [@] *2*	6.0 *19*	2173.05		495.32	(7/2$^+$)			
1693.0 [@] *2*	3.3 *7*	2121.20		428.17	(3/2$^-$)			
1697.8 [@] *4*	1.8 *2*	2193.1	(5/2$^+$)	495.32	(7/2$^+$)			
1702.3 [@] *2*	7.1 *16*	2178.90	(3/2$^-$)	476.59	(7/2$^-$)			
1714.7 [@] *2*	3.0 *3*	1918.05		203.28	(3/2$^+$)			
1726.6 [@] *2*	10.6 *19*	2154.46	(3/2$^-$)	428.17	(3/2$^-$)			

$^{187}_{79}Au_{108}$-12

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π
1728.5@ *2*	3.3 *9*	2184.92		456.17	(5/2⁻)	1951.7@ *2*	5.1 *11*	2154.88		203.28	(3/2⁺)
1744.3@ *2*	8.1 *14*	2172.39		428.17	(3/2⁻)	1957.3@ *2*	4.1 *7*	2283.0		325.71	(7/2⁻)
1746.8@ *2*	4.2 *8*	2293.17		546.13	(1/2⁻)	1969.4@ *2*	4.9 *9*	2173.05		203.28	(3/2⁺)
1794.0@ *4*	1.8 *2*	1997.3		203.28	(3/2⁺)	x1998.1# *8*	10.8# *22*				
1830.6@ *2*	2.7 *3*	2121.59		290.98	(5/2⁺)	2013.0@ *2*	5.7 *16*	2253.18		240.17	(5/2⁺)
1848.3@ *4*	1.8 *2*	2051.6		203.28	(3/2⁺)	2028.9@ *4*	0.9 *2*	2524.3		495.32	(7/2⁺)
1850.5@ *2*	3.0 *8*	2345.86		495.32	(7/2⁺)	2047@ *2*	2.7 *6*	2322.0		274.96	(1/2⁻)
1857.8@ *2*	2.7 *6*	2184.92		325.71	(7/2⁻)	2049.5@ *4*	1.5 *2*	2253.18		203.28	(3/2⁺)
1863.7@ *2*	13.6 *22*	2154.88		290.98	(5/2⁺)	2131.5@ *4*	1.0 *2*	2334.8		203.28	(3/2⁺)
1882.3@ *2*	5.1 *5*	2173.05		290.98	(5/2⁺)	2142.7@ *4*	0.9 *2*	2345.86		203.28	(3/2⁺)
1900.0@ *2*	6.8 *11*	2103.29		203.28	(3/2⁺)	2163.0@ *4*	1.8 *4*	2403.2		240.17	(5/2⁺)
1902.3@ *4*	0.9 *2*	2142.23		240.17	(5/2⁺)	x2176.5# *10*	20# *4*				
1914.9@ *2*	5.1 *13*	2154.88		240.17	(5/2⁺)	2199.9@ *4*	0.7 *2*	2403.2		203.28	(3/2⁺)
1924.5@ *2*	3.4 *9*	2127.79		203.28	(3/2⁺)	2227.9@ *4*	0.9 *2*	2431.07		203.28	(3/2⁺)
1932.5@ *2*	2.3 *4*	2173.05		240.17	(5/2⁺)	2301.0@ *4*	1.6 *2*	2504.3		203.28	(3/2⁺)
1935.7@ *2*	4.1 *9*	2431.07		495.32	(7/2⁺)	2321.1@ *4*	0.7 *2*	2524.3		203.28	(3/2⁺)
1939.5@ *4*	1.8 *4*	2142.23		203.28	(3/2⁺)	2486@ *2*	2.0 *4*	2486.0		0.0	1/2(+)

† From 1998Ru04, except otherwise noted. ΔE=0.2 for Iγ≥2 and ΔE=0.4 for Iγ<2 are assigned based on a private communication with J. L. Wood, a 1998Ru04 co-author.
‡ Only seen in the ^{187}Hg^{g} decay.
# From 1978Bo05.
@ From 1994RuZX.
& Assigned by 1998Ru04 based on α(K)exp or α(L)exp value, except where noted. The α(K)exp and α(L)exp values (1998Ru04) are listed in the comment section.
a Assigned from an estimated M/N subshell ratio, observing a conversion electron spectrum (fig 5-1978Bo05) by the evaluator.
b Calculated by the evaluator using α(K)exp value, except otherwise noted.
c 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.
x γ ray not placed in level scheme.

$^{187}_{79}Au_{108}$-13

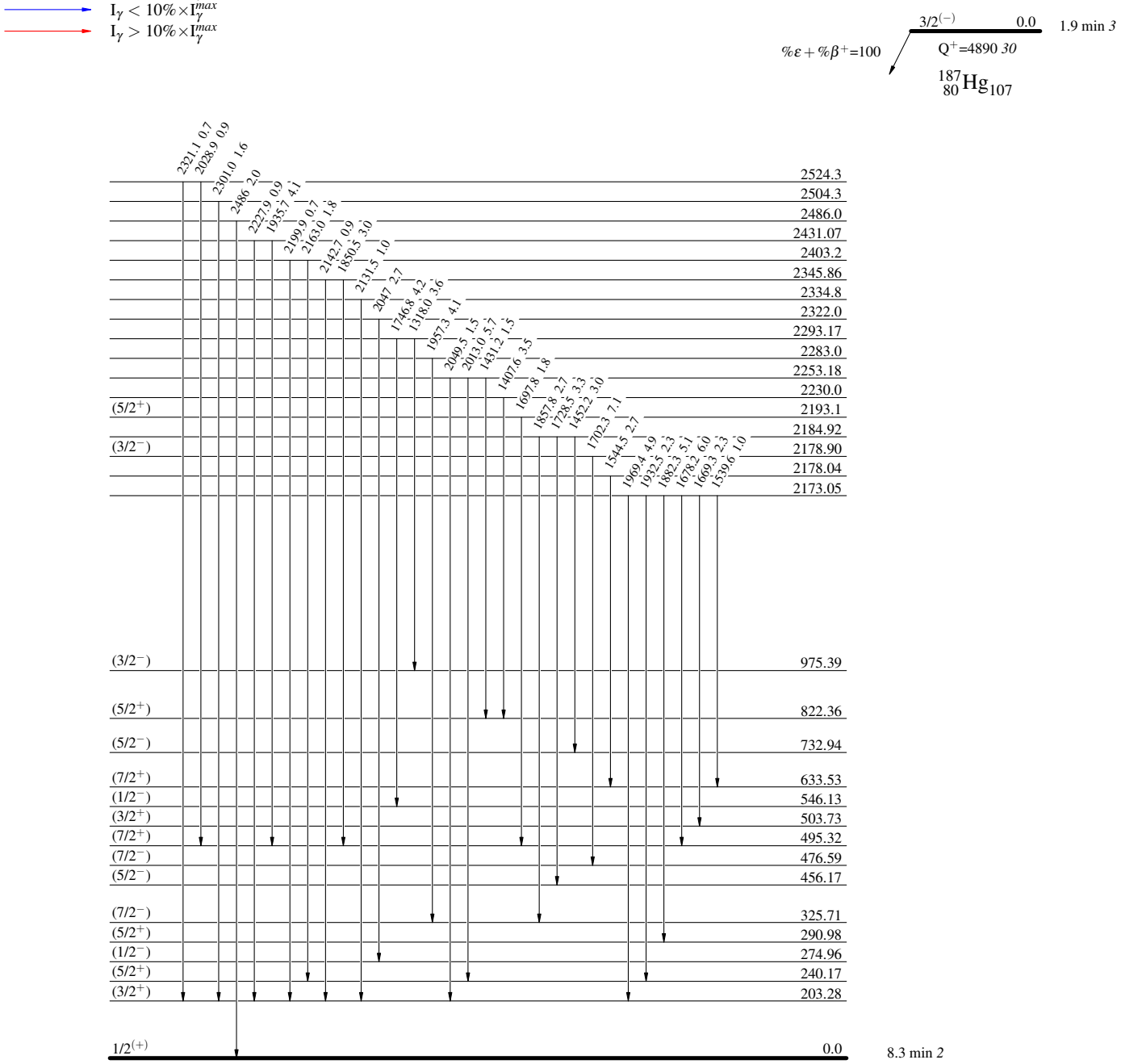
^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme

Intensities: Relative I_γ

Legend

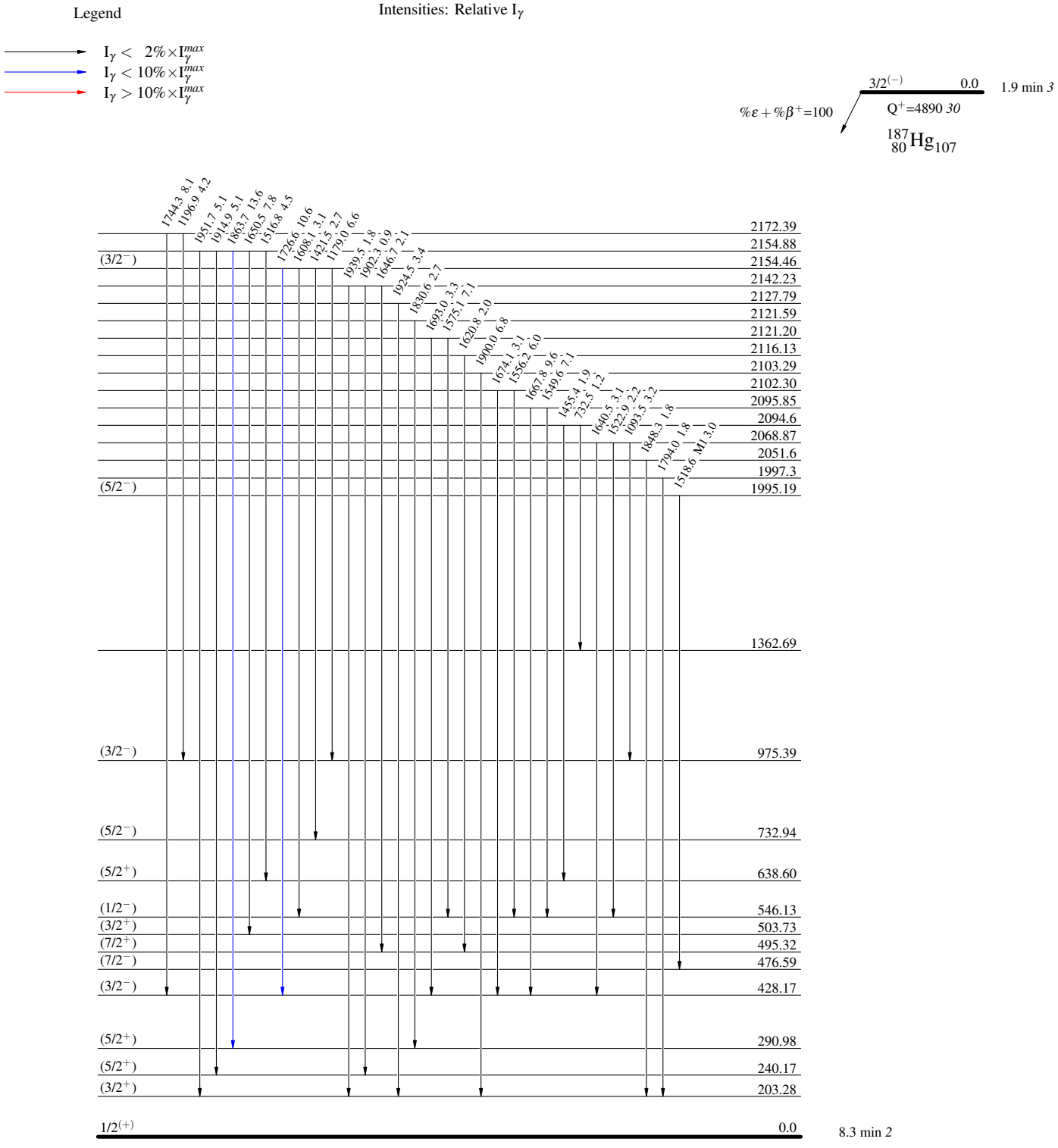
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

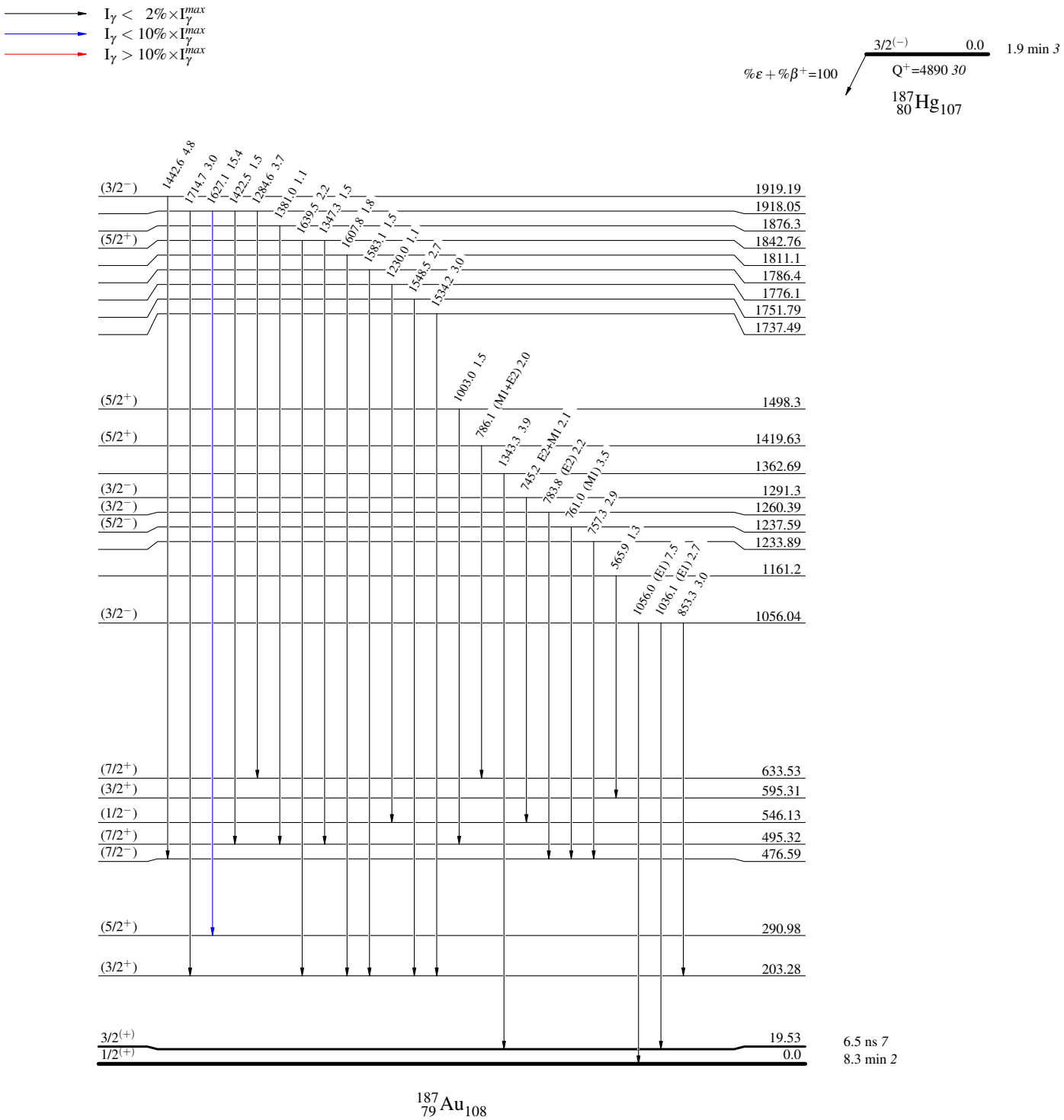
Intensities: Relative I_γ



^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

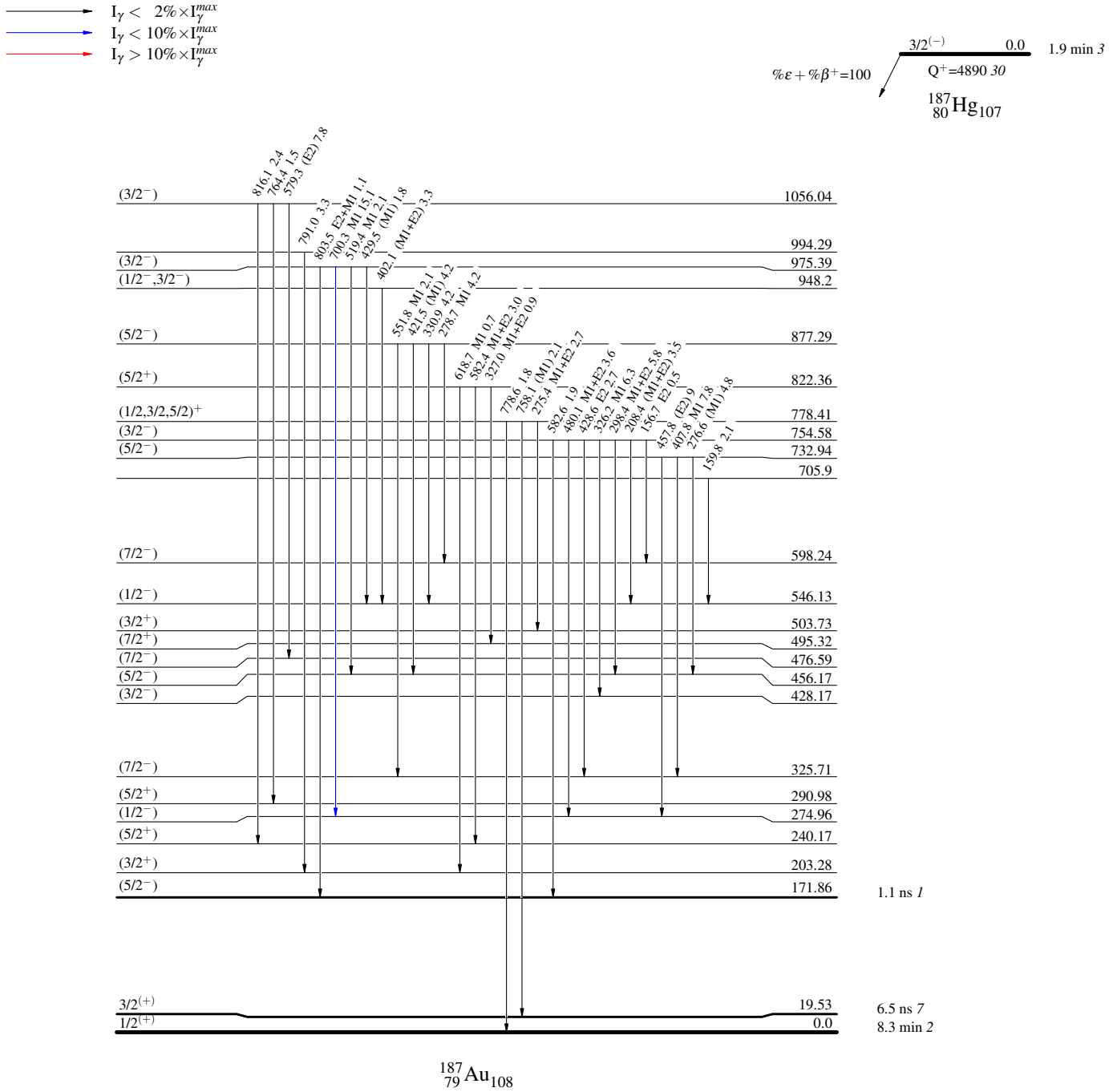
Intensities: Relative I_γ



^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

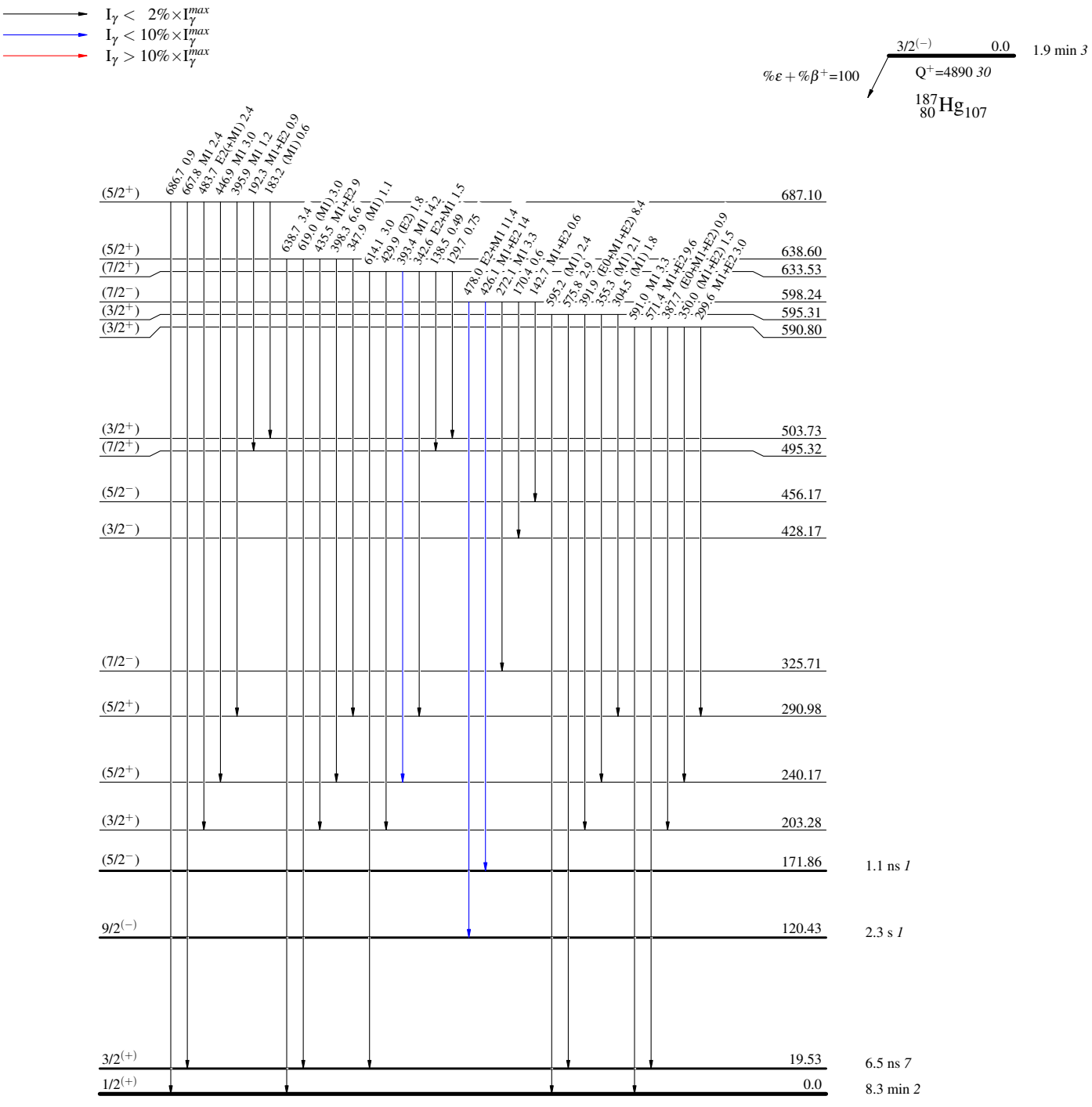


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

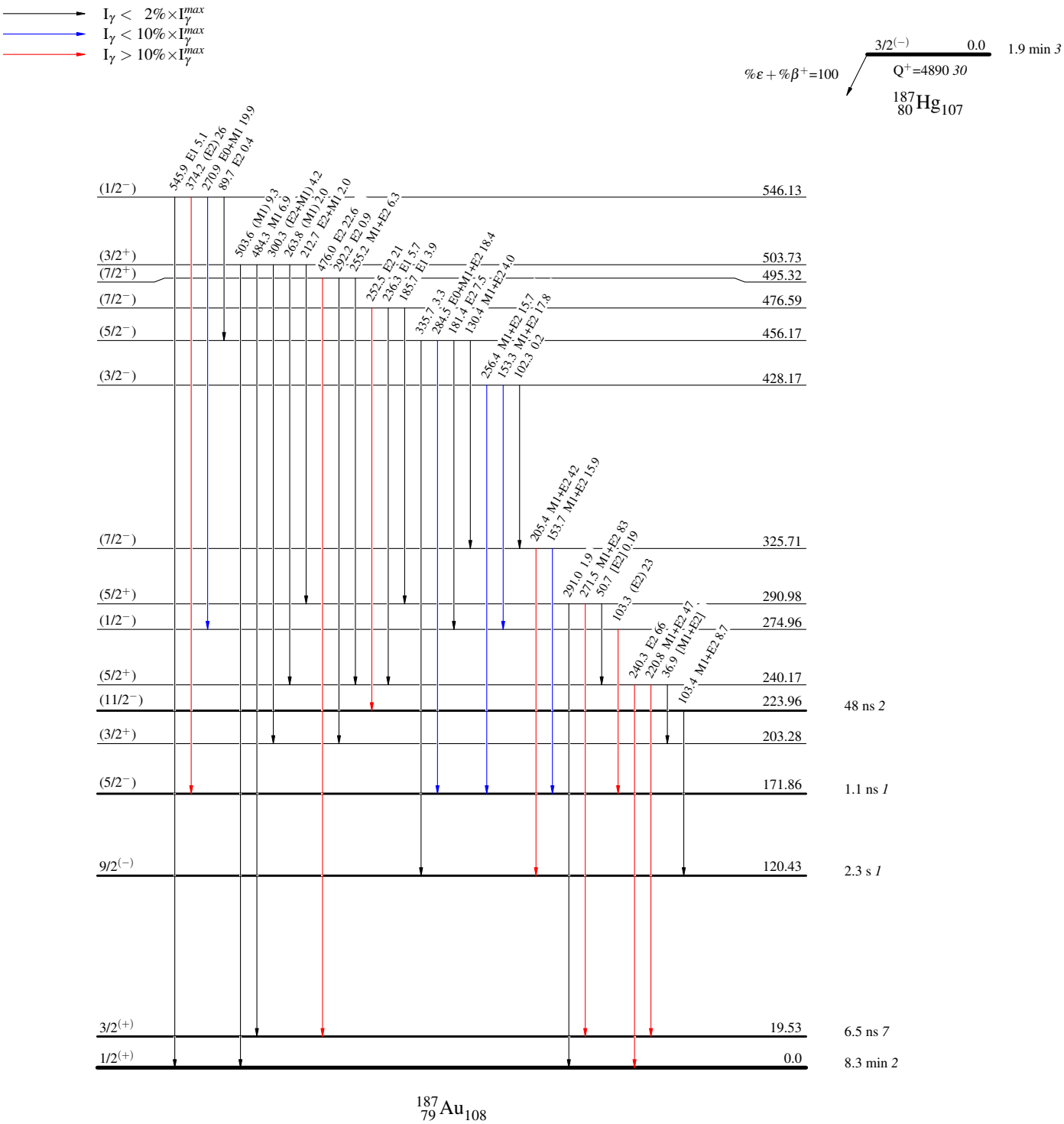


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

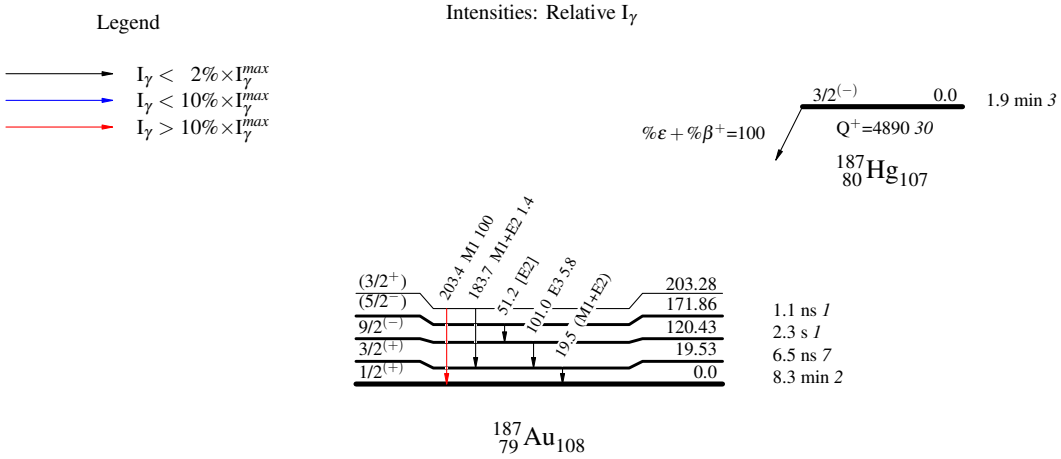


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (1.9 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

Parent: ^{187}Hg: E=0.0+x; $J^\pi=13/2^{(+)}$; $T_{1/2}$=2.4 min *3*; Q(ε)=4890 *30*; %ε+%$β^+$ decay=100.0

^{187}Hg-$T_{1/2}$: 2.2 min in 1998Ru04, not measured (e-mail communication with Dr. Dubravka Rupnik).

Other references: 1995Ru07, 1988Pa15, 1988Ko22, 1986Be07, 1983Be48, 1975Ho03, and 1970Du09.

1998Ru04,1994RuZX,1995Ru07: Mass separated ^{187}Hg^g were obtained from the ^{187}Tl^{m,g} decay produced through ^{176}Hf(^{19}F,8n); Detector: Ge(Li), Se(Li); Measured: Eγ, Iγ, α(K)exp, γγ t, ce-γ-t, γ-x-t, and ce-x-t.

1978Bo05: On line mass separated ^{187}Hg from Au(p,xn)Hg; Detector: Ge(Li), Si(Li); Measured Eγ, Iγ, α, γγ coin, ce-γ coin, γ-ce-t, deduced levels, J, π, mult.

1988Pa15,1988Ko22: Mass-separated ^{187}Hg^g produced from ^{180}W(^{14}N,7n), E=160 MeV, 187Tl $β^+$ decay; ^{187}Hg^m from ^{180}W(^{12}C,5n), E=120 MeV; Measured: γγ(t), γ-x-t, γ-ce-t, ce-x-t.

1986Be07,1983Be48: ^{187}Hg produced from Au(p,xn), measured level $T_{1/2}$ by ce-ce(t), γ-ce(t).

1975Ho03, 1970Du09: Measured total absorption spectrum of ^{187}Hg ε decay. The spectrum (Fig. 3 of 1975Ho03) indicates level population in the ^{187}Hg ε Decay upto ≈4500 keV. 1970Du09 shows the total absorption of the ^{187}Hg decay upto ≈3000 keV (Fig. 8e – 1970Du09).

The ^{187}Hg decay scheme is presented as constructed by 1998Ru04.

^{187}Au Levels

E(level)[†]	J^π[‡]	$T_{1/2}$	Comments
0.0	$1/2^{(+)}$	8.3 min *2*	$T_{1/2}$: From Adopted Levels.
19.44 *16*	$3/2^{(+)}$	6.5 ns *7*	$T_{1/2}$: weighted average of 6 ns *1* ce(19.5L)(t)–1978Bo05 and 7 ns *1* (ce(220K)-ce(19.5M)(t)–1986Be07).
120.40 *22*	$9/2^{(-)}$	2.3 s *1*	$T_{1/2}$: From ce(t)–1983Br26. The uncertainty is at 95% confidence level (^{187}Au IT decay).
172.0 *3*	$(5/2^-)$	1.1 ns *1*	$T_{1/2}$: from ce(271.1K)-ce(51.2L)(t)–1983Be48.
203.40[#] *20*	$(3/2^+)$		
223.93[@] *22*	$(11/2^-)$	48 ns *2*	$T_{1/2}$: from γ-ce(103.3M)(t)–1983Be48. Other value: 50 ns *8* (γ-ce(103.3L(t)–1978Bo05).
240.27[#] *15*	$(5/2^+)$		
290.97[#] *17*	$(5/2^+)$		
325.72[&] *24*	$(7/2^-)$		
353.78[&] *23*	$(13/2^-)$		
443.30[&] *24*	$9/2^{(-)}$		
476.59[@] *23*	$(7/2^-)$		
495.37[#] *16*	$(7/2^+)$		
496.79[&] *23*	$(11/2^-)$		
503.73 *10*	$(3/2^+)$		E(level): From Adopted Levels.
590.80[#] *18*	$(3/2^+)$		
598.1[&] *3*	$(7/2^-)$		
619.86[&] *24*	$(11/2^-)$		
633.68[#] *18*	$(7/2^+)$		
673.24[@] *24*	$(15/2^-)$		
674.1[@] *3*	$(9/2^-,11/2^-)$		
687.12[#] *19*	$(5/2^+)$		
688.68[&] *25*	$(17/2^-)$		
710.48[#] *18*	$(9/2^+)$		
741.96[&] *25*	$(13/2^-)$		
749.30[@] *25*	$(13/2^-)$		

Continued on next page (footnotes at end of table)

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

^{187}Au Levels (continued)

E(level)[†]	Jπ[‡]
755.3[&] *3*	(9/2⁻)
767.11[#] *19*	(9/2⁺)
815.89[&] *24*	(15/2⁻)
822.47[#] *24*	(5/2⁺)
829.13[&] *25*	(11/2⁻)
840.1[@] *3*	(9/2⁻)
880.03[#] *23*	(7/2⁺)
881.22[@] *25*	(11/2⁻)
934.39[#] *23*	(5/2⁺)
950.3[&] *3*	(7/2⁻,9/2⁻)
956.52[&] *24*	(13/2⁻)
965.6[#] *5*	(7/2⁺)
968.01[#] *21*	(11/2⁺)
985.0[&] *3*	(9/2⁻)
993.2[&] *3*	(15/2⁻)
1015.35[#] *23*	(7/2⁺)
1047.6 *5*	
1120.4 *4*	
1120.95[#] *20*	(11/2⁺)
1121.68[&] *24*	(13/2⁺)
1126.7[&] *4*	(7/2,9/2,11/2)⁻
1147.8[&] *3*	(11/2⁻,13/2⁻)
1148.6[#] *5*	(11/2⁺)
1149.27[#] *22*	(13/2⁺)
1155.9[&] *4*	(11/2⁻)
1159.0[&] *3*	(17/2⁻)
1164.51[#] *24*	(11/2⁺)
1166.9[&] *4*	(17/2⁻)
1184.8[&] *5*	(7/2⁻,9/2⁻)
1187.1[@] *3*	(13/2⁻)
1197.6[@] *3*	(11/2⁻)
1205.19[#] *20*	(9/2⁺)
1228.7[@] *4*	(9/2⁻)
1232.6[&] *4*	(19/2⁻)
1249.5[&] *3*	(11/2⁻)
1276.9[&] *3*	(7/2⁻,9/2⁻)
1280.07[#] *21*	(11/2⁺)
1304.5[#]	(9/2⁺,11/2⁺)
1316.1[@] *4*	(17/2⁻)
1316.87[&] *25*	(9/2⁻)
1357.7[&] *3*	(15/2⁻)
1367.3[&] *4*	(15/2⁻)
1369.54[#] *24*	(7/2⁺)
1380.7[&] *3*	(17/2⁺)
1393.4[&] *3*	(13/2⁻)

Continued on next page (footnotes at end of table)

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

^{187}Au Levels (continued)

E(level)†	Jπ‡	Comments
1397.9& 5		
1398.2# 3	(15/2+)	
1400.3& 5	(13/2−,15/2−)	
1405.3@ 5	(19/2−)	
1405.4@ 5		
1405.4& 3	(13/2+)	
1418.5@ 3	(13/2−)	
1420.6 3	(9/2+,11/2+)	
1420.7@ 5	(11/2−)	
1464.4& 5		
1471.0& 3	(13/2+,15/2+)	
1540.7@ 4	(13/2−,15/2−)	
1557.5 4		
1562.8& 5		
1568.2 4	(11/2,13/2,15/2)+	
1589.65& 25	(11/2,13/2)+	Jπ: (11/2,13/2)− in 1998Ru04, decay scheme requires (11/2,13/2)+.
1590.0@ 4	(11/2−,13/2−)	
1600.9 3		
1604.6# 5	(17/2+)	
1637.6 3		
1711.0& 3		
1778.9 5	(11/2−)	
1791.5& 5		
1807.6@ 3	(15/2−)	
1815.9@ 3	(15/2−)	
1816.2 4	(11/2−)	
1819.8@ 5		
1864.1# 5		
1905.3@ 4	(15/2−)	
1930.4@ 4	(17/2−)	
1994.3 5	(11/2−)	
2029.8& 5		
2065.7@ 5		
2073.3& 5		
2082.1& 5		
2099.7 5		
2117.2 5		
2145.4# 4		
2149.8& 5	(13/2−)	
2180.1# 5	(9/2+)	
2183.9& 5		
2186.1& 3		
2191.4 5		
2201.9& 3		
2206.0@ 4		
2206.6# 4		
2221.8& 5		

Continued on next page (footnotes at end of table)

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

^{187}Au Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†
2223.3@ 3		2300.44& 24		2348.9@ 5		2474.2& 5
2237.6& 3	(13/2⁻)	2300.7@ 3		2350.8& 4		2513.6@ 5
2237.8@ 3		2306.2& 5		2354.2@ 5		2541.5& 5
2246.5& 3	(13/2⁻)	2306.8@ 5		2365.3@ 5	(13/2⁻)	2551.1& 5
2248.2& 5		2313.6 4	(13/2⁺)	2369.1 5	(13/2⁺)	2572.8@ 5
2253.3@ 3		2319.1@ 4		2384.7# 5		2606.8& 5
2262.9@ 5		2319.2& 3	(15/2⁻)	2389.2 5		2625.3@ 5
2266.3 5		2319.2# 4		2390.0& 4		2633.1& 5
2268.2& 3	(13/2⁻)	2327.9& 3		2395.7@ 4	(13/2⁺)	2688.4& 5
2279.9@ 4		2334.1 5		2396.1& 4	(15/2⁺)	2749.3& 5
2285.0 5		2337.2@ 4		2400.7@ 5		2768.2& 5
2289.0 5		2343.0& 4		2400.9& 4		2828.0& 5
2291.1 6	(11/2⁺)	2343.2@ 4		2410.9@ 4		
2300.28# 21		2345.8 4	(11/2⁺)	2471.1 5	(11/2⁻)	

† From a least-squares fit to the γ-ray energies.
‡ From Adopted Levels.
# $s_{1/2}\otimes d_{3/2}\otimes d_{5/2}$ bands.
@ $h_{11/2}$ bands.
& $h_{9/2}\otimes f_{7/2}$ bands.

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	$I_{(\gamma+ce)}$ †	Comments
19.5@ *4*		19.44	3/2(+)	0.0	1/2(+)	(M1+E2)		7.×10^3 *6*		ce(L)/(γ+ce)=0.8 *6*; ce(M)/(γ+ce)=0.19 *24*; ce(N+)/(γ+ce)=0.05 *8* ce(N)/(γ+ce)=0.05 *7*; ce(O)/(γ+ce)=0.007 *11*; ce(P)/(γ+ce)=1.3×10^{-5} *13* Mult.: Assigned from an estimated M/N subshell ratio, observing a conversion electron spectrum (fig 5-1978Bo05) by the evaluator.
36.9@		240.27	(5/2+)	203.40	(3/2+)				4.7 *20*	
50.7@ *4*		290.97	(5/2+)	240.27	(5/2+)				0.9 *4*	
51.2@ *4*	0.26 *13*	172.0	(5/2−)	120.40	9/2(−)	[E2]		112 *5*	30 *15*	ce(L)/(γ+ce)=0.744 *22*; ce(M)/(γ+ce)=0.193 *10*; ce(N+)/(γ+ce)=0.055 *4* ce(N)/(γ+ce)=0.047 *3*; ce(O)/(γ+ce)=0.0075 *5*; ce(P)/(γ+ce)=7.4×10^{-6} *4* I_γ: Deduced by the evaluator from TI/(1+α).
90.5[a] *4*		1471.0	(13/2+,15/2+)	1380.7	(17/2+)				3 *1*	
101.0@ *2*		120.40	9/2(−)	19.44	3/2(+)	E3		120.4 *22*	678 *50*	ce(K)/(γ+ce)=0.00762 *18*; ce(L)/(γ+ce)=0.723 *10*; ce(M)/(γ+ce)=0.203 *5*; ce(N+)/(γ+ce)=0.0585 *15* ce(N)/(γ+ce)=0.0505 *13*; ce(O)/(γ+ce)=0.00803 *21*; ce(P)/(γ+ce)=1.52×10^{-5} *4* Mult.: α(L)exp=75 *20*, L1/L2<0.1, L2/L3≈1.3.
103.4@ *2*	22.0 *15*	223.93	(11/2−)	120.40	9/2(−)	M1+E2	0.0 *5*	6.6 *5*		α(K)=5.4 *10*; α(L)=0.9 *4*; α(M)=0.21 *11*; α(N+..)=0.06 *3* α(N)=0.05 *3*; α(O)=0.010 *4*; α(P)=0.00065 *12* α(L12)exp=0.99 *8* (1998Ru04), α(K)exp=5.5 *10* (1978Bo05).
117.5 *4*	0.50 *15*	443.30	9/2(−)	325.72	(7/2−)	E2+M1	5 *3*	2.8 *3*		α(K)=0.7 *6*; α(L)=1.57 *17*; α(M)=0.41 *5*; α(N+..)=0.117 *13* α(N)=0.100 *11*; α(O)=0.0162 *17*; α(P)=8.E−5 *7* α(K)exp=0.68 *21*.
122.0 *4*	0.45 *15*	741.96	(13/2−)	619.86	(11/2−)	M1+E2	2.2 *10*	2.6 *5*		α(K)=1.0 *7*; α(L)=1.22 *19*; α(M)=0.31 *6*; α(N+..)=0.090 *15* α(N)=0.077 *13*; α(O)=0.0126 *20*; α(P)=0.00012 *9* α(K)exp=1.0 *4*.
127.4 *4*	0.8 *2*	815.89	(15/2−)	688.68	(17/2−)	E2+M1	3.1 *14*	2.1 *3*		α(K)=0.7 *4*; α(L)=1.06 *11*; α(M)=0.27 *3*; α(N+..)=0.078 *8* α(N)=0.067 *7*; α(O)=0.0109 *11*; α(P)=8.E−5 *5* α(K)exp=0.7 *2*.
129.7‡ *4*	0.27 *10*	633.68	(7/2+)	503.73	(3/2+)					α(K)exp=2.0 *7*, implies Mult: M1+E2.

$^{187}_{79}Au_{108}$-5

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
131.8 *4*	0.55 *10*	881.22	(11/2$^-$)	749.30	(13/2$^-$)	E2+M1	2.3 *7*	1.97 *20*	α(K)=0.8 *3*; α(L)=0.88 *7*; α(M)=0.225 *18*; α(N+..)=0.065 *5* α(N)=0.055 *5*; α(O)=0.0090 *7*; α(P)=9.E−5 *4* α(K)exp=0.8 *2*.
133.7 *4*	0.7 *3*	767.11	(9/2$^+$)	633.68	(7/2$^+$)	E2+M1	2.2 *7*	1.89 *22*	α(K)=0.8 *3*; α(L)=0.82 *7*; α(M)=0.210 *19*; α(N+..)=0.060 *5* α(N)=0.052 *5*; α(O)=0.0084 *7*; α(P)=9.E−5 *4* α(K)exp=0.8 *5*.
135.4 *4*	0.45 *15*	1015.35	(7/2$^+$)	880.03	(7/2$^+$)				α(K)exp=0.5 *3*, implies Mult: M1+E2.
138.5@ *4*	0.20 *10*	633.68	(7/2$^+$)	495.37	(7/2$^+$)				α(K)exp=0.6 *3*, implies Mult: M1+E2.
140.7 *4*	0.15 *5*	956.52	(13/2$^-$)	815.89	(15/2$^-$)	(M1+E2)	0.0 *3*	2.74 *13*	α(K)=2.25 *16*; α(L)=0.38 *3*; α(M)=0.087 *9*; α(N+..)=0.0260 *23* α(N)=0.0217 *20*; α(O)=0.0040 *3*; α(P)=0.000270 *20* α(K)exp=2.2 *9*.
142.6 *2*	2.05 *20*	496.79	(11/2$^-$)	353.78	(13/2$^-$)	M1(+E2)	0.4 *8*	2.4 *7*	α(K)=1.9 *8*; α(L)=0.40 *14*; α(M)=0.10 *4*; α(N+..)=0.028 *12* α(N)=0.024 *10*; α(O)=0.0043 *14*; α(P)=0.00023 *10* α(K)exp=1.9 *5* (1998Ru04) and α(K)exp=3 *1* (1978Bo05).
148.3 *4*	0.55 *20*	1380.7	(17/2$^+$)	1232.6	(19/2$^-$)				
148.8 *4*	1.1 *2*	1164.51	(11/2$^+$)	1015.35	(7/2$^+$)	(E2)		1.080 *19*	α(K)=0.341 *6*; α(L)=0.554 *11*; α(M)=0.143 *3*; α(N+..)=0.0411 *8* α(N)=0.0353 *7*; α(O)=0.00571 *11*; α(P)=3.54×10^{-5} *6* α(K)exp=0.3 *1*.
153.7@ *4*	1.1 *3*	325.72	(7/2$^-$)	172.0	(5/2$^-$)	M1+E2	0.65 *10*	1.78 *9*	α(K)=1.32 *10*; α(L)=0.348 *14*; α(M)=0.085 *4*; α(N+..)=0.0248 *11* α(N)=0.0210 *10*; α(O)=0.00365 *14*; α(P)=0.000157 *12* α(K)exp=1.32 *9*.
154.0 *4*	0.3 *1*	1120.95	(11/2$^+$)	968.01	(11/2$^+$)	(E2)		0.950 *17*	α(K)=0.316 *5*; α(L)=0.476 *9*; α(M)=0.1231 *23*; α(N+..)=0.0352 *7* α(N)=0.0303 *6*; α(O)=0.00490 *9*; α(P)=3.26×10^{-5} *5* α(K)exp=0.40 *18*.
171.7 *4*	0.55 *15*	496.79	(11/2$^-$)	325.72	(7/2$^-$)				α(K)exp=0.5 *3*, implies Mult: M1+E2.
176.5 *4*	0.3 *1*	619.86	(11/2$^-$)	443.30	9/2$^{(-)}$	M1+E2	0.5 *16*	1.3 *6*	α(K)=1.0 *6*; α(L)=0.21 *4*; α(M)=0.050 *14*; α(N+..)=0.015 *4* α(N)=0.012 *4*; α(O)=0.0022 *4*; α(P)=0.00012 *8* α(K)exp=1.0 *6*.
181.0 *4*	0.45 *10*	1149.27	(13/2$^+$)	968.01	(11/2$^+$)	E2+M1	6.1 *10*	0.551 *13*	α(K)=0.240 *11*; α(L)=0.234 *4*; α(M)=0.0601 *11*; α(N+..)=0.0173 *3* α(N)=0.0148 *3*; α(O)=0.00242 *5*; α(P)=2.49×10^{-5} *13* α(K)exp=0.24 *14*.
183.7@ *4*	0.02 *1*	203.40	(3/2$^+$)	19.44	3/2$^{(+)}$	E2+M1	2.3 *4*	0.63 *5*	α(K)=0.34 *5*; α(L)=0.214 *5*; α(M)=0.0543 *13*; α(N+..)=0.0157 *4* α(N)=0.0134 *4*; α(O)=0.00222 *5*; α(P)=3.8×10^{-5} *7* α(K)exp=0.34 *10*.
185.7@ *4*	0.6 *1*	476.59	(7/2$^-$)	290.97	(5/2$^+$)	E1		0.0868	α(K)=0.0709 *11*; α(L)=0.01216 *19*; α(M)=0.00282 *5*; α(N+..)=0.000823 *13* α(N)=0.000694 *11*; α(O)=0.0001223 *19*; α(P)=6.37×10^{-6} *10* α(K)exp=0.07 *2*.
192.3@ *4*	0.51 *20*	687.12	(5/2$^+$)	495.37	(7/2$^+$)	E2+M1	2.1 *4*	0.56 *6*	α(K)=0.32 *6*; α(L)=0.177 *4*; α(M)=0.0447 *11*; α(N+..)=0.0129 *3* α(N)=0.0110 *3*; α(O)=0.00184 *4*; α(P)=3.6×10^{-5} *7* α(K)exp=0.33 *17*.
192.6 *4*	0.8 *2*	880.03	(7/2$^+$)	687.12	(5/2$^+$)	(E2+M1)	2.0 *7*	0.57 *12*	α(K)=0.33 *13*; α(L)=0.175 *6*; α(M)=0.0443 *20*; α(N+..)=0.0128 *5*

$^{187}_{79}Au_{108}$-6

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(N)=0.0109 *5*; α(O)=0.00182 *5*; α(P)=3.7×10^{-5} *16* α(K)exp=0.33 *20*.
196.0 *4*	0.65 *20*	815.89	(15/2$^-$)	619.86	(11/2$^-$)	E2		0.401 *7*	α(K)=0.178 *3*; α(L)=0.168 *3*; α(M)=0.0430 *8*; α(N+..)=0.01236 *21* α(N)=0.01061 *18*; α(O)=0.00173 *3*; α(P)=1.82×10^{-5} *3* α(K)exp=0.17 *9*.
196.9 *4*	0.8 *2*	1164.51	(11/2$^+$)	968.01	(11/2$^+$)	E2+M1	1.6 *6*	0.58 *15*	α(K)=0.37 *16*; α(L)=0.159 *5*; α(M)=0.0398 *20*; α(N+..)=0.0115 *5* α(N)=0.0098 *5*; α(O)=0.00166 *5*; α(P)=4.2×10^{-5} *19* α(K)exp=0.37 *11*.
203.4@ *4*	1.9 *6*	203.40	(3/2$^+$)	0.0	1/2$^{(+)}$	M1		0.969	α(K)=0.797 *12*; α(L)=0.1325 *20*; α(M)=0.0307 *5*; α(N+..)=0.00916 *14* α(N)=0.00766 *12*; α(O)=0.001408 *22*; α(P)=9.52×10^{-5} *15* Iγ 18.9 (1978Bo05), α(K)exp=0.8 *1* (1998Ru04), α(K)exp=0.65 *15* (1978Bo05).
205.4@ *2*	2.8 *7*	325.72	(7/2$^-$)	120.40	9/2$^{(-)}$	E2+M1	0.73 *23*	0.73 *9*	α(K)=0.56 *10*; α(L)=0.1319 *23*; α(M)=0.0318 *10*; α(N+..)=0.00934 *23* α(N)=0.00788 *22*; α(O)=0.001389 *22*; α(P)=6.6×10^{-5} *12* α(K)exp=0.56 *10*.
207.8 *4*	0.45 *10*	881.22	(11/2$^-$)	673.24	(15/2$^-$)	(E2)		0.329	α(K)=0.1544 *23*; α(L)=0.1310 *22*; α(M)=0.0336 *6*; α(N+..)=0.00965 *16* α(N)=0.00828 *14*; α(O)=0.001356 *22*; α(P)=1.584×10^{-5} *24* α(K)exp=0.16 *6*.
215.3 *4*	0.6 *1*	710.48	(9/2$^+$)	495.37	(7/2$^+$)	M1+E2	0.7 *8*	0.65 *20*	α(K)=0.50 *20*; α(L)=0.1130 *18*; α(M)=0.0271 *11*; α(N+..)=0.00798 *23* α(N)=0.00673 *25*; α(O)=0.001191 *22*; α(P)=5.9×10^{-5} *25* α(K)exp=0.50 *19*.
220.8@ *2*	16.5 *20*	240.27	(5/2$^+$)	19.44	3/2$^{(+)}$	M1+E2	2.54 *18*	0.336 *11*	α(K)=0.200 *10*; α(L)=0.1024 *15*; α(M)=0.0258 *4*; α(N+..)=0.00747 *11* α(N)=0.00638 *10*; α(O)=0.001064 *16*; α(P)=2.20×10^{-5} *12* I_γ: 24 (1978Bo05). α(K)exp=0.203 *29* (1998Ru04) and α(K)exp=0.28 *6* (1978Bo05).
233.4 *2*	100 *4*	353.78	(13/2$^-$)	120.40	9/2$^{(-)}$	E2		0.224	α(K)=0.1157 *17*; α(L)=0.0812 *12*; α(M)=0.0207 *3*; α(N+..)=0.00597 *9* α(N)=0.00511 *8*; α(O)=0.000842 *13*; α(P)=1.199×10^{-5} *17* α(K)exp=0.116 *14* (1998Ru04), α(K)exp=0.11 *3* (1978Bo05).
236.3@ *4*	0.7 *1*	476.59	(7/2$^-$)	240.27	(5/2$^+$)	E1		0.0478	α(K)=0.0392 *6*; α(L)=0.00655 *10*; α(M)=0.001516 *23*; α(N+..)=0.000444 *7* α(N)=0.000374 *6*; α(O)=6.64×10^{-5} *10*; α(P)=3.63×10^{-6} *6* α(K)exp=0.05 *2*.
240.3@ *2*	21 *2*	240.27	(5/2$^+$)	0.0	1/2$^{(+)}$	E2		0.203	α(K)=0.1076 *16*; α(L)=0.0722 *11*; α(M)=0.0184 *3*; α(N+..)=0.00530 *8* α(N)=0.00454 *7*; α(O)=0.000749 *11*; α(P)=1.119×10^{-5} *16* α(K)exp=0.12 *2* (1998Ru04), α(K)exp=0.12 *3* (1978Bo05).

$^{187}_{79}Au_{108}$-7

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
245.1 *4*	1.1 *2*	741.96	(13/2$^-$)	496.79	(11/2$^-$)	E2+M1	1.2 *3*	0.35 *6*	α(K)=0.26 *6*; α(L)=0.0716 *21*; α(M)=0.0175 *4*; α(N+..)=0.00512 *11* α(N)=0.00434 *9*; α(O)=0.000751 *24*; α(P)=3.0×10^{-5} *7* α(K)exp=0.26 *6*.
247.6 *4*	1.45 *20*	934.39	(5/2$^+$)	687.12	(5/2$^+$)	M1+E2	1.2 *5*	0.34 *10*	α(K)=0.25 *10*; α(L)=0.069 *4*; α(M)=0.0169 *5*; α(N+..)=0.00494 *18* α(N)=0.00419 *13*; α(O)=0.00073 *4*; α(P)=2.9×10^{-5} *12* α(K)exp=0.25 *8*.
252.5[@] *2*	3.7 *9*	476.59	(7/2$^-$)	223.93	(11/2$^-$)	E2		0.1737	α(K)=0.0951 *14*; α(L)=0.0592 *9*; α(M)=0.01506 *22*; α(N+..)=0.00434 *7* α(N)=0.00372 *6*; α(O)=0.000615 *9*; α(P)=9.94×10^{-6} *14* Iγ=8.0 *16* (1978Bo05), α(K)exp=0.09 *2*.
255.2[@] *2*	6.2 *3*	495.37	(7/2$^+$)	240.27	(5/2$^+$)	M1+E2	0.3 *7*	0.49 *15*	α(K)=0.40 *14*; α(L)=0.069 *6*; α(M)=0.0162 *9*; α(N+..)=0.0048 *3* α(N)=0.00402 *22*; α(O)=0.00073 *7*; α(P)=4.7×10^{-5} *17* α(K)exp=0.40 *6* (1998Ru04), α(K)exp=0.38 *10* (1978Bo05).
257.4 *4*	1.85 *10*	968.01	(11/2$^+$)	710.48	(9/2$^+$)	E2+M1	1.8 *6*	0.24 *6*	α(K)=0.17 *6*; α(L)=0.058 *3*; α(M)=0.0144 *4*; α(N+..)=0.00419 *15* α(N)=0.00357 *11*; α(O)=0.00061 *3*; α(P)=1.9×10^{-5} *7* α(K)exp=0.17 *4* (1998Ru04), α(K)exp=0.38 *10* (1978Bo05).
258.7 *4*	0.3 *1*	755.3	(9/2$^-$)	496.79	(11/2$^-$)	(M1)		0.498	α(K)=0.410 *6*; α(L)=0.0678 *10*; α(M)=0.01572 *23*; α(N+..)=0.00469 *7* α(N)=0.00392 *6*; α(O)=0.000720 *11*; α(P)=4.88×10^{-5} *8* α(K)exp=0.5 *2*.
259.2 *4*	1.35 *20*	1380.7	(17/2$^+$)	1121.68	(13/2$^+$)	E2		0.1600	α(K)=0.0891 *13*; α(L)=0.0534 *9*; α(M)=0.01356 *21*; α(N+..)=0.00391 *6* α(N)=0.00335 *6*; α(O)=0.000554 *9*; α(P)=9.34×10^{-6} *14* α(K)exp=0.09 *6* (1998Ru04). Other: α(K)exp=0.42 *15* (1978Bo05).
265.9 *4*	1.1 *2*	619.86	(11/2$^-$)	353.78	(13/2$^-$)	E2+M1	1.2 *6*	0.28 *11*	α(K)=0.21 *10*; α(L)=0.054 *5*; α(M)=0.0132 *8*; α(N+..)=0.0039 *3* α(N)=0.00327 *21*; α(O)=0.00057 *6*; α(P)=2.4×10^{-5} *12* α(K)exp=0.20 *8*.
271.2 *2*	7.5 *7*	443.30	9/2$^{(-)}$	172.0	(5/2$^-$)	E2		0.1389	α(K)=0.0796 *12*; α(L)=0.0447 *7*; α(M)=0.01134 *17*; α(N+..)=0.00327 *5* α(N)=0.00280 *4*; α(O)=0.000465 *7*; α(P)=8.40×10^{-6} *12* α(K)exp=0.09 *3*.
271.5[@] *2*	3.3 *9*	290.97	(5/2$^+$)	19.44	3/2$^{(+)}$	M1+E2	0.0 *3*	0.44 *3*	α(K)=0.359 *24*; α(L)=0.0593 *15*; α(M)=0.0138 *3*; α(N+..)=0.00410 *9* α(N)=0.00343 *8*; α(O)=0.000630 *17*; α(P)=4.3×10^{-5} *3* Iγ=30.8 (1978Bo05), α(K)exp=0.42 *8* (1998Ru04), α(K)exp=0.30 *6* (1978Bo05).
271.6 *2*	4.2 *5*	767.11	(9/2$^+$)	495.37	(7/2$^+$)	E2+M1	2.1 *7*	0.19 *5*	α(K)=0.13 *5*; α(L)=0.0472 *24*; α(M)=0.0117 *5*; α(N+..)=0.00341 *14* α(N)=0.00290 *11*; α(O)=0.00049 *3*; α(P)=1.5×10^{-5} *6* α(K)exp=0.13 *3*.
272.1[@] *4*	0.37 *10*	598.1	(7/2$^-$)	325.72	(7/2$^-$)	M1		0.433	α(K)=0.357 *6*; α(L)=0.0590 *9*; α(M)=0.01367 *20*; α(N+..)=0.00407 *6* α(N)=0.00341 *5*; α(O)=0.000626 *10*; α(P)=4.24×10^{-5} *7* α(K)exp=0.37 *8*.
283.7 *2*	2.8 *4*	1405.4	(13/2$^+$)	1121.68	(13/2$^+$)	M1+E2	0.49 *23*	0.34 *4*	α(K)=0.27 *4*; α(L)=0.0497 *24*; α(M)=0.0117 *5*; α(N+..)=0.00346 *14*

$^{187}_{79}Au_{108}$-8

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	$I_{(\gamma+ce)}$ †	Comments
										α(N)=0.00290 *11*; α(O)=0.00053 *3*; α(P)=3.2×10^{-5} *5* α(K)exp=0.27 *4*.
284.2 *4*	0.9 *2*	1164.51	(11/2$^+$)	880.03	(7/2$^+$)	E2		0.1204		α(K)=0.0709 *11*; α(L)=0.0373 *6*; α(M)=0.00944 *15*; α(N+..)=0.00273 *4* α(N)=0.00233 *4*; α(O)=0.000388 *6*; α(P)=7.52×10^{-6} *11* α(K)exp=0.075 *23*.
289.5 *4*	1.55 *20*	880.03	(7/2$^+$)	590.80	(3/2$^+$)	(E2)		0.1139		α(K)=0.0677 *10*; α(L)=0.0348 *6*; α(M)=0.00879 *14*; α(N+..)=0.00254 *4* α(N)=0.00217 *4*; α(O)=0.000362 *6*; α(P)=7.20×10^{-6} *11* α(K)exp=0.10 *4*.
291.0@ *4*	0.06 *2*	290.97	(5/2$^+$)	0.0	1/2$^{(+)}$					
292.1 *4*	0.7 *1*	1121.68	(13/2$^+$)	829.13	(11/2$^-$)	E1		0.0287		α(K)=0.0236 *4*; α(L)=0.00386 *6*; α(M)=0.000893 *13*; α(N+..)=0.000262 *4* α(N)=0.000220 *4*; α(O)=3.94×10^{-5} *6*; α(P)=2.24×10^{-6} *4* α(K)exp=0.028 *14*.
292.2@ *4*	0.3 *1*	495.37	(7/2$^+$)	203.40	(3/2$^+$)	E2		0.1107		α(K)=0.0662 *10*; α(L)=0.0336 *5*; α(M)=0.00848 *13*; α(N+..)=0.00245 *4* α(N)=0.00209 *4*; α(O)=0.000349 *6*; α(P)=7.04×10^{-6} *11*
294.5 *4*	0.6 *1*	619.86	(11/2$^-$)	325.72	(7/2$^-$)	E2		0.1081		α(K)=0.0650 *10*; α(L)=0.0326 *5*; α(M)=0.00822 *13*; α(N+..)=0.00238 *4* α(N)=0.00203 *3*; α(O)=0.000339 *5*; α(P)=6.91×10^{-6} *10* α(K)exp=0.05 *2*.
298.6 *2*	9.9 *4*	741.96	(13/2$^-$)	443.30	9/2$^{(-)}$	E2		0.1038		α(K)=0.0628 *9*; α(L)=0.0309 *5*; α(M)=0.00780 *12*; α(N+..)=0.00225 *4* α(N)=0.00193 *3*; α(O)=0.000322 *5*; α(P)=6.69×10^{-6} *10* α(K)exp=0.08 *2*.
299.6@ *4*	1.2 *2*	590.80	(3/2$^+$)	290.97	(5/2$^+$)	M1+E2	1.5 *7*	0.17 *7*		α(K)=0.13 *7*; α(L)=0.035 *5*; α(M)=0.0086 *9*; α(N+..)=0.0025 *3* α(N)=0.00212 *22*; α(O)=0.00037 *5*; α(P)=1.5×10^{-5} *8* α(K)exp=0.13 *7*.
304.6 *4*	0.4 *1*	993.2	(15/2$^-$)	688.68	(17/2$^-$)	(M1)		0.319		α(K)=0.262 *4*; α(L)=0.0433 *7*; α(M)=0.01002 *15*; α(N+..)=0.00299 *5* α(N)=0.00250 *4*; α(O)=0.000459 *7*; α(P)=3.11×10^{-5} *5*
305.4 *4*	1.5 *2*	1121.68	(13/2$^+$)	815.89	(15/2$^-$)	(E1)		0.0258		α(K)=0.0213 *3*; α(L)=0.00347 *5*; α(M)=0.000801 *12*; α(N+..)=0.000235 *4* α(N)=0.000198 *3*; α(O)=3.54×10^{-5} *5*; α(P)=2.03×10^{-6} *3* Iγ=4 (1978Bo05), α(K)exp=0.03 *1* (1998Ru04), α(K)exp<0.04 (1978Bo05).
305.8 *4*	1.8 *2*	1187.1	(13/2$^-$)	881.22	(11/2$^-$)	M1+E2	1.1 *3*	0.20 *4*		α(K)=0.15 *4*; α(L)=0.0348 *24*; α(M)=0.0084 *5*; α(N+..)=0.00246 *15* α(N)=0.00208 *12*; α(O)=0.00037 *3*; α(P)=1.7×10^{-5} *4* α(K)exp=0.15 *3*.
319.2 *2*	7.0 *2*	815.89	(15/2$^-$)	496.79	(11/2$^-$)	E2		0.0853		α(K)=0.0534 *8*; α(L)=0.0241 *4*; α(M)=0.00606 *9*;

$^{187}_{79}Au_{108}$-9

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
									α(N+..)=0.001753 *25* α(N)=0.001496 *22*; α(O)=0.000251 *4*; α(P)=5.73×10^{-6} *8*
322.9 *2*	13.4 *5*	443.30	9/2$^{(-)}$	120.40	9/2$^{(-)}$	E0+M1+E2		≈0.83	α(K)exp=0.057 *15* (1998Ru04), α(K)exp<0.07 (1978Bo05). Mult.: α(K)exp=0.66 *17* (1988Pa15), %E0≈76, α(K)exp=0.62 *7* (1998Ru04). α: Estimated by the evaluator from the α(K)exp values.
327.0@ *4*	0.4 *1*	822.47	(5/2$^+$)	495.37	(7/2$^+$)	M1+E2	0.7 *12*	0.20 *9*	α(K)=0.16 *8*; α(L)=0.031 *7*; α(M)=0.0074 *13*; α(N+..)=0.0022 *4* α(N)=0.0018 *4*; α(O)=0.00033 *7*; α(P)=1.9×10^{-5} *10* α(K)exp=0.16 *9*.
328.1[a] *4*	0.95 *11*	1015.35	(7/2$^+$)	687.12	(5/2$^+$)	M1		0.260	α(K)=0.214 *3*; α(L)=0.0353 *5*; α(M)=0.00818 *12*; α(N+..)=0.00244 *4* α(N)=0.00204 *3*; α(O)=0.000375 *6*; α(P)=2.54×10^{-5} *4* α(K)exp=0.22 *9*.
331.8 *4*	0.55 *20*	1147.8	(11/2$^-$,13/2$^-$)	815.89	(15/2$^-$)	(M1)		0.253	α(K)=0.208 *3*; α(L)=0.0342 *5*; α(M)=0.00793 *12*; α(N+..)=0.00236 *4* α(N)=0.00198 *3*; α(O)=0.000364 *6*; α(P)=2.46×10^{-5} *4* α(K)exp=0.22 *19*.
331.9 *4*	0.85 *10*	965.6	(7/2$^+$)	633.68	(7/2$^+$)	M1+E2	0.6 *14*	0.21 *10*	α(K)=0.17 *9*; α(L)=0.031 *8*; α(M)=0.0072 *15*; α(N+..)=0.0021 *5* α(N)=0.0018 *4*; α(O)=0.00032 *8*; α(P)=1.9×10^{-5} *11* α(K)exp=0.17 *9*.
332.3 *4*	1.6 *2*	829.13	(11/2$^-$)	496.79	(11/2$^-$)	M1		0.252	α(K)=0.207 *3*; α(L)=0.0341 *5*; α(M)=0.00790 *12*; α(N+..)=0.00235 *4* α(N)=0.00197 *3*; α(O)=0.000362 *6*; α(P)=2.45×10^{-5} *4* α(K)exp=0.19 *6*.
334.8 *2*	17.5 *3*	688.68	(17/2$^-$)	353.78	(13/2$^-$)	E2		0.0743	α(K)=0.0475 *7*; α(L)=0.0203 *3*; α(M)=0.00507 *8*; α(N+..)=0.001470 *21* α(N)=0.001254 *18*; α(O)=0.000211 *3*; α(P)=5.13×10^{-6} *8* α(K)exp=0.054 *9* (1998Ru04), α(K)exp=0.042 *12* (1978Bo05).
336.7 *2*	2.3 *1*	956.52	(13/2$^-$)	619.86	(11/2$^-$)	M1+E2	0.60 *18*	0.198 *20*	α(K)=0.159 *18*; α(L)=0.0294 *16*; α(M)=0.0069 *4*; α(N+..)=0.00205 *10* α(N)=0.00172 *8*; α(O)=0.000312 *17*; α(P)=1.88×10^{-5} *22* α(K)exp=0.16 *2* (1998Ru04), α(K)exp<0.14 (1978Bo05).
342.6@ *4*	0.65 *10*	633.68	(7/2$^+$)	290.97	(5/2$^+$)	E2+M1	0.8 *4*	0.17 *4*	α(K)=0.13 *4*; α(L)=0.026 *4*; α(M)=0.0063 *7*; α(N+..)=0.00185 *21* α(N)=0.00155 *17*; α(O)=0.00028 *4*; α(P)=1.6×10^{-5} *5* α(K)exp=0.13 *4*.
342.8 *4*	0.7 *1*	1159.0	(17/2$^-$)	815.89	(15/2$^-$)	(E2)		0.0695	α(K)=0.0449 *7*; α(L)=0.0186 *3*; α(M)=0.00465 *7*; α(N+..)=0.001348 *20* α(N)=0.001150 *17*; α(O)=0.000194 *3*; α(P)=4.86×10^{-6} *7* α(K)exp=0.06 *3*.

$^{187}_{79}Au_{108}$-10

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
343.6 *4*	1.25 *15*	934.39	(5/2$^+$)	590.80	(3/2$^+$)	M1+E2	1.0 *5*	0.15 *5*	α(K)=0.12 *5*; α(L)=0.025 *4*; α(M)=0.0059 *8*; α(N+..)=0.00174 *25* α(N)=0.00147 *20*; α(O)=0.00026 *5*; α(P)=1.4×10^{-5} *6* α(K)exp=0.12 *4*.
349.5 *2*	4.5 *6*	1471.0	(13/2$^+$,15/2$^+$)	1121.68	(13/2$^+$)	M1		0.219	α(K)=0.181 *3*; α(L)=0.0297 *5*; α(M)=0.00688 *10*; α(N+..)=0.00205 *3* α(N)=0.001715 *25*; α(O)=0.000316 *5*; α(P)=2.14×10^{-5} *3* α(K)exp=0.18 *3* (1998Ru04), α(K)exp=0.22 *5* (1978Bo05).
350.0[@] *4*	0.45 *9*	590.80	(3/2$^+$)	240.27	(5/2$^+$)	(M1+E2)	1.2 *9*	0.13 *8*	α(K)=0.10 *7*; α(L)=0.022 *7*; α(M)=0.0054 *13*; α(N+..)=0.0016 *4* α(N)=0.0013 *4*; α(O)=0.00023 *7*; α(P)=1.1×10^{-5} *9* α(K)exp=0.10 *6*.
351.9 *4*	0.8 *1*	950.3	(7/2$^-$,9/2$^-$)	598.1	(7/2$^-$)	M1		0.215	α(K)=0.178 *3*; α(L)=0.0292 *5*; α(M)=0.00676 *10*; α(N+..)=0.00201 *3* α(N)=0.001683 *25*; α(O)=0.000310 *5*; α(P)=2.10×10^{-5} *3* α(K)exp=0.20 *3*.
360.4 *4*	1.3 *2*	1316.87	(9/2$^-$)	956.52	(13/2$^-$)	E2		0.0604	α(K)=0.0399 *6*; α(L)=0.01556 *23*; α(M)=0.00388 *6*; α(N+..)=0.001126 *17* α(N)=0.000959 *14*; α(O)=0.0001622 *24*; α(P)=4.33×10^{-6} *7* α(K)exp=0.035 *10*.
363.3 *2*	2.1 *2*	840.1	(9/2$^-$)	476.59	(7/2$^-$)	(E2+M1)	3.2 *9*	0.071 *10*	α(K)=0.050 *9*; α(L)=0.0162 *9*; α(M)=0.00399 *18*; α(N+..)=0.00116 *6* α(N)=0.00099 *5*; α(O)=0.000169 *10*; α(P)=5.6×10^{-6} *11* α(K)exp=0.05 *3* (1998Ru04), α(K)exp=0.23 *6* (1978Bo05).
364.0[#] *4*	0.7 *2*	1357.7	(15/2$^-$)	993.2	(15/2$^-$)	E2+M1	1.0 *7*	0.13 *6*	α(K)=0.10 *6*; α(L)=0.021 *5*; α(M)=0.0050 *11*; α(N+..)=0.0015 *4* α(N)=0.0012 *3*; α(O)=0.00022 *6*; α(P)=1.2×10^{-5} *7* α(K)exp=0.10 *4*.
366.5 *4*	0.95 *15*	1316.87	(9/2$^-$)	950.3	(7/2$^-$,9/2$^-$)	E2+M1	1.2 *7*	0.11 *6*	α(K)=0.09 *5*; α(L)=0.019 *5*; α(M)=0.0046 *10*; α(N+..)=0.0014 *3* α(N)=0.00115 *24*; α(O)=0.00020 *5*; α(P)=1.0×10^{-5} *6* α(K)exp=0.09 *4*.
371.3 *4*	1.4 *3*	1126.7	(7/2,9/2,11/2)$^-$	755.3	(9/2$^-$)	(E2+M1)	2.8 *6*	0.070 *8*	α(K)=0.050 *7*; α(L)=0.0153 *7*; α(M)=0.00376 *15*; α(N+..)=0.00110 *5* α(N)=0.00093 *4*; α(O)=0.000160 *8*; α(P)=5.6×10^{-6} *9* α(K)exp=0.05 *2*.
373.6 *4*	0.95 *15*	993.2	(15/2$^-$)	619.86	(11/2$^-$)	(E2)		0.0547	α(K)=0.0366 *6*; α(L)=0.01372 *20*; α(M)=0.00341 *5*; α(N+..)=0.000991 *15* α(N)=0.000844 *13*; α(O)=0.0001431 *21*; α(P)=3.99×10^{-6} *6* α(K)exp=0.04 *1*.

$^{187}_{79}Au_{108}$-11

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
376.3 *2*	41.0 *9*	496.79	(11/2$^-$)	120.40	9/2$^{(-)}$	M1+E2	0.6 *3*	0.147 *24*	α(K)=0.119 *21*; α(L)=0.0214 *21*; α(M)=0.0050 *5*; α(N+..)=0.00149 *14* α(N)=0.00125 *11*; α(O)=0.000227 *22*; α(P)=1.39×10^{-5} *25* α(K)exp=0.119 *15* (1998Ru04), and 0.11 *3* (1978Bo05).
381.7 *4*	0.75 *15*	1015.35	(7/2$^+$)	633.68	(7/2$^+$)	(M1)		0.1732	α(K)=0.1427 *21*; α(L)=0.0234 *4*; α(M)=0.00542 *8*; α(N+..)=0.001615 *23* α(N)=0.001350 *20*; α(O)=0.000248 *4*; α(P)=1.687×10^{-5} *24* α(K)exp=0.14 *5*.
381.8 *4*	0.85 *20*	1149.27	(13/2$^+$)	767.11	(9/2$^+$)	(E2)		0.0516	α(K)=0.0348 *5*; α(L)=0.01273 *19*; α(M)=0.00316 *5*; α(N+..)=0.000919 *14* α(N)=0.000782 *12*; α(O)=0.0001328 *20*; α(P)=3.80×10^{-6} *6* Mult.: 1998Ru04 assigned E2(+M1) from α(K)exp=0.06 *3* (indicates δ=1.8 *7*), decay scheme requires E2.
382.8 *4*	1.0 *1*	1205.19	(9/2$^+$)	822.47	(5/2$^+$)	E2		0.0512	α(K)=0.0346 *5*; α(L)=0.01261 *19*; α(M)=0.00313 *5*; α(N+..)=0.000910 *14* α(N)=0.000775 *12*; α(O)=0.0001316 *19*; α(P)=3.77×10^{-6} *6* α(K)exp=0.03 *1*.
384.6 *4*	0.85 *2*	880.03	(7/2$^+$)	495.37	(7/2$^+$)	E2+M1	2.4 *8*	0.068 *16*	α(K)=0.050 *14*; α(L)=0.0140 *15*; α(M)=0.0034 *3*; α(N+..)=0.00100 *10* α(N)=0.00085 *8*; α(O)=0.000146 *16*; α(P)=5.6×10^{-6} *17* α(K)exp=0.05 *1*.
385.8 *2*	2.3 *3*	829.13	(11/2$^-$)	443.30	9/2$^{(-)}$	M1		0.1683	α(K)=0.1387 *20*; α(L)=0.0227 *4*; α(M)=0.00526 *8*; α(N+..)=0.001569 *22* α(N)=0.001312 *19*; α(O)=0.000241 *4*; α(P)=1.639×10^{-5} *23* α(K)exp=0.17 *4*.
387.5 *4*	0.50 *15*	1380.7	(17/2$^+$)	993.2	(15/2$^-$)	(E1)		0.01494	α(K)=0.01238 *18*; α(L)=0.00197 *3*; α(M)=0.000454 *7*; α(N+..)=0.0001338 *19* α(N)=0.0001124 *16*; α(O)=2.02×10^{-5} *3*; α(P)=1.206×10^{-6} *17* α(K)exp=0.020 *12*.
387.7[@] *4*	0.32 *8*	590.80	(3/2$^+$)	203.40	(3/2$^+$)	E0+M1+E2		≈0.28	α(K)exp=0.22 *8*. α: Estimated by the evaluator from the α(K)exp value.
388.1 *2*	3.0 *2*	741.96	(13/2$^-$)	353.78	(13/2$^-$)	E0+M1+E2		≈1.0	α(K)exp=0.96 *11* (1998Ru04), α(K)exp=0.64 *9* (1988Pa15). δ: %E0=81 *4* (1988Pa15). α: Estimated by the evaluator from the weighted average α(K)exp=0.77 *7*.
388.5 *4*	0.7 *1*	1228.7	(9/2$^-$)	840.1	(9/2$^-$)	M1		0.1652	α(K)=0.1362 *20*; α(L)=0.0223 *4*; α(M)=0.00517 *8*; α(N+..)=0.001540 *22* α(N)=0.001287 *19*; α(O)=0.000237 *4*; α(P)=1.608×10^{-5} *23* α(K)exp=0.18 *5*.
392.5 *4*	0.55 *15*	1590.0	(11/2$^-$,13/2$^-$)	1197.6	(11/2$^-$)	E2+M1	1.3 *7*	0.09 *5*	α(K)=0.07 *4*; α(L)=0.015 *4*; α(M)=0.0037 *8*; α(N+..)=0.00108 *25*

$^{187}_{79}Au_{108}$-12

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
									α(N)=0.00091 *20*; α(O)=0.00016 *4*; α(P)=8.E−6 *5* α(K)exp=0.07 *3*.
393.4@ *2*	5.1 *2*	633.68	(7/2+)	240.27	(5/2+)	M1		0.1597	α(K)=0.1317 *19*; α(L)=0.0216 *3*; α(M)=0.00499 *7*; α(N+..)=0.001489 *21* α(N)=0.001244 *18*; α(O)=0.000229 *4*; α(P)=1.555×10^{-5} *22* α(K)exp=0.15 *3* (1998Ru04), α(K)exp=0.16 *4* (1978Bo05).
395.9@ *4*	0.5 *2*	687.12	(5/2+)	290.97	(5/2+)	M1		0.1571	α(K)=0.1295 *19*; α(L)=0.0212 *3*; α(M)=0.00491 *7*; α(N+..)=0.001463 *21* α(N)=0.001223 *18*; α(O)=0.000225 *4*; α(P)=1.529×10^{-5} *22* α(K)exp=0.14 *6*.
404.6 *4*	0.55 *15*	881.22	(11/2−)	476.59	(7/2−)	(E2)		0.0442	α(K)=0.0304 *5*; α(L)=0.01044 *15*; α(M)=0.00259 *4*; α(N+..)=0.000752 *11* α(N)=0.000640 *10*; α(O)=0.0001090 *16*; α(P)=3.33×10^{-6} *5* α(K)exp=0.031 *18*.
410.6 *2*	3.6 *2*	1120.95	(11/2+)	710.48	(9/2+)	M1		0.1425	α(K)=0.1175 *17*; α(L)=0.0192 *3*; α(M)=0.00445 *7*; α(N+..)=0.001326 *19* α(N)=0.001109 *16*; α(O)=0.000204 *3*; α(P)=1.386×10^{-5} *20* α(K)exp=0.13 *3* (both in 1998Ru04, 1978Bo05).
416.9 *4*	0.5 *1*	1232.6	(19/2−)	815.89	(15/2−)	(E2)		0.0408	α(K)=0.0284 *4*; α(L)=0.00945 *14*; α(M)=0.00234 *4*; α(N+..)=0.000679 *10* α(N)=0.000578 *9*; α(O)=9.87×10^{-5} *15*; α(P)=3.12×10^{-6} *5* α(K)exp=0.04 *2*.
417.1 *4*	0.8 *2*	1159.0	(17/2−)	741.96	(13/2−)	(E2)		0.0408	α(K)=0.0283 *4*; α(L)=0.00943 *14*; α(M)=0.00233 *4*; α(N+..)=0.000678 *10* α(N)=0.000577 *9*; α(O)=9.85×10^{-5} *15*; α(P)=3.11×10^{-6} *5* α(K)exp=0.04 *2*.
419.5 *4*	0.4 *1*	710.48	(9/2+)	290.97	(5/2+)	(E2)		0.0402	α(K)=0.0280 *4*; α(L)=0.00925 *14*; α(M)=0.00229 *4*; α(N+..)=0.000665 *10* α(N)=0.000566 *9*; α(O)=9.67×10^{-5} *14*; α(P)=3.07×10^{-6} *5* α(K)exp=0.04 *2*.
424.1 *4*	1.0 *2*	1015.35	(7/2+)	590.80	(3/2+)	(E2)		0.0390	α(K)=0.0273 *4*; α(L)=0.00893 *13*; α(M)=0.00220 *4*; α(N+..)=0.000642 *10* α(N)=0.000545 *8*; α(O)=9.33×10^{-5} *14*; α(P)=3.00×10^{-6} *5* α(K)exp=0.032 *9*.
425.0 *4*	1.6 *4*	1166.9	(17/2−)	741.96	(13/2−)	(E2)		0.0388	α(K)=0.0271 *4*; α(L)=0.00886 *13*; α(M)=0.00219 *4*; α(N+..)=0.000637 *10* α(N)=0.000541 *8*; α(O)=9.26×10^{-5} *14*; α(P)=2.98×10^{-6} *5* α(K)exp=0.029 *6*.
426.1@ *4*	1.3 *1*	598.1	(7/2−)	172.0	(5/2−)	M1+E2	0.5 *4*	0.111 *23*	α(K)=0.091 *20*; α(L)=0.0157 *22*; α(M)=0.0037 *5*; α(N+..)=0.00109 *15* α(N)=0.00091 *12*; α(O)=0.000166 *24*; α(P)=1.06×10^{-5} *24* α(K)exp=0.09 *2*.
429.6 *2*	2.1 *4*	755.3	(9/2−)	325.72	(7/2−)	M1+E2	1.1 *4*	0.078 *20*	α(K)=0.062 *17*; α(L)=0.0124 *19*; α(M)=0.0029 *4*; α(N+..)=0.00087 *13* α(N)=0.00073 *10*; α(O)=0.000131 *20*; α(P)=7.2×10^{-6} *21* α(K)exp=0.061 *15*.
429.9@ *4*	0.6 *1*	633.68	(7/2+)	203.40	(3/2+)	(E2)		0.0377	α(K)=0.0264 *4*; α(L)=0.00854 *13*; α(M)=0.00211 *3*; α(N+..)=0.000613 *9*

$^{187}_{79}Au_{108}$-13

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(N)=0.000521 *8*; α(O)=8.92×10^{-5} *13*; α(P)=2.91×10^{-6} *5* α(K)exp=0.025 *15*.
430.2 *2*	4.4 *1*	1398.2	(15/2$^+$)	968.01	(11/2$^+$)	E2		0.0376	α(K)=0.0264 *4*; α(L)=0.00852 *12*; α(M)=0.00210 *3*; α(N+..)=0.000612 *9* α(N)=0.000520 *8*; α(O)=8.90×10^{-5} *13*; α(P)=2.90×10^{-6} *4* α(K)exp=0.027 *7* (1998Ru04), α(K)exp=0.088 *10* (1978Bo05).
433.4[a] *4*	0.9 *3*	1120.4		687.12	(5/2$^+$)				α(K)exp=0.9 *3*, mult: (E2).
436.6 *4*	1.45 *20*	1393.4	(13/2$^-$)	956.52	(13/2$^-$)	M1+E2	0.8 *6*	0.09 *3*	α(K)=0.07 *3*; α(L)=0.013 *3*; α(M)=0.0031 *7*; α(N+..)=0.00091 *20* α(N)=0.00077 *16*; α(O)=0.00014 *4*; α(P)=8.E−6 *4* α(K)exp=0.07 *2*.
437.9 *4*	0.4 *1*	1187.1	(13/2$^-$)	749.30	(13/2$^-$)	E0+M1+E2		≈0.28	α(K)exp=0.22 *7*. α: Estimated by the evaluator from the α(K)exp value.
438.8 *2*	10.0 *3*	1149.27	(13/2$^+$)	710.48	(9/2$^+$)	E2		0.0358	α(K)=0.0252 *4*; α(L)=0.00798 *12*; α(M)=0.00197 *3*; α(N+..)=0.000573 *8* α(N)=0.000487 *7*; α(O)=8.34×10^{-5} *12*; α(P)=2.78×10^{-6} *4* α(K)exp=0.023 *5* (1998Ru04), α(K)exp=0.034 *8* (1978Bo05).
438.9 *4*	1.5 *1*	934.39	(5/2$^+$)	495.37	(7/2$^+$)	E2+M1	1.8 *5*	0.055 *12*	α(K)=0.042 *10*; α(L)=0.0099 *11*; α(M)=0.00238 *24*; α(N+..)=0.00070 *8* α(N)=0.00059 *6*; α(O)=0.000104 *12*; α(P)=4.9×10^{-6} *12* α(K)exp=0.043 *15*.
446.5 *2*	2.1 *2*	1568.2	(11/2,13/2,15/2)$^+$	1121.68	(13/2$^+$)	E2+M1	1.3 *3*	0.064 *11*	α(K)=0.050 *9*; α(L)=0.0104 *11*; α(M)=0.00249 *22*; α(N+..)=0.00073 *7* α(N)=0.00062 *6*; α(O)=0.000110 *11*; α(P)=5.8×10^{-6} *11* α(K)exp=0.05 *1*.
446.9[@] *4*	1.5 *1*	687.12	(5/2$^+$)	240.27	(5/2$^+$)	M1		0.1138	α(K)=0.0938 *14*; α(L)=0.01532 *22*; α(M)=0.00354 *5*; α(N+..)=0.001056 *15* α(N)=0.000883 *13*; α(O)=0.0001625 *23*; α(P)=1.105×10^{-5} *16* α(K)exp=0.09 *3*.
448.3 *2*	4.0 *5*	1197.6	(11/2$^-$)	749.30	(13/2$^-$)	M1+E2	1.0 *9*	0.07 *4*	α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0027 *9*; α(N+..)=0.0008 *3* α(N)=0.00066 *21*; α(O)=0.00012 *4*; α(P)=7.E−6 *4* α(K)exp=0.06 *3*.
449.2 *2*	26.0 *15*	673.24	(15/2$^-$)	223.93	(11/2$^-$)	E2		0.0337	α(K)=0.0239 *4*; α(L)=0.00740 *11*; α(M)=0.00182 *3*;

$^{187}_{79}Au_{108}$-14

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
									α(N+..)=0.000531 *8* α(N)=0.000451 *7*; α(O)=7.74×10^{-5} *11*; α(P)=2.64×10^{-6} *4* α(K)exp=0.024 *6* (1998Ru04), α(K)exp=0.027 *6* (1978Bo05).
450.1 *2*	3.5 *15*	674.1	(9/2$^-$,11/2$^-$)	223.93	(11/2$^-$)	(M1)		0.1116	α(K)=0.0921 *13*; α(L)=0.01503 *22*; α(M)=0.00348 *5*; α(N+..)=0.001036 *15* α(N)=0.000866 *13*; α(O)=0.0001594 *23*; α(P)=1.084×10^{-5} *16* α(K)exp=0.09 *6*.
455.3 *4*	1.55 *20*	1604.6	(17/2$^+$)	1149.27	(13/2$^+$)	(E2)		0.0326	α(K)=0.0232 *4*; α(L)=0.00709 *11*; α(M)=0.001742 *25*; α(N+..)=0.000508 *8* α(N)=0.000431 *7*; α(O)=7.41×10^{-5} *11*; α(P)=2.56×10^{-6} *4* α(K)exp=0.038 *25*.
459.4 *2*	4.7 *2*	956.52	(13/2$^-$)	496.79	(11/2$^-$)	E2+M1	0.9 *7*	0.07 *3*	α(K)=0.06 *3*; α(L)=0.011 *3*; α(M)=0.0026 *7*; α(N+..)=0.00076 *20* α(N)=0.00064 *17*; α(O)=0.00012 *4*; α(P)=7.E−6 *4* α(K)exp=0.06 *2* (1998Ru04), α(K)exp=0.12 *3* (1978Bo05).
462.1 *2*	11.8 *6*	815.89	(15/2$^-$)	353.78	(13/2$^-$)	M1+E2	1.1 *3*	0.064 *12*	α(K)=0.051 *10*; α(L)=0.0100 *12*; α(M)=0.0024 *3*; α(N+..)=0.00070 *8* α(N)=0.00059 *7*; α(O)=0.000106 *13*; α(P)=5.9×10^{-6} *12* α(K)exp=0.050 *9* (1998Ru04), α(K)exp=0.08 *2* (1978Bo05).
467.7 *4*	1.0 *2*	1589.65	(11/2,13/2)$^+$	1121.68	(13/2$^+$)	E2+M1	1.1 *7*	0.06 *3*	α(K)=0.05 *3*; α(L)=0.010 *3*; α(M)=0.0023 *7*; α(N+..)=0.00068 *20* α(N)=0.00057 *16*; α(O)=0.00010 *4*; α(P)=6.E−6 *3* α(K)exp=0.05 *2*.
470.2 *4*	0.9 *2*	1159.0	(17/2$^-$)	688.68	(17/2$^-$)	M1+E2	0.5 *13*	0.09 *4*	α(K)=0.07 *4*; α(L)=0.012 *4*; α(M)=0.0028 *9*; α(N+..)=0.0008 *3* α(N)=0.00069 *22*; α(O)=0.00013 *5*; α(P)=8.E−6 *4* α(K)exp=0.07 *3*.
470.3 *2*	27.1 *2*	710.48	(9/2$^+$)	240.27	(5/2$^+$)	E2		0.0300	α(K)=0.0216 *3*; α(L)=0.00639 *9*; α(M)=0.001568 *22*; α(N+..)=0.000457 *7* α(N)=0.000388 *6*; α(O)=6.69×10^{-5} *10*; α(P)=2.39×10^{-6} *4* α(K)exp=0.023 *4* (1998Ru04), α(K)exp=0.026 *7* (1978Bo05).
472.8 *2*	11.3 *2*	968.01	(11/2$^+$)	495.37	(7/2$^+$)	E2		0.0296	α(K)=0.0213 *3*; α(L)=0.00629 *9*; α(M)=0.001542 *22*; α(N+..)=0.000450 *7* α(N)=0.000382 *6*; α(O)=6.58×10^{-5} *10*; α(P)=2.36×10^{-6} *4* α(K)exp=0.020 *5*.
475.4 *2*	2.0 *3*	829.13	(11/2$^-$)	353.78	(13/2$^-$)	M1		0.0966	α(K)=0.0797 *12*; α(L)=0.01299 *19*; α(M)=0.00300 *5*; α(N+..)=0.000895 *13* α(N)=0.000748 *11*; α(O)=0.0001378 *20*; α(P)=9.37×10^{-6} *14* α(K)exp=0.08 *3*.
476.0[@] *2*	23 *2*	495.37	(7/2$^+$)	19.44	3/2$^{(+)}$	E2		0.0291	α(K)=0.0210 *3*; α(L)=0.00616 *9*; α(M)=0.001509 *22*; α(N+..)=0.000440 *7* α(N)=0.000373 *6*; α(O)=6.44×10^{-5} *9*; α(P)=2.32×10^{-6} *4* α(K)exp=0.024 *5* (1998Ru04), and 0.043 *10* (1978Bo05).
476.3 *2*	3.6 *4*	767.11	(9/2$^+$)	290.97	(5/2$^+$)	E2		0.0291	α(K)=0.0210 *3*; α(L)=0.00614 *9*; α(M)=0.001506 *22*;

$^{187}_{79}Au_{108}$-15

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(N+..)=0.000439 *7* α(N)=0.000373 *6*; α(O)=6.43×10^{-5} *9*; α(P)=2.32×10^{-6} *4* Iγ=11.1 *22* (1978Bo05), α(K)exp=0.022 *9* (1998Ru04), α(K)exp=0.085 20 (1978Bo05).
478.0[@] *4*	0.8 *1*	598.1	(7/2$^-$)	120.40	9/2$^{(-)}$	E2+M1	1.0 *7*	0.06 *3*	α(K)=0.050 *25*; α(L)=0.009 *3*; α(M)=0.0022 *7*; α(N+..)=0.00066 *19* α(N)=0.00055 *16*; α(O)=0.00010 *3*; α(P)=6.E−6 *3* α(K)exp=0.05 *2*.
478.1 *4*	0.25 *10*	1166.9	(17/2$^-$)	688.68	(17/2$^-$)	E0+M1+E2		≈0.31	α(K)exp=0.24 *10*. α: Estimated by the evaluator from the α(K)exp value.
479.6 *4*	0.55 *10*	1228.7	(9/2$^-$)	749.30	(13/2$^-$)	(E2)		0.0286	α(K)=0.0207 *3*; α(L)=0.00601 *9*; α(M)=0.001473 *21*; α(N+..)=0.000430 *7* α(N)=0.000365 *6*; α(O)=6.29×10^{-5} *9*; α(P)=2.29×10^{-6} *4* α(K)exp=0.03 *2*.
480.6[a] *4*	1.30 *15*	1600.9		1120.4					α(K)exp=0.031 *13*, E2(+M1) in 1994RuZX.
483.7[@] *4*	0.8 *2*	687.12	(5/2$^+$)	203.40	(3/2$^+$)	E2(+M1)	2.2 *5*	0.039 *6*	α(K)=0.030 *5*; α(L)=0.0070 *6*; α(M)=0.00168 *13*; α(N+..)=0.00049 *4* α(N)=0.00042 *4*; α(O)=7.3×10^{-5} *7*; α(P)=3.4×10^{-6} *6* Iγ 2.6 (1978Bo05), α(K)exp=0.03 *1*.
486.4 *4*	1.75 *20*	1120.95	(11/2$^+$)	633.68	(7/2$^+$)	E2		0.0276	α(K)=0.0200 *3*; α(L)=0.00575 *9*; α(M)=0.001408 *20*; α(N+..)=0.000411 *6* α(N)=0.000349 *5*; α(O)=6.02×10^{-5} *9*; α(P)=2.22×10^{-6} *4* α(K)exp=0.023 *6*.
487.7 *4*	1.4 *2*	985.0	(9/2$^-$)	496.79	(11/2$^-$)	E2+M1	1.2 *7*	0.053 *25*	α(K)=0.042 *22*; α(L)=0.008 *3*; α(M)=0.0020 *6*; α(N+..)=0.00058 *17* α(N)=0.00049 *14*; α(O)=9.E−5 *3*; α(P)=5.E−6 *3* α(K)exp=0.042 *16*.
493.2[a] *4*	0.67 *15*	2300.7		1807.6	(15/2$^-$)				α(K)exp=0.024 *15*, Mult: E2+M1 in 1994RuZX.
494.6 *4*	0.7 *1*	1205.19	(9/2$^+$)	710.48	(9/2$^+$)	M1		0.0870	α(K)=0.0718 *11*; α(L)=0.01169 *17*; α(M)=0.00270 *4*; α(N+..)=0.000806 *12* α(N)=0.000673 *10*; α(O)=0.0001240 *18*; α(P)=8.44×10^{-6} *12* α(K)exp=0.07 *2*.
496.5 *4*	0.2 *1*	993.2	(15/2$^-$)	496.79	(11/2$^-$)				
499.0[a#] *4*	0.9 *2*	1380.7	(17/2$^+$)	881.22	(11/2$^-$)				α(K)exp=0.04 *3*.
499.4 *2*	19.6 *9*	619.86	(11/2$^-$)	120.40	9/2$^{(-)}$	E2+M1	1.5 *4*	0.044 *9*	α(K)=0.035 *8*; α(L)=0.0072 *9*; α(M)=0.00171 *20*; α(N+..)=0.00050 *6* α(N)=0.00042 *5*; α(O)=7.6×10^{-5} *10*; α(P)=4.0×10^{-6} *9* α(K)exp=0.034 *6* (1998Ru04), α(K)exp=0.08 *2* (1978Bo05).
501.9 *2*	3.1 *2*	1121.68	(13/2$^+$)	619.86	(11/2$^-$)	E1		0.00851 *12*	α=0.00851 *12*; α(K)=0.00708 *10*; α(L)=0.001102 *16*; α(M)=0.000253 *4*; α(N+..)=7.48×10^{-5} *11* α(N)=6.27×10^{-5} *9*; α(O)=1.135×10^{-5} *16*; α(P)=7.02×10^{-7} *10* α(K)exp=0.007 *3* (1998Ru04), α(K)exp<0.1 (1978Bo05).

$^{187}_{79}Au_{108}$-16

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
502.9 [a] *4*	0.80 *15*	2319.1		1816.2	(11/2$^-$)				α(K)exp<0.09 *5*.
503.0 [#] *4*	0.60 *15*	829.13	(11/2$^-$)	325.72	(7/2$^-$)				
513.0 [#] *4*	0.55 *15*	956.52	(13/2$^-$)	443.30	9/2$^{(-)}$				α(K)exp=0.03 *2*, implies Mult: M1+E2.
513.6 *4*	0.75 *10*	1187.1	(13/2$^-$)	673.24	(15/2$^-$)	(E2+M1)	0.9 *8*	0.054 *24*	α(K)=0.044 *21*; α(L)=0.0080 *25*; α(M)=0.0019 *6*; α(N+..)=0.00056 *17* α(N)=0.00047 *14*; α(O)=8.E−5 *3*; α(P)=5.1×10^{-6} *25* α(K)exp=0.043 *18*.
515.9 [a] *4*	0.70 *15*	1637.6		1121.68	(13/2$^+$)				α(K)exp=0.09 *5*.
520.1 *4*	0.75 *15*	1015.35	(7/2$^+$)	495.37	(7/2$^+$)	M1		0.0762	α(K)=0.0629 *9*; α(L)=0.01023 *15*; α(M)=0.00237 *4*; α(N+..)=0.000705 *10* α(N)=0.000589 *9*; α(O)=0.0001085 *16*; α(P)=7.39×10^{-6} *11* α(K)exp=0.057 *14*.
524.5 *2*	3.5 *4*	1197.6	(11/2$^-$)	673.24	(15/2$^-$)	E2		0.0230	α(K)=0.01700 *24*; α(L)=0.00457 *7*; α(M)=0.001113 *16*; α(N+..)=0.000325 *5* α(N)=0.000276 *4*; α(O)=4.78×10^{-5} *7*; α(P)=1.88×10^{-6} *3* α(K)exp=0.016 *6* (1998Ru04), 0.065 *10* (1978Bo05).
x524.6 [a] *4*	0.6 *1*								
525.4 *2*	24 *1*	749.30	(13/2$^-$)	223.93	(11/2$^-$)	M1+E2	0.8 *4*	0.054 *13*	α(K)=0.044 *12*; α(L)=0.0078 *14*; α(M)=0.0018 *3*; α(N+..)=0.00054 *10* α(N)=0.00046 *8*; α(O)=8.3×10^{-5} *15*; α(P)=5.1×10^{-6} *14* α(K)exp=0.044 *11* (1998Ru04), α(K)exp=0.065 *10* (1978Bo05). E$_\gamma$: 1978Bo05 placed this γ feeding the 674 level.
526.7 *4*	1.9 *2*	767.11	(9/2$^+$)	240.27	(5/2$^+$)	(E2)		0.0228	α(K)=0.01685 *24*; α(L)=0.00451 *7*; α(M)=0.001099 *16*; α(N+..)=0.000321 *5* α(N)=0.000272 *4*; α(O)=4.73×10^{-5} *7*; α(P)=1.87×10^{-6} *3* α(K)exp=0.021 *10*.
527.8 *2*	2.2 *2*	1147.8	(11/2$^-$,13/2$^-$)	619.86	(11/2$^-$)	M1+E2	0.8 *3*	0.054 *10*	α(K)=0.043 *9*; α(L)=0.0077 *11*; α(M)=0.00181 *23*; α(N+..)=0.00054 *7* α(N)=0.00045 *6*; α(O)=8.2×10^{-5} *11*; α(P)=5.1×10^{-6} *10* α(K)exp=0.043 *8*.
537.3 *4*	1.1 *1*	1304.5	(9/2$^+$,11/2$^+$)	767.11	(9/2$^+$)	M1+E2	0.9 *10*	0.048 *22*	α(K)=0.039 *19*; α(L)=0.0071 *23*; α(M)=0.0017 *5*; α(N+..)=0.00049 *16* α(N)=0.00041 *13*; α(O)=7.5×10^{-5} *25*; α(P)=4.5×10^{-6} *23* α(K)exp=0.04 *2*.
537.5 *4*	0.8 *2*	1418.5	(13/2$^-$)	881.22	(11/2$^-$)	M1+E2	0.9 *10*	0.048 *22*	α(K)=0.039 *19*; α(L)=0.0071 *23*; α(M)=0.0017 *5*; α(N+..)=0.00049 *16* α(N)=0.00041 *13*; α(O)=7.5×10^{-5} *25*; α(P)=4.5×10^{-6} *23* α(K)exp=0.04 *2*.
542.0 *4*	0.8 *2*	1357.7	(15/2$^-$)	815.89	(15/2$^-$)	M1+E2	0.8 *10*	0.050 *19*	α(K)=0.041 *16*; α(L)=0.0072 *20*; α(M)=0.0017 *5*; α(N+..)=0.00050 *14* α(N)=0.00042 *11*; α(O)=7.6×10^{-5} *21*; α(P)=4.7×10^{-6} *19* α(K)exp=0.04 *2*.

$^{187}_{79}Au_{108}$-17

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
544.0 *4*	0.6 *1*	1232.6	(19/2$^-$)	688.68	(17/2$^-$)	M1(+E2)	0.4 *21*	0.06 *4*	α(K)=0.05 *3*; α(L)=0.008 *4*; α(M)=0.0019 *8*; α(N+..)=0.00058 *25* α(N)=0.00048 *20*; α(O)=9.E−5 *4*; α(P)=6.E−6 *4* α(K)exp=0.05 *3*.
546.7 *4*	0.6 *1*	1369.54	(7/2$^+$)	822.47	(5/2$^+$)	(M1)		0.0669	α(K)=0.0552 *8*; α(L)=0.00896 *13*; α(M)=0.00207 *3*; α(N+..)=0.000618 *9* α(N)=0.000516 *8*; α(O)=9.50×10^{-5} *14*; α(P)=6.48×10^{-6} *10* α(K)exp=0.06 *3*.
550.8[a] *4*	0.7 *2*	1047.6		496.79	(11/2$^-$)				α(K)exp=0.07 *2*.
551.1 *4*	0.5 *1*	1367.3	(15/2$^-$)	815.89	(15/2$^-$)	M1		0.0655	α(K)=0.0541 *8*; α(L)=0.00877 *13*; α(M)=0.00203 *3*; α(N+..)=0.000605 *9* α(N)=0.000505 *8*; α(O)=9.30×10^{-5} *14*; α(P)=6.34×10^{-6} *9* α(K)exp=0.05 *3*.
564.8 *2*	3.75 *20*	1380.7	(17/2$^+$)	815.89	(15/2$^-$)	E1		0.00665 *10*	α=0.00665 *10*; α(K)=0.00554 *8*; α(L)=0.000855 *12*; α(M)=0.000196 *3*; α(N+..)=5.80×10^{-5} *9* α(N)=4.86×10^{-5} *7*; α(O)=8.81×10^{-6} *13*; α(P)=5.54×10^{-7} *8* α(K)exp=0.007 *2* (1998Ru04), α(K)exp<0.01 (1978Bo05).
566.9 *4*	0.5 *1*	1316.1	(17/2$^-$)	749.30	(13/2$^-$)				
569.5 *4*	1.2 *1*	1280.07	(11/2$^+$)	710.48	(9/2$^+$)	E2+M1	0.9 *4*	0.042 *11*	α(K)=0.034 *9*; α(L)=0.0061 *11*; α(M)=0.00142 *25*; α(N+..)=0.00042 *8* α(N)=0.00035 *7*; α(O)=6.4×10^{-5} *12*; α(P)=3.9×10^{-6} *11* α(K)exp=0.033 *9*.
571.4[@] *2*	2.8 *2*	590.80	(3/2$^+$)	19.44	3/2$^{(+)}$	M1+E2	1.2 *3*	0.036 *6*	α(K)=0.029 *5*; α(L)=0.0054 *7*; α(M)=0.00126 *15*; α(N+..)=0.00037 *5* α(N)=0.00031 *4*; α(O)=5.7×10^{-5} *7*; α(P)=3.3×10^{-6} *6* α(K)exp=0.029 *5*.
578.8 *4*	0.7 *2*	1393.4	(13/2$^-$)	815.89	(15/2$^-$)	M1		0.0576	α(K)=0.0476 *7*; α(L)=0.00771 *11*; α(M)=0.00178 *3*; α(N+..)=0.000531 *8* α(N)=0.000444 *7*; α(O)=8.17×10^{-5} *12*; α(P)=5.57×10^{-6} *8* α(K)exp=0.050 *16*.
582.4[@] *4*	1.3 *1*	822.47	(5/2$^+$)	240.27	(5/2$^+$)	M1+E2	0.4 *7*	0.051 *16*	α(K)=0.042 *14*; α(L)=0.0070 *18*; α(M)=0.0016 *4*; α(N+..)=0.00048 *12* α(N)=0.00040 *10*; α(O)=7.4×10^{-5} *19*; α(P)=4.9×10^{-6} *17* α(K)exp=0.043 *7*.
583.4 *4*	0.4 *1*	755.3	(9/2$^-$)	172.0	(5/2$^-$)				
584.4 *4*	0.80 *15*	1400.3	(13/2$^-$,15/2$^-$)	815.89	(15/2$^-$)	M1+E2	0.8 *8*	0.041 *15*	α(K)=0.034 *13*; α(L)=0.0059 *17*; α(M)=0.0014 *4*; α(N+..)=0.00041 *11* α(N)=0.00034 *10*; α(O)=6.2×10^{-5} *18*; α(P)=3.9×10^{-6} *16* α(K)exp=0.033 *12*.
586.7 *4*	0.9 *3*	1184.8	(7/2$^-$,9/2$^-$)	598.1	(7/2$^-$)	M1+E2	1.0 *7*	0.037 *16*	α(K)=0.030 *14*; α(L)=0.0054 *18*; α(M)=0.0013 *4*; α(N+..)=0.00037 *12* α(N)=0.00031 *10*; α(O)=5.7×10^{-5} *19*; α(P)=3.4×10^{-6} *17* α(K)exp=0.03 *1*.

$^{187}_{79}Au_{108}$-18

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
591.0[@] 4	0.8 1	590.80	(3/2$^+$)	0.0	1/2$^{(+)}$	M1		0.0546	α(K)=0.0451 7; α(L)=0.00730 11; α(M)=0.001687 24; α(N+..)=0.000503 7 α(N)=0.000420 6; α(O)=7.74×10^{-5} 11; α(P)=5.28×10^{-6} 8 α(K)exp=0.05 2.
594.2 4	1.2 1	1304.5	(9/2$^+$,11/2$^+$)	710.48	(9/2$^+$)	E2(+M1)	3.1 4	0.0206 10	α(K)=0.0160 9; α(L)=0.00356 12; α(M)=0.00085 3; α(N+..)=0.000250 8 α(N)=0.000211 7; α(O)=3.73×10^{-5} 13; α(P)=1.80×10^{-6} 11 α(K)exp=0.016 3.
602.9 2	2.35 15	956.52	(13/2$^-$)	353.78	(13/2$^-$)	M1+E2	0.9 3	0.036 7	α(K)=0.029 6; α(L)=0.0052 8; α(M)=0.00121 16; α(N+..)=0.00036 5 α(N)=0.00030 4; α(O)=5.5×10^{-5} 8; α(P)=3.4×10^{-6} 7 α(K)exp=0.029 5 (1998Ru04), α(K)exp=0.040 8 (1978Bo05).
608.4[a] 4	1.1 2	2319.2	(15/2$^-$)	1711.0					α(K)exp=0.023 8.
614.1[@] 4	1.7 8	633.68	(7/2$^+$)	19.44	3/2$^{(+)}$				α(K)exp=0.03 2, implies Mult: M1+E2.
616.4 2	3.1 3	840.1	(9/2$^-$)	223.93	(11/2$^-$)	M1		0.0489	α(K)=0.0404 6; α(L)=0.00653 10; α(M)=0.001510 22; α(N+..)=0.000450 7 α(N)=0.000376 6; α(O)=6.92×10^{-5} 10; α(P)=4.73×10^{-6} 7 α(K)exp=0.047 10 (1998Ru04), α(K)exp=0.045 15 (1978Bo05).
618.7[@] 4	0.28 5	822.47	(5/2$^+$)	203.40	(3/2$^+$)	M1		0.0484	α(K)=0.0400 6; α(L)=0.00647 10; α(M)=0.001495 21; α(N+..)=0.000446 7 α(N)=0.000372 6; α(O)=6.86×10^{-5} 10; α(P)=4.68×10^{-6} 7 α(K)exp=0.05 2.
621.8 4	1.7 2	741.96	(13/2$^-$)	120.40	9/2$^{(-)}$	E2		0.01552	α(K)=0.01185 17; α(L)=0.00280 4; α(M)=0.000674 10; α(N+..)=0.000198 3 α(N)=0.0001670 24; α(O)=2.93×10^{-5} 5; α(P)=1.317×10^{-6} 19 α(K)exp=0.012 6.
624.9 4	0.25 8	1367.3	(15/2$^-$)	741.96	(13/2$^-$)	M1		0.0472	α(K)=0.0390 6; α(L)=0.00630 9; α(M)=0.001456 21; α(N+..)=0.000434 7 α(N)=0.000363 6; α(O)=6.68×10^{-5} 10; α(P)=4.56×10^{-6} 7 α(K)exp=0.04 3.
625.0 2	12.6 4	1121.68	(13/2$^+$)	496.79	(11/2$^-$)	E1		0.00541 8	α=0.00541 8; α(K)=0.00452 7; α(L)=0.000691 10; α(M)=0.0001586 23; α(N+..)=4.69×10^{-5} 7 α(N)=3.93×10^{-5} 6; α(O)=7.14×10^{-6} 10; α(P)=4.54×10^{-7} 7 α(K)exp=0.006 2 (1998Ru04), α(K)exp=0.0064 14 (1978Bo05).
625.4 2	2.75 20	1120.95	(11/2$^+$)	495.37	(7/2$^+$)	E2		0.01532	α(K)=0.01171 17; α(L)=0.00275 4; α(M)=0.000663 10; α(N+..)=0.000194 3 α(N)=0.0001643 23; α(O)=2.88×10^{-5} 4; α(P)=1.301×10^{-6} 19 α(K)exp=0.013 4.
629.6 4	1.1 3	1249.5	(11/2$^-$)	619.86	(11/2$^-$)	M1+E2	0.9 3	0.032 6	α(K)=0.026 5; α(L)=0.0046 7; α(M)=0.00108 15; α(N+..)=0.00032 5

$^{187}_{79}Au_{108}$-19

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(N)=0.00027 *4*; α(O)=4.9×10^{-5} *7*; α(P)=3.0×10^{-6} *6*
									α(K)exp=0.027 *5*.
632.0[a] *4*	1.10 *15*	2343.0		1711.0					α(K)exp=0.020 *8*.
632.8[a] *4*	0.70 *15*	1600.9		968.01	(11/2$^+$)				α(K)exp=0.020 *8*.
634.9 *4*	0.4 *1*	755.3	(9/2$^-$)	120.40	9/2$^{(-)}$				
639.4 *2*	8.6 *3*	993.2	(15/2$^-$)	353.78	(13/2$^-$)	M1+E2	0.85 *18*	0.032 *4*	α(K)=0.026 *3*; α(L)=0.0045 *4*; α(M)=0.00106 *9*; α(N+..)=0.00031 *3*
									α(N)=0.000263 *21*; α(O)=4.8×10^{-5} *4*; α(P)=3.0×10^{-6} *4*
									α(K)exp=0.026 *3* (1998Ru04), α(K)exp=0.033 *6* (1978Bo05).
642.7 *4*	1.95 *15*	1316.1	(17/2$^-$)	673.24	(15/2$^-$)	M1+E2	1.3 *9*	0.025 *15*	α(K)=0.020 *13*; α(L)=0.0038 *17*; α(M)=0.0009 *4*; α(N+..)=0.00026 *11*
									α(N)=0.00022 *9*; α(O)=4.0×10^{-5} *18*; α(P)=2.3×10^{-6} *15*
									α(K)exp=0.02 *1*.
643.5 *4*	0.6 *1*	934.39	(5/2$^+$)	290.97	(5/2$^+$)	M1(+E2)	0.2 *4*	0.043 *7*	α(K)=0.035 *6*; α(L)=0.0057 *8*; α(M)=0.00132 *17*; α(N+..)=0.00039 *5*
									α(N)=0.00033 *5*; α(O)=6.1×10^{-5} *8*; α(P)=4.1×10^{-6} *7*
									α(K)exp=0.035 *20*.
646.3 *2*	2.0 *2*	1280.07	(11/2$^+$)	633.68	(7/2$^+$)	(E2)		0.01424	α(K)=0.01094 *16*; α(L)=0.00252 *4*; α(M)=0.000604 *9*; α(N+..)=0.0001774 *25*
									α(N)=0.0001498 *21*; α(O)=2.64×10^{-5} *4*; α(P)=1.216×10^{-6} *17*
									α(K)exp=0.014 *5*.
647.9[a] *4*	0.8 *2*	2237.6	(13/2$^-$)	1589.65	(11/2,13/2)$^+$				α(K)exp=0.01 *1*, Mult: (E1) (1994RuZX).
648.1[a] *4*	0.40 *15*	2237.8		1589.65	(11/2,13/2)$^+$				α(K)exp=0.03 *1*, Mult: M1 (1994RuZX).
650.9 *2*	2.3 *2*	1147.8	(11/2$^-$,13/2$^-$)	496.79	(11/2$^-$)	E2+M1	1.3 *5*	0.025 *7*	α(K)=0.020 *6*; α(L)=0.0037 *8*; α(M)=0.00086 *17*; α(N+..)=0.00025 *6*
									α(N)=0.00021 *5*; α(O)=3.9×10^{-5} *9*; α(P)=2.3×10^{-6} *7*
									α(K)exp=0.020 *5*.
651.2 *4*	0.5 *1*	1393.4	(13/2$^-$)	741.96	(13/2$^-$)	M1		0.0424	α(K)=0.0351 *5*; α(L)=0.00566 *8*; α(M)=0.001307 *19*; α(N+..)=0.000390 *6*
									α(N)=0.000326 *5*; α(O)=6.00×10^{-5} *9*; α(P)=4.10×10^{-6} *6*
									α(K)exp=0.040 *16*.
653.2 *4*	1.75 *20*	1148.6	(11/2$^+$)	495.37	(7/2$^+$)	E2		0.01391	α(K)=0.01071 *15*; α(L)=0.00244 *4*; α(M)=0.000587 *9*; α(N+..)=0.0001723 *25*
									α(N)=0.0001455 *21*; α(O)=2.56×10^{-5} *4*; α(P)=1.190×10^{-6} *17*
									α(K)exp=0.011 *4*.
653.9 *4*	0.8 *2*	1420.6	(9/2$^+$,11/2$^+$)	767.11	(9/2$^+$)	M1+E2	1.2 *7*	0.025 *11*	α(K)=0.021 *10*; α(L)=0.0037 *13*; α(M)=0.0009 *3*; α(N+..)=0.00026 *9*

$^{187}_{79}Au_{108}$-20

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(N)=0.00022 *7*; α(O)=3.9×10^{-5} *14*; α(P)=2.4×10^{-6} *12* α(K)exp=0.021 *7* (1998Ru04), α(K)exp=0.020 *4* (1978Bo05).
656.1[a] *4*	0.4 *1*	1405.4		749.30	(13/2$^-$)				
657.0[a#] *4*	0.35 *15*	2246.5	(13/2$^-$)	1589.65	(11/2,13/2)$^+$				
657.3 *2*	7.0 *5*	881.22	(11/2$^-$)	223.93	(11/2$^-$)	E0+M1+E2		≈0.07	α(K)exp=0.069 *11* (1998Ru04), α(K)exp=0.039 *8* (1978Bo05), α(K)exp=0.10 *2* (1988Pa15). α: Estimated by the evaluator from the weighted average α(K)exp=0.057 *7*.
659.1 *4*	0.65 *1*	1369.54	(7/2$^+$)	710.48	(9/2$^+$)	E2(+M1)	2.9 *9*	0.017 *3*	α(K)=0.0130 *22*; α(L)=0.0027 *3*; α(M)=0.00065 *7*; α(N+..)=0.000190 *20* α(N)=0.000160 *17*; α(O)=2.9×10^{-5} *4*; α(P)=1.5×10^{-6} *3* α(K)exp=0.013 *6*.
659.2 *4*	0.75 *15*	1155.9	(11/2$^-$)	496.79	(11/2$^-$)	M1		0.0411	α(K)=0.0340 *5*; α(L)=0.00548 *8*; α(M)=0.001266 *18*; α(N+..)=0.000377 *6* α(N)=0.000315 *5*; α(O)=5.81×10^{-5} *9*; α(P)=3.97×10^{-6} *6* α(K)exp=0.038 *13*.
659.4 *2*	2.4 *3*	985.0	(9/2$^-$)	325.72	(7/2$^-$)	M1+E2	0.5 *11*	0.036 *15*	α(K)=0.029 *13*; α(L)=0.0049 *16*; α(M)=0.0011 *4*; α(N+..)=0.00034 *11* α(N)=0.00028 *9*; α(O)=5.1×10^{-5} *18*; α(P)=3.4×10^{-6} *15* α(K)exp=0.030 *9*.
667.8[@] *4*	0.9 *1*	687.12	(5/2$^+$)	19.44	3/2$^{(+)}$	M1		0.0397	α(K)=0.0329 *5*; α(L)=0.00530 *8*; α(M)=0.001224 *18*; α(N+..)=0.000365 *6* α(N)=0.000305 *5*; α(O)=5.61×10^{-5} *8*; α(P)=3.84×10^{-6} *6* α(K)exp=0.04 *2*.
669.1 *4*	3.0 *3*	1164.51	(11/2$^+$)	495.37	(7/2$^+$)	E2		0.01319	α(K)=0.01019 *15*; α(L)=0.00229 *4*; α(M)=0.000549 *8*; α(N+..)=0.0001613 *23* α(N)=0.0001362 *20*; α(O)=2.40×10^{-5} *4*; α(P)=1.132×10^{-6} *16* α(K)exp=0.010 *6*.
669.2 *4*	1.05 *15*	1418.5	(13/2$^-$)	749.30	(13/2$^-$)	M1		0.0395	α(K)=0.0327 *5*; α(L)=0.00527 *8*; α(M)=0.001217 *18*; α(N+..)=0.000363 *6* α(N)=0.000303 *5*; α(O)=5.58×10^{-5} *8*; α(P)=3.82×10^{-6} *6* α(K)exp=0.04 *2*.
678.9 *4*	1.4 *3*	1276.9	(7/2$^-$,9/2$^-$)	598.1	(7/2$^-$)	M1		0.0381	α(K)=0.0315 *5*; α(L)=0.00507 *8*; α(M)=0.001172 *17*; α(N+..)=0.000349 *5* α(N)=0.000292 *5*; α(O)=5.38×10^{-5} *8*; α(P)=3.68×10^{-6} *6*

$^{187}_{79}Au_{108}$-21

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. b	δ c	α d	Comments
									α(K)exp=0.033 *6*.

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	δ [c]	α [d]	Comments
679.7 [a] *4*	0.40 *15*	2268.2	(13/2$^-$)	1589.65	(11/2,13/2)$^+$				α(K)exp=0.007 *7*, Mult: (E1) (1994RuZX).
683.5 *4*	1.3 *2*	1126.7	(7/2,9/2,11/2)$^-$	443.30	9/2$^{(-)}$	M1+E2	0.6 *3*	0.031 *5*	α(K)=0.025 *4*; α(L)=0.0042 *6*; α(M)=0.00098 *12*; α(N+..)=0.00029 *4* α(N)=0.00024 *3*; α(O)=4.5×10^{-5} *6*; α(P)=2.9×10^{-6} *5* α(K)exp=0.025 *5*.
686.7 [@] *4*	0.5 *1*	687.12	(5/2$^+$)	0.0	1/2$^{(+)}$				
692.1 *4*	0.3 *1*	1380.7	(17/2$^+$)	688.68	(17/2$^-$)	(E1)		0.00442 *7*	α=0.00442 *7*; α(K)=0.00369 *6*; α(L)=0.000561 *8*; α(M)=0.0001286 *18*; α(N+..)=3.80×10^{-5} *6* α(N)=3.19×10^{-5} *5*; α(O)=5.80×10^{-6} *9*; α(P)=3.73×10^{-7} *6* α(K)exp=0.01 *1*.
693.8 *4*	1.8 *2*	934.39	(5/2$^+$)	240.27	(5/2$^+$)	M1+E2	0.8 *6*	0.027 *9*	α(K)=0.022 *8*; α(L)=0.0037 *10*; α(M)=0.00087 *22*; α(N+..)=0.00026 *7* α(N)=0.00022 *6*; α(O)=3.9×10^{-5} *11*; α(P)=2.5×10^{-6} *9* α(K)exp=0.022 *6*.
709.2 *4*	1.9 *3*	829.13	(11/2$^-$)	120.40	9/2$^{(-)}$	(E2+M1)	0.8 *12*	0.025 *10*	α(K)=0.021 *8*; α(L)=0.0035 *11*; α(M)=0.00082 *24*; α(N+..)=0.00024 *8* α(N)=0.00020 *6*; α(O)=3.7×10^{-5} *12*; α(P)=2.4×10^{-6} *10* α(K)exp=0.021 *11*.
709.9 *2*	3.6 *3*	1205.19	(9/2$^+$)	495.37	(7/2$^+$)	E2(+M1)	2.3 *6*	0.0152 *22*	α(K)=0.0121 *19*; α(L)=0.0024 *3*; α(M)=0.00056 *6*; α(N+..)=0.000165 *18* α(N)=0.000139 *15*; α(O)=2.5×10^{-5} *3*; α(P)=1.36×10^{-6} *23* α(K)exp=0.012 *4*.
710.3 *4*	1.2 *1*	1420.6	(9/2$^+$,11/2$^+$)	710.48	(9/2$^+$)	M1+E2	1.2 *4*	0.021 *5*	α(K)=0.017 *4*; α(L)=0.0030 *6*; α(M)=0.00070 *12*; α(N+..)=0.00021 *4* α(N)=0.00017 *3*; α(O)=3.2×10^{-5} *6*; α(P)=1.9×10^{-6} *5* α(K)exp=0.017 *3*.
712.7 *4*	1.45 *15*	1155.9	(11/2$^-$)	443.30	9/2$^{(-)}$	M1+E2	0.6 *9*	0.028 *10*	α(K)=0.023 *8*; α(L)=0.0038 *11*; α(M)=0.00088 *25*; α(N+..)=0.00026 *8* α(N)=0.00022 *6*; α(O)=4.0×10^{-5} *12*; α(P)=2.6×10^{-6} *10* α(K)exp=0.023 *7*.
721.7 *4*	0.50 *15*	1197.6	(11/2$^-$)	476.59	(7/2$^-$)	(E2)		0.01120	α(K)=0.00875 *13*; α(L)=0.00188 *3*; α(M)=0.000448 *7*; α(N+..)=0.0001317 *19* α(N)=0.0001111 *16*; α(O)=1.97×10^{-5} *3*; α(P)=9.71×10^{-7} *14* α(K)exp=0.012 *9*.
724.1 *4*	0.5 *2*	2313.6	(13/2$^+$)	1589.65	(11/2,13/2)$^+$	(M1)		0.0323	α(K)=0.0267 *4*; α(L)=0.00429 *6*; α(M)=0.000991 *14*; α(N+..)=0.000295 *5*

$^{187}_{79}Au_{108}$-23

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(N)=0.000247 *4*; α(O)=4.54×10^{-5} *7*; α(P)=3.11×10^{-6} *5* α(K)exp=0.04 *3*.
732.1 *4*	0.7 *1*	1405.3	(19/2$^-$)	673.24	(15/2$^-$)	(E2)		0.01087	α(K)=0.00850 *12*; α(L)=0.00181 *3*; α(M)=0.000431 *6*; α(N+..)=0.0001269 *18* α(N)=0.0001070 *15*; α(O)=1.90×10^{-5} *3*; α(P)=9.43×10^{-7} *14* α(K)exp=0.011 *6*.
736.3 *4*	0.5 *1*	1369.54	(7/2$^+$)	633.68	(7/2$^+$)	M1		0.0309	α(K)=0.0256 *4*; α(L)=0.00411 *6*; α(M)=0.000948 *14*; α(N+..)=0.000283 *4* α(N)=0.000236 *4*; α(O)=4.35×10^{-5} *7*; α(P)=2.98×10^{-6} *5* α(K)exp=0.026 *9*.
745.1 *4*	1.0 *1*	1418.5	(13/2$^-$)	673.24	(15/2$^-$)	E2+M1	0.8 *11*	0.022 *8*	α(K)=0.018 *7*; α(L)=0.0031 *9*; α(M)=0.00072 *20*; α(N+..)=0.00021 *6* α(N)=0.00018 *5*; α(O)=3.3×10^{-5} *10*; α(P)=2.1×10^{-6} *8* α(K)exp=0.018 *9*.
747.5 *4*	1.55 *15*	1420.7	(11/2$^-$)	673.24	(15/2$^-$)	E2		0.01040	α(K)=0.00815 *12*; α(L)=0.001714 *25*; α(M)=0.000408 *6*; α(N+..)=0.0001202 *17* α(N)=0.0001013 *15*; α(O)=1.80×10^{-5} *3*; α(P)=9.05×10^{-7} *13* α(K)exp=0.008 *2*.
751.9 *4*	0.6 *1*	1228.7	(9/2$^-$)	476.59	(7/2$^-$)	M1+E2	0.9 *10*	0.021 *9*	α(K)=0.017 *8*; α(L)=0.0029 *10*; α(M)=0.00068 *23*; α(N+..)=0.00020 *7* α(N)=0.00017 *6*; α(O)=3.1×10^{-5} *11*; α(P)=2.0×10^{-6} *9* α(K)exp=0.017 *8*.
753.1 *4*	0.7 *2*	1249.5	(11/2$^-$)	496.79	(11/2$^-$)	M1		0.0292	α(K)=0.0241 *4*; α(L)=0.00387 *6*; α(M)=0.000894 *13*; α(N+..)=0.000267 *4* α(N)=0.000223 *4*; α(O)=4.10×10^{-5} *6*; α(P)=2.81×10^{-6} *4* α(K)exp=0.026 *7*.
761.1 *4*	0.6 *1*	1589.65	(11/2,13/2)$^+$	829.13	(11/2$^-$)	(E1)		0.00368 *6*	α=0.00368 *6*; α(K)=0.00308 *5*; α(L)=0.000464 *7*; α(M)=0.0001062 *15*; α(N+..)=3.14×10^{-5} *5* α(N)=2.63×10^{-5} *4*; α(O)=4.80×10^{-6} *7*; α(P)=3.12×10^{-7} *5* α(K)exp=0.003 *2*.
768.0 *2*	3.95 *20*	1121.68	(13/2$^+$)	353.78	(13/2$^-$)	E1		0.00361 *5*	α=0.00361 *5*; α(K)=0.00302 *5*; α(L)=0.000456 *7*; α(M)=0.0001043 *15*; α(N+..)=3.09×10^{-5} *5* α(N)=2.59×10^{-5} *4*; α(O)=4.71×10^{-6} *7*; α(P)=3.06×10^{-7} *5* α(K)exp=0.0031 *7*.
773.3 *4*	0.7 *1*	1393.4	(13/2$^-$)	619.86	(11/2$^-$)	M1		0.0272	α(K)=0.0225 *4*; α(L)=0.00362 *5*; α(M)=0.000835 *12*; α(N+..)=0.000249 *4* α(N)=0.000208 *3*; α(O)=3.83×10^{-5} *6*; α(P)=2.62×10^{-6} *4* α(K)exp=0.03 *1*.
778.8 *4*	1.1 *1*	1369.54	(7/2$^+$)	590.80	(3/2$^+$)	(E2)		0.00954 *14*	α=0.00954 *14*; α(K)=0.00752 *11*; α(L)=0.001545 *22*; α(M)=0.000367 *6*; α(N+..)=0.0001082 α(N)=9.11×10^{-5} *13*; α(O)=1.621×10^{-5} *23*; α(P)=8.34×10^{-7} *12* α(K)exp=0.009 *4*.

$^{187}_{79}Au_{108}$-24

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
780.0[a#] *4*	0.4 *1*	1276.9	(7/2⁻,9/2⁻)	496.79	(11/2⁻)				
781.5[a] *4*	0.35 *10*	1471.0	(13/2⁺,15/2⁺)	688.68	(17/2⁻)				
785.3 *4*	0.65 *15*	1280.07	(11/2⁺)	495.37	(7/2⁺)	E2		0.00937 *14*	α=0.00937 *14*; α(K)=0.00739 *11*; α(L)=0.001513 *22*; α(M)=0.000360 *5*; α(N+..)=0.0001059 α(N)=8.92×10⁻⁵ *13*; α(O)=1.587×10⁻⁵ *23*; α(P)=8.20×10⁻⁷ *12* α(K)exp=0.008 *3*.
785.5 *4*	0.3 *1*	1405.4	(13/2⁺)	619.86	(11/2⁻)				
790.5[a] *4*	0.4 *1*	1557.5		767.11	(9/2⁺)				α(K)exp=0.020 *17*.
791.3 *4*	0.5 *1*	1540.7	(13/2⁻,15/2⁻)	749.30	(13/2⁻)	M1		0.0257	α(K)=0.0212 *3*; α(L)=0.00341 *5*; α(M)=0.000786 *11*; α(N+..)=0.000234 *4* α(N)=0.000196 *3*; α(O)=3.61×10⁻⁵ *5*; α(P)=2.47×10⁻⁶ *4* α(K)exp=0.022 *12*.
795.0 *4*	0.8 *1*	1147.8	(11/2⁻,13/2⁻)	353.78	(13/2⁻)	(M1)		0.0254	α(K)=0.0210 *3*; α(L)=0.00337 *5*; α(M)=0.000777 *11*; α(N+..)=0.000232 *4* α(N)=0.000193 *3*; α(O)=3.56×10⁻⁵ *5*; α(P)=2.44×10⁻⁶ *4* α(K)exp=0.019 *5*.
805.5 *4*	0.95 *20*	1159.0	(17/2⁻)	353.78	(13/2⁻)	(E2)		0.00889 *13*	α=0.00889 *13*; α(K)=0.00703 *10*; α(L)=0.001421 *20*; α(M)=0.000337 *5*; α(N+..)=9.93×10⁻⁵ *14* α(N)=8.36×10⁻⁵ *12*; α(O)=1.490×10⁻⁵ *21*; α(P)=7.80×10⁻⁷ *11* α(K)exp=0.008 *3*.
805.7 *4*	0.65 *15*	1249.5	(11/2⁻)	443.30	9/2⁽⁻⁾	M1+E2	0.6 *13*	0.020 *9*	α(K)=0.017 *7*; α(L)=0.0028 *10*; α(M)=0.00064 *22*; α(N+..)=0.00019 *7* α(N)=0.00016 *6*; α(O)=2.9×10⁻⁵ *11*; α(P)=1.9×10⁻⁶ *9* α(K)exp=0.017 *7*.
813.3 *4*	0.7 *1*	985.0	(9/2⁻)	172.0	(5/2⁻)	E2		0.00872 *13*	α=0.00872 *13*; α(K)=0.00690 *10*; α(L)=0.001387 *20*; α(M)=0.000329 *5*; α(N+..)=9.70×10⁻⁵ *14* α(N)=8.16×10⁻⁵ *12*; α(O)=1.455×10⁻⁵ *21*; α(P)=7.65×10⁻⁷ *11* α(K)exp=0.006 *4*.
829.9 *2*	2.3 *2*	950.3	(7/2⁻,9/2⁻)	120.40	9/2⁽⁻⁾	M1+E2	1.1 *4*	0.015 *4*	α(K)=0.012 *3*; α(L)=0.0021 *4*; α(M)=0.00049 *9*; α(N+..)=0.00014 *3* α(N)=0.000121 *21*; α(O)=2.2×10⁻⁵ *4*; α(P)=1.4×10⁻⁶ *4* α(K)exp=0.012 *2*.
830.1 *4*	0.80 *15*	1155.9	(11/2⁻)	325.72	(7/2⁻)	(E2)		0.00836 *12*	α=0.00836 *12*; α(K)=0.00663 *10*; α(L)=0.001320 *19*; α(M)=0.000313 *5*; α(N+..)=9.21×10⁻⁵ *13* α(N)=7.76×10⁻⁵ *11*; α(O)=1.384×10⁻⁵ *20*; α(P)=7.35×10⁻⁷ *11* α(K)exp=0.007 *4*.
836.2 *2*	3.6 *2*	956.52	(13/2⁻)	120.40	9/2⁽⁻⁾	E2		0.00823 *12*	α=0.00823 *12*; α(K)=0.00654 *10*; α(L)=0.001296 *19*;

$^{187}_{79}Au_{108}$-25

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(M)=0.000307 *5*; α(N+..)=9.05×10^{-5} *13* α(N)=7.62×10^{-5} *11*; α(O)=1.360×10^{-5} *19*; α(P)=7.24×10^{-7} *11* α(K)exp=0.0067 *10*.
840.5 *4*	0.75 *15*	1590.0	(11/2$^-$,13/2$^-$)	749.30	(13/2$^-$)	E2+M1	0.6 *10*	0.018 *7*	α(K)=0.015 *6*; α(L)=0.0025 *8*; α(M)=0.00057 *17*; α(N+..)=0.00017 *5* α(N)=0.00014 *5*; α(O)=2.6×10^{-5} *8*; α(P)=1.7×10^{-6} *7* α(K)exp=0.015 *5*.
846.8[a] *4*	0.5 *1*	1557.5		710.48	(9/2$^+$)				α(K)exp=0.016 *12*, Mult: (M1+E2) (1994RuZX).
848.1[a] *2*	2.25 *15*	2319.2	(15/2$^-$)	1471.0	(13/2$^+$,15/2$^+$)				α(K)exp=0.004 *2*.
860.7 *4*	1.7 *2*	1357.7	(15/2$^-$)	496.79	(11/2$^-$)	E2		0.00776 *11*	α=0.00776 *11*; α(K)=0.00618 *9*; α(L)=0.001209 *17*; α(M)=0.000286 *4*; α(N+..)=8.43×10^{-5} *12* α(N)=7.09×10^{-5} *10*; α(O)=1.268×10^{-5} *18*; α(P)=6.84×10^{-7} *10* α(K)exp=0.010 *2*.
864.4 *4*	1.2 *1*	985.0	(9/2$^-$)	120.40	9/2$^{(-)}$	E2+M1	0.9 *8*	0.015 *6*	α(K)=0.012 *5*; α(L)=0.0020 *7*; α(M)=0.00047 *15*; α(N+..)=0.00014 *5* α(N)=0.00012 *4*; α(O)=2.1×10^{-5} *7*; α(P)=1.4×10^{-6} *6* α(K)exp=0.012 *4*.
867.5 *4*	0.45 *15*	1540.7	(13/2$^-$,15/2$^-$)	673.24	(15/2$^-$)	M1		0.0203	α(K)=0.01680 *24*; α(L)=0.00269 *4*; α(M)=0.000620 *9*; α(N+..)=0.000185 *3* α(N)=0.0001544 *22*; α(O)=2.84×10^{-5} *4*; α(P)=1.95×10^{-6} *3* α(K)exp=0.020 *7*.
871.9[a] *4*	1.7 *2*	2343.0		1471.0	(13/2$^+$,15/2$^+$)				α(K)exp=0.003 *2*.
873.6 *4*	1.0 *2*	1316.87	(9/2$^-$)	443.30	9/2$^{(-)}$	M1		0.0199	α(K)=0.01650 *24*; α(L)=0.00264 *4*; α(M)=0.000609 *9*; α(N+..)=0.000181 *3* α(N)=0.0001516 *22*; α(O)=2.79×10^{-5} *4*; α(P)=1.92×10^{-6} *3* α(K)exp=0.020 *6*.
880.3[a] *4*	0.7 *1*	2300.28		1420.6	(9/2$^+$,11/2$^+$)				α(K)exp=0.010 *4*.
890.3[a] *4*	0.4 *1*	1600.9		710.48	(9/2$^+$)				α(K)exp=0.015 *9*.
895.8 *4*	1.65 *20*	1249.5	(11/2$^-$)	353.78	(13/2$^-$)	E2(+M1)	3.2 *8*	0.0082 *7*	α=0.0082 *7*; α(K)=0.0066 *6*; α(L)=0.00122 *9*; α(M)=0.000287 *19*; α(N+..)=8.5×10^{-5} *6* α(N)=7.1×10^{-5} *5*; α(O)=1.28×10^{-5} *9*; α(P)=7.4×10^{-7} *7* α(K)exp=0.0066 *20*.
896.2 *4*	0.65 *15*	1393.4	(13/2$^-$)	496.79	(11/2$^-$)	M1		0.0187	α(K)=0.01546 *22*; α(L)=0.00247 *4*; α(M)=0.000570 *8*; α(N+..)=0.0001699 *24* α(N)=0.0001419 *20*; α(O)=2.62×10^{-5} *4*; α(P)=1.80×10^{-6} *3* α(K)exp=0.021 *6*.
900.7[a] *4*	1.1 *2*	2319.1		1418.5	(13/2$^-$)				

$^{187}_{79}Au_{108}$-26

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	$I_{(\gamma+ce)}$[†]	Comments
908.5 *4*	1.0 *1*	1405.4	(13/2$^+$)	496.79	(11/2$^-$)					
913.5[a] *2*	2.1 *4*	2319.2	(15/2$^-$)	1405.4						α(K)exp=0.004 *3*.
914.0 *4*	0.8 *2*	1205.19	(9/2$^+$)	290.97	(5/2$^+$)	(E2)		0.00687 *10*		α=0.00687 *10*; α(K)=0.00550 *8*; α(L)=0.001048 *15*; α(M)=0.000247 *4*; α(N+..)=7.29×10^{-5} *11* α(N)=6.13×10^{-5} *9*; α(O)=1.099×10^{-5} *16*; α(P)=6.09×10^{-7} *9* α(K)exp=0.008 *4*.
920.7[a] *4*	0.90 *15*	2237.6	(13/2$^-$)	1316.87	(9/2$^-$)					α(K)exp=0.007 *4*.
930.9[a] *4*	0.8 *1*	2300.28		1369.54	(7/2$^+$)					
932.7[a] *4*	1.8 *2*	2313.6	(13/2$^+$)	1380.7	(17/2$^+$)	E2		0.00660 *10*		α=0.00660 *10*; α(K)=0.00530 *8*; α(L)=0.000999 *14*; α(M)=0.000235 *4*; α(N+..)=6.95×10^{-5} *10* α(N)=5.84×10^{-5} *9*; α(O)=1.048×10^{-5} *15*; α(P)=5.85×10^{-7} *9* α(K)exp=0.004 *2*.
951.0 *4*	0.65 *15*	1276.9	(7/2$^-$,9/2$^-$)	325.72	(7/2$^-$)	M1+E2	0.6 *11*	0.013 *5*		α(K)=0.011 *4*; α(L)=0.0018 *6*; α(M)=0.00042 *13*; α(N+..)=0.00012 *4* α(N)=0.00010 *4*; α(O)=1.9×10^{-5} *6*; α(P)=1.3×10^{-6} *5* α(K)exp=0.011 *4*.
962.9 *4*	1.05 *20*	1316.87	(9/2$^-$)	353.78	(13/2$^-$)	E2		0.00619 *9*		α=0.00619 *9*; α(K)=0.00498 *7*; α(L)=0.000928 *13*; α(M)=0.000218 *3*; α(N+..)=6.45×10^{-5} *9* α(N)=5.42×10^{-5} *8*; α(O)=9.74×10^{-6} *14*; α(P)=5.50×10^{-7} *8* α(K)exp=0.005 *2*.
963.0[a#] *4*	0.65 *15*	1778.9	(11/2$^-$)	815.89	(15/2$^-$)	(E2)		0.00619 *9*		α=0.00619 *9*; α(K)=0.00498 *7*; α(L)=0.000928 *13*; α(M)=0.000218 *3*; α(N+..)=6.45×10^{-5} *9* α(N)=5.42×10^{-5} *8*; α(O)=9.74×10^{-6} *14*; α(P)=5.50×10^{-7} *8* α(K)exp=0.005 *2*.
963.2 *2*	3.5 *3*	1187.1	(13/2$^-$)	223.93	(11/2$^-$)	E2+M1	1.7 *6*	0.0086 *19*		α=0.0086 *19*; α(K)=0.0070 *16*; α(L)=0.00122 *22*; α(M)=0.00028 *5*; α(N+..)=8.4×10^{-5} *15* α(N)=7.1×10^{-5} *13*; α(O)=1.28×10^{-5} *24*; α(P)=7.9×10^{-7} *19* α(K)exp=0.007 *2*.
969.7 *4*	0.45 *15*	1589.65	(11/2,13/2)$^+$	619.86	(11/2$^-$)	(E1)		0.00234 *4*		α=0.00234 *4*; α(K)=0.00196 *3*; α(L)=0.000291 *4*; α(M)=6.65×10^{-5} *10*; α(N+..)=1.97×10^{-5} *3* α(N)=1.649×10^{-5} *24*; α(O)=3.02×10^{-6} *5*; α(P)=2.00×10^{-7} *3* α(K)exp=0.003 *2*.
973.9 *4*	1.8 *2*	1197.6	(11/2$^-$)	223.93	(11/2$^-$)	M1+E2	0.7 *6*	0.012 *3*		α(K)=0.0100 *25*; α(L)=0.0016 *4*; α(M)=0.00038

$^{187}_{79}Au_{108}$-27

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									8; α(N+..)=0.000113 *24* α(N)=9.4×10^{-5} *20*; α(O)=1.7×10^{-5} *4*; α(P)=1.2×10^{-6} *3*
988.4[a] *4*	0.8 *1*	2369.1	(13/2$^+$)	1380.7	(17/2$^+$)				α(K)exp=0.010 *2*.
995.5[a] *4*	0.65 *15*	2117.2		1121.68	(13/2$^+$)				α(K)exp=0.005 *3*.
995.9[a] *4*	0.8 *1*	2300.28		1304.5	(9/2$^+$,11/2$^+$)				α(K)exp=0.012 *6*.
996.1[a] *4*	0.7 *1*	2145.4		1149.27	(13/2$^+$)				α(K)exp=0.010 *4*.
1004.2 *4*	0.70 *15*	1357.7	(15/2$^-$)	353.78	(13/2$^-$)	M1		0.01398	α(K)=0.01159 *17*; α(L)=0.00184 *3*; α(M)=0.000425 *6*; α(N+..)=0.0001268 *18* α(N)=0.0001059 *15*; α(O)=1.95×10^{-5} *3*; α(P)=1.342×10^{-6} *19* α(K)exp=0.011 *4*.
1009.4[a] *4*	1.0 *1*	2390.0		1380.7	(17/2$^+$)				
1014.2 *4*	0.65 *15*	1367.3	(15/2$^-$)	353.78	(13/2$^-$)	M1+E2	1.0 *9*	0.010 *4*	α=0.010 *4*; α(K)=0.008 *4*; α(L)=0.0013 *5*; α(M)=0.00030 *11*; α(N+..)=9.E−5 *4* α(N)=8.E−5 *3*; α(O)=1.4×10^{-5} *5*; α(P)=9.E−7 *4* α(K)exp=0.008 *3*.
1020.3[a] *4*	1.9 *2*	2300.28		1280.07	(11/2$^+$)				α(K)exp=0.011 *3*.
1023.7[a] *4*	1.45 *15*	2300.44		1276.9	(7/2$^-$,9/2$^-$)				α(K)exp=0.003 *2*, implies 1023.7γ (E2).
1023.8 *4*	0.45 *15*	1905.3	(15/2$^-$)	881.22	(11/2$^-$)	(E2)		0.00549 *8*	α=0.00549 *8*; α(K)=0.00444 *7*; α(L)=0.000807 *12*; α(M)=0.000189 *3*; α(N+..)=5.60×10^{-5} *8* α(N)=4.70×10^{-5} *7*; α(O)=8.47×10^{-6} *12*; α(P)=4.89×10^{-7} *7* α(K)exp=0.003 *2*.
1027.3 *4*	0.3 *1*	1147.8	(11/2$^-$,13/2$^-$)	120.40	9/2$^{(-)}$				
1044.1 *4*	1.05 *15*	1397.9		353.78	(13/2$^-$)	E2+M1			α(K)exp=0.0057 *20*, Mult: E2+M1.
1051.4 *4*	0.95 *15*	1405.4	(13/2$^+$)	353.78	(13/2$^-$)	(E1)		0.00202 *3*	α=0.00202 *3*; α(K)=0.001693 *24*; α(L)=0.000250 *4*; α(M)=5.72×10^{-5} *8*; α(N+..)=1.695×10^{-5} *24* α(N)=1.418×10^{-5} *20*; α(O)=2.60×10^{-6} *4*; α(P)=1.734×10^{-7} *25* α(K)exp=0.003 *2*.
1056.1 *4*	0.6 *2*	1280.07	(11/2$^+$)	223.93	(11/2$^-$)	(E1)		0.00200 *3*	α=0.00200 *3*; α(K)=0.001680 *24*; α(L)=0.000248 *4*; α(M)=5.67×10^{-5} *8*; α(N+..)=1.681×10^{-5} *24* α(N)=1.406×10^{-5} *20*; α(O)=2.57×10^{-6} *4*; α(P)=1.721×10^{-7} *25* α(K)exp=0.002 *1*.
1058.0 *4*	0.5 *1*	1807.6	(15/2$^-$)	749.30	(13/2$^-$)	M1		0.01225	α(K)=0.01015 *15*; α(L)=0.001613 *23*; α(M)=0.000372 *6*; α(N+..)=0.0001109 *16* α(N)=9.26×10^{-5} *13*; α(O)=1.707×10^{-5} *24*; α(P)=1.175×10^{-6} *17* α(K)exp=0.016 *4*.
1066.0[a#] *4*	0.4 *1*	1562.8		496.79	(11/2$^-$)				

$^{187}_{79}Au_{108}$-28

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
1066.6 *2*	2.7 *2*	1815.9	(15/2$^-$)	749.30	(13/2$^-$)	E2+M1	1.7 *5*	0.0068 *11*	α=0.0068 *11*; α(K)=0.0056 *9*; α(L)=0.00095 *13*; α(M)=0.00022 *3*; α(N+..)=6.6×10^{-5} *9* α(N)=5.5×10^{-5} *8*; α(O)=1.00×10^{-5} *14*; α(P)=6.3×10^{-7} *11* α(K)exp=0.0056 *12*.
1069.7[a] *4*	0.6 *2*	2191.4		1121.68	(13/2$^+$)				α(K)exp=0.006 *4*.
1092.5 *4*	0.95 *15*	1316.87	(9/2$^-$)	223.93	(11/2$^-$)	M1+E2	0.9 *8*	0.008 *3*	α=0.008 *3*; α(K)=0.0069 *24*; α(L)=0.0011 *4*; α(M)=0.00026 *8*; α(N+..)=7.8×10^{-5} *24* α(N)=6.5×10^{-5} *20*; α(O)=1.2×10^{-5} *4*; α(P)=8.E−7 *3* α(K)exp=0.007 *2*.
1095.1[a] *2*	2.5 *3*	2300.28		1205.19	(9/2$^+$)				α(K)exp=0.005 *1*.
1103.9[a] *4*	0.6 *1*	2300.7		1197.6	(11/2$^-$)				α(K)exp=0.005 *3*, Mult: (E2+M1) in 1994RuZX.
1110.6[a] *4*	0.8 *1*	1464.4		353.78	(13/2$^-$)				
1117.0[a] *4*	0.45 *10*	2266.3		1149.27	(13/2$^+$)				α(K)exp=0.012 *6*.
1134.0 *4*	0.50 *15*	1807.6	(15/2$^-$)	673.24	(15/2$^-$)	M1		0.01028	α(K)=0.00852 *12*; α(L)=0.001351 *19*; α(M)=0.000311 *5*; α(N+..)=9.39×10^{-5} *14* α(N)=7.76×10^{-5} *11*; α(O)=1.430×10^{-5} *20*; α(P)=9.85×10^{-7} *14*; α(IPF)=1.061×10^{-6} *22* α(K)exp=0.015 *10*.
1135.5[a] *4*	1.8 *1*	2300.28		1164.51	(11/2$^+$)				α(K)exp=0.006 *2*.
1142.5 *4*	0.8 *2*	1815.9	(15/2$^-$)	673.24	(15/2$^-$)	(E2+M1)	1.6 *10*	0.006 *3*	α=0.006 *3*; α(K)=0.0049 *22*; α(L)=0.0008 *4*; α(M)=0.00019 *8*; α(N+..)=5.8×10^{-5} *22* α(N)=4.8×10^{-5} *18*; α(O)=9.E−6 *4*; α(P)=6.E−7 *3*; α(IPF)=1.0×10^{-6} *3* α(K)exp=0.005 *3*.
1146.6[a] *4*	0.70 *15*	1819.8		673.24	(15/2$^-$)				
1154.2[a] *4*	0.7 *2*	2471.1	(11/2$^-$)	1316.87	(9/2$^-$)	(E2+M1)	0.9 *18*	0.0074 *25*	α=0.0074 *25*; α(K)=0.0061 *21*; α(L)=0.0010 *3*; α(M)=0.00023 *7*; α(N+..)=7.0×10^{-5} *21* α(N)=5.7×10^{-5} *18*; α(O)=1.0×10^{-5} *4*; α(P)=6.9×10^{-7} *25*; α(IPF)=1.7×10^{-6} *4* α(K)exp=0.006 *4*.
1156.5[a] *4*	0.45 *15*	2354.2		1197.6	(11/2$^-$)				
1156.9 *4*	0.9 *2*	1276.9	(7/2$^-$,9/2$^-$)	120.40	9/2$^{(-)}$	M1		0.00977 *14*	α=0.00977 *14*; α(K)=0.00810 *12*; α(L)=0.001284 *18*; α(M)=0.000296 *5*; α(N+..)=9.05×10^{-5} *13* α(N)=7.37×10^{-5} *11*; α(O)=1.359×10^{-5} *19*; α(P)=9.36×10^{-7} *14*; α(IPF)=2.25×10^{-6} *5* α(K)exp=0.008 *2*.
1169.8[a] *4*	0.45 *10*	2319.2		1149.27	(13/2$^+$)				α(K)exp=0.011 *7*.
1181.2 *4*	1.55 *15*	1930.4	(17/2$^-$)	749.30	(13/2$^-$)	E2		0.00416 *6*	α=0.00416 *6*; α(K)=0.00339 *5*; α(L)=0.000589 *9*; α(M)=0.0001374 *20*; α(N+..)=4.33×10^{-5} *6*

$^{187}_{79}Au_{108}$-29

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
									α(N)=3.41×10^{-5} *5*; α(O)=6.18×10^{-6} *9*; α(P)=3.73×10^{-7} *6*; α(IPF)=2.67×10^{-6} *5* α(K)exp=0.003 *1*.
1181.4 *4*	1.8 *2*	1405.4	(13/2$^+$)	223.93	(11/2$^-$)	(E1)		0.001651 *24*	α=0.001651 *24*; α(K)=0.001378 *20*; α(L)=0.000202 *3*; α(M)=4.62×10^{-5} *7*; α(N+..)=2.51×10^{-5} *4* α(N)=1.146×10^{-5} *16*; α(O)=2.10×10^{-6} *3*; α(P)=1.415×10^{-7} *20*; α(IPF)=1.141×10^{-5} *19* α(K)exp=0.0017 *11*.
1184.8[a] *4*	0.5 *1*	2334.1		1149.27	(13/2$^+$)				α(K)exp=0.004 *2*.
1196.1[a] *4*	0.50 *15*	2345.8	(11/2$^+$)	1149.27	(13/2$^+$)				α(K)exp=0.006 *4*.
1196.6 *2*	2.5 *2*	1316.87	(9/2$^-$)	120.40	9/2$^{(-)}$	E2+M1	1.2 *5*	0.0061 *13*	I$_\gamma$: 0.5 *15* in 1994RuZX, probably a typo for Iγ=0.50 *15*. α=0.0061 *13*; α(K)=0.0050 *11*; α(L)=0.00082 *16*; α(M)=0.00019 *4*; α(N+..)=6.1×10^{-5} *12* α(N)=4.7×10^{-5} *9*; α(O)=8.7×10^{-6} *17*; α(P)=5.7×10^{-7} *13*; α(IPF)=4.8×10^{-6} *7* α(K)exp=0.005 *1*.
1214.6[a] *4*	0.55 *20*	1711.0		496.79	(11/2$^-$)				α(K)exp=0.007 *4*.
1229.3[a] *4*	1.00 *15*	2350.8		1121.68	(13/2$^+$)				α(K)exp=0.001 *1*.
1232.3 *4*	0.5 *1*	1905.3	(15/2$^-$)	673.24	(15/2$^-$)	(M1)		0.00834 *12*	α=0.00834 *12*; α(K)=0.00691 *10*; α(L)=0.001093 *16*; α(M)=0.000252 *4*; α(N+..)=8.70×10^{-5} *13* α(N)=6.27×10^{-5} *9*; α(O)=1.157×10^{-5} *17*; α(P)=7.98×10^{-7} *12*; α(IPF)=1.188×10^{-5} *19* α(K)exp=0.008 *6*.
1236.6 *4*	1.00 *15*	1589.65	(11/2,13/2)$^+$	353.78	(13/2$^-$)	(E1)		0.001543 *22*	α=0.001543 *22*; α(K)=0.001272 *18*; α(L)=0.000186 *3*; α(M)=4.25×10^{-5} *6*; α(N+..)=4.22×10^{-5} *6* α(N)=1.055×10^{-5} *15*; α(O)=1.93×10^{-6} *3*; α(P)=1.308×10^{-7} *19*; α(IPF)=2.96×10^{-5} *5* α(K)exp=0.0018 *8*.
1237.9[a] *4*	0.8 *2*	2206.6		968.01	(11/2$^+$)				α(K)exp=0.005 *3*.
1244.7[a] *4*	0.45 *15*	2237.6	(13/2$^-$)	993.2	(15/2$^-$)				α(K)exp=0.004 *4*.
1253.4[a] *4*	0.50 *15*	2246.5	(13/2$^-$)	993.2	(15/2$^-$)				α(K)exp=0.008 *5*.
1257.0 *4*	0.65 *15*	1930.4	(17/2$^-$)	673.24	(15/2$^-$)	(M1+E2)	0.4 *23*	0.007 *4*	α=0.007 *4*; α(K)=0.006 *3*; α(L)=0.0010 *4*; α(M)=0.00022 *9*; α(N+..)=8.E−5 *4* α(N)=5.6×10^{-5} *23*; α(O)=1.0×10^{-5} *5*; α(P)=7.E−7 *4*; α(IPF)=1.6×10^{-5} *5* α(K)exp=0.006 *3*.
1274.3[a] *4*	0.5 *2*	2396.1	(15/2$^+$)	1121.68	(13/2$^+$)				α(K)exp=0.004 *4*.
1277.2[a] *4*	0.4 *1*	2099.7		822.47	(5/2$^+$)				α(K)exp=0.0025 *25*.
1283.8[a] *2*	2.2 *3*	1637.6		353.78	(13/2$^-$)				
1294.7[a] *4*	0.45 *15*	1791.5		496.79	(11/2$^-$)				
1315.2[a] *4*	0.35 *10*	2474.2		1159.0	(17/2$^-$)				
1315.4[a] *2*	4.0 *3*	2300.44		985.0	(9/2$^-$)				

$^{187}_{79}Au_{108}$-30

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	α[d]	Comments
1317.0[a#] 4	0.50 15	2285.0		968.01	(11/2$^+$)				
1321.1[a] 4	0.55 15	1994.3	(11/2$^-$)	673.24	(15/2$^-$)				
1325.5[a] 4	0.6 1	2291.1	(11/2$^+$)	965.6	(7/2$^+$)				
1332.5[a] 4	0.8 2	2289.0		956.52	(13/2$^-$)				
1339.5[a] 4	0.5 1	1816.2	(11/2$^-$)	476.59	(7/2$^-$)	(E2)		0.00330 5	α=0.00330 5; α(K)=0.00269 4; α(L)=0.000451 7; α(M)=0.0001048 15; α(N+..)=5.45×10^{-5} 8 α(N)=2.60×10^{-5} 4; α(O)=4.73×10^{-6} 7; α(P)=2.95×10^{-7} 5; α(IPF)=2.34×10^{-5} 4 α(K)exp=0.003 2.
1350.0[a] 4	1.0 2	2300.44		950.3	(7/2$^-$,9/2$^-$)				
1357.2[a] 4	1.85 20	1711.0		353.78	(13/2$^-$)				
1357.6[a] 4	0.4 1	2180.1	(9/2$^+$)	822.47	(5/2$^+$)				
1362.6[a] 4	1.95 15	2319.2	(15/2$^-$)	956.52	(13/2$^-$)				
1365.8 2	2.1 3	1589.65	(11/2,13/2)$^+$	223.93	(11/2$^-$)	E1		0.001364 19	α=0.001364 19; α(K)=0.001071 15; α(L)=0.0001563 22; α(M)=3.56×10^{-5} 5; α(N+..)=0.000100 α(N)=8.84×10^{-6} 13; α(O)=1.623×10^{-6} 23; α(P)=1.104×10^{-7} 16; α(IPF)=8.98×10^{-5} 13 α(K)exp=0.0012 4.
1368.7[a] 4	0.40 15	1864.1		495.37	(7/2$^+$)				
1372.3[a] 4	0.50 15	2253.3		881.22	(11/2$^-$)				
1392.5[a] 4	0.70 15	2065.7		673.24	(15/2$^-$)				
1399.6[a] 4	0.45 15	2279.9		880.03	(7/2$^+$)				
1419.6 4	1.15 20	2300.7		881.22	(11/2$^-$)				
1425.6[a] 4	0.4 1	2306.8		881.22	(11/2$^-$)				
1430.3[a] 4	0.65 15	2246.5	(13/2$^-$)	815.89	(15/2$^-$)				
1435.0[a] 4	0.4 1	2145.4		710.48	(9/2$^+$)				
1461.1[a] 4	0.60 15	2149.8	(13/2$^-$)	688.68	(17/2$^-$)	E2		0.00284 4	α=0.00284 4; α(K)=0.00229 4; α(L)=0.000377 6; α(M)=8.74×10^{-5} 13; α(N+..)=7.98×10^{-5} 12 α(N)=2.17×10^{-5} 3; α(O)=3.96×10^{-6} 6; α(P)=2.51×10^{-7} 4; α(IPF)=5.38×10^{-5} 8 α(K)exp=0.0021 10.
1466.1[a] 4	1.1 2	2345.8	(11/2$^+$)	880.03	(7/2$^+$)				
1467.7[a] 4	0.5 1	2348.9		881.22	(11/2$^-$)	M1		0.00546 8	α=0.00546 8; α(K)=0.00446 7; α(L)=0.000702 10; α(M)=0.0001616 23; α(N+..)=0.0001361 α(N)=4.02×10^{-5} 6; α(O)=7.42×10^{-6} 11; α(P)=5.13×10^{-7} 8; α(IPF)=8.79×10^{-5} 13 α(K)exp=0.004 3.
[x]1468.0[a#] 4	0.3 1								
1496.8[a] 4	0.4 1	2206.6		710.48	(9/2$^+$)				
1503.6[a] 4	0.80 15	2319.2	(15/2$^-$)	815.89	(15/2$^-$)	(E2+M1)	2.3 21	0.0031 20	α=0.0031 20; α(K)=0.0025 17; α(L)=0.00040 25;

$^{187}_{79}Au_{108}$-31

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. [b]	α [d]	Comments
								α(M)=9.E−5 *6*; α(N+..)=0.00010 *5* α(N)=2.3×10^{-5} *14*; α(O)=4.E−6 *3*; α(P)=2.8×10^{-7} *20*; α(IPF)=7.E−5 *3* α(K)exp=0.0025 *15*.
1532.8 [a] *2*	4.0 *4*	2206.0		673.24	(15/2$^-$)			
1545.3 [a] *4*	0.75 *20*	2300.44		755.3	(9/2$^-$)			
1563.6 [a] *4*	0.45 *15*	2237.8		674.1	(9/2$^-$,11/2$^-$)			
1564.0 [a] *4*	0.4 *1*	2183.9		619.86	(11/2$^-$)			
1570.0 [a] *4*	1.45 *20*	2319.1		749.30	(13/2$^-$)			
1576.5 [a] *4*	0.35 *15*	2073.3		496.79	(11/2$^-$)			
1579.5 [a] *2*	4.4 *3*	2268.2	(13/2$^-$)	688.68	(17/2$^-$)			
1580.0 [a#] *4*	0.50 *15*	2253.3		673.24	(15/2$^-$)			
1583.8 *2*	2.0 *2*	1807.6	(15/2$^-$)	223.93	(11/2$^-$)	E2	0.00249 *4*	α=0.00249 *4*; α(K)=0.00198 *3*; α(L)=0.000321 *5*; α(M)=7.42×10^{-5} *11*; α(N+..)=0.0001157 *17* α(N)=1.84×10^{-5} *3*; α(O)=3.36×10^{-6} *5*; α(P)=2.17×10^{-7} *3*; α(IPF)=9.37×10^{-5} *14* α(K)exp=0.0019 *5*.
1584.8 [a] *4*	0.35 *15*	2400.9		815.89	(15/2$^-$)			
1587.9 [a] *2*	2.1 *2*	2337.2		749.30	(13/2$^-$)			
1589.0 [a] *4*	0.45 *10*	2300.28		710.48	(9/2$^+$)			
1589.6 [a] *4*	0.65 *15*	2262.9		673.24	(15/2$^-$)			
1592.0 *4*	0.4 *2*	1815.9	(15/2$^-$)	223.93	(11/2$^-$)			
1594.3 [a] *4*	1.1 *1*	2343.2		749.30	(13/2$^-$)			
1601.9 [a] *4*	0.8 *2*	2221.8		619.86	(11/2$^-$)			
1606.9 [a] *4*	0.60 *15*	2279.9		673.24	(15/2$^-$)			
1608.8 [a] *4*	0.4 *1*	2319.2		710.48	(9/2$^+$)			
1616.0 [a] *4*	0.7 *2*	2365.3	(13/2$^-$)	749.30	(13/2$^-$)			
1617.8 [a] *4*	0.60 *15*	2237.6	(13/2$^-$)	619.86	(11/2$^-$)			
1626.7 [a] *4*	0.70 *15*	2246.5	(13/2$^-$)	619.86	(11/2$^-$)			
1627.2 [a] *4*	0.4 *1*	2300.7		673.24	(15/2$^-$)			
1630.9 [a] *4*	0.60 *15*	2319.2	(15/2$^-$)	688.68	(17/2$^-$)	(M1)	0.00430 *6*	α=0.00430 *6*; α(K)=0.00343 *5*; α(L)=0.000538 *8*; α(M)=0.0001238 *18*; α(N+..)=0.000210 *3* α(N)=3.08×10^{-5} *5*; α(O)=5.69×10^{-6} *8*; α(P)=3.94×10^{-7} *6*; α(IPF)=0.0001736 *25* α(K)exp=0.004 *2*.
1646.4 [a] *2*	4.6 *4*	2395.7	(13/2$^+$)	749.30	(13/2$^-$)			
[x] 1647.3 [&] *5*	4.7 [&] *9*							
1651.4 [a] *4*	1.3 *2*	2400.7		749.30	(13/2$^-$)			
1661.4 [a] *4*	1.55 *15*	2410.9		749.30	(13/2$^-$)			
1669.0 [a] *2*	3.2 *3*	2343.2		674.1	(9/2$^-$,11/2$^-$)			
1676.0 [a] *4*	0.8 *2*	2029.8		353.78	(13/2$^-$)			

$^{187}_{79}Au_{108}$-32

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05 (continued)

γ(^{187}Au) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π
1680.8[a] *4*	0.45 *15*	2300.44		619.86	(11/2⁻)	1989.1[a] *4*	1.0 *2*	2343.0		353.78	(13/2⁻)
1681.5 *4*	1.35 *20*	1905.3	(15/2⁻)	223.93	(11/2⁻)	1997.0[a] *4*	1.9 *2*	2350.8		353.78	(13/2⁻)
1701.2[a] *4*	0.7 *1*	2390.0		688.68	(17/2⁻)	[x]1998.1[&] *8*	10.8[&] *22*				
1707.6[a] *4*	0.65 *15*	2396.1	(15/2⁺)	688.68	(17/2⁻)	1999.4[a] *2*	10.4 *9*	2223.3		223.93	(11/2⁻)
1715.9[a] *4*	0.65 *15*	2389.2		673.24	(15/2⁻)	2013.9[a] *2*	9.0 *9*	2237.8		223.93	(11/2⁻)
1728.3[a] *4*	0.7 *1*	2082.1		353.78	(13/2⁻)	2029.3[a] *2*	6.3 *2*	2253.3		223.93	(11/2⁻)
1737.9[a] *4*	0.5 *1*	2410.9		673.24	(15/2⁻)	2047.3[a] *4*	1.0 *2*	2400.9		353.78	(13/2⁻)
1740.9[a] *2*	2.9 *3*	2237.6	(13/2⁻)	496.79	(11/2⁻)	2065.7[a] *2*	3.7 *4*	2186.1		120.40	9/2(⁻)
1764.3[a] *4*	0.4 *2*	2513.6		749.30	(13/2⁻)	2076.6[a] *2*	11.7 *9*	2300.7		223.93	(11/2⁻)
1803.6[a] *2*	2.9 *2*	2300.44		496.79	(11/2⁻)	2081.5[a] *2*	5 *1*	2201.9		120.40	9/2(⁻)
1804.0[a] *4*	0.75 *15*	2633.1		829.13	(11/2⁻)	[x]2176.5[&] *10*	20[&] *4*				
1853.8[a] *4*	0.40 *15*	2350.8		496.79	(11/2⁻)	2179.9[a] *2*	23.5 *5*	2300.44		120.40	9/2(⁻)
1857.2[a] *2*	2.3 *2*	2300.44		443.30	9/2(⁻)	2187.7[a] *4*	0.35 *15*	2541.5		353.78	(13/2⁻)
1883.5[a] *4*	0.9 *2*	2237.6	(13/2⁻)	353.78	(13/2⁻)	2197.3[a] *4*	0.3 *1*	2551.1		353.78	(13/2⁻)
1889.3[a] *4*	0.5 *2*	2384.7		495.37	(7/2⁺)	2207.5[a] *2*	3.1 *3*	2327.9		120.40	9/2(⁻)
1894.4[a] *4*	1.45 *10*	2248.2		353.78	(13/2⁻)	2253.0[a] *4*	0.35 *15*	2606.8		353.78	(13/2⁻)
1899.5[a] *4*	0.3 *1*	2572.8		673.24	(15/2⁻)	2334.6[a] *4*	0.4 *1*	2688.4		353.78	(13/2⁻)
1914.2[a] *2*	3.0 *3*	2268.2	(13/2⁻)	353.78	(13/2⁻)	2395.5[a] *4*	0.25 *15*	2749.3		353.78	(13/2⁻)
1952.0[a] *4*	0.3 *1*	2625.3		673.24	(15/2⁻)	2414.4[a] *4*	0.3 *1*	2768.2		353.78	(13/2⁻)
1952.4[a] *4*	0.9 *2*	2306.2		353.78	(13/2⁻)	2474.2[a] *4*	0.3 *1*	2828.0		353.78	(13/2⁻)
1974.3[a] *4*	1.35 *20*	2327.9		353.78	(13/2⁻)						

† From 1998Ru04, except otherwise noted. All Eγ are seen only in the ^{187}Hg^{m} decay, except otherwise noted. ΔE=0.2 for Iγ≥ 2 and ΔE=0.4 for Iγ<2 are assigned based on a private communication with J. L. Wood, a 1998Ru04 co-author.

‡ In Table II (1998Ru04), 129.7γ is shown from 633-keV (J^π=7/2⁺) to 503.8-keV (3/2⁺) level, but not presented in the decay scheme.

Decimal place number of the γ-ray is not reported, the evaluator added a zero.

@ Also seen in the ^{187}Hg^{g} decay.

& From 1978Bo05.

a From 1994RuZX.

b Assigned by 1998Ru04 based on α(K)exp or α(L)exp value, except where noted. The α(K)exp and α(L)exp values (1998Ru04) are listed in the comment section.

c Calculated by the evaluator from the α(K)exp or α(L)exp value (1998Ru04), except otherwise noted.

d 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.

x γ ray not placed in level scheme.

$^{187}_{79}Au_{108}$-33

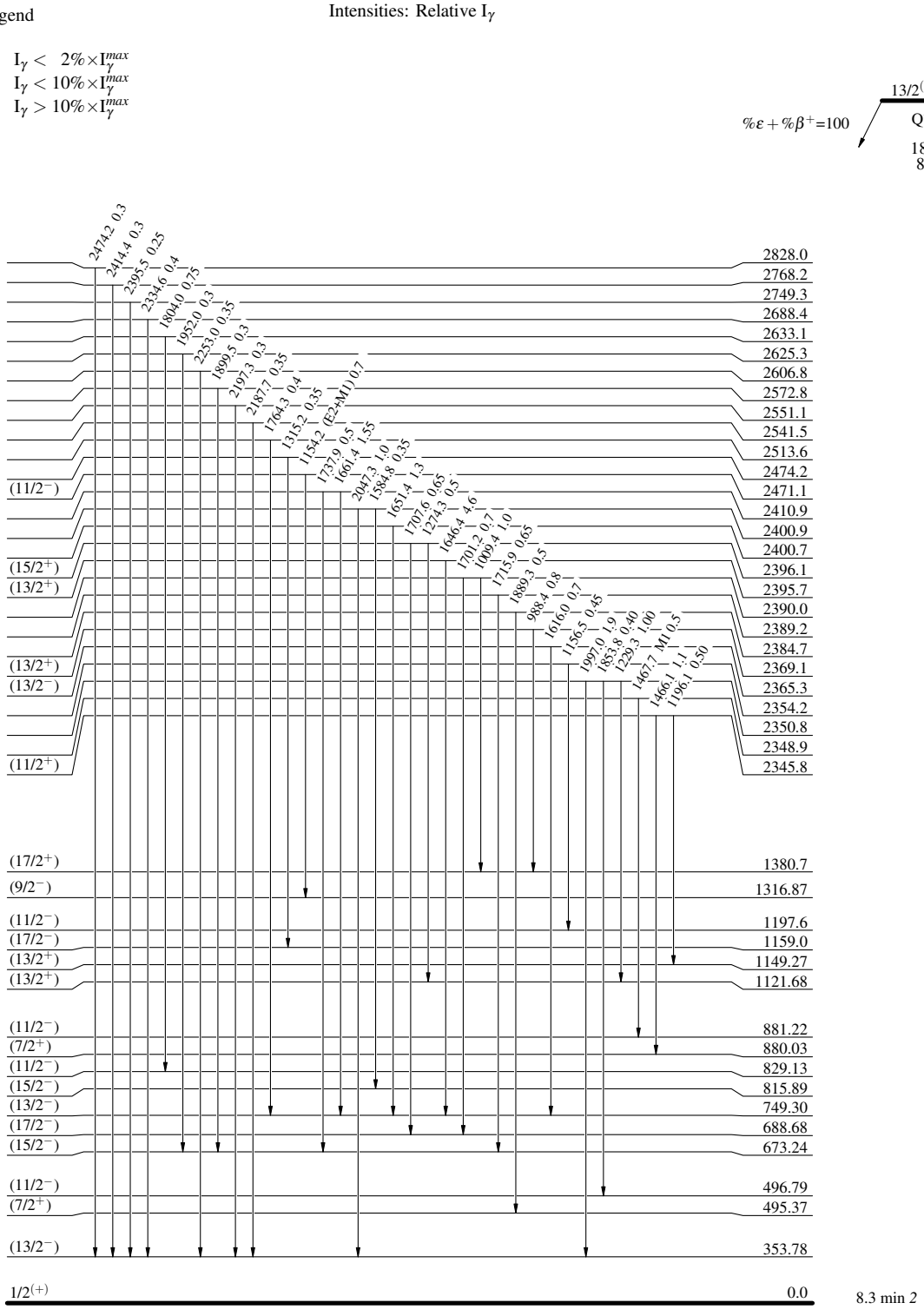
^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme

Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{187}_{79}Au_{108}$

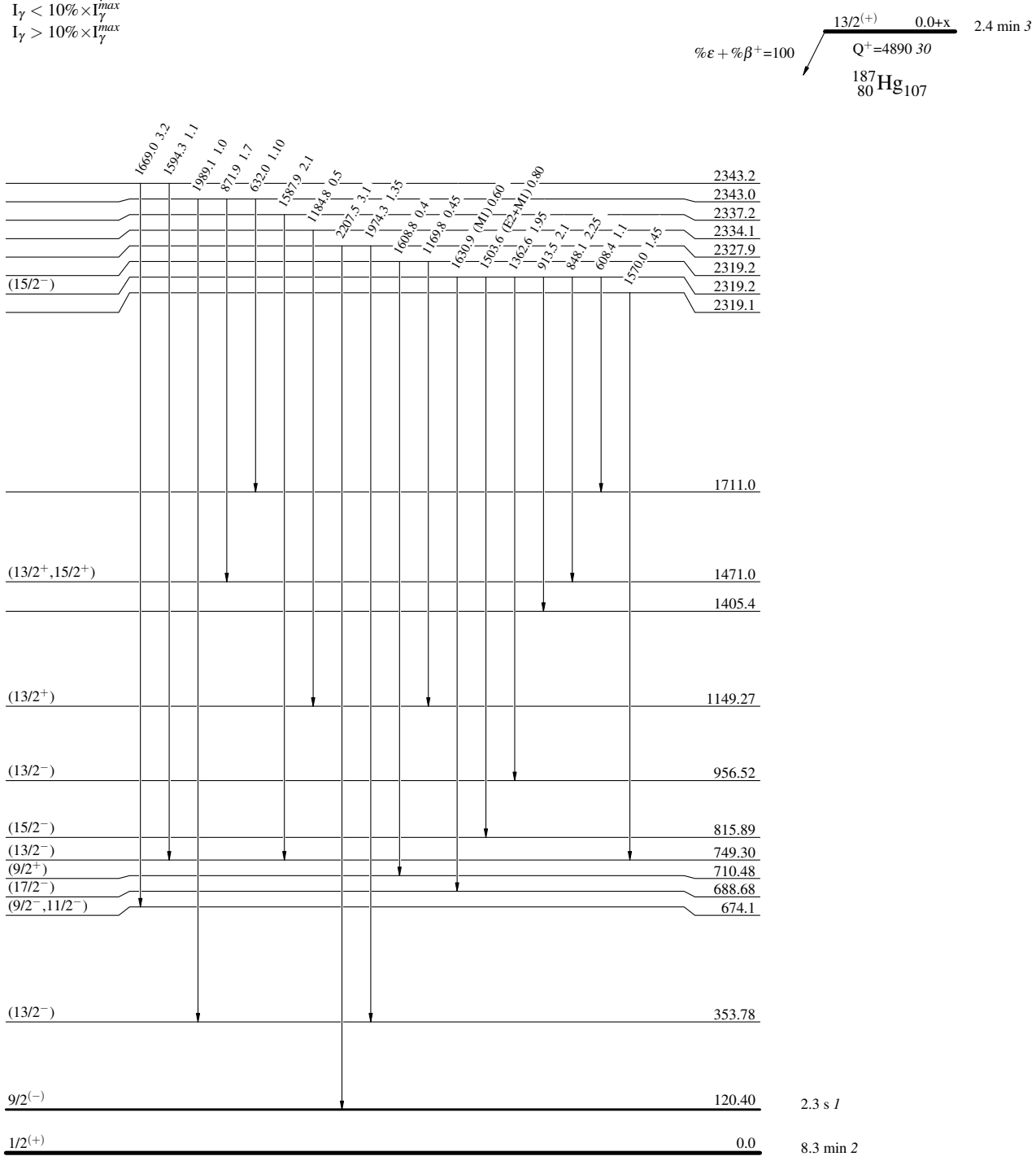
^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

Legend

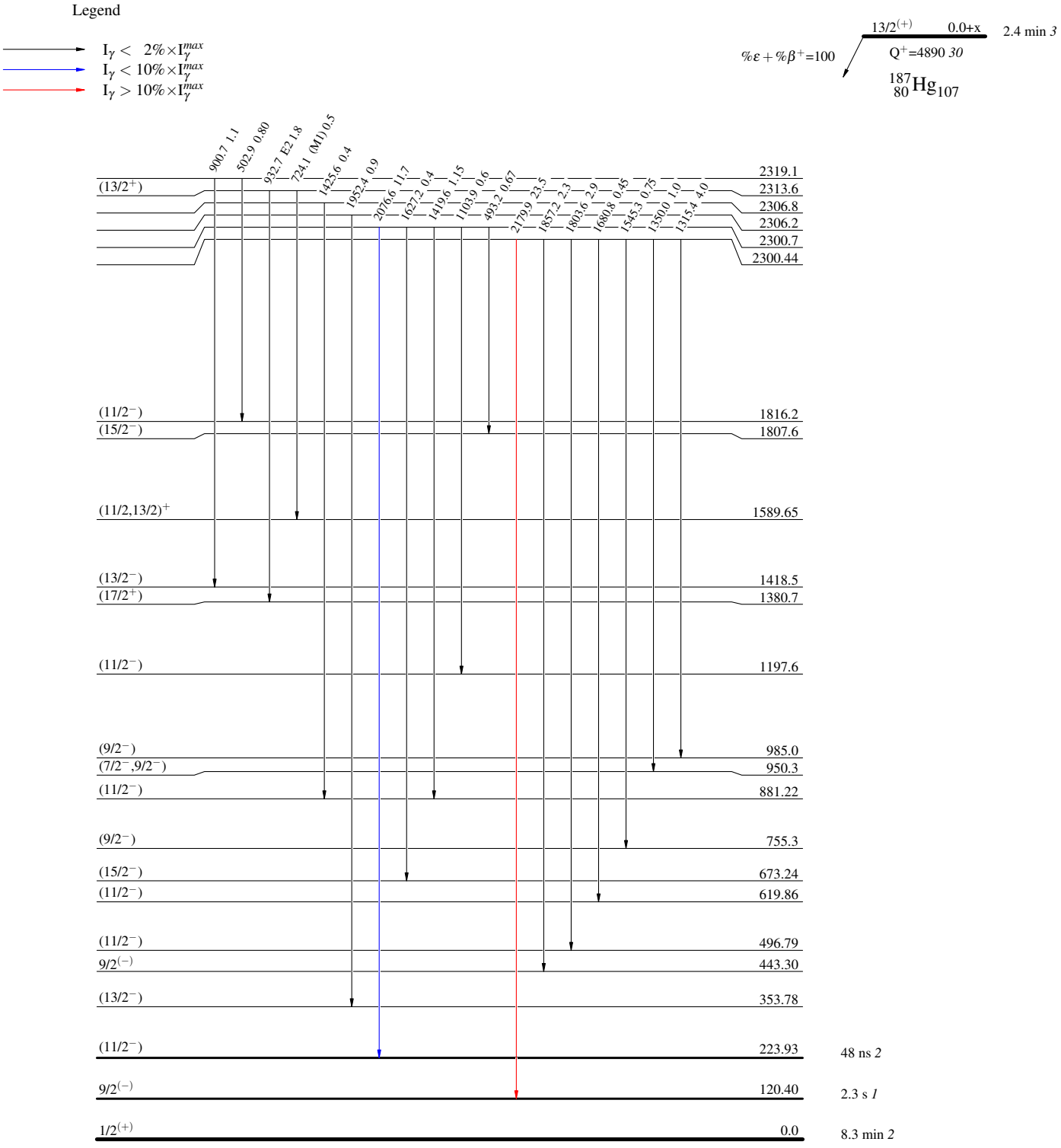
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

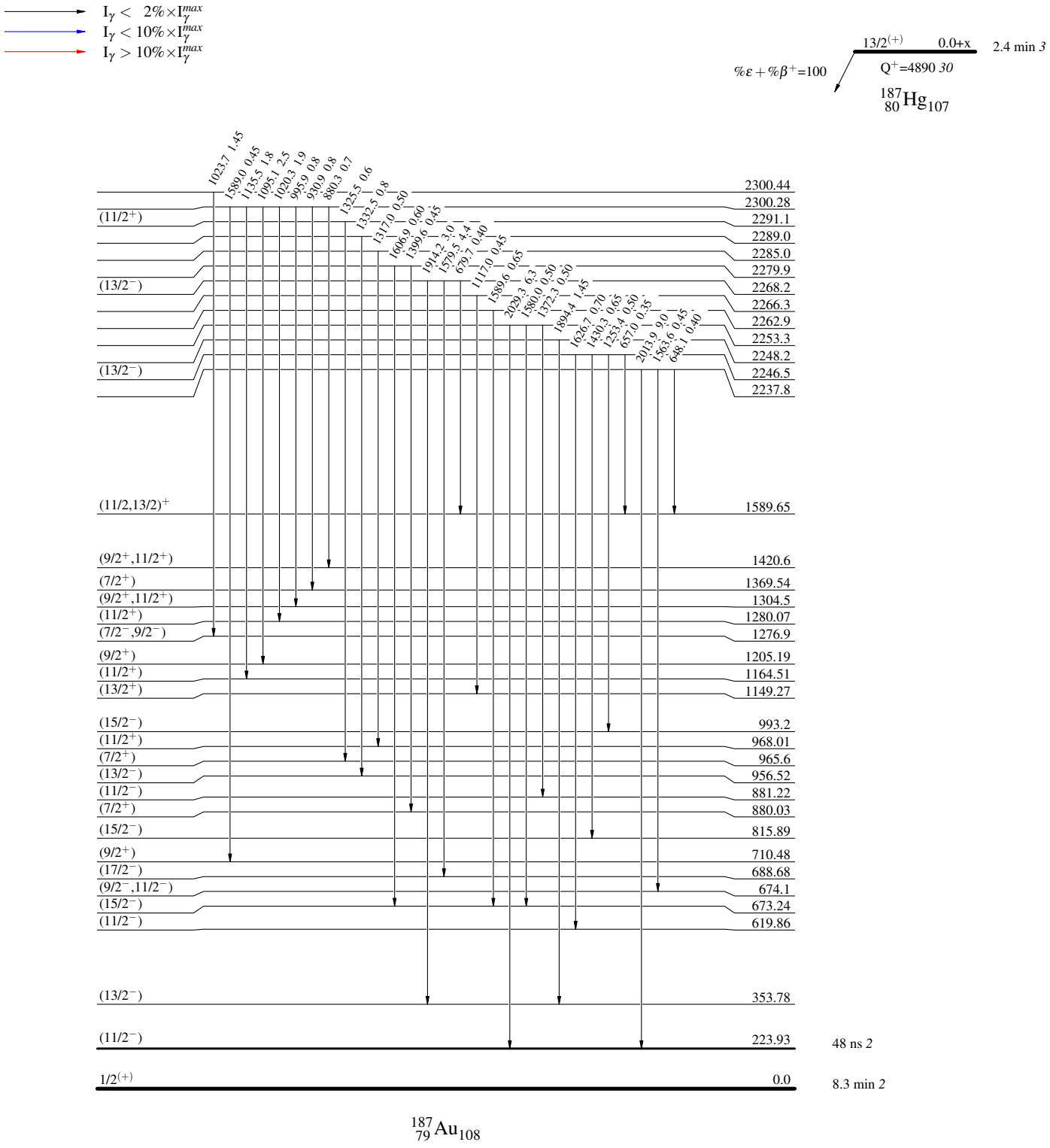


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

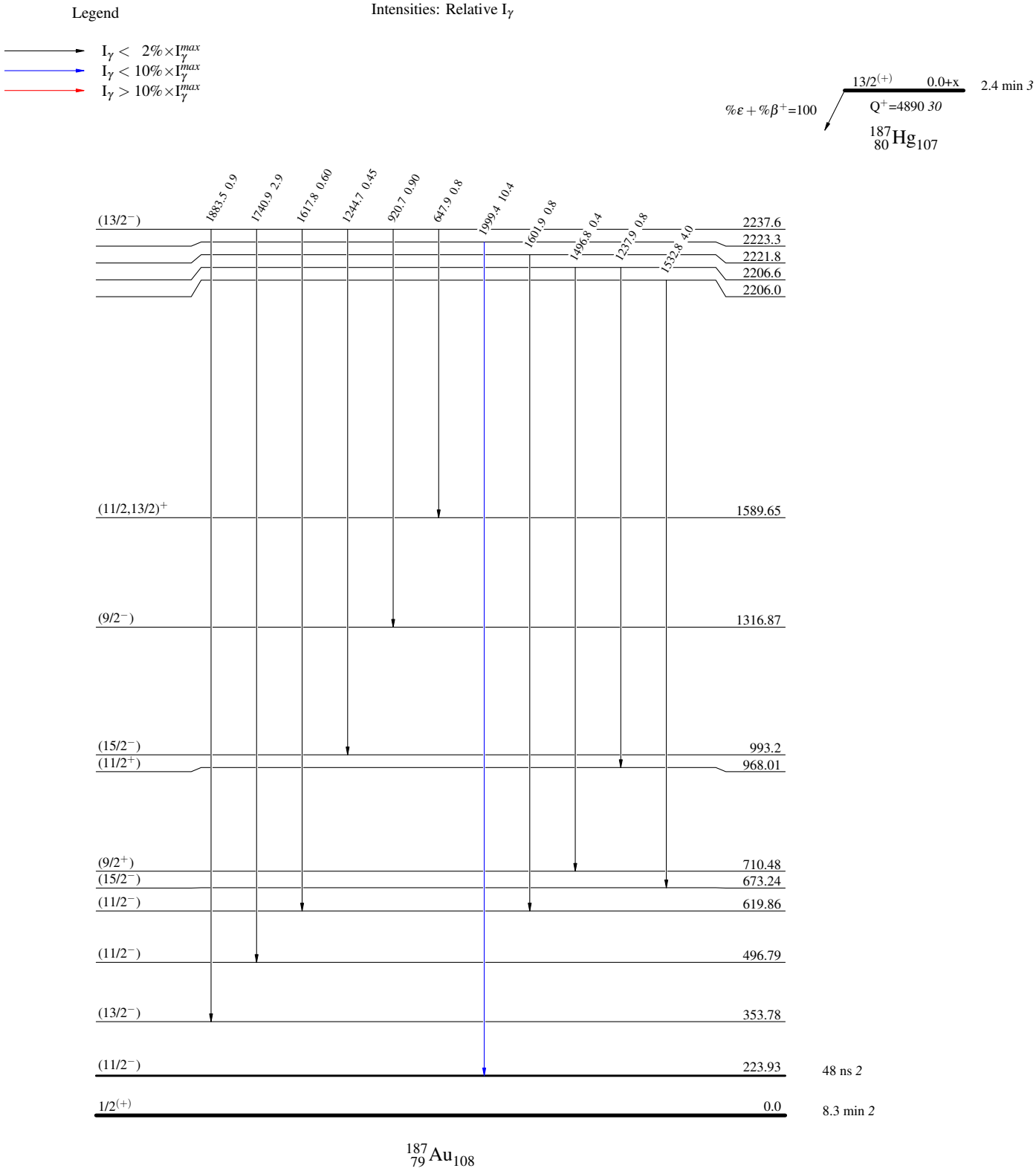
Intensities: Relative I_γ



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ



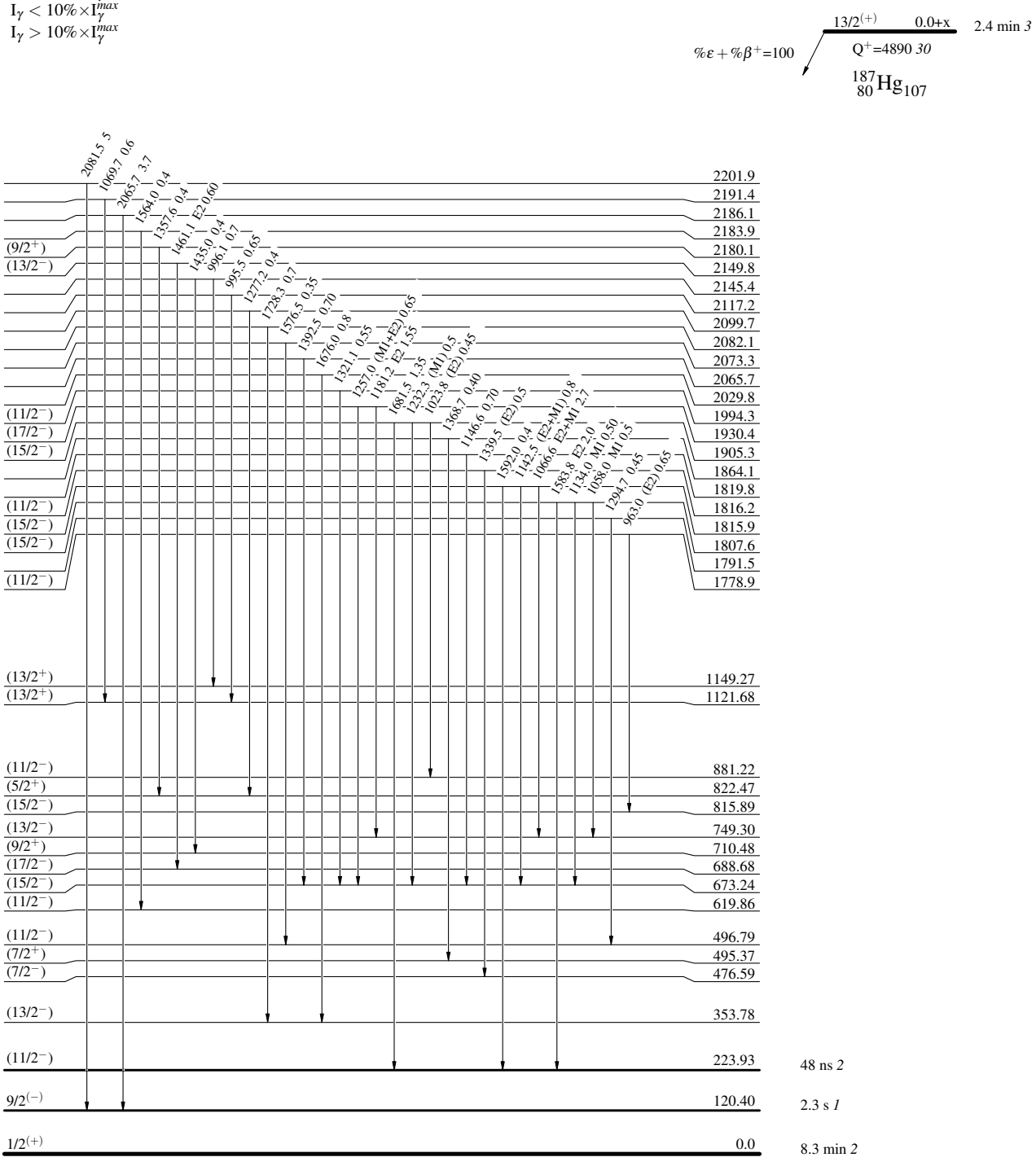
^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

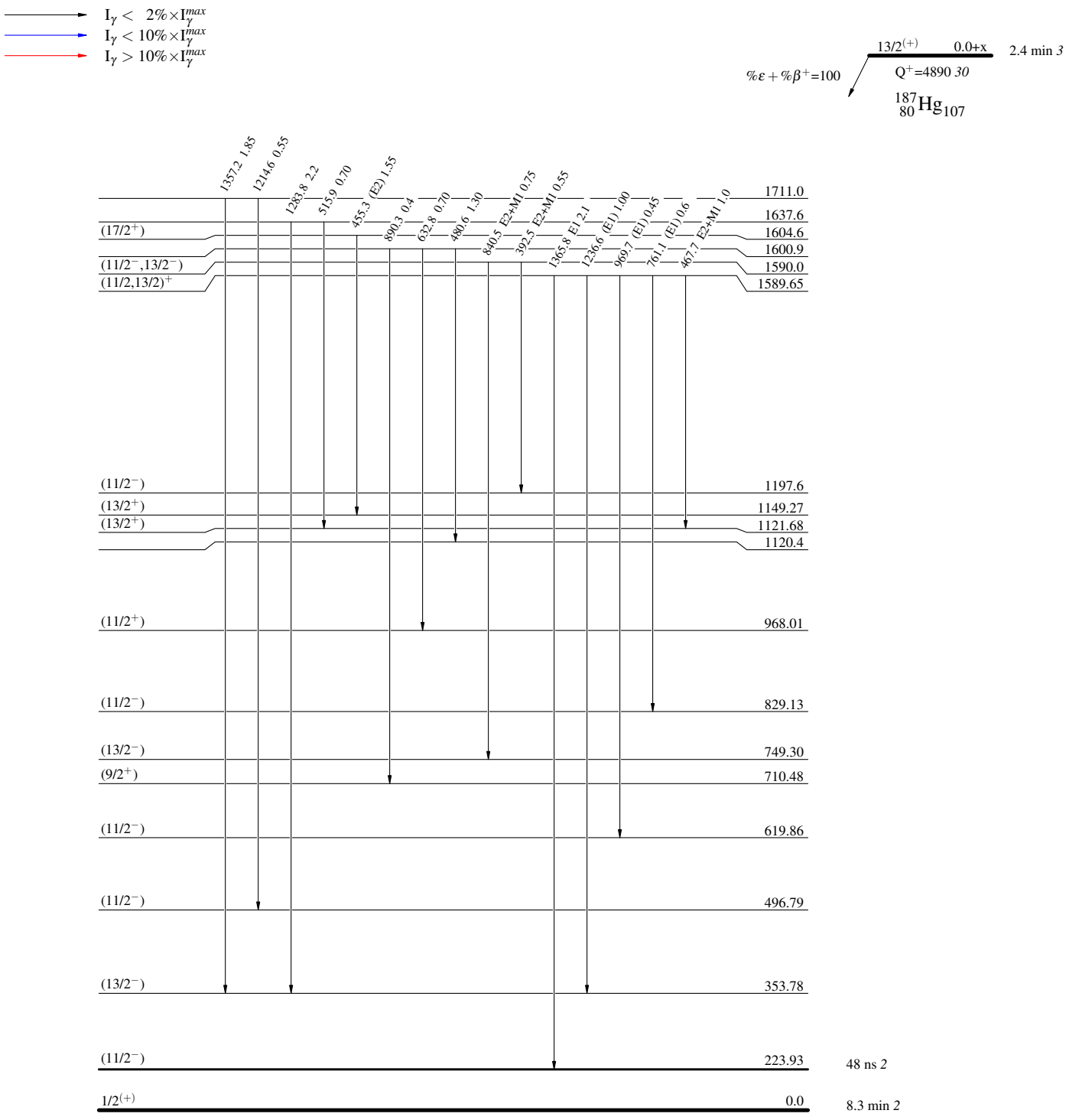


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

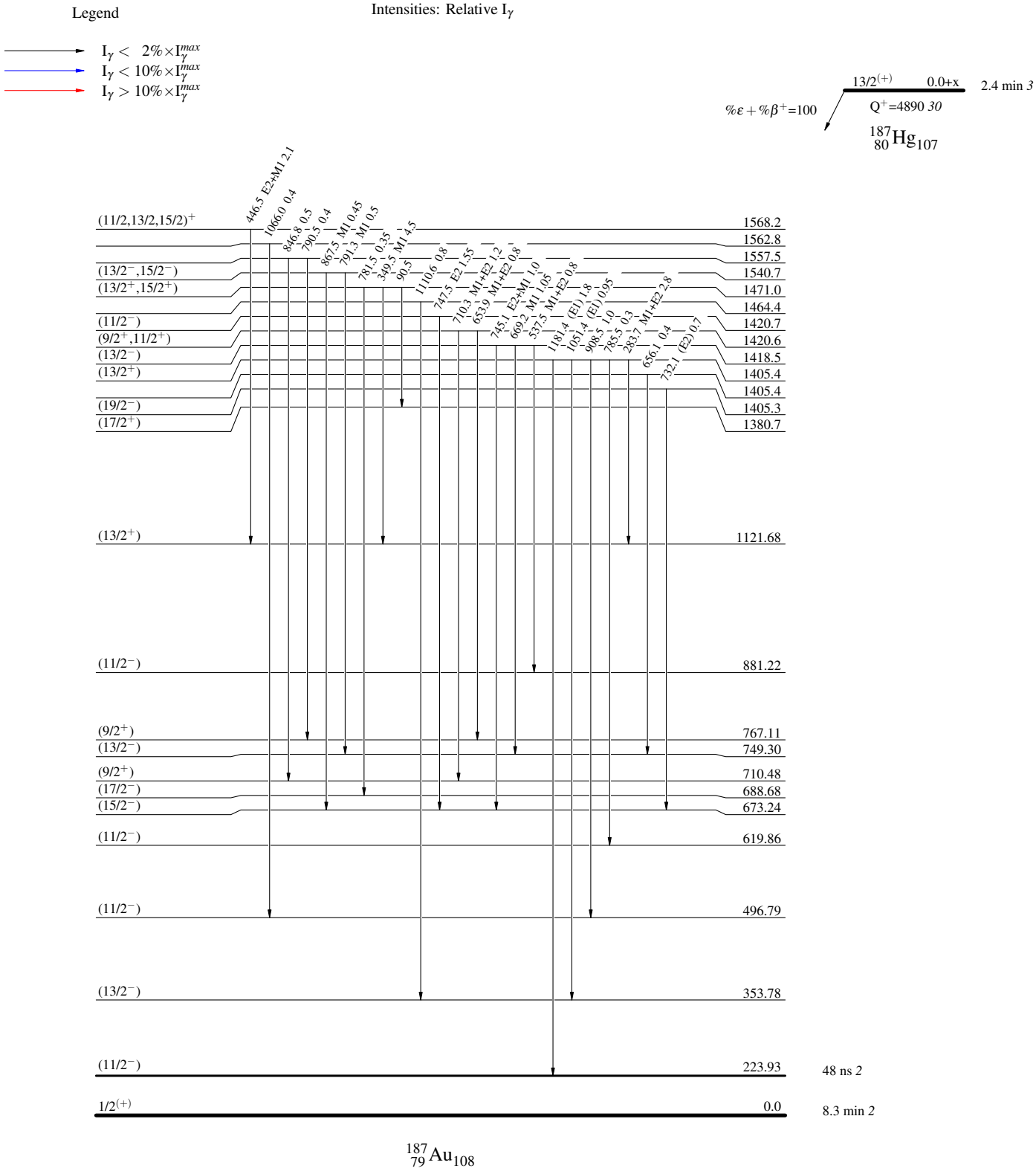
Intensities: Relative I_γ



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

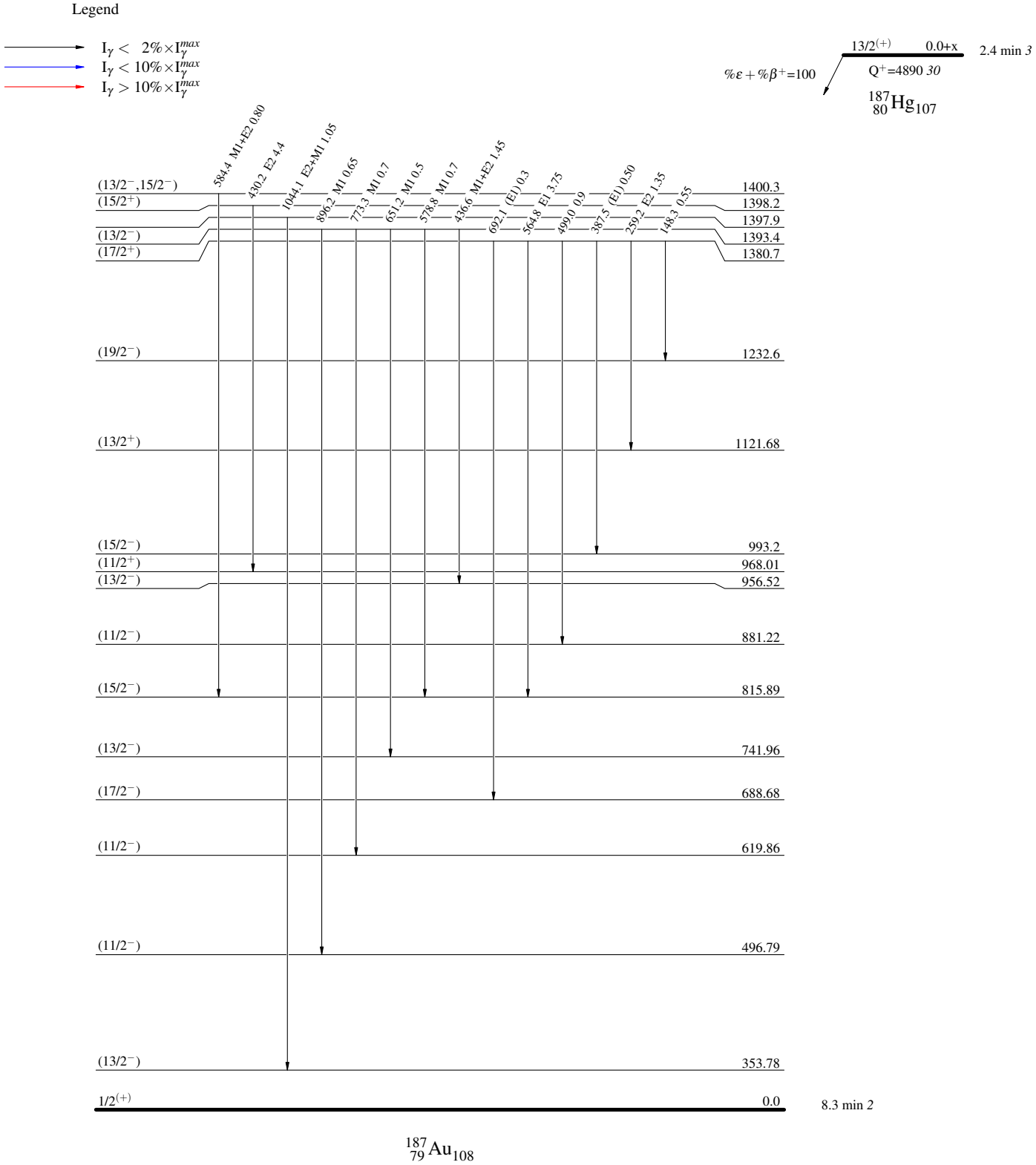
Intensities: Relative I_γ



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

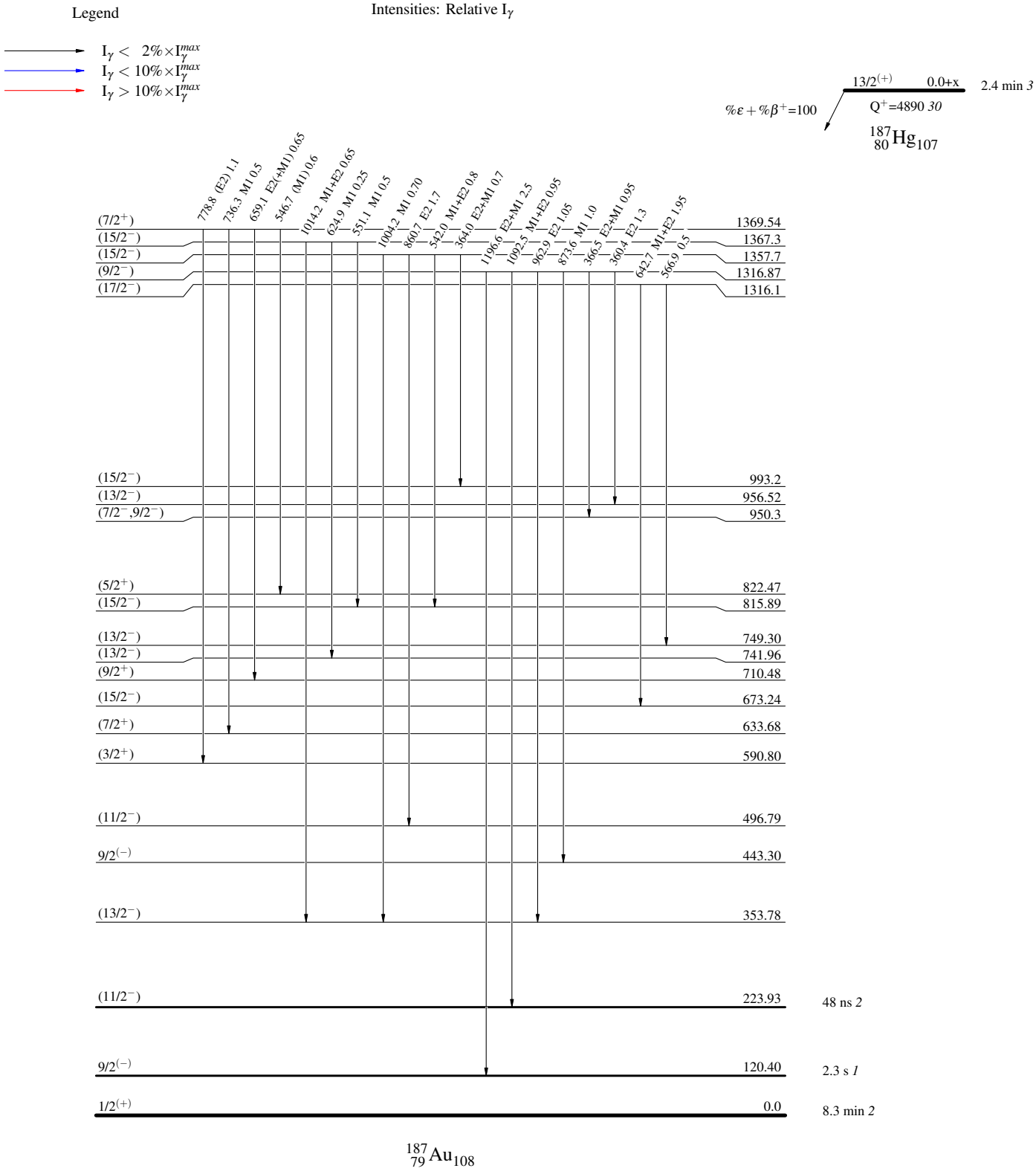


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

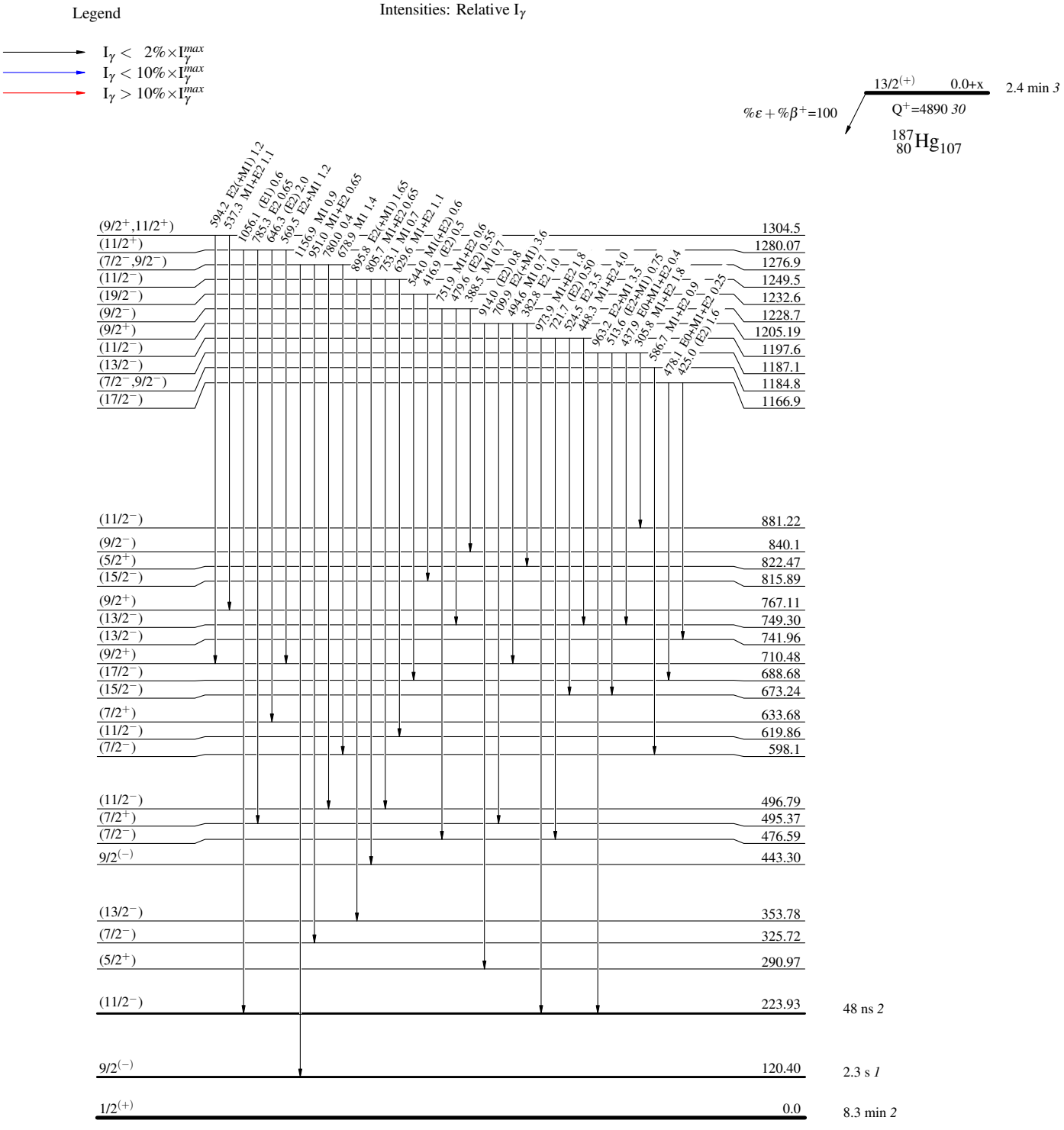
Intensities: Relative I_γ



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

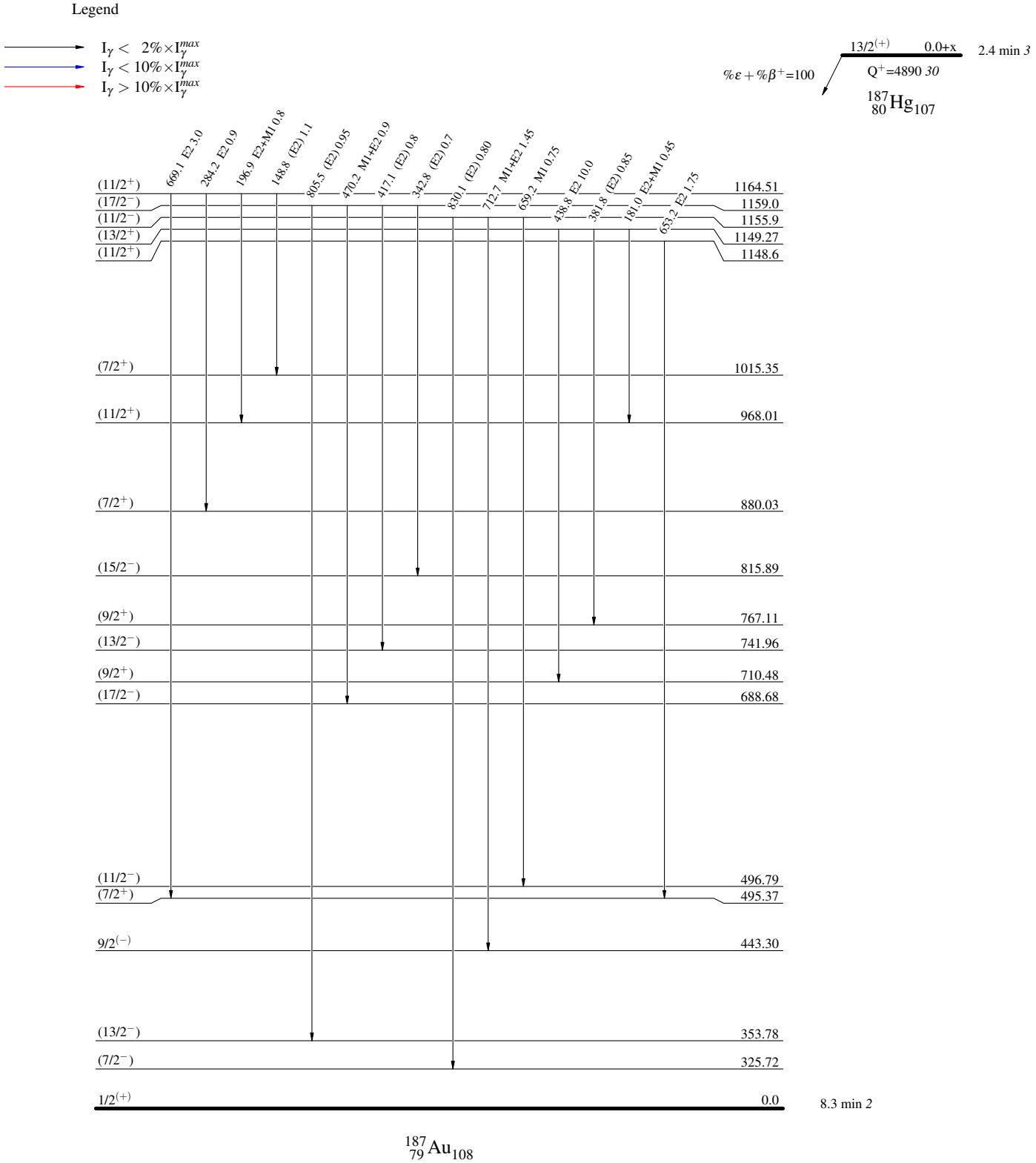
Intensities: Relative I_γ



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

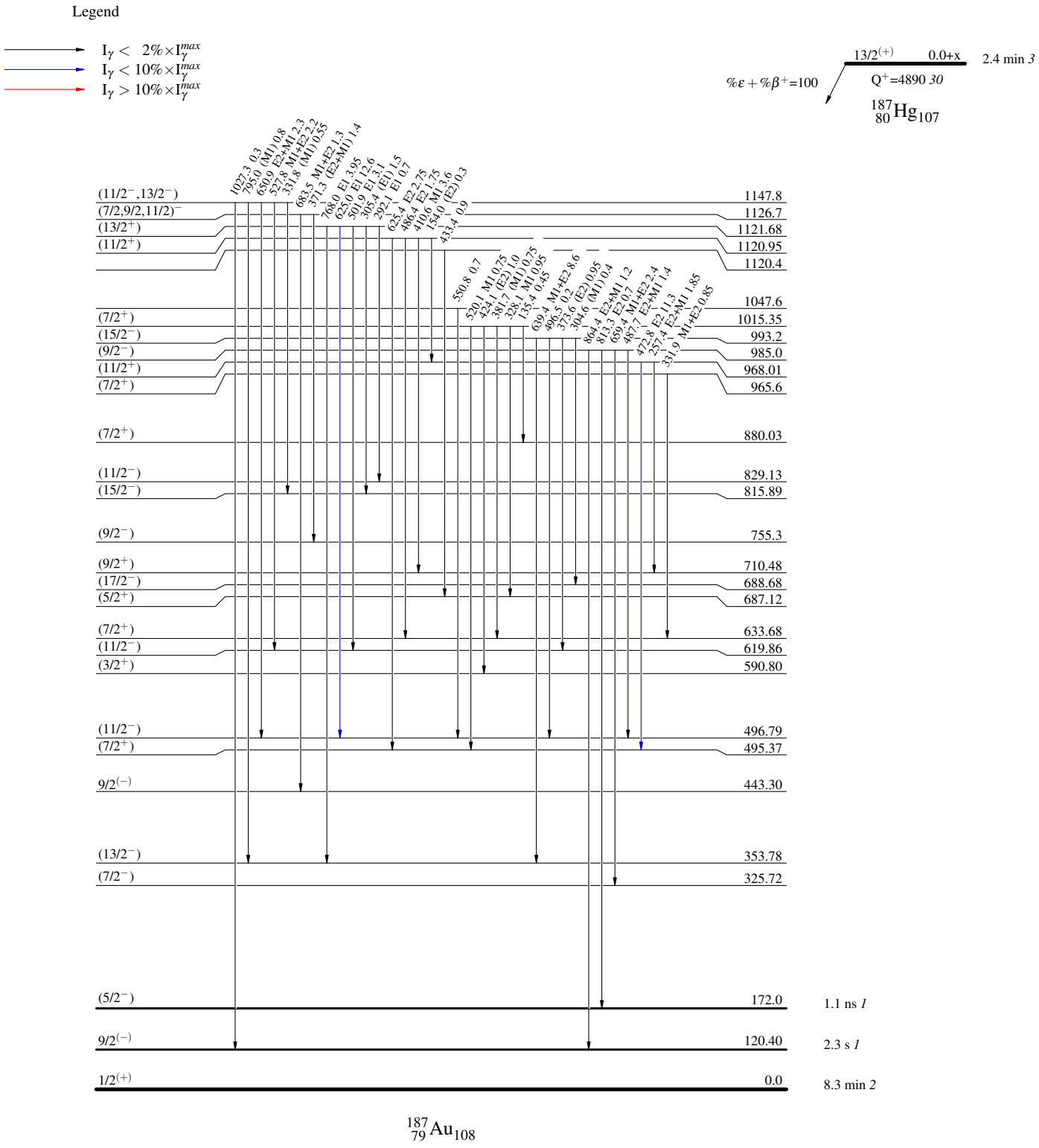


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

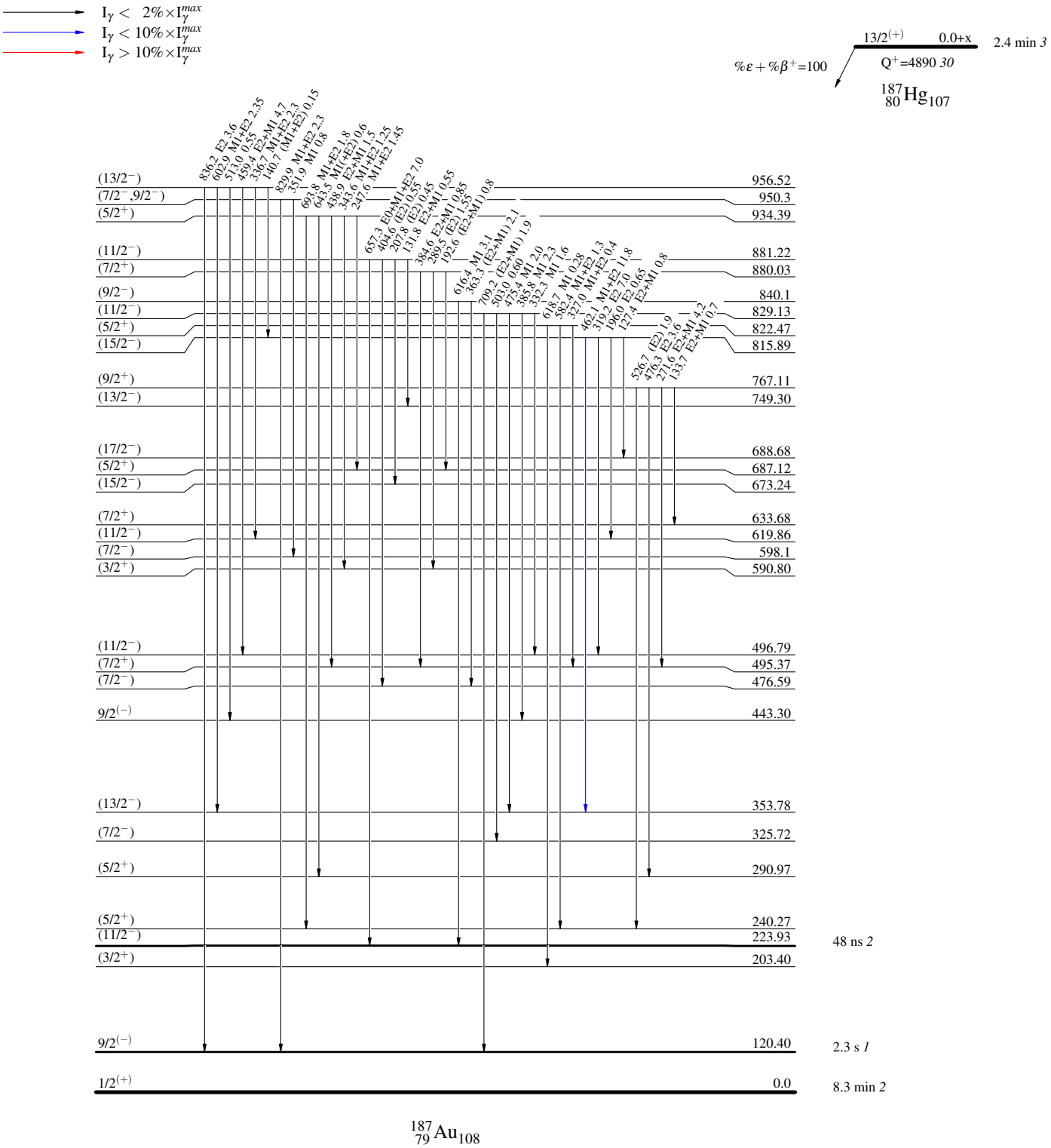


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ

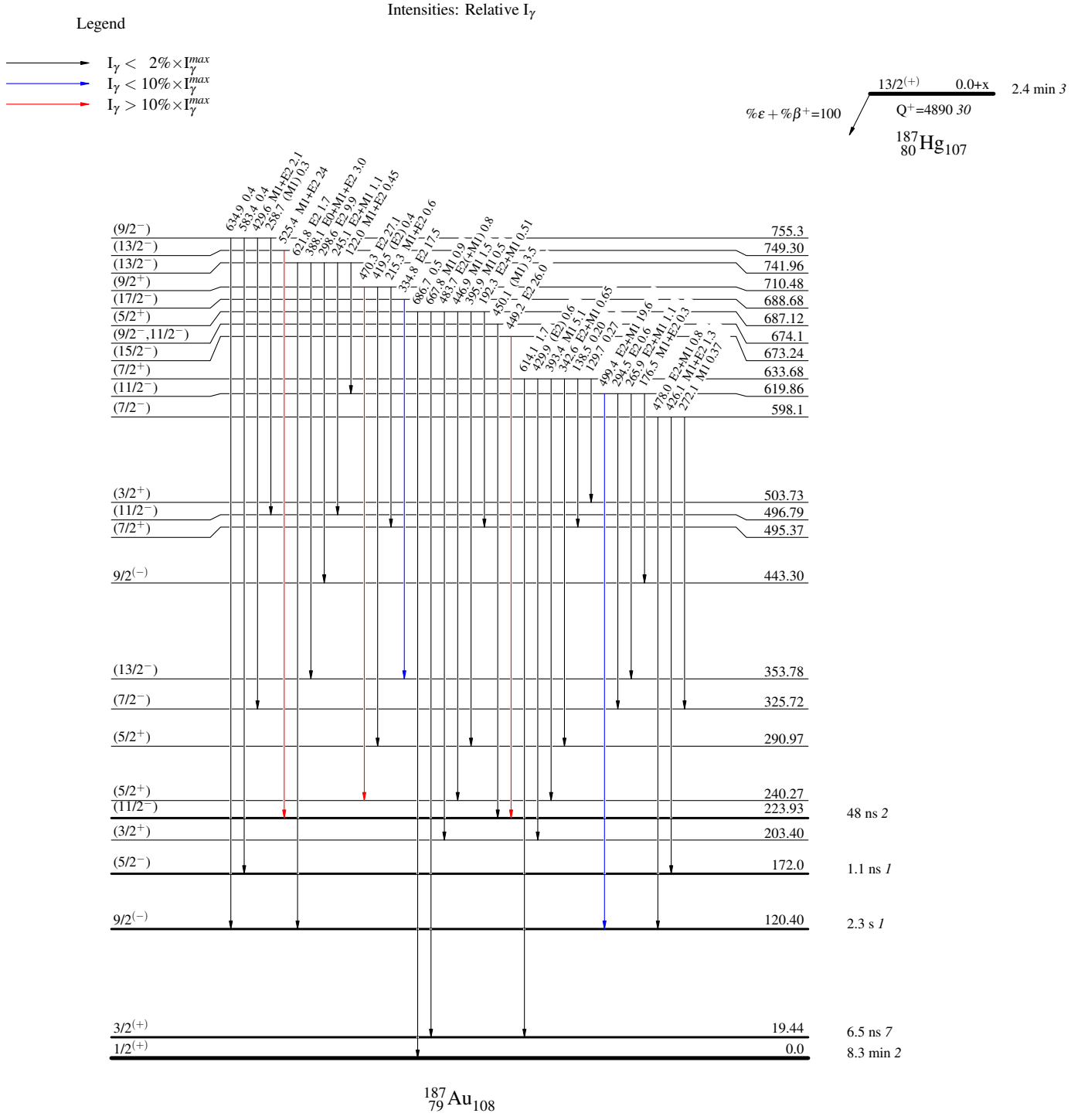


$^{187}_{79}Au_{108}$

^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

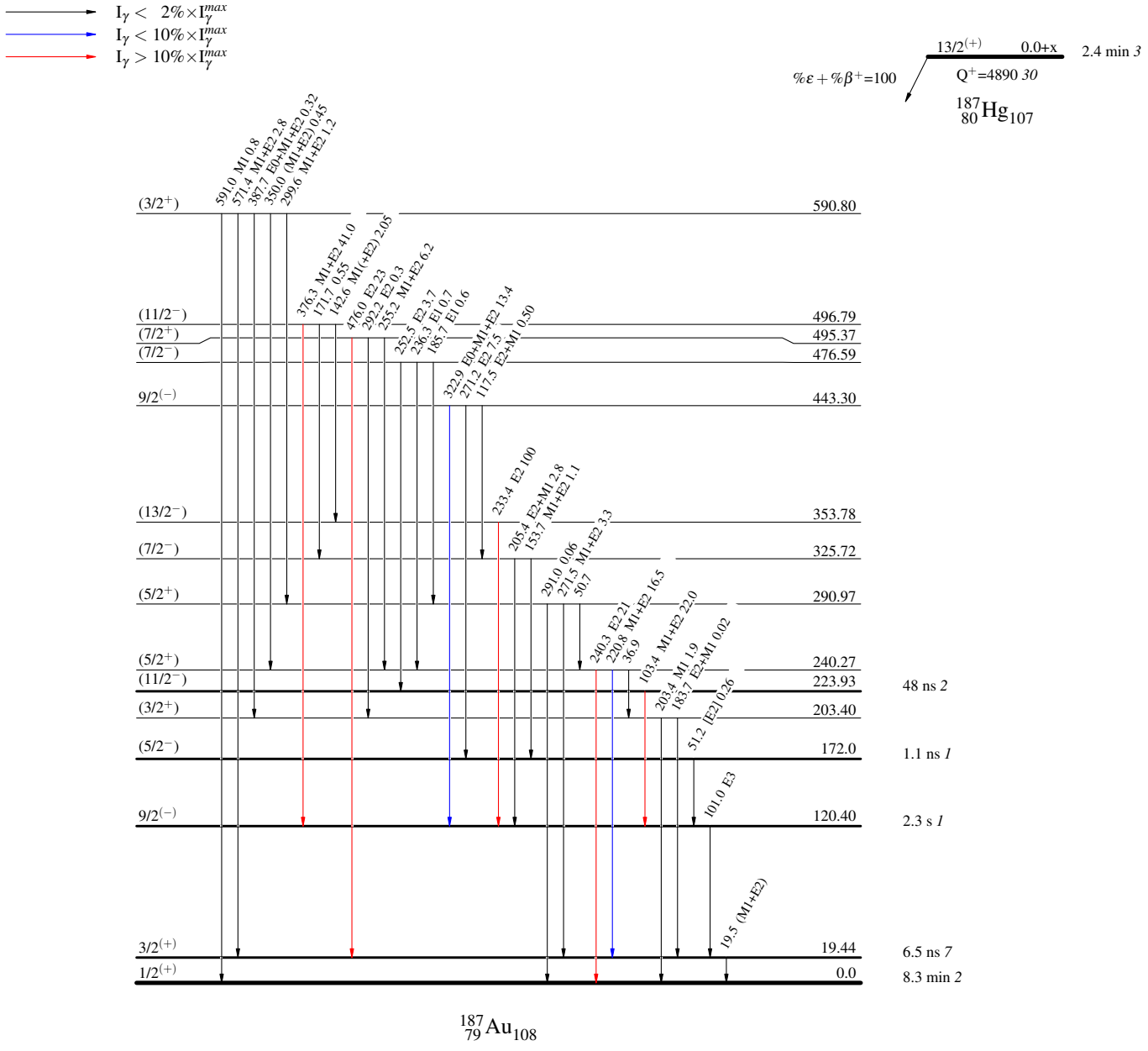
Intensities: Relative I_γ



^{187}Hg ε decay (2.4 min) 1998Ru04,1994RuZX,1978Bo05

Decay Scheme (continued)

Intensities: Relative I_γ



$^{187}_{79}Au_{108}$

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

Other references: 1975De21, 1987ViZY, 1997Pe26, 1992Ko10.

1989Bo10: 92.5% enriched ^{172}Yb; Projectile: ^{19}F, E=95 MeV; Detector: 'Chateau de Cristal' consists of 12 Compton-suppressed HPGe and 38 BaF_2 counters; Measured: Eγ, $\gamma\gamma$ coin, γ-fold, and γ-sum-energy, linear polarization and DCO ratios of the γ-rays. The DCO ratios are deduced for γ-rays measured at 33° and 90° and gated on the stretched E2 transitions.

1989Jo02: Target: 98% enriched ^{172}Yb; Projectile: ^{19}F, E=95 MeV; Detector: 6 NaI and an array of 5 HPGe at 90°, 60°, 45°, 30°, −10° with respect to the beam direction, and an additional planer Ge detector at −90° for low energy γ-ray measurement and time resolution; Measured: Eγ, Iγ, $\gamma(\theta)$, and $T_{1/2}$.

1975De21: ^{175}Lu(^{16}O,4nγ) E=95 MeV.

1987ViZY: ^{175}Lu(^{16}O,4nγ) E=90 MeV.

1997Pe26 (Same group of 1989Bo10): ^{172}Yb(^{19}F,4nγ), E=88 MeV; Measured g-factor for the 2670-keV isomer (J^π=31/2$^-$ or 35/2$^-$).

1992Ko10: Target: 95% enriched ^{172}Yb; Projectile: ^{19}F, E=90-,95-, and 100-MeV; Detector: 'Chateau de Cristal' consists of 12 Compton-suppressed HPGe and 26 BaF_2 counters; Measured: Eγ, $\gamma\gamma$ coin, γ-fold, and γ-sum-energy.

In general, the level scheme is mostly similar between 1989Bo10 and 1989Jo02. Differences are noted. 1989Bo10 presents more band structures in the level scheme than those in the 1989Jo02.

^{187}Au Levels

E(level)[†]	J^π[‡]	$T_{1/2}$[@]	Comments
0.0[h]	1/2$^+$		
19.47[h] *13*	3/2$^+$		Additional information 1.
121[&]	9/2$^-$		Additional information 2.
173[d]	5/2$^-$		Additional information 3.
224.9[e] *5*	11/2$^-$	50 ns *5*	
239.7[h] *4*	5/2$^+$		
354.2[&] *4*	13/2$^-$		
444.0[d] *4*	(7/2$^-$,9/2$^-$)		
497.1[a] *4*	11/2$^-$		
674.0[e] *6*	15/2$^-$		
688.8[&] *5*	17/2$^-$		
709.7[h] *7*	9/2$^+$		
742.1[d] *5*	(11/2$^-$,13/2$^-$)		
816.1[a] *5*	15/2$^-$		
1102.7[&] *6*	21/2$^-$		
1122.0[c] *5*	13/2$^+$		
1147.7[h] *8*	13/2$^+$		
1167.1[d] *7*	(15/2$^-$,17/2$^-$)		
1199.3 *8*	17/2$^-$		J^π: (11/2$^-$) in the Adopted Levels. Placement of 525.5γ is from (13/2$^-$) state at 749.9 keV in 1989Jo02 and from 17/2$^-$ state in 1989Bo10.
1233.0[a] *5*	19/2$^-$		
1316.8 *7*	19/2$^-$		J^π: (17/2$^-$) in the Adopted Levels.
1381.1[c] *5*	17/2$^+$		
1405.5[e] *7*	19/2$^-$		
1415.8 *6*	(17/2$^-$,19/2,21/2$^+$)		J^π: 727γ to 17/2$^-$ and 699γ from 21/2$^+$ states.
1594.0[&] *7*	25/2$^-$		

Continued on next page (footnotes at end of table)

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02 (continued)

^{187}Au Levels (continued)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[@]	Comments
1602.7[h] *10*	17/2$^+$		
1685.1[d] *9*	(19/2$^-$,21/2$^-$)		
1697.5[c] *6*	21/2$^+$		
1739.9[a] *6*	23/2$^-$		
1766.3			
2007.6 *7*	23/2$^-$		
2052.8 *8*	21/2		
2097.8[c] *7*	25/2$^+$		
2114.9[f] *7*	21/2$^+$		
2160.9[&] *9*	29/2$^-$		
2196.5[e] *8*	23/2$^-$		
2247.1[d] *10*	(23/2$^-$,25/2$^-$)		
2281.6[f] *7*	23/2$^+$	<10 ns	
2292.9[b] *7*	27/2$^-$		
2354.9[a] *8*	27/2$^-$		
2431.2[f] *8*	25/2$^+$	24 ns *3*	T$_{1/2}$: Weighted average of 21 ns *6* (1997Pe26) and 25 ns *3* (1989Jo02).
2551.6 *9*			
2564.5?[f] *10*	27/2$^+$		
2568.8[c] *8*	29/2$^+$		
2581.0[e] *8*	(25/2$^-$)[#]		J$^\pi$: (25/2) in 1989Bo10 and 27/2$^-$ in 1989Jo02.
2669.8[g] *10*	31/2$^-$	100 ns *5*	μ=−3.9 *5* T$_{1/2}$: Weighted average of 102 ns *5* (1997Pe26) and 90 ns *10* (1989Jo02); Other: 100 ns (1989Bo10). μ: deduced by the evaluator from g=0.25 *3* (1997Pe26). The g-factor is measured using time differential perturbed angular distribution. 1997Pe26 speculates that the g-factor might be for a (35/2$^-$) state at 2669.8+ΔE keV level feeding the 2669.8-keV level by a <40−keV γ-ray based on the hindrence factor calculation.
2670.5 *9*	(25/2)		
2672.1?[d] *11*			
2792.9 *9*	29/2$^-$,31/2$^-$[#]		J$^\pi$: 29/2$^-$ in 1989Jo02, 31/2$^-$ in 1989Bo10.
2798.9[&] *10*	33/2$^-$		
2966.5[g] *11*	33/2$^-$		
3013.9[a] *9*	(31/2$^-$)		
3040.2[c] *10*	33/2$^+$		
3055.9?[f] *11*	31/2$^+$		
3129.3[g] *11*	35/2$^-$		
3190.1?[d] *12*			
3346.1[b] *10*	35/2$^-$[#]		J$^\pi$: 33/2$^-$ in 1989Jo02, 35/2$^-$ in 1989Bo10.
3353.4 *12*	35/2$^-$		
3482.4[g] *11*	37/2$^-$		
3484.1[c] *11*	37/2$^+$		
3503.7[&] *11*	37/2$^-$		
3761.9[g] *11*	39/2$^-$		
3809.9[f] *12*	35/2$^+$		
3977.3[b] *11*	39/2$^-$		
3994.4[c] *12*	41/2$^+$		
4015.3 *11*	39/2$^-$		
4225.5[g] *11*	41/2$^-$		
4263.8[&] *12*	41/2$^-$		

Continued on next page (footnotes at end of table)

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02 (continued)

^{187}Au Levels (continued)

E(level)[†]	J$^\pi$[‡]	Comments
4316.9 *13*		
4506.6[g] *12*	43/2$^-$	
4550.2 *12*	43/2$^-$	
4576.0[f] *13*	39/2$^+$	
4593.6[c] *13*	45/2$^+$	
4650.1 *13*	39/2$^+$	
4657.0 *12*	43/2$^-$	
4690.3[b] *12*	(43/2$^-$)	
4787.2[f] *13*	43/2$^+$	
4850.9 *12*	47/2$^-$	
5041.3[&] *13*	(45/2$^-$)	
5127.5 *12*	47/2$^-$	
5253.0 *14*		
5281.7[c] *14*	49/2$^+$	
5351.6[g] *13*	(47/2)	
5374.3[f] *14*	47/2$^+$	
5519.1 *13*	51/2$^-$	
5745.9 *13*		
5781.3[f] *15*	(49/2$^+$)	
5814.3 *15*		
5868.5 *13*		
5979.3 *15*		
6054.7[c] *15*	(53/2$^+$)	
6128.3 *14*	53/2,55/2$^-$[#]	J$^\pi$: (55/2$^-$) in 1989Jo02, 53/2 in 1989Bo10.
6249.1 *14*		
6399.1[f] *16*	(51/2$^+$)[#]	J$^\pi$: from 1989Jo02. (53/2) in 1989Bo10. 617.6γ to 49/2$^+$ state is consistent with the A$_2$=−0.15 *9* (1989Jo02).
6504.5 *14*		
6593.3 *15*		
6914.7[c] *16*	(57/2$^+$)	
7218.9[f] *17*	(57/2)[#]	J$^\pi$: (53/2$^+$) in 1989Jo02.

[†] From a least-squares adjustment to the γ energies assuming ΔE=0.5 keV for all γ-ray energies. Bands 1, 2, 3, 4, and 5 represent collective behavior and Bands 6, 7, 8, and 9 are the part of the systems of levels with non-collective behavior.
[‡] From the $\gamma(\theta)$ measurements and rotational band structure.
[#] Assignment differs between 1989Bo10 and 1989Jo02.
[@] From $\gamma\gamma$(t) (1989Jo02).
[&] Band 1: configuration=π h$_{9/2}$ α=+1/2 *1*/2$^-$[541].
[a] Band 2: configuration=π h$_{9/2}$ α=−1/2 *1*/2$^-$[541].
[b] Band 3: configuration=π f$_{7/2}$.
[c] Band 4: configuration=π i$_{13/2}$ 1/2$^+$[660].
[d] Band 5.
[e] Band 6: configuration=π h$_{11/2}$.
[f] Band 7.
[g] Band 8: Isomeric band.
[h] Band 9.

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02 (continued)

$\gamma(^{187}Au)$

E_γ[†]	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	Comments
89.0[‡]	2[‡]	1405.5	19/2$^-$	1316.8	19/2$^-$		E_γ: expected but not observed by 1989Jo02 and uncertainly placed from 2669.8-keV level (J^π=31/2$^-$).
103.9	2	224.9	11/2$^-$	121	9/2$^-$		E_γ: reported only in 1989Jo02.
133.7[‡]	9[‡]	2564.5?	27/2$^+$	2431.2	25/2$^+$	D+Q	A_2=−0.12 *4*, A_4=+0.01 *5* (1989Jo02); R_{DCO}=0.5 *2* (1989Bo10). Placement is shown from 35/2$^+$ state at 3810.9 keV in 1989Jo02.
137.6[‡]	[‡]	4787.2	43/2$^+$	4650.1	39/2$^+$		
143		497.1	11/2$^-$	354.2	13/2$^-$		
148		1381.1	17/2$^+$	1233.0	19/2$^-$		
149.6[b‡]	17[b‡]	2431.2	25/2$^+$	2281.6	23/2$^+$	(M1+E2)[&]	A_2=−0.14(2), A_4=−0.03 *2* for doublet (1989Jo02); R_{DCO}=0.6 *2* (1989Bo10).
150[b]	17[b]	2581.0	(25/2$^-$)	2431.2	25/2$^+$		A_2=−0.14(2), A_4=−0.03 *2* for doublet (1989Jo02). E_γ: Placement only in 1989Jo02.
162.7[‡]	14[‡]	3129.3	35/2$^-$	2966.5	33/2$^-$	D+Q	A_2=−0.33 *3*, A_4=+0.09 *4* (1989Jo02); R_{DCO}=0.5 *1* (1989Bo10).
166.7[‡]	19[‡]	2281.6	23/2$^+$	2114.9	21/2$^+$	(M1+E2)[&]	A_2=−0.14 *2*, A_4=+0.02 *2* (1989Jo02); R_{DCO}=0.6 *2* (1989Bo10).
194.1[‡]	7[‡]	4850.9	47/2$^-$	4657.0	43/2$^-$		
211.6[‡]	15[‡]	4787.2	43/2$^+$	4576.0	39/2$^+$	Q	A_2=+0.38 *4*, A_4=−0.08 *5* (1989Jo02).
220		239.7	5/2$^+$	19.47	3/2$^+$		
229		2281.6	23/2$^+$	2052.8	21/2		
233.4[‡]	100[‡]	354.2	13/2$^-$	121	9/2$^-$	Q[&]	A_2=+0.27 *1*, A_4=−0.09 *1* (1989Jo02).
240		239.7	5/2$^+$	0.0	1/2$^+$		
259.4[‡]	4[‡]	1381.1	17/2$^+$	1122.0	13/2$^+$		A_2=+0.07 *4*, A_4=−0.08 *5* (1989Jo02).
270		2551.6		2281.6	23/2$^+$		
271		444.0	(7/2$^-$,9/2$^-$)	173	5/2$^-$		
279.7[‡]	23[‡]	3761.9	39/2$^-$	3482.4	37/2$^-$	(M1+E2)	A_2=−0.14 *2*, A_4=+0.07 *2* (1989Jo02); R_{DCO}=0.7 *1* and linear polarization=−0.19 *7* (1989Bo10).
281.0[‡]	3[‡]	4506.6	43/2$^-$	4225.5	41/2$^-$	D+Q	A_2=−0.12 *2*, A_4=+0.09 *2* (1989Jo02).
297.1[‡]	43[‡]	2966.5	33/2$^-$	2669.8	31/2$^-$	(M1+E2)	A_2=−0.03 *1*, A_4=+0.09 *1* (1989Jo02); R_{DCO}=0.5 *1* and Linear polarization=−0.35 *10* (1989Bo10).
298		742.1	(11/2$^-$,13/2$^-$)	444.0	(7/2$^-$,9/2$^-$)		
316.4[‡]	29[‡]	1697.5	21/2$^+$	1381.1	17/2$^+$	Q	A_2=+0.28 *1*, A_4=−0.10 *2* (1989Jo02).
319.2[‡]	7[‡]	816.1	15/2$^-$	497.1	11/2$^-$	Q[&]	A_2=+0.39 *3*, A_4=−0.12 *3* (1989Jo02).
323		444.0	(7/2$^-$,9/2$^-$)	121	9/2$^-$		
325		4550.2	43/2$^-$	4225.5	41/2$^-$		R_{DCO}=0.5 *2* (1989Bo10).
334.7[‡]	93[‡]	688.8	17/2$^-$	354.2	13/2$^-$	Q[&]	A_2=+0.28 *1*, A_4=−0.09 *1* (1989Jo02).
344.5[‡]	8[‡]	4850.9	47/2$^-$	4506.6	43/2$^-$	Q	A_2=+0.19 *6*, A_4=−0.06 *8* (1989Jo02).
353.4[‡]	33[‡]	3482.4	37/2$^-$	3129.3	35/2$^-$	(M1+E2)	A_2=−0.15 *2*, A_4=+0.08 *2* (1989Jo02); R_{DCO}=0.3 *1* and linear polarization=−0.07 *2* (1989Bo10).
358		2097.8	25/2$^+$	1739.9	23/2$^-$		
376.4[‡]	11[‡]	497.1	11/2$^-$	121	9/2$^-$	(M1+E2)[&]	A_2=−0.81 *2*, A_4=+0.19 *2* (1989Jo02); R_{DCO}=0.3 *1* and linear polarization=−0.10 *5* (1989Bo10).

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^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02 (continued)

$\gamma(^{187}Au)$ (continued)

E_γ[†]	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ	Comments
384.7[‡]	5[‡]	2581.0	(25/2$^-$)	2196.5	23/2$^-$			R_{DCO}=0.7 *3* (1989Bo10).
387		3353.4	35/2$^-$	2966.5	33/2$^-$			
388		742.1	(11/2$^-$,13/2$^-$)	354.2	13/2$^-$			
400.4[‡]	27[‡]	2097.8	25/2$^+$	1697.5	21/2$^+$	Q		A_2=+0.30 *1*, A_4=−0.10 *2* (1989Jo02).
407.0[‡]	6[‡]	5781.3	(49/2$^+$)	5374.3	47/2$^+$			A_2=−0.00 *14*, A_4=−0.43 *7* (1989Jo02); R_{DCO}=0.6 *2* (1989Bo10).
413.8[‡]	81[‡]	1102.7	21/2$^-$	688.8	17/2$^-$	Q[&]		A_2=+0.26 *1*, A_4=−0.07 *1* (1989Jo02).
416.8[‡]	10[‡]	1233.0	19/2$^-$	816.1	15/2$^-$			A_2=+0.12 *3*, A_4=−0.04 *3* (1989Jo02).
425[a]		1167.1	(15/2$^-$,17/2$^-$)	742.1	(11/2$^-$,13/2$^-$)			
425[a]		2672.1?		2247.1	(23/2$^-$,25/2$^-$)			
431.6[‡]	2[‡]	4657.0	43/2$^-$	4225.5	41/2$^-$			A_2=−0.05 *12*, A_4=+0.45 *15* (1989Jo02).
438		1147.7	13/2$^+$	709.7	9/2$^+$			
440		5814.3		5374.3	47/2$^+$			
443.8[‡]	19[‡]	3484.1	37/2$^+$	3040.2	33/2$^+$	Q		A_2=+0.38 *3*, A_4=−0.16 *4* (1989Jo02).
449.5[‡]	64[‡]	674.0	15/2$^-$	224.9	11/2$^-$	Q[&]		A_2=+0.25 *1*, A_4=−0.11 *1* (1989Jo02).
455		1602.7	17/2$^+$	1147.7	13/2$^+$			
459.4[‡]	20[‡]	3129.3	35/2$^-$	2669.8	31/2$^-$	Q		A_2=+0.31 *3*, A_4=−0.16 *3* (1989Jo02).
462.1[‡]	[‡]	816.1	15/2$^-$	354.2	13/2$^-$			R_{DCO}=0.20 *5* (1989Bo10).
463.6[‡]	7[‡]	4225.5	41/2$^-$	3761.9	39/2$^-$	(M1+E2)		R_{DCO}=0.3 *1* and linear polarization=−0.25 *10* (1989Bo10).
464.5[‡]	14[‡]	1697.5	21/2$^+$	1233.0	19/2$^-$			R_{DCO}=0.6 *2* (1989Bo10).
465[a]		6593.3		6128.3	53/2,55/2$^-$			
466		5253.0		4787.2	43/2$^+$			
470		709.7	9/2$^+$	239.7	5/2$^+$			
470.9[b‡]	48[b‡]	2568.8	29/2$^+$	2097.8	25/2$^+$	(Q)		A_2=+0.32 *2*, A_4=−0.10 *2* for doublet (1989Jo02).
470.9[b‡]	48[b‡]	3040.2	33/2$^+$	2568.8	29/2$^+$	(Q)		
474		2670.5	(25/2)	2196.5	23/2$^-$			R_{DCO}=0.6 *4* (1989Bo10).
491.6[‡]	71[‡]	1594.0	25/2$^-$	1102.7	21/2$^-$	(E2)[&]		A_2=+0.31 *1*, A_4=−0.15 *1* (1989Jo02).
491.8[‡]	55[‡]	3055.9?	31/2$^+$	2564.5?	27/2$^+$			E_γ: Placement is from (29/2$^+$) state at 2923 keV in 1989Jo02 but the state is not reported in 1989Bo10.
500.0[‡]	7[‡]	2792.9	29/2$^-$,31/2$^-$	2292.9	27/2$^-$			A_2=−0.23 *4*, A_4=−0.05 *5* (1989Jo02).
507.0[‡]	8[‡]	1739.9	23/2$^-$	1233.0	19/2$^-$			
507		4316.9		3809.9	35/2$^+$			
508.8[‡]	48[‡]	2669.8	31/2$^-$	2160.9	29/2$^-$	(M1+E2)[&]	1.1	A_2=−0.15 *1*, A_4=+0.04 *2* (1989Jo02); R_{DCO}=0.4 *1* (1989Bo10). δ: From 55% E2 as mentioned in 1989Bo10 referring 1987ViZY.
510.6[‡]	16[‡]	3994.4	41/2$^+$	3484.1	37/2$^+$			
516.0[‡]	5[‡]	3482.4	37/2$^-$	2966.5	33/2$^-$			
518[a]		1685.1	(19/2$^-$,21/2$^-$)	1167.1	(15/2$^-$,17/2$^-$)			
518[a]		3190.1?		2672.1?				
525.5[‡]	[‡]	1199.3	17/2$^-$	674.0	15/2$^-$			A_2=+0.22 *6*, A_4=+0.05 *7* (1989Jo02). Placement is from (13/2$^-$) state at 749.9 keV in 1989Jo02, but the level is not reported in 1989Bo10. 525.5.
533		4015.3	39/2$^-$	3482.4	37/2$^-$			
544.5[‡]	5[‡]	1233.0	19/2$^-$	688.8	17/2$^-$	(M1+E2)		A_2=−1.10 *7*, A_4=+0.19 *8* (1989Jo02);

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^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02 (continued)

$\gamma(^{187}Au)$ (continued)

E_γ[†]	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	Comments
							R_{DCO}=0.2 *1* and linear polarization=−0.2 *1* (1989Bo10).
553.1[b‡]	14[b‡]	2292.9	27/2$^-$	1739.9	23/2$^-$		A_2=+0.05 *4*, A_4=−0.02 *5* for doublet (1989Jo02).
553.1[b‡]	14[b‡]	3346.1	35/2$^-$	2792.9	29/2$^-$,31/2$^-$		A_2=+0.05 *4*, A_4=−0.02 *5* for doublet (1989Jo02).
562		2247.1	(23/2$^-$,25/2$^-$)	1685.1	(19/2$^-$,21/2$^-$)		
565.2‡	13‡	1381.1	17/2$^+$	816.1	15/2$^-$	(E1)[&]	A_2=−0.40 *2*, A_4=+0.18 *3* (1989Jo02); R_{DCO}=0.6 *2* and linear polarization=0.4 *2* (1989Bo10).
566.8‡	64‡	2160.9	29/2$^-$	1594.0	25/2$^-$	(E2)[&]	A_2=+0.30 *1*, A_4=−0.10 *1* (1989Jo02).
567		1766.3		1199.3	17/2$^-$		
577.4‡	5‡	5127.5	47/2$^-$	4550.2	43/2$^-$		A_2=+0.08 *12*, A_4=+0.03 *15* (1989Jo02). E_γ: Placement is from (49/2$^-$) state at 5428.5 keV in 1989Jo02 but the state is not reported in 1989Bo10.
587.2‡	16‡	5374.3	47/2$^+$	4787.2	43/2$^+$	Q	A_2=+0.36 *6*, A_4=−0.22 *7* (1989Jo02).
599.5‡	10‡	4593.6	45/2$^+$	3994.4	41/2$^+$		
602		2007.6	23/2$^-$	1405.5	19/2$^-$		
605		5979.3		5374.3	47/2$^+$		
609.4‡	5‡	6128.3	53/2,55/2$^-$	5519.1	51/2$^-$		A_2=+0.13 *9*, A_4=+0.49 *12* (1989Jo02); R_{DCO}=0.4 *2* (1989Bo10).
615		2354.9	27/2$^-$	1739.9	23/2$^-$		
617.6‡	5‡	6399.1	(51/2$^+$)	5781.3	(49/2$^+$)		A_2=−0.15 *9*, A_4=−0.33 *11* (1989Jo02).
621		5127.5	47/2$^-$	4506.6	43/2$^-$		
624.9‡	5‡	1122.0	13/2$^+$	497.1	11/2$^-$	[&]	A_2=−0.25 *6*, A_4=−0.04 *7* (1989Jo02).
631.5‡	‡	3977.3	39/2$^-$	3346.1	35/2$^-$		E_γ: Uncertain placement from (31/2$^-$) state at 2924.6 keV in 1989Jo02, and the state is not reported in 1989Bo10.
632.9‡	10‡	3761.9	39/2$^-$	3129.3	35/2$^-$		A_2=+0.56 *12*, A_4=−0.09 *14* (1989Jo02).
636		6504.5		5868.5			
637‡	‡	1739.9	23/2$^-$	1102.7	21/2$^-$		
638.1‡	18‡	2798.9	33/2$^-$	2160.9	29/2$^-$	Q	A_2=+0.27 *4*, A_4=−0.07 *5* (1989Jo02).
642		4657.0	43/2$^-$	4015.3	39/2$^-$		
642.9‡	8‡	1316.8	19/2$^-$	674.0	15/2$^-$	[&]	A_2=+0.26 *3*, A_4=+0.02 *4* (1989Jo02).
659		3013.9	(31/2$^-$)	2354.9	27/2$^-$		
662		4015.3	39/2$^-$	3353.4	35/2$^-$		
668.4‡	16‡	5519.1	51/2$^-$	4850.9	47/2$^-$	Q	A_2=+0.48 *7*, A_4=−0.32 *9* (1989Jo02).
688.3‡	4‡	5281.7	49/2$^+$	4593.6	45/2$^+$		
691		2007.6	23/2$^-$	1316.8	19/2$^-$		
692.2‡	2‡	1381.1	17/2$^+$	688.8	17/2$^-$		R_{DCO}=0.9 *1* (1989Bo10).
[x]696.0	3					D+Q	A_2=−0.18 *30*, A_4=+0.59 *42* (1989Jo02). Placement is shown along with the 788.1γ from (53/2$^-$) state at 6216.3 keV in 1989Jo02, but the γ-ray and the state are not reported in 1989Bo10.
699		2114.9	21/2$^+$	1415.8	(17/2$^-$,19/2,21/2$^+$)		
699.1‡	7‡	2292.9	27/2$^-$	1594.0	25/2$^-$	(M1+E2)	A_2=−0.94 *11*, A_4=+0.50 *13* (1989Jo02); R_{DCO}=0.3 *1* and linear polarization=−0.5 *3* (1989Bo10).
704.7‡	11‡	3503.7	37/2$^-$	2798.9	33/2$^-$	Q	A_2=+0.45 *9*, A_4=−0.48 *11* (1989Jo02).

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^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02 (continued)

$\gamma(^{187}Au)$ (continued)

E_γ[†]	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	Comments
709.8[‡]	39[‡]	2114.9	21/2$^+$	1405.5	19/2$^-$	(E1)[&]	A_2=−0.20 *1*, A_4=−0.02 *2* (1989Jo02); R_{DCO}=0.7 *2* and linear polarization=0.4 *2* (1989Bo10).
713		4690.3	(43/2$^-$)	3977.3	39/2$^-$		
727		1415.8	(17/2$^-$,19/2,21/2$^+$)	688.8	17/2$^-$		
730		6249.1		5519.1	51/2$^-$		E_γ: Placement from (59/2$^-$) state at 6859.5 keV in 1989Jo02 but the state is not reported in 1989Bo10.
731.5[‡]	19[‡]	1405.5	19/2$^-$	674.0	15/2$^-$	(E2)[&]	A_2=+0.31 *1*, A_4=−0.13 *1* (1989Jo02).
736.4[‡]	5[‡]	2052.8	21/2	1316.8	19/2$^-$		A_2=−0.41 *8*, A_4=−0.05 *10* (1989Jo02); R_{DCO}=0.5 *2* (1989Bo10).
741		5868.5		5127.5	47/2$^-$		
743.2[‡]	[‡]	4225.5	41/2$^-$	3482.4	37/2$^-$		
744.6[‡]	17[‡]	4506.6	43/2$^-$	3761.9	39/2$^-$		
754.1[‡]	51[‡]	3809.9	35/2$^+$	3055.9?	31/2$^+$	Q	A_2=+0.20 *1*, A_4=−0.11 *2* (1989Jo02). E_γ: Placement is from (33/2$^+$) state at 3677.2 keV in 1989Jo02 but the state is not reported in 1989Bo10.
760.3[‡]	5[‡]	4263.8	41/2$^-$	3503.7	37/2$^-$		
766.4[‡]	28[‡]	4576.0	39/2$^+$	3809.9	35/2$^+$		A_2=+0.60 *3*, A_4=−0.24 *4* (1989Jo02).
773		6054.7	(53/2$^+$)	5281.7	49/2$^+$		
777.5	2	5041.3	(45/2$^-$)	4263.8	41/2$^-$		E_γ: Average of 1989Bo10 and 1989Jo02.
788.1[‡]	5[‡]	4550.2	43/2$^-$	3761.9	39/2$^-$		A_2=+0.32 *17*, A_4=−1.40 *25* (1989Jo02). E_γ: This γ-ray is placed from (53/2$^-$) state at 6216.3 keV in 1989Jo02 but the state is not reported in 1989Bo10.
790.6[‡]	5[‡]	2196.5	23/2$^-$	1405.5	19/2$^-$	(E2)[&]	A_2=+0.34 *8*, A_4=−0.09 *11* (1989Jo02).
819.6[‡]	4[‡]	7218.9	(57/2)	6399.1	(51/2$^+$)		
840.3[‡]	14[‡]	4650.1	39/2$^+$	3809.9	35/2$^+$		A_2=+0.06 *7*, A_4=−0.09 *9* (1989Jo02).
845		5351.6	(47/2)	4506.6	43/2$^-$		
860		6914.7	(57/2$^+$)	6054.7	(53/2$^+$)		
[x]881[c]	3						Placement is shown from (57/2$^-$) state at 7097.3 keV in 1989Jo02, but the γ-ray and the state are not reported in 1989Bo10.
886		4015.3	39/2$^-$	3129.3	35/2$^-$		
895		5745.9		4850.9	47/2$^-$		
895.1[‡]	7[‡]	4657.0	43/2$^-$	3761.9	39/2$^-$	Q	A_2=+0.37 *8*, A_4=−0.21 *10* (1989Jo02).

[†] From 1989Bo10, except otherwise noted.
[‡] From 1989Jo02. Eγ and placement also reported in 1989Bo10.
[#] From 1989Jo02, relative uncertainty reported as 5% for intense transitions, normalized to 233.4γ.
[@] From 1989Jo02 on the basis of $\gamma(\theta)$, θ=90°, 60°, 45°, 30°, and −10°.
[&] Multipolarity confirmed by ce measurements of 1987ViZY, ce data are not quoted.
[a] Multiply placed.
[b] Multiply placed with undivided intensity.
[c] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02

Level Scheme

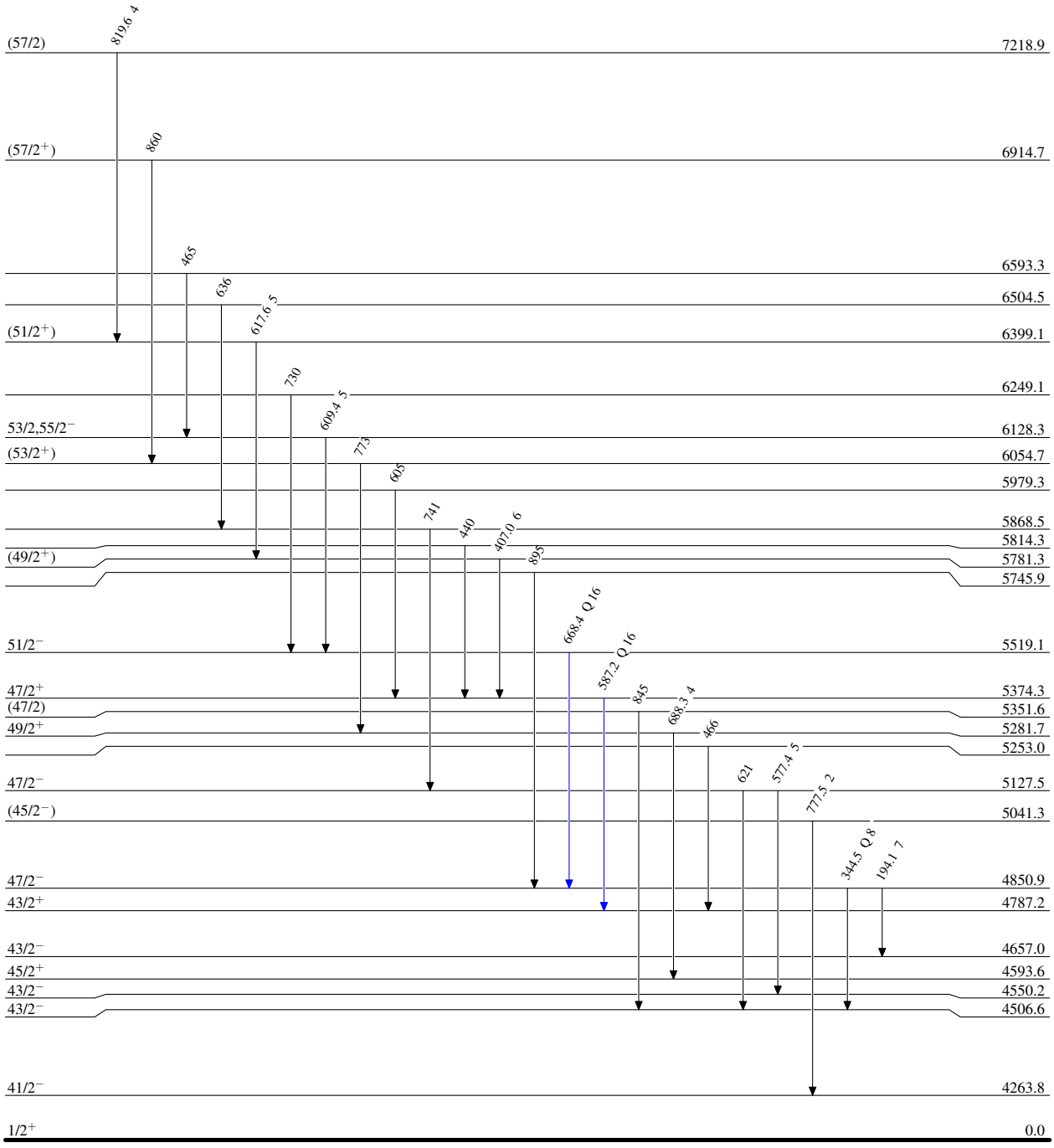
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



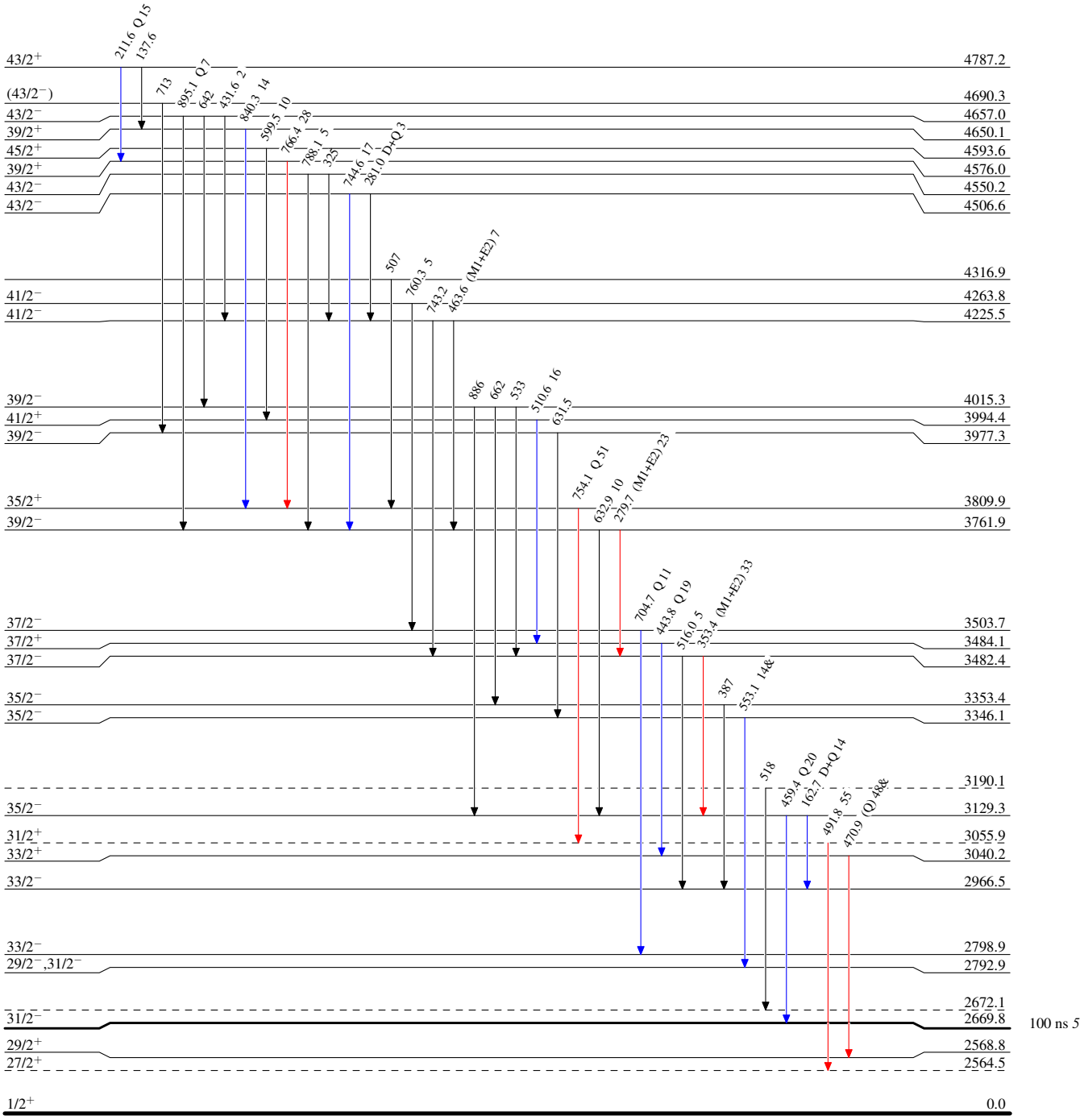
$^{187}_{79}Au_{108}$

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



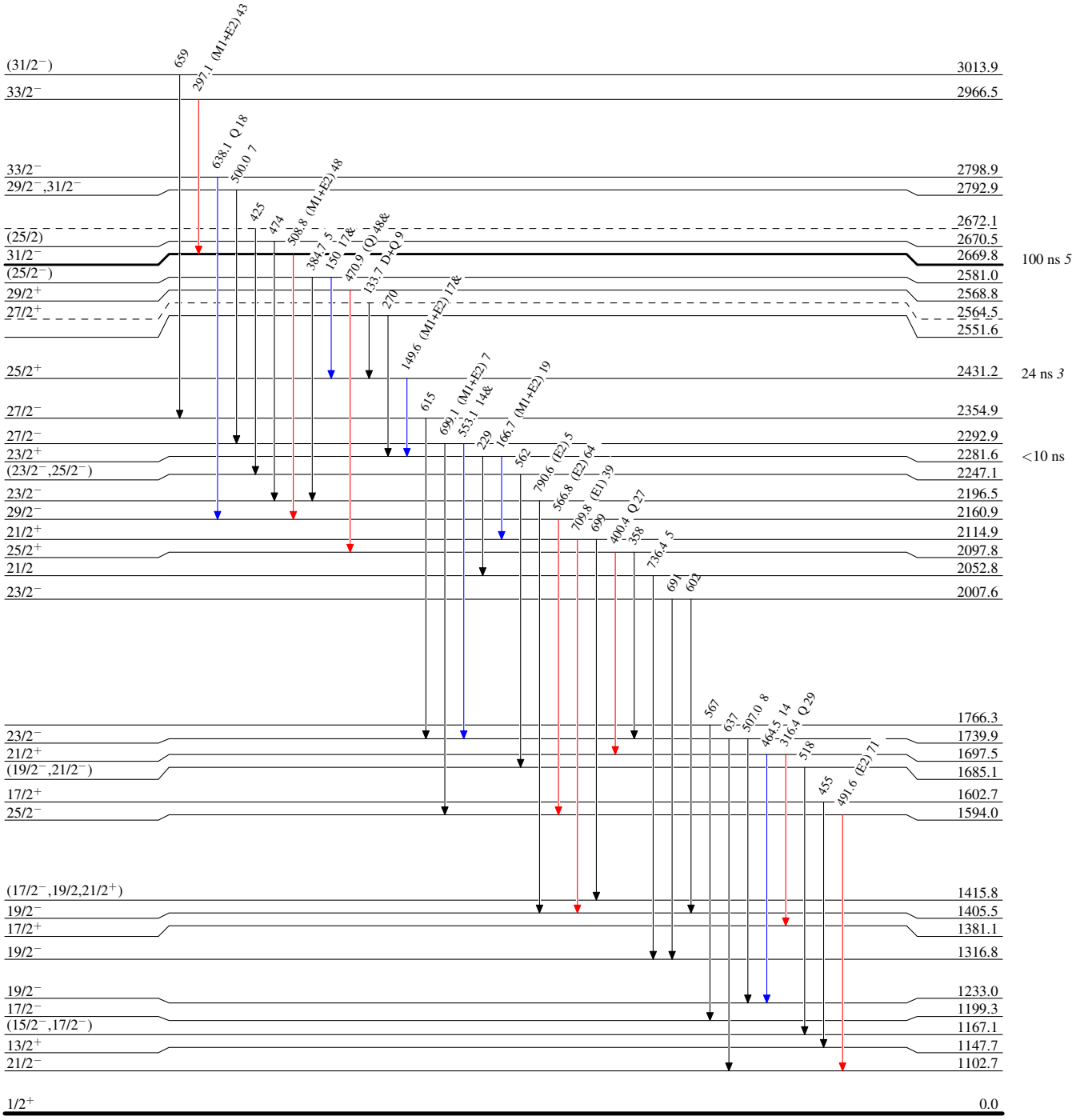
$^{187}_{79}Au_{108}$

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



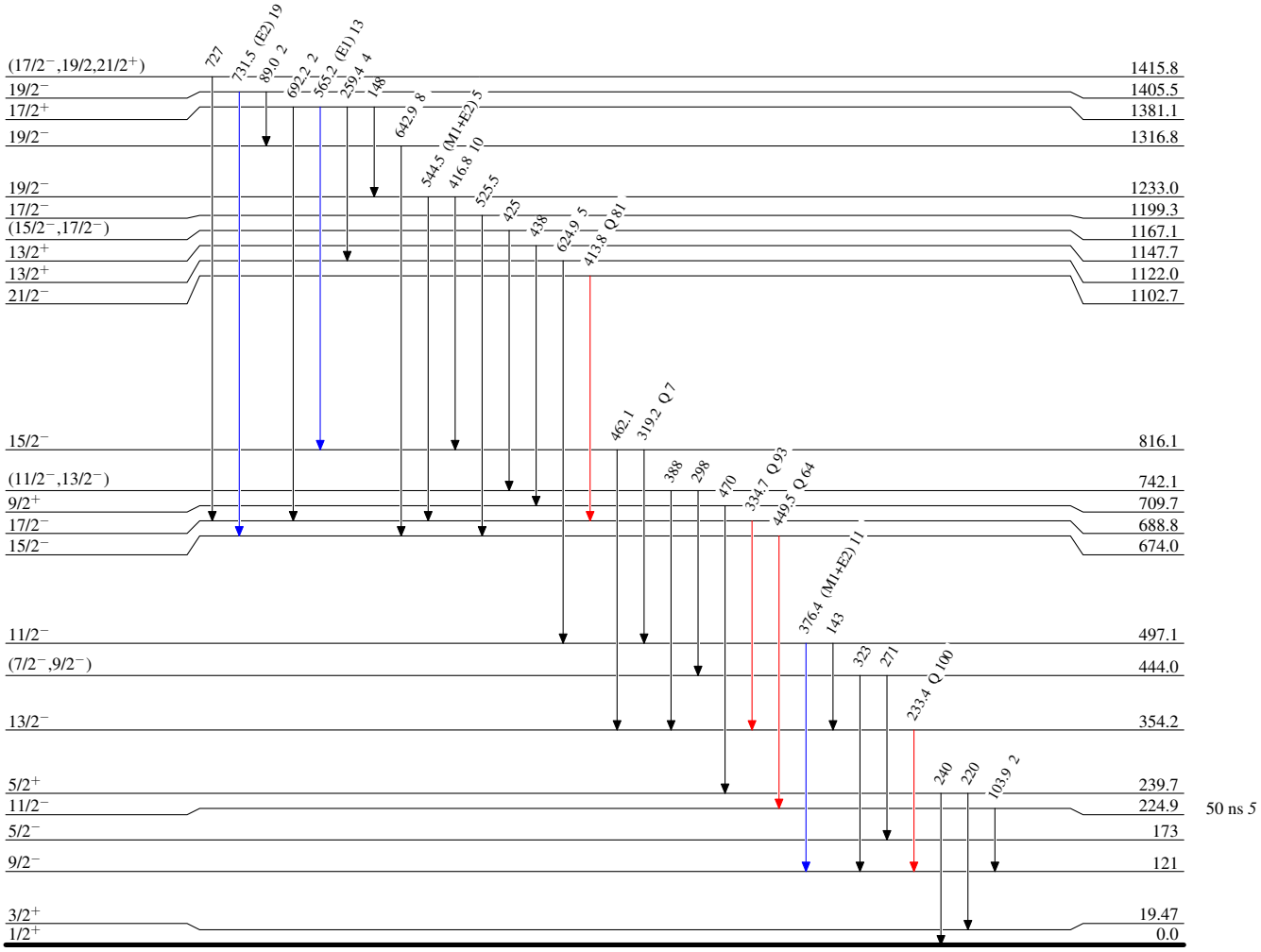
$^{187}_{79}Au_{108}$

^{172}Yb(^{19}F,4nγ) 1989Bo10,1989Jo02

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{187}_{79}Au_{108}$