Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 143, 1 (2017)	31-Mar-2017

Q(β^-)=−2343 *14*; S(n)=8704 *18*; S(p)=4405 *9*; Q(α)=2620 *15* 2017Wa10

Other studies:
1990Ka04: ^{197}Au(α,^{8}He); Eα=65 MeV. Reaction products analyzed at 8° with a solid angle of 5 msr by the quadrupole-dipole-dipole magnetic spectrometer.
1998Is08: ^{191}Ir(α,2n), ^{193}Ir(α,4n); Eα=16-48 MeV. Reaction cross-section measured and compared to Hauser-Feshbach with pre-equilibrium calculation.
2001Gl05: Pb(P,4pXn); E(p)=0.065-2.6 GeV. Measured excitation function.
2008Er03: ^{197}Au(γ,4n), E<67.7 MeV, measured ^{193}Au yield and integral cross section.
2015Ju02: Measured ^{193}Au production cross section, 30.3 mb *25*, bombarding Pb target with proton beam, E=250 MeV.
2015Ba20: ^{208}Pb(^{136}Xe, X), E=743 MeV (mid target), measured cumulative and independent production yields for ^{193}Au to be 1.39 mb *28* and 1.27 mb *21*, respectively.

2016Ka36: Measured cumulative production cross section of ^{193}Au, 9.61 mb *96*, bombarding ^{209}Bi target with ^{11}B beam, E=146.0 MeV.

^{193}Au Levels

Cross Reference (XREF) Flags

A	^{193}Au IT decay (3.9 s)	E	^{186}W(^{11}B,4nγ)
B	^{193}Hg ε decay (3.80 h)	F	Ir(α,xnγ)
C	^{193}Hg ε decay (11.8 h)	G	^{194}Pt(p,2nγ)
D	^{192}Os(^{7}Li,6nγ)		

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[‡]	3/2$^+$	17.65 h *15*	ABCD FG	%ε+%β^+=100 μ=+0.1396 *5*; Q=+0.664 *20* Limit for possible α decay:<1×10^{-5}% (1963Ka17). Theory 1×10^{-21}% (2001Mo07). J$^\pi$: spin from atomic beam (1976Fu06); parity from Schmidt diagram, μ. T$_{1/2}$: from 1968Sv01. Other values: 15.8 h *3* (1948Wi01,1949Wi08), 17.5 h *2* (1957Ew34), 15.3 h *5* (1952Fi06). μ: Collinear LASER spectroscopy (1994Pa37); others: 0.1396 *6* NMR on oriented nuclei (1993Hi10), +0.140 *1* atomic beam (2014StZZ,1980Ek04), 0.139 atomic beam (1976Fu06). Q: Collinear LASER spectroscopy (2014StZZ,1994Pa37). Isotope shift: Δ<r^2>=−0.162 fm^2 2 (1994Pa37), relative to ^{197}Au. Other: −0.157 fm^2 4 (1989Wa11,1985St10). $\sqrt{<r^2>}$=5.421 fm *4* (2004An14).
38.234 *17*	(1/2)$^+$	3.81 ns *18*	ABC FG	J$^\pi$: M1+E2 γ to 3/2$^+$; 1/2$^+$ suggested by shell model, systematics. T$_{1/2}$: from ^{193}Hg ε decay (3.80 h) (1970Fo08).
224.80 *3*	(3/2)$^+$	<0.03 ns	B F	J$^\pi$: M1+E2 γ to (1/2)$^+$. T$_{1/2}$: from ^{193}Hg ε decay (3.80 h) (1970Fo08).
257.986[‡] *21*	5/2$^+$	45 ps *20*	ABCD FG	J$^\pi$: M1+E2 γ to 3/2$^+$, E2 γ to (1/2)$^+$; see J$^\pi$ assignment for the 290.18 level. T$_{1/2}$: from ^{193}Au IT decay (3.9 s) (1970Fo08).
290.20[#] *4*	11/2$^-$	3.9 s *3*	ABCDEFG	%IT=99.97; %ε+%β^+≈0.03 μ=6.18 *9*; Q=+1.98 *6*

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Adopted Levels, Gammas (continued)

^{193}Au Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
				Jπ: E3 − M1+E2 cascade to $3/2^+$ g.s., direct transition to g.s. very weak and no transition to $(1/2)^+$ 38.23 level. This indicates $J^\pi=11/2^-$ for the 290.18 level and $J^\pi=5/2^+$ for the 257.97 level. Systematics of h11/2 levels in Au nuclei. $T_{1/2}$: from ^{193}Au IT decay (1955Fi30). $\%\varepsilon+\%\beta^+$: deduced from Ti(258.0γ in ^{193}Au) relative to Ti(135.5γ in ^{193}Pt) (1955Br41). μ: Radiative detection of NMR (2014StZZ,1983Ha10); other: 6.17 *9* NMR (2014StZZ,1983Li21). Q: γ(θ,H,t) from ^{193}Hg decay (11.8 h), NMR (2014StZZ,1996Se06).
381.62 *3*	$5/2^+$		BC G	Jπ: D+Q γ to $3/2^+$ g.s., γ to $(1/2)^+$; see Jπ assignment at 508-keV level.
508.27 *4*	$7/2^-$	0.29 ns *2*	BC FG	Jπ: E2 γ to $11/2^-$ level, (E1) − M1+E2 cascade to $3/2^+$ g.s.; this gives $J^\pi=7/2^-$ for this level and $J^\pi=5/2^+$ for 382-keV level. $T_{1/2}$: from ^{193}Hg ε decay (11.8 h) (1970Ba56).
538.99‡ *4*	$(7/2^+)$		BCD FG	Jπ: (E2) γ to $3/2^+$ g.s.; band structure.
687.43 *4*	$(7/2^+)$		C G	Jπ: Q γ to $(3/2)^+$; D+Q γ to $5/2^+$.
697.81# *5*	$(15/2)^-$		CDEFG	Jπ: E2 γ to $11/2^-$ level; band structure.
789.94a *5*	$9/2^-$	1.2 ns *1*	C EFG	Jπ: M1+E2 γ's to $7/2^-$ and $11/2^-$ levels; band structure. $T_{1/2}$: from ^{193}Hg ε decay (11.8 h) (1975Be29).
808.57‡ *5*	$(9/2)^+$		CD FG	Jπ: Q γ to $5/2^+$ level; band structure.
828.00 *9*	$3/2^+$		B G	Jπ: (M1) γ to $(1/2)^+$, D+Q γ to $5/2^+$. $1/2^+$ discarded based on correlation analysis of 446γ and 381γ cascade.
863.36@ *5*	$(13/2)^-$		C FG	Jπ: M1 γ to $(15/2)^-$ level, M1+E2 γ to $11/2^-$ level.
890.80 *5*	$9/2^-$		CD FG	Jπ: M1 γ to $7/2^-$, M1+E2 γ to $11/2^-$.
929.09 *5*	$(9/2^+)$		C G	Jπ: (E2) γ to $5/2^+$ level. See Jπ assignment for 2125 level.
983.59 *11*	$(7/2^+)$		G	Jπ: 758.8γ Q to $(3/2)^+$, 725.6γ D+Q to $5/2^+$.
1085.35 *11*	$(7/2^+)$		G	Jπ: 860.5γ to $(3/2)^+$, 827.5γ D+Q to $5/2^+$.
1089.34 *9*			B G	
1105.92 *12*	$(7/2^+)$		G	Jπ: γ D+Q to $5/2^+$, 277.9γ to $(3/2^+)$.
1106.4b *5*	$(11/2^-)$		E	Jπ: 316.5γ M1+E2 to $9/2^-$, band structure.
1118.97 *12*	$(3/2)^+$		B G	Jπ: M1+E2 γ to $5/2^+$ level, γ to $(1/2)^+$ level.
1131.84 *6*	$9/2^-,11/2^-$		C FG	Jπ: M1+E2 γ to $9/2^-$ level. 1007.8γ from $(13/2^-,15/2^-)$.
1153.53‡ *6*	$(11/2^+)$		C FG	Jπ: Q γ to $(7/2^+)$ level; log *ft*=8.2 from $13/2^+$ ^{193}Hg; band structure.
1194.31a *7*	$(13/2^-)$		C EFG	Jπ: (E2) γ to $9/2^-$; log *ft*=8.2, log $f^{1u}t$=8.9 from $13/2^+$ ^{193}Hg.
1284.81 *5*	$9/2^-,11/2^-$		C FG	Jπ: M1+E2 γ to $9/2^-$; log *ft*=7.6, log $f^{1u}t$=8.3 from $13/2^+$ ^{193}Hg.
1297.41 *16*	$(3/2^-$ to $11/2^-)$		G	Jπ: 789γ to $7/2^-$.
1300.39 *22*	$(3/2$ to $11/2^+)$		G	Jπ: 215γ to $(7/2^+)$.
1330.90 *14*	$(9/2^+)$		G	Jπ: 347.3γ D+Q to $(7/2^+)$, 949.3γ to $5/2^+$.
1343.69 *20*	$(1/2^+$ to $9/2^+)$		G	Jπ: γ to $5/2^+$.
1355.32 *8*	$(11/2$ to $15/2^-)$		C	Jπ: (E2) γ to $(15/2)^-$ level; (M1+E2) γ from $11/2^-,13/2^-$ 1630 level.
1372.94@ *10*	$(17/2)^-$		C FG	Jπ: M1+E2 γ to $(15/2)^-$ level; band structure.
1379.93 *10*	$(11/2^+)$		C G	Jπ: (E2) γ to $(7/2^+,9/2^+)$ level; 840.9γ to $(7/2^+)$; log *ft*=8.3 from $13/2^+$ ^{193}Hg.
1398.51 *6*	$(13/2)^-$		C FG	Jπ: M1+E2 γ to $(13/2)^-$ level, (M1+E2) γ to $(15/2)^-$ level, (E2) γ to $9/2^-$ level.
1400.39 *5*	$11/2^-$		C G	Jπ: M1+E2 γ to $9/2^-$; log $f^{1u}t$=7.8 from $13/2^+$.
1413.03 *16*	$(9/2^-)$		C	Jπ: log $f^{1u}t$=9.7, log *ft*=9.1 (if 11/2) from $13/2^+$ ^{193}Hg; γ to $(7/2^+)$ level.
1417.99 *14*	$(5/2^+,7/2^+)$		G	Jπ: 590γ to $(3/2^+)$ and 609.3γ to $(9/2)^+$.
1419.13# *25*	$(19/2)^-$		DEFG	Jπ: E2 γ to $(15/2)^-$ level; band structure.
1433.49 *12*	$(11/2^+,13/2^+)$		C	Jπ: (E2) γ to $(9/2)^+$ level; log *ft*=8.4 from $13/2^+$ ^{193}Hg.
1455.19 *9*	$(11/2$ to $15/2^-)$		C	Jπ: (E2) γ's to $(13/2)^-$ and $(15/2)^-$ levels; γ from $(11/2^-)$ 2201 level.

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Adopted Levels, Gammas (continued)

^{193}Au Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
1463.10 *22*			G	
1476.98[‡] *21*	(13/2$^+$)		D FG	Jπ: γ to (9/2)$^+$ level; band structure.
1477.18 *12*	(7/2,9/2,11/2)$^-$		C	Jπ: 668.48γ E1 to (9/2)$^+$.
1496.30 *7*	(9/2)$^-$		C FG	Jπ: M1+E2 γ to 9/2$^-$,11/2$^-$ level; (E1) γ to (7/2$^+$) level.
1514.20 *16*	(7/2$^-$)		C	Jπ: γ to 5/2$^+$ level; γ from 11/2$^-$ 2157 level. see Jπ assignment for 2157 level.
1521.9[b] *11*	(15/2$^-$)		E	Jπ: E2 γ to (11/2$^-$), band structure.
1526.9 *3*	(9/2,7/2$^+$)		G	Jπ: Suggested by 2014Th04 (p,2nγ) based on γγ(θ) results.
1572.29 *12*	(9/2$^-$,11/2,13/2$^+$)		C G	Jπ: γ to (9/2$^+$) level; log *ft*=9.0, log $f^{1u}t$=9.5 from 13/2$^+$ ^{193}Hg.
1575.62 *6*	11/2$^-$,13/2$^-$		C G	Jπ: M1 γ to 9/2$^-$,11/2$^-$ level; 877.76γ E2 to (15/2)$^-$; log $f^{1u}t$=7.5 from 13/2$^+$ ^{193}Hg.
1578.01 *17*	(5/2,7/2)$^+$		G	Jπ: Suggested by 2014Th04 based on γγ(θ) results.
1598.6 *3*			G	
1603.15 *19*	(3/2$^-$,5/2$^+$)		B	Jπ: γ's to 7/2$^-$ and (1/2)$^+$ levels.
1630.25 *6*	11/2$^-$,13/2$^-$		C G	Jπ: M1+E2 γ to 9/2$^-$, 11/2$^-$ level; log $f^{1u}t$=7.1 from 13/2$^+$.
1654.69 *16*	(9/2$^-$,11/2,13/2$^+$)		C G	Jπ: γ to (9/2$^+$) level; log $f^{1u}t$=8.4 from 13/2$^+$ ^{193}Hg.
1658.0 *3*	1/2$^{(+)}$ to 5/2$^{(+)}$		B G	Jπ: (E2) γ to 5/2$^+$; log $f^{1u}t$=6.9 from 3/2$^-$ ^{193}Hg.
1678.79 *19*			G	
1680.35 *17*	(11/2$^-$,13/2$^-$)		C	Jπ: γ's to 9/2$^-$ and (15/2)$^-$ levels; (E2) γ to (13/2)$^-$ level.
1684.74 *19*	(9/2$^-$ to 13/2$^-$)		C	Jπ: (E2) γ to 11/2$^-$ level; γ to 9/2$^-$ level; log *ft*=7.6, log $f^{1u}t$=8.0 from 13/2$^+$ ^{193}Hg.
1708.8[a] *9*	(17/2$^-$)		E	Jπ: E2 γ to (13/2$^-$); band structure.
1733.44 *10*	(15/2$^-$)		C G	Jπ: (M1+E2) γ to (17/2)$^-$; log $f^{1u}t$=7.4 from 13/2$^+$ ^{193}Hg.
1745.1 *3*			G	
1776.04 *8*	11/2$^-$		C	Jπ: E2 γ to (13/2)$^-$ level; γ to 7/2$^-$ level; log *ft*=7.8, log $f^{1u}t$=7.0 from 13/2$^+$ ^{193}Hg.
1794.92 *15*	(13/2$^-$)		C	Jπ: γ's to 9/2$^-$ and (17/2$^-$).
1815.1 *3*	(1/2,3/2,5/2$^+$)		B	Jπ: γ to (1/2)$^+$ level.
1815.41 *23*	(9/2$^-$,11/2$^-$,13/2$^-$)		C	Jπ: γ's to 9/2$^-$ and (13/2)$^-$ levels.
1829.91 *6*	(11/2$^-$,13/2$^-$)		C	Jπ: (M1) γ to (13/2)$^-$ level; γ to 9/2$^-$ level.
1861.91 *21*	(1/2$^+$,3/2,5/2$^+$)		B	Jπ: γ's to (1/2)$^+$ and 5/2$^+$ levels.
1869.28 *17*	(11/2$^-$ to 15/2$^-$)		C	Jπ: (E2) γ to (15/2)$^-$ level; γ to 11/2$^-$ level.
1876.29 *17*	(11/2$^-$,13/2$^-$)		C	Jπ: (E2) γ to (15/2)$^-$ level; γ to 9/2$^-$ level.
1915.20 *17*	(11/2$^-$ to 15/2$^-$)		C	Jπ: (E2) γ to (13/2)$^-$ level; γ's to 11/2$^-$ and (15/2)$^-$ levels.
1930.03 *6*	11/2$^-$,13/2$^-$		C	Jπ: M1 γ to 11/2$^-$,13/2$^-$ level; γ to 9/2$^-$ level; log $f^{1u}t$=6.6 from 13/2$^+$ ^{193}Hg.
1939.20 *11*	(11/2,13/2)$^-$		C	Jπ: E2 γ to (15/2)$^-$ level; γ to 9/2$^-$ level.
1947.10[d] *25*	(21/2)$^+$	10.4 ns *8*	DEF	μ=+6.48 *11* (2014StZZ) μ: From differential perturbed angular distribution of γ rays following nuclear reactions. Jπ: E1 γ to (19/2)$^-$ level, (E3) γ to (15/2)$^-$ level. $T_{1/2}$: from Ir(α,xnγ) (1985Ko13).
2012.20 *17*	(13/2$^-$,15/2$^-$)		C	Jπ: γ's to 11/2$^-$ and (17/2)$^-$ levels.
2014.72 *25*	(1/2$^+$,3/2,5/2$^+$)		B	Jπ: γ's to (1/2)$^+$ and 5/2$^+$ levels.
2023.47 *10*	(11/2 to 15/2$^-$)		C	Jπ: M1+E2 and (E2) γ's to 11/2$^-$ and (15/2)$^-$ levels.
2037.47 *7*	(11/2,13/2)$^-$		C	Jπ: M1+E2 γ to 11/2$^-$,13/2$^-$, (M1+E2) γ to 9/2$^-$,11/2$^-$ level (E2) γ to (15/2)$^-$.
2043.4 *3*	1/2,3/2,5/2		B	Jπ: log *ft*=6.1, log $f^{1u}t$=5.5 from 3/2$^-$ ^{193}Hg.
2063.05 *7*	11/2$^-$,13/2$^-$,15/2$^-$		C	Jπ: M1+E2 γ to 11/2$^-$,13/2$^-$ level; log $f^{1u}t$=6.3 from 13/2$^+$ ^{193}Hg.
2080.0[d] *4*	(25/2$^+$)	2.51 ns *13*	DEF	$T_{1/2}$: from Ir(α,xnγ) (1985Ko13). Jπ: (E2) γ to (21/2)$^+$ level; member of γ cascade in (α,xnγ).
2087.3[@] *4*	(21/2$^-$)		F	Jπ: γ to (19/2)$^-$ level; band structure.
2100.9[b] *15*	(19/2$^-$)		E	Jπ: E2 to (15/2$^-$); band structure.
2104.44 *15*	(11/2,13/2)$^-$		C	Jπ: γ's to 9/2$^-$ and (15/2)$^-$ levels.

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Adopted Levels, Gammas (continued)

^{193}Au Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
2125.37 *19*	(11/2⁻)		C	Jπ: (E2) γ to (13/2)⁻ level gives π=(−) and 9/2≤J≤17/2; log $f^{1u}t$=6.9 from 13/2⁺ ^{193}Hg rules out J=9/2 and 17/2; 1196γ − 547 (E2) γ cascade to 5/2⁺ level rules out J=13/2 and 15/2 since 1196γ, competing with the 1262 (E2) γ, in unlikely to be an M2 transition. Therefore J(this level)=11/2 and J(929 level)=9/2.
2130.40 *12*	(11/2⁻ to 15/2⁻)		C	Jπ: (E2) γ to (13/2)⁻; log $f^{1u}t$=6.3 from 13/2⁺ level.
2139.78 *19*	(13/2⁻,15/2⁻)		C	Jπ: (M1) γ to (15/2)⁻, γ to 9/2⁻,11/2⁻ level.
2140.2 *4*	(23/2⁺)		D F	Jπ: D+Q γ to (21/2)⁺; no decay to levels with J<21/2.
2157.63 *16*	(11/2⁻)		C	Jπ: strongest γ′s to (15/2)⁻ and (9/2)⁻ levels; the 643γ − 1132γ cascade to 5/2⁺ level.
2159.03 *9*	(11/2⁻ to 15/2⁻)		C	Jπ: (E2) γ to 11/2⁻, 13/2⁻ level; (M1,E2) γ to (15/2)⁻; log $f^{1u}t$=6.4 from 13/2⁺ ^{193}Hg.
2173.0[#] *4*	(23/2⁻)		DEF	Jπ: (E2) γ to (19/2)⁻ level: band structure.
2196.88 *20*	(11/2⁻,13/2,15/2⁻)		C	Jπ: γ′s to 11/2⁻ and (15/2)⁻ levels.
2201.73 *9*	(11/2⁻)		C	Jπ: (E2) γ to (15/2)⁻ level; γ to 7/2⁻ level.
2205.94 *22*	(11/2⁻)		C	Jπ: log $f^{1u}t$=6.1 from 13/2⁺ ^{193}Hg; γ to 7/2⁻ level.
2215.20 *17*	(13/2⁻,15/2⁻)		C	Jπ: (M1) γ to (15/2)⁻ level; γ to 11/2⁻ level; log $f^{1u}t$=5.9 from 13/2⁺ ^{193}Hg.
2255.12 *13*	(11/2⁻ to 15/2⁻)		C	Jπ: (M1) γ to (13/2)⁻ level.
2279.39 *17*	(11/2⁻)		C	Jπ: intense γ′s to 7/2⁻ and (15/2)⁻ levels; (E2) γ to (7/2,9/2,11/2)⁻ level.
2285.28 *16*	(11/2⁺)		C	Jπ: log *ft*=6.8, log $f^{1u}t$=5.2 from 13/2⁺ ^{193}Hg; γ to (7/2⁺) level.
2291.01 *16*	(11/2⁺)		C	Jπ: log *ft*=6.5, log $f^{1u}t$=5.6 from 13/2⁺ ^{193}Hg; γ to (7/2⁺) level.
2320.1[a] *12*	(21/2⁻)		E	Jπ: 611.3γ E2 to (17/2⁻). Band structure.
2324.9[d] *5*	(29/2⁺)	<0.2 ns	F	$T_{1/2}$: Ir(α,xnγ) (1985Ko13). Jπ: 2007Ok05 (^{11}B,4nγ) assign 29/2⁺ based on 245.1γ E2 to 25/2⁺ and 161.8γ d from 31/2⁺. However, 1979Go15 (α,xnγ) assign 27/2⁺ based on 244.9γ (M1) to 25/2⁺ and 161.8γ (E2) from 31.2⁺. Note that Multipolarity assignments in 2007Ok05 were from R(DCO) and polarization measurements, while for 161.8γ in 1979Go15 (M1) multipolarity from measured total conversion coefficient and γ-ray angular distribution measurements.
2377.9[#] *4*	(27/2⁻)	0.79 ns *8*	DEF	μ≤9.5 (2014StZZ,1985Ko13) μ: From integral perturbed angular distribution. Jπ: (E2) γ to (23/2⁻) level; band structure. $T_{1/2}$: from Ir(α,xnγ) (1985Ko13).
2476.6[#] *5*	(31/2⁻)	3.52 ns *18*	EF	μ=4.7 *31* (2014StZZ,1985Ko13) Jπ: (E2) γ to (27/2⁻) level; band structure. $T_{1/2}$: from Ir(α,xnγ) (1985Ko13). μ: From integral perturbed angular distribution.
2486.7[&] *6*	(31/2⁺)	150 ns *50*	EF	Jπ: D γ to (27/2⁺); band structure. $T_{1/2}$: from Ir(α,xnγ) (1985Ko13).
2701.1[c] *6*	(33/2⁻)	1.80 ns *9*	EF	μ=2.3 *19* (2014StZZ,1985Ko13) Jπ: 2007Ok05 (^{11}B,4nγ) assign 33/2⁻ based on 224.5γ M1+E2 to 31/2⁻. However, 1979Go15 (α,xnγ) assign 35/2⁻ based on 224.5γ as E2 to 31/2⁻. Note that Multipolarity assignments in 2007Ok05 were from R(DCO) and polarization measurements. In 1979Go15 Q multipolarity from γ-ray angular distribution measurements. $T_{1/2}$: from Ir(α,xnγ) (1985Ko13). μ: From integral perturbed angular distribution.
2923.4[&] *7*	(35/2⁺)		EF	Jπ: (E2) γ to (31/2⁺) level; band structure.
3155.1[c] *7*	(37/2⁻)	<0.5 ns	EF	Jπ: (E2) γ to (33/2⁻) level; band structure.

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Adopted Levels, Gammas (continued)

^{193}Au Levels (continued)

E(level)[†]	J^π	XREF	Comments
			$T_{1/2}$: from Ir(α,xnγ) (1985Ko13).
3441.9[&] *7*	(39/2$^+$)	EF	J^π: (E2) γ to (35/2$^+$) level; band structure.
3896.1[c] *7*	(41/2$^-$)	EF	J^π: (E2) γ to (37/2$^-$) level; band structure.
4063.4[&] *8*	(43/2$^+$)	EF	J^π: (E2) γ to (39/2$^+$) level, band structure.
4348.5[&] *11*	(47/2$^+$)	E	J^π: 285.1γ E2 to (43/2$^+$), band structure.
4701.1[c] *9*	(45/2$^-$)	E	J^π: 805.0γ E2 to (41/2$^-$), band structure.
5058.8[&] *14*	(51/2$^+$)	E	J^π: 710.3γ E2 to (47/2$^+$), band structure.
5231.8[c] *13*	(49/2$^-$)	E	J^π: 530.7γ E2 to (45/2$^-$), band structure.
5741.6[&] *17*	(55/2$^+$)	E	J^π: 682.8γ E2 to (51/2$^+$), band structure.

[†] From least-squares fit to Eγ.
[‡] Band(A): g.s. band.
[#] Band(B): h11/2 decoupled band (favored sequence).
[@] Band(C): h11/2 decoupled band (unfavored sequence).
[&] Band(D): rotation-aligned band based on 31/2$^+$ level.
[a] Band(E): $h_{9/2}$ band, α=+1/2.
[b] Band(F): $h_{9/2}$ band, α=−1/2.
[c] Band(G): Band based on (33/2$^-$). Continuation of $h_{11/2}$ band after band crossing. Second band crossing occurs at $\hbar\omega\approx$0.22 MeV.
[d] Band(H): Band based on (21/2$^+$).

Adopted Levels, Gammas (continued)

γ(^{193}Au)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
38.234	(1/2)$^+$	38.23[&] *2*	100	0.0	3/2$^+$	M1+E2	0.41 *8*	86 *23*	B(M1)(W.u.)=0.00098 *17*; B(E2)(W.u.)=46 *12* α(L)=65 *17*; α(M)=16.4 *44* α(N)=4.0 *11*; α(O)=0.66 *17*; α(P)=0.0107 *5*
224.80	(3/2)$^+$	186.56[#] *3*	100[a] *10*	38.234	(1/2)$^+$	M1+E2[#]	0.26[#] *5*	1.186 *25*	α(K)=0.963 *24*; α(L)=0.171 *3*; α(M)=0.0401 *7* α(N)=0.00997 *17*; α(O)=0.00182 *3*; α(P)=0.000115 *3* B(M1)(W.u.)>0.045; B(E2)(W.u.)>22
		224.81[#] *4*	5.0[a] *10*	0.0	3/2$^+$				
257.986	5/2$^+$	219.75[&] *3*	5.7 *3*	38.234	(1/2)$^+$	E2		0.273	B(E2)(W.u.)=14 *7* α(K)=0.1344 *19*; α(L)=0.1039 *15*; α(M)=0.0266 *4* α(N)=0.00655 *10*; α(O)=0.001076 *15*; α(P)=1.385×10^{-5} *20* I_γ: From ^{193}Au IT decay (3.9 s). I_γ: Iγ=4 from Ir(α,xnγ) (1974Tj02).
		257.99[&] *3*	100[a] *10*	0.0	3/2$^+$	M1+E2	−0.75 *11*	0.380 *25*	B(M1)(W.u.)=0.014 *7*; B(E2)(W.u.)=31 *15* α(K)=0.297 *23*; α(L)=0.0633 *14*; α(M)=0.0151 *3* α(N)=0.00375 *7*; α(O)=0.000668 *15*; α(P)=3.5×10^{-5} *3* δ: From (p,2nγ).
290.20	11/2$^-$	32.21 *3*	≈4.1	257.986	5/2$^+$	E3		9.29×10^4	B(E3)(W.u.)≈0.042 α(N)=5.50×10^3 *9*; α(O)=843 *13*; α(P)=0.681 *10* α(L)=6.50×10^4 *10*; α(M)=2.16×10^4 *4* E_γ: From ^{193}Hg ε decays (11.8 h). I_γ: Branching deduced using I(γ+ce) in ^{193}Au IT decay (3.9 s).
		289.8[‡]	100	0.0	3/2$^+$	[M4]		18.1	α(K)=9.01 *13*; α(L)=6.67 *10*; α(M)=1.86 *3* α(N)=0.472 *7*; α(O)=0.0807 *12*; α(P)=0.00310 *5* I_γ: Branching deduced using I(γ+ce) in ^{193}Au IT decay (3.9 s). Yields B(M4)(W.u.)=26 *14*, note the value exceeds RUL=10 by 1 to 2 sigmas.
381.62	5/2$^+$	156.8[a] *2*	1[a] *1*	224.80	(3/2)$^+$				
		343.4[a] *2*	6[a] *1*	38.234	(1/2)$^+$				
		381.60 *4*	100[a] *10*	0.0	3/2$^+$	D+Q[a]	−2.9[a] *+6−5*		δ: 1.2 *+5−3* (^{193}Hg ε decay (11.8 h)).
508.27	7/2$^-$	126.56 *10*	2.0 *6*	381.62	5/2$^+$	(E1)		0.229	B(E1)(W.u.)=5.3×10^{-6} *17* α(K)=0.185 *3*; α(L)=0.0336 *5*; α(M)=0.00781 *11* α(N)=0.00191 *3*; α(O)=0.000332 *5*; α(P)=1.574×10^{-5} *23*
		218.07 *4*	100 *14*	290.20	11/2$^-$	E2		0.280	B(E2)(W.u.)=46 *4* α(K)=0.1370 *20*; α(L)=0.1073 *15*; α(M)=0.0274 *4* α(N)=0.00677 *10*; α(O)=0.001111 *16*; α(P)=1.411×10^{-5} *20*

$^{193}_{79}Au_{114}$-6

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
538.99	(7/2$^+$)	157.40 *10*	2.5 *5*	381.62	5/2$^+$	(E2)		0.877	α(K)=0.301 *5*; α(L)=0.432 *7*; α(M)=0.1117 *16* α(N)=0.0275 *4*; α(O)=0.00446 *7*; α(P)=3.09×10^{-5} *5*
		280.94 *5*	26[a] *4*	257.986	5/2$^+$	D+Q[a]	−0.06[a] *3*		I_γ: Others: 15 *12* (^{193}Hg ε decay (11.8 h)), 45 from Ir(α,xnγ) (1974Tj02).
		314.0[a] *2*	2[a] *1*	224.80	(3/2)$^+$				
		539.03 *6*	100[a] *10*	0.0	3/2$^+$	(E2)		0.0216	α(K)=0.01603 *23*; α(L)=0.00421 *6*; α(M)=0.001024 *15* α(N)=0.000254 *4*; α(O)=4.41×10^{-5} *7*; α(P)=1.778×10^{-6} *25*
687.43	(7/2$^+$)	148.5[a] *3*	1[a] *1*	538.99	(7/2$^+$)				
		305.9[a] *2*	9[a] *1*	381.62	5/2$^+$	D+Q[a]	+0.44[a] *+22−19*		
		429.51[e] *5*	100[ea] *10*	257.986	5/2$^+$	D+Q[a]	−0.19[a] *+2−3*		
		462.6[a] *2*	13[a] *2*	224.80	(3/2)$^+$	Q[a]			
		687.5[a] *2*	27[a] *1*	0.0	3/2$^+$				
697.81	(15/2)$^-$	407.63 *4*	100	290.20	11/2$^-$	E2		0.0433	α(K)=0.0299 *5*; α(L)=0.01018 *15*; α(M)=0.00252 *4* α(N)=0.000624 *9*; α(O)=0.0001063 *15*; α(P)=3.28×10^{-6} *5*
789.94	9/2$^-$	251.0[a] *2*	2[a] *2*	538.99	(7/2$^+$)	[E1][a]		0.0412	α(K)=0.0339 *5*; α(L)=0.00563 *8*; α(M)=0.001302 *19* α(N)=0.000321 *5*; α(O)=5.71×10^{-5} *8*; α(P)=3.16×10^{-6} *5* B(E1)(W.u.)=1.6×10^{-7} *16*
		281.76 *4*	20[a] *1*	508.27	7/2$^-$	M1+E2	0.66 *+17−12*	0.31 *3*	B(M1)(W.u.)=8.9×10^{-5} *15*; B(E2)(W.u.)=0.16 *6* α(K)=0.25 *3*; α(L)=0.0490 *18*; α(M)=0.0116 *4* α(N)=0.00289 *9*; α(O)=0.000518 *19*; α(P)=2.9×10^{-5} *4*
		499.65 *5*	100[a] *10*	290.20	11/2$^-$	M1+E2	0.8 *4*	0.062 *15*	B(M1)(W.u.)=5.5×10^{-5} *19*; B(E2)(W.u.)=0.09 *3* α(K)=0.050 *13*; α(L)=0.0090 *16*; α(M)=0.0021 *4* α(N)=0.00052 *9*; α(O)=9.5×10^{-5} *17*; α(P)=5.8×10^{-6} *16*
808.57	(9/2)$^+$	269.4 *2*	3[a] *1*	538.99	(7/2$^+$)	D+Q[a]	−0.13[a] *5*		E_γ: Average of 269.2 *3* (α,xnγ) and 269.6 *2* (p,2nγ).
		427.0[a] *2*	3[a] *1*	381.62	5/2$^+$				
		550.63 *6*	100[a] *10*	257.986	5/2$^+$	Q			
828.00	3/2$^+$	446.4[a] *2*	52[a] *9*	381.62	5/2$^+$	D+Q[a]	−0.30[a] *7*		
		603.2[a] *3*	100[a] *10*	224.80	(3/2)$^+$	D+Q[a]	+0.50[a] *+36−28*		δ: Angular correlation analysis did yield a distinct value (2014Th02 − (p,2nγ)).
		789.7[a] *2*	54[a] *4*	38.234	(1/2)$^+$	(M1)[#]		0.0258	α(K)=0.0214 *3*; α(L)=0.00342 *5*; α(M)=0.000791 *11* α(N)=0.000197 *3*; α(O)=3.63×10^{-5} *5*; α(P)=2.48×10^{-6} *4* E_γ: 789.21 *21* in ^{193}Hg ε decay (3.80 h) is a doublet (2014Th02).
		828.0[a] *2*	81[a] *23*	0.0	3/2$^+$	(E2)[#]		0.00840	α(K)=0.00666 *10*; α(L)=0.001328 *19*; α(M)=0.000315 *5* α(N)=7.81×10^{-5} *11*; α(O)=1.393×10^{-5} *20*; α(P)=7.38×10^{-7} *11* E_γ: 827.81 *20* in ^{193}Hg ε decay (3.80 h) is a doublet (2014Th02).

$^{193}_{79}Au_{114}$-7

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
863.36	(13/2)$^-$	165.53 *4*	0.28 *7*	697.81	(15/2)$^-$	M1		1.728	α(K)=1.419 *20*; α(L)=0.237 *4*; α(M)=0.0549 *8* α(N)=0.01369 *20*; α(O)=0.00252 *4*; α(P)=0.0001700 *24*
		573.25 *6*	100 *10*	290.20	11/2$^-$	M1+E2	+0.36[@] *7*	0.0545 *19*	α(K)=0.0448 *16*; α(L)=0.00740 *21*; α(M)=0.00172 *5* α(N)=0.000427 *12*; α(O)=7.84×10^{-5} *23*; α(P)=5.24×10^{-6} *19*
890.80	9/2$^-$	382.47 *4*	100 *21*	508.27	7/2$^-$	M1		0.1723	α(K)=0.1420 *20*; α(L)=0.0233 *4*; α(M)=0.00539 *8* α(N)=0.001343 *19*; α(O)=0.000247 *4*; α(P)=1.677×10^{-5} *24*
		600.65 *6*	100 *11*	290.20	11/2$^-$	M1+E2	1.4 *+6−4*	0.029 *6*	α(K)=0.023 *5*; α(L)=0.0044 *7*; α(M)=0.00104 *15* α(N)=0.00026 *4*; α(O)=4.6×10^{-5} *7*; α(P)=2.6×10^{-6} *6* I_γ: Iγ=18 from Ir(α,xnγ) (1974Tj02).
929.09	(9/2$^+$)	241.70 *4*	40 *9*	687.43	(7/2$^+$)	D+Q[a]	−0.12[a] *5*		
		390.1[a] *3*	29[a] *2*	538.99	(7/2$^+$)	D[a]			
		547.43 *6*	100[a] *10*	381.62	5/2$^+$	(E2)		0.0208	α(K)=0.01550 *22*; α(L)=0.00402 *6*; α(M)=0.000977 *14* α(N)=0.000242 *4*; α(O)=4.21×10^{-5} *6*; α(P)=1.720×10^{-6} *24*
		638.9[a] *2*	14[a] *5*	290.20	11/2$^-$				
983.59	(7/2$^+$)	155.6[a] *4*	2[a] *1*	828.00	3/2$^+$				
		444.6[a] *4*	10[a] *4*	538.99	(7/2$^+$)				
		725.6[a] *2*	100[a] *10*	257.986	5/2$^+$	D+Q[a]	+2.54[a] *+30−25*		
		758.8[a] *2*	56[a] *4*	224.80	(3/2)$^+$	Q[a]			
1085.35	(7/2$^+$)	295.4[a] *3*	100[a] *10*	789.94	9/2$^-$				
		577.1[a] *2*	23[a] *3*	508.27	7/2$^-$				
		703.7[a] *2*	37[a] *4*	381.62	5/2$^+$	D+Q[a]	+0.36[a] *+21−19*		δ: Value listed in parentheses (2014Th02 − (p,2nγ)).
		827.5[a] *3*	40[a] *5*	257.986	5/2$^+$	D+Q[a]	+0.48[a] *16*		δ: Value listed in parentheses (2014Th02 − (p,2nγ)).
		860.5[a] *3*	63[a] *8*	224.80	(3/2)$^+$				
1089.34		580.97[#] *8*	100	508.27	7/2$^-$				
1105.92	(7/2$^+$)	277.9[a] *2*	20[a] *4*	828.00	3/2$^+$				
		567.1[a] *3*	59[a] *12*	538.99	(7/2$^+$)	D+Q[a]	+0.32[a] *+22−19*		
		724.3[a] *2*	100[a] *10*	381.62	5/2$^+$	D+Q[a]	+0.40[a] *11*		
		847.8[a] *3*	35[a] *7*	257.986	5/2$^+$	D+Q[a]	+0.28[a] *5*		
1106.4	(11/2$^-$)	316.5[b] *5*	100	789.94	9/2$^-$	M1+E2[b]		0.19 *10*	α(K)=0.145 *91*; α(L)=0.032 *7*; α(M)=0.0076 *14* α(N)=0.0019 *4*; α(O)=0.00034 *8*; α(P)=1.7×10^{-5} *11*
1118.97	(3/2)$^+$	861.11[#] *17*	100[#] *17*	257.986	5/2$^+$	M1+E2[a]	+1.33[a] *40*	0.0124 *23*	α(K)=0.0101 *20*; α(L)=0.0018 *3*; α(M)=0.00041 *6* α(N)=0.000102 *16*; α(O)=1.9×10^{-5} *3*; α(P)=1.15×10^{-6} *23*
		1080.7[#] *3*	29[#] *4*	38.234	(1/2)$^+$				
		1118.84[#] *17*	64[#] *9*	0.0	3/2$^+$				Mult.: (E2) in ^{193}Hg ε decay (3.80 h). Spin parity implies (M1+E2).

$^{193}_{79}Au_{114}$-8

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
1131.84	9/2⁻,11/2⁻	341.91 *4*	100	789.94	9/2⁻	M1+E2	0.9 *3*	0.16 *3*	α(K)=0.13 *3*; α(L)=0.0258 *24*; α(M)=0.0061 *5* α(N)=0.00153 *13*; α(O)=0.00027 *3*; α(P)=1.5×10^{-5} *4*
1153.53	(11/2⁺)	345.00 *4*	91 *39*	808.57	(9/2)⁺	D			Mult.: From (p,2nγ), in band transition. α(K)exp=0.052 *33* (^{193}Hg ε decay (11.8 h) indicates dominant E2 (>90%).
		614.32 *10*	100 *16*	538.99	(7/2⁺)	Q			Mult.: From (p,2nγ). α(K)exp=0.021 *5* (^{193}Hg ε decay (11.8 h)) indicates M1+E2 with δ=1.5 *4*.
1194.31	(13/2⁻)	404.36 *5*	100	789.94	9/2⁻	(E2)		0.0442	α(K)=0.0304 *5*; α(L)=0.01046 *15*; α(M)=0.00259 *4* α(N)=0.000641 *9*; α(O)=0.0001093 *16*; α(P)=3.34×10^{-6} *5* E_γ: Other value: 406.9 keV *9* (^{11}B,4nγ).
1284.81	9/2⁻,11/2⁻	394.00 *4*	100 *12*	890.80	9/2⁻	M1+E2	0.75 *22*	0.119 *16*	α(K)=0.096 *14*; α(L)=0.0179 *15*; α(M)=0.0042 *3* α(N)=0.00105 *8*; α(O)=0.000189 *16*; α(P)=1.12×10^{-5} *17*
		776.57 *20*	26 *11*	508.27	7/2⁻				
		994.61 *15*	61 *7*	290.20	11/2⁻	E2		0.00581	α(K)=0.00469 *7*; α(L)=0.000862 *12*; α(M)=0.000202 *3* α(N)=5.03×10^{-5} *7*; α(O)=9.04×10^{-6} *13*; α(P)=5.17×10^{-7} *8*
1297.41	(3/2⁻ to 11/2⁻)	207.7[a] *3*	19[a] *4*	1089.34					
		789.1[a] *2*	100[a] *10*	508.27	7/2⁻				
1300.39	(3/2 to 11/2⁺)	215.1[a] *3*	100[a] *10*	1085.35	(7/2⁺)				
		612.9[a] *3*	13[a] *5*	687.43	(7/2⁺)				
1330.90	(9/2⁺)	347.3[a] *3*	100[a] *10*	983.59	(7/2⁺)	D+Q[a]	−0.45[a] *24*		
		401.8[a] *3*	95[a] *19*	929.09	(9/2⁺)				
		522.3[a] *3*	53[a] *11*	808.57	(9/2)⁺				
		643.5[a] *3*	89[a] *18*	687.43	(7/2⁺)				
		949.3[a] *3*	28[a] *6*	381.62	5/2⁺				
1343.69	(1/2⁺ to 9/2⁺)	962[a] *3*	19[a] *6*	381.62	5/2⁺				
		1085.7[a] *2*	100[a] *10*	257.986	5/2⁺				
1355.32	(11/2 to 15/2⁻)	657.62 *15*	100	697.81	(15/2)⁻	(E2)		0.01370	α(K)=0.01056 *15*; α(L)=0.00240 *4*; α(M)=0.000576 *8* α(N)=0.0001428 *20*; α(O)=2.52×10^{-5} *4*; α(P)=1.173×10^{-6} *17*
1372.94	(17/2)⁻	675.17 *12*	100	697.81	(15/2)⁻	M1+E2	1.5 *+10−5*	0.021 *5*	α(K)=0.0168 *43*; α(L)=0.0031 *6*; α(M)=0.00074 *13* α(N)=0.00018 *4*; α(O)=3.3×10^{-5} *6*; α(P)=1.92×10^{-6} *51*
1379.93	(11/2⁺)	571.3[a] *2*	100[a] *10*	808.57	(9/2)⁺	D[a]			
		692.54 *12*	98[a] *20*	687.43	(7/2⁺)	(E2)		0.01224	α(K)=0.00950 *14*; α(L)=0.00209 *3*; α(M)=0.000500 *7* α(N)=0.0001240 *18*; α(O)=2.19×10^{-5} *3*; α(P)=1.056×10^{-6} *15*
		840.9 *3*	77[a] *15*	538.99	(7/2⁺)				

$^{193}_{79}Au_{114}$-9

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
1398.51	(13/2)$^-$	535.15 *5*	100 *20*	863.36	(13/2)$^-$	M1+E2	1.3 *+8–4*	0.040 *10*	α(K)=0.032 *8*; α(L)=0.0062 *10*; α(M)=0.00147 *22* α(N)=0.00037 *6*; α(O)=6.6×10^{-5} *11*; α(P)=3.68×10^{-6} *95*
		608.70 *10*	4.7 *13*	789.94	9/2$^-$	(E2)		0.01628	α(K)=0.01239 *18*; α(L)=0.00297 *5*; α(M)=0.000716 *10* α(N)=0.0001774 *25*; α(O)=3.11×10^{-5} *5*; α(P)=1.376×10^{-6} *20*
		700.88 *12*	15 *3*	697.81	(15/2)$^-$	(M1+E2)	1.1 *+10–5*	0.0224 *66*	α(K)=0.0182 *56*; α(L)=0.0032 *8*; α(M)=0.00075 *17* α(N)=0.00019 *5*; α(O)=3.4×10^{-5} *8*; α(P)=2.09×10^{-6} *67*
1400.39	11/2$^-$	509.43 *6*	37 *18*	890.80	9/2$^-$	M1+E2	1.4 *+8–4*	0.044 *10*	α(K)=0.034 *8*; α(L)=0.0070 *10*; α(M)=0.00165 *22* α(N)=0.00041 *6*; α(O)=7.3×10^{-5} *11*; α(P)=4.0×10^{-6} *10*
		537.08 *5*	100 *13*	863.36	(13/2)$^-$	M1+E2	0.8 *+6–5*	0.051 *15*	α(K)=0.042 *13*; α(L)=0.0074 *16*; α(M)=0.0017 *4* α(N)=0.00043 *9*; α(O)=7.8×10^{-5} *17*; α(P)=4.8×10^{-6} *16*
		1109.80[f] *17*	32 *5*	290.20	11/2$^-$				
1413.03	(9/2$^-$)	725.60[e] *15*	100[e]	687.43	(7/2$^+$)				
1417.99	(5/2$^+$,7/2$^+$)	434.4[a] *3*	58[a] *12*	983.59	(7/2$^+$)				
		488.9[a] *3*	64[a] *13*	929.09	(9/2$^+$)				
		590.0[a] *3*	67[a] *17*	828.00	3/2$^+$				
		609.3[a] *3*	32[a] *6*	808.57	(9/2)$^+$				
		879.1[a] *3*	100[a] *10*	538.99	(7/2$^+$)				
1419.13	(19/2)$^-$	721.3[a] *3*	100	697.81	(15/2)$^-$	E2[@]		0.01122	α(K)=0.00876 *13*; α(L)=0.00188 *3*; α(M)=0.000449 *7* α(N)=0.0001112 *16*; α(O)=1.97×10^{-5} *3*; α(P)=9.72×10^{-7} *14*
1433.49	(11/2$^+$,13/2$^+$)	624.91 *10*	100	808.57	(9/2)$^+$	(E2)		0.01535	α(K)=0.01173 *17*; α(L)=0.00276 *4*; α(M)=0.000664 *10* α(N)=0.0001647 *23*; α(O)=2.89×10^{-5} *4*; α(P)=1.303×10^{-6} *19*
1455.19	(11/2 to 15/2$^-$)	591.72 *8*	80 *23*	863.36	(13/2)$^-$	M1+E2	1.0 *7*	0.036 *16*	α(K)=0.029 *14*; α(L)=0.0052 *17*; α(M)=0.00123 *38* α(N)=3.06×10^{-4} *95*; α(O)=5.5×10^{-5} *19*; α(P)=3.4×10^{-6} *16*
		757.63 *20*	100 *20*	697.81	(15/2)$^-$	(E2)		0.01010	α(K)=0.00794 *12*; α(L)=0.001656 *24*; α(M)=0.000394 *6* α(N)=9.78×10^{-5} *14*; α(O)=1.737×10^{-5} *25*; α(P)=8.81×10^{-7} *13*
1463.10		572.3[a] *3*	100[a] *10*	890.80	9/2$^-$				

$^{193}_{79}Au_{114}$-10

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
1463.10		635.1[a] *3*	21[a] *5*	828.00	3/2$^+$				
1476.98	(13/2$^+$)	668.4[a] *2*		808.57	(9/2)$^+$				E_γ: Other: 669.8 in (^{7}Li,6nγ).
1477.18	(7/2,9/2,11/2)$^-$	668.48 *12*	100	808.57	(9/2)$^+$	E1		0.00474	α(K)=0.00395 *6*; α(L)=0.000602 *9*; α(M)=0.0001380 *20* α(N)=3.42×10^{-5} *5*; α(O)=6.22×10^{-6} *9*; α(P)=3.99×10^{-7} *6*
1496.30	(9/2)$^-$	364.47 *4*	100 *14*	1131.84	9/2$^-$,11/2$^-$	M1+E2	1.3 *+5−4*	0.110 *25*	α(N)=0.00115 *12*; α(O)=0.000203 *23*; α(P)=9.8×10^{-6} *27* α(K)=0.084 *23*; α(L)=0.0193 *21*; α(M)=0.0046 *5*
		706.30 *12*	39 *7*	789.94	9/2$^-$	(E2)		0.01173	α(K)=0.00913 *13*; α(L)=0.00198 *3*; α(M)=0.000474 *7* α(N)=0.0001176 *17*; α(O)=2.08×10^{-5} *3*; α(P)=1.014×10^{-6} *15*
		957.42[f] *25*	13 *3*	538.99	(7/2$^+$)	(E1)		0.00239	α(K)=0.00201 *3*; α(L)=0.000298 *5*; α(M)=6.81×10^{-5} *10* α(N)=1.689×10^{-5} *24*; α(O)=3.09×10^{-6} *5*; α(P)=2.05×10^{-7} *3*
		1205.3 *6*	1.3 *5*	290.20	11/2$^-$				
1514.20	(7/2$^-$)	1132.50 *20*	100	381.62	5/2$^+$				
1521.9	(15/2$^-$)	415.5[b] *9*	100	1106.4	(11/2$^-$)	E2[b]		0.0412 *7*	α(K)=0.0286 *5*; α(L)=0.00955 *15*; α(M)=0.00236 *4* α(N)=0.000584 *10*; α(O)=9.98×10^{-5} *16*; α(P)=3.14×10^{-6} *5*
1526.9	(9/2,7/2$^+$)	987.9[a] *3*	100	538.99	(7/2$^+$)				
1572.29	(9/2$^-$,11/2,13/2$^+$)	274.4[a] *3*	100[a] *10*	1297.41	(3/2$^-$ to 11/2$^-$)				
		482.1[a] *3*	17[a] *3*	1089.34					
		643.41 *12*		929.09	(9/2$^+$)				
1575.62	11/2$^-$,13/2$^-$	290.75 *5*	40 *8*	1284.81	9/2$^-$,11/2$^-$	M1		0.362	α(K)=0.298 *5*; α(L)=0.0491 *7*; α(M)=0.01139 *16* α(N)=0.00284 *4*; α(O)=0.000522 *8*; α(P)=3.53×10^{-5} *5*
		444.0 *4*	3.5 *10*	1131.84	9/2$^-$,11/2$^-$				
		684.77 *12*	29 *8*	890.80	9/2$^-$	(E2)		0.01254	α(K)=0.00972 *14*; α(L)=0.00215 *3*; α(M)=0.000516 *8* α(N)=0.0001278 *18*; α(O)=2.26×10^{-5} *4*; α(P)=1.080×10^{-6} *16*
		712.15 *12*	17 *3*	863.36	(13/2)$^-$	M1+E2	1.3 *5*	0.0198 *53*	α(K)=0.0160 *45*; α(L)=0.0029 *6*; α(M)=0.00068 *14* α(N)=0.00017 *4*; α(O)=3.0×10^{-5} *7*; α(P)=1.83×10^{-6} *54*
		877.76 *17*	100 *13*	697.81	(15/2)$^-$	E2		0.00746	α(K)=0.00595 *9*; α(L)=0.001153 *17*;

$^{193}_{79}Au_{114}$-11

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
									α(M)=0.000272 *4* α(N)=6.76×10^{-5} *10*; α(O)=1.210×10^{-5} *17*; α(P)=6.58×10^{-7} *10*
1575.62	11/2$^-$,13/2$^-$	1285.20 *20*	29 *4*	290.20	11/2$^-$	M1+E2	1.3 *7*	0.0050 *15*	α(K)=0.0041 *12*; α(L)=6.7×10^{-4} *18*; α(M)=1.56×10^{-4} *41* α(N)=3.9×10^{-5} *11*; α(O)=7.1×10^{-6} *19*; α(P)=4.7×10^{-7} *15*; α(IPF)=1.7×10^{-5} *4*
1578.01	(5/2,7/2)$^+$	472.1[a] *2*	100[a] *10*	1105.92	(7/2$^+$)				
		750.0[a] *2*	17[a] *6*	828.00	3/2$^+$				
1598.6		404.3[a] *3*	100[a]	1194.31	(13/2$^-$)				
1603.15	(3/2$^-$,5/2$^+$)	1094.5[#] *4*	94[#] *28*	508.27	7/2$^-$				
		1221.1[#] *5*	46[#] *14*	381.62	5/2$^+$				
		1378.5[#] *4*	100[#] *29*	224.80	(3/2)$^+$				
		1565.0[#] *6*	19[#] *10*	38.234	(1/2)$^+$				
		1603.4[d#] *3*	350[d#] *70*	0.0	3/2$^+$				
1630.25	11/2$^-$,13/2$^-$	274.95 *7*	0.56 *14*	1355.32	(11/2 to 15/2$^-$)	(M1+E2)	1.2 *+8−5*	0.251 *76*	α(K)=0.188 *71*; α(L)=0.049 *4*; α(M)=0.0118 *7* α(N)=0.00292 *18*; α(O)=0.00051 *5*; α(P)=2.17×10^{-5} *87*
		345.46 *4*	8.6 *9*	1284.81	9/2$^-$,11/2$^-$	M1+E2	0.24 *3*	0.218 *4*	α(K)=0.179 *4*; α(L)=0.0300 *5*; α(M)=0.00696 *11* α(N)=0.00173 *3*; α(O)=0.000318 *5*; α(P)=2.11×10^{-5} *4*
		739.47 *17*	1.3 *8*	890.80	9/2$^-$	(E2,M1)		0.021 *10*	α(K)=0.0168 *85*; α(L)=0.0029 *12*; α(M)=6.8×10^{-4} *26* α(N)=1.69×10^{-4} *65*; α(O)=3.1×10^{-5} *13*; α(P)=1.9×10^{-6} *11*
		766.97 *20*	3.1 *6*	863.36	(13/2)$^-$	(E2)		0.00985	α(K)=0.00775 *11*; α(L)=0.001606 *23*; α(M)=0.000382 *6* α(N)=9.48×10^{-5} *14*; α(O)=1.684×10^{-5} *24*; α(P)=8.59×10^{-7} *12*
		932.37 *15*	100 *10*	697.81	(15/2)$^-$	(E2)		0.00660	α(K)=0.00530 *8*; α(L)=0.001000 *14*; α(M)=0.000236 *4* α(N)=5.85×10^{-5} *9*; α(O)=1.049×10^{-5} *15*; α(P)=5.86×10^{-7} *9*
1654.69	(9/2$^-$,11/2,13/2$^+$)	725.60[e] *15*	100[e]	929.09	(9/2$^+$)				
1658.0	1/2$^{(+)}$ to 5/2$^{(+)}$	1276.38[#] *25*		381.62	5/2$^+$	(E2)[#]		0.00360	α(K)=0.00294 *5*; α(L)=0.000499 *7*;

$^{193}_{79}Au_{114}$-12

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
									α(M)=0.0001162 *17* α(N)=2.89×10^{-5} *4*; α(O)=5.24×10^{-6} *8*; α(P)=3.23×10^{-7} *5*; α(IPF)=1.285×10^{-5} *19*
1678.79		695.2[a] *2*	100[a] *10*	983.59	(7/2$^+$)				
		870.2[a] *3*	68[a] *18*	808.57	(9/2)$^+$				
1680.35	(11/2$^-$,13/2$^-$)	790.6 *4*	23 *10*	890.80	9/2$^-$				
		816.81 *20*	100 *17*	863.36	(13/2)$^-$	(E2)		0.00864	α(K)=0.00684 *10*; α(L)=0.001373 *20*; α(M)=0.000325 *5* α(N)=8.08×10^{-5} *12*; α(O)=1.440×10^{-5} *21*; α(P)=7.58×10^{-7} *11*
		982.2 *4*	17 *6*	697.81	(15/2)$^-$				
1684.74	(9/2$^-$ to 13/2$^-$)	895.0 *5*	1.8 *6*	789.94	9/2$^-$				
		1394.50 *20*	100 *15*	290.20	11/2$^-$	(E2)		0.00307	α(K)=0.00250 *4*; α(L)=0.000415 *6*; α(M)=9.63×10^{-5} *14* α(N)=2.39×10^{-5} *4*; α(O)=4.35×10^{-6} *6*; α(P)=2.74×10^{-7} *4*; α(IPF)=3.58×10^{-5} *5*
1708.8	(17/2$^-$)	514.5[b] *9*	100	1194.31	(13/2$^-$)	E2[b]		0.0241	α(K)=0.0177 *3*; α(L)=0.00484 *8*; α(M)=0.001181 *18* α(N)=0.000292 *5*; α(O)=5.07×10^{-5} *8*; α(P)=1.96×10^{-6} *3*
1733.44	(15/2$^-$)	360.51 *5*	14 *4*	1372.94	(17/2)$^-$	(M1+E2)	0.9 *+6−4*	0.139 *35*	α(K)=0.110 *32*; α(L)=0.022 *3*; α(M)=0.0052 *7* α(N)=0.00130 *16*; α(O)=0.00023 *4*; α(P)=1.28×10^{-5} *38*
		870.05 *17*	100 *14*	863.36	(13/2)$^-$	(E2)		0.00759	α(K)=0.00605 *9*; α(L)=0.001178 *17*; α(M)=0.000278 *4* α(N)=6.91×10^{-5} *10*; α(O)=1.236×10^{-5} *18*; α(P)=6.70×10^{-7} *10*
		1035.54 *17*	62 *10*	697.81	(15/2)$^-$	(E2)		0.00537	α(K)=0.00434 *6*; α(L)=0.000787 *11*; α(M)=0.000184 *3* α(N)=4.58×10^{-5} *7*; α(O)=8.25×10^{-6} *12*; α(P)=4.79×10^{-7} *7*
1745.1		1236.8[a] *3*	100	508.27	7/2$^-$				
1776.04	11/2$^-$	200.30 *7*		1575.62	11/2$^-$,13/2$^-$				
		491.3 *4*	11 *6*	1284.81	9/2$^-$,11/2$^-$				
		885.3 *4*	7.2 *22*	890.80	9/2$^-$				
		913.06 *15*	100 *11*	863.36	(13/2)$^-$	E2		0.00689	α(K)=0.00552 *8*; α(L)=0.001050 *15*; α(M)=0.000248 *4* α(N)=6.15×10^{-5} *9*; α(O)=1.102×10^{-5} *16*; α(P)=6.10×10^{-7} *9*
		985.9 *4*	3.6 *11*	789.94	9/2$^-$				
		1267.90 *20*	19 *3*	508.27	7/2$^-$	(E2)		0.00365	α(K)=0.00298 *5*; α(L)=0.000506 *7*;

$^{193}_{79}Au_{114}$-13

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[c]	Comments
								α(M)=0.0001178 *17* α(N)=2.93×10^{-5} *4*; α(O)=5.31×10^{-6} *8*; α(P)=3.27×10^{-7} *5*; α(IPF)=1.170×10^{-5} *17*
1776.04	11/2$^-$	1486.10 *25*	94 *11*	290.20	11/2$^-$	(E2)	0.00276	α(K)=0.00223 *4*; α(L)=0.000365 *6*; α(M)=8.44×10^{-5} *12* α(N)=2.10×10^{-5} *3*; α(O)=3.82×10^{-6} *6*; α(P)=2.43×10^{-7} *4*; α(IPF)=6.12×10^{-5} *9*
1794.92	(13/2$^-$)	421.8 *4*	100 *25*	1372.94	(17/2)$^-$			
		1004.6 *6*	58 *18*	789.94	9/2$^-$			
		1097.15 *15*	58 *15*	697.81	(15/2)$^-$			
1815.1	(1/2,3/2,5/2$^+$)	1776.4[#] *4*	32[#] *8*	38.234	(1/2)$^+$			
		1815.6[#] *4*	100[#] *24*	0.0	3/2$^+$			
1815.41	(9/2$^-$,11/2$^-$,13/2$^-$)	952.0 *4*	9 *3*	863.36	(13/2)$^-$			
		1026.0 *6*	2.3 *9*	789.94	9/2$^-$			
		1525.1 *3*	100 *14*	290.20	11/2$^-$	(E2)	0.00265	α(K)=0.00212 *3*; α(L)=0.000346 *5*; α(M)=8.01×10^{-5} *12* α(N)=1.99×10^{-5} *3*; α(O)=3.63×10^{-6} *5*; α(P)=2.32×10^{-7} *4*; α(IPF)=7.36×10^{-5} *11*
1829.91	(11/2$^-$,13/2$^-$)	429.51[e] *5*	37[e] *19*	1400.39	11/2$^-$			
		431.46 *5*	21 *6*	1398.51	(13/2)$^-$	(M1)	0.1249	α(K)=0.1030 *15*; α(L)=0.01683 *24*; α(M)=0.00389 *6* α(N)=0.000970 *14*; α(O)=0.000179 *3*; α(P)=1.214×10^{-5} *17*
		545.05 *6*	100 *22*	1284.81	9/2$^-$,11/2$^-$	(E2)	0.0210	α(K)=0.01565 *22*; α(L)=0.00408 *6*; α(M)=0.000990 *14* α(N)=0.000245 *4*; α(O)=4.27×10^{-5} *6*; α(P)=1.736×10^{-6} *25*
		939.1 *4*	18 *5*	890.80	9/2$^-$			
		966.1 *4*	14 *5*	863.36	(13/2)$^-$			
		1539.0 *5*	21 *5*	290.20	11/2$^-$			
1861.91	(1/2$^+$,3/2,5/2$^+$)	1603.4[d#] *3*	143[d#] *28*	257.986	5/2$^+$			
		1824.3[#] *4*	36[#] *11*	38.234	(1/2)$^+$			
		1862.2[#] *4*	100[#] *19*	0.0	3/2$^+$			
1869.28	(11/2$^-$ to 15/2$^-$)	1171.50 *17*	100 *22*	697.81	(15/2)$^-$	(E2)	0.00423	α(K)=0.00345 *5*; α(L)=0.000600 *9*; α(M)=0.0001399 *20* α(N)=3.47×10^{-5} *5*; α(O)=6.29×10^{-6} *9*; α(P)=3.79×10^{-7} *6*; α(IPF)=2.07×10^{-6} *3*
		1578.9 *4*	5.3 *15*	290.20	11/2$^-$			
1876.29	(11/2$^-$,13/2$^-$)	1013.3 *4*	50 *13*	863.36	(13/2)$^-$			
		1085.7 *6*	18 *7*	789.94	9/2$^-$			
		1178.60 *20*	100 *23*	697.81	(15/2)$^-$	(E2)	0.00418	α(K)=0.00341 *5*; α(L)=0.000592 *9*; α(M)=0.0001381 *20* α(N)=3.43×10^{-5} *5*; α(O)=6.21×10^{-6} *9*; α(P)=3.75×10^{-7} *6*; α(IPF)=2.50×10^{-6} *4*
		1585.5 *4*	57 *13*	290.20	11/2$^-$			
1915.20	(11/2$^-$ to 15/2$^-$)	1052.00 *20*	100 *17*	863.36	(13/2)$^-$	(E2)	0.00520	α(K)=0.00421 *6*; α(L)=0.000759 *11*; α(M)=0.0001779 *25* α(N)=4.42×10^{-5} *7*; α(O)=7.97×10^{-6} *12*; α(P)=4.64×10^{-7} *7*
		1217.7 *5*	3.0 *9*	697.81	(15/2)$^-$			
		1624.5 *3*	54 *8*	290.20	11/2$^-$			

$^{193}_{79}Au_{114}$-14

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
1930.03	11/2⁻,13/2⁻	299.82 *4*	18 *3*	1630.25	11/2⁻,13/2⁻	M1		0.333	α(K)=0.274 *4*; α(L)=0.0452 *7*; α(M)=0.01046 *15* α(N)=0.00261 *4*; α(O)=0.000480 *7*; α(P)=3.25×10^{-5} *5*
		354.5 *5*	2.6 *12*	1575.62	11/2⁻,13/2⁻				
		529.51 *7*	35 *20*	1400.39	11/2⁻	(E2)		0.0225	α(K)=0.01665 *24*; α(L)=0.00444 *7*; α(M)=0.001081 *16* α(N)=0.000268 *4*; α(O)=4.65×10^{-5} *7*; α(P)=1.85×10^{-6} *3*
		645.23 *12*	8.2 *23*	1284.81	9/2⁻,11/2⁻	(E2)		0.01429	α(K)=0.01098 *16*; α(L)=0.00253 *4*; α(M)=0.000607 *9* α(N)=0.0001505 *21*; α(O)=2.65×10^{-5} *4*; α(P)=1.220×10^{-6} *17*
		1040.5 *3*	<10	890.80	9/2⁻				
		1066.0 *6*	1.4 *5*	863.36	(13/2)⁻				
		1139.5 *5*	2.9 *9*	789.94	9/2⁻				
		1232.20 *20*	68 *9*	697.81	(15/2)⁻	E2		0.00385	α(K)=0.00314 *5*; α(L)=0.000538 *8*; α(M)=0.0001253 *18* α(N)=3.11×10^{-5} *5*; α(O)=5.64×10^{-6} *8*; α(P)=3.45×10^{-7} *5*; α(IPF)=7.32×10^{-6} *11*
		1639.4 *3*	100 *15*	290.20	11/2⁻				
1939.20	(11/2,13/2)⁻	654.51 *15*	3.8 *11*	1284.81	9/2⁻,11/2⁻	(E2)		0.01385	α(K)=0.01066 *15*; α(L)=0.00243 *4*; α(M)=0.000584 *9* α(N)=0.0001447 *21*; α(O)=2.55×10^{-5} *4*; α(P)=1.185×10^{-6} *17*
		1048.5 *4*	1.8 *6*	890.80	9/2⁻				
		1075.90 *25*	14.6 *21*	863.36	(13/2)⁻	(E2)		0.00498	α(K)=0.00404 *6*; α(L)=0.000722 *11*; α(M)=0.0001691 *24* α(N)=4.20×10^{-5} *6*; α(O)=7.58×10^{-6} *11*; α(P)=4.45×10^{-7} *7*
		1241.30 *20*	100 *9*	697.81	(15/2)⁻	E2		0.00379	α(K)=0.00310 *5*; α(L)=0.000530 *8*; α(M)=0.0001234 *18* α(N)=3.06×10^{-5} *5*; α(O)=5.56×10^{-6} *8*; α(P)=3.40×10^{-7} *5*; α(IPF)=8.36×10^{-6} *12*
		1648.5 *3*	46 *7*	290.20	11/2⁻				
1947.10	(21/2)⁺	528.0[@] *3*	100[@] *7*	1419.13	(19/2)⁻	E1[@]		0.00765	α(K)=0.00637 *9*; α(L)=0.000987 *14*; α(M)=0.000227 *4* α(N)=5.62×10^{-5} *8*; α(O)=1.017×10^{-5} *15*; α(P)=6.34×10^{-7} *9* B(E1)(W.u.)=1.04×10^{-7} *13* E_γ: Weighted average of 527.9 *3* (α,xnγ) and 528.4 *5* (^{11}B,4nγ).
		1249.3[@] *3*	26[@] *3*	697.81	(15/2)⁻	(E3)[@]		0.00799	B(E3)(W.u.)=2.3 *4* α(K)=0.00625 *9*; α(L)=0.001324 *19*; α(M)=0.000316 *5* α(N)=7.86×10^{-5} *11*; α(O)=1.408×10^{-5} *20*; α(P)=7.56×10^{-7} *11*; α(IPF)=3.08×10^{-6} *5*
2012.20	(13/2⁻,15/2⁻)	639.0[e] *4*	35[e] *18*	1372.94	(17/2)⁻				
		1149.3 *6*	6 *2*	863.36	(13/2)⁻				
		1314.51[e] *20*	100[e] *38*	697.81	(15/2)⁻				
		1721.3 *5*	3.8 *11*	290.20	11/2⁻				

$^{193}_{79}Au_{114}$-15

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
2014.72	(1/2$^+$,3/2,5/2$^+$)	1756.7[#] *5*	18[#] *6*	257.986	5/2$^+$				
		1976.6[#] *4*	100[#] *24*	38.234	(1/2)$^+$				
		2014.6[#] *4*	3.2[#] *8*	0.0	3/2$^+$				
2023.47	(11/2 to 15/2$^-$)	623.10 *10*	12 *3*	1400.39	11/2$^-$	M1+E2	1.0 *9*	0.032 *16*	α(K)=0.026 *14*; α(L)=0.0046 *18*; α(M)=0.00107 *40* α(N)=2.66×10^{-4} *98*; α(O)=4.8×10^{-5} *19*; α(P)=3.0×10^{-6} *17*
		738.60[f] *17*	10 *6*	1284.81	9/2$^-$,11/2$^-$				
		1160.18 *20*	17.6 *25*	863.36	(13/2)$^-$	(E2)		0.00431	α(K)=0.00351 *5*; α(L)=0.000612 *9*; α(M)=0.0001429 *20* α(N)=3.55×10^{-5} *5*; α(O)=6.42×10^{-6} *9*; α(P)=3.86×10^{-7} *6*; α(IPF)=1.505×10^{-6} *23*
		1325.50 *20*	100 *12*	697.81	(15/2)$^-$	(E2)		0.00336	α(K)=0.00274 *4*; α(L)=0.000461 *7*; α(M)=0.0001072 *15* α(N)=2.66×10^{-5} *4*; α(O)=4.84×10^{-6} *7*; α(P)=3.01×10^{-7} *5*; α(IPF)=2.07×10^{-5} *3*
2037.47	(11/2,13/2)$^-$	461.83 *6*	40 *6*	1575.62	11/2$^-$,13/2$^-$	M1+E2	0.9 *6*	0.072 *27*	α(K)=0.058 *24*; α(L)=0.011 *3*; α(M)=0.0025 *6* α(N)=0.00063 *15*; α(O)=1.14×10^{-4} *29*; α(P)=6.7×10^{-6} *28*
		560.0 *4*	9 *4*	1477.18	(7/2,9/2,11/2)$^-$				
		639.0[e] *4*	11[e] *4*	1398.51	(13/2)$^-$				
		752.70 *15*	11.7 *23*	1284.81	9/2$^-$,11/2$^-$	(M1+E2)	0.9 *7*	0.0207 *78*	α(K)=0.0169 *66*; α(L)=0.00290 *90*; α(M)=6.7×10^{-4} *21* α(N)=1.68×10^{-4} *51*; α(O)=3.06×10^{-5} *96*; α(P)=1.95×10^{-6} *79*
		883.6 *4*	3.4 *11*	1153.53	(11/2$^+$)				
		1147.20 *20*	6.4 *13*	890.80	9/2$^-$	(E2)		0.00440	α(K)=0.00358 *5*; α(L)=0.000627 *9*; α(M)=0.0001465 *21* α(N)=3.64×10^{-5} *5*; α(O)=6.58×10^{-6} *10*; α(P)=3.94×10^{-7} *6*; α(IPF)=1.004×10^{-6} *16*
		1174.00 *17*	53 *8*	863.36	(13/2)$^-$	(E2)		0.00421	α(K)=0.00343 *5*; α(L)=0.000597 *9*; α(M)=0.0001393 *20* α(N)=3.46×10^{-5} *5*; α(O)=6.26×10^{-6} *9*; α(P)=3.77×10^{-7} *6*; α(IPF)=2.22×10^{-6} *4*
		1339.60 *20*	100 *13*	697.81	(15/2)$^-$	(E2)		0.00330	α(K)=0.00269 *4*; α(L)=0.000451 *7*; α(M)=0.0001048 *15* 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*
2043.4	1/2,3/2,5/2	953.7[#] *4*	100[#] *29*	1089.34					
		1662.1[#] *4*	62[#] *16*	381.62	5/2$^+$				

$^{193}_{79}Au_{114}$-16

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ	α[c]	Comments
2063.05	11/2⁻,13/2⁻,15/2⁻	330.0 *5*	1.9 *6*	1733.44	(15/2⁻)				
		487.41 *6*	25 *5*	1575.62	11/2⁻,13/2⁻	M1+E2	1.1 *3*	0.056 *10*	α(K)=0.045 *9*; α(L)=0.0086 *11*; α(M)=0.00204 *23* α(N)=0.00051 *6*; α(O)=9.1×10⁻⁵ *11*; α(P)=5.2×10⁻⁶ *11*
		662.73 *12*	18 *5*	1400.39	11/2⁻				
		778.37 *20*	13 *7*	1284.81	9/2⁻,11/2⁻	(M1,E2)		0.0182 *87*	α(K)=0.0148 *74*; α(L)=0.0026 *10*; α(M)=5.9×10⁻⁴ *23* α(N)=1.48×10⁻⁴ *57*; α(O)=2.7×10⁻⁵ *11*; α(P)=1.71×10⁻⁶ *88*
		1199.5 *3*	2.7 *8*	863.36	(13/2)⁻	(M1)		0.00892	α(K)=0.00740 *11*; α(L)=0.001171 *17*; α(M)=0.000270 *4* α(N)=6.72×10⁻⁵ *10*; α(O)=1.239×10⁻⁵ *18*; α(P)=8.54×10⁻⁷ *12*; α(IPF)=6.64×10⁻⁶ *11*
		1365.10 *22*	100 *13*	697.81	(15/2)⁻	(E2)		0.00319	α(K)=0.00260 *4*; α(L)=0.000434 *6*; α(M)=0.0001007 *15* α(N)=2.50×10⁻⁵ *4*; α(O)=4.55×10⁻⁶ *7*; α(P)=2.85×10⁻⁷ *4*; α(IPF)=2.89×10⁻⁵ *4*
2080.0	(25/2⁺)	132.9[@] *3*	100	1947.10	(21/2)⁺	E2[@]		1.66 *3*	α(K)=0.433 *7*; α(L)=0.920 *16*; α(M)=0.239 *5* α(N)=0.0587 *11*; α(O)=0.00946 *17*; α(P)=4.65×10⁻⁵ *7* B(E2)(W.u.)=30.9 *17*
2087.3	(21/2⁻)	668.2[@] *3*		1419.13	(19/2)⁻				
2100.9	(19/2⁻)	578.5[bf] *9*	100	1521.9	(15/2⁻)	E2[b]		0.0183	α(K)=0.01379 *20*; α(L)=0.00343 *5*; α(M)=0.000830 *13* α(N)=0.000206 *3*; α(O)=3.59×10⁻⁵ *6*; α(P)=1.531×10⁻⁶ *22*
2104.44	(11/2,13/2)⁻	1314.51[e] *20*	36[e] *14*	789.94	9/2⁻				
		1406.60 *20*	100 *14*	697.81	(15/2)⁻	(M1,E2)		0.0045 *15*	α(K)=0.0037 *13*; α(L)=5.9×10⁻⁴ *19*; α(M)=1.37×10⁻⁴ *43* α(N)=3.4×10⁻⁵ *11*; α(O)=6.3×10⁻⁶ *20*; α(P)=4.2×10⁻⁷ *16*; α(IPF)=5.0×10⁻⁵ *12*
2125.37	(11/2⁻)	295.4 *4*	13 *5*	1829.91	(11/2⁻,13/2⁻)				
		1196.4 *3*	53 *12*	929.09	(9/2⁺)				
		1261.9 *3*	100 *25*	863.36	(13/2)⁻	(E2)		0.00368	α(K)=0.00300 *5*; α(L)=0.000512 *8*; α(M)=0.0001191 *17* α(N)=2.96×10⁻⁵ *5*; α(O)=5.37×10⁻⁶ *8*; α(P)=3.29×10⁻⁷ *5*; α(IPF)=1.091×10⁻⁵ *16*
2130.40	(11/2⁻ to 15/2⁻)	731.95 *12*	32 *6*	1398.51	(13/2)⁻	(E2)		0.01087	α(K)=0.00850 *12*; α(L)=0.00181 *3*; α(M)=0.000431 *6* α(N)=0.0001070 *15*; α(O)=1.90×10⁻⁵ *3*; α(P)=9.44×10⁻⁷ *14*

$^{193}_{79}Au_{114}$-17

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[c]	Comments
2130.40	(11/2⁻ to 15/2⁻)	1432.40 *20*	100 *15*	697.81	(15/2)⁻	(E2,M1)	0.0044 *15*	α(K)=0.0036 *12*; α(L)=5.7×10⁻⁴ *18*; α(M)=1.31×10⁻⁴ *41* α(N)=3.3×10⁻⁵ *10*; α(O)=6.0×10⁻⁶ *19*; α(P)=4.0×10⁻⁷ *15*; α(IPF)=5.9×10⁻⁵ *14*
2139.78	(13/2⁻,15/2⁻)	1007.8 *4*	36 *9*	1131.84	9/2⁻,11/2⁻			
		1442.00 *20*	100 *21*	697.81	(15/2)⁻	(M1)	0.00569	α(K)=0.00466 *7*; α(L)=0.000734 *11*; α(M)=0.0001690 *24* α(N)=4.21×10⁻⁵ *6*; α(O)=7.76×10⁻⁶ *11*; α(P)=5.37×10⁻⁷ *8*; α(IPF)=7.66×10⁻⁵ *11*
2140.2	(23/2⁺)	193.1[@] *3*	100	1947.10	(21/2)⁺	D+Q[@]		
2157.63	(11/2⁻)	643.41[e] *12*	26[e] *10*	1514.20	(7/2⁻)			
		661.7 *4*	42 *13*	1496.30	(9/2)⁻			
		963.1 *6*	5.8 *24*	1194.31	(13/2⁻)			
		1294.3 *4*	17 *5*	863.36	(13/2)⁻			
		1459.8 *4*	100 *30*	697.81	(15/2)⁻			
2159.03	(11/2⁻ to 15/2⁻)	583.32 *8*	27 *8*	1575.62	11/2⁻,13/2⁻	(E2)	0.0179	α(K)=0.01355 *19*; α(L)=0.00335 *5*; α(M)=0.000810 *12* α(N)=0.000201 *3*; α(O)=3.51×10⁻⁵ *5*; α(P)=1.505×10⁻⁶ *21*
		1461.60 *20*	100 *30*	697.81	(15/2)⁻	(M1,E2)	0.0042 *14*	α(K)=0.0034 *11*; α(L)=5.4×10⁻⁴ *17*; α(M)=1.25×10⁻⁴ *38* α(N)=3.12×10⁻⁵ *95*; α(O)=5.7×10⁻⁶ *18*; α(P)=3.8×10⁻⁷ *14*; α(IPF)=7.0×10⁻⁵ *16*
		1869.2 *3*	41 *11*	290.20	11/2⁻			
2173.0	(23/2⁻)	753.8[@] *3*	100	1419.13	(19/2)⁻	(E2)[@]	0.01021	α(K)=0.00802 *12*; α(L)=0.001678 *24*; α(M)=0.000400 *6* α(N)=9.91×10⁻⁵ *14*; α(O)=1.760×10⁻⁵ *25*; α(P)=8.90×10⁻⁷ *13*
2196.88	(11/2⁻,13/2,15/2⁻)	798.39 *25*	30 *13*	1398.51	(13/2)⁻			
		1499.2 *4*	100 *26*	697.81	(15/2)⁻			
		1906.4 *5*	23 *8*	290.20	11/2⁻			
2201.73	(11/2⁻)	626.22 *10*	13 *4*	1575.62	11/2⁻,13/2⁻	(M1)	0.0469	α(K)=0.0388 *6*; α(L)=0.00627 *9*; α(M)=0.001448 *21* α(N)=0.000361 *5*; α(O)=6.64×10⁻⁵ *10*; α(P)=4.54×10⁻⁶ *7*
		746.11 *20*	9 *3*	1455.19	(11/2 to 15/2⁻)			
		803.22 *25*	3.8 *15*	1398.51	(13/2)⁻	(M1)	0.0247	α(K)=0.0204 *3*; α(L)=0.00328 *5*; α(M)=0.000757 *11* α(N)=0.000188 *3*; α(O)=3.47×10⁻⁵ *5*; α(P)=2.38×10⁻⁶ *4*
		1070.6 *6*	1.4 *7*	1131.84	9/2⁻,11/2⁻			
		1503.80 *25*	100 *17*	697.81	(15/2)⁻	(E2)	0.00271	α(K)=0.00218 *3*; α(L)=0.000356 *5*; α(M)=8.24×10⁻⁵ *12*

$^{193}_{79}Au_{114}$-18

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[c]	Comments
								α(N)=2.05×10^{-5} *3*; α(O)=3.73×10^{-6} *6*; α(P)=2.38×10^{-7} *4*; α(IPF)=6.67×10^{-5} *10*
2201.73	(11/2$^-$)	1693.4 *6*	2.3 *9*	508.27	7/2$^-$			
2205.94	(11/2$^-$)	1697.0 *3*	25 *6*	508.27	7/2$^-$			
		1916.4 *3*	100 *21*	290.20	11/2$^-$			
2215.20	(13/2$^-$,15/2$^-$)	1351.52 *25*	50 *15*	863.36	(13/2)$^-$	(E2,M1)	0.0049 *17*	α(K)=0.0041 *15*; α(L)=6.5×10^{-4} *21*; α(M)=1.51×10^{-4} *49* α(N)=3.8×10^{-5} *12*; α(O)=6.9×10^{-6} *23*; α(P)=4.6×10^{-7} *18*; α(IPF)=3.4×10^{-5} *8*
		1517.50 *25*	100 *15*	697.81	(15/2)$^-$	(M1)	0.00505	α(K)=0.00410 *6*; α(L)=0.000645 *9*; α(M)=0.0001485 *21* α(N)=3.70×10^{-5} *6*; α(O)=6.82×10^{-6} *10*; α(P)=4.72×10^{-7} *7*; α(IPF)=0.0001118 *16*
		1925.5 *4*	38 *11*	290.20	11/2$^-$			
2255.12	(11/2$^-$ to 15/2$^-$)	854.80 *25*	49 *16*	1400.39	11/2$^-$			
		970.0 *4*	19 *3*	1284.81	9/2$^-$,11/2$^-$			
		1123.2 *3*	20 *9*	1131.84	9/2$^-$,11/2$^-$			
		1392.00 *20*	100 *18*	863.36	(13/2)$^-$	(M1)	0.00619	α(K)=0.00509 *8*; α(L)=0.000802 *12*; α(M)=0.000185 *3* α(N)=4.60×10^{-5} *7*; α(O)=8.48×10^{-6} *12*; α(P)=5.87×10^{-7} *9*; α(IPF)=5.60×10^{-5} *8*
		1556.9 *3*	93 *16*	697.81	(15/2)$^-$			
2279.39	(11/2$^-$)	801.73 *25*	58 *15*	1477.18	(7/2,9/2,11/2)$^-$	(E2)	0.00898	α(K)=0.00710 *10*; α(L)=0.001437 *21*; α(M)=0.000341 *5* α(N)=8.46×10^{-5} *12*; α(O)=1.508×10^{-5} *22*; α(P)=7.87×10^{-7} *11*
		900.4 *6*	7 *3*	1379.93	(11/2$^+$)			
		1581.9 *3*	100 *21*	697.81	(15/2)$^-$			
		1771.6 *4*	42 *12*	508.27	7/2$^-$			
		1988.6 *6*	1.2 *6*	290.20	11/2$^-$			
2285.28	(11/2$^+$)	808.3 *6*	5.3 *15*	1477.18	(7/2,9/2,11/2)$^-$			
		905.1 *5*	5.2 *21*	1379.93	(11/2$^+$)			
		1476.70 *20*	100 *15*	808.57	(9/2)$^+$			
		1746.3 *3*	88 *18*	538.99	(7/2$^+$)			
2291.01	(11/2$^+$)	1137.80 *25*	29 *9*	1153.53	(11/2$^+$)			
		1400.0 *3*	41 *12*	890.80	9/2$^-$			
		1481.6 *4*	100 *26*	808.57	(9/2)$^+$			
		1752.2 *3*	41 *12*	538.99	(7/2$^+$)			
2320.1	(21/2$^-$)	611.3[b] *8*	100	1708.8	(17/2$^-$)	E2[b]	0.01613	α(K)=0.01228 *18*; α(L)=0.00293 *5*; α(M)=0.000707 *11* α(N)=0.000175 *3*; α(O)=3.07×10^{-5} *5*; α(P)=1.364×10^{-6} *20*
2324.9	(29/2$^+$)	244.9[@] *3*	100	2080.0	(25/2$^+$)	(E2)	0.191	α(K)=0.1026 *15*; α(L)=0.0669 *10*; α(M)=0.0170 *3* α(N)=0.00420 *7*; α(O)=0.000694 *11*; α(P)=1.069×10^{-5} *16* B(E2)(W.u.)>40 Mult.: From (^{11}B,4nγ). Other (M1) in (α,xnγ).

$^{193}_{79}Au_{114}$-19

Adopted Levels, Gammas (continued)

γ(^{193}Au) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[c]	Comments
2377.9	(27/2⁻)	204.9[@] *3*	100[@] *12*	2173.0	(23/2⁻)	(E2)[@]	0.345	B(E2)(W.u.)=17 *4* α(K)=0.1599 *24*; α(L)=0.1390 *22*; α(M)=0.0356 *6* α(N)=0.00879 *14*; α(O)=0.001438 *22*; α(P)=1.638×10^{-5} *24*
		298.0[@] *3*	41[@] *12*	2080.0	(25/2⁺)	(E1)[b]	0.0273	B(E1)(W.u.)=2.2×10^{-6} *8* α(K)=0.0226 *4*; α(L)=0.00368 *6*; α(M)=0.000850 *12* α(N)=0.000210 *3*; α(O)=3.75×10^{-5} *6*; α(P)=2.14×10^{-6} *3* E_γ: Other value: 297.2 *8* (α,4xnγ).
2476.6	(31/2⁻)	98.7[@] *3*	100	2377.9	(27/2⁻)	(E2)[@]	5.50 *11*	α(K)=0.671 *10*; α(L)=3.62 *8*; α(M)=0.941 *19* α(N)=0.231 *5*; α(O)=0.0370 *8*; α(P)=9.78×10^{-5} *16* B(E2)(W.u.)=39.9 *23*
2486.7	(31/2⁺)	161.8[@] *3*	100	2324.9	(29/2⁺)	D		Mult.: From (^{11}B,4nγ). Other (E2) in (αxnγ).
2701.1	(33/2⁻)	224.5[@] *3*	100	2476.6	(31/2⁻)	(E2)[@]	0.254	B(E2)(W.u.)=6.6 *4* α(K)=0.1275 *19*; α(L)=0.0952 *15*; α(M)=0.0243 *4* α(N)=0.00600 *9*; α(O)=0.000986 *15*; α(P)=1.316×10^{-5} *19*
2923.4	(35/2⁺)	436.7[@] *3*	100	2486.7	(31/2⁺)	(E2)[@]	0.0362	α(K)=0.0255 *4*; α(L)=0.00811 *12*; α(M)=0.00200 *3* α(N)=0.000494 *7*; α(O)=8.47×10^{-5} *12*; α(P)=2.81×10^{-6} *4*
3155.1	(37/2⁻)	454.0[@] *3*	100	2701.1	(33/2⁻)	(E2)[@]	0.0328	B(E2)(W.u.)>0.85 α(K)=0.0234 *4*; α(L)=0.00715 *11*; α(M)=0.001758 *25* α(N)=0.000435 *7*; α(O)=7.48×10^{-5} *11*; α(P)=2.58×10^{-6} *4*
3441.9	(39/2⁺)	518.5[@] *3*	100	2923.4	(35/2⁺)	(E2)[@]	0.0237	α(K)=0.01743 *25*; α(L)=0.00473 *7*; α(M)=0.001153 *17* α(N)=0.000286 *4*; α(O)=4.95×10^{-5} *7*; α(P)=1.93×10^{-6} *3*
3896.1	(41/2⁻)	741.0[@] *3*	100	3155.1	(37/2⁻)	(E2)[@]	0.01059	α(K)=0.00830 *12*; α(L)=0.001753 *25*; α(M)=0.000418 *6* α(N)=0.0001036 *15*; α(O)=1.84×10^{-5} *3*; α(P)=9.21×10^{-7} *13*
4063.4	(43/2⁺)	621.5[@] *3*	100	3441.9	(39/2⁺)	(E2)[@]	0.01554	α(K)=0.01186 *17*; α(L)=0.00280 *4*; α(M)=0.000675 *10* α(N)=0.0001672 *24*; α(O)=2.94×10^{-5} *5*; α(P)=1.318×10^{-6} *19*
4348.5	(47/2⁺)	285.1[b] *7*	100	4063.4	(43/2⁺)	E2[b]	0.1192 *19*	α(K)=0.0704 *11*; α(L)=0.0369 *7*; α(M)=0.00932 *16* α(N)=0.00230 *4*; α(O)=0.000383 *7*; α(P)=7.46×10^{-6} *12*
4701.1	(45/2⁻)	805.0[b] *5*	100	3896.1	(41/2⁻)	E2[b]	0.00890	α(K)=0.00704 *10*; α(L)=0.001423 *20*; α(M)=0.000338 *5* α(N)=8.38×10^{-5} *12*; α(O)=1.493×10^{-5} *21*; α(P)=7.81×10^{-7} *11*
5058.8	(51/2⁺)	710.3[b] *9*	100	4348.5	(47/2⁺)	E2[b]	0.01159	α(K)=0.00903 *13*; α(L)=0.00196 *3*; α(M)=0.000467 *7* α(N)=0.0001159 *17*; α(O)=2.05×10^{-5} *3*; α(P)=1.003×10^{-6} *15*
5231.8	(49/2⁻)	530.7[b] *9*	100	4701.1	(45/2⁻)	E2[b]	0.0224	α(K)=0.01657 *24*; α(L)=0.00441 *7*; α(M)=0.001074 *16* α(N)=0.000266 *4*; α(O)=4.62×10^{-5} *7*; α(P)=1.84×10^{-6} *3*
5741.6	(55/2⁺)	682.8[b] *9*	100	5058.8	(51/2⁺)	E2[b]	0.01262	α(K)=0.00978 *14*; α(L)=0.00217 *4*; α(M)=0.000520 *8* α(N)=0.0001288 *19*; α(O)=2.27×10^{-5} *4*; α(P)=1.086×10^{-6} *16*

[†] From ^{193}Hg ε decay (11.8 h), unless otherwise noted.

$^{193}_{79}Au_{114}$-20

Adopted Levels, Gammas (continued)

$\gamma(^{193}Au)$ (continued)

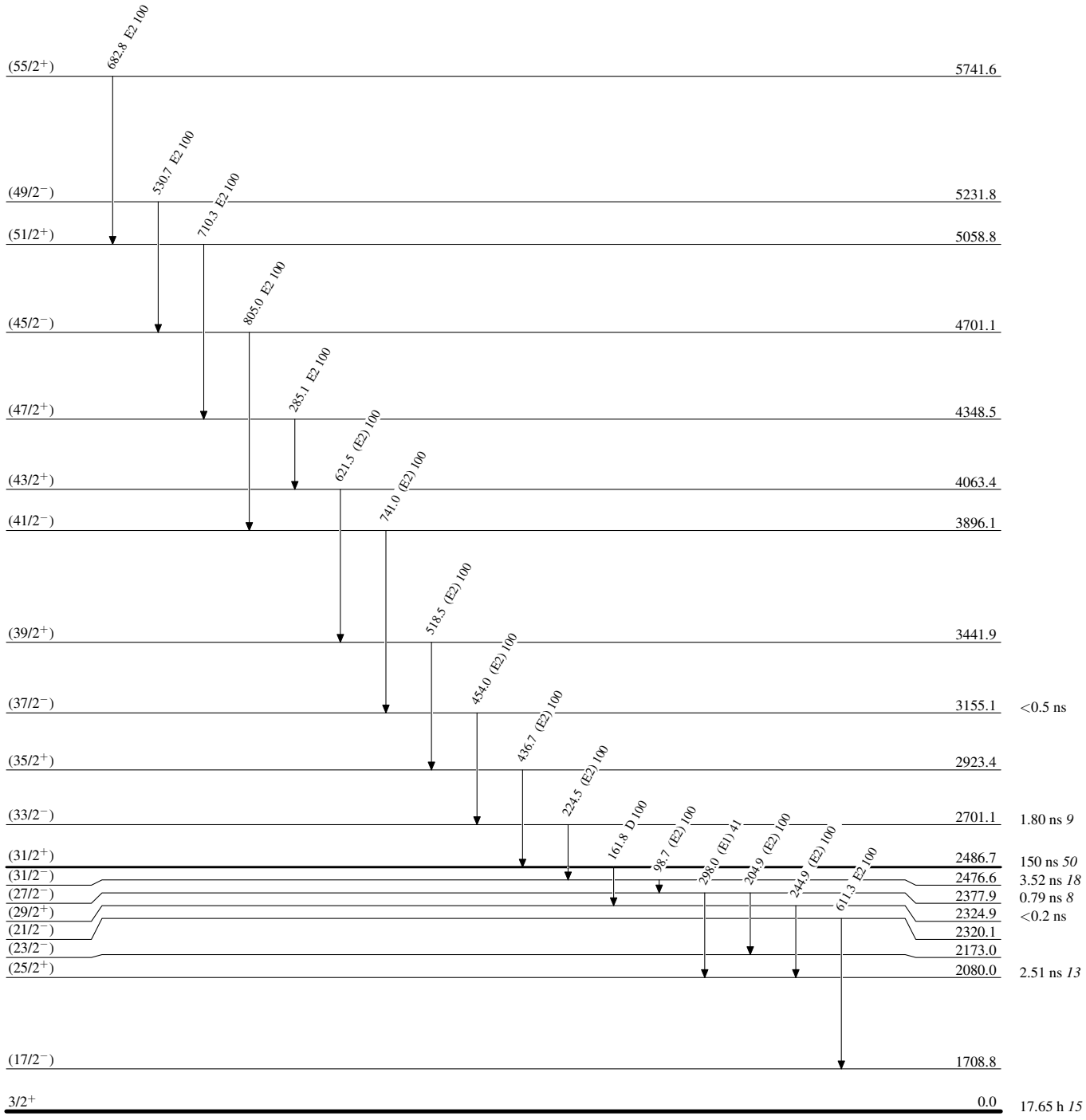
‡ From ^{193}Au IT decay (3.9 s).
# From ^{193}Hg ε decay (3.80 h).
@ From Ir(α,xnγ).
& Weighted average of measurements from 1970Fo08 (^{193}Au IT decay) and 1974ViZS (^{193}Hg decays).
[a] From (p,2nγ).
[b] From (^{11}B,4nγ).
[c] Additional information 1.
[d] Multiply placed with undivided intensity.
[e] Multiply placed with intensity suitably divided.
[f] Placement of transition in the level scheme is uncertain.

$^{193}_{79}Au_{114}$-21

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

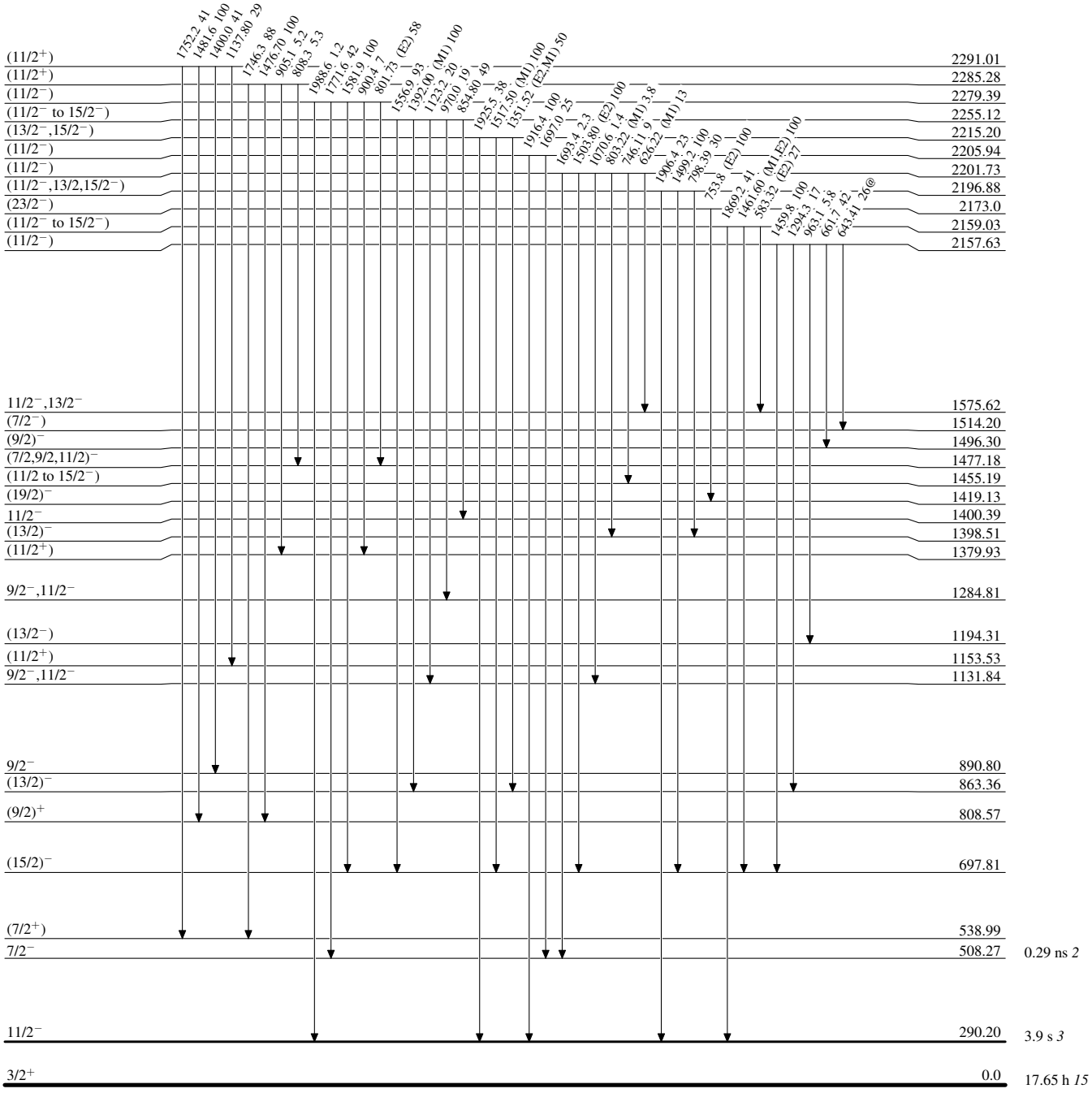


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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

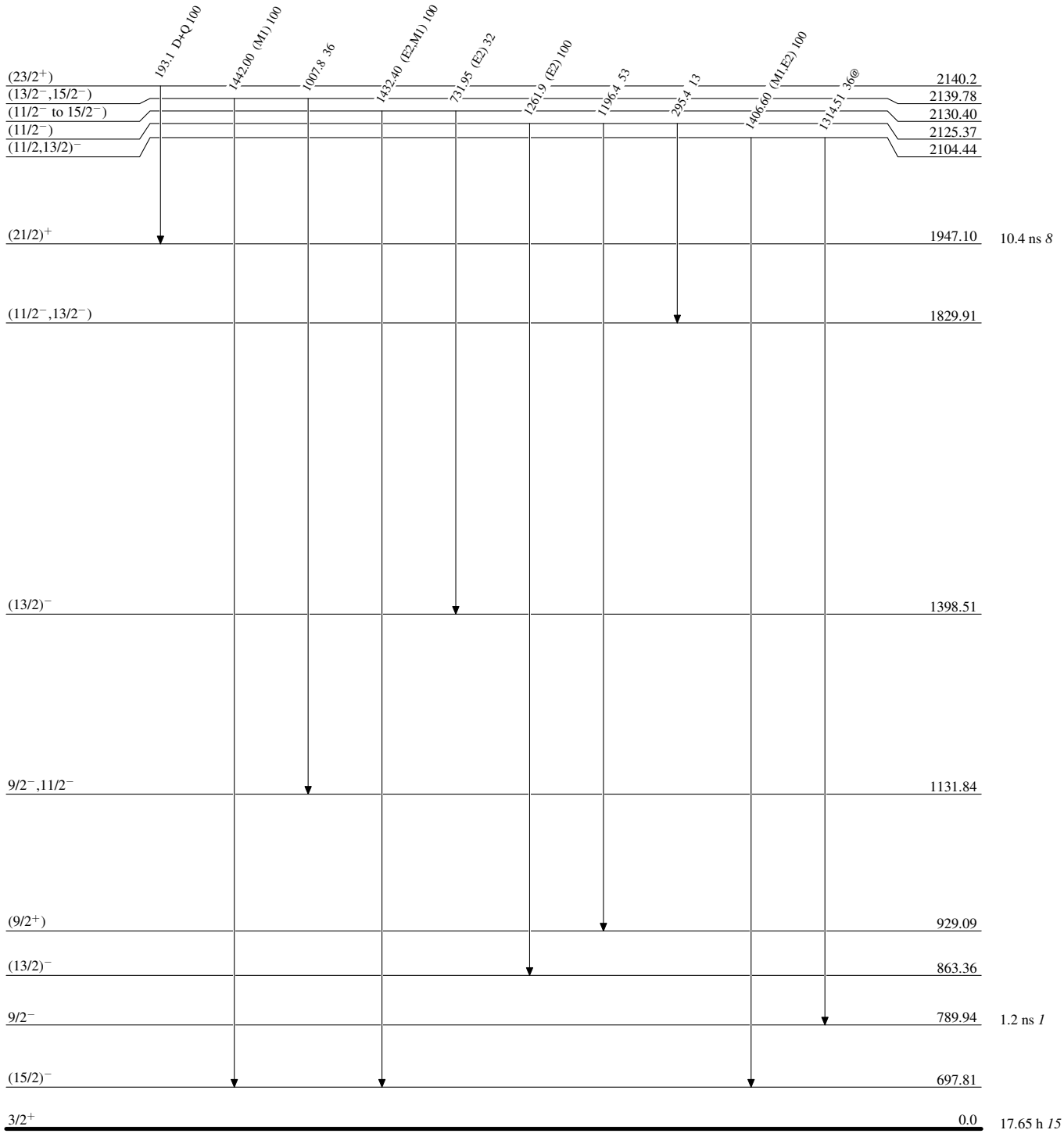


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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



$^{193}_{79}Au_{114}$

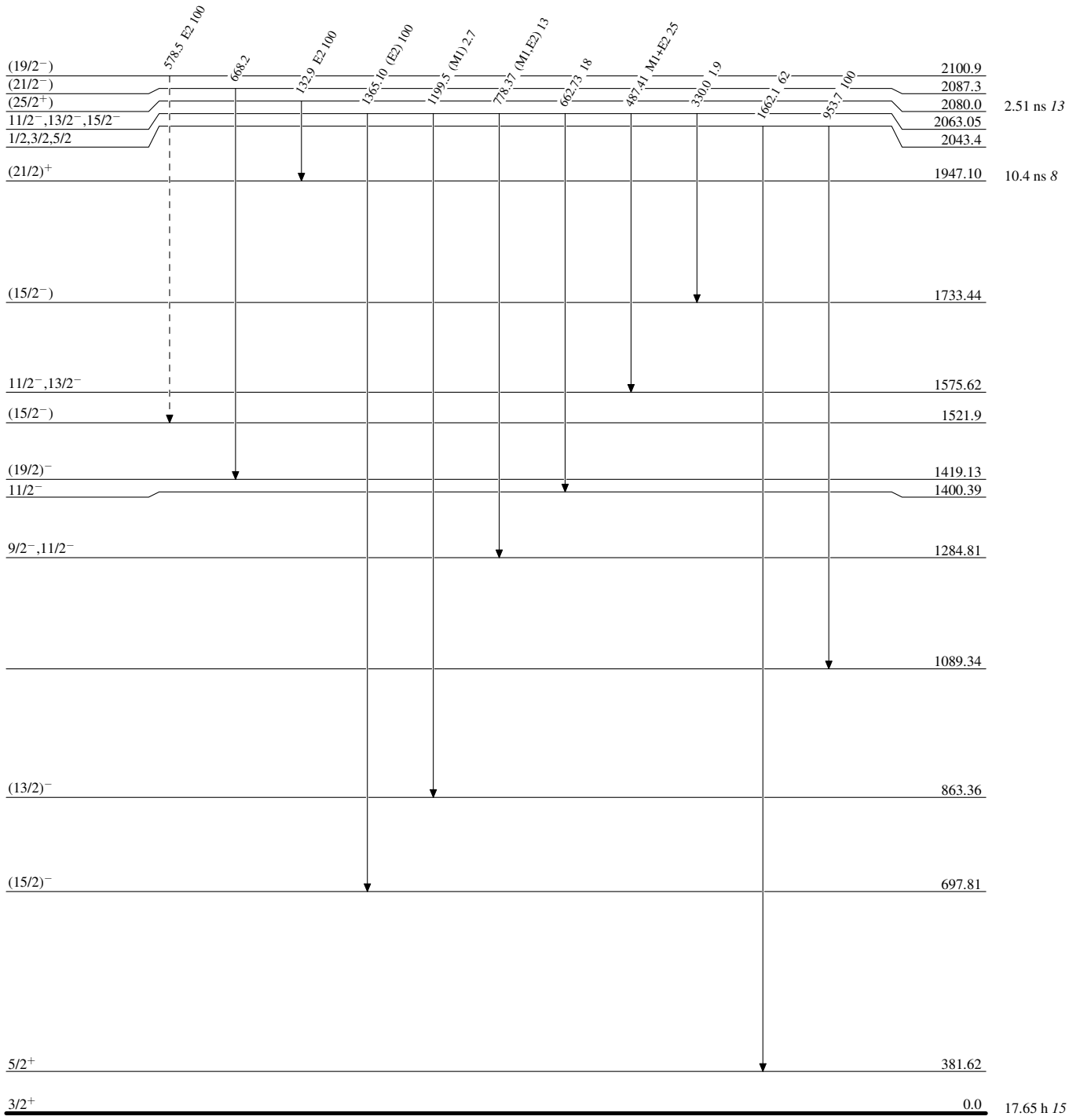
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

γ Decay (Uncertain)



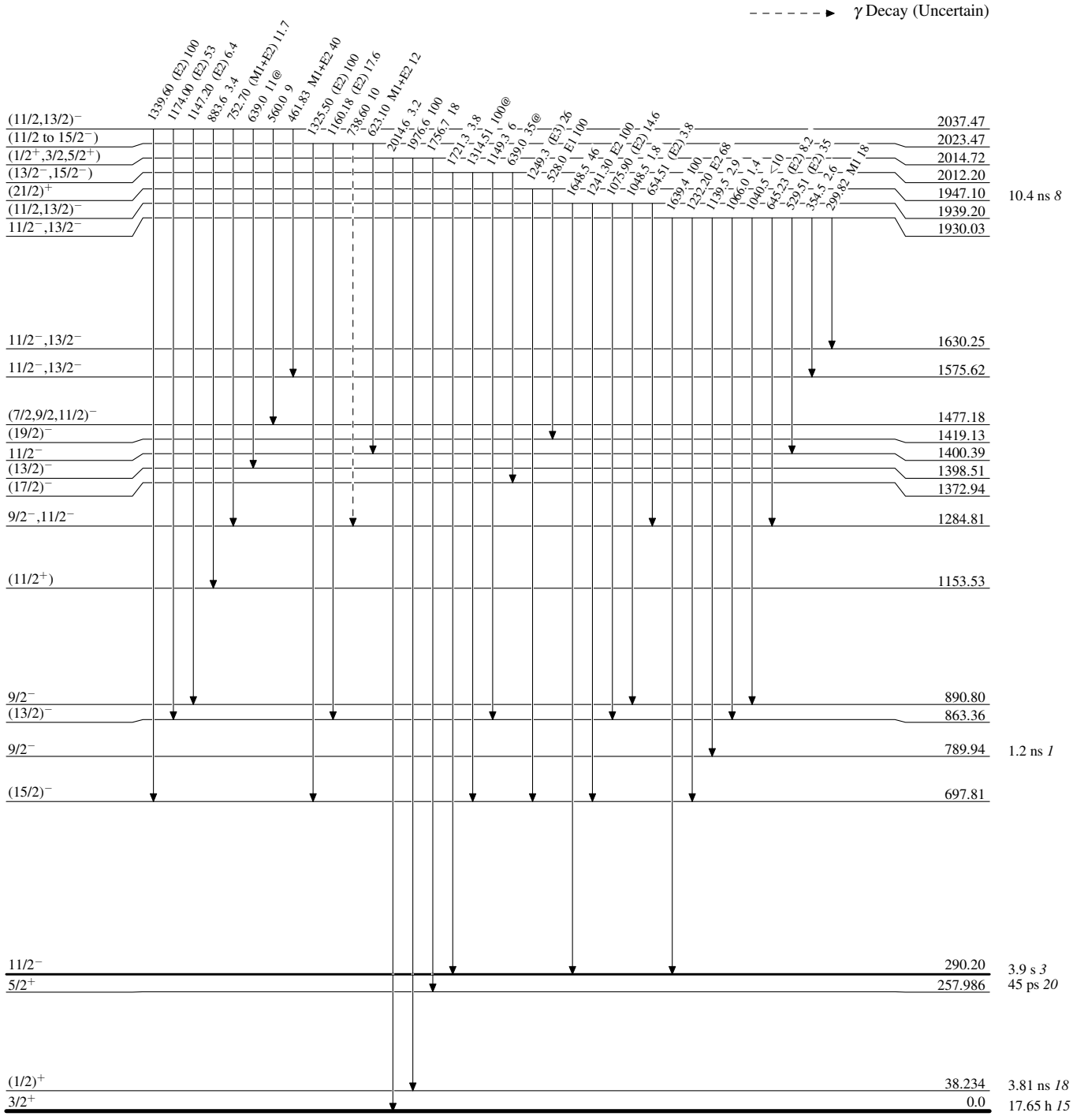
$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

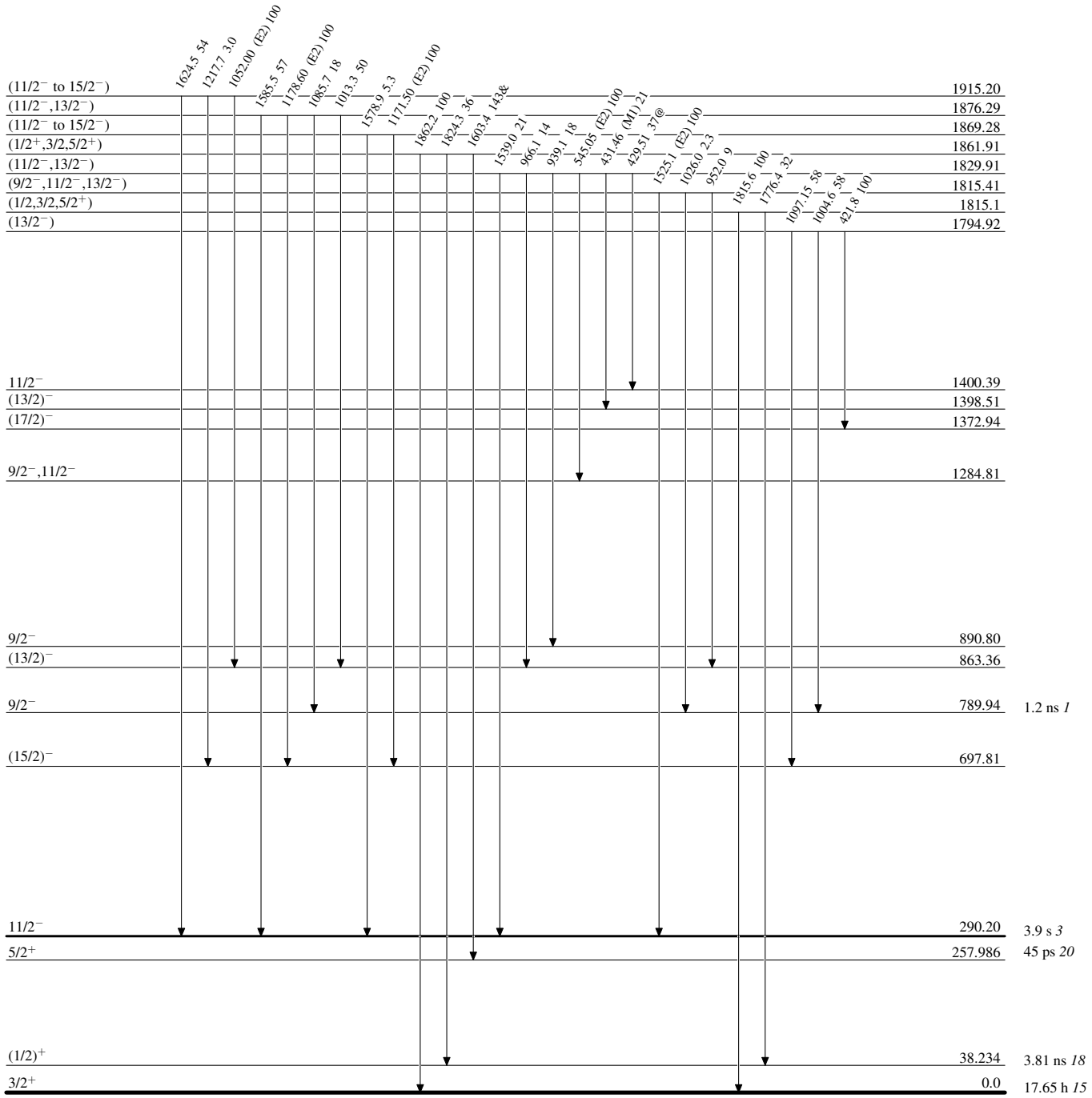


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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

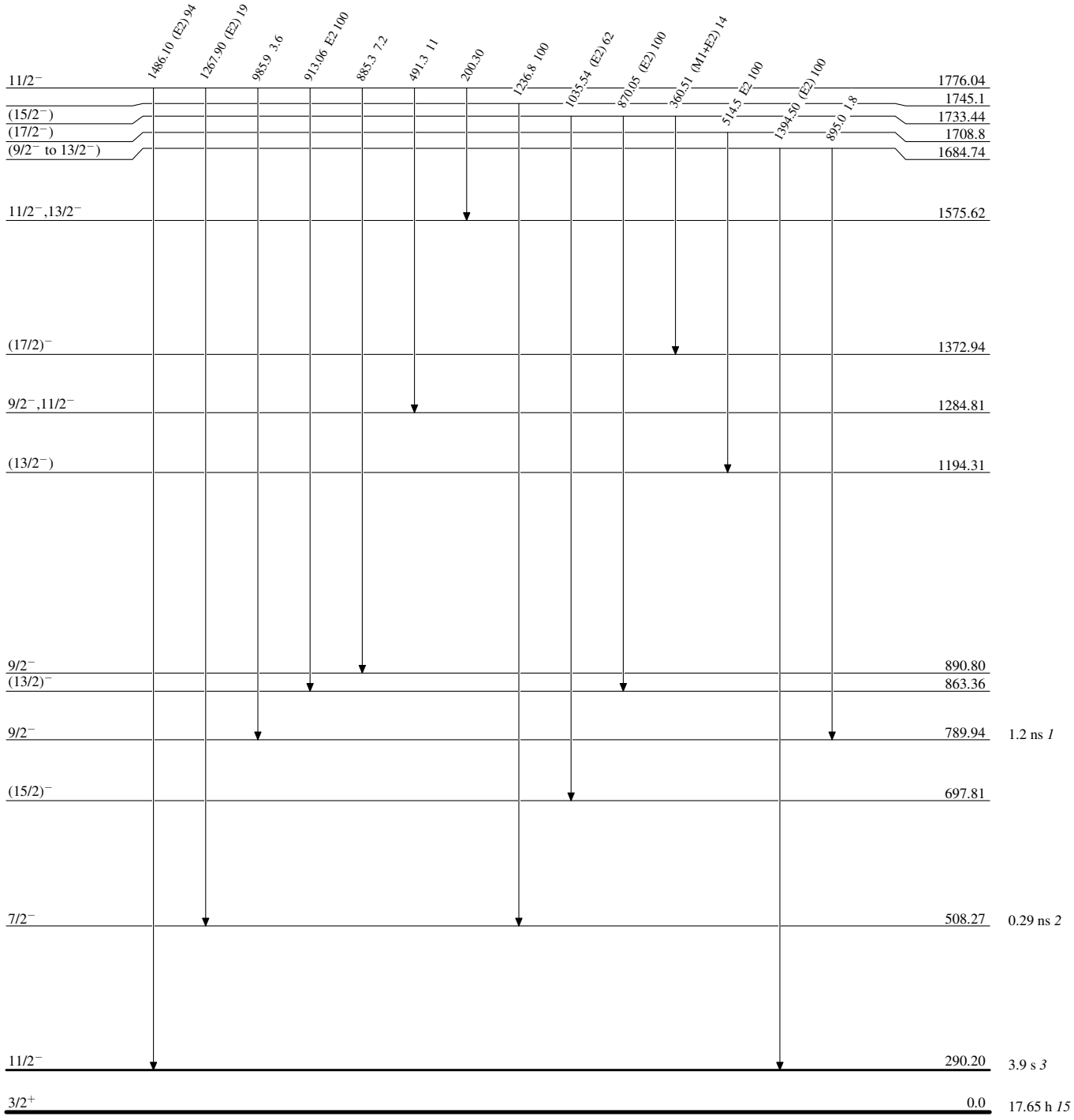


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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

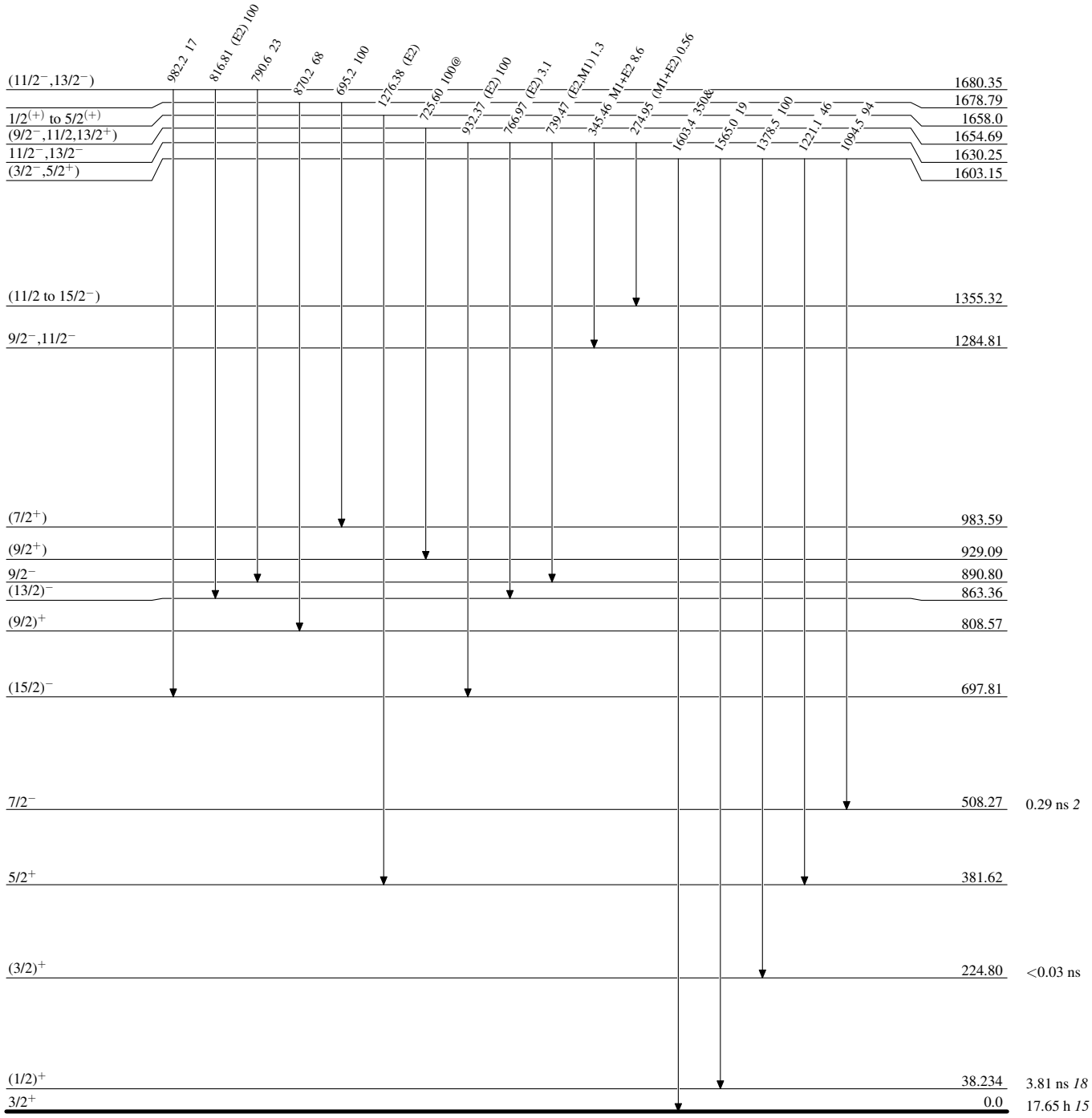


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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



$^{193}_{79}Au_{114}$

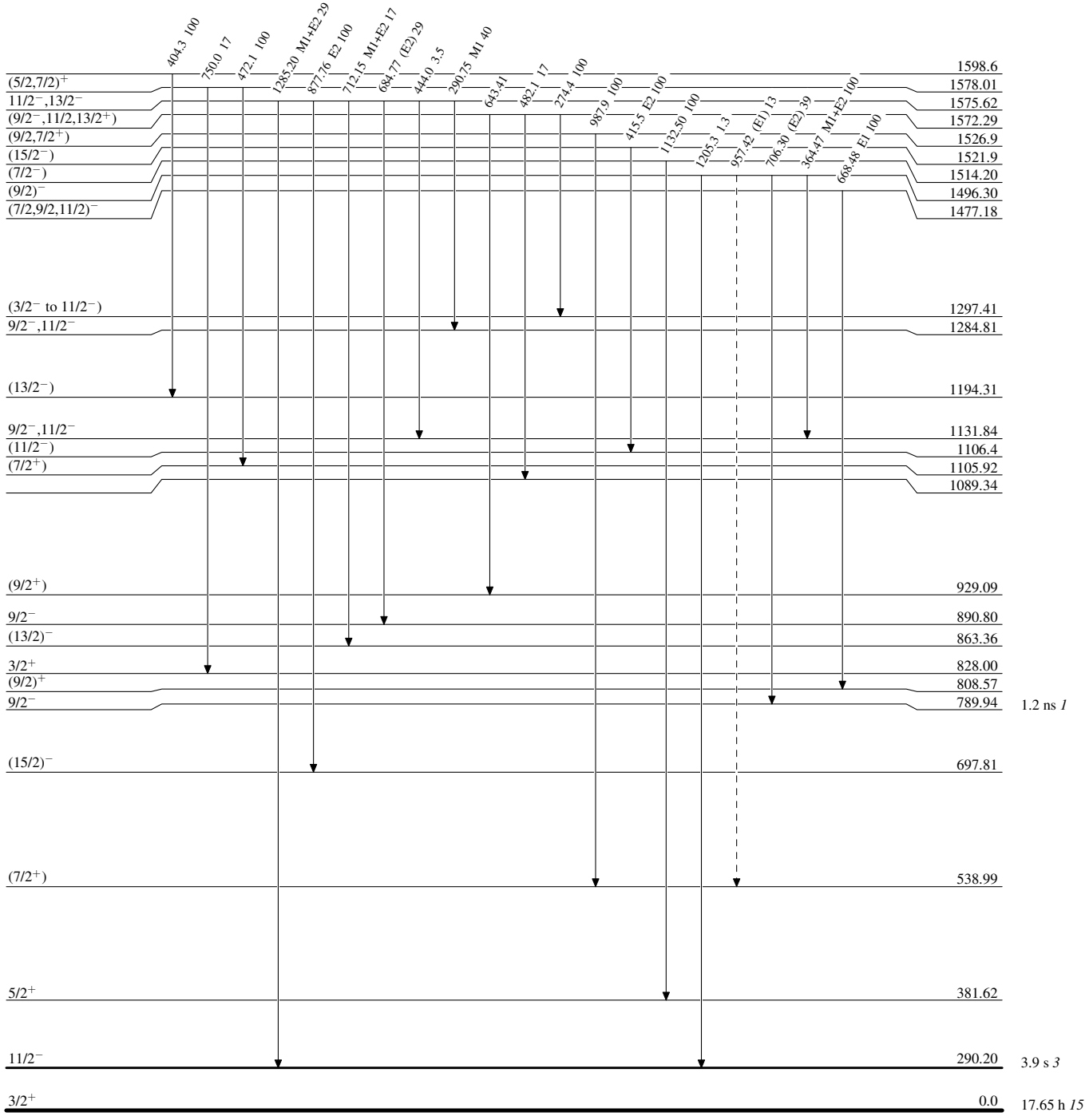
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

– – – – – – ► γ Decay (Uncertain)



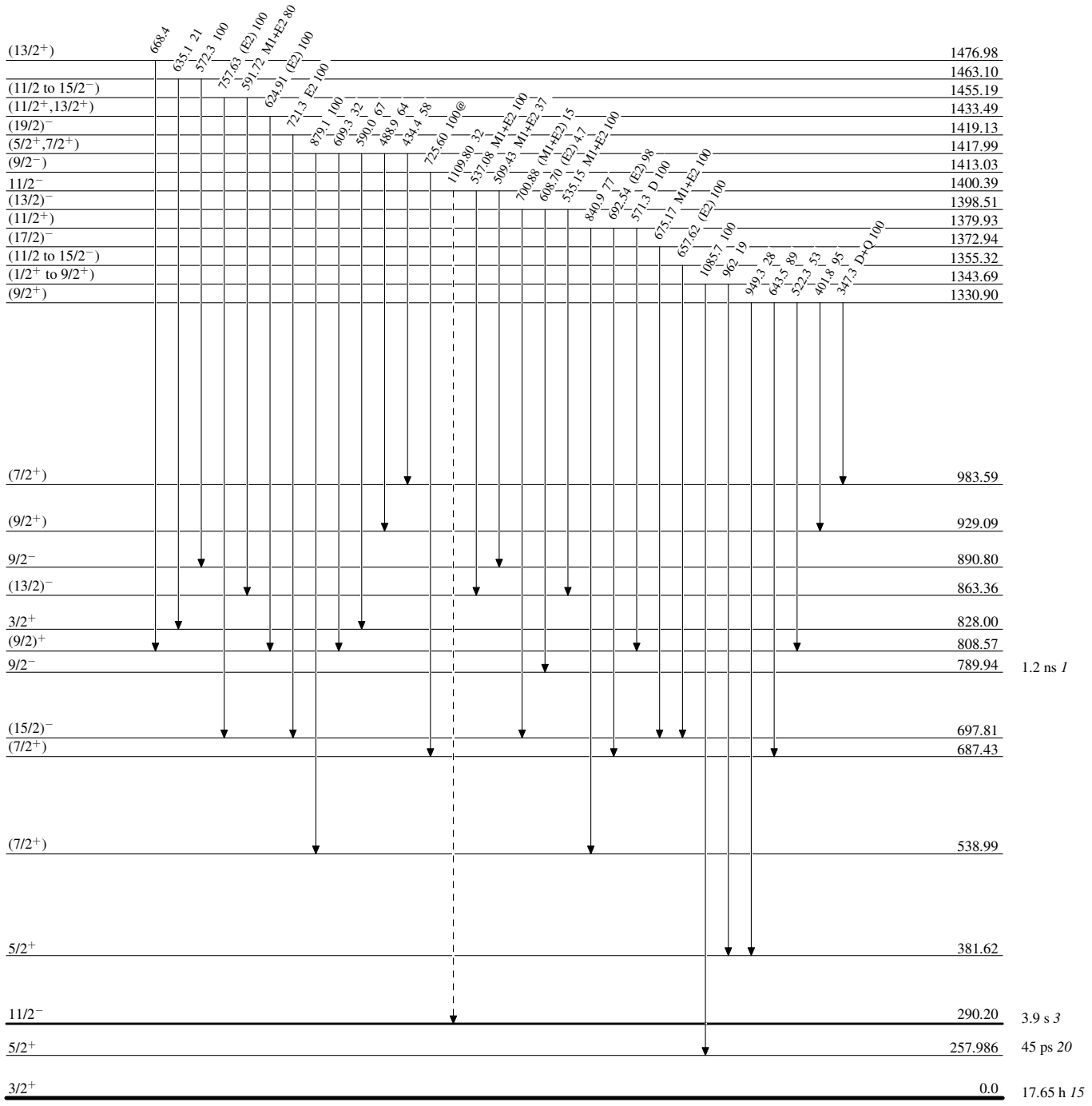
$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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

Legend
- - - - - - ► γ Decay (Uncertain)

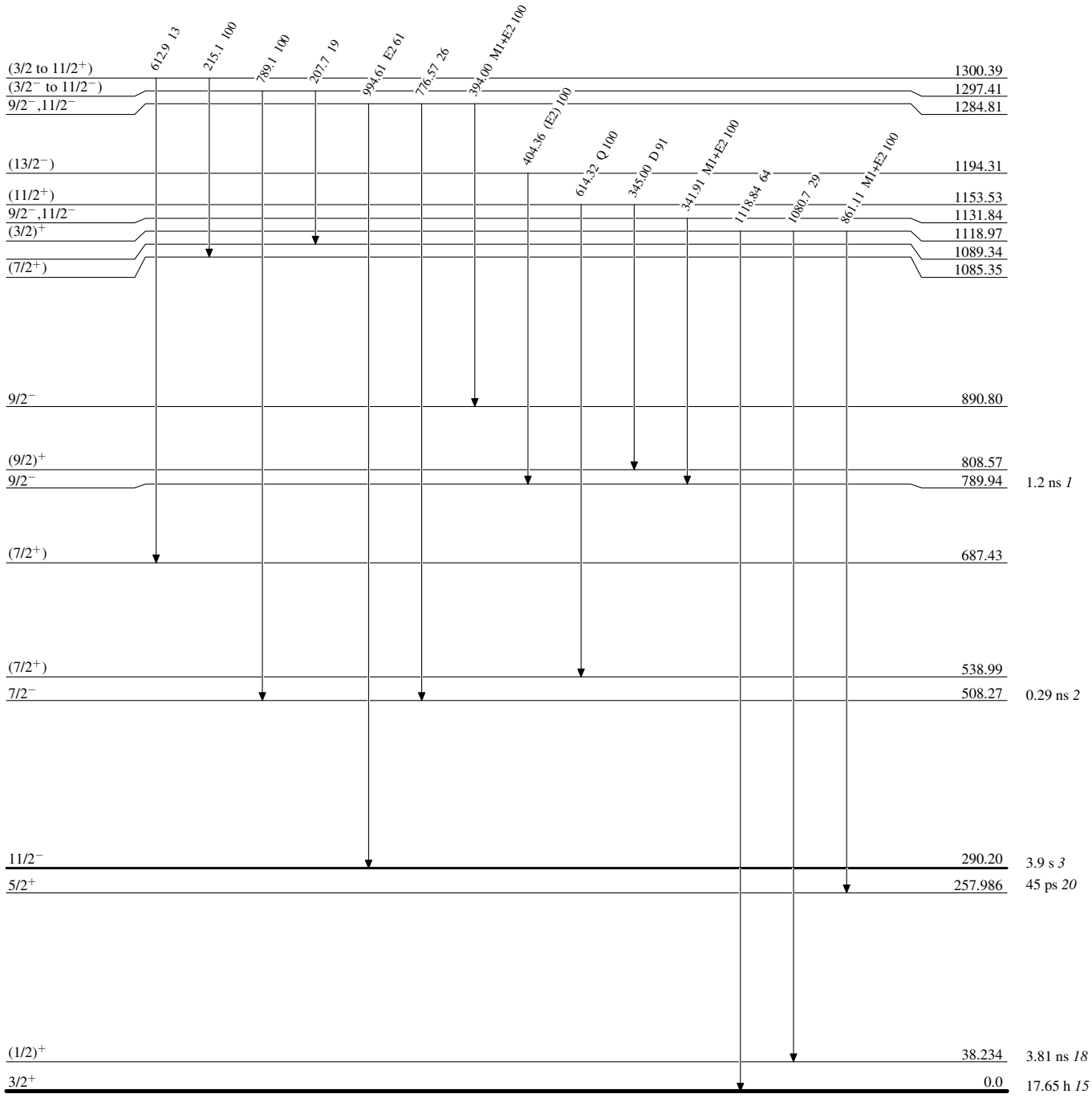


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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

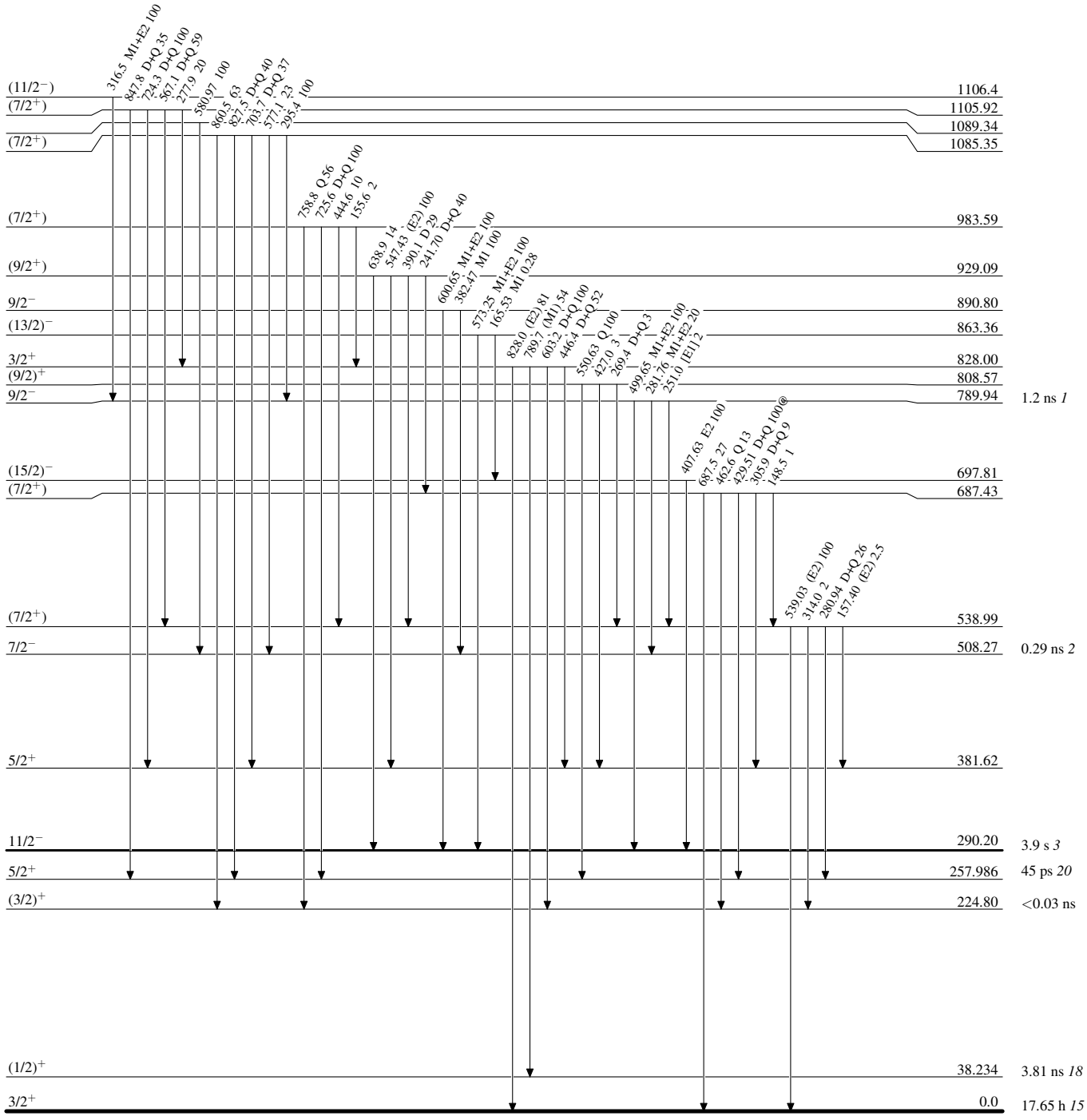


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

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

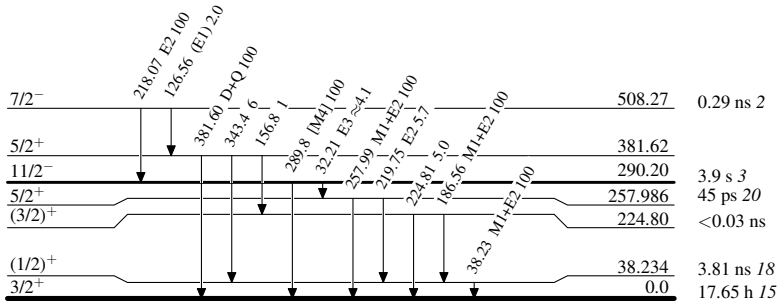


$^{193}_{79}Au_{114}$

Adopted Levels, Gammas

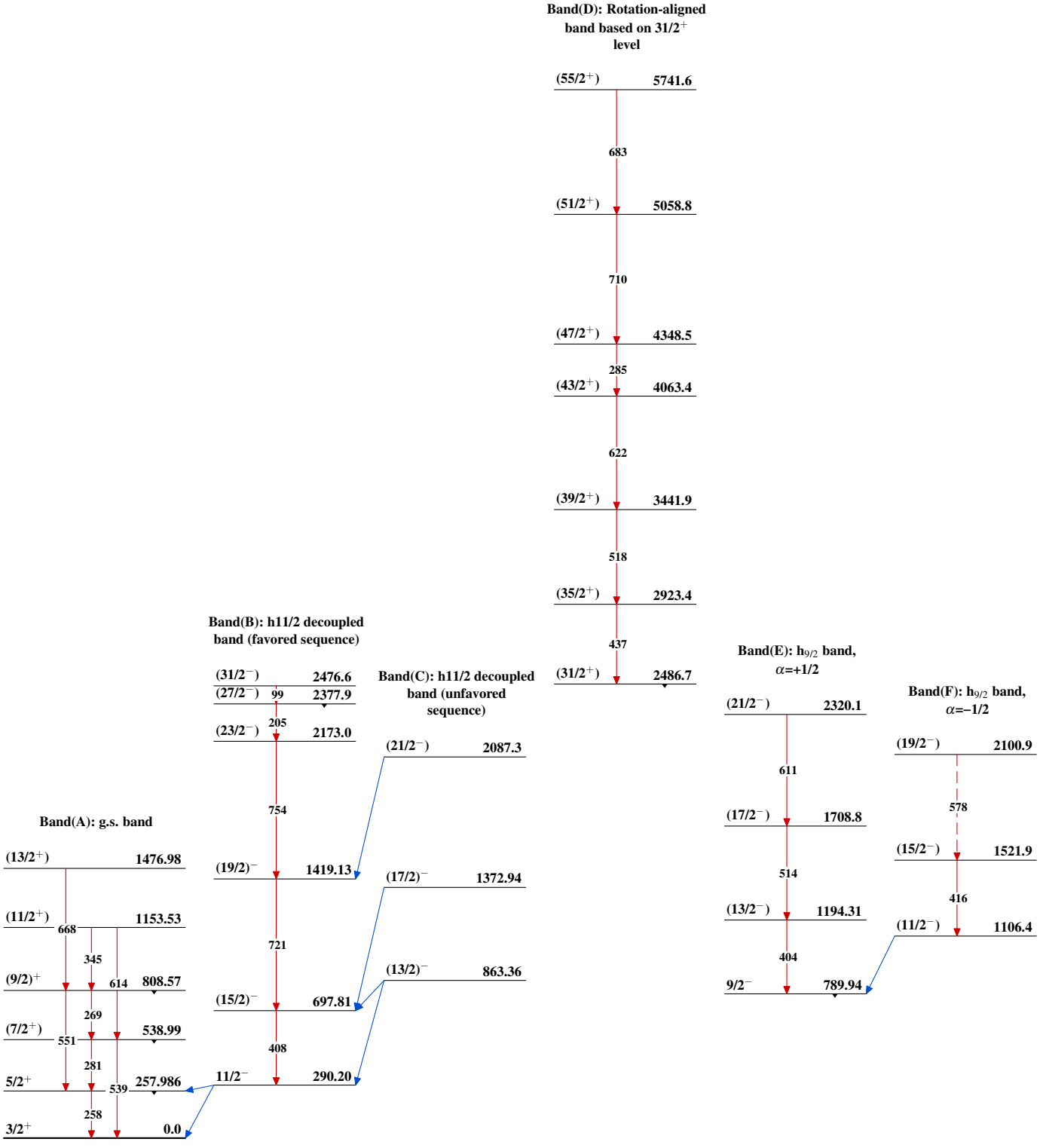
Level Scheme (continued)

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



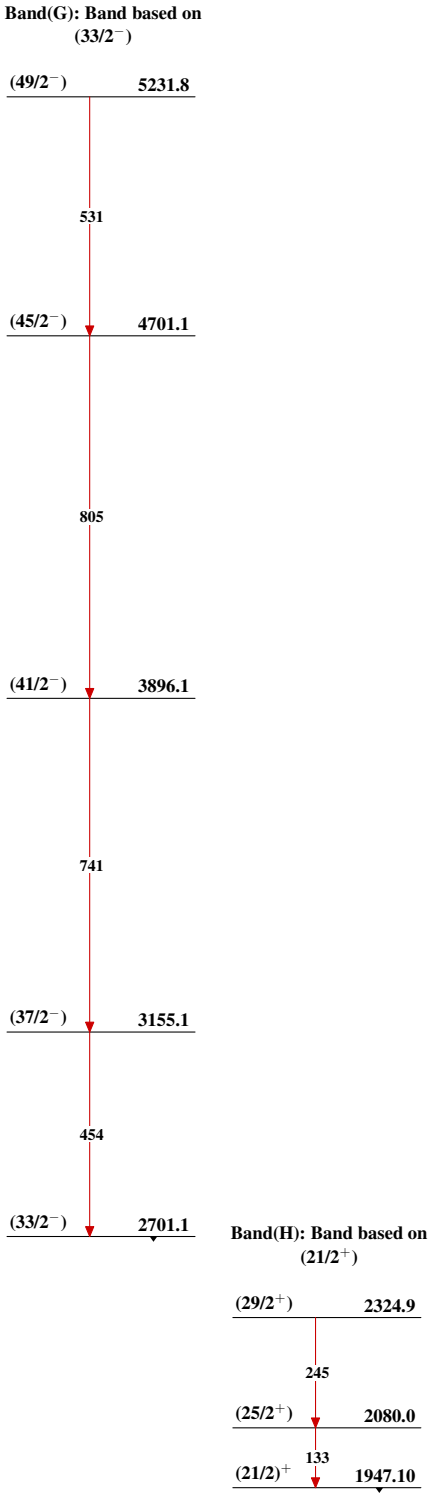
$^{193}_{79}Au_{114}$

Adopted Levels, Gammas



$^{193}_{79}Au_{114}$

Adopted Levels, Gammas (continued)



$^{193}_{79}Au_{114}$