Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 177, 1 (2021)	3-Sep-2021

Q(β^-)=−28 *4*; S(n)=6878 *9*; S(p)=5021.2 *25*; Q(α)=2116.7 *25* 2021Wa16
S(2n)=15582 *16*, S(2p)=11954.3 *24*, Q(ε)=2548.2 *21* (2021Wa16).
Hyperfine structure and isotope-shift measurements: 1990Sa21, 1994Pa37.
Mass measurement: 2010El11, 1985De40.
Other measurements:
^{181}Ta(^{13}C,X) E=65, 84 MeV; ^{181}Ta(^{12}C,X) E=75 MeV: GDR parameters in ^{194}Au: 2004Ma14.
(HI,X): 1986Su08; ^{197}Au(^{14}N,^{17}N), 3-neutron transfer reaction.
Additional information 1.
Theoretical references: consult the NSR database (www.nndc.bnl.gov/nsr/) for 21 primary references dealing with nuclear structure calculations.

^{194}Au Levels

Band and sequence assignments are from (^{7}Li,5nγ) (2012Ga46).

Cross Reference (XREF) Flags

A	^{194}Hg ε decay (447 y)	E	^{193}Ir(α,3nγ)
B	^{194}Au IT decay (600 ms)	F	^{194}Pt(p,nγ)
C	^{194}Au IT decay (420 ms)	G	^{195}Pt(p,2nγ)
D	^{192}Os(^{7}Li,5nγ)		

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0.0	1$^-$	38.02 h *10*	ABC EFG	%ε+%β^+=100 μ=+0.0763 *13* (1994Pa37,2019StZV) Q=−0.240 *9* (1994Pa37,2016St14) β_2=0.121 (1994Pa37,1990Sa21) J$^\pi$: spin from atomic-beam method (1960Ew06); parity from systematics of neighboring nuclides (^{190}Au and ^{192}Au both have g.s. J^π=1$^-$). Small value of μ=0.076 is consistent with probable configuration=((π $d_{3/2}$)(ν $p_{1/2}$)). $T_{1/2}$: from 1992Si02 (γ-decay curve, with reference to ^{137}Cs half-life, which was counted at the same time). Others: 39.23 h *51* (2019Ja03, from γ decay curve, average of 38.47 h *+79−76* and 39.61 h *39* from sources made in two different reactions, uncertainties are statistical only); 39.5 h *5* (1949Wi08, β decay curve), 39 h *2* (1949St17). Unweighted average of all values is 38.9 h *3*. μ: from resonance ionization mass spectroscopy with collinear fast-beam laser spectroscopy (1994Pa37). Other values: +0.079 *3*, resonance ionization mass spectroscopy (1990Sa21); 0.080 *24*, atomic beam magnetic resonance (1980Ek04); 0.074 *4*, atomic beam magnetic resonance (1965Ch08, 1962Ch18). 2020Ba17 give 0.0754 *25* from re-analysis of data in 1994Pa37. Q: from collinear fast-beam laser spectroscopy (1994Pa37). Evaluated $<r^2>^{1/2}$=5.4252 fm *40* (2013An02). Evaluated $\Delta<r^2>$(^{194}Au,^{197}Au)=−0.131 fm^2 *1* (2013An02). Others: −0.1289 fm^2 *21* (1994Pa37), −0.130 fm^2 *4* (1990Sa21).
35.22 *7*	(2)$^-$		BC EFG	J$^\pi$: see comment on J^π for 80.5 level.
80.51 *10*	(3)$^-$		BC EFG	J$^\pi$: 45.29γ(M1+E2)−35.22γ(M1+E2) cascade to 1$^-$ g.s., absence of direct transition to 1$^-$ g.s., and $\gamma(\theta)$ in (α,3nγ) favor (3)$^-$ for this level and (2)$^-$ for 35.2 level.
107.4[c] *5*	(5$^+$)	600 ms *8*	BCDEFG	%IT=100 J$^\pi$: 26.9γ (M2) transition to (3)$^-$ and syst (similar 5$^+$ isomers are reported in

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Adopted Levels, Gammas (continued)

^{194}Au Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				^{192}Au and ^{198}Au). Since (E3) assignment for 26.9γ is not ruled out, 6^+ is also possible. In that case the spins of the levels based on this isomer will increase by one.
				$T_{1/2}$: from γ(t) and pulsed beam in ^{194}Au IT decay (1975Ya14). Other: 600 ms *50* (1982Ne05).
244.5[c] *6*	(7^+)	2.6 ns *2*	CDEFG	Jπ: 137.08γ E2, ΔJ=2 to (5^+); band assignment.
				$T_{1/2}$: from γ(t) in ^{194}Au IT decay (420 ms) (1977Pa20).
278.2[b] *6*	(6^+)	1.1 ns *4*	CDEFG	Jπ: 170.78γ M1+E2 γ to (5^+); band assignment.
				$T_{1/2}$: from γ(t) in ^{194}Au IT decay (420 ms) (1977Pa20).
406.7[b] *6*	(8^+)	2.9 ns *4*	CDEFG	Jπ: 128.5γ E2, ΔJ=2 to (6^+).
				$T_{1/2}$: from γ(t) in ^{194}Au IT decay (420 ms) (1977Pa20).
439.3 *6*	(9^+)		EFG	Jπ: 194.85γ (E2), ΔJ=2 to (7^+).
475.7[@] *6*	(11^-)	420 ms *10*	CDEFG	%IT=100
				Jπ: 69.0γ (E3) transition to (8^+). Similar 11^- isomers with $T_{1/2}$=160 ms and 125 ms reported in ^{192}Au and ^{190}Au, respectively (1977Pa20). Also probable shell-model configuration. Since (M2) assignment to 69.0γ cannot be ruled out, 10^- is also possible. In that case the spins of the levels based on this isomer will decrease by one.
				$T_{1/2}$: from γ(t) and pulsed beam (1975Ya14). Others: 420 ms *20* (1982Ne05), 400 ms *20* (1953He57).
535.6 *6*	(9^+)		EFG	Jπ: 291.13γ (E2), ΔJ=2 to (7^+).
608.9[c] *6*	(9^+)		DEFG	Jπ: 364.62γ (E2), ΔJ=2 to (7^+), 202.2γ D to (8^+).
618.6[#] *6*	(12^-)		DE	Jπ: 142.9γ D, ΔJ=1 to (11^-); band assignment.
685.7 *6*	(10^+)		E	Jπ: 279.0γ (E2), ΔJ=2 to (8^+).
720.3 *6*	(9)		DEFG	Jπ: 313.4γ D, ΔJ=1 to (8^+).
768.3 *7*	(10^+)		E	Jπ: 232.7γ D, ΔJ=1 to (9^+).
840.3[@] *7*	(13^-)		DE	Jπ: 364.5γ (E2), ΔJ=2 to (11^-), 221.7γ D, ΔJ=1 to (12^-).
888.0[b] *6*	(10^+)		DE	Jπ: 481.1γ Q, ΔJ=2 to (8^+).
1033.3[#] *7*	(14^-)		DE	Jπ: 414.4γ Q, ΔJ=2 to (12^-), 193.0γ D, ΔJ=1 to (13^-); band assignment.
1154.1[c] *6*	(11^+)		DE	
1257.1 *7*	(10,11)		D	Jπ: γ to (9).
1284.9[d] *7*	(14^-)		DE	
1482.3[b] *6*	(12^+)		D	
1525.5[@] *7*	(15^-)		DE	
1748.7[#] *7*	(16^-)		DE	
1780.9[d] *9*	(16^-)		D	
1848.7[c] *7*	(13^+)		DE	
2084.1 *7*	(14^+)		D	
2085.4[b] *7*	(14^+)		D	
2091.7[&] *7*	(15^+)		DE	
2185.1[&] *7*	(16^+)		DE	
2236.2[&] *7*	(17^+)		D	
2301.2[@] *7*	(17^-)		D	Jπ: 776.0γ to (15^-).
2334.3[d] *11*			D	
2431.6[&] *7*	(19^+)		D	
2521.7[#] *7*	(18^-)		D	
2585.2 *8*	(19^+)		D	
2699.1[a] *8*	(20^+)		D	
2765.2[#] *7*	(20^-)		D	
2947.6[#] *8*	(22^-)		D	

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Adopted Levels, Gammas (continued)

^{194}Au Levels (continued)

E(level)[†]	Jπ[‡]	XREF
2980.2[@] *9*	(19⁻)	D
3173.5[a] *9*	(22⁺)	D
3335.1[a] *9*	(22⁺)	D
3416.5[#] *9*	(24⁻)	D
3655.9[a] *11*		D
4216.3[#] *10*	(26⁻)	D

[†] From a least-squares fit to γ-ray energies.

[‡] For levels above 1033 keV, the assignments are based on γ(θ) data in (α,3nγ) and γγ(θ)(ADO) in (^{7}Li,5nγ), and sequences of levels connected by γ cascades, with the assumption that spins generally ascend with the excitation energy in the (HI,xnγ) type of reactions.

[#] Seq.(A): Band 1 based on 12⁻. Configuration=$\pi h^{-1}_{11/2}\otimes\nu i^{-1}_{13/2}$, α=0; $\pi h^{-1}_{11/2}\otimes\nu i^{-3}_{13/2}$ above band crossing.

[@] Seq.(a): Sequence 2 based on 11⁻. Configuration=$\pi h^{-1}_{11/2}\otimes\nu i^{-1}_{13/2}$, α=1. See signature partner.

[&] Seq.(B): Sequence 3 based on 15⁺. Configuration=$\pi h^{-1}_{11/2}\otimes\nu i^{-2}_{13/2}\nu(p_{3/2}/f_{5/2})$.

[a] Seq.(C): Structure based on 20⁺. Configuration=$\pi h^{-1}_{11/2}\otimes\nu i^{-2}_{13/2}\nu h^{-1}_{9/2}$.

[b] Seq.(D): Sequence 4 based on 6⁺. Configuration=$\pi d^{-1}_{3/2}\otimes\nu i^{-1}_{13/2}$, α=0.

[c] Seq.(d): Sequence 5 based on 5⁺. Configuration=$\pi d^{-1}_{3/2}\otimes\nu i^{-1}_{13/2}$, α=1.

[d] Seq.(E): Sequence 6 based on (14⁻). Possible configuration=$\pi h^{-1}_{11/2}\otimes\nu i^{-1}_{13/2}$.

Adopted Levels, Gammas (continued)

γ(^{194}Au)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.‡	δ	α@	Comments
35.22	(2)$^-$	35.22 *7*	100	0.0	1$^-$	M1+E2	0.14 *4*	41 *9*	α(L)=31 *7*; α(M)=7.5 *16* α(N)=1.8 *4*; α(O)=0.32 *7*; α(P)=0.0151 *3* E_γ,Mult.,δ: from ^{194}Au IT decay (600 ms), with mult and δ from ce data.
80.51	(3)$^-$	45.29 *7*	100	35.22	(2)$^-$	M1+E2	0.144 *30*	17.0 *18*	α(L)=13.0 *13*; α(M)=3.1 *4* α(N)=0.77 *9*; α(O)=0.137 *14*; α(P)=0.00715 *12* E_γ,Mult.,δ: from ^{194}Au IT decay (600 ms), with mult and δ from ce data.
107.4	(5$^+$)	26.9 *5*	100	80.51	(3)$^-$	(M2)		7.5×10^3 *7*	B(M2)(W.u.)=1.46×10^{-5} *+21−18* α(L)=5.5×10^3 *6*; α(M)=1.50×10^3 *14* α(N)=3.8×10^2 *4*; α(O)=67 *7*; α(P)=3.3 *3* E_γ,Mult.: from ce data in ^{194}Au IT decay (1977Pa20).
244.5	(7$^+$)	137.08 *10*	100	107.4	(5$^+$)	E2		1.473	B(E2)(W.u.)=27.3 *+23−20* α(K)=0.407 *6*; α(L)=0.800 *12*; α(M)=0.207 *3* α(N)=0.0510 *8*; α(O)=0.00823 *12*; α(P)=4.32×10^{-5} *6* E_γ: weighted average of 137.17 *10* from ^{194}Au IT decay (420 ms), 137.0 *1* from (^{7}Li,5nγ), and 137.0 *3* from (α,3nγ). Mult.: from ce data in ^{194}Au IT decay (420 ms) and γ(θ) in (α,3nγ).
278.2	(6$^+$)	(33.6)	2.2 *4*	244.5	(7$^+$)	[M1]			B(M1)(W.u.)=0.0034 *14* E_γ: from level-energy difference. I_γ: deduced from intensity balance in ^{194}Au IT decay (420 ms).
		170.78 *10*	100 *6*	107.4	(5$^+$)	M1+E2	−0.6 *2*	1.34 *12*	B(M1)(W.u.)=0.0013 *+7−4*; B(E2)(W.u.)=6.0 *+48−30* α(K)=1.02 *14*; α(L)=0.239 *12*; α(M)=0.058 *4* α(N)=0.0143 *9*; α(O)=0.00252 *11*; α(P)=0.000121 *17* E_γ: weighted average of 170.78 *10* from ^{194}Au IT decay (420 ms), 170.8 *1* from (^{7}Li,5nγ), and 170.6 *3* from (α,3nγ). I_γ: from ^{194}Au IT decay (420 ms). Mult.,δ: from ce data in ^{194}Au IT decay (420 ms) (1977Pa20), with sign of δ from γ(θ) in 1977Pa20.
406.7	(8$^+$)	128.49 *10*	100 *6*	278.2	(6$^+$)	E2		1.89	B(E2)(W.u.)=22.9 *+36−29* α(K)=0.462 *7*; α(L)=1.072 *16*; α(M)=0.278 *4* α(N)=0.0684 *10*; α(O)=0.01102 *16*; α(P)=5.05×10^{-5} *8* E_γ: weighted average of 128.57 *10* from ^{194}Au IT decay (420 ms), 128.4 *1* from (^{7}Li,5nγ), and 128.6 *3* from (α,3nγ). I_γ: from (^{7}Li,5nγ) and (α,3nγ). Others: 100 *50* from (p,nγ), and 100 *16* from (p,2nγ); 100 from ^{194}Au IT decay (420 ms).
		162.26 *10*	36.6 *19*	244.5	(7$^+$)	M1+E2	−1.6 *3*	1.08 *10*	B(M1)(W.u.)=5.0×10^{-5} *+20−12*; B(E2)(W.u.)=1.87 *36* α(K)=0.62 *12*; α(L)=0.342 *13*; α(M)=0.087 *4* α(N)=0.0214 *10*; α(O)=0.00355 *13*; α(P)=7.1×10^{-5} *14* E_γ: weighted average of 162.22 *12* from ^{194}Au IT decay (420 ms),

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Adopted Levels, Gammas (continued)

γ(^{194}Au) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.‡	α@	Comments
								162.3 *1* from (^{7}Li,5nγ), and 162.2 *3* from (α,3nγ). I_γ: weighted average of 37.0 *30* from ^{194}Au IT decay (420 ms), 35.0 *21* from (^{7}Li,5nγ), 37.8 *19* from (α,3nγ), and 36 *4* from (p,2nγ). Mult.,δ: from ce data in ^{194}Au IT decay (420 ms) (1977Pa20), with sign of δ from γ(θ) in 1977Pa20.
439.3	(9$^+$)	194.85 *12*	100	244.5	(7$^+$)	(E2)#		E_γ: weighted average of 195.0 *3* from (α,3nγ) and 194.83 *12* from (p,2nγ).
475.7	(11$^-$)	69.0 *3*	100	406.7	(8$^+$)	(E3)	1.06×10^3 *3*	B(E3)(W.u.)=0.164 *8* α(L)=773 *23*; α(M)=224 *7* α(N)=56.2 *17*; α(O)=8.8 *3*; α(P)=0.0124 *4* E_γ: from (α,3nγ). Others: 69.0 *7* from ^{194}Au IT decay (420 ms) and 69.0 *7* from (p,2nγ). E_γ: from ce data in (α,3nγ). Other: 69.0 *7* from ce data in ^{194}Au IT decay (420 ms). Mult.: from ce data in (α,3nγ) and ^{194}Au IT decay (420 ms).
535.6	(9$^+$)	291.13 *15*	100	244.5	(7$^+$)	(E2)#		E_γ: weighted average of 291.3 *3* from (α,3nγ) and 291.09 *15* from (p,2nγ).
608.9	(9$^+$)	202.2 *4*	27 *14*	406.7	(8$^+$)	D		E_γ: weighted average of 201.8 *3* from (^{7}Li,5nγ) and 202.5 *3* from (α,3nγ). I_γ: from (α,3nγ). Other: <14 from (^{7}Li,5nγ). Mult.: from γ(θ) in (α,3nγ).
		364.62 *18*	100 *14*	244.5	(7$^+$)	(E2)#		E_γ: weighted average of 364.7 *2* from (^{7}Li,5nγ), 364.8 *5* from (α,3nγ), and 364.54 *18* from (p,2nγ). I_γ: from (^{7}Li,5nγ). Other: 100 *36* from (α,3nγ).
618.6	(12$^-$)	142.9 *1*	100	475.7	(11$^-$)	D		E_γ: weighted average of 142.9 *1* from (^{7}Li,5nγ) and 143.0 *3* from (α,3nγ). Mult.: from γ(θ) in (α,3nγ).
685.7	(10$^+$)	279.0 *3*	100	406.7	(8$^+$)	(E2)#		E_γ: from (α,3nγ). in (^{7}Li,5nγ), a 279.3γ is placed from 888, (10$^+$) to 609, (9$^+$) level, inconsistent with ΔJ=2, quadrupole suggested by γ(θ) data in (α,3nγ).
720.3	(9)	313.4 *2*	100	406.7	(8$^+$)	D		E_γ: weighted average of 313.6 *2* from (^{7}Li,5nγ), 313.3 *3* from (α,3nγ), and 313.2 *2* from (p,2nγ). Mult.: from γγ(ADO) (ΔJ=1) in (^{7}Li,5nγ), γ(θ) in (α,3nγ) and (p,2nγ).
768.3	(10$^+$)	232.7 *3*	100	535.6	(9$^+$)	D		E_γ,Mult.: from (α,3nγ), with mult from γ(θ).
840.3	(13$^-$)	221.7 *1*	83 *7*	618.6	(12$^-$)	D		E_γ: from (^{7}Li,5nγ). Other: 221.7 *5* from (α,3nγ). I_γ: weighted average of 85 *7* from (^{7}Li,5nγ) and 79 *11* from (α,3nγ). Mult.: from γγ(ADO) in (^{7}Li,5nγ), ΔJ=1.
		364.5 *2*	100 *9*	475.7	(11$^-$)	(E2)#		E_γ: weighted average of 364.5 *2* from (^{7}Li,5nγ) and 364.6 *5* from (α,3nγ). I_γ: from (^{7}Li,5nγ). Other: 100 *15* from (α,3nγ).
888.0	(10$^+$)	167.3† *3*	27† *7*	720.3	(9)			
		279.3† *2*	<20.0†	608.9	(9$^+$)			
		481.1† *5*	100† *13*	406.7	(8$^+$)	Q		E_γ: weighted average of 481.0 *5* from (^{7}Li,5nγ) and 481.2 *5* from (α,3nγ).
1033.3	(14$^-$)	193.0 *1*	100 *5*	840.3	(13$^-$)	D		E_γ: from (^{7}Li,5nγ). Other: 193.0 *3* from (α,3nγ). I_γ: from (^{7}Li,5nγ). Other: 100 *25* from (α,3nγ).
		414.4 *3*	45 *11*	618.6	(12$^-$)	Q		E_γ: weighted average of 414.3 *3* from (^{7}Li,5nγ) and 414.5 *3* from (α,3nγ). I_γ: unweighted average of 55 *5* from (^{7}Li,5nγ) and 34 *7* from (α,3nγ).

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Adopted Levels, Gammas (continued)

γ(^{194}Au) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.‡	Comments
1154.1	(11$^+$)	545.0 *3*	100	608.9	(9$^+$)	Q	E_γ: weighted average of 544.9 *5* from (^{7}Li,5nγ) and 545.0 *3* from (α,3nγ).
1257.1	(10,11)	536.9† *6*	100	720.3	(9)		
1284.9	(14$^-$)	666.3 *3*	100	618.6	(12$^-$)	Q	E_γ: weighted average of 666.5 *3* from (^{7}Li,5nγ) and 666.1 *3* from (α,3nγ).
1482.3	(12$^+$)	225.2† *4*	<14.3†	1257.1	(10,11)		
		328.1† *2*	<43†	1154.1	(11$^+$)		
		594.8† *5*	100† *14*	888.0	(10$^+$)	Q	
1525.5	(15$^-$)	492.6 *3*	83 *6*	1033.3	(14$^-$)	D	E_γ: weighted average of 492.3 *5* from (^{7}Li,5nγ) and 492.7 *3* from (α,3nγ). I_γ: weighted average of 83 *6* from (^{7}Li,5nγ) and 82 *18* from (α,3nγ).
		685.2 *3*	100 *12*	840.3	(13$^-$)	Q	E_γ: weighted average of 685.4 *3* from (^{7}Li,5nγ) and 685.0 *3* from (α,3nγ). I_γ: from (^{7}Li,5nγ). Other: 100 *18* from (α,3nγ).
1748.7	(16$^-$)	223.3 *3*	25 *4*	1525.5	(15$^-$)	D	E_γ: weighted average of 223.4 *2* from (^{7}Li,5nγ) and 222.6 *5* from (α,3nγ). I_γ: weighted average of 24 *4* from (^{7}Li,5nγ) and 36 *14* from (α,3nγ).
		715.4 *3*	100 *5*	1033.3	(14$^-$)	Q	E_γ: weighted average of 715.7 *3* from (^{7}Li,5nγ) and 715.1 *3* from (α,3nγ). I_γ: from (^{7}Li,5nγ). Other: 100 *27* from (α,3nγ).
1780.9	(16$^-$)	496.0† *5*	100	1284.9	(14$^-$)	Q	
1848.7	(13$^+$)	694.5 *3*	100	1154.1	(11$^+$)	Q	E_γ: weighted average of 694.7 *4* from (^{7}Li,5nγ) and 694.4 *3* from (α,3nγ).
2084.1	(14$^+$)	1243.8† *3*	100	840.3	(13$^-$)	D	
2085.4	(14$^+$)	236.6† *3*	<33†	1848.7	(13$^+$)		
		603.2† *4*	100† *17*	1482.3	(12$^+$)	Q	
2091.7	(15$^+$)	(7.6)		2084.1	(14$^+$)		E_γ: from level-energy difference.
		343.0 *2*	24 *5*	1748.7	(16$^-$)	D	E_γ: weighted average of 343.0 *2* from (^{7}Li,5nγ) and 343.2 *5* from (α,3nγ). I_γ: from (^{7}Li,5nγ). Other: <36 from (α,3nγ).
		566.3† *6*	18.4† *26*	1525.5	(15$^-$)		
		1058.3 *2*	100 *8*	1033.3	(14$^-$)	D	E_γ: from (^{7}Li,5nγ). Other: 1058.3 *3* from (α,3nγ). I_γ: from (^{7}Li,5nγ). Other: 100 *18* from (α,3nγ).
2185.1	(16$^+$)	93.4† *2*	10.8† *27*	2091.7	(15$^+$)		
		436.4 *4*	100 *8*	1748.7	(16$^-$)	D	E_γ: weighted average of 436.3 *4* from (^{7}Li,5nγ) and 436.5 *5* from (α,3nγ). I_γ: from (^{7}Li,5nγ). Mult.: D+Q from $\gamma(\theta)$ in (α,3nγ); $\gamma\gamma$(ADO) in (^{7}Li,5nγ) consistent with ΔJ=0 or 2.
2236.2	(17$^+$)	50.9† *7*	100† *29*	2185.1	(16$^+$)		
		487.2† *5*	100† *29*	1748.7	(16$^-$)	D	
2301.2	(17$^-$)	552.4† *5*	100† *17*	1748.7	(16$^-$)		
		776.0† *4*	100† *17*	1525.5	(15$^-$)		
2334.3		553.4† *6*	100	1780.9	(16$^-$)		
2431.6	(19$^+$)	195.4† *2*	100	2236.2	(17$^+$)	Q	
2521.7	(18$^-$)	220.6† *3*	<6.9†	2301.2	(17$^-$)		
		773.0† *3*	100† *7*	1748.7	(16$^-$)	Q	
2585.2	(19$^+$)	348.8† *2*	100	2236.2	(17$^+$)	Q	

$^{194}_{79}Au_{115}$-6

Adopted Levels, Gammas (continued)

γ(^{194}Au) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.‡
2699.1	(20$^+$)	113.7† *3*	<11.1†	2585.2	(19$^+$)	
		267.7† *2*	100† *22*	2431.6	(19$^+$)	D
2765.2	(20$^-$)	243.6† *2*	100† *14*	2521.7	(18$^-$)	Q
		333.6† *2*	29† *10*	2431.6	(19$^+$)	
2947.6	(22$^-$)	182.4† *2*	100	2765.2	(20$^-$)	Q
2980.2	(19$^-$)	679.0† *5*	100	2301.2	(17$^-$)	
3173.5	(22$^+$)	474.4† *5*	100	2699.1	(20$^+$)	Q
3335.1	(22$^+$)	636.0† *4*	100	2699.1	(20$^+$)	Q
3416.5	(24$^-$)	468.9† *5*	100	2947.6	(22$^-$)	Q
3655.9		482.4† *6*	100	3173.5	(22$^+$)	
4216.3	(26$^-$)	799.8† *5*	100	3416.5	(24$^-$)	

† From (^{7}Li,5nγ) only.

‡ From γ(θ) in (α,3nγ) and/or γγ(ADO) in (^{7}Li,5nγ), with ΔJ=2 for Q and ΔJ=1 to D from γγ(ADO) where available, unless otherwise noted.

ΔJ=2, quadrupole from γ(θ) in (α,3nγ), with further restriction that (E2) is assigned for Eγ<400 keV, assuming level half-lives are less than few ns from observation of the γ rays in γγ-coin with a resolving time of few tens of ns.

@ 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.

$^{194}_{79}Au_{115}$-7

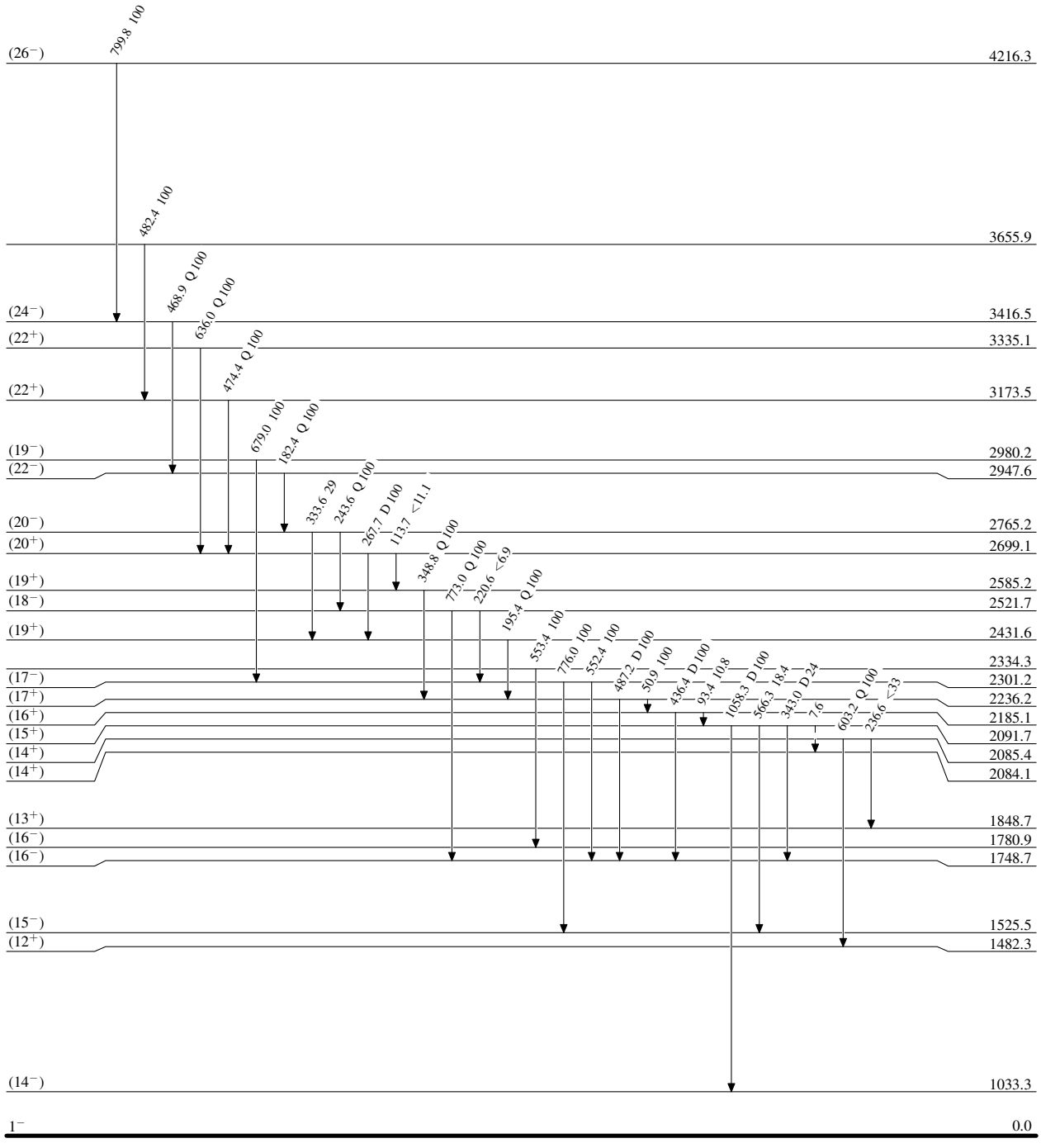
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{194}_{79}Au_{115}$

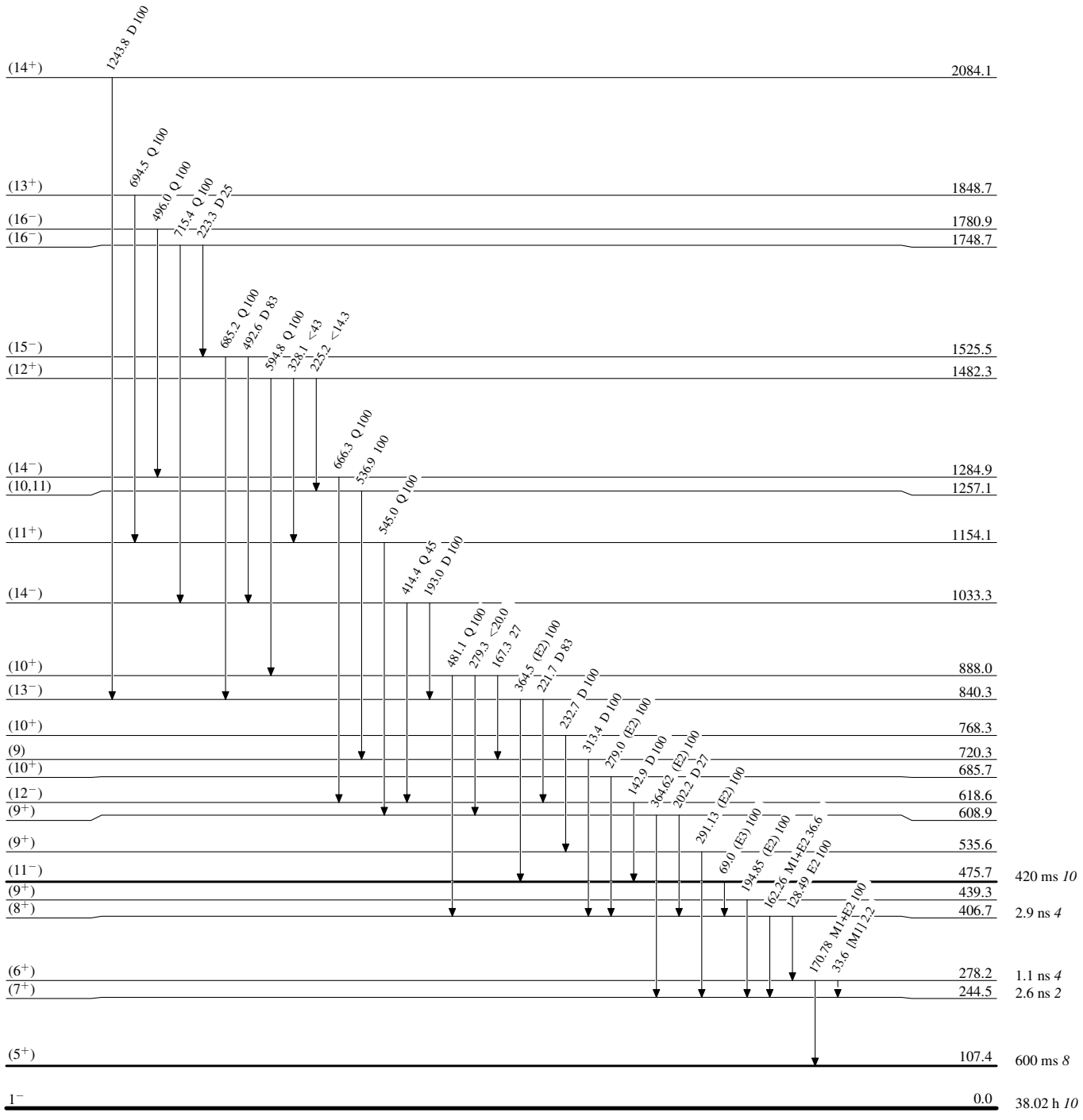
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)

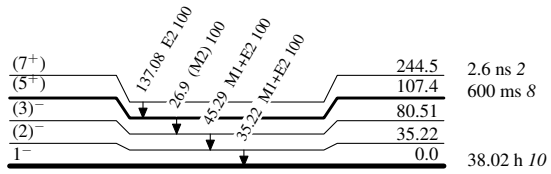


$^{194}_{79}Au_{115}$

Adopted Levels, Gammas

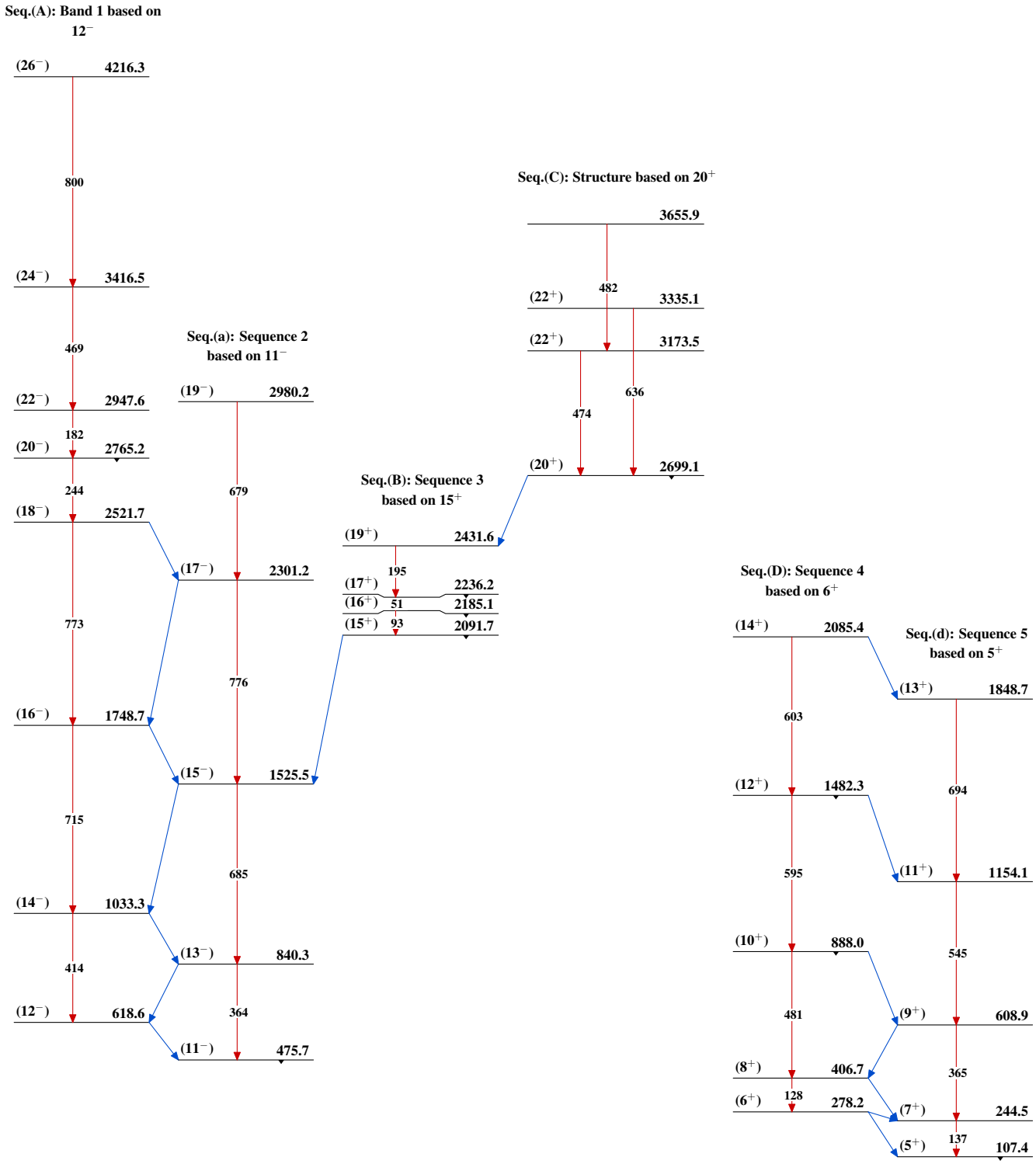
Level Scheme (continued)

Intensities: Relative photon branching from each level



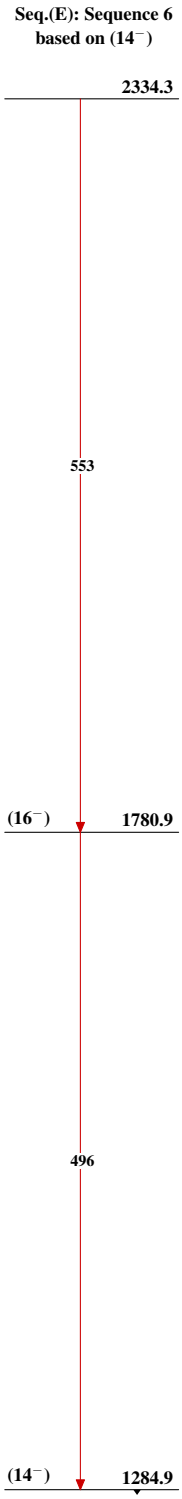
$^{194}_{79}Au_{115}$

Adopted Levels, Gammas



$^{194}_{79}Au_{115}$

Adopted Levels, Gammas (continued)



$^{194}_{79}Au_{115}$