Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. M. Baglin[1], E. A. Mccutchan[2], S. Basunia[1]	NDS 153, 1 (2018)	1-Oct-2018

Q(β^-)=−12550 *SY*; S(n)=11860 *SY*; S(p)=1494 *30*; Q(α)=6707 *3* 2017Wa10
ΔQ(β^-)=ΔS(n)=200 (2017Wa10).
S(2n)=21434 *151*; S(2p)=882 *21*; Q(εp)=7135 (syst) *31* (2017Wa10).

^{170}Pt Levels

Cross Reference (XREF) Flags

- A ^{171}Au p decay (17 μs)
- B ^{171}Au p decay (1.02 ms)
- C ^{174}Hg α decay
- D (HI,xnγ)

E(level)‡	J$^\pi$†	T$_{1/2}$	XREF	Comments
0.0#	0$^+$@	13.8 ms *5*	ABCD	%α=98 *2*; %ε+%β^+=2 calc T$_{1/2}$: weighted average of 14.7 ms *5* (1996Bi07) and 13.5 ms *3* (1998Ki20). Other T$_{1/2}$: 6 ms *+5−2* from α(t) measurement (1981Ho10); 15 ms *+16−6* (1997Uu01). %α: Gross β decay theory calculations predict partial β half-life to be≈2 s (1973Ta30) and 1997Mo25 predict 0.38 s, implying %ε+%β^+≈0.7 or 3.6, respectively; based on this, the evaluator adopts %α=98 *2*. α decay of ^{170}Pt has been observed (1981Ho10,1982En03,1996Bi07), but %α has not been measured. ε+β^+ decay has not been observed.
509.20# *20*	2$^+$@		D	
1171.90# *23*	4$^+$@		D	
1514.3& *8*	(3$^-$)		D	
1898.3& *4*	(5$^-$)		D	J$^\pi$: D 726γ to 4$^+$.
1912.30# *25*	6$^+$@		D	
1972.5? *7*			D	
2111.5& *4*	(7$^-$)		D	J$^\pi$: intraband stretched Q 213γ to (5$^-$).
2436.8# *4*	8$^+$@		D	J$^\pi$: intraband stretched Q 524γ to 6$^+$.
2443.7? *5*			D	
2495.5& *11*	(9$^-$)		D	
2501.3? *11*			D	
2509.6? *7*			D	
2629.0? *5*			D	
3025.2# *4*	(10$^+$)@		D	J$^\pi$: The 10$^+$ member of the g.s. band is either the 3025 or the 3038 level; 2006Jo04 assign 10$^+$ to 3025 in level scheme in figure 1 and in the text, but assign 10$^+$ to 3038 in table I. 2005Jo18 assigned the 3038 level as the J=10 band member.
3038.2 *5*	(10$^+$)		D	J$^\pi$: see comment on 3025 level.
3067.3?& *11*			D	
3121.5? *12*			D	
3708.2?& *11*			D	

† Based on data from (HI,xnγ). The three strongest γ-rays form a cascade of stretched Q transitions, and the energy of the

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{170}Pt Levels (continued)

strongest agrees closely with that expected for the first 2^+ state (based on energy systematics for the first excited states of even-A Pt isotopes from ^{172}Pt to ^{190}Pt (see, e.g., fig. 4 of 1998Se20)). 1998Ki20, therefore, assign the three strongest γ-rays from (HI,xnγ) to the 0^+ g.s. band of ^{170}Pt. Values given without further comment are based on band structure from (HI,xnγ).

‡ From least-squares fit to Eγ.

\# Band(A): $K^\pi=0^+$ g.s. band (2006Jo04). Weakly-deformed; possibly crossed by a deformed intruder configuration At J≈8ℏ (2006Jo04).

@ Definite J^π assigned to members of g.s. band up to possible band crossing based on independently-established $J^\pi=0^+$ for g.s. and stretched Q multipolarities for J=2 to 0 and J=8 to 6 509γ and 524γ.

& Band(B): sequence on (3^-) 1514 (2006Jo04).

γ(^{170}Pt)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	α#	Comments
509.20	2^+	509.2 *2*	100	0.0	0^+	(E2)	0.0237	
1171.90	4^+	662.7 *1*	100	509.20	2^+	(E2)	0.01288	
1514.3	(3^-)	1005.0 *10*	100	509.20	2^+			
1898.3	(5^-)	384.0 *10*	<74	1514.3	(3^-)			
		726.4 *3*	100 *23*	1171.90	4^+	(E1)		placement from (^{60}Ni,2nγ), where γγ coin rules out alternative placement within g.s. band tentatively suggested In (HI,xnγ) for a 725.9γ. Mult.: Δπ=yes from level scheme for D transition.
1912.30	6^+	740.4 *1*	100	1171.90	4^+	(E2)	0.01013	
1972.5?		800.6@ *6*	100	1171.90	4^+			
2111.5	(7^-)	213.2 *1*	100	1898.3	(5^-)	(E2)	0.290	
2436.8	8^+	524.5 *2*	100	1912.30	6^+	(E2)	0.0220	
2443.7?		545.4@ *2*	100	1898.3	(5^-)			
2495.5	(9^-)	384.0 *10*	100	2111.5	(7^-)			
2501.3?		603.0@ *10*	100	1898.3	(5^-)			
2509.6?		537.1@ *1*	100	1972.5?				
2629.0?		185.3@ *1*	100	2443.7?				
3025.2	(10^+)	588.4 *2*	100	2436.8	8^+			
3038.2	(10^+)	601.4 *3*	100	2436.8	8^+			
3067.3?		571.8@ *2*	100	2495.5	(9^-)			
3121.5?		620.2@ *4*	100	2501.3?				
3708.2?		640.9@ *2*	100	3067.3?				

† From ^{112}Sn(^{60}Ni,2nγ), E=266 MeV reaction In (HI,xnγ).

‡ Based on angular distribution ratio R (2006Jo04 In (HI,xnγ)) where R=Iγ(158°)/[Iγ(86°)+ Iγ(94°)]. R=1.32 *5* and 0.86 *2* for known ΔJ=2 443γ and ΔJ=1 947γ In ^{170}Os, respectively. Supported by Iγ(157.6°)/Iγ(79° and 101°) values (from 1998Ki20 In (HI,xnγ)) which are consistent with value expected for stretched Q transition for several transitions. Δπ=(No) has been assigned to intraband transitions.

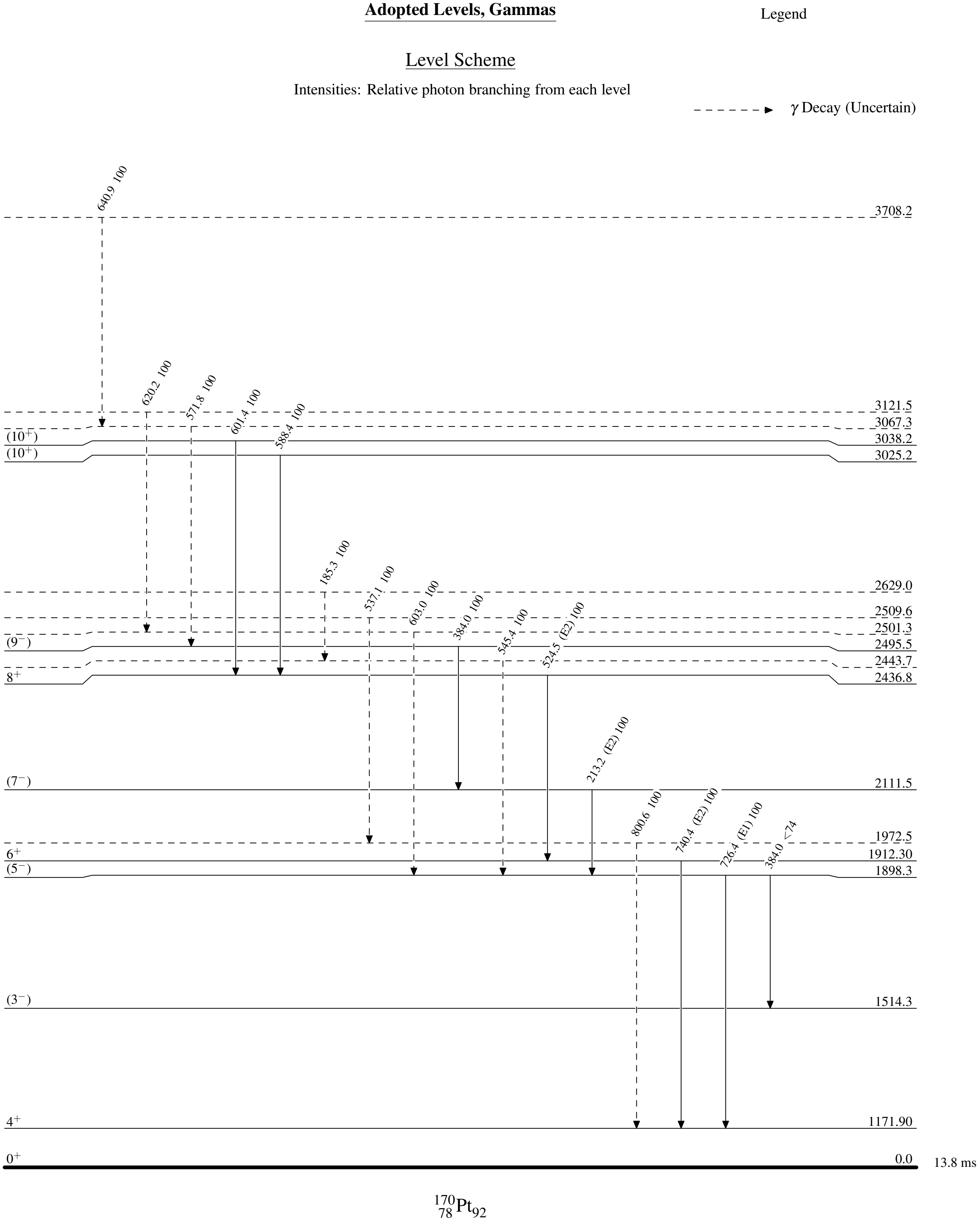
\# Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

@ Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

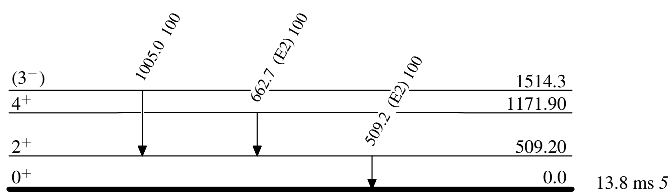
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

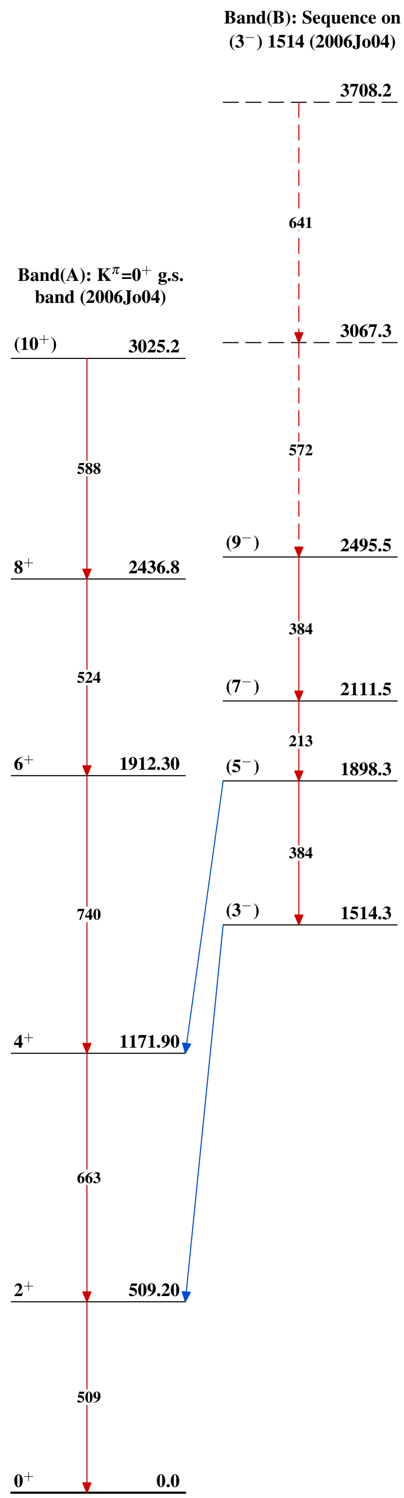
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{170}_{78}Pt_{92}$

Adopted Levels, Gammas



$^{170}_{78}Pt_{92}$

Adopted Levels, Gammas

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Tibor Kibedi and Coral M. Baglin	ENSDF	15-Mar-2010

Q(β^-)=−1.173×10^4 *8*; S(n)=1.170×10^4 *8*; S(p)=1.97×10^3 *4*; Q(α)=6464 *4* 2012Wa38
Note: Current evaluation has used the following Q record −11820 syst 11705 *89* 1960 40 *6464* 4 2003Au03,2009AuZZ.
Q(β^-): Uncertainties: 160 (Q(β^-)) (2003Au03, 2009AuZZ)).
S(n),Q(α): From 2009AuZZ; 11700 *90* and 6465 *4*, respectively, from 2003Au03.
Q(εp)=5900 *22* (2009AuZZ) cf. 5903 *23* (2003Au03).
For details about the production and identification of ^{172}Pt see ^{172}Pt α decay (1981De22,1982En03,1993ToZY).
Theory references: 1984Sa16, 1984Al36, 2005Mc09, 2007Pe30, 2009Ga15, 2010Ro06.

^{172}Pt Levels

Cross Reference (XREF) Flags

- A ^{176}Hg α decay
- B ^{116}Sn(^{58}Ni,2nγ),
- C ^{92}Mo(^{84}Sr,2p2nγ),
- D S(n)(^{60}Ni,xnγ)

E(level)†	J$^\pi$‡	T$_{1/2}$	XREF	Comments
0.0#	0$^+$	97.6 ms *13*	ABCD	%α=94 *6* (2004GoZZ); %ε+%β^+=6 *6* %α: From 2004GoZZ. Other: 94 *+6−32* (1984ScZQ). %ε+%β^+: From 100−%α. J$^\pi$: g.s. of even-even nucleus. T$_{1/2}$: 97.6 ms *13* (2003Da06) from 6316α(t). Other data: 104 ms *7* (2002Ro17), 96 ms *3* (1996Pa01), 0.110 s *20* (1993ToZY), 0.09 s *1* (1982En03), 0.12 s *1* (1981De22), 0.10 s *1* (1975Ga25), 0.12 s *5* (1984ScZQ). The weighted average of all data is 97.8 ms *12*.
457.60# *10*	2$^{(+)}$		BCD	J$^\pi$: stretched Q 458γ to 0$^+$ g.s..
1069.98# *23*	(4$^+$)		BCD	
1464.7@ *8*	(3$^-$)&		D	
1753.2# *4*	(6$^+$)		BCD	
1839.2@ *3*	(5$^-$)&		BCD	
1931.8 *4*			CD	
2081.0@ *4*	(7$^-$)&		CD	
2164.0? *5*			D	J$^\pi$: possible Q (D ΔJ=0) 411γ to 6$^+$ 1752, so J=(4$^+$,6,8$^+$).
2405.8# *4*	(8$^+$)		BCD	
2406.3 *4*			D	
2728.1? *5*			D	
2742.6 *4*			D	
2993.8# *6*	(10$^+$)		CD	
3580.5# *12*	(12$^+$)		D	
4218.0# *12*	(14$^+$)		D	

† From least-squares fit to Eγ.
‡ From Sn(^{60}Ni,xnγ), except as noted. Values for the g.s. band follow from the assumption of a stretched Q γ cascade. Those for the π=(−) band are based on the observation that the lowest excited bands in light neighboring Os and Pt isotopes have π=− and odd J, and this band connects to the g.s. band at its 2$^+$ state.

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Adopted Levels, Gammas (continued)

^{172}Pt Levels (continued)

[#] Band(A): $K^{\pi}=0^{+}$ g.s. band (2006Jo04).
[@] Band(B): $\pi=(-)$, $\alpha=1$ band (2006Jo04). Possibly has strong octupole component, but a two-quasiparticle structure such as (ν $i_{13/2}$)(ν h9/2) cannot Be ruled out (2003Da06). Possibly analogous to first-excited sidebands in neighboring nuclides. The tentative J^{π} values have been adopted from Sn(^{60}Ni,xnγ); note, however, that 2003Da06, in ^{92}Mo(^{84}Sr,2p2nγ), suggest values 2$\hbar$ lower than those shown here.
[&] See comment on $\pi=(-)$ band.

$\gamma(^{172}$Pt)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[‡]	E_f	J^{π}_f	Mult.[#]	α[&]	Comments
457.60	$2^{(+)}$	457.6 *1*	100	0.0	0^{+}	(E2)	0.0309	
1069.98	(4^{+})	612.4[@] *2*	100	457.60	$2^{(+)}$			Other Eγ: 611.5 *6* in (^{58}Ni,2nγ); 612.5 *1* for doublet in (^{60}Ni,xnγ).
1464.7	(3^{-})	1006.7 *10*	100	457.60	$2^{(+)}$			
1753.2	(6^{+})	683.2 *3*	100	1069.98	(4^{+})	(E2)	0.01205	E_{γ}: unweighted average of 682.6 *3* from (^{58}Ni,2nγ), 683.2 *2* from (^{84}Sr,2p2nγ) and 683.7 *1* from (^{60}Ni,xnγ).
1839.2	(5^{-})	374.0 *10*	12 *3*	1464.7	(3^{-})			Placement of 374.1 *3* γ feeding 2181 level in (^{84}Sr,2p2nγ) is not adopted. That γ probably belongs here, consistent with implied branching of 15 *4*.
		769.2 *2*	100 *9*	1069.98	(4^{+})			Other Eγ: 768.9 *3* in (^{58}Ni,2nγ), 768.5 *2* in (^{84}Sr,2p2nγ).
1931.8		861.8[@] *3*	100	1069.98	(4^{+})			E_{γ}: weighted average of 861.7 *4* from (^{58}Ni,2nγ), 861.9 *5* from (^{84}Sr,2p2nγ) and 862.1 *10* from (^{60}Ni,xnγ).
2081.0	(7^{-})	241.80 *21*	100	1839.2	(5^{-})	(E2)	0.192	E_{γ}: unweighted average of 241.5 *2* from (^{58}Ni,2nγ), 241.7 *2* from (^{84}Sr,2p2nγ) and 242.2 *2* from (^{60}Ni,xnγ).
2164.0?		410.8[a] *2*	100	1753.2	(6^{+})	Q		Other Eγ: 411.4 *3* in (^{84}Sr,2p2nγ), 410.1 *3* in (^{58}Ni,2nγ).
2405.8	(8^{+})	652.6 *1*	100	1753.2	(6^{+})			Other Eγ: 651.6 *3* in (^{58}Ni,2nγ), 652.3 *2* in (^{84}Sr,2p2nγ).
2406.3		567.1 *2*	100	1839.2	(5^{-})			Other Eγ: 568.4 *5* in (^{58}Ni,2nγ).
2728.1?		564.1[a] *2*	100	2164.0?				Other Eγ: 563.1 *5* in (^{58}Ni,2nγ).
2742.6		336.4 *2*	100 *6*	2406.3				E_{γ},I_{γ}: doublet in Sn(^{60}Ni,xnγ); Eγ is from (^{84}Sr,2p2nγ), Iγ is weighted average from (^{58}Ni,2nγ) and (^{84}Sr,2p2nγ).
		661.6 *4*	60 *7*	2081.0	(7^{-})			I_{γ}: weighted average of 53 *9* from (^{84}Sr,2p2nγ) and 66 *9* from (^{58}Ni,2nγ).
2993.8	(10^{+})	588.0[@] *4*	100	2405.8	(8^{+})			
3580.5	(12^{+})	586.7 *10*	100	2993.8	(10^{+})			E_{γ}: from (^{58}Ni,2nγ). Eγ=586.7 *10* for doublet in (^{60}Ni,xnγ).
4218.0	(14^{+})	637.5 *3*	100	3580.5	(12^{+})			

[†] From Sn(^{60}Ni,xnγ), except as noted. Note, however, that although these data are in satisfactory agreement with those from ^{92}Mo(^{84}Sr,2p2nγ), they are usually higher than data from ^{116}Sn(^{58}Ni,2nγ). Major discrepancies are noted.
[‡] From Sn(^{60}Ni,xnγ).
[#] From asymmetry ratio in S(n)(^{60}Ni,xnγ), assigning $\Delta\pi$=(no) to intraband transitions.
[@] From ^{92}Mo(^{84}Sr,2p2nγ).

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Adopted Levels, Gammas (continued)

$\gamma(^{172}Pt)$ (continued)

[&] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[a] Placement of transition in the level scheme is uncertain.

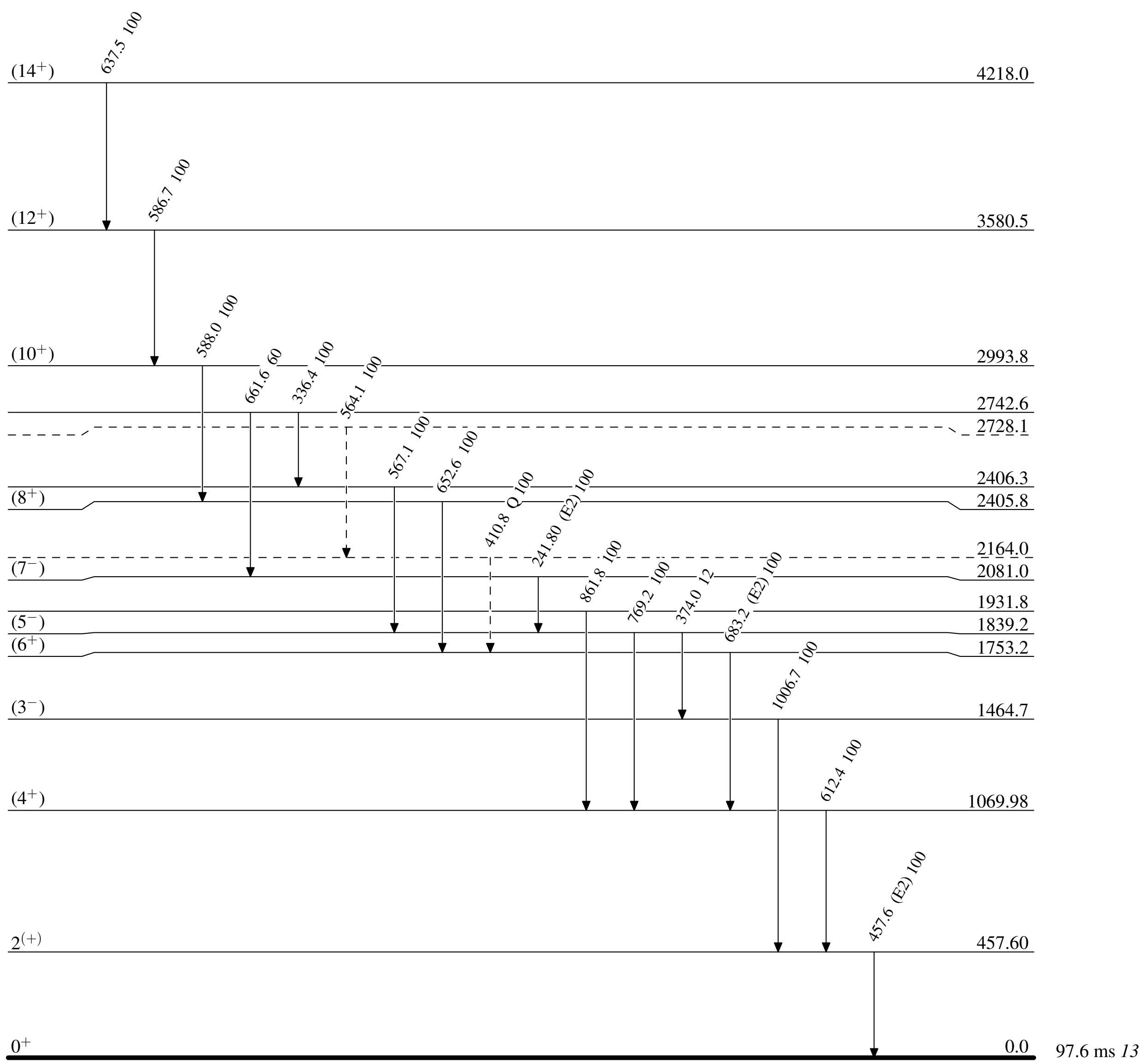
Adopted Levels, Gammas

Legend

Level Scheme

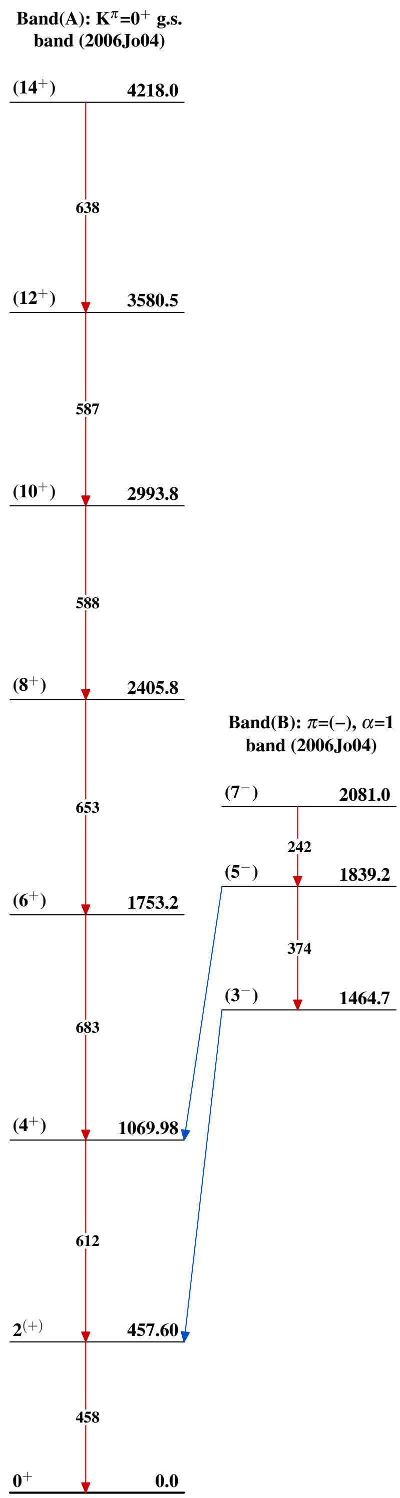
Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{172}_{78}Pt_{94}$

Adopted Levels, Gammas



$^{172}_{78}Pt_{94}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. C. Batchelder and A. M. Hurst, M. S. Basunia	NDS 183, 1 (2022)	1-Mar-2022

Q(β^-)=−6.15×10^3 *3*; S(n)=9.25×10^3 *3*; S(p)=4.82×10^3 *4*; Q(α)=4320 *18* 2021Wa16
Isotope shift and/or hfs data: 1988Le22, 1992Hi07, 1999Le52.

^{186}Pt Levels

Cross Reference (XREF) Flags

- A ^{186}Au ε decay (10.7 min)
- B ^{154}Sm(^{36}S,4nγ)
- C ^{186}Os(α,4nγ), ^{174}Yb(^{16}O,4nγ)
- D ^{188}Os(α,6nγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[@]	0$^+$	2.10 h *5*	ABCD	%ε+%β^+=100; %α≈0.00014 Δ<r^2>(^{194}Pt,^{186}Pt)=−0.200 fm^2 *6* (1999Le52). %α: From 1963Gr08; observed α peak tentatively assigned to the decay of ^{186}Pt based on T$_{1/2}$. Authors state that ^{187}Pt is another possibility for the origin of this peak. Intensity was estimated to be accurate within a factor of 2. T$_{1/2}$: From 1991Be25. Weighted average of data 2.10 h *5* (1991Be25), 2.0 h *1* (1972Fi12), 2.2 h *2* (1963Gr08), and 2.5 h *5* (1955Sm42 -labeled ^{187}Pt) yields 2.09 h *4*. Other values: 2.9 h (1960Al20), 2.8 h (1965Qa01), 3.03 h (1963Gr22).
191.54[@] *4*	2$^+$	240 ps *20*	ABCD	μ=+0.54 *6* μ: From g-factor=0.27 *3* (2020StZV, 1996St12, transient field), assuming g[^{192}Pt, 2$^+$]=0.30 *1* (1995An15). J$^\pi$: E2 γ to 0$^+$. T$_{1/2}$: Unweighted average of 220 ps *17* (^{36}S,4nγ) and 260 ps *10* (^{186}Au ε Decay).
471.50[&] *18*	0$^+$		A D	J$^\pi$: E0 472 transition to 0$^+$.
490.35[@] *9*	4$^+$	18.9 ps *13*	ABCD	J$^\pi$: stretched E2 intraband 298γ to 2$^+$. T$_{1/2}$: from (^{36}S,4nγ).
607.17[a] *11*	2$^+$		A D	J$^\pi$: M1+E2 416γ to 2$^+$; γ to 0$^+$; M1+E2 349γ from 3$^+$ 956.
798.48[&] *12*	2$^+$		A D	J$^\pi$: E2 327γ to 0$^+$.
877.51[@] *18*	6$^+$	3.54 ps *28*	ABCD	J$^\pi$: stretched E2 intraband 387γ to 4$^+$. T$_{1/2}$: from ^{154}Sm(^{36}S,4nγ).
956.48[a] *15*	3$^+$		A D	J$^\pi$: M1+E2 765γ to 2$^+$; E1+M2 677γ from (4$^-$) 1633.
991.44[a] *15*	4$^+$		A D	J$^\pi$: M1+E2 501γ to 4$^+$; E2 (not ΔJ=1) 384γ to 2$^+$ 607.
1175.95 *20*	2$^+$		A	J$^\pi$: 704γ to 0$^+$; J=2 from 985γ(θ,H,T).
1222.46[&] *14*	4$^+$		A D	J$^\pi$: E0+M1+E2 732γ to 4$^+$; 1031γ(θ,H,T).
1342.9[@] *3*	8$^+$	1.39 ps *14*	BCD	J$^\pi$: stretched Q 465γ to 6$^+$; member of g.s. band. T$_{1/2}$: from ^{154}Sm(^{36}S,4nγ).
1363.09[a] *24*	(5$^+$)		A D	J$^\pi$: Band assignment; 872γ to 4$^+$ 490; 406γ to 3$^+$ 956.
1407.60[d] *14*	3$^-$		A D	J$^\pi$: E1 1216γ to 2$^+$; M1+E2 225γ from 4$^-$ 1633.
1417.89 *18*	(3)$^+$		A	J$^\pi$: M1(+E2+E0) 462γ to 3$^+$ 956; J=2$^+$,3$^+$ proposed in 1985Va07 (^{186}Au ε decay).
1470.21[a] *19*	(6$^+$)		D	
1600.26[&] *22*	(6$^+$)		D	J$^\pi$: gammas to 4$^+$ and 6$^+$; band assignment.
1612.3 *4*			A	
1632.78[e] *17*	(4$^-$)		A D	J$^\pi$: E1 1143γ to 4$^+$ 490.

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Adopted Levels, Gammas (continued)

^{186}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
1671.9 *5*	3^+,4		A	J^{π}: 1182γ(θ,H,T) to 4^+ 490.
1692.68[d] *16*	(5^-)		CD	J^{π}: ΔJ≤1 1203γ to 4^+ 490; band assignment.
1801.4[a] *3*	(7^+)		D	J^{π}: based on γ decay pattern in (α,6nγ) (however, 6^- is not excluded); band assignment.
1814.1 *4*			A	
1837.96 *18*	$(4)^-$		A	J^{π}: M1+E2 430γ to 3^- 1408; 882γ(θ,H,T) allows J=2 or 4, and J=4 requires the smaller M2 admixture.
1858.0[@] *4*	10^+	0.83 ps *7*	BCD	J^{π}: stretched Q 515γ to 8^+ 1343; g.s. band assignment. $T_{1/2}$: from (^{36}S,4nγ).
1896.5 *3*	2^+,3^+		A	J^{π}: from 1289γ(θ,H,T) in ^{186}Au ε decay (1985Va07).
1952.33[d] *19*	(7^-)	85 ps *10*	CD	J^{π}: E2 260γ to (5^-); D 1075γ to 6^+; band assignment. $T_{1/2}$: from ce(t) in (^{16}O,4nγ).
1969.63[e] *19*	(6^-)		D	J^{π}: 1092 keV γ transition to 6^+ level in ground state band, no decay to 4^+ and 3^- states, rules out 4, 5, 6^+.
2004.33[a] *24*	(8^+)		D	
2051.4[i] *3*	(7^-)		D	J^{π}: ΔJ=0,1 1174γ to 6^+; 323γ from (9^-) 2374.
2108.5[j] *4*	(10^+)		D	J^{π}: ΔJ=0,1 251γ to 10^+; 766γ to 8^+; based on similar DCO ratios for all transitions connecting this level′s band to other bands, (α,6nγ) favor J=10 over J=9.
2123.05 *25*	(7^-,8^+)		D	J^{π}: 252γ from (9^-) 2375; γ to 6^+.
2159.5 *3*	4^+		A	J^{π}: from 1203γ(θ,H,T) in ^{186}Au ε decay; 796γ to (5^+) 1363.
2195.0 *3*	(8^-)[#]	8.0 ns *13*	CD	J^{π}: M1+E2 γ to (7^-) 1952; systematics of even-even Pt isotopes. $T_{1/2}$: from 243γ-1074.8γ(t) in (α,6nγ). Other: 4.6 ns in (^{16}O,4nγ).
2216.2 *4*	3^+,4^+		A	J^{π}: gammas to 2^+ and 4^+; 1726γ(θ,H,T) in (^{186}Au ε decay).
2227.6 *3*	3^+,4^+		A	J^{π}: gammas to 2^+ and 4^+; 1738γ(θ,H,T) in (^{186}Au ε decay).
2253.95[e] *24*	(8^-)		D	J^{π}: Q 284 γ to (6^-) 1969 level.
2280.1[a] *4*	(9^+)		D	J^{π}: based on γ decay pattern in (α,6nγ) (however, J=8 is not excluded); band assignment.
2317.0[h] *3*	(8^-)		D	J^{π}: stretched Q 347γ to (6^-) 1970; 316γ from (10^-) 2633.
2336.2[@] *4*	12^+	1.39 ps *14*	BCD	J^{π}: stretched E2 478γ to 10^+ 1858. $T_{1/2}$: from (^{36}S,4nγ). Other: <50 ps (1979Ri08 – (^{16}O,4nγ)).
2356.1 *4*	(9^-)		D	J^{π}: ΔJ=0,1 161γ to (8^-); 432γ from (11^-) 2788.
2374.92[d] *23*	(9^-)		D	J^{π}: Q 422 γ to 7^- 2123 level. Band structure.
2430.5[i] *3*	(9^-)		D	
2544.5[a] *4*	(10^+)		D	
2559.4[f] *3*	(10^-)		D	J^{π}: ΔJ=1 204γ to (9^-) 2356; ΔJ=1 233γ from (11^-) 2792.
2611.7[j] *4*	(12^+)	≤0.5 ns	D	$T_{1/2}$: from centroid shift in (α,6nγ).
2632.90[e] *25*	(10^-)		D	J^{π}: Q 379 keV γ to 2254 (8^-) level.
2696.4[h] *4*	(10^-)		D	
2788.0[d] *3*	(11^-)		D	J^{π}: Q 413 keV γ to (9^-) 2375 level.
2792.1[g] *3*	(11^-)		D	J^{π}: (E2) γ to (9^-) 2375 keV level.
2825.0[@] *4*	(14^+)	1.46 ps *14*	BCD	$T_{1/2}$: from (^{36}S,4nγ).
2864.4[c] *4*	(12^+)	≤0.5 ns	D	J^{π}: gammas to 10^+ and 12^+ but not to 8^+; based on similar DCO ratios for all transitions connecting this level′s band to other bands, 1987He29 favor J=12 over J=11. $T_{1/2}$: from centroid shift in (α,6nγ).
2887.2[i] *4*	(11^-)		D	
3043.0[f] *4*	(12^-)		D	
3073.4[e] *4*	(12^-)		D	
3171.7[h] *5*	(12^-)		D	
3192.1[b] *4*	(13^-)		D	J^{π}: ΔJ=0,1 856γ to 12^+ 2336; 367γ to 14^+ 2825; absence of γ to any 10^+

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{186}Pt Levels (continued)

E(level)†	J^{π}‡	$T_{1/2}$	XREF	Comments
				levels; 1990He19 (α,6nγ) favor π=− due to D transitions from the next two members of this band (3531, 3984) to the g.s. band.
3192.4[c] 4	(14+)	≤0.5 ns	D	$T_{1/2}$: from centroid shift in (α,6nγ).
3269.6[j] 4	(14+)		D	
3299.8[d] 4	(13−)		D	
3310.7[g] 4	(13−)		D	
3394.8[@] 5	(16+)	0.76 ps 14	B D	$T_{1/2}$: from (^{36}S,4nγ).
3421.4[i] 5	(13−)		D	
3530.8[b] 5	(15−)		D	
3566.9[e] 5	(14−)		D	
3599.8[f] 4	(14−)		D	
3664.6[c] 5	(16+)		D	
3701.0[h] 6	(14−)		D	
3873.8[d] 5	(15−)		D	
3893.0[g] 4	(15−)		D	
3963.3[j] 5	(16+)		D	
3983.9[b] 5	(17−)		D	
4051.3[@] 6	(18+)	<1.25 ps	B D	$T_{1/2}$: from (^{36}S,4nγ).
4110.6[e] 6	(16−)		D	
4172.6[h] 7	(16−)		D	
4208.5[f] 5	(16−)		D	
4258.5[c] 6	(18+)		D	
4393.2 6			D	
4483.0[d] 6	(17−)		D	
4518.0[g] 5	(17−)		D	
4539.9[b] 6	(19−)		D	
4661.1?[j] 6	(18+)		D	
4699.0[e] 7	(18−)		D	
4788.3[@] 7	(20+)		D	
4836.0[f] 6	(18−)		D	
4938.4 7			D	
4956.2[c] 7	(20+)		D	
5188.6[b] 7	(21−)		D	
5321.2[e] 8	(20−)		D	
5597.1[@] 7	(22+)		D	
5738.1[c] 7	(22+)		D	
5921.8[b] 7	(23−)		D	
6463.8[@] 8	(24+)		D	
6582.5[c] 8	(24+)		D	
6729.8[b] 13	(25−)		D	
7407.8?[@] 13	(26+)		D	

† From least-squares adjustment of Eγ.

‡ Based on DCO ratios and band structure in (α,6nγ), unless noted otherwise.

By analogy to ^{184}Pt (1840 keV level) and ^{182}Os (1831 keV level) high-K isomers with probable prolate configuration= (ν 9/2[624])(ν 7/2[514]). However, deexcitation of states differs, possibly due to availability in ^{186}Pt of decay path to 7−

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{186}Pt Levels (continued)

(1952 keV) level with similar configuration.

@ Band(A): Prolate g.s. band.

& Band(B): β band.

[a] Band(C): γ band.

[b] Band(D): π=(−), α=1 prolate band. π assignment tentative; supported by absence of interaction with g.s. band which it intersects near $J^\pi=21^{(-)}$. Possible configuration=((π $h_{9/2}$)(π $i_{13/2}$)).

[c] Band(E): π=+, α=0 oblate band. Probable configuration=(ν $i_{13/2}$)(ν $i_{13/2}$). Decay to γ band from 12^+ member suggests some similarity between these two bands.

[d] Band(F): π=−, α=1 band. Signature partner of band that includes the 4^- 1633 level. Possible configuration=(high j)(low j), one quasiparticle being (π $h_{11/2}$) or (ν $i_{13/2}$), the other an N=4 shell quasiproton or an N=5 shell quasineutron (analogous to configuration for bands starting at $J^\pi=5^-$ in many even nuclei in the Pt-Hg transitional region).

[e] Band(G): π=−, α=0 band. Signature partner of band including 3^- 1408 level.

[f] Band(H): π=−,α=0 band. Possible configuration=(ν 11/2[615])(ν 9/2[505])10^-.

[g] Band(I): $K^\pi=(10^-)$,α=1 band. Possible configuration=(ν 11/2[615])(ν 9/2[505])10^-.

[h] Band(J): π=−,α=0 band.

[i] Band(K): π=−,α=1 band.

[j] Band(L): π=+,α=0 band.

Adopted Levels, Gammas (continued)

$\gamma(^{186}Pt)$

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&c]	α[b]	Comments
191.54	2^+	191.53[‡] 4	100[‡]	0.0	0^+	E2		0.417	α(K)=0.189 3; α(L)=0.1713 24; α(M)=0.0438 7 α(N)=0.01070 15; α(O)=0.001699 24; α(P)=1.80×10^{-5} 3 B(E2)(W.u.)=102 9 Mult.: from α_K in ^{186}Au ε decay.
471.50	0^+	279.7[‡] 3	100[‡] 5	191.54	2^+	E2		0.1216	α(K)=0.0728 11; α(L)=0.0369 6; α(M)=0.00928 14 α(N)=0.00227 4; α(O)=0.000369 6; α(P)=7.26×10^{-6} 11
		471.6 5		0.0	0^+	E0			
490.35	4^+	298.84[‡] 10	100[‡]	191.54	2^+	E2		0.0998	α(K)=0.0618 9; α(L)=0.0288 4; α(M)=0.00721 11 α(N)=0.00177 3; α(O)=0.000288 4; α(P)=6.22×10^{-6} 9 B(E2)(W.u.)=181 13
607.17	2^+	415.56[‡] 16	100[‡] 8	191.54	2^+	M1+E2	−0.38 4	0.116 3	α(K)=0.0954 23; α(L)=0.0160 3; α(M)=0.00370 7 α(N)=0.000916 17; α(O)=0.000164 3; α(P)=1.07×10^{-5} 3
		607.2[‡] 2	62[‡] 15	0.0	0^+	[E2]		0.01567	α(K)=0.01200 17; α(L)=0.00280 4; α(M)=0.000671 10 α(N)=0.0001652 24; α(O)=2.83×10^{-5} 4; α(P)=1.270×10^{-6} 18
798.48	2^+	307.9[‡] 3	7.7[‡] 6	490.35	4^+	E2		0.0912	α(K)=0.0573 9; α(L)=0.0257 4; α(M)=0.00642 10 α(N)=0.001573 23; α(O)=0.000257 4; α(P)=5.78×10^{-6} 9
		326.8[‡] 3	15.1[‡] 12	471.50	0^+	E2		0.0766	α(K)=0.0494 7; α(L)=0.0206 3; α(M)=0.00513 8 α(N)=0.001258 18; α(O)=0.000206 3; α(P)=5.03×10^{-6} 7
		607.05 15		191.54	2^+	(E0+M1+E2)			α(K)=0.025 14; α(L)=0.0045 17; α(M)=0.0011 4 α(N)=0.00026 10; α(O)=4.6×10^{-5} 18; α(P)=2.8×10^{-6} 16 E_γ: Weighted ave. of data from (α,6nγ) and ^{186}Au ε decay. I(ce)/Iγ(799)=0.099 20 (1970Jo02 – ^{186}Au ε decay).
		798.7[‡] 4	100[‡] 12	0.0	0^+	(E2)		0.00864	α(K)=0.00687 10; α(L)=0.001362 19; α(M)=0.000322 5 α(N)=7.93×10^{-5} 12; α(O)=1.380×10^{-5} 20; α(P)=7.26×10^{-7} 11
877.51	6^+	387.0[‡] 3	100[‡]	490.35	4^+	E2		0.0478	α(K)=0.0329 5; α(L)=0.01133 16; α(M)=0.00280 4 α(N)=0.000686 10; α(O)=0.0001138 16; α(P)=3.40×10^{-6} 5 B(E2)(W.u.)=279 22 Mult.: stretched Q from DCO ratio in ^{188}Os(α,6nγ); M2 excluded by comparison to RUL. g.s. band intraband γ.
956.48	3^+	349.4[‡] 3	12.4[‡] 10	607.17	2^+	M1+E2	+2.7 3	0.080 4	α(K)=0.057 4; α(L)=0.0175 4; α(M)=0.00429 9 α(N)=0.001054 22; α(O)=0.000176 4; α(P)=6.1×10^{-6} 4
		466.3[‡] 3	12.4[‡] 9	490.35	4^+	(M1+E2)			δ: +0.42 7 or +3.8 9 from γ(θ,H,T) (1985Va07 – ^{186}Au ε decay) $\Delta\pi$=no from level scheme.
		765.1[#] 3	100 5	191.54	2^+	M1+E2	+16 +4−3	0.00951	α(K)=0.00753 11; α(L)=0.001522 22; α(M)=0.000360 6 α(N)=8.87×10^{-5} 13; α(O)=1.542×10^{-5} 22; α(P)=7.97×10^{-7} 12
991.44	4^+	384.2[#] 3	63 11	607.17	2^+	E2		0.0488	α(K)=0.0335 5; α(L)=0.01162 17; α(M)=0.00287 4 α(N)=0.000704 10; α(O)=0.0001167 17; α(P)=3.46×10^{-6} 5 Mult.: from DCO in (α,6nγ) and α(K)exp in ε decay.

$^{186}_{78}Pt_{108}$-5

Adopted Levels, Gammas (continued)

γ(^{186}Pt) (continued)

E_i(level)	J^{π}_i	E_γ[†]	I_γ[†]	E_f	J^{π}_f	Mult.[&]	δ[&c]	α[b]	Comments
991.44	4+	501.1[#] *3*	100 *16*	490.35	4+	M1+E2	−0.85 *9*	0.055 *3*	α(K)=0.045 *3*; α(L)=0.0080 *3*; α(M)=0.00188 *7* α(N)=0.000464 *17*; α(O)=8.2×10^{-5} *4*; α(P)=5.0×10^{-6} *3*
		799.6 *3*	79 *16*	191.54	2+				
1175.95	2+	704.4[‡] *3*	43[‡] *6*	471.50	0+				
		984.5[‡] *4*	100[‡] *10*	191.54	2+	M1+E2			Mult.,δ: from γ(θ,H,t) (1985Va07 – ^{186}Au ε decay); δ=−0.12 *6* or +3.2 *8*.
		1176.1[‡] *5*	48[‡] *7*	0.0	0+				
1222.46	4+	266.5[‡d] *4*	19[‡] *2*	956.48	3+				Assignment to ^{186}Au ε decay is not certain.
		423.9[‡] *3*	45[‡] *5*	798.48	2+	E2		0.0375	α(K)=0.0266 *4*; α(L)=0.00835 *12*; α(M)=0.00205 *3* α(N)=0.000503 *7*; α(O)=8.40×10^{-5} *12*; α(P)=2.77×10^{-6} *4* Mult.: from DCO in (α,6nγ) and α(K)exp in ε decay.
		615.6[‡] *4*	23[‡] *3*	607.17	2+				
		732.1[#] *2*	82 *6*	490.35	4+	E0+M1+E2		0.07 *3*	α(K)=0.016 *8*; α(L)=0.0028 *11*; α(M)=0.00064 *24* α(N)=0.00016 *6*; α(O)=2.8×10^{-5} *11*; α(P)=1.8×10^{-6} *9*
		1030.8[#] *3*	100 *5*	191.54	2+	E2		0.00516	α(K)=0.00419 *6*; α(L)=0.000746 *11*; α(M)=0.0001742 *25* α(N)=4.29×10^{-5} *6*; α(O)=7.57×10^{-6} *11*; α(P)=4.41×10^{-7} *7* Mult.: Q from γ(θ,H,T).
1342.9	8+	464.8[@] *4*	100	877.51	6+	(E2)[a]		0.0297 *6*	α(K)=0.0215 *4*; α(L)=0.00620 *14*; α(M)=0.00151 *4* α(N)=0.000372 *9*; α(O)=6.25×10^{-5} *14*; α(P)=2.26×10^{-6} *4* B(E2)(W.u.)=2.9×10^{2} *3*
1363.09	(5+)	406 *1*	22 *8*	956.48	3+				
		872.9[#] *4*	100 *7*	490.35	4+				
1407.60	3−	231.7[‡] *3*	15.5[‡] *14*	1175.95	2+	(E1)		0.0487	α(K)=0.0401 *6*; α(L)=0.00662 *10*; α(M)=0.001527 *22* α(N)=0.000374 *6*; α(O)=6.49×10^{-5} *10*; α(P)=3.56×10^{-6} *5* Mult.: E1, E2 from α(K)exp from ε decay; Δπ=yes from level scheme.
		609.4[‡] *3*	40[‡] *10*	798.48	2+				
		800.1[‡] *3*	<35[‡]	607.17	2+				E_γ,I_γ: Unweighted average of data from ^{186}Au ε decay and (α,6nγ).
		916.7[‡] *3*	11.2[‡] *2*	490.35	4+				E_γ,I_γ: Weighted average of data from ^{186}Au ε decay and (α,6nγ). Iγ Other: 29 *9* in (α,6nγ).
		1216.2[‡] *3*	100[‡] *5*	191.54	2+	E1		1.52×10^{-3}	α(K)=0.001256 *18*; α(L)=0.000183 *3*; α(M)=4.15×10^{-5} *6* α(N)=1.024×10^{-5} *15*; α(O)=1.84×10^{-6} *3*; α(P)=1.239×10^{-7} *18*; α(IPF)=2.28×10^{-5} *9*

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$\gamma(^{186}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ[&c]	α[b]	Comments
1417.89	(3)$^+$	461.8[‡] *3*	<10[‡]	956.48	3$^+$	M1(+E2+E0)			α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0022 *7* α(N)=0.00056 *18*; α(O)=0.00010 *4*; α(P)=6.E−6 *4* Mult.: α_k = 0.5 from ε decay.
		810.7[‡] *3*	38[‡] *4*	607.17	2$^+$				
		927.3[‡] *4*	25[‡] *6*	490.35	4$^+$				
		1226.1[‡] *3*	100[‡] *6*	191.54	2$^+$				
1470.21	(6$^+$)	478.7 *3*	<200	991.44	4$^+$	(E2)[a]		0.0276	α(K)=0.0201 *3*; α(L)=0.00565 *8*; α(M)=0.001377 *20* α(N)=0.000338 *5*; α(O)=5.70×10^{-5} *8*; α(P)=2.12×10^{-6} *3*
		592.3 *3*	100 *47*	877.51	6$^+$				
		979.7 *3*	87 *35*	490.35	4$^+$				
1600.26	(6$^+$)	722.6 *3*	100 *11*	877.51	6$^+$				
		1110.0 *3*	≈34	490.35	4$^+$				
1612.3		1121.9[‡] *3*	100[‡]	490.35	4$^+$				
1632.78	(4$^-$)	225.1[‡] *3*	13.2[‡] *11*	1407.60	3$^-$	M1+E2	1.3 +*14*−*5*	0.40 *11*	α(K)=0.29 *11*; α(L)=0.0887 *16*; α(M)=0.0218 *5* α(N)=0.00534 *10*; α(O)=0.000894 *22*; α(P)=3.1×10^{-5} *13*
		676.2[#] *4*	100 *4*	956.48	3$^+$	E1+M2	−0.014 *10*	0.00445	α(K)=0.00372 *6*; α(L)=0.000561 *8*; α(M)=0.0001282 *18* α(N)=3.15×10^{-5} *5*; α(O)=5.62×10^{-6} *8*; α(P)=3.61×10^{-7} *5*
		1142.4[#] *4*	12.6 *14*	490.35	4$^+$	(E1)		1.67×10^{-3}	α(K)=0.001403 *20*; α(L)=0.000205 *3*; α(M)=4.65×10^{-5} *7* α(N)=1.147×10^{-5} *16*; α(O)=2.06×10^{-6} *3*; α(P)=1.382×10^{-7} *20*; α(IPF)=4.17×10^{-6} *7* Eγ=1142.0 *3*, Iγ=54 *20* in (α,6nγ).
		1441.3[‡] *4*	14.3[‡] *14*	191.54	2$^+$				Mult.: see comment in ^{186}Au ε decay.
1671.9	3$^+$,4	1181.5[‡] *5*	100[‡]	490.35	4$^+$				
1692.68	(5$^-$)	285.3 *3*	9.2 *24*	1407.60	3$^-$				
		470.1 *3*	27.1 *22*	1222.46	4$^+$				
		700.9 *3*	16.4 *20*	991.44	4$^+$				
		1202.8 *3*	100 *5*	490.35	4$^+$	(E1)		1.54×10^{-3}	α(K)=0.001281 *18*; α(L)=0.000186 *3*; α(M)=4.24×10^{-5} *6* α(N)=1.045×10^{-5} *15*; α(O)=1.87×10^{-6} *3*; α(P)=1.263×10^{-7} *18*; α(IPF)=1.81×10^{-5} *3* Mult.: DCO consistent with pure stretched D or with D+Q (δ≥1.4) ΔJ=0 transition. ΔJ=1, Δπ=yes from level scheme.
1801.4	(7$^+$)	438 *1*	100 *6*	1363.09	(5$^+$)				
		923.7 *3*	88 *10*	877.51	6$^+$				

$^{186}_{78}Pt_{108}$-7

Adopted Levels, Gammas (continued)

$\gamma(^{186}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&c]	α[b]	Comments
1814.1		1323.7[‡] *4*	100	490.35	4^+				
1837.96	$(4)^-$	205.0[‡] *3*	97[‡] *8*	1632.78	(4^-)	M1+E2	−0.309 *23*	0.824 *14*	α(K)=0.669 *12*; α(L)=0.1190 *18*; α(M)=0.0278 *5* α(N)=0.00686 *11*; α(O)=0.001220 *18*; α(P)=7.62×10^{-5} *14*
		430.3[‡] *3*	85[‡] *8*	1407.60	3^-	M1+E2	+6.6 *9*	0.0379 *8*	α(K)=0.0272 *7*; α(L)=0.00812 *13*; α(M)=0.00198 *3* α(N)=0.000488 *8*; α(O)=8.17×10^{-5} *13*; α(P)=2.86×10^{-6} *8*
		615.6[‡] *3*	<2.9[‡]	1222.46	4^+				
		881.6[‡] *3*	100[‡] *6*	956.48	3^+	E1+M2	−0.04 +*2*−*13*	0.0027 *12*	α(K)=0.0023 *10*; α(L)=0.00034 *17*; α(M)=8.E−5 *4* α(N)=1.9×10^{-5} *10*; α(O)=3.4×10^{-6} *18*; α(P)=2.3×10^{-7} *12*
1858.0	10^+	515.1 *3*	100	1342.9	8^+	(E2)[a]		0.0230	α(K)=0.01711 *24*; α(L)=0.00452 *7*; α(M)=0.001095 *16* α(N)=0.000269 *4*; α(O)=4.56×10^{-5} *7*; α(P)=1.80×10^{-6} *3* B(E2)(W.u.)=291 *25*
1896.5	$2^+,3^+$	905.1[‡] *3*	18[‡] *3*	991.44	4^+				
		1098.0[‡d] *3*	20.6[‡] *25*	798.48	2^+				Assignment to ^{186}Au ε decay is not certain.
		1289.2[‡] *5*	100[‡] *6*	607.17	2^+				
1952.33	(7^-)	259.8 *3*	74 *5*	1692.68	(5^-)	E2		0.1528	B(E2)(W.u.)=29 *4* α(K)=0.0876 *13*; α(L)=0.0492 *8*; α(M)=0.01241 *19* α(N)=0.00304 *5*; α(O)=0.000490 *8*; α(P)=8.66×10^{-6} *13* Mult.: Q from DCO ratio in (α,6nγ) and $\gamma(\theta)$ in (α,4nγ), ...; not M2 from RUL.
		352.0 *3*	17.3 *15*	1600.26	(6^+)	(E1)[a]			B(E1)(W.u.)=4.2×10^{-6} *7*
		481.7 *3*	27.2 *28*	1470.21	(6^+)	(E1)[a]			B(E1)(W.u.)=2.6×10^{-6} *5*
		1074.8 *3*	100 *5*	877.51	6^+	(E1)[a]			B(E1)(W.u.)=8.6×10^{-7} *12*
1969.63	(6^-)	277.0 *3*	30 *4*	1692.68	(5^-)				
		336.9 *3*	38 *6*	1632.78	(4^-)	Q[a]			
		606.6 *3*	100 *10*	1363.09	(5^+)				Mult.: not stretched Q from (α,6nγ).
		1092.0 *3*	14 *5*	877.51	6^+				
2004.33	(8^+)	533.9 *3*	100 *10*	1470.21	(6^+)	(Q)[a]			
		661.2 *3*	45 *11*	1342.9	8^+				
		1127.4 *3*	52 *8*	877.51	6^+				
2051.4	(7^-)	1173.8 *3*	100	877.51	6^+				Mult.: DCO excludes stretched Q in (α,6nγ).
2108.5	(10^+)	250.5 *3*	43 *4*	1858.0	10^+				Mult.: not ΔJ=2 from DCO in (α,6nγ).
		765.6 *3*	100 *4*	1342.9	8^+				
2123.05	$(7^-,8^+)$	170.6 *3*	91 *14*	1952.33	(7^-)				
		1246.0 *3*	100 *13*	877.51	6^+				
2159.5	4^+	796.4[‡] *4*	36[‡] *8*	1363.09	(5^+)				
		1203.0[‡] *3*	100[‡] *7*	956.48	3^+				
2195.0	(8^-)	242.6 *3*	100	1952.33	(7^-)	M1+E2			Mult.: from DCO ratio in (α,6nγ); M1(+E2) from K/L and α(K)exp in (α,4nγ). δ: ≤0.46 from K/L in (α,4nγ).
2216.2	$3^+,4^+$	1725.9[‡] *4*	63[‡] *9*	490.35	4^+				

$^{186}_{78}Pt_{108}$-8

γ(^{186}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	α[b]	Comments
2216.2	3+,4+	2024.6[‡] *5*	100[‡] *9*	191.54	2+			
2227.6	3+,4+	1271.1[‡] *5*	17.4[‡] *25*	956.48	3+			
		1737.6[‡] *4*	65[‡] *8*	490.35	4+			
		2035.6[‡] *5*	100[‡] *7*	191.54	2+			
2253.95	(8−)	284.4 *3*	20.7 *29*	1969.63	(6−)	(E2)[a]	0.1156	α(K)=0.0698 *10*; α(L)=0.0346 *5*; α(M)=0.00870 *13* α(N)=0.00213 *4*; α(O)=0.000346 *5*; α(P)=6.98×10^{-6} *10*
		301.7 *3*	100 *11*	1952.33	(7−)	(M1+E2)[a]		
2280.1	(9+)	479 *1*	<200	1801.4	(7+)			
		937.2 *3*	100 *17*	1342.9	8+			
2317.0	(8−)	347.3 *3*	100 *9*	1969.63	(6−)	(E2)	0.0644	α(K)=0.0426 *6*; α(L)=0.01654 *24*; α(M)=0.00411 *6* α(N)=0.001008 *15*; α(O)=0.0001658 *24*; α(P)=4.37×10^{-6} *7* Mult.: DCO consistent with stretched E2.
		515.4 *3*	<50	1801.4	(7+)			
2336.2	12+	478.2 *3*	100	1858.0	10+	E2	0.0276	α(K)=0.0202 *3*; α(L)=0.00567 *8*; α(M)=0.001381 *20* α(N)=0.000339 *5*; α(O)=5.72×10^{-5} *8*; α(P)=2.12×10^{-6} *3* B(E2)(W.u.)=2.5×10^2 *3* Mult.: stretched Q from (α,6nγ); not M2 from RUL.
2356.1	(9−)	161.1 *3*	100	2195.0	(8−)	D(+Q)[a]		
2374.92	(9−)	252.2 *3*	17.8 *35*	2123.05	(7−,8+)			
		323.4 *3*	20.6 *25*	2051.4	(7−)			
		422.4 *3*	100 *6*	1952.33	(7−)	(E2)[a]	0.0379	α(K)=0.0268 *4*; α(L)=0.00845 *12*; α(M)=0.00207 *3* α(N)=0.000509 *8*; α(O)=8.50×10^{-5} *12*; α(P)=2.79×10^{-6} *4*
2430.5	(9−)	379.2 *3*		2051.4	(7−)	(E2)[a]	0.0505	α(K)=0.0345 *5*; α(L)=0.01215 *18*; α(M)=0.00300 *5* α(N)=0.000737 *11*; α(O)=0.0001220 *18*; α(P)=3.57×10^{-6} *5* I_γ: I(379γ triplet):I(1088γ)=100 *5*:21.1 *13* in (α,6nγ).
		1087.7 *3*		1342.9	8+			I_γ: see comment on 579.2γ.
2544.5	(10+)	540.3 *3*	100	2004.33	(8+)	(E2)[a]	0.0205	α(K)=0.01541 *22*; α(L)=0.00391 *6*; α(M)=0.000946 *14* α(N)=0.000233 *4*; α(O)=3.95×10^{-5} *6*; α(P)=1.627×10^{-6} *23*
2559.4	(10−)	203.5 *3*	100 *9*	2356.1	(9−)	[a]		Mult.: DCO indicates ΔJ=1 transition.
		364.3 *3*	23 *9*	2195.0	(8−)			
2611.7	(12+)	275.6 *3*	15.6 *16*	2336.2	12+			
		503.2 *3*	27 *3*	2108.5	(10+)	E2	0.0244	α(K)=0.0180 *3*; α(L)=0.00485 *7*; α(M)=0.001176 *17* α(N)=0.000289 *4*; α(O)=4.89×10^{-5} *7*; α(P)=1.90×10^{-6} *3* B(E2)(W.u.)>0.10 Mult.: stretched Q from DCO in (α,6nγ); not M2 from RUL.
		753.6 *3*	100 *6*	1858.0	10+	[E2]	0.00976	α(K)=0.00770 *11*; α(L)=0.001574 *22*; α(M)=0.000373 *6* α(N)=9.18×10^{-5} *13*; α(O)=1.594×10^{-5} *23*; α(P)=8.15×10^{-7} *12* B(E2)(W.u.)>0.051 Mult.: DCO in (α,6nγ) consistent with stretched Q; not M2 from RUL.
2632.90	(10−)	202.6 *3*	40 *13*	2430.5	(9−)			
		257.9 *3*	100 *17*	2374.92	(9−)	M1(+E2)[a]		Mult.: DCO in (α,6nγ) implies ΔJ=1.
		315.7 *3*	40 *7*	2317.0	(8−)			

Adopted Levels, Gammas (continued)

$\gamma(^{186}Pt)$ (continued)

E_i(level)	J^π_i	E_γ [†]	I_γ [†]	E_f	J^π_f	Mult. [&]	α [b]	Comments
2632.90	(10⁻)	379.1 3	<667	2253.95	(8⁻)	(E2) [a]	0.0506	α(K)=0.0345 5; α(L)=0.01216 18; α(M)=0.00301 5 α(N)=0.000738 11; α(O)=0.0001221 18; α(P)=3.57×10⁻⁶ 5 I_γ: 633 33 for 379γ triplet in (α,6nγ).
2696.4	(10⁻)	379.4 3	100	2317.0	(8⁻)	(E2) [a]	0.0505	α(K)=0.0345 5; α(L)=0.01213 18; α(M)=0.00300 5 α(N)=0.000735 11; α(O)=0.0001218 18; α(P)=3.56×10⁻⁶ 5
2788.0	(11⁻)	228.7 3	63 8	2559.4	(10⁻)	D+Q		DCO implies ΔJ=1.
		413.2 3	100 8	2374.92	(9⁻)	(E2) [a]	0.0401	α(K)=0.0282 4; α(L)=0.00908 13; α(M)=0.00223 4 α(N)=0.000548 8; α(O)=9.13×10⁻⁵ 13; α(P)=2.93×10⁻⁶ 5
		431.9 3	46 4	2356.1	(9⁻)			
2792.1	(11⁻)	232.7 3	31 3	2559.4	(10⁻)	(M1+E2) [a]		DCO implies ΔJ=1.
		417.2 3	100 6	2374.92	(9⁻)	(E2)	0.0391	α(K)=0.0276 4; α(L)=0.00880 13; α(M)=0.00216 3 α(N)=0.000531 8; α(O)=8.85×10⁻⁵ 13; α(P)=2.87×10⁻⁶ 4
2825.0	(14⁺)	488.9 3	100	2336.2	12⁺	(E2) [a]	0.0262	α(K)=0.0192 3; α(L)=0.00529 8; α(M)=0.001288 19 α(N)=0.000316 5; α(O)=5.34×10⁻⁵ 8; α(P)=2.02×10⁻⁶ 3 B(E2)(W.u.)=214 21
2864.4	(12⁺)	253.1 3	49 8	2611.7	(12⁺)			
		319.9 3	35 7	2544.5	(10⁺)			
		527.8 3	25 8	2336.2	12⁺			
		1006.3 3	100 8	1858.0	10⁺			
2887.2	(11⁻)	456.7 3	100	2430.5	(9⁻)	(E2) [a]	0.0310	α(K)=0.0224 4; α(L)=0.00656 10; α(M)=0.001602 23 α(N)=0.000393 6; α(O)=6.60×10⁻⁵ 10; α(P)=2.35×10⁻⁶ 4
3043.0	(12⁻)	251.0 3	24 6	2792.1	(11⁻)	D(+Q) [a]	0.498	α(K)=0.410 6; α(L)=0.0672 10; α(M)=0.01552 23 α(N)=0.00384 6; α(O)=0.000691 10; α(P)=4.67×10⁻⁵ 7 Mult.: DCO in (α,6nγ) excludes stretched Q.
		255.1 3	39 3	2788.0	(11⁻)			
		483.4 3	100 9	2559.4	(10⁻)			
3073.4	(12⁻)	377.0 [d] 3	15.3 26	2696.4	(10⁻)			
		440.5 3	100 5	2632.90	(10⁻)	(E2) [a]	0.0340	α(K)=0.0243 4; α(L)=0.00737 11; α(M)=0.00180 3 α(N)=0.000443 7; α(O)=7.42×10⁻⁵ 11; α(P)=2.54×10⁻⁶ 4
3171.7	(12⁻)	475.3 3	100	2696.4	(10⁻)	(E2) [a]	0.0281	α(K)=0.0205 3; α(L)=0.00578 9; α(M)=0.001408 20 α(N)=0.000346 5; α(O)=5.82×10⁻⁵ 9; α(P)=2.15×10⁻⁶ 3
3192.1	(13⁻)	366.9 3	21 7	2825.0	(14⁺)			
		855.9 3	100 14	2336.2	12⁺	D		DCO in (α,6nγ) excludes stretched Q.
3192.4	(14⁺)	328.2 3	52 6	2864.4	(12⁺)	(E2) [a]	0.0757	B(E2)(W.u.)>1.2 α(K)=0.0489 7; α(L)=0.0203 3; α(M)=0.00506 8 α(N)=0.001239 18; α(O)=0.000203 3; α(P)=4.98×10⁻⁶ 7
		367.3 3	8 3	2825.0	(14⁺)			
		580.4 3	100 9	2611.7	(12⁺)	(E2)	0.01737	α(K)=0.01321 19; α(L)=0.00318 5; α(M)=0.000765 11 α(N)=0.000188 3; α(O)=3.21×10⁻⁵ 5; α(P)=1.397×10⁻⁶ 20 B(E2)(W.u.)>0.13 Mult.: DCO in (α,6nγ) consistent with stretched Q; not M2 from RUL.
		856.4 3	38 4	2336.2	12⁺	(E2)	0.00747	α(K)=0.00598 9; α(L)=0.001147 16; α(M)=0.000270 4 α(N)=6.66×10⁻⁵ 10; α(O)=1.163×10⁻⁵ 17; α(P)=6.32×10⁻⁷ 9 B(E2)(W.u.)>0.0072

Adopted Levels, Gammas (continued)

γ(^{186}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	α[b]	Comments
3269.6	(14⁺)	444.7 *3*	42 *6*	2825.0	(14⁺)			
		657.8 *3*	100 *9*	2611.7	(12⁺)	(E2)[a]	0.01309	α(K)=0.01016 *15*; α(L)=0.00225 *4*; α(M)=0.000536 *8* α(N)=0.0001320 *19*; α(O)=2.27×10^{-5} *4*; α(P)=1.075×10^{-6} *15*
		933.3 *3*	55 *7*	2336.2	12⁺			
3299.8	(13⁻)	507.7 *3*	27 *7*	2792.1	(11⁻)	(E2)[a]	0.0239	α(K)=0.01766 *25*; α(L)=0.00472 *7*; α(M)=0.001144 *17* α(N)=0.000281 *4*; α(O)=4.76×10^{-5} *7*; α(P)=1.86×10^{-6} *3*
		511.8 *3*	100 *20*	2788.0	(11⁻)	(E2)[a]	0.0234	α(K)=0.01735 *25*; α(L)=0.00460 *7*; α(M)=0.001116 *16* α(N)=0.000274 *4*; α(O)=4.64×10^{-5} *7*; α(P)=1.83×10^{-6} *3*
3310.7	(13⁻)	268.0 *3*	43 *11*	3043.0	(12⁻)	(M1+E2)[a]		Mult.: ΔJ=1 transition from DCO in (α,6nγ).
		518.5 *3*	100 *21*	2792.1	(11⁻)	(E2)[a]	0.0227	α(K)=0.01686 *24*; α(L)=0.00442 *7*; α(M)=0.001072 *16* α(N)=0.000264 *4*; α(O)=4.47×10^{-5} *7*; α(P)=1.778×10^{-6} *25*
3394.8	(16⁺)	569.8 *3*	100	2825.0	(14⁺)	(E2)[a]	0.0181	α(K)=0.01374 *20*; α(L)=0.00335 *5*; α(M)=0.000807 *12* α(N)=0.000199 *3*; α(O)=3.39×10^{-5} *5*; α(P)=1.452×10^{-6} *21* B(E2)(W.u.)=1.9×10^{2} *4*
3421.4	(13⁻)	534.2 *3*	100	2887.2	(11⁻)	(E2)[a]	0.0211	α(K)=0.01580 *23*; α(L)=0.00405 *6*; α(M)=0.000979 *14* α(N)=0.000241 *4*; α(O)=4.09×10^{-5} *6*; α(P)=1.667×10^{-6} *24*
3530.8	(15⁻)	338.6 *3*	39 *7*	3192.1	(13⁻)	(E2)[a]	0.0692	α(K)=0.0453 *7*; α(L)=0.0181 *3*; α(M)=0.00451 *7* α(N)=0.001105 *16*; α(O)=0.000182 *3*; α(P)=4.63×10^{-6} *7*
		705.8 *3*	100 *6*	2825.0	(14⁺)	(E1)	0.00409	α(K)=0.00342 *5*; α(L)=0.000514 *8*; α(M)=0.0001174 *17* α(N)=2.89×10^{-5} *4*; α(O)=5.15×10^{-6} *8*; α(P)=3.32×10^{-7} *5* DCO in (α,6nγ) excludes stretched Q.
3566.9	(14⁻)	493.5 *3*	100	3073.4	(12⁻)	(E2)[a]	0.0256	α(K)=0.0188 *3*; α(L)=0.00514 *8*; α(M)=0.001250 *18* α(N)=0.000307 *5*; α(O)=5.19×10^{-5} *8*; α(P)=1.98×10^{-6} *3*
3599.8	(14⁻)	289.2 *3*	45 *8*	3310.7	(13⁻)	(M1+E2)[a]		Mult.: ΔJ=1 transition from DCO in (α,6nγ).
		556.6 *3*	100 *11*	3043.0	(12⁻)	(E2)[a]	0.0192	α(K)=0.01445 *21*; α(L)=0.00359 *5*; α(M)=0.000865 *13* α(N)=0.000213 *3*; α(O)=3.62×10^{-5} *6*; α(P)=1.527×10^{-6} *22*
3664.6	(16⁺)	472.2 *3*	100	3192.4	(14⁺)	(E2)[a]	0.0285	α(K)=0.0208 *3*; α(L)=0.00590 *9*; α(M)=0.001438 *21* α(N)=0.000353 *5*; α(O)=5.95×10^{-5} *9*; α(P)=2.18×10^{-6} *3*
3701.0	(14⁻)	529.3 *3*	100	3171.7	(12⁻)	(E2)[a]	0.0216	α(K)=0.01612 *23*; α(L)=0.00416 *6*; α(M)=0.001007 *15* α(N)=0.000247 *4*; α(O)=4.20×10^{-5} *6*; α(P)=1.700×10^{-6} *24*
3873.8	(15⁻)	574.0 *3*	100	3299.8	(13⁻)	(E2)[a]	0.0178	α(K)=0.01352 *19*; α(L)=0.00328 *5*; α(M)=0.000790 *12* α(N)=0.000194 *3*; α(O)=3.32×10^{-5} *5*; α(P)=1.430×10^{-6} *20*
3893.0	(15⁻)	293.4 *3*	42 *15*	3599.8	(14⁻)	(M1+E2)[a]		
		582.3 *3*	100 *23*	3310.7	(13⁻)	(E2)[a]	0.01724	α(K)=0.01312 *19*; α(L)=0.00315 *5*; α(M)=0.000758 *11* α(N)=0.000186 *3*; α(O)=3.18×10^{-5} *5*; α(P)=1.387×10^{-6} *20*
3963.3	(16⁺)	568[d] *1*		3394.8	(16⁺)			
		693.7 *3*	100 *8*	3269.6	(14⁺)	(E2)[a]	0.01165	α(K)=0.00910 *13*; α(L)=0.00195 *3*; α(M)=0.000464 *7* α(N)=0.0001142 *16*; α(O)=1.97×10^{-5} *3*; α(P)=9.64×10^{-7} *14*
		1138 *1*	25 *17*	2825.0	(14⁺)			
3983.9	(17⁻)	453.1 *3*	100 *8*	3530.8	(15⁻)	(E2)[a]	0.0316	α(K)=0.0228 *4*; α(L)=0.00672 *10*; α(M)=0.001643 *24* α(N)=0.000404 *6*; α(O)=6.77×10^{-5} *10*; α(P)=2.39×10^{-6} *4*
		589.1 *3*	62 *9*	3394.8	(16⁺)	(D)		DCO in (α,6nγ) excludes stretched Q.

From ENSDF

$\gamma(^{186}Pt)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f	Mult.[&]	α[b]	Comments
4051.3	(18$^+$)	656.5 *3*	100	3394.8	(16$^+$)	(E2)[a]	0.01315	α(K)=0.01020 *15*; α(L)=0.00226 *4*; α(M)=0.000539 *8* α(N)=0.0001327 *19*; α(O)=2.28×10^{-5} *4*; α(P)=1.080×10^{-6} *16* B(E2)(W.u.)>58
4110.6	(16$^-$)	543.7 *3*	100	3566.9	(14$^-$)	(E2)[a]	0.0202	α(K)=0.01520 *22*; α(L)=0.00384 *6*; α(M)=0.000928 *13* α(N)=0.000228 *4*; α(O)=3.88×10^{-5} *6*; α(P)=1.605×10^{-6} *23*
4172.6	(16$^-$)	471.6 *3*	100	3701.0	(14$^-$)	(E2)[a]	0.0286	α(K)=0.0208 *3*; α(L)=0.00592 *9*; α(M)=0.001444 *21* α(N)=0.000355 *5*; α(O)=5.97×10^{-5} *9*; α(P)=2.19×10^{-6} *3*
4208.5	(16$^-$)	315.5 *3*	25 *10*	3893.0	(15$^-$)			
		608.6 *3*	100 *25*	3599.8	(14$^-$)	(E2)[a]	0.01558	α(K)=0.01194 *17*; α(L)=0.00278 *4*; α(M)=0.000667 *10* α(N)=0.0001641 *23*; α(O)=2.81×10^{-5} *4*; α(P)=1.264×10^{-6} *18*
4258.5	(18$^+$)	593.9 *3*	100	3664.6	(16$^+$)	(E2)[a]	0.01648	α(K)=0.01258 *18*; α(L)=0.00298 *5*; α(M)=0.000715 *10* α(N)=0.0001760 *25*; α(O)=3.01×10^{-5} *5*; α(P)=1.331×10^{-6} *19*
4393.2		519.4 *3*	100	3873.8	(15$^-$)			
4483.0	(17$^-$)	609.2 *3*	100	3873.8	(15$^-$)			
4518.0	(17$^-$)	625.0 *3*	100	3893.0	(15$^-$)			
4539.9	(19$^-$)	556.0 *3*	100	3983.9	(17$^-$)	(E2)[a]	0.0192	α(K)=0.01448 *21*; α(L)=0.00360 *5*; α(M)=0.000868 *13* α(N)=0.000213 *3*; α(O)=3.63×10^{-5} *6*; α(P)=1.530×10^{-6} *22*
4661.1?	(18$^+$)	697.8[d] *3*	100	3963.3	(16$^+$)			
4699.0	(18$^-$)	588.4 *3*	100	4110.6	(16$^-$)	(E2)[a]	0.01683	α(K)=0.01283 *18*; α(L)=0.00306 *5*; α(M)=0.000735 *11* α(N)=0.000181 *3*; α(O)=3.09×10^{-5} *5*; α(P)=1.357×10^{-6} *19*
4788.3	(20$^+$)	737.0 *3*	100	4051.3	(18$^+$)	(E2)[a]	0.01023	α(K)=0.00805 *12*; α(L)=0.001666 *24*; α(M)=0.000395 *6* α(N)=9.73×10^{-5} *14*; α(O)=1.687×10^{-5} *24*; α(P)=8.53×10^{-7} *12*
4836.0	(18$^-$)	627.5 *3*	100	4208.5	(16$^-$)	(E2)[a]	0.01454	α(K)=0.01120 *16*; α(L)=0.00255 *4*; α(M)=0.000611 *9* α(N)=0.0001505 *22*; α(O)=2.58×10^{-5} *4*; α(P)=1.186×10^{-6} *17*
4938.4		545.2 *3*	100	4393.2				
4956.2	(20$^+$)	697.7 *3*	100	4258.5	(18$^+$)	(E2)[a]	0.01151	α(K)=0.00900 *13*; α(L)=0.00192 *3*; α(M)=0.000457 *7* α(N)=0.0001125 *16*; α(O)=1.94×10^{-5} *3*; α(P)=9.53×10^{-7} *14*
5188.6	(21$^-$)	648.7 *3*	100	4539.9	(19$^-$)	(E2)[a]	0.01350	α(K)=0.01045 *15*; α(L)=0.00233 *4*; α(M)=0.000557 *8* α(N)=0.0001372 *20*; α(O)=2.36×10^{-5} *4*; α(P)=1.107×10^{-6} *16*
5321.2	(20$^-$)	622.2 *3*	100	4699.0	(18$^-$)			
5597.1	(22$^+$)	808.8 *3*	100	4788.3	(20$^+$)	(E2)[a]	0.00841	α(K)=0.00669 *10*; α(L)=0.001319 *19*; α(M)=0.000311 *5* α(N)=7.67×10^{-5} *11*; α(O)=1.336×10^{-5} *19*; α(P)=7.08×10^{-7} *10*
5738.1	(22$^+$)	781.9 *3*	100	4956.2	(20$^+$)			
5921.8	(23$^-$)	733.2 *3*	100	5188.6	(21$^-$)	(E2)[a]	0.01034	α(K)=0.00814 *12*; α(L)=0.001688 *24*; α(M)=0.000401 *6* α(N)=9.86×10^{-5} *14*; α(O)=1.709×10^{-5} *24*; α(P)=8.62×10^{-7} *12*
6463.8	(24$^+$)	866.7 *3*	100	5597.1	(22$^+$)	(E2)[a]	0.00729	α(K)=0.00584 *9*; α(L)=0.001115 *16*; α(M)=0.000262 *4* α(N)=6.46×10^{-5} *9*; α(O)=1.130×10^{-5} *16*; α(P)=6.17×10^{-7} *9*
6582.5	(24$^+$)	844.4 *3*	100	5738.1	(22$^+$)			
6729.8	(25$^-$)	808 *1*	100	5921.8	(23$^-$)			
7407.8?	(26$^+$)	944[d] *1*	100	6463.8	(24$^+$)			

$^{186}_{78}Pt_{108}$-12

Adopted Levels, Gammas (continued)

$\gamma(^{186}Pt)$ (continued)

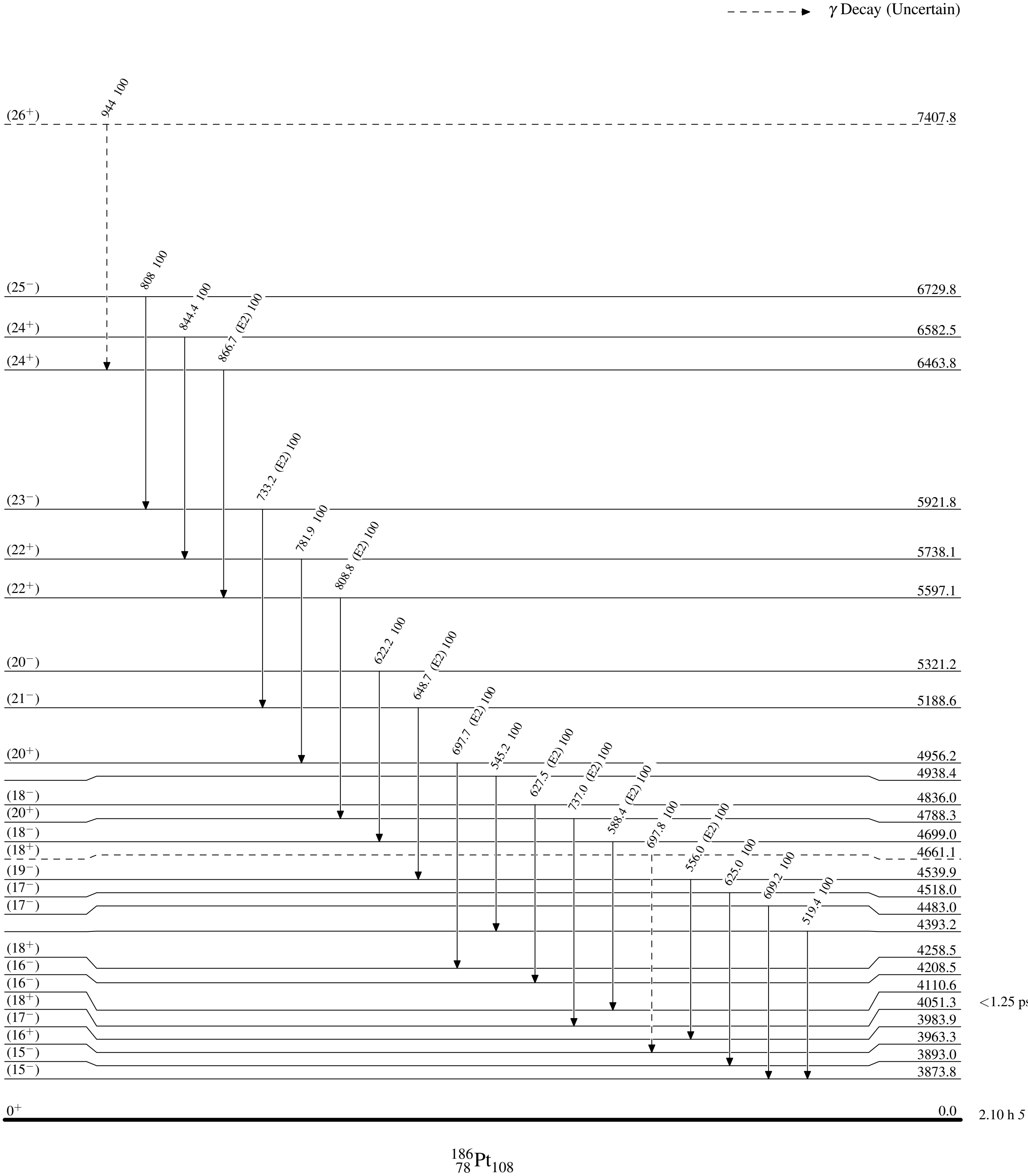
[†] From (α,6nγ), unless noted otherwise.
[‡] From ^{186}Au ε decay.
[#] Weighted average of data from ^{186}Au ε decay and (α,6nγ).
[@] Weighted average of 1990He19 (α,6nγ), 1975De21 (^{16}O,4nγ).
[&] From measured α(K)exp and/or $\gamma(\theta$,H,T) in ^{186}Au ε decay, unless noted otherwise.
[a] From DCO ratio in (α,6nγ) and band structure. Stretched Q intraband transitions are assigned as (E2), and D+Q intraband transitions or transitions between members of bands which are signature partners are assigned as (M1+E2).
[b] Additional information 1.
[c] If no value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[d] Placement of transition in the level scheme is uncertain.

$^{186}_{78}Pt_{108}$-13

Adopted Levels, Gammas

Level Scheme

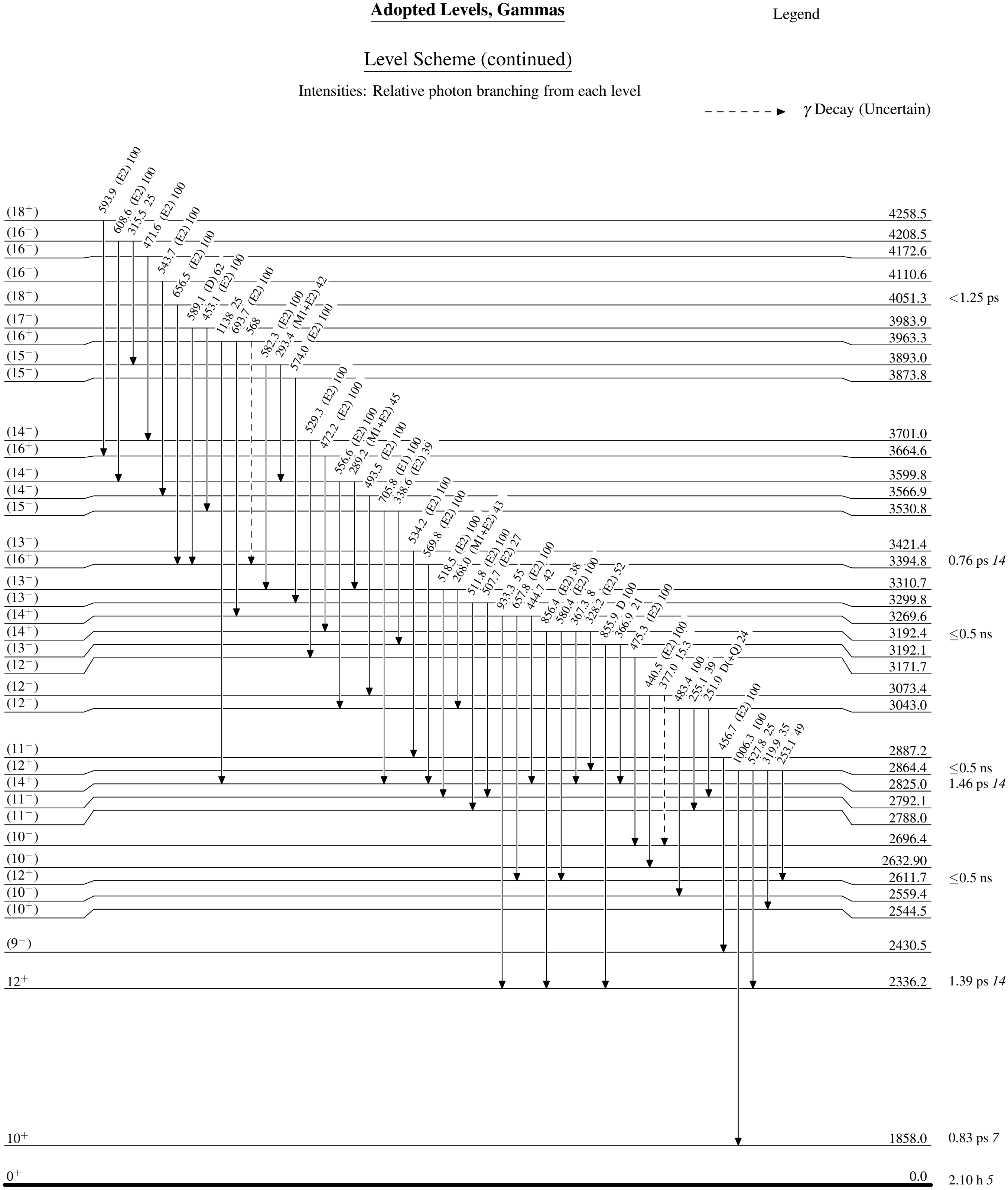
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

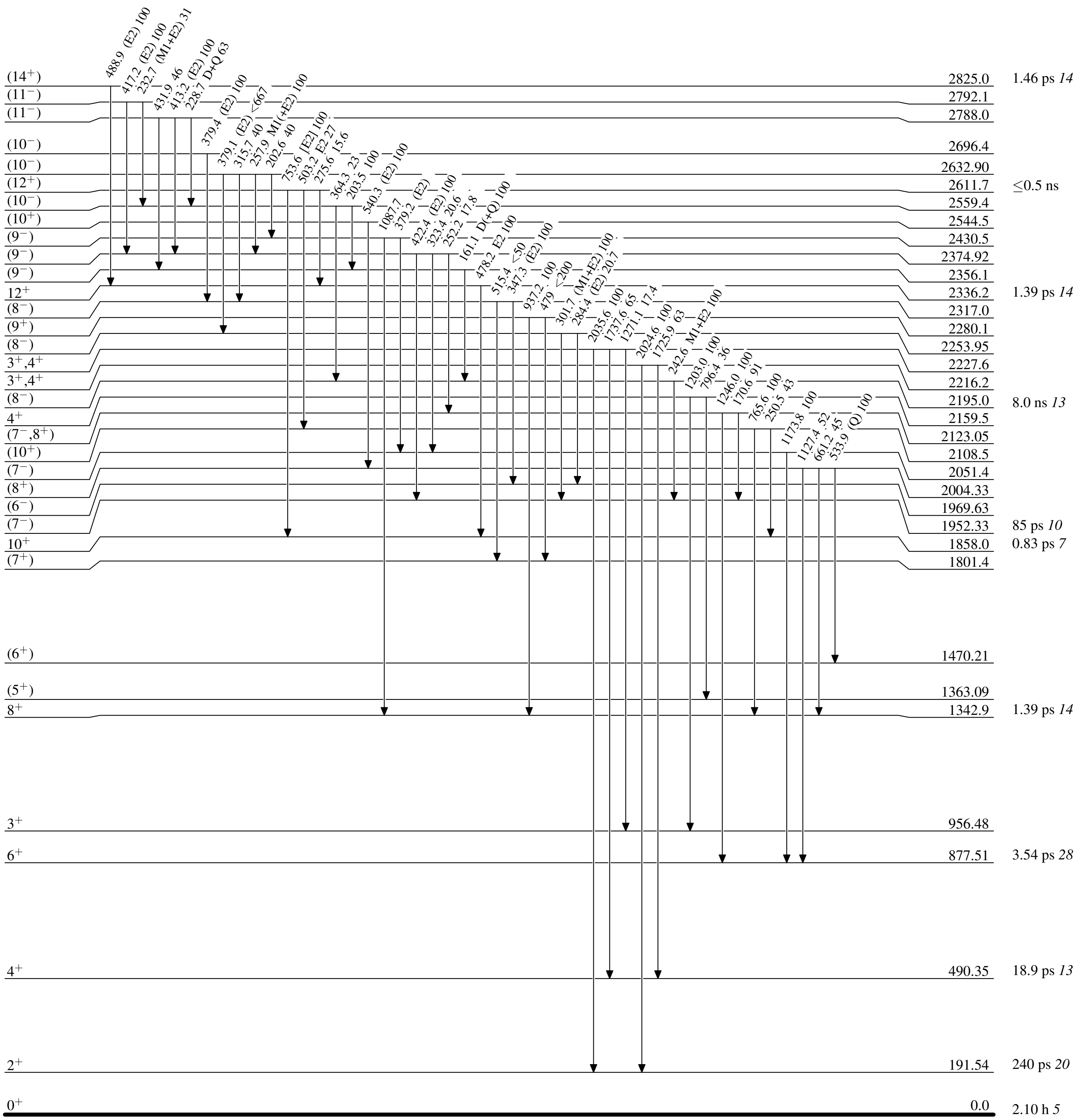


$^{186}_{78}Pt_{108}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{186}_{78}Pt_{108}$

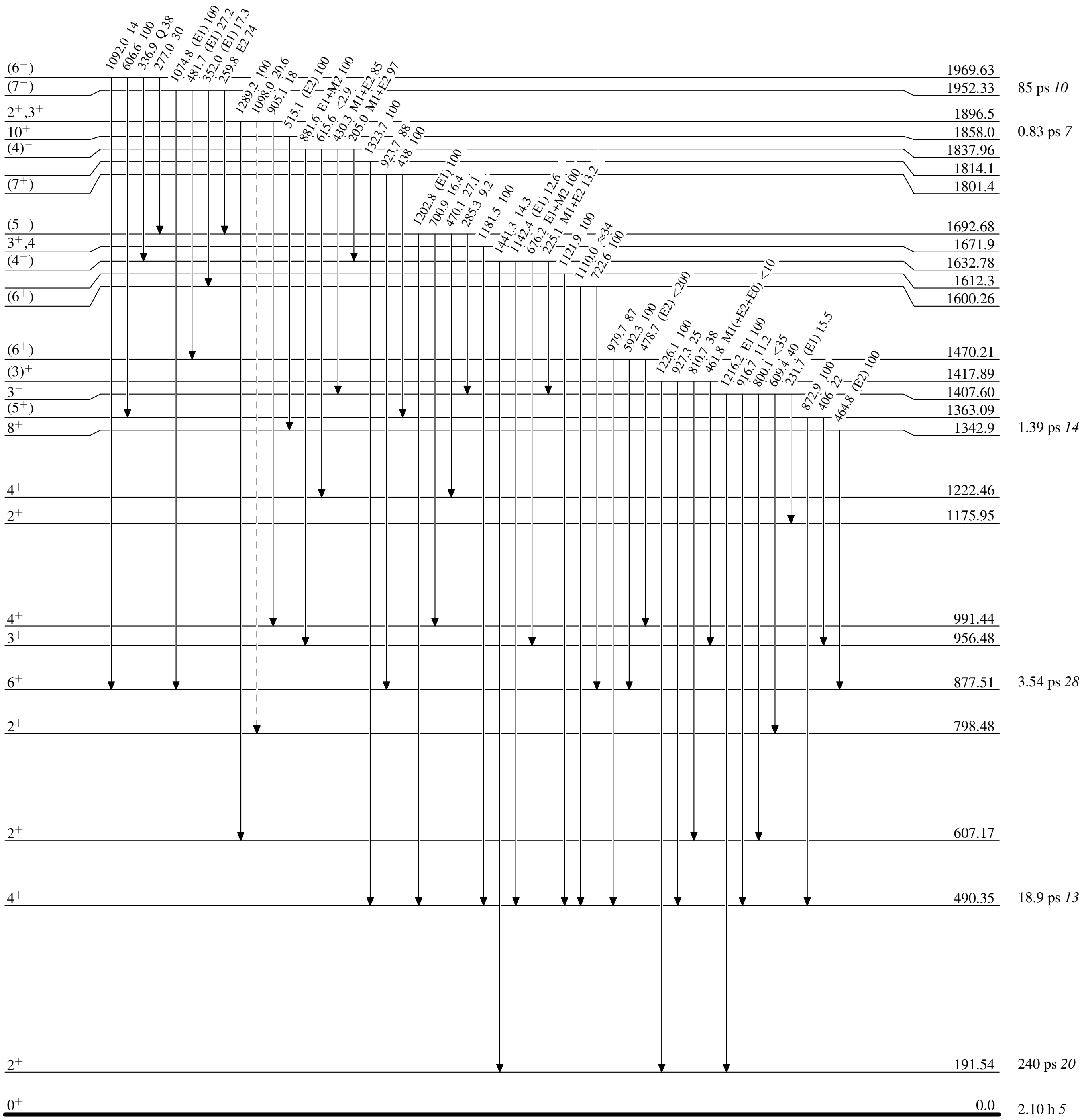
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)

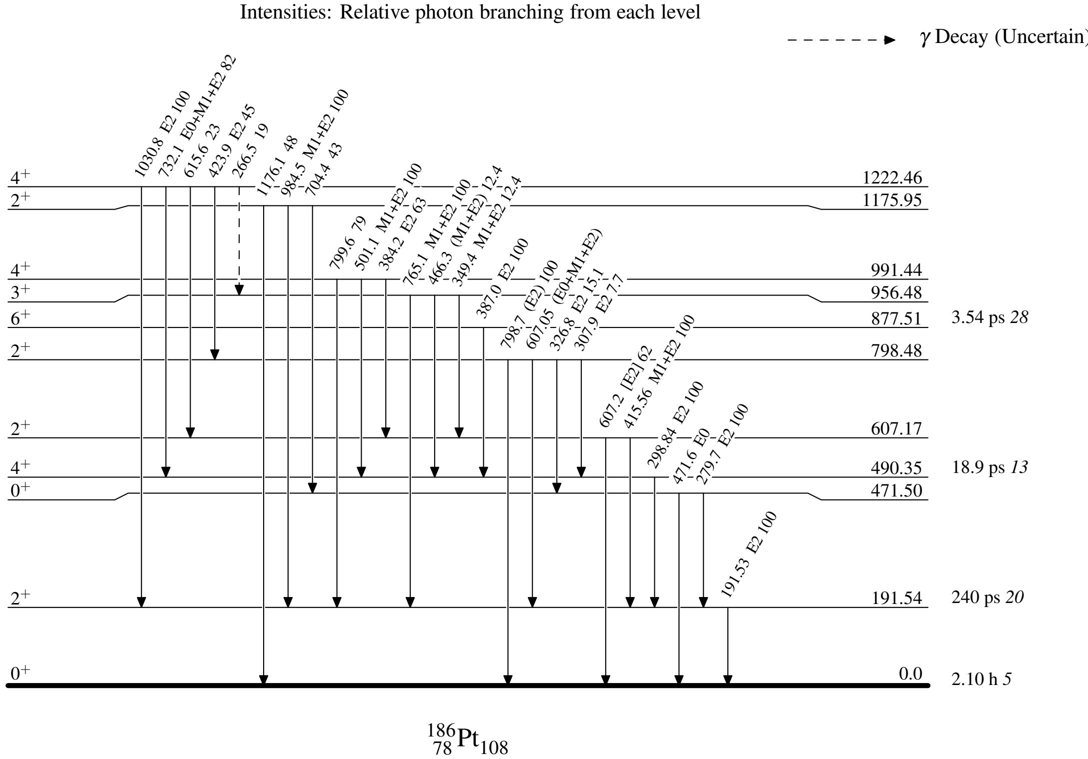


$^{186}_{78}Pt_{108}$

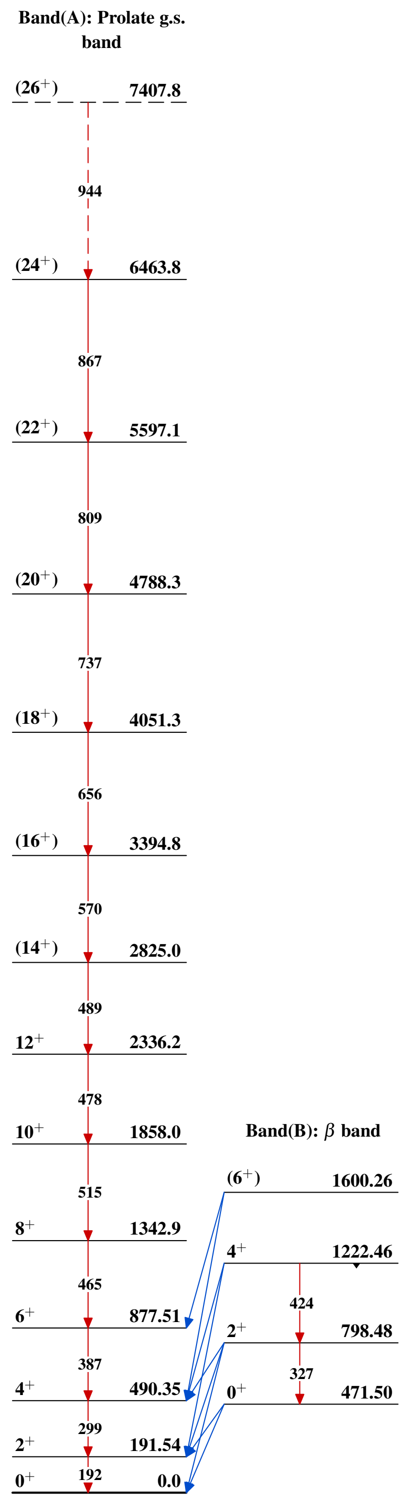
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

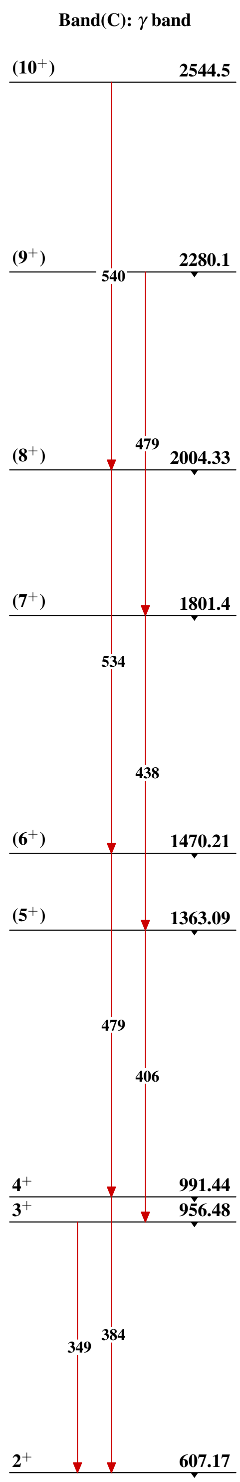


Adopted Levels, Gammas



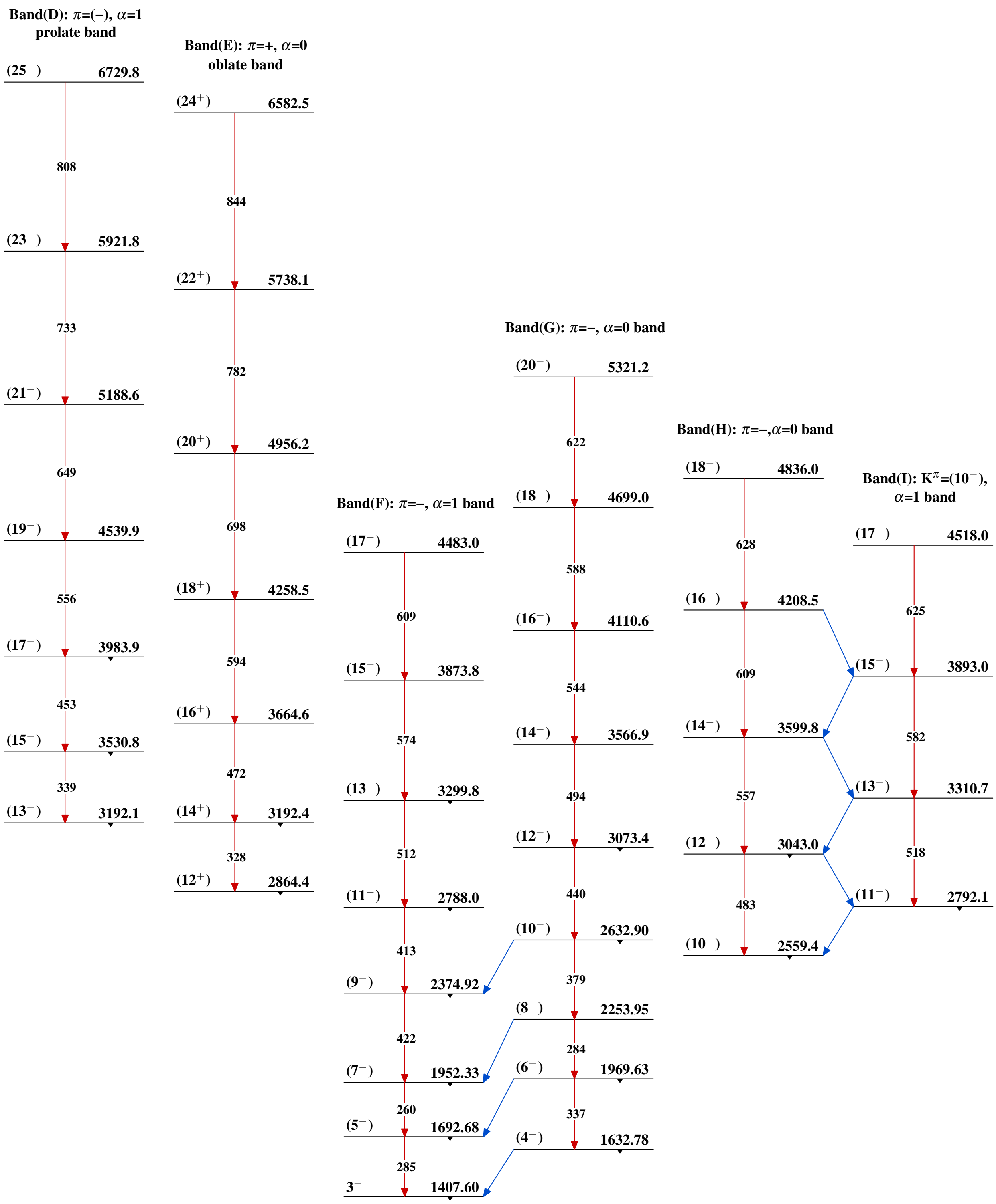
$^{186}_{78}Pt_{108}$

Adopted Levels, Gammas (continued)



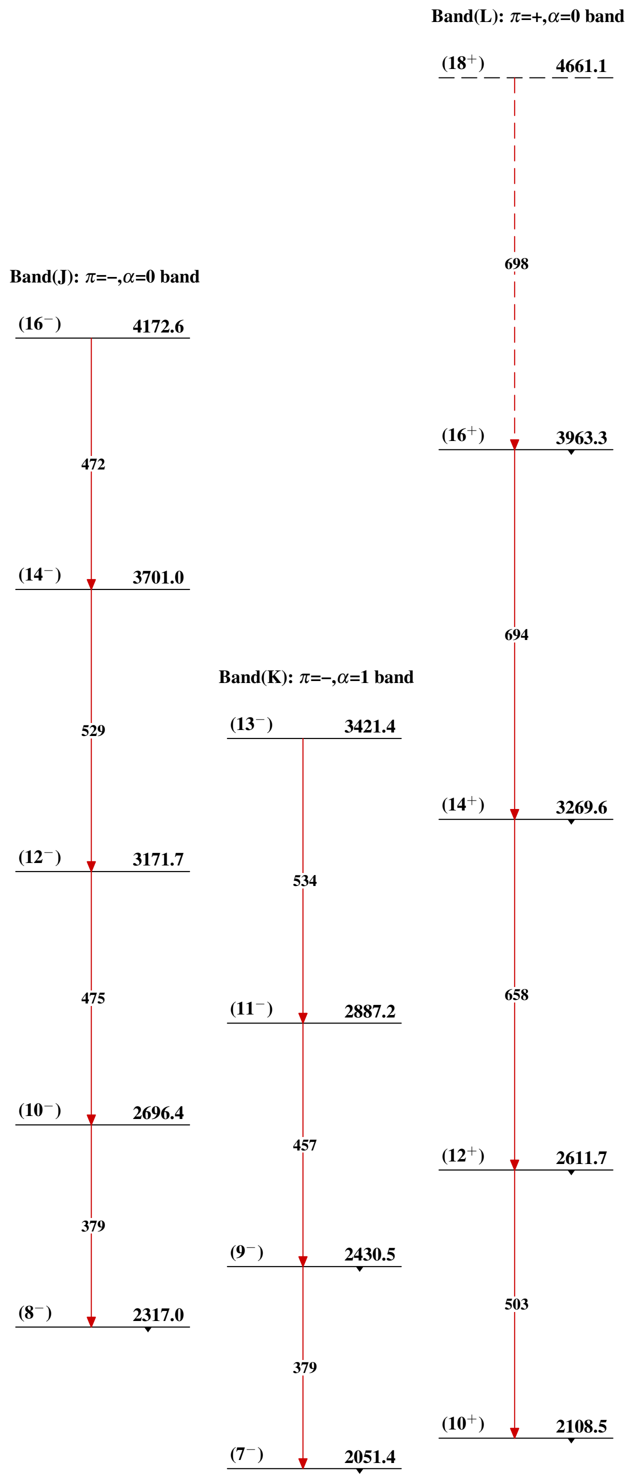
$^{186}_{78}Pt_{108}$

Adopted Levels, Gammas (continued)



$^{186}_{78}Pt_{108}$

Adopted Levels, Gammas (continued)



$^{186}_{78}Pt_{108}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Juutinen, D. J. Hartley	NDS 150, 1 (2018)	1-Feb-2018

Q(β^-)=−5450 *6*; S(n)=9207 *25*; S(p)=5561 *28*; Q(α)=4007 *5* 2017Wa10
Additional information 1.

^{188}Pt Levels

Cross Reference (XREF) Flags

A ^{188}Au ε decay (8.84 min)
B ^{190}Pt(p,t)
C (HI,xnγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	XREF	Comments
0.0[@]	0$^+$	10.16 d *18*	ABC	%ε+%β^+=99.999974 *3*; %α=2.6×10^{-5} *3* %α: Weighted average of 2.2×10^{-5} *5* (1979Ha10), 2.8×10^{-5} *5* (1978El11) and 3.0×10^{-5} *6* (1963Gr08). Other: 5.0×10^{-5} *+50−25* (1963Ka17). T$_{1/2}$: Weighted average of 10.5 d *10* (1963Ka17), 10.2 d *3* (1963Gr08), 10.0 d *3* (1955Sm42), and 10.3 d *4* (1954Na25). Eα=3870 keV *50* (1963Ka17), 3930 keV *10* (1963Gr08), 3915 keV *10* (1978El11) and 3905 keV *15* (1979Ha10). Δ<r^2>(^{190}Pt−^{188}Pt)=−0.040 fm^2 *8* (1988Le22). Δ<r^2>(^{194}Pt−^{188}Pt)=−0.188 fm^2 *7* (1992Hi07,1990Hi08).
265.61[@] *5*	2$^+$	66 ps *3*	A C	μ=+0.58 *8* J$^\pi$: 265.63γ E2 to 0$^+$. T$_{1/2}$: Weighted average of 65 ps *5* (1995AnZQ) and 67 ps *+4−3* (2017Ro07), both using the Dopler-shift recoil distance method. Other: 72 ps *13* using 265.63$\beta\gamma$(t) in 1972Fi12. μ: From g=+0.29 *4* using the transient-field integral PAC technique (1996St12). $\omega\tau$(2$^+$)=160 mrad *10* and τ(2$^+$)=93 ps *7* were used.
605.69[b] *6*	2$^+$		A C	J$^\pi$: 605.3γ E2 to 0$^+$.
670.97[@] *6*	4$^+$	5.1 ps *+15−11*	A C	J$^\pi$: 405.49γ E2 to 2$^+$; band assignment.
798.75 *8*	0$^+$		AB	XREF: B(800). J$^\pi$: L(p,t)=0; 533.4γ E2 to 2$^+$ and 799.2γ E0 to 0$^+$.
936.41 *6*	3$^+$		A C	J$^\pi$: 330.76γ E2(+M1) to 2$^+$; 689.1γ E2 from 1$^+$.
1085.38[b] *8*	4$^+$		A C	J$^\pi$: 479.40γ E2 to 2$^+$, 414.79γ M1(+E2) to 4$^+$.
1115.22 *5*	2$^+$		A C	XREF: C(1116.4). J$^\pi$: 316.53γ to 0$^+$, 414.18γ E2 to 4$^+$.
1184.43[@] *13*	6$^+$	1.53 ps *14*	C	J$^\pi$: 513.4γ E2 to 4$^+$; band assignment.
1214.69 *9*	(2)$^+$		A	J$^\pi$: 949.09γ E2(+M1) to 2$^+$, 1214.2γ to 0$^+$.
1312.73 *6*	2$^+$		A	J$^\pi$: 1312.62γ E2 to 0$^+$, 641.82γ (E2) to 4$^+$.
1349.99 *6*	3$^-$		A C	J$^\pi$: 679.13γ E1 to 4$^+$, 1084.33γ E1 to 2$^+$.
1443.7? *3*			C	
1528.04 *13*	2$^+$		A	J$^\pi$: 857.0γ to 4$^+$, 1528.3γ to 0$^+$, 1262.46γ E0+M1+E2 to 2$^+$.
1565.60[d] *13*	5$^-$		C	J$^\pi$: 215.9γ E2 to 3$^-$, 381.1γ to 6$^+$.
1625.71 *8*	1$^+$		A	J$^\pi$: 1626.2γ M1 to 0$^+$, 689.1 E2 to 3$^+$.
1636.31[b] *13*	6$^+$		C	J$^\pi$: 550.9γ E2 to 4$^+$, 451.9γ to 6$^+$; band assignment.
1674.53 *22*	(0$^+$,1,2)		A	J$^\pi$: 1408.92γ to 2$^+$; probable direct population in ^{188}Au ε decay (J$^\pi$=(1$^-$)).
1685.6 *4*	(0$^+$,1,2)		A	J$^\pi$: 1079.7γ to 2$^+$; probable direct population in ^{188}Au ε decay (J$^\pi$=(1$^-$)).
1768.15[d] *16*	7$^-$	0.20 ns *2*	C	J$^\pi$: 202.6γ E2 to 5$^-$; 583.7γ (E1) to 6$^+$; band assignment. T$_{1/2}$: From 203ce(K)(t) in 1979Ri08. Other: 0.621 ns *38* from 203ce(K)(t)

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{188}Pt Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$[#]	XREF	Comments
				in 1978Ti02, but the line is weak and contaminations cannot be excluded (see 1978Ti02 for details). A long-lived component of 14 ns *2* was also reported to the 203ce(K) line in 1978Ti02, but not in 1979Ri08.
1776.08 *7*	(1$^-$)		A	J$^{\pi}$: 426.5γ (E2) to 3$^-$; 977.27γ (E1) to 0$^+$.
1782.23[@] *19*	8$^+$	0.97 ps *14*	C	J$^{\pi}$: 597.8γ E2 to 6$^+$; band assignment.
1810.57 *9*	(2)$^+$		A	J$^{\pi}$: 499.58γ (E0+M1+E2) to 2$^+$; 1139.7γ to 4$^+$.
1954.26 *14*	(1$^+$,2)		A	J$^{\pi}$: 1017.91γ to 3$^+$; probable direct population in ^{188}Au ε decay (J$^{\pi}$=(1$^-$)).
2171.4 *4*	(0$^+$,1,2)		A	J$^{\pi}$: 1905.9γ to 2$^+$; probable direct population in ^{188}Au ε decay (J$^{\pi}$=(1$^-$)).
2179.75[c] *23*	8$^-$		C	J$^{\pi}$: 411.6γ M1+E2 to 7$^-$; band assignment.
2210.2? *3*			A	
2246.52[b] *17*	8$^+$		C	J$^{\pi}$: 610.2γ E2 to 6$^+$; band assignment.
2295.61 *12*	(1,2$^+$)		A	J$^{\pi}$: 2295.48γ to 0$^+$, 2030.02γ to 2$^+$.
2312.45[d] *21*	9$^-$		C	J$^{\pi}$: 544.3γ E2 to 7$^-$; band assignment.
2437.13[@] *23*	10$^+$	0.49 ps *+28−21*	C	J$^{\pi}$: 654.9γ to 8$^+$; band assignment.
2446.89 *22*	(1,2$^+$)		A	J$^{\pi}$: 2446.87γ to 0$^+$; probable direct population in ^{188}Au ε decay (J$^{\pi}$=(1$^-$)).
2458.05[e] *22*	9$^-$	≈0.66 ns	C	J$^{\pi}$: 689.3γ E2 to 7$^-$; band assignment. $T_{1/2}$: From 1979Ri08, where a delayed component is observed for the electron line associated with the 689-keV γ ray.
2468.4? *5*	(1,2$^+$)		A	J$^{\pi}$: 1669.6γ to 0$^+$; probable direct population in ^{188}Au ε decay (J$^{\pi}$=(1$^-$)).
2497.50 *13*			A	
2524.65? *19*			A	
2588.6? *3*			A	
2620.2 *3*	(8$^+$)		C	J$^{\pi}$: 838.0γ (E2) to 8$^+$. Assigned J$^{\pi}$=(9$^+$) in 1988KaZW, but no value was given in 1979DaZN. The relatively lower population of this level, compared to the 10$^+$ level at 2664 keV, would be consistent with J^{π}=8$^+$. The alternative J^{π}=6$^+$ assignment can be excluded since such a level won't be populated in (HI,xnγ).
2651.25[c] *24*	10$^-$		C	J$^{\pi}$: 338.8γ M1+E2 to 9$^-$, 471.5γ E2 to 8$^-$; band assignment.
2663.63[b] *21*	10$^+$		C	J$^{\pi}$: 417.1γ E2 to 8$^+$, 226.5γ to 10$^+$; band assignment.
2701.35[e] *25*	10$^-$		C	J$^{\pi}$: 243.3γ (M1+E2) to 9$^-$; band assignment.
2702.03 *24*	10$^+$		C	J$^{\pi}$: 919.8γ E2 to 8$^+$.
2772.6[d] *3*	11$^-$		C	J$^{\pi}$: 460.2γ E2 to 9$^-$; band assignment.
2798.1? *5*			A	
2810.13[&] *23*	12$^+$	0.66 ns *4*	C	J$^{\pi}$: 108.1γ E2 to 10$^+$. $T_{1/2}$: From 108-, 147- and 373ce(K)(t) in 1979Ri08. configuration: $\nu(i_{13/2}^{-2})$ rotational-aligned state. The proposed shape isomer interpretation in 2014Mu12 seems to be incorrect. It is based on the observed reduced B(E2) values from 2002Si10 and comparison with Cranked-model calculations, but the values quoted in 2002Si10 are incorrect. See 2015Ko14 for detailed interpretation.
2875.1[a] *3*	(11$^+$)		C	J$^{\pi}$: 173.1γ (M1) to 10$^+$.
2909.6? *3*	(2$^+$)		A	J$^{\pi}$: probable E0 admixture in 1596.9γ to 2$^+$; direct population in ^{188}Au ε decay (J$^{\pi}$=(1$^-$)).
2960.3[e] *3*	11$^-$		C	J$^{\pi}$: 502.3γ E2 to 9$^-$; band assignment.
3046.73 *14*			A	
3102.4[c] *3*	12$^-$		C	J$^{\pi}$: 329.8γ to 11$^-$, 451.2γ E2 to 10$^-$; band assignment.
3103.6[@] *3*	12$^+$	<0.42 ps	C	J$^{\pi}$: 666.5γ E2 to 10$^+$; band assignment.
3139.0[&] *3*	14$^+$		C	J$^{\pi}$: 328.9γ E2 to 12$^+$; band assignment.
3182.0 *3*	12$^+$		C	J$^{\pi}$: 744.9γ E2 to 10$^+$.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{188}Pt Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
3226.6[e] 3	12⁻	C	Jπ: 525.3γ E2 to 10⁻; band assignment.
3232.49 17		A	
3260.66 18		A	
3261.3[a] 4	(13⁺)	C	Jπ: 386.2γ (E2) to (11⁺); band assignment.
3325.1[d] 4	13⁻	C	Jπ: 552.5γ E2 to 11⁻; band assignment.
3565.0[e] 4	13⁻	C	Jπ: 604.6γ E2 to 11⁻; band assignment.
3580.5[@] 3	14⁺	C	Jπ: 476.9γ E2 to 12⁺; band assignment.
3625.8[c] 4	14⁻	C	Jπ: 523.3γ E2 to 12⁻; band assignment.
3627.0[&] 4	16⁺	C	Jπ: 488.0γ E2 to 14⁺; band assignment.
3749.6[a] 4	(15⁺)	C	Jπ: 488.3γ to (13⁺); band assignment.
3867.2[e] 4	14⁻	C	Jπ: 640.5γ E2 to 12⁻; band assignment.
3946.6[d] 4	15⁻	C	Jπ: 621.4γ E2 to 13⁻; band assignmnet.
4007.6[@] 4	16⁺	C	Jπ: 427.1γ E2 to 14⁺; band assignment.
4174.5[c] 4	16⁻	C	Jπ: 548.7γ to 14⁻; band assignment.
4237.8[e] 4	15⁻	C	Jπ: 672.8γ E2 to 13⁻; band assignment.
4243.8[&] 4	18⁺	C	Jπ: 616.8γ E2 to 16⁺; band assignment.
4280.5[f] 4	(17⁻)	C	Jπ: 333.9γ (E2) to 15⁻; band assignment.
4353.2[a] 4	(17⁺)	C	Jπ: 603.6γ to (15⁺); band assignment.
4478.8[@] 6	(18⁺)	C	Jπ: 471.2γ to 16⁺; band assignment.
4549.7[e] 7	(16⁻)	C	Jπ: 682.5γ (E2) to 14⁻; band assignment.
4593.4[f] 4	(18⁻)	C	Jπ: 312.9γ to (17⁻); band assignment.
4665.4[d] 4	(17⁻)	C	Jπ: 718.8γ to 15⁻; band assignment.
4765.4[c] 7	(18⁻)	C	Jπ: 590.9γ to 16⁻; band assignment.
4947.6[f] 5	(19⁻)	C	Jπ: 354.2γ to (18⁻); band assignment.
4960.7[&] 5	20⁺	C	Jπ: 716.9γ E2 to 18⁺; band assignment.
5201.3[g] 6		C	
5505.2[g] 6		C	
5744.9[&] 7	(22⁺)	C	Jπ: 784.2γ to 20⁺; band assignment.
6549.9[&] 9	(24⁺)	C	Jπ: 805.0γ to (22⁺); band assignment.
7367.9[&] 10	(26⁺)	C	Jπ: 818.0γ to (24⁺); band assignment.

[†] From least-squares fit to Eγ′s.
[‡] From deduced transition multipolarities and band structures.
[#] From 2017Ro07 in (HI,xnγ), using the recoil distance doppler shift method, unless otherwise stated.
[@] Band(A): K^π=0⁺, ground-state band.
[&] Band(B): Band based on the 2810.13-keV level, associated with a pair of $i_{13/2}$ neutrons (α=0).
[a] Band(C): Band based on the 2875.1-keV level, associated witha pair of $i_{13/2}$ neutrons (α=1).
[b] Band(D): K^π=2⁺, gamma-vibrational band.
[c] Band(E): Band based on the 2179.75-keV level (α=0). Probably a mixture of several bands within the ν^2(9/2[624],1/2[510]) and ν^2(9/2[624],3/2[512]) configurations (by the evaluators).
[d] Band(F): Band based on the 1768.15-keV level (α=1). Probably a mixture of several bands within the ν^2(9/2[624],1/2[510]) and ν^2(9/2[624],3/2[512]) configurations (by the evaluators).
[e] Band(G): K^π=9⁻, ν^2(9/2[624],9/2[505]) band.
[f] Band(H): Band based on the 4280.5-keV level.
[g] Band(I): Band based on the 5201.3-keV level.

$\gamma(^{188}Pt)$

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[#]	α[@]	Comments
265.61	2^+	265.63[‡] *6*	100[‡]	0.0	0^+	E2	0.1425	α(K)=0.0829 *12*; α(L)=0.0451 *7*; α(M)=0.01137 *16* α(N)=0.00278 *4*; α(O)=0.000450 *7*; α(P)=8.21×10^{-6} *12* B(E2)(W.u.)=89 *4* Mult.: From K/L1=7.4 *14*, L1/L2=0.44 *9*, L1/L3=0.77 *17* (1970Jo02), K/L3=5.8 *7* and α(L3)exp=0.0143 *7* (1972Fi12); K/L=2.4, α(L)exp=0.032 (1971Hu02); DCO=1.13 *3* and POL=0.11 *3* (2017Mu12); K/L≈2 (1979Ri08); A_2=0.216 *9*, A_4=−0.030 *11* (1967Ne02); A_2=0.16 *4*, A_4=−0.08 *5* (1988KaZW); A_2=0.21 *2*, A_4=−0.05 *3* (1979DaZN).
605.69	2^+	340.04[‡] *5*	100[‡] *4*	265.61	2^+	E2(+M1)	0.218	α(K)=0.180 *3*; α(L)=0.0292 *4*; α(M)=0.00674 *10* α(N)=0.001668 *24*; α(O)=0.000300 *5*; α(P)=2.03×10^{-5} *3* Mult.: From α(L3)exp=0.0060 *4* (1972Fi12). Others: α(K)exp=0.055 *5* (1970Jo02) and K/M=13.9, α(K)exp=0.055, α(L)exp=0.004 (1971Hu02). However, 1972Fi12 pointed out that ce(K)(340γ) is complex. DCO=1.02 *10* and POL=−0.05 *9* (2017Mu12).
		605.3[‡] *2*	68.2[‡] *25*	0.0	0^+	E2	0.01578	α(K)=0.01208 *17*; α(L)=0.00282 *4*; α(M)=0.000677 *10* α(N)=0.0001667 *24*; α(O)=2.85×10^{-5} *4*; α(P)=1.279×10^{-6} *18* Mult.: From α(K)exp=0.0114 *4* (1972Fi12); α(K)exp=0.009 (1971Hu02). DCO=1.10 *3* and POL=0.11 *5* (2017Mu12); A_2=0.24 *5*, A_4=−0.08 *5* (1988KaZW); A_2=0.23 *6*, A_4=−0.03 *8* (1979DaZN).
670.97	4^+	405.49[‡] *5*	100[‡]	265.61	2^+	E2	0.0422	α(K)=0.0295 *5*; α(L)=0.00967 *14*; α(M)=0.00238 *4* α(N)=0.000584 *9*; α(O)=9.73×10^{-5} *14*; α(P)=3.06×10^{-6} *5* B(E2)(W.u.)=1.5×10^2 *+4−5* Mult.: From α(L3)exp=0.0023 *3* (1972Fi12). Also α(M)exp=0.0027 *5* (1972Fi12), but the authors pointed out that this line is complex in ce data. DCO=1.02 *2* and POL=0.12 *2* (2017Mu12); A_2=0.270 *13*, A_4=−0.044 *14* (1967Ne02); A_2=0.23 *4*, A_4=−0.07 *5* (1988KaZW); A_2=0.26 *2*, A_4=−0.07 *3* (1979DaZN).
798.75	0^+	192.89[‡] *19*	2.9[‡] *7*	605.69	2^+			
		533.4[‡] *3*	100[‡] *4*	265.61	2^+	E2	0.0212	α(K)=0.01585 *23*; α(L)=0.00407 *6*; α(M)=0.000983 *14* α(N)=0.000242 *4*; α(O)=4.10×10^{-5} *6*; α(P)=1.672×10^{-6} *24* Mult.: From α(L)exp=0.0039 *4* (1972Fi12); α(K)exp=0.014 (1971Hu02).
		799.2 *5*		0.0	0^+	E0		E_γ: From ^{188}Au ε decay. Mult.: From α(K)exp≥1.3 (1972Fi12); α(K)exp≥2 (1971Hu02).
936.41	3^+	330.76[‡] *5*	62.3[‡] *24*	605.69	2^+	E2(+M1)	0.234	α(K)=0.193 *3*; α(L)=0.0315 *5*; α(M)=0.00727 *11* α(N)=0.00180 *3*; α(O)=0.000324 *5*; α(P)=2.19×10^{-5} *3* I_γ: Other: 95 *10* in (HI,xnγ). Mult.: From α(L3)exp=0.0055 *7* (1972Fi12). A_2=−0.08 *5*, A_4=0.08 *5* (1988KaZW).
		670.83[‡] *5*	100[‡] *4*	265.61	2^+	M1(+E2)	0.0363	α(K)=0.0301 *5*; α(L)=0.00479 *7*; α(M)=0.001102 *16* α(N)=0.000273 *4*; α(O)=4.91×10^{-5} *7*; α(P)=3.35×10^{-6} *5* Mult.: From A_2=0.02 *5*, A_4=−0.06 *6* (1988KaZW).
1085.38	4^+	414.79[‡] *10*	70[‡] *8*	670.97	4^+	M1(+E2)	0.1277	α(K)=0.1056 *15*; α(L)=0.01708 *24*; α(M)=0.00394 *6*

$^{188}_{78}Pt_{110}$-4

$\gamma(^{188}$Pt) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.#	α@	Comments
								α(N)=0.000974 *14*; α(O)=0.0001755 *25*; α(P)=1.190×10^{-5} *17* I_γ: Other: 40.2 *16* in (HI,xnγ). Mult.: From α(K)exp=0.078 *11* (1972Fi12) for 413.3γ+414.79γ. A_2=−0.06 *5*, A_4=−0.07 *5* (1988KaZW); A_2=−0.22 *12*, A_4=−0.03 *16* (1979DaZN).
1085.38	4^+	479.40‡ *9*	100‡ *10*	605.69	2^+	E2	0.0275	α(K)=0.0201 *3*; α(L)=0.00563 *8*; α(M)=0.001370 *20* α(N)=0.000337 *5*; α(O)=5.67×10^{-5} *8*; α(P)=2.11×10^{-6} *3* Mult.: From α(L)exp=0.0057 *10* (1972Fi12). DCO=1.17 *7* and POL=0.09 *5* (2017Mu12); A_2=0.26 *5*, A_4=−0.07 *5* (1988KaZW); A_2=0.43 *14*, A_4=0.08 *17* (1979DaZN).
		819.4‡ *4*	27‡ *9*	265.61	2^+	E2	0.00819	α(K)=0.00652 *10*; α(L)=0.001277 *18*; α(M)=0.000301 *5* α(N)=7.42×10^{-5} *11*; α(O)=1.295×10^{-5} *19*; α(P)=6.90×10^{-7} *10* Mult.: From A_2=0.20 *5*, A_4=0.09 *6* (1988KaZW).
1115.22	2^+	316.53‡ *9*	19‡ *2*	798.75	0^+	[E2]	0.0841	α(K)=0.0535 *8*; α(L)=0.0232 *4*; α(M)=0.00579 *9* α(N)=0.001418 *20*; α(O)=0.000232 *4*; α(P)=5.42×10^{-6} *8*
		444.18‡ *8*	21.7‡ *18*	670.97	4^+	E2	0.0333	α(K)=0.0239 *4*; α(L)=0.00717 *10*; α(M)=0.001754 *25* α(N)=0.000431 *6*; α(O)=7.22×10^{-5} *11*; α(P)=2.50×10^{-6} *4* Mult.: From α(K)exp=0.023 *2*, α(L3)exp=0.0066 *25*, α(M)exp=0.0050 *18* (1972Fi12). Authors′ α(L3)exp agrees with α(L) rather than with α(L3). Ice(L3) given by 1972Fi12 should possibly be interpreted as Ice(L).
		849.3‡ *6*	14‡ *5*	265.61	2^+	E0+M1+E2	0.27 *1*	α(K)=0.01644 *24*; α(L)=0.00260 *4*; α(M)=0.000598 *9* α(N)=0.0001479 *21*; α(O)=2.67×10^{-5} *4*; α(P)=1.83×10^{-6} *3* E_γ: 850.9 *3* in (HI,xnγ). Mult.: From α(K)exp=0.22 *1*, α(L)exp=0.038 *2*, and α(M)exp=0.0098 *20* (1972Fi12). A_2=−0.63 *5*, A_4=0.19 *5* (1988KaZW). δ: −1.1 *+20−2* from $\gamma(\theta)$ (1988KaZW). α: 0.27 *1*, deduced from α(K)exp + α(L)exp + α(M)exp in 1972Fi12.
		1115.25‡ *5*	100‡ *4*	0.0	0^+	(E2)	0.00442	α(K)=0.00361 *5*; α(L)=0.000627 *9*; α(M)=0.0001458 *21* α(N)=3.60×10^{-5} *5*; α(O)=6.36×10^{-6} *9*; α(P)=3.79×10^{-7} *6*; α(IPF)=3.24×10^{-7} *5* Mult.: From α(K)exp≈0.002 (1972Fi12).
1184.43	6^+	513.4 *2*	100	670.97	4^+	E2	0.0232	α(K)=0.01723 *25*; α(L)=0.00456 *7*; α(M)=0.001105 *16* α(N)=0.000272 *4*; α(O)=4.60×10^{-5} *7*; α(P)=1.82×10^{-6} *3* B(E2)(W.u.)=158 *15* Mult.: DCO=0.95 *5* and POL=0.10 *4* (2017Mu12); A_2=0.187 *22*, A_4=−0.078 *25* (1967Ne02); A_2=0.23 *4*, A_4=−0.07 *5* (1988KaZW); A_2=0.24 *3*, A_4=−0.08 *4* (1979DaZN).
1214.69	$(2)^+$	949.09‡ *8*	100‡ *7*	265.61	2^+	E2(+M1)	0.01494	α(K)=0.01240 *18*; α(L)=0.00195 *3*; α(M)=0.000449 *7* α(N)=0.0001111 *16*; α(O)=2.00×10^{-5} *3*; α(P)=1.375×10^{-6} *20* Mult.: From α(K)exp=0.0046 *5* (1972Fi12).
		1214.2‡& *5*	19.7‡ *12*	0.0	0^+			Mult.: α(K)exp≈0.085 (1972Fi12) indicates E0 mixture, implying a probable doublet in ce data.

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Adopted Levels, Gammas (continued)

$\gamma(^{188}Pt)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.#	α@	Comments
1312.73	2^+	198.1‡ *3*	7.1‡ *24*	1115.22	2^+			
		376.70‡ *15*	17‡ *3*	936.41	3^+	E2+M1	0.1652	α(K)=0.1364 *20*; α(L)=0.0221 *4*; α(M)=0.00511 *8* α(N)=0.001263 *18*; α(O)=0.000227 *4*; α(P)=1.542×10^{-5} *22* Mult.: From α(K)exp=0.074 *7*, α(L)exp≈0.040 (1972Fi12).
		641.82‡ *18*	22‡ *4*	670.97	4^+	(E2)	0.01383	α(K)=0.01069 *15*; α(L)=0.00240 *4*; α(M)=0.000574 *8* α(N)=0.0001413 *20*; α(O)=2.43×10^{-5} *4*; α(P)=1.132×10^{-6} *16* Mult.: From α(K)exp=0.0071 *26* (1972Fi12).
		707.08‡ *14*	31‡ *4*	605.69	2^+	E0+M1+E2	0.076 *5*	α(K)=0.0263 *4*; α(L)=0.00418 *6*; α(M)=0.000961 *14* α(N)=0.000238 *4*; α(O)=4.29×10^{-5} *6*; α(P)=2.93×10^{-6} *5* Mult.: From α(K)exp=0.061 *3* and α(L)exp=0.011 *2* (1972Fi12) indicate E0 admixtures. α: 0.076 5 deduced from α(K)exp + α(L)exp × (1 + M/L + N/L).
		1046.99‡ *11*	65‡ *7*	265.61	2^+	E0+M1+E2	0.076 *3*	α(K)=0.00968 *14*; α(L)=0.001521 *22*; α(M)=0.000349 *5* α(N)=8.64×10^{-5} *13*; α(O)=1.559×10^{-5} *22*; α(P)=1.072×10^{-6} *15* Mult.: From α(K)exp=0.065 *2*, α(L)exp=0.0075 *8* (1972Fi12) indicate E0 admixtures. α: 0.076 3 deduced from α(K)exp + α(L)exp × (1 + M/L + N/L).
		1312.62‡ *9*	100‡ *7*	0.0	0^+	E2	0.00326	α(K)=0.00266 *4*; α(L)=0.000442 *7*; α(M)=0.0001024 *15* α(N)=2.53×10^{-5} *4*; α(O)=4.49×10^{-6} *7*; α(P)=2.79×10^{-7} *4*; α(IPF)=1.87×10^{-5} *3* Mult.: α(K)exp=0.0029 *4* (1972Fi12).
1349.99	3^-	234.8‡ *3*	3.6‡ *11*	1115.22	2^+			
		413.3‡& *5*	7.7‡ *5*	936.41	3^+			
		679.13‡ *6*	30.5‡ *18*	670.97	4^+	E1	0.00441	α(K)=0.00369 *6*; α(L)=0.000556 *8*; α(M)=0.0001270 *18* α(N)=3.13×10^{-5} *5*; α(O)=5.56×10^{-6} *8*; α(P)=3.57×10^{-7} *5* Mult.: from α(K)exp≤0.0036 (1972Fi12).
		1084.33‡ *5*	100‡ *5*	265.61	2^+	E1	0.00183	α(K)=0.001539 *22*; α(L)=0.000225 *4*; α(M)=5.12×10^{-5} *8* α(N)=1.262×10^{-5} *18*; α(O)=2.26×10^{-6} *4*; α(P)=1.514×10^{-7} *22* Mult.: from α(K)exp≤0.0015 (1972Fi12).
1443.7?		507.3 *3*	100	936.41	3^+			E_γ,I_γ: from (p,4nγ) data (1977Nu03). Iγ(507γ)/Iγ(266γ)=0.102 *5*.
1528.04	2^+	591.4‡& *5*	11.9‡ *16*	936.41	3^+	(M1)	0.0503	α(K)=0.0416 *6*; α(L)=0.00666 *10*; α(M)=0.001534 *22* α(N)=0.000379 *6*; α(O)=6.84×10^{-5} *10*; α(P)=4.66×10^{-6} *7* Mult.: from α(K)exp≈0.056 (1972Fi12).
		857.0‡ *5*	8.7‡ *16*	670.97	4^+			
		922.23‡ *18*	69‡ *10*	605.69	2^+	E0+M1+E2	0.029 *3*	α(K)=0.01334 *19*; α(L)=0.00210 *3*; α(M)=0.000484 *7* α(N)=0.0001196 *17*; α(O)=2.16×10^{-5} *3*; α(P)=1.480×10^{-6} *21* Mult.: from α(K)exp=0.024 *2* (1972Fi12). α: 0.029 *3* from K/T and α(K)exp.
		1262.46‡ *19*	100‡ *14*	265.61	2^+	E0+M1+E2	0.037 *4*	α(K)=0.00605 *9*; α(L)=0.000945 *14*; α(M)=0.000217 *3* α(N)=5.37×10^{-5} *8*; α(O)=9.69×10^{-6} *14*; α(P)=6.68×10^{-7} *10*;

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γ(^{188}Pt) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.#	α@	Comments
								α(IPF)=1.746×10^{-5} *25* Mult.: from α(K)exp=0.031 *3* (1972Fi12). α: 0.037 *4* from K/T and α(K)exp.
1528.04	2$^+$	1528.3‡ *3*	57‡ *12*	0.0	0$^+$			
1565.60	5$^-$	215.9 *2*	9.6 *9*	1349.99	3$^-$	E2	0.278	α(K)=0.1401 *20*; α(L)=0.1037 *15*; α(M)=0.0264 *4* α(N)=0.00645 *10*; α(O)=0.001031 *15*; α(P)=1.350×10^{-5} *20* Mult.: DCO=1.14 *9* (2017Mu12); A_2=0.32 *11*, A_4=0.01 *14* (1979DaZN).
		381.1 *2*	9.1 *14*	1184.43	6$^+$			A_2=0.29 *5*, A_4=0.38 *6* (1988KaZW).
		480.1 *5*	20.9 *9*	1085.38	4$^+$	(E1)	0.00901	α(K)=0.00751 *11*; α(L)=0.001161 *17*; α(M)=0.000266 *4* α(N)=6.54×10^{-5} *10*; α(O)=1.157×10^{-5} *17*; α(P)=7.14×10^{-7} *11* Mult.: From A_2=−0.36 *5*, A_4=0.12 *5* (1988KaZW); A_2=−0.22 *18*, A_4=0.05 *24* (1979DaZN).
		894.5 *2*	100 *5*	670.97	4$^+$	(E1)	0.00260	α(K)=0.00218 *3*; α(L)=0.000323 *5*; α(M)=7.36×10^{-5} *11* α(N)=1.81×10^{-5} *3*; α(O)=3.24×10^{-6} *5*; α(P)=2.14×10^{-7} *3* Mult.: DCO=0.49 *2* and POL=0.12 *3* (2017Mu12); A_2=−0.30 *5*, A_4=0.06 *5* (1988KaZW); A_2=−0.20 *2*, A_4=0.07 *3* (1979DaZN).
1625.71	1$^+$	313.0‡ *5*	3.9‡ *5*	1312.73	2$^+$			
		689.1‡ *3*	9‡ *3*	936.41	3$^+$	E2	0.01182	α(K)=0.00923 *13*; α(L)=0.00198 *3*; α(M)=0.000472 *7* α(N)=0.0001163 *17*; α(O)=2.01×10^{-5} *3*; α(P)=9.77×10^{-7} *14* Mult.: from α(K)exp=0.010 *3* (1972Fi12).
		1020.1‡ *4*	19‡ *5*	605.69	2$^+$			
		1360.10‡ *7*	100‡ *5*	265.61	2$^+$			
		1626.2‡ *8*	22‡ *14*	0.0	0$^+$	M1	0.00404	α(K)=0.00322 *5*; α(L)=0.000500 *7*; α(M)=0.0001146 *17* α(N)=2.84×10^{-5} *4*; α(O)=5.12×10^{-6} *8*; α(P)=3.54×10^{-7} *5*; α(IPF)=0.0001678 *24* Mult.: from α(K)exp=0.0054 *18* (1972Fi12).
1636.31	6$^+$	451.9 *2*	42 *4*	1184.43	6$^+$			
		550.9 *2*	100 *8*	1085.38	4$^+$	E2	0.0196	α(K)=0.01477 *21*; α(L)=0.00370 *6*; α(M)=0.000892 *13* α(N)=0.000219 *3*; α(O)=3.73×10^{-5} *6*; α(P)=1.561×10^{-6} *22* Mult.: A_2=0.27 *5*, A_4=−0.08 *5* (1988KaZW); A_2=0.26 *4*, A_4=−0.12 *5* (1979DaZN).
		965.3 *2*	24 *5*	670.97	4$^+$			
1674.53	(0$^+$,1,2)	1408.92‡ *21*	100‡	265.61	2$^+$			
1685.6	(0$^+$,1,2)	471.1‡ *5*	61‡ *33*	1214.69	(2)$^+$			
		1079.7‡ *5*	100‡ *42*	605.69	2$^+$			
1768.15	7$^-$	131.8 *2*	6.1 *10*	1636.31	6$^+$	(E1)	0.202	α(K)=0.1639 *24*; α(L)=0.0291 *5*; α(M)=0.00673 *10* α(N)=0.001641 *24*; α(O)=0.000279 *4*; α(P)=1.348×10^{-5} *20* B(E1)(W.u.)=1.21×10^{-5} *24* Mult.: From A_2=−0.16 *5*, A_4=−0.10 *5* (1988KaZW); A_2=−0.15 *12*, A_4=0.02 *16* (1979DaZN).
		202.6 *2*	88 *5*	1565.60	5$^-$	E2	0.344	α(K)=0.1645 *24*; α(L)=0.1351 *20*; α(M)=0.0345 *5*

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Adopted Levels, Gammas (continued)

$\gamma(^{188}Pt)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.#	α@	Comments
								α(N)=0.00842 *13*; α(O)=0.001342 *20*; α(P)=1.573×10^{-5} *23* B(E2)(W.u.)=50 *7* Mult.: DCO=1.20 *2* and POL=0.28 *5* (2017Mu12); A_2=0.28 *5*, A_4=−0.11 *6* (1988KaZW); A_2=0.22 *3*, A_4=−0.12 *4* (1979DaZN).
1768.15	7^-	583.7 *2*	100 *5*	1184.43	6^+	(E1)	0.00598	α(N)=4.28×10^{-5} *6*; α(O)=7.60×10^{-6} *11*; α(P)=4.80×10^{-7} *7* α(K)=0.00500 *7*; α(L)=0.000761 *11*; α(M)=0.0001741 *25* B(E1)(W.u.)=2.3×10^{-6} *3* Mult.: DCO=0.53 *2* and POL=0.11 *3* (2017Mu12); A_2=−0.19 *5*, A_4=0.03 *5* (1988KaZW); A_2=−0.15 *3*, A_4=0.02 *3* (1979DaZN).
1776.08	(1^-)	426.5‡ *3*	12‡ *3*	1349.99	3^-	(E2)	0.0370	α(K)=0.0262 *4*; α(L)=0.00818 *12*; α(M)=0.00201 *3* α(N)=0.000493 *7*; α(O)=8.23×10^{-5} *12*; α(P)=2.73×10^{-6} *4* Mult.: From α(K)exp≈0.018 (1972Fi12).
		977.27‡ *10*	75‡ *6*	798.75	0^+	(E1)	0.00221	α(K)=0.00186 *3*; α(L)=0.000273 *4*; α(M)=6.22×10^{-5} *9* α(N)=1.532×10^{-5} *22*; α(O)=2.74×10^{-6} *4*; α(P)=1.82×10^{-7} *3* Mult.: From α(K)exp=0.0032 *9* (1972Fi12).
		1170.49‡ *9*	96‡ *7*	605.69	2^+	(E1)	1.61×10^{-3}	α(K)=0.001344 *19*; α(L)=0.000196 *3*; α(M)=4.45×10^{-5} *7* α(N)=1.098×10^{-5} *16*; α(O)=1.97×10^{-6} *3*; α(P)=1.325×10^{-7} *19*; α(IPF)=9.10×10^{-6} *13* Mult.: From α(K)exp=0.0023 *4* (1972Fi12).
		1510.38‡ *9*	100‡ *7*	265.61	2^+	(E1)	1.21×10^{-3}	α(K)=0.000867 *13*; α(L)=0.0001248 *18*; α(M)=2.83×10^{-5} *4* α(N)=6.99×10^{-6} *10*; α(O)=1.256×10^{-6} *18*; α(P)=8.58×10^{-8} *12*; α(IPF)=0.000185 *3* Mult.: From α(K)exp≤0.00077 (1972Fi12).
1782.23	8^+	597.8 *2*	100	1184.43	6^+	E2	0.01623	α(K)=0.01240 *18*; α(L)=0.00292 *5*; α(M)=0.000702 *10* α(N)=0.0001727 *25*; α(O)=2.96×10^{-5} *5*; α(P)=1.312×10^{-6} *19* B(E2)(W.u.)=118 *17* Mult.: DCO=0.95 *5* and POL=0.12 *6* (2017Mu12); A_2=0.26 *5*, A_4=−0.06 *5* (1988KaZW); A_2=0.27 *3*, A_4=−0.09 *3* (1979DaZN).
1810.57	$(2)^+$	498.6‡ *5*	23‡ *6*	1312.73	2^+	(E0+M1+E2)	0.225 *14*	α(K)=0.0650 *10*; α(L)=0.01045 *15*; α(M)=0.00241 *4* α(N)=0.000596 *9*; α(O)=0.0001073 *16*; α(P)=7.30×10^{-6} *11* Mult.: From α(K)exp=0.11 *1* and α(L)exp=0.089 *8* (1972Fi12). α: 0.225 14 deduced from α(K)exp + α(L)exp × (1 + M/L + N/L).
		695.4‡ *5*	8.2‡ *9*	1115.22	2^+	M1(+E2)	0.0331	α(K)=0.0274 *4*; α(L)=0.00436 *7*; α(M)=0.001004 *15* α(N)=0.000248 *4*; α(O)=4.48×10^{-5} *7*; α(P)=3.06×10^{-6} *5* Mult.: From α(K)exp=0.031 *11* (1972Fi12).
		874.66‡ *24*	25‡ *6*	936.41	3^+			
		1139.7‡ *4*	16‡ *5*	670.97	4^+			
		1204.60‡ *13*	70‡ *7*	605.69	2^+			
		1545.00‡ *10*	100‡ *8*	265.61	2^+			

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$\gamma(^{188}Pt)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.#	α@	Comments
1954.26	$(1^+,2)$	1017.91‡ *18*	100‡ *14*	936.41	3^+			
		1348.50‡ *19*	69‡ *10*	605.69	2^+			
2171.4	$(0^+,1,2)$	1565.6‡ *5*	63‡ *23*	605.69	2^+			
		1905.9‡ *4*	100‡ *26*	265.61	2^+			
2179.75	8^-	411.6 *2*	100	1768.15	7^-	M1+E2	0.1304	α(K)=0.1077 *16*; α(L)=0.01744 *25*; α(M)=0.00402 *6* α(N)=0.000995 *14*; α(O)=0.000179 *3*; α(P)=1.215×10^{-5} *17* Mult.: DCO=0.77 *3* and POL=−0.17 *11* (2017Mu12); A_2=0.51 *5*, A_4=0.03 *6* (1988KaZW); A_2=0.50 *7*, A_4=0.11 *8* (1979DaZN).
		544& *1*		1636.31	6^+			E_γ: From 1988KaZW.
2210.2?		1944.6‡ *3*	100‡	265.61	2^+			
2246.52	8^+	464.3 *2*	26 *6*	1782.23	8^+	(M1+E2)	0.0947	α(K)=0.0783 *11*; α(L)=0.01263 *18*; α(M)=0.00291 *4* α(N)=0.000720 *11*; α(O)=0.0001297 *19*; α(P)=8.81×10^{-6} *13* Mult.: From A_2=−0.12 *5*, A_4=−0.02 *5* (1988KaZW) and the adopted level scheme.
		610.2 *2*	100 *9*	1636.31	6^+	E2	0.01549	α(K)=0.01188 *17*; α(L)=0.00276 *4*; α(M)=0.000662 *10* α(N)=0.0001629 *23*; α(O)=2.79×10^{-5} *4*; α(P)=1.257×10^{-6} *18* Mult.: DCO=1.06 *3* and POL=0.10 *4* (2017Mu12); A_2=0.28 *5*, A_4=−0.05 *6* (1988KaZW); A_2=0.27 *5*, A_4=−0.09 *6* (1979DaZN).
		1062.1 *2*	21 *4*	1184.43	6^+			
2295.61	$(1,2^+)$	2030.02‡ *12*	100‡ *9*	265.61	2^+			
		2295.48‡ *23*	50‡ *7*	0.0	0^+			
2312.45	9^-	544.3 *2*	100	1768.15	7^-	E2	0.0202	α(N)=0.000227 *4*; α(O)=3.87×10^{-5} *6*; α(P)=1.601×10^{-6} *23* α(K)=0.01516 *22*; α(L)=0.00383 *6*; α(M)=0.000925 *13* Mult.: DCO=1.01 *5* and POL=0.10 *5* (2017Mu12); A_2=0.24 *5*, A_4=−0.07 *5* (1988KaZW); A_2=0.37 *5*, A_4=0.03 *6* (1979DaZN).
2437.13	10^+	654.9 *2*	100	1782.23	8^+	E2	0.01322	α(K)=0.01025 *15*; α(L)=0.00227 *4*; α(M)=0.000543 *8* α(N)=0.0001336 *19*; α(O)=2.30×10^{-5} *4*; α(P)=1.085×10^{-6} *16* B(E2)(W.u.)=1.5×10^2 *+7−9* Mult.: DCO=1.11 *4* and POL=0.13 *3* (2017Mu12); A_2=0.31 *3*, A_4=−0.06 *4* (1979DaZN); A_2=0.20 *5*, A_4=−0.05 *6* (1988KaZW).
2446.89	$(1,2^+)$	2446.87‡ *22*	100‡	0.0	0^+			
2458.05	9^-	145.6 *2*	37 *7*	2312.45	9^-	[M1]	2.28	α(K)=1.88 *3*; α(L)=0.310 *5*; α(M)=0.0718 *11* α(N)=0.0178 *3*; α(O)=0.00319 *5*; α(P)=0.000215 *4* B(M1)(W.u.)≈0.0018
		689.9 *2*	100 *10*	1768.15	7^-	E2	0.01179	α(K)=0.00921 *13*; α(L)=0.00198 *3*; α(M)=0.000471 *7* α(N)=0.0001159 *17*; α(O)=2.00×10^{-5} *3*; α(P)=9.75×10^{-7} *14* B(E2)(W.u.)≈0.039 Mult.: DCO=1.07 *5* and POL=0.24 *7* (2017Mu12); A_2=0.25 *10*, A_4=−0.18 *13* (1979DaZN); A_2=0.23 *4*, A_4=−0.06 *6* (1988KaZW).
2468.4?	$(1,2^+)$	1669.6‡ *5*	100‡	798.75	0^+			

$\gamma(^{188}$Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[#]	α[@]	Comments
2497.50		2231.88[‡] 12	100[‡]	265.61	2^+			
2524.65?		2259.07[‡] 19	100[‡]	265.61	2^+			
2588.6?		1917.6[‡] 3	100[‡]	670.97	4^+			
2620.2	(8^+)	838.0 2	100	1782.23	8^+	(E2)	0.00782	α(K)=0.00624 9; α(L)=0.001209 17; α(M)=0.000285 4 α(N)=7.02×10^{-5} 10; α(O)=1.226×10^{-5} 18; α(P)=6.60×10^{-7} 10 Mult.: From A_2=0.35 10, A_4=0.05 12 (1979DaZN); A_2=0.17 5, A_4=0.05 6 (1988KaZW).
2651.25	10^-	338.8 2	32 4	2312.45	9^-	M1+E2	0.220	α(K)=0.181 3; α(L)=0.0295 5; α(M)=0.00681 10 α(N)=0.001685 24; α(O)=0.000303 5; α(P)=2.05×10^{-5} 3 Mult.: DCO=0.78 9 and POL=−0.16 14 (2017Mu12).
		471.5 2	100 9	2179.75	8^-	E2	0.0286	α(K)=0.0208 3; α(L)=0.00593 9; α(M)=0.001445 21 α(N)=0.000355 5; α(O)=5.97×10^{-5} 9; α(P)=2.19×10^{-6} 3 Mult.: DCO=1.08 5 and POL=0.11 9 (2017Mu12).
2663.63	10^+	226.5 2	35 5	2437.13	10^+			
		417.1 2	100 6	2246.52	8^+	E2	0.0392	α(K)=0.0276 4; α(L)=0.00881 13; α(M)=0.00216 3 α(N)=0.000531 8; α(O)=8.86×10^{-5} 13; α(P)=2.87×10^{-6} 4 Mult.: DCO=1.14 4 and POL=0.10 4 (2017Mu12); A_2=0.32 4, A_4=−0.09 6 (1988KaZW); A_2=0.38 7, A_4=0.06 9 (1979DaZN).
		881.4 2	38.1 24	1782.23	8^+	(E2)	0.00705	α(K)=0.00565 8; α(L)=0.001071 15; α(M)=0.000252 4 α(N)=6.20×10^{-5} 9; α(O)=1.086×10^{-5} 16; α(P)=5.97×10^{-7} 9 Mult.: A_2=0.34 20, A_4=−0.18 24 (1979DaZN).
2701.35	10^-	243.3 2	96 14	2458.05	9^-	(M1+E2)	0.542	α(K)=0.447 7; α(L)=0.0733 11; α(M)=0.01692 24 α(N)=0.00419 6; α(O)=0.000754 11; α(P)=5.09×10^{-5} 8 Mult.: DCO=0.71 5 (2017Mu12); A_2=0.13 5, A_4=0.15 6 (1988KaZW). δ: 6 +8−3 (1988KaZW).
		388.9 2	100 24	2312.45	9^-			
2702.03	10^+	919.8 2	100 6	1782.23	8^+	E2	0.00647	α(K)=0.00520 8; α(L)=0.000969 14; α(M)=0.000227 4 α(N)=5.60×10^{-5} 8; α(O)=9.82×10^{-6} 14; α(P)=5.49×10^{-7} 8 Mult.: DCO=1.08 2 and POL=0.11 9; A_2=0.28 4, A_4=−0.15 6 (1988KaZW).
2772.6	11^-	460.2 2	100	2312.45	9^-	E2	0.0304	α(K)=0.0220 3; α(L)=0.00640 9; α(M)=0.001562 22 α(N)=0.000384 6; α(O)=6.45×10^{-5} 9; α(P)=2.31×10^{-6} 4 Mult.: DCO=0.96 7 and POL=0.12 3 (2017Mu12); A_2=0.27 4, A_4=−0.12 6 (1988KaZW); A_2=0.16 7, A_4=−0.21 9 (1979DaZN).
2798.1?		2532.5 5	100	265.61	2^+			
2810.13	12^+	108.1 2	41 9	2702.03	10^+	E2	3.56 6	α(K)=0.645 10; α(L)=2.19 4; α(M)=0.566 10 α(N)=0.1380 23; α(O)=0.0215 4; α(P)=7.17×10^{-5} 11 B(E2)(W.u.)=78 21 E_γ: Other: 107.8 2 from ce data in 1979Ri08. Mult.: from K/L≈0.4 (1979Ri08).
		146.5 2	100 19	2663.63	10^+	E2	1.091	α(K)=0.360 6; α(L)=0.550 9; α(M)=0.1415 22 α(N)=0.0345 6; α(O)=0.00543 9; α(P)=3.44×10^{-5} 5

$^{188}_{78}$Pt$_{110}$-10

Adopted Levels, Gammas (continued)

γ(^{188}Pt) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$†	I$_\gamma$†	E$_f$	J$^\pi_f$	Mult.#	α@	Comments
								B(E2)(W.u.)=42 *10* Mult.: DCO=1.15 *4* (2017Mu12); K/L≈0.7 (1979Ri08); A$_2$=0.22 *8*, A$_4$=−0.23 *10* (1979DaZN); A$_2$=0.10 *5*, A$_4$=−0.01 *6* (1988KaZW).
2810.13	12$^+$	373.0 *2*	78 *9*	2437.13	10$^+$	[E2]	0.0529	α(K)=0.0359 *5*; α(L)=0.01286 *19*; α(M)=0.00318 *5* α(N)=0.000781 *11*; α(O)=0.0001291 *19*; α(P)=3.70×10^{-6} *6* B(E2)(W.u.)=0.30 *6*
2875.1	(11$^+$)	173.1 *2*	100	2702.03	10$^+$	(M1)	1.399	α(K)=1.152 *17*; α(L)=0.190 *3*; α(M)=0.0439 *7* α(N)=0.01087 *16*; α(O)=0.00196 *3*; α(P)=0.0001318 *19* Mult.: DCO=0.66 *19* (2017Mu12).
2909.6?	(2$^+$)	1596.9‡ *3*	100‡	1312.73	2$^+$	(E0+M1+E2)	0.0200 *25*	α(K)=0.00337 *5*; α(L)=0.000523 *8*; α(M)=0.0001200 *17* α(N)=2.97×10^{-5} *5*; α(O)=5.36×10^{-6} *8*; α(P)=3.71×10^{-7} *6*; α(IPF)=0.0001516 *22* Mult.: from α(K)exp=0.016 *2* (1972Fi12), which suggests E0 admixtures. α: 0.0200 25 deduced from K/T and α(K)exp.
2960.3	11$^-$	259.0 *5*	29 *6*	2701.35	10$^-$			
		502.3 *2*	100 *15*	2458.05	9$^-$	(E2)	0.0245	α(K)=0.0181 *3*; α(L)=0.00487 *7*; α(M)=0.001183 *17* α(N)=0.000291 *4*; α(O)=4.91×10^{-5} *7*; α(P)=1.90×10^{-6} *3* Mult.: DCO=1.22 *3* (2017Mu12); A$_2$=0.39 *5*, A$_4$=−0.08 *6* (1988KaZW).
3046.73		1697.2‡ *4*	25‡ *7*	1349.99	3$^-$			
		2441.3‡ *3*	48‡ *9*	605.69	2$^+$			
		2780.97‡ *15*	100‡ *9*	265.61	2$^+$			
3102.4	12$^-$	329.8 *5*	13 *4*	2772.6	11$^-$			
		451.2 *2*	100 *7*	2651.25	10$^-$	E2	0.0320	α(K)=0.0230 *4*; α(L)=0.00682 *10*; α(M)=0.001666 *24* α(N)=0.000409 *6*; α(O)=6.86×10^{-5} *10*; α(P)=2.41×10^{-6} *4* Mult.: DCO=0.99 *4* and POL=0.13 *8* (2017Mu12).
3103.6	12$^+$	666.5 *2*	100	2437.13	10$^+$	E2	0.01272	α(K)=0.00988 *14*; α(L)=0.00217 *3*; α(M)=0.000517 *8* α(N)=0.0001273 *18*; α(O)=2.19×10^{-5} *3*; α(P)=1.047×10^{-6} *15* B(E2)(W.u.)>1.6×10^2 Mult.: DCO=0.99 *6* and POL=0.12 *10* (2017Mu12); A$_2$=0.29 *5*, A$_4$=−0.11 *6* (1988KaZW).
3139.0	14$^+$	328.9 *2*	100	2810.13	12$^+$	E2	0.0752	α(K)=0.0487 *7*; α(L)=0.0201 *3*; α(M)=0.00502 *8* α(N)=0.001230 *18*; α(O)=0.000202 *3*; α(P)=4.96×10^{-6} *7* Mult.: DCO=1.17 *5* and POL=0.22 *4* (2017Mu12); A$_2$=0.23 *6*, A$_4$=−0.12 *7* (1979DaZN); A$_2$=0.25 *5*, A$_4$=−0.09 *6* (1988KaZW).
3182.0	12$^+$	744.9 *2*	100	2437.13	10$^+$	E2	0.01000	α(K)=0.00788 *11*; α(L)=0.001621 *23*; α(M)=0.000384 *6* α(N)=9.46×10^{-5} *14*; α(O)=1.642×10^{-5} *23*; α(P)=8.34×10^{-7} *12* Mult.: DCO=1.21 *20* and POL=0.15 *10* (2017Mu12); A$_2$=0.38 *8*, A$_4$=−0.17 *10* (1979DaZN); A$_2$=0.18 *5*, A$_4$=−0.06 *6* (1988KaZW).
3226.6	12$^-$	266.3 *5*		2960.3	11$^-$			
		525.3 *2*	100	2701.35	10$^-$	E2	0.0220	α(K)=0.01639 *23*; α(L)=0.00426 *6*; α(M)=0.001030 *15* α(N)=0.000253 *4*; α(O)=4.29×10^{-5} *6*; α(P)=1.728×10^{-6} *25*

$^{188}_{78}$Pt$_{110}$-11

$\gamma(^{188}Pt)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.#	α@	Comments
								Mult.: DCO=1.27 6 (2017Mu12); A_2=0.28 4, A_4=−0.09 5 (1988KaZW); A_2=0.44 11, A_4=0.05 13 (1979DaZN).
3232.49		1882.45‡ 18	82‡ 11	1349.99	3^-			
		2626.9‡ 3	100‡ 22	605.69	2^+			
3260.66		736.4‡ 6	49‡ 22	2524.65?				
		1306.4‡ 3	92‡ 19	1954.26	$(1^+,2)$			
		1484.55‡ 23	100‡ 18	1776.08	(1^-)			
		2994.9‡ 4	91‡ 18	265.61	2^+			
3261.3	(13^+)	386.2 2	100	2875.1	(11^+)	(E2)	0.0481	α(K)=0.0330 5; α(L)=0.01141 17; α(M)=0.00282 4 α(N)=0.000691 10; α(O)=0.0001146 17; α(P)=3.42×10^{-6} 5 Mult.: DCO=1.28 7 (2017Mu12).
		451.2 5		2810.13	12^+			
3325.1	13^-	552.5 2	100	2772.6	11^-	E2	0.0195	α(K)=0.01468 21; α(L)=0.00367 6; α(M)=0.000885 13 α(N)=0.000218 3; α(O)=3.70×10^{-5} 6; α(P)=1.551×10^{-6} 22 Mult.: DCO=1.20 6 and POL=0.07 5 (2017Mu12); A_2=0.28 4, A_4=−0.09 6 (1988KaZW); A_2=0.31 10, A_4=−0.06 13 (1979DaZN).
3565.0	13^-	338.3 5	38 10	3226.6	12^-			
		604.6 2	100 24	2960.3	11^-	E2	0.01582	α(K)=0.01211 17; α(L)=0.00283 4; α(M)=0.000680 10 α(N)=0.0001672 24; α(O)=2.86×10^{-5} 4; α(P)=1.282×10^{-6} 18 Mult.: DCO=1.14 6 (2017Mu12); A_2=0.23 6, A_4=−0.03 8 (1979DaZN).
3580.5	14^+	398.5 2	48 13	3182.0	12^+			
		441.5 5	20 8	3139.0	14^+			
		476.9 2	100 15	3103.6	12^+	E2	0.0278	α(K)=0.0203 3; α(L)=0.00572 8; α(M)=0.001393 20 α(N)=0.000342 5; α(O)=5.76×10^{-5} 9; α(P)=2.13×10^{-6} 3 Mult.: DCO=1.05 4 and POL=0.15 10 (2017Mu12); A_2=0.32 4, A_4=−0.14 6 (1988KaZW).
		770.4 2	38 10	2810.13	12^+			
3625.8	14^-	300.6 5		3325.1	13^-			
		523.3 2	100	3102.4	12^-	E2	0.0222	α(K)=0.01652 24; α(L)=0.00430 6; α(M)=0.001042 15 α(N)=0.000256 4; α(O)=4.34×10^{-5} 7; α(P)=1.743×10^{-6} 25 Mult.: DCO=0.98 3 and POL=0.18 5 (2017Mu12).
3627.0	16^+	488.0 2	100	3139.0	14^+	E2	0.0263	α(K)=0.0193 3; α(L)=0.00532 8; α(M)=0.001295 19 α(N)=0.000318 5; α(O)=5.37×10^{-5} 8; α(P)=2.03×10^{-6} 3 Mult.: DCO=1.11 4 and POL=0.11 5 (2017Mu12); A_2=0.31 4, A_4=−0.13 6 (1988KaZW); A_2=0.28 7, A_4=−0.14 9 (1979DaZN).
3749.6	(15^+)	488.3 2	100	3261.3	(13^+)	E2	0.0262	α(K)=0.0193 3; α(L)=0.00531 8; α(M)=0.001293 19 α(N)=0.000318 5; α(O)=5.36×10^{-5} 8; α(P)=2.03×10^{-6} 3 Mult.: DCO=1.05 4 (2017Mu12); A_2=0.31 4, A_4=−0.13 6 (1988KaZW); A_2=0.28 7, A_4=−0.14 9 (1979DaZN).
		610.6 5		3139.0	14^+			
3867.2	14^-	302.2& 5		3565.0	13^-			

$^{188}_{78}Pt_{110}$-12

γ(^{188}Pt) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.#	α@	Comments
3867.2	14⁻	640.5 *2*	100	3226.6	12⁻	E2	0.01389	α(K)=0.01073 *15*; α(L)=0.00241 *4*; α(M)=0.000577 *8* α(N)=0.0001421 *20*; α(O)=2.44×10^{-5} *4*; α(P)=1.136×10^{-6} *16* Mult.: DCO=1.06 *6* (2017Mu12); A_2=0.29 *4*, A_4=−0.11 *6* (1988KaZW).
3946.6	15⁻	621.4 *2*	100	3325.1	13⁻	E2	0.01487	α(K)=0.01143 *16*; α(L)=0.00262 *4*; α(M)=0.000629 *9* α(N)=0.0001547 *22*; α(O)=2.65×10^{-5} *4*; α(P)=1.210×10^{-6} *17* Mult.: DCO=1.01 *7* and POL=0.18 *8* (2017Mu12); A_2=0.25 *5*, A_4=−0.03 *6* (1988KaZW).
4007.6	16⁺	380.6 *5*	9 *4*	3627.0	16⁺			
		427.1 *2*	100 *11*	3580.5	14⁺	E2	0.0368	α(K)=0.0261 *4*; α(L)=0.00814 *12*; α(M)=0.00200 *3* α(N)=0.000491 *7*; α(O)=8.19×10^{-5} *12*; α(P)=2.72×10^{-6} *4* Mult.: DCO=0.98 *4* and POL=0.09 *5* (2017Mu12); A_2=0.34 *5*, A_4=−0.11 *6* (1988KaZW).
4174.5	16⁻	548.7 *2*	100	3625.8	14⁻	E2	0.0198	α(K)=0.01490 *21*; α(L)=0.00374 *6*; α(M)=0.000903 *13* α(N)=0.000222 *4*; α(O)=3.78×10^{-5} *6*; α(P)=1.574×10^{-6} *22* Mult.: DCO=1.12 *4* and POL=0.14 *4* (2017Mu12).
4237.8	15⁻	672.8 *2*	100	3565.0	13⁻	E2	0.01246	α(K)=0.00969 *14*; α(L)=0.00211 *3*; α(M)=0.000504 *7* α(N)=0.0001241 *18*; α(O)=2.14×10^{-5} *3*; α(P)=1.027×10^{-6} *15* Mult.: A_2=0.24 *4*, A_4=−0.11 *6* (1988KaZW).
4243.8	18⁺	616.8 *2*	100	3627.0	16⁺	E2	0.01512	α(K)=0.01161 *17*; α(L)=0.00268 *4*; α(M)=0.000642 *9* α(N)=0.0001580 *23*; α(O)=2.71×10^{-5} *4*; α(P)=1.229×10^{-6} *18* Mult.: DCO=1.13 *3* and POL=0.16 *6* (2017Mu12); A_2=0.35 *4*, A_4=−0.29 *6* (1988KaZW).
4280.5	(17⁻)	106.0 *5*		4174.5	16⁻			
		333.9 *2*	100	3946.6	15⁻	(E2)	0.0721	α(K)=0.0469 *7*; α(L)=0.0191 *3*; α(M)=0.00474 *7* α(N)=0.001163 *17*; α(O)=0.000191 *3*; α(P)=4.78×10^{-6} *7* Mult.: DCO=1.26 *9* (2017Mu12).
4353.2	(17⁺)	603.6 *2*	100	3749.6	(15⁺)			
		726.2& *5*		3627.0	16⁺			
4478.8	(18⁺)	471.2 *5*	100	4007.6	16⁺			
4549.7	(16⁻)	682.5 *5*	100	3867.2	14⁻	(E2)	0.01207	α(K)=0.00941 *14*; α(L)=0.00203 *3*; α(M)=0.000485 *7* α(N)=0.0001194 *17*; α(O)=2.06×10^{-5} *3*; α(P)=9.97×10^{-7} *14* Mult.: A_2=0.24 *5*, A_4=0.07 *6* (1988KaZW).
4593.4	(18⁻)	312.9 *2*	100	4280.5	(17⁻)	(M1)	0.272	α(K)=0.225 *4*; α(L)=0.0366 *6*; α(M)=0.00846 *12* α(N)=0.00209 *3*; α(O)=0.000377 *6*; α(P)=2.55×10^{-5} *4* Mult.: DCO=0.67 *8* (2017Mu12).
		418.9 *5*		4174.5	16⁻			
4665.4	(17⁻)	718.8 *2*	100	3946.6	15⁻			
4765.4	(18⁻)	590.9 *5*	100	4174.5	16⁻			
4947.6	(19⁻)	354.2 *2*	100	4593.4	(18⁻)			
4960.7	20⁺	716.9 *2*	100	4243.8	18⁺	E2	0.01085	α(K)=0.00852 *12*; α(L)=0.00179 *3*; α(M)=0.000425 *6* α(N)=0.0001047 *15*; α(O)=1.81×10^{-5} *3*; α(P)=9.02×10^{-7} *13* Mult.: DCO=1.20 *10* and POL=0.16 *13* (2017Mu12); A_2=0.12 *5*, A_4=0.07 *6* (1988KaZW).

$^{188}_{78}Pt_{110}$-13

$\gamma(^{188}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Comments
5201.3		607.9 *5*	100	4593.4	(18^-)	
5505.2		303.9 *5*		5201.3		
		557.6 *5*		4947.6	(19^-)	
5744.9	(22^+)	784.2 *5*	100	4960.7	20^+	A_2=0.09 *5*, A_4=−0.04 *6* (1988KaZW).
6549.9	(24^+)	805.0 *5*	100	5744.9	(22^+)	
7367.9	(26^+)	818.0 *5*	100	6549.9	(24^+)	

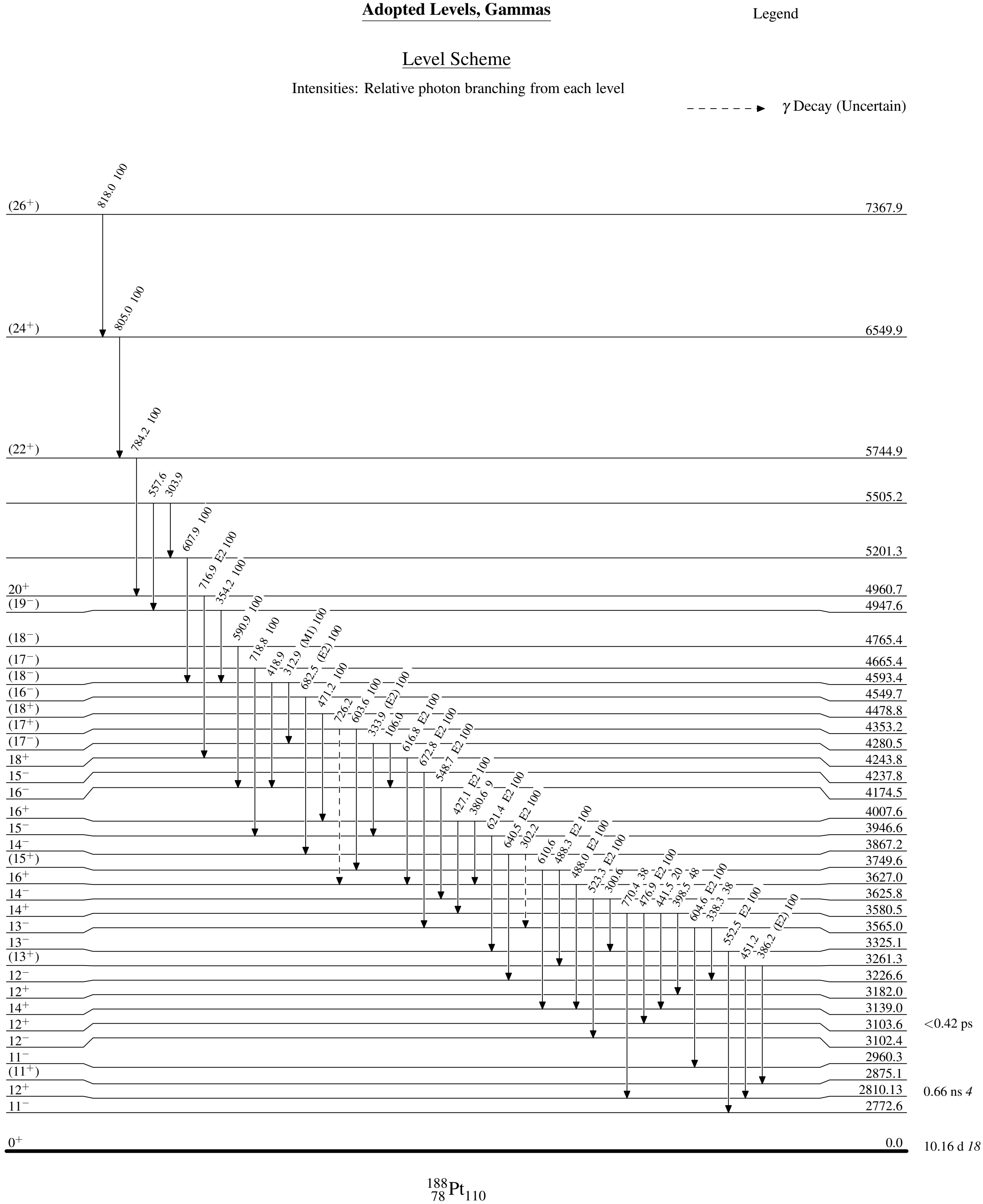
[†] From (HI,xnγ), unless otherwise stated.
[‡] From ^{188}Au ε decay.
[#] From ce data in ^{188}Ae ε decay, $\gamma\gamma(\theta)$(DCO), $\gamma(\theta)$, ce ratios, γ-ray polarization and the apparent band structure.
[@] Additional information 2.
[&] Placement of transition in the level scheme is uncertain.

$^{188}_{78}Pt_{110}$-14

Adopted Levels, Gammas

Level Scheme

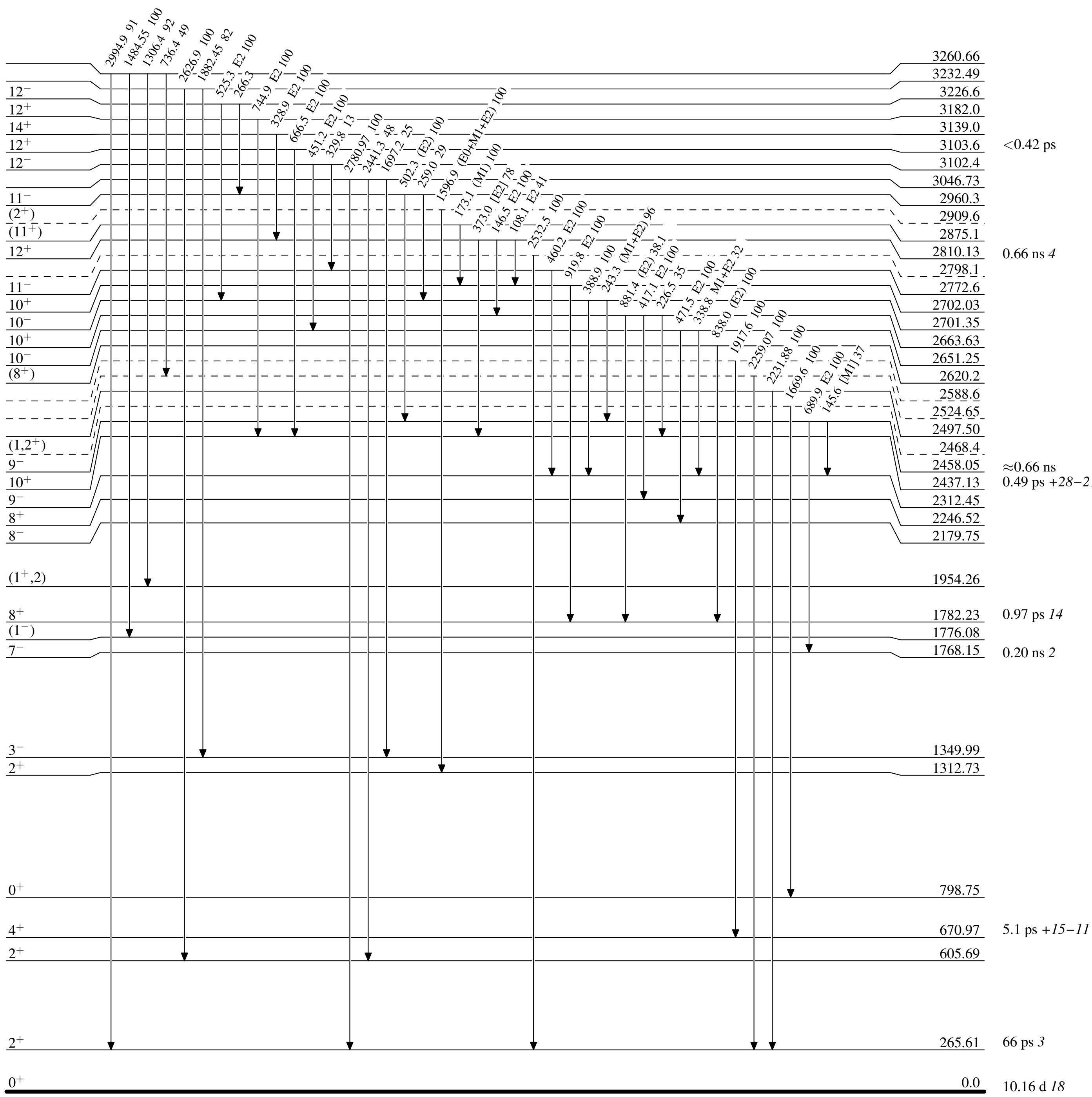
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

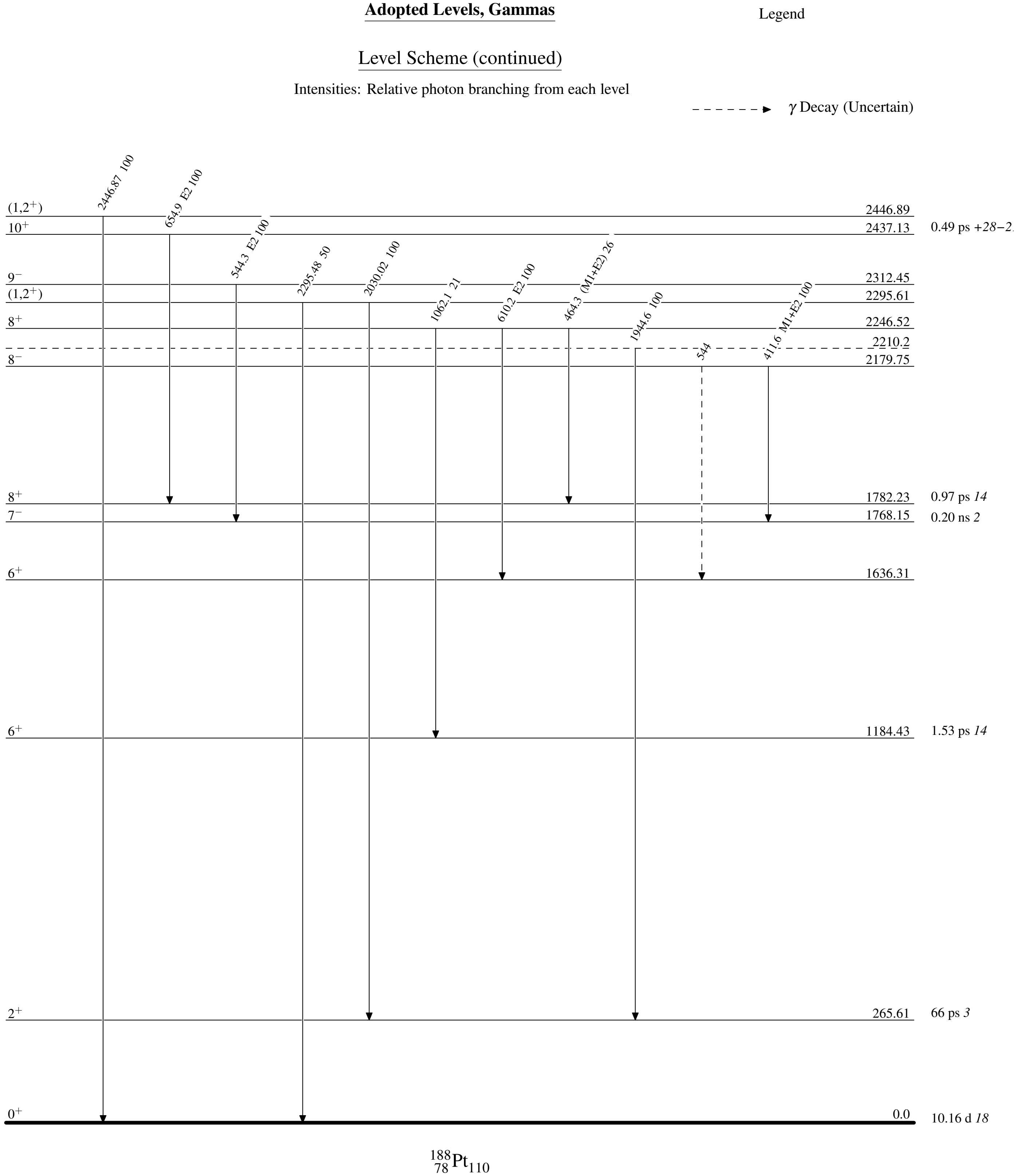


$^{188}_{78}Pt_{110}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



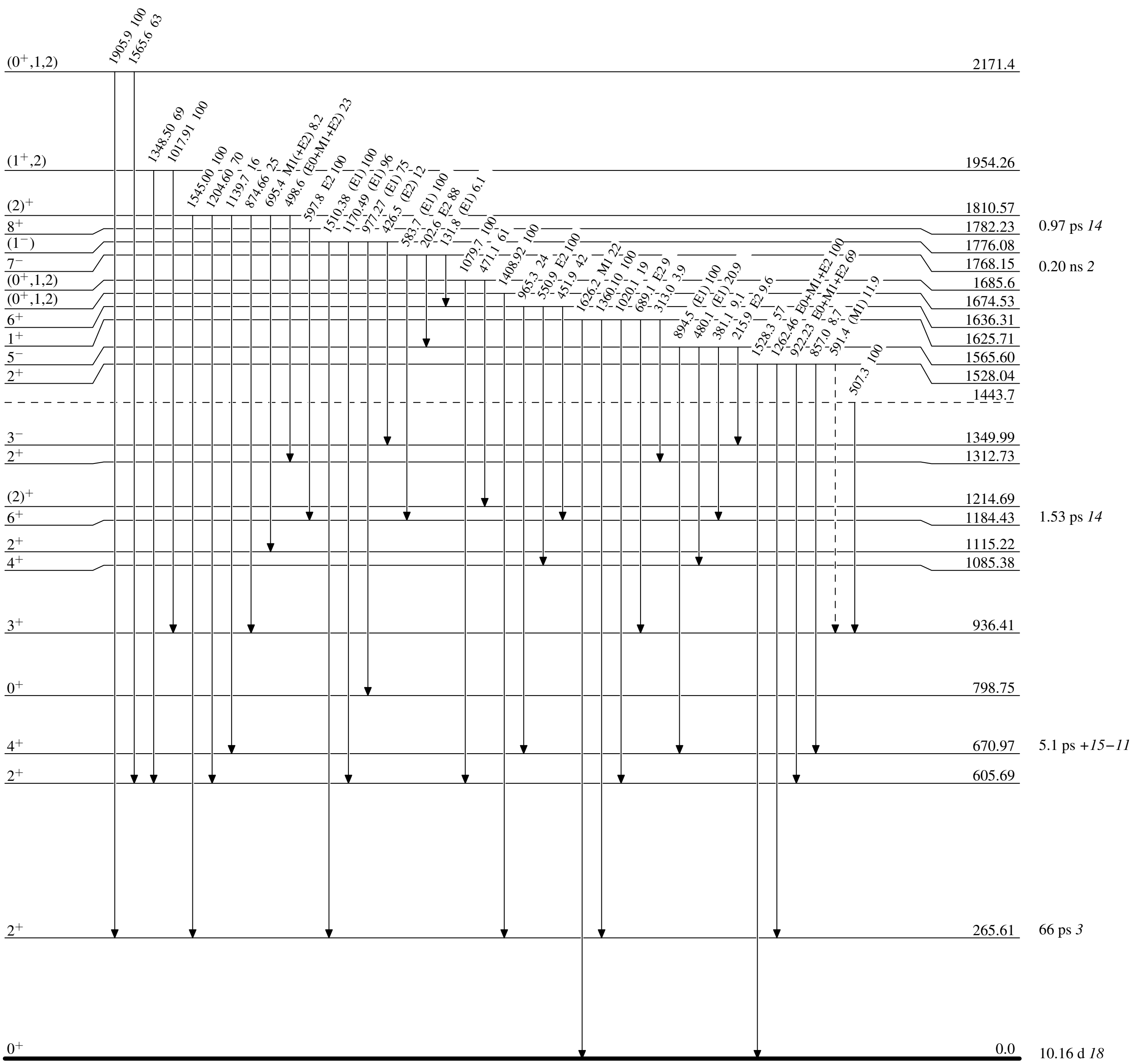
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

Legend

γ Decay (Uncertain)

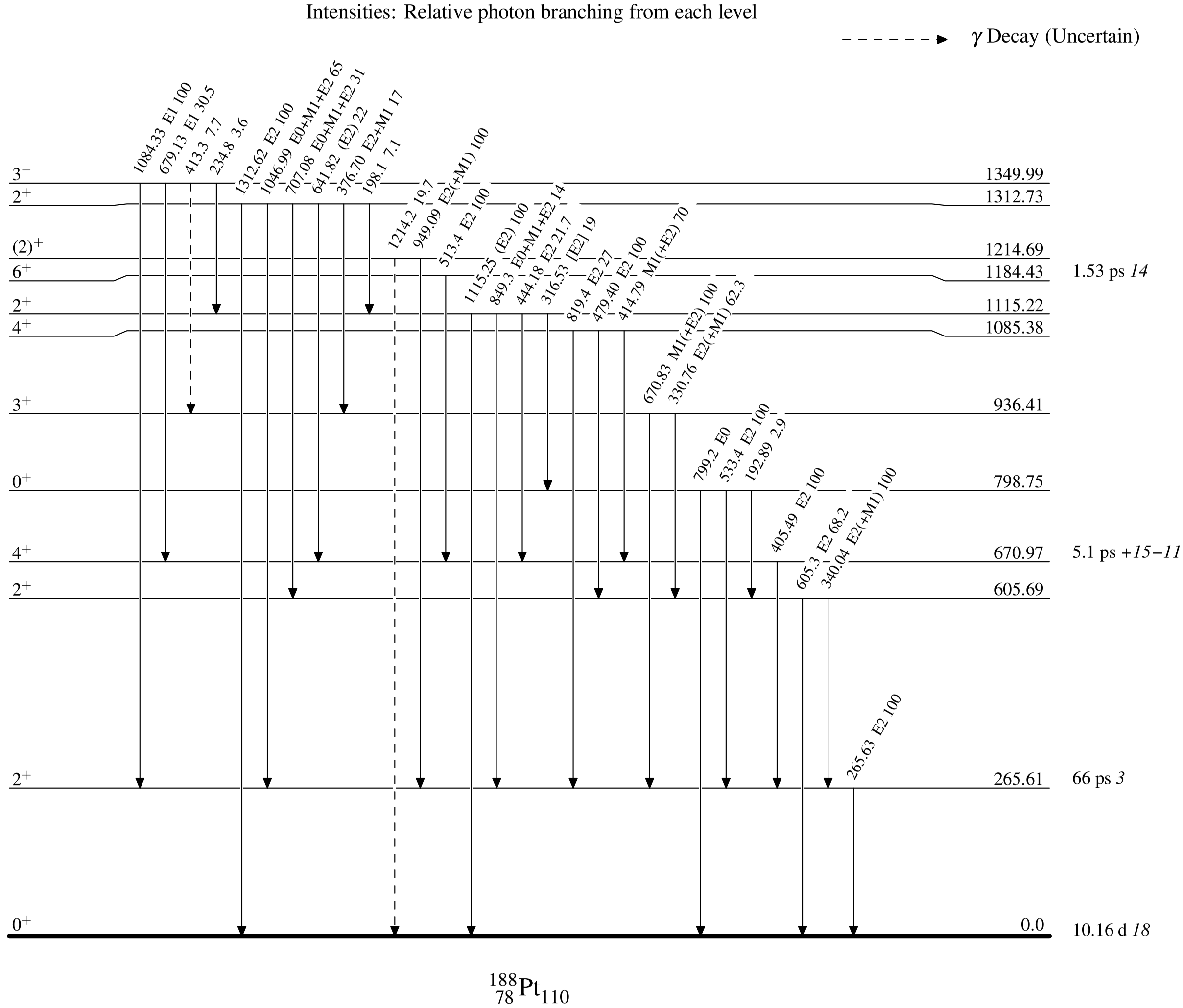


$^{188}_{78}Pt_{110}$

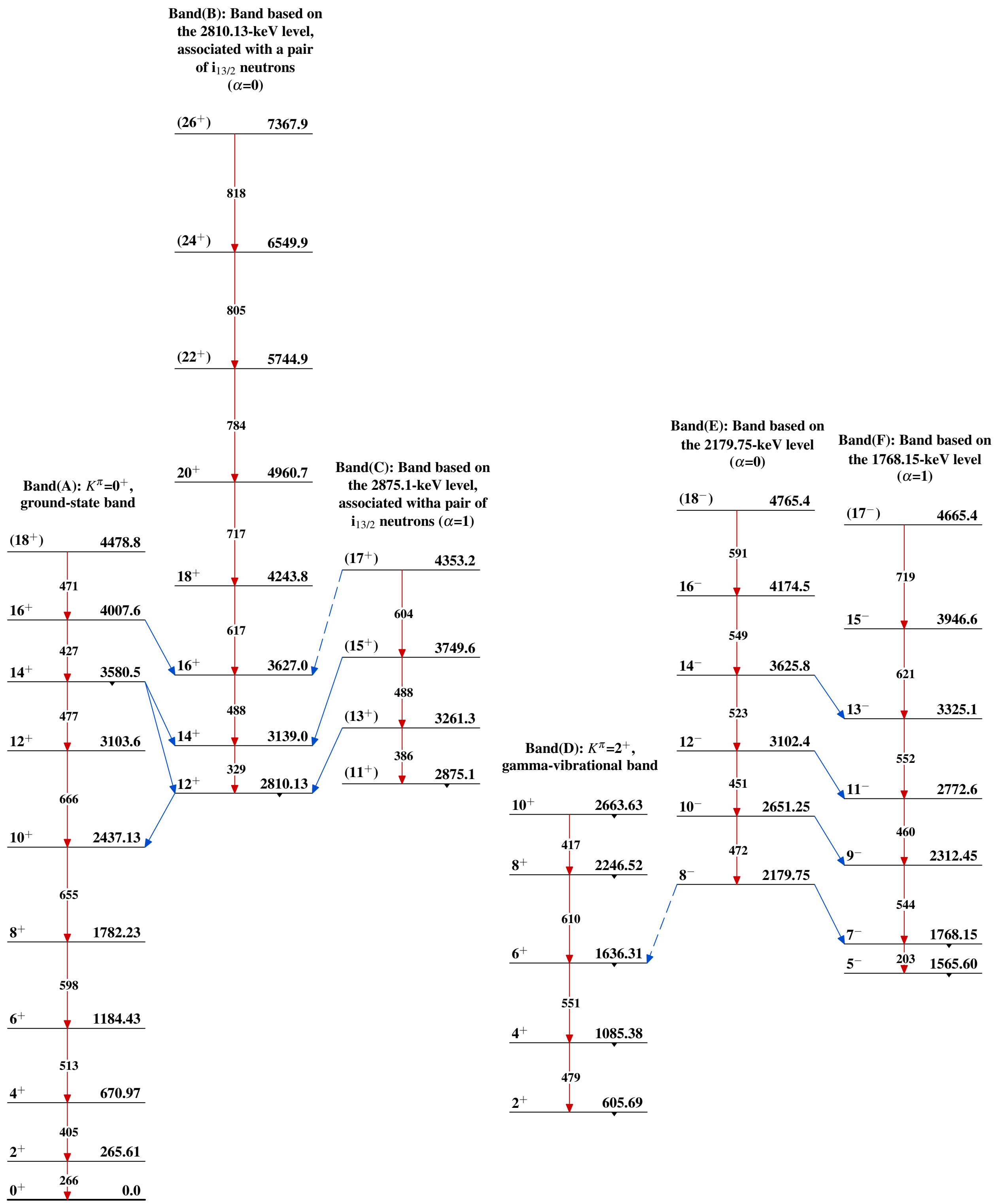
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

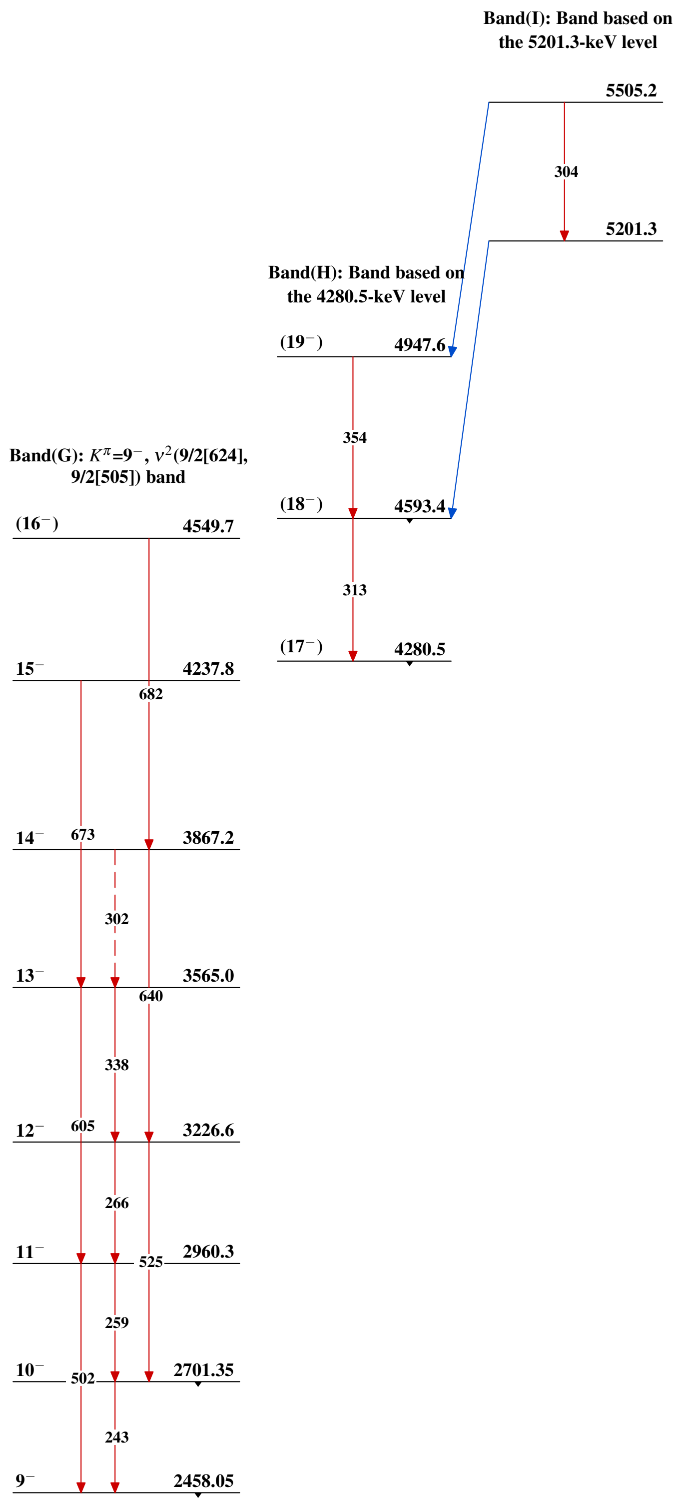


Adopted Levels, Gammas



$^{188}_{78}Pt_{110}$

Adopted Levels, Gammas (continued)



$^{188}_{78}Pt_{110}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, [1] and Jun Chen[2]	NDS 169, 1 (2020)	15-Oct-2020

Q(β^-)=−4473 *4*; S(n)=8908 *10*; S(p)=6146 *13*; Q(α)=3268.6 *6* 2017Wa10
S(2n)=15628 *5*, S(2p)=10747.2 *6* (2017Wa10).
Hyperfine structure and isotope-shift measurements: 1992Ki30, 1992Hi07 (also 1990Hi08), 1988Bo31, 1987Ne09, 1988Le22.
Mass measurement: 2016Ei01: using LEBIT Penning trap mass spectrometer at NSCL-MSU.
Mass excess from ^{190}Pt(p,d) reaction: 1980Ka19.
Additional information 1.
Theory references: consult the NSR database (www.nndc.bnl.gov/nsr/) for about 150 primary references dealing with nuclear structure and other calculations.

^{190}Pt Levels

Band assignments and configurations are from 2014Li21 (also 2008Ma58) in ^{176}Yb(^{18}O,4nγ).
Additional information 2.

Cross Reference (XREF) Flags

A	^{190}Au ε decay (42.8 min)	E	Coulomb excitation
B	^{176}Yb(^{18}O,4nγ)	F	^{191}Ir(p,2nγ)
C	^{188}Os(α,2nγ)	G	^{192}Pt(p,t)
D	^{190}Os(α,4nγ)		

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[&]	0$^+$	4.97×10^{11}[#@] y *16*	ABCDEFG	%α=100 %$\varepsilon\beta^+$=?. Double-beta decay mode is allowed, but only the lower limits of the half-life of this decay mode have been measured. Evaluated rms charge radius=5.4108 fm *30* (2013An02). Evaluated δ<r^2>(^{194}Pt,^{190}Pt)=−0.137 fm^2 *2* (2013An02). Δ<r^2>(^{194}Pt−^{190}Pt)=−0.132 fm^2 *8* (1992Hi07). See also 1992Ki30 for Δ<r^2> measurement.
295.78[&] *3*	2$^+$	62.3 ps *31*	ABCDEFG	μ=+0.57 *3* (1995An15,2014StZZ) J$^\pi$: E2 γ to 0$^+$. T$_{1/2}$: from B(E2)=1.82 *9*, weighted average of 1.82 *9* (1995An15, Coul. ex.); 2.5 *+13−6* (1972Fi12, from (ce)γ(t) in ε decay); 1.75 *22* (1966Gr20, Coul. ex., uncertainty from 2001Ra27 evaluation). 2016Pr01 evaluation gives B(E2)=1.854 *90*, and corresponding T$_{1/2}$=61.1 ps *+31−28*. μ,B(E2)↑: transient-field method in Coul. ex. (1995An15,1995AnZQ).
597.61[a] *4*	2$^+$		A CD FG	J$^\pi$: E2 γs to 0$^+$ and 2$^+$.
737.02[&] *5*	4$^+$		ABCD F	J$^\pi$: E2, ΔJ=2 γ to 2$^+$; not 0$^+$ from $\gamma(\theta)$.
916.57[a] *5*	3$^+$		A CD F	J$^\pi$: E2+M1 γs to 4$^+$ and 2$^+$.
920.83 *7*	0$^+$		A G	J$^\pi$: E0 transition to 0$^+$.
1128.16[a] *6*	(4$^+$)		A CD FG	XREF: A(?). J$^\pi$: L(p,t)=(4).
1202.62 *10*	2$^+$		A C F	J$^\pi$: E2 γ to 0$^+$.
1287.69[&] *7*	6$^+$		BCD F	J$^\pi$: ΔJ=2, E2 γ to 4$^+$; band member.
1353.33 *7*	3$^-$		A CD FG	J$^\pi$: E1 γs to 2$^+$ and 4$^+$.
1385.88 *14*	(2$^+$,3,4$^+$)		C F	J$^\pi$: γs to 2$^+$ and (4$^+$).
1395.09 *10*	2$^+$		A F	J$^\pi$: E2 γ to 0$^+$.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{190}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
1449.80[a] *11*	(5$^+$)		CD F	J^{π}: probable band member; γs to 3$^+$ and (4$^+$).
1464.51 *6*	5$^-$		BCD F	J^{π}: E1, ΔJ=1 γ to 4$^+$; γ to 6$^+$.
1543 *5*	(2$^+$)		G	J^{π}: L(p,t)=(2).
1600.67 *21*	(2$^+$)		C F	XREF: C(?). J^{π}: γs to 0$^+$ and 4$^+$.
1601.99 *20*	(2,1)$^+$		A	J^{π}: γ to 0$^+$; M1+E2 γ to 2$^+$. Possible 864.5γ to 4$^+$ disfavors 1$^+$.
1624.85 *17*	(2$^+$,3,4)		C F	XREF: C(?). J^{π}: γs to 4$^+$, 3$^+$, and 3$^-$.
1628.04 *13*	(2$^+$,3,4)		C F	J^{π}: γs to 4$^+$, 3$^+$, and 3$^-$.
1631.09[c] *8*	7$^-$	0.79 ns *5*	BCD F	μ=+4.3 *6* (2006Le06,2014StZZ) J^{π}: E2, ΔJ=2 γ to 5$^-$; ΔJ=1 γ to 6$^+$. Possible configuration=ν3/2[512]⊗ν11/2[615]. $T_{1/2}$: ce(t) for 167γ in (α,4nγ). Weighted average of 0.77 ns *14* (1979Ri08) and 0.80 ns *5* (1978Ti02). Others: γ(t): <1 ns (1976Hj01), ≈1.2 ns (1976Cu02). μ: integral perturbed angular correlation (IPAC) method (2006Le06).
1670 *5*	0$^+$		G	J^{π}: L(p,t)=0.
1732.64[a] *18*	(6$^+$)		C	J^{π}: probable band member.
1736.92 *16*	1$^-$		A F	J^{π}: E1 γ to 0$^+$.
1833.83 *9*	(6$^-$)		CD F	J^{π}: ΔJ=1 γ to 5$^-$.
1842 *5*			G	
1876.77 *13*	1$^-$,2$^-$,3$^-$		A	J^{π}: E1 γ to 2$^+$. 3$^-$ less likely if ε feeding from 1$^-$ is correct.
1915.34[&] *10*	8$^+$		BCD F	J^{π}: E2, ΔJ=2 γ to 6$^+$; band member.
2043.81 *13*	(7,8,9$^-$)		CD F	J^{π}: γ to 7$^-$.
2078.30[d] *12*	8$^-$		BCD F	J^{π}: M1+E2, ΔJ=1 γ to 7$^-$.
2212.8? *4*	(1$^-$)		A	J^{π}: E1 γ to 0$^+$.
2216.0? *3*	(2$^+$,3,4$^+$)		A	J^{π}: M1 γ to 2$^+$.
2222.62[c] *12*	9$^-$		BCD	J^{π}: E2, ΔJ=2 γ to 7$^-$.
2297.45[d] *17*	(10$^-$)	48 ns *5*	BCD	μ=−0.02 *4* (2006Le06,2014StZZ) J^{π}: (E2), ΔJ=(2) γ to 8$^-$; γ to 9$^-$. μ: integral perturbed angular correlation (IPAC) method. Measured value is from 2006Le06. Other measurement: +0.09 *8* in (α,2nγ) (2001Ko41). Configuration=ν9/2[505]ν11/2[615] (2001Ko41) from consistency measured and calculated g factor. $T_{1/2}$: 219γ(t) in (α,2nγ) and (α,4nγ). Weighted average of 48 ns *5* (1976Hj01) and 47 ns *6* (1976Cu02).
2358.2 *3*	(2)$^+$		A	J^{π}: M1 γ to 2$^+$; (E0+E2+M1) γ to 2$^+$.
2382.58 *14*	(1)$^+$		A	J^{π}: M1 γ to 0$^+$.
2408.09? *19*	(1$^-$,2$^-$,3$^-$)		A	J^{π}: (M1,E2) 1054.7γ to 3$^-$; 1205.5γ to 2$^+$.
2497.69? *25*	(2$^+$)		A	J^{π}: (E2) γ to 0$^+$.
2535.28[b] *12*	10$^+$		BCD	J^{π}: ΔJ=2, E2 γ to 8$^+$.
2570.71[d] *23*	(11$^-$)		BCD	J^{π}: ΔJ=1 γ to (10$^-$).
2603.08 *16*	10$^+$		BCD	J^{π}: ΔJ=2 γ to 8$^+$; γ from 12$^+$.
2679.7? *4*	(1$^-$)		A	J^{π}: (E1) γ to 0$^+$.
2683.4 *5*	(10$^-$)		D	J^{π}: ΔJ=(2) γ to 8$^-$.
2701.94 *22*	(10)$^+$		BCD	J^{π}: E2, ΔJ=(2) γ to 8$^+$.
2723.35? *23*	(1$^-$)		A	J^{π}: (1$^-$) from E1 γ to 0$^+$, but γ to 4$^+$ requires E3.
2726.62[b] *14*	12$^+$	1.39 ns *12*	BCD	μ=−2.0 *14* (2006Le06,2014StZZ) J^{π}: E2, ΔJ=2 γ to 10$^+$. $T_{1/2}$: weighted average of 1.27 ns *9* (1978Ti02, ce(t) for 191γ) and 1.52 ns *9* (1979Ri08, ce(t) for 123γ and 191γ) in (α,4nγ). Others: γ(t): <1 ns (1976Hj01), ≈1.5 ns (1976Cu02). μ: integral perturbed angular correlation (IPAC) method (2006Le06).
2760.9[c] *3*	(11$^-$)		BCD	J^{π}: ΔJ=2 γ to 9$^-$.

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Adopted Levels, Gammas (continued)

^{190}Pt Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
2796.89? *25*		A	Jπ: (3⁻) from E1 γ to 2⁺ and γ to 4⁺, but (M1) γ to 0⁺ suggests (1⁺). Note that all the gamma-ray placements are questionable, thus no Jπ is assigned for the 2797 level.
2820.3? *3*	(11⁺)	CD	Jπ: ΔJ=1 γ to 10⁺.
2821.8 *4*	(12⁻)	D	Jπ: ΔJ=(2) γ to (10⁻).
2875.14? *24*		A	
2942.7? *5*	(0⁻,1⁻,2⁻)	A	Jπ: M1 γ to (1⁻).
2980.9 *4*	1⁻	A	Jπ: E1 γ to 0⁺.
3013.88 *20*	(2)⁻	A	Jπ: E1 γs to 2⁺ and 3⁺; probable ε feeding from 1⁻.
3024.6 *6*	(12⁻)	D	Jπ: ΔJ=1 γ to (11⁻).
3049.19 *22*	(2)⁻	A	Jπ: E1 γs to 2⁺ and 3⁺; probable ε feeding from 1⁻.
3067.26 *20*	(1,2)⁻	A	Jπ: E1 γ to 2⁺; probable ε feeding from 1⁻.
3069.19[b] *20*	14⁺	BCD	Jπ: ΔJ=2, E2 γ to 12⁺; band member.
3111.7[d] *3*	(13⁻)	B D	Jπ: ΔJ=2 γ to (11⁻).
3233.4? *4*	(2⁻,3⁻)	A	Jπ: (M1(+E2)) γ to 3⁻; γ to 2⁺.
3344.6[c] *3*	(13⁻)	B D	Jπ: ΔJ=2, E2 γ to (11⁻); band member.
3414.86[f] *24*	(14⁺)	B D	Jπ: γs to 12⁺ and (14⁺).
3576.5[b] *4*	(16⁺)	B D	Jπ: ΔJ=2 γ to (14⁺); probable band member.
3666.1[f] *3*	(16⁺)	B D	Jπ: ΔJ=2, E2 γ to (14⁺).
3807.9[f] *4*	(18⁺)	B D	Jπ: ΔJ=2, (E2) γ to (16⁺).
3856.0[c] *4*	(15⁻)	B	Jπ: ΔJ=2 γ to (13⁻); ΔJ=1 γ to 14⁺; band member.
4055.5? *6*		B	Jπ: (16) from ΔJ=1 γ to (15⁻).
4083.2[e] *4*	(17⁻)	B D	Jπ: ΔJ=2, (E2) γ to (15⁻); ΔJ=1 γ to (16⁺); band member.
4133.8[f] *5*	(20⁺)	B	Jπ: ΔJ=2, (E2) γ to (18⁺); band member.
4214.6[b] *6*	(18⁺)	B D	Jπ: ΔJ=2 γ to (16⁺); band member.
4266.6[e] *5*	(19⁻)	B	
4612.3 *7*	(21⁺)	B	Jπ: ΔJ=1 γ to (20⁺).
4653.5[e] *6*	(21⁻)	B	
4929.7[f] *7*	(22⁺)	B	Jπ: ΔJ=2 γ to (20⁺); band member.
4958.2[b] *8*	(20⁺)	B	Jπ: ΔJ=2 γ to (18⁺); band member.
5330.1 *7*	(23⁺)	B	Jπ: ΔJ=1 γ to (22⁺).
5391.4?[f] *8*	(24⁺)	B	Jπ: ΔJ=2 γ to (22⁺); band member.
5448.0[e] *7*	(23⁻)	B	Jπ: ΔJ=2 γ to (21⁻); band member.
5720.4 *8*	(25⁺)	B	Jπ: ΔJ=2, (E2) γ to (23⁺).
6006.7?[e] *8*	(24⁻)	B	Jπ: ΔJ=1 γ to (23⁻); band member.
6282.2?[f] *8*	(26⁺)	B	Jπ: ΔJ=2 γ to (24⁺); band member.
6739.6?[e] *10*	(26⁻)	B	Jπ: ΔJ=2 γ to (24⁻); band member.
6790.5?[f] *10*	(28⁺)	B	Jπ: ΔJ=2 γ to (26⁺); band member.
7227.3?[e] *11*	(28⁻)	B	Jπ: ΔJ=2 γ to (26⁻); band member.
7469.1?[f] *11*	(30⁺)	B	Jπ: ΔJ=2 γ to (28⁺); band member.
7534.2?[e] *12*	(30⁻)	B	Jπ: ΔJ=2 γ to (28⁻); band member.
7957.1?[e] *13*	(32⁻)	B	Jπ: ΔJ=2 γ to (30⁻); band member.
7992.0?[f] *12*	(32⁺)	B	Jπ: ΔJ=2 γ to (30⁺); band member.
8130.9?[e] *14*	(33⁻)	B	Jπ: ΔJ=1 γ to (32⁻); band member.
8772.3?[e] *15*	(35⁻)	B	Jπ: ΔJ=2 γ to (33⁻); band member.

[†] From least-squares fit to Eγ values.

[‡] When deduced from in-beam γ-ray datasets, it is assumed that levels with ascending spins are populated as the excitation energy increases. This is generally supported by systematics of such reactions and by decay modes. It is also assumed that transitions

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Adopted Levels, Gammas (continued)

^{190}Pt Levels (continued)

with quoted mult=D+Q and Q are M1+E2 and E2, respectively. The quoted ΔJ values are interpreted from $\gamma(\theta)$ data.

[#] Measured by 2017Br04 through the detection of the 3183-keV α emitted by ^{190}Pt with a total of 10103 *101* events, after subtraction of 77 background events, resulting in decay rate of 133.1 *13* counts per day from the decay of ^{190}Pt. The quoted uncertainty in half-life includes statistical as well as systematic, the two combined in quadrature. Authors compared their result with previous 13 measurements (eight from direct counting and five from geological methods), compiled and evaluated by 2006Ta01, and concluded that their measured value was in good agreement with an average value of 4.78×10^{11} y *5* from geological methods, but not with averaged 3.9×10^{11} y *2* from direct counting methods, which among themselves suffer from inconsistency. Others: 3.2×10^{11} y *1* (1997Ta33); 6.65×10^{11} y *28* (1987Al28,1986AlZT); 1966Ka23; 5.4×10^{11} y *6* (1963Gr08, 6.8×10^{11} y in 1961Gr37); 6.9×10^{11} y *5* (1961Ma05); 4.7×10^{11} y *17* (1961Pe23); 10×10^{11} y (1954Po24, also 1956Po16,1953Po01); $\approx5\times10^{11}$ y (1921Ho01). Geological measurements of half-life of ^{190}Pt: 8.8×10^{11} y *7* (1991Wa32); 4.49×10^{11} y *4* (1997Wa40; this value revised to 4.69×10^{11} y *4* by 2001Be81); 4.7×10^{11} y *3* (2002Mo47); 4.9×10^{11} y *1* and 4.90×10^{11} y *4* (2004Co30); revised to 5.1×10^{11} y *1* and 5.08×10^{11} y *5*, respectively by 2006Ta01, considering the revised half-life of ^{187}Re. Evaluators obtain a weighted averaged (NRM approach) value of 4.93×10^{11} y *10* from above 11 values listed with uncertainties, but using a minimum uncertainty of 0.1×10^{11}, with reduced χ^2=3.8, somewhat larger than the critical χ^2=1.8, implying that measured half-lives represent a discrepant dataset. See 2006Ta01 (also 2011Ta23) for compilation of experimental and theoretical α-decay half-lives of ^{190}Pt, statistical analysis and theoretical calculations. Partial measured half-lives to excited states of ^{186}Os: 2.6×10^{14} y *+4−3*(stat) *6*(syst) (2011Be08) for the decay to the first 2$^+$ state in ^{186}Os, and >3.6×10^{15} y (90% confidence level) to the first 4$^+$ level in ^{186}Os (2011Be08).

[@] Half-life measurements for double-beta decay: ≥9.2×10^{15} y (2011Be32) for two-neutrino $\varepsilon\beta^+$ decay mode to the g.s. of ^{190}Os. Also deduced in this work was the lower limit for 0-neutrino $\varepsilon\beta^+$ decay to the ground state of ^{190}Os: $T_{1/2}$ ≥9.0×10^{15} y, and the lower limit for two-neutrino + 0-neutrino $\varepsilon\beta^+$ decay to the first excited state of ^{190}Os: $T_{1/2}\geq8.4\times10^{15}$ y. A lower limit for the resonant 2ε capture to the 1382.4 keV level of ^{190}Os was also set: $T_{1/2}\geq2.9\times10^{16}$ y, along with limits for double electron capture from various combinations of the K and L shells (see 2011Be32 for details). Others: $T_{1/2}(0\nu\beta\varepsilon)>3.1\text{x}10^{11}$ (1952Fr23,2002Tr04).

[&] Band(A): g.s. band.

[a] Band(B): Possible γ band.

[b] Band(C): 2-qusiparticle band based on 10$^+$. Configuration=$\nu i^{-2}_{13/2}$.

[c] Seq.(E): γ cascade based on 7$^-$. Possible configuration=$\nu i^{-1}_{13/2}\otimes\nu(p^{-1}_{3/2}$ or $f^{-1}_{5/2})$ (2014Li21). Possible Nilsson configuration=ν3/2[512]$\otimes\nu$11/2[615].

[d] Seq.(F): γ cascade based on 8$^-$.

[e] Seq.(G): γ cascade based on 17$^-$. Possible configuration=$\nu i^{-3}_{13/2}\otimes\nu(p^{-1}_{3/2}$ or $f^{-1}_{5/2})$ (2014Li21, assignment based on total Routhian surface calculations).

[f] Band(D): Band based on 14$^+$. Possible configuration=$\nu i^{-2}_{13/2}\otimes\nu h^{-1}_{9/2}\otimes\nu(p^{-1}_{3/2}$ or $f^{-1}_{5/2})$ (2008Ma58, 2014Li21, assignment based on total Routhian surface calculations).

$\gamma(^{190}Pt)$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡	δ	α#	$I_{(\gamma+ce)}$	Comments
295.78	2^+	295.76 *3*	100	0.0	0^+	E2		0.1027		B(E2)(W.u.)=56.1 *28*
597.61	2^+	301.82 *3*	100.0 *23*	295.78	2^+	E2		0.0967		δ(E2/M1)=+6.8 *+30−12* from $\gamma(\theta)$ in (p,2nγ) (1972YoZZ).
		597.66 *7*	40 *3*	0.0	0^+	E2		0.01624		
737.02	4^+	441.22 *4*	100	295.78	2^+	E2		0.0339		
916.57	3^+	179.6 *3*	2.8 *3*	737.02	4^+	E2+M1	3 *+2−1*	0.60 *8*		δ: from α(K)exp in ε decay.
		318.93 *5*	100 *4*	597.61	2^+	E2+M1	3.1 *+18−7*	0.099 *10*		
		620.77 *7*	56 *4*	295.78	2^+	E2+M1	2.0 *+20−6*	0.030 *12*		δ: from α(K)exp in ε decay.
920.83	0^+	323.17 *7*	34.5 *21*	597.61	2^+	E2		0.0792		
		625.1 *2*	100 *5*	295.78	2^+	E2		0.01467		
		921.05 *14*		0.0	0^+	E0			2.1 *1*	E_γ: from ce data in ε decay. q^2_K(E0/E2)=1.45 *17*, X(E0/E2)=0.0143 *17* (2005Ki02).
1128.16	(4^+)	391.02 *9*	27.9 *22*	737.02	4^+	[M1,E2]		0.098 *52*		
		530.62 *12*	100 *5*	597.61	2^+	(E2)		0.0214		
		832.40 *21*	7.1 *20*	295.78	2^+					
1202.62	2^+	282.3 *8*	51 *4*	920.83	0^+	E2		0.1182 *20*		Eγ and branching ratio data of γ rays from 1203 level are from the ε decay dataset. Additional information 3.
		286.2 *3*	18 *8*	916.57	3^+	E2(+M1)	>5	0.118 *5*		δ: from α(K)exp in ε decay.
		466.0 *3*	32 *2*	737.02	4^+	E2		0.0295		
		604.56 *17*	100 *2*	597.61	2^+	M1(+E2)	<0.4	0.0452 *23*		E_γ: NRM weighted average of 605.21 *12* (ε decay), 604.48 *17* (α,2nγ) and 604.46 *17* (p,2nγ). Weighted average is 604.84 *26* with normalized χ^2=9.5. δ: from α(K)exp and K/(L1+L2) ratio in ε decay.
		906.61 *20*	96 *4*	295.78	2^+	E0+(E2,M1)		0.049 *6*		E_γ: NRM weighted average of 907.30 *9* (ε decay), 906.5 *2* (α,2nγ) and 906.5 *2* (p,2nγ). Weighted average is 907.07 *26* with normalized χ^2=11.4. I_γ: NRM weighted average of 97.2 *24* (ε decay), 46 *12* (α,2nγ) and 89 *11* (p,2nγ). Weighted average is 95 *7* with normalized χ^2=8.9.
		1203.4 *4*	14.2 *14*	0.0	0^+	(E2)				
1287.69	6^+	550.66 *5*	100	737.02	4^+	E2		0.0196		
1353.33	3^-	224.9 *3*	8.2 *9*	1128.16	(4^+)					
		616.20 *9*	43 *3*	737.02	4^+	E1				
		756.4 *2*	4.1 *10*	597.61	2^+	E1				
		1057.42 *10*	100 *6*	295.78	2^+	E1				
1385.88	$(2^+,3,4^+)$	257.6 *4*	6 *3*	1128.16	(4^+)					

$^{190}_{78}Pt_{112}$-5

Adopted Levels, Gammas (continued)

$\gamma(^{190}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ	α[#]	Comments
1385.88	(2+,3,4+)	469.0 5	100 18	916.57	3+				
		788.30 14	53 12	597.61	2+				
1395.09	2+	192.2 3	3.8 4	1202.62	2+	[M1,E2]		0.73 32	
		478.2 2	16 3	916.57	3+	M1(+E2)	<0.8	0.076 12	δ: from α(K)exp in ε decay.
		657.9 3	5.3 6	737.02	4+	(E2)		0.01309	
		797.5 3	5.0 6	597.61	2+	E0+(E2,M1)		0.28 4	
		1099.5 2	43 6	295.78	2+	E0+(E2,M1)		0.041 6	
		1395.2 3	100 11	0.0	0+	E2			
1449.80	(5+)	321.76 13	22 7	1128.16	(4+)	[M1,E2]		0.166 87	I_γ: from (p,2nγ). Iγ=89 20 in (α,2nγ).
		533.08 15	100 7	916.57	3+				
1464.51	5−	176.8 3	2.4 10	1287.69	6+	[E1]		0.0956	
		336.32 5	18.0 12	1128.16	(4+)	D			
		727.53 6	100 4	737.02	4+	E1			
1600.67	(2+)	863.8 4	16 4	737.02	4+				
		1003.4 5	16 8	597.61	2+				
		1304.8 3	100 16	295.78	2+				
		1599.8 8	8 4	0.0	0+				
1601.99	(2,1)+	206.1 3	12 1	1395.09	2+	[M1,E2]		0.59 27	
		864.5[a] 3	20 2	737.02	4+				Mult.: (E0+E2+M1) from ce data is inconsistent with ΔJ^π.
		1005.4 4	100 19	597.61	2+	M1+E2	0.7 5	0.0104 22	δ: from α(K)exp in ε decay.
		1307.6 5	67 7	295.78	2+	M1			
		1601.5 4	30 4	0.0	0+	(M1,E2)			
1624.85	(2+,3,4)	271.5 2	100 17	1353.33	3−				
		422.5[a] 3		1202.62	2+				γ reported in (α,2nγ) only.
		496.8 4	67 17	1128.16	(4+)				γ reported in (p,2nγ) only.
		708.4 4	83 33	916.57	3+				γ reported in (p,2nγ) only.
		887.5 6	67 33	737.02	4+				γ reported in (p,2nγ) only.
1628.04	(2+,3,4)	274.73 14	50 9	1353.33	3−				
		711.5 3	100 14	916.57	3+				
		890.9 3	23 5	737.02	4+				
1631.09	7−	166.6 1	100 4	1464.51	5−	E2		0.681	B(E2)(W.u.)=36.7 24
		343.35 6	65 3	1287.69	6+	(E1)		0.0190	B(E1)(W.u.)=1.78×10^{-6} 14 I_γ: from (α,4nγ). Iγ=130 13 in (p,2nγ).
1732.64	(6+)	604.48 17	100	1128.16	(4+)				
1736.92	1−	816.1 2	10.4 9	920.83	0+	E1			
		1139.2 3	36.5 13	597.61	2+	E1			
		1441.2 3	100 10	295.78	2+	E1			
1833.83	(6−)	369.32 6	100	1464.51	5−	(M1+E2)	+0.3 1	0.164 7	δ: from $\gamma(\theta)$ data in (α,4nγ).
1876.77	1−,2−,3−	523.28 13	18.8 16	1353.33	3−	E2(+M1)	>1	0.034 12	δ: from α(K)exp in ε decay.
		1279.5 3	100 18	597.61	2+	(E1)			
		1581.5 3	78 6	295.78	2+	E1			
1915.34	8+	627.70 7	100	1287.69	6+	E2		0.01454	
2043.81	(7,8,9−)	412.72 10	100	1631.09	7−				

$^{190}_{78}Pt_{112}$-6

Adopted Levels, Gammas (continued)

$\gamma(^{190}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	δ	α[#]	Comments
2078.30	8^-	447.21 9	100	1631.09	7^-	M1+E2	+0.56 16	0.087 8	δ: from $\gamma(\theta)$ data in (α,4nγ).
2212.8?	(1^-)	2212.8[a] 4	100	0.0	0^+	E1			
2216.0?	$(2^+,3,4^+)$	1013.1[@a] 4	<8.0[@]	1202.62	2^+				
		1920.4[a] 4	100 20	295.78	2^+	M1			
2222.62	9^-	591.43 10	100	1631.09	7^-	E2		0.01663	
2297.45	(10^-)	75.0 5	43 13	2222.62	9^-	[M1]		2.73 7	B(M1)(W.u.)=1.6×10^{-4} 6
		219.14 14	100 6	2078.30	8^-	(E2)		0.264	B(E2)(W.u.)=0.125 +50−34
2358.2	$(2)^+$	1760.7 3	100 6	597.61	2^+	M1(+E2)	<0.8		δ: from α(K)exp in ε decay.
		2061.1[@] 13	<30[@]	295.78	2^+	(E0+E2+M1)		0.0094 18	
2382.58	$(1)^+$	987.4 2	13.1 7	1395.09	2^+	M1(+E2)	<1	0.0115 20	δ: from α(K)exp in ε decay.
		1461.6 4	11.5 11	920.83	0^+	M1			δ: <1.1 from ce data, but ΔJ^π requires δ=0.
		1784.9 3	40.4 21	597.61	2^+	M1			
		2087.3 4	22 4	295.78	2^+	M1,E2			
		2382.6 3	100 8	0.0	0^+	(M1)			Mult.: ce data give (M1,E2); but ΔJ^π requires M1.
2408.09?	$(1^-,2^-,3^-)$	1013.1[@a] 4	<24[@]	1395.09	2^+	(E1)		0.008 5	Mult.: (D,E2) from ce data in ^{190}Au ε decay, but ΔJ^π requires E1.
		1054.7[a] 3	100 10	1353.33	3^-	(M1,E2)		0.0082 33	
		1205.5[a] 4	82 8	1202.62	2^+				
		1810.7[@a] 5	<42[@]	597.61	2^+				
		2111.9[a] 6	46 6	295.78	2^+				
2497.69?	(2^+)	1760.7[a] 3		737.02	4^+				
		2497.6[a] 4	100 13	0.0	0^+	(E2)		1.49×10^{-3}	
2535.28	10^+	620.00 8	100	1915.34	8^+	E2		0.01494	
2570.71	(11^-)	273.27 16	100	2297.45	(10^-)	(M1+E2)	−0.2 1	0.384 13	δ: from $\gamma(\theta)$ data in (α,4nγ).
2603.08	10^+	380.0[a] 2	56 8	2222.62	9^-				γ not reported in (^{18}O,4nγ).
		687.90 24	100 32	1915.34	8^+	Q			
2679.7?	(1^-)	2081.6[a] 5	76 8	597.61	2^+				
		2680.2[a] 5	100 16	0.0	0^+	(E1)			
2683.4	(10^-)	605.1 4	100	2078.30	8^-	(Q)			
2701.94	$(10)^+$	786.6 2	100	1915.34	8^+	E2			
2723.35?	(1^-)	1802.8[a] 3	100 12	920.83	0^+	E1			
		1985.8[a] 5	49 6	737.02	4^+	[E3]			
		2125.0[a] 6	21.2 15	597.61	2^+				
		2428.0[a] 7	91 11	295.78	2^+				
2726.62	12^+	123.2 2	5.8 13	2603.08	10^+	[E2]		2.11 4	B(E2)(W.u.)=8.0 +32−25
		191.40 9	100 6	2535.28	10^+	E2		0.418	B(E2)(W.u.)=15.3 14
2760.9	(11^-)	538.3 3	100	2222.62	9^-	Q			
2796.89?		1401.9[a] 3	100 5	1395.09	2^+	E1			
		1880.0[@a] 4	<120[@]	916.57	3^+	(M1)			δ(E2/M1)<1 from α(K)exp in ε decay.
		2061.1[@a] 13	<47[@]	737.02	4^+				

$^{190}_{78}Pt_{112}$-7

$\gamma(^{190}$Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[#]	Comments
2820.3?	(11+)	217.2 2	100	2603.08	10+	(M1+E2)	0.51 24	
2821.8	(12−)	524.3 3	100	2297.45	(10−)			
2875.14?		1672.4[a] 3		1202.62	2+			
		1958.8[a] 5	100 11	916.57	3+			
		2277.6[@a] 7	<285[@]	597.61	2+			
		2579.4[a] 8	33 7	295.78	2+			
2942.7?	(0−,1−,2−)	729.88[a] 17	100	2212.8?	(1−)	M1	0.0292	
2980.9	1−	2685.1 5	100 11	295.78	2+	E1		
		2980.9 6	83 16	0.0	0+	E1		
3013.88	(2)−	1810.7[@] 5	<3.1[@]	1202.62	2+			
		2097.2 3	46 6	916.57	3+	E1		
		2277.6[@] 7	<11[@]	737.02	4+			
		2416.4 3	100 9	597.61	2+	E1		
3024.6	(12−)	453.9 5	100	2570.71	(11−)	D+Q		
3049.19	(2)−	2132.5 3	23 4	916.57	3+	E1		
		2452.0 5	30 5	597.61	2+	E1		
		2753.3 4	100 10	295.78	2+	E1		
3067.26	(1,2)−	1672.4 3	49 7	1395.09	2+	E1		
		1864.5 4	82 18	1202.62	2+	(E1)		
		2469.5 4	100 18	597.61	2+	E1		
		2771.2 5	61 11	295.78	2+	E1		
3069.19	14+	342.57 17	100	2726.62	12+	E2	0.0670	
3111.7	(13−)	541.0 3	100	2570.71	(11−)	Q		
3233.4?	(2−,3−)	1880.0[@a] 4	<92[@]	1353.33	3−	(M1)	0.0027 3	δ(E2/M1)<1 from α(K)exp in ε decay.
		2636.2[a] 8	100 11	597.61	2+			
3344.6	(13−)	583.7 3	100 8	2760.9	(11−)	E2	0.01715	
		618.1 5		2726.62	12+			γ only from (^{18}O,4nγ).
3414.86	(14+)	303.2 4	38 7	3111.7	(13−)	D		I_γ: from (^{18}O,4nγ) for all γ rays from 3415 level.
		345.7 3	93 11	3069.19	14+	(M1,E2)	0.137 72	
		688.2[&] 4	100[&] 8	2726.62	12+	Q		
3576.5	(16+)	507.3 3	100	3069.19	14+	Q		
3666.1	(16+)	251.2 2	100 9	3414.86	(14+)	E2	0.1698	
		596.8 5		3069.19	14+			γ only from (^{18}O,4nγ).
3807.9	(18+)	141.8 2	100	3666.1	(16+)	(E2)		
3856.0	(15−)	441.2 5		3414.86	(14+)			
		511.4 5	100 10	3344.6	(13−)	Q		
		786.8 5	50 9	3069.19	14+	D		
4055.5?		199.5 5	100	3856.0	(15−)	D		
4083.2	(17−)	(27.7)		4055.5?				
		227.2 5	34 3	3856.0	(15−)	(E2)		
		417.1 3	100 8	3666.1	(16+)	D		
		506.6 5		3576.5	(16+)			

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$\gamma(^{190}Pt)$ (continued)

E_i(level)	J_i^{π}	E_{γ}[†]	I_{γ}[†]	E_f	J_f^{π}	Mult.[‡]
4133.8	(20^+)	325.9 *3*	100	3807.9	(18^+)	(E2)
4214.6	(18^+)	638.1 *4*	100	3576.5	(16^+)	Q
4266.6	(19^-)	183.4 *3*	100	4083.2	(17^-)	(E2)
4612.3	(21^+)	478.5 *5*	100	4133.8	(20^+)	D
4653.5	(21^-)	386.9 *3*	100	4266.6	(19^-)	(E2)
4929.7	(22^+)	795.9 *5*	100	4133.8	(20^+)	Q
4958.2	(20^+)	743.6 *5*	100	4214.6	(18^+)	Q
5330.1	(23^+)	400.4 *5*	100 *11*	4929.7	(22^+)	D
		717.8 *5*	≤66	4612.3	(21^+)	
5391.4?	(24^+)	461.7 *5*	100	4929.7	(22^+)	Q
5448.0	(23^-)	794.5 *3*	100	4653.5	(21^-)	Q
5720.4	(25^+)	390.3 *5*	100	5330.1	(23^+)	(E2)
6006.7?	(24^-)	558.7 *5*	100	5448.0	(23^-)	D
6282.2?	(26^+)	561.8 *5*		5720.4	(25^+)	
		890.8 *5*	100 *9*	5391.4?	(24^+)	Q
6739.6?	(26^-)	732.9 *5*	100	6006.7?	(24^-)	Q
6790.5?	(28^+)	508.3 *5*	≤100	6282.2?	(26^+)	Q
7227.3?	(28^-)	487.7 *5*	100	6739.6?	(26^-)	Q
7469.1?	(30^+)	678.6 *5*	100	6790.5?	(28^+)	Q
7534.2?	(30^-)	306.9 *5*	100	7227.3?	(28^-)	Q
7957.1?	(32^-)	422.9 *5*	100	7534.2?	(30^-)	Q
7992.0?	(32^+)	522.9 *5*	100	7469.1?	(30^+)	Q
8130.9?	(33^-)	173.8 *5*	100	7957.1?	(32^-)	D
8772.3?	(35^-)	641.4 *5*	100	8130.9?	(33^-)	Q

[†] Weighted averages of values from γ-ray datasets, when data are available from more than one dataset. Above 2850 keV, data are mainly available from (^{18}O,4nγ).

[‡] From ce data in ^{190}Au ε decay and (α,4nγ); $\gamma(\theta)$ data in (α,4nγ), and $\gamma\gamma(\theta)$(ADO) data in (^{18}O,4nγ). Below 400 keV, $\Delta J=2$ (stretched) quadrupole transitions are assigned mult=(E2) in preference to M2, as no level lifetimes >10 ns or so are indicated in $\gamma\gamma$-coin data in in-beam γ-ray data.

[#] 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.

[@] Multiply placed with undivided intensity.

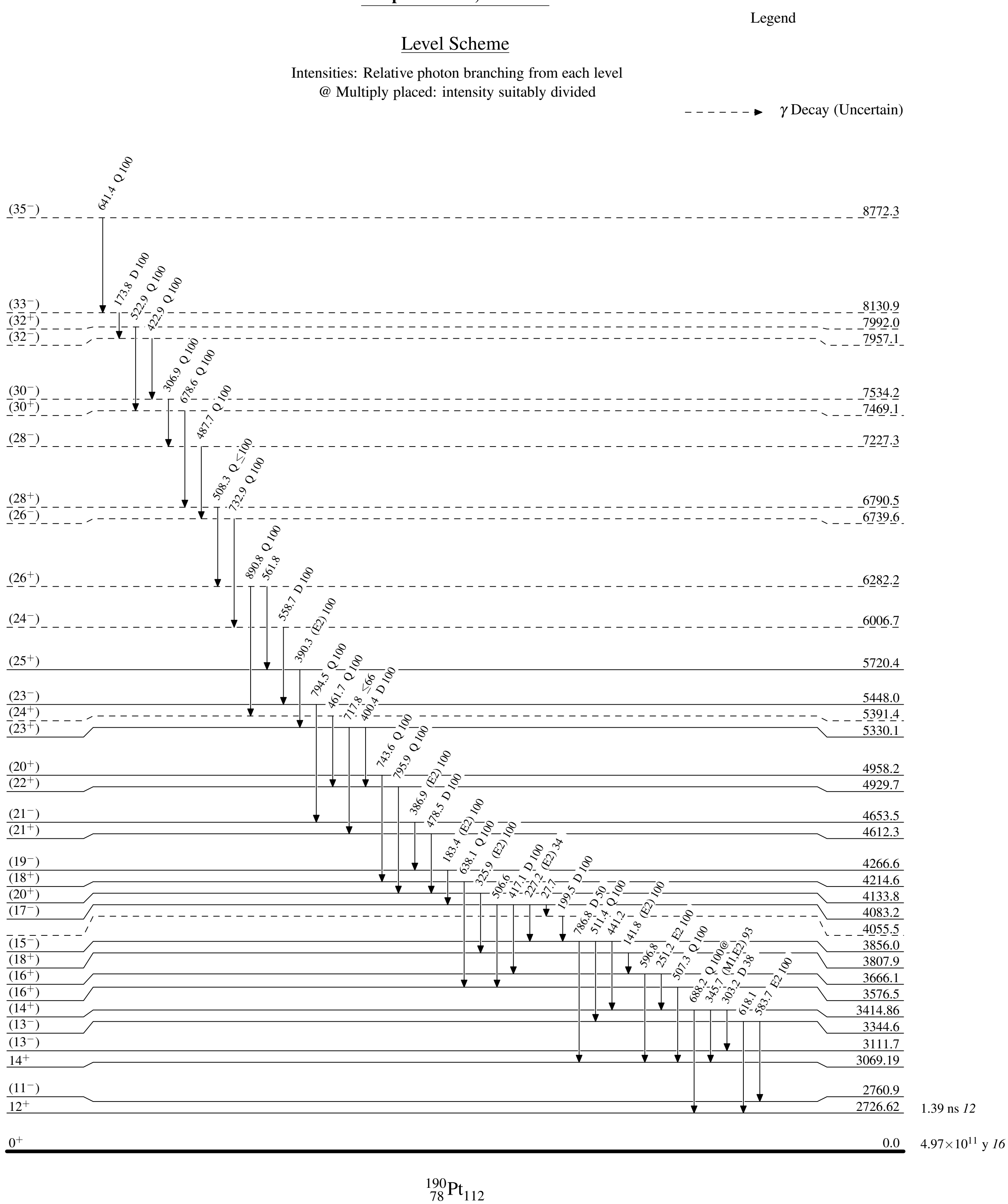
[&] Multiply placed with intensity suitably divided.

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

Adopted Levels, Gammas

Level Scheme

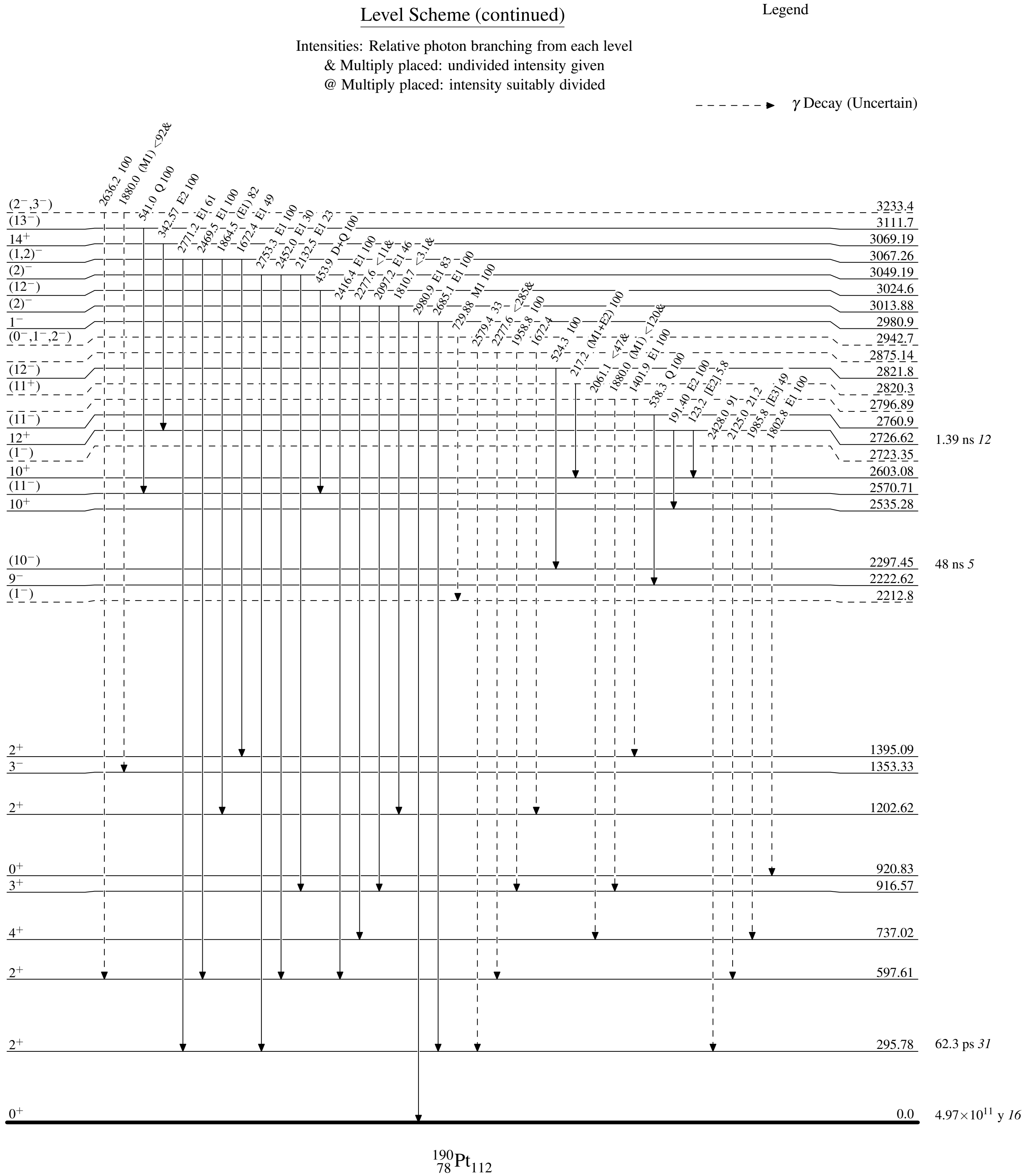
Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

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



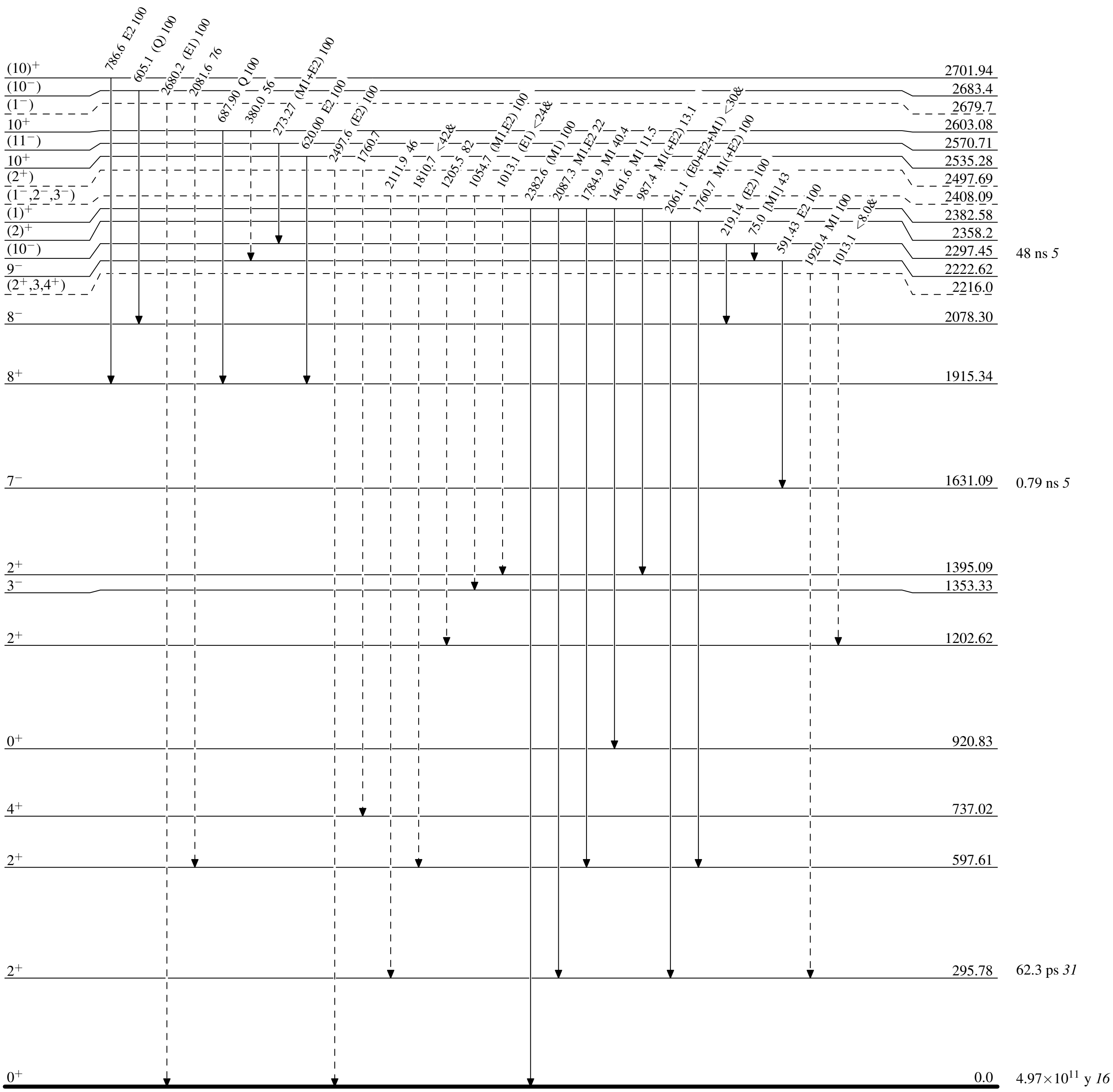
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

γ Decay (Uncertain)

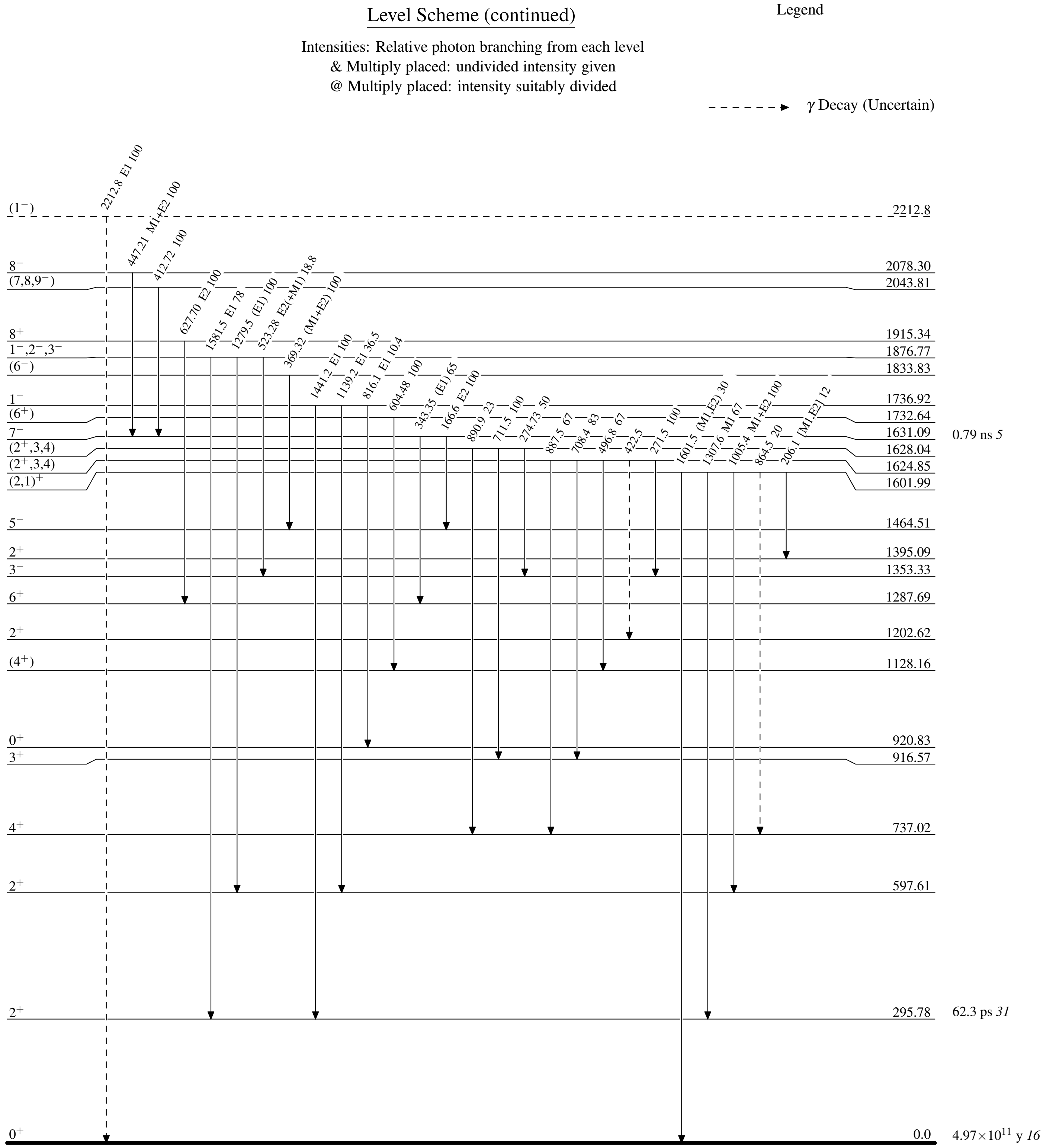


$^{190}_{78}Pt_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

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

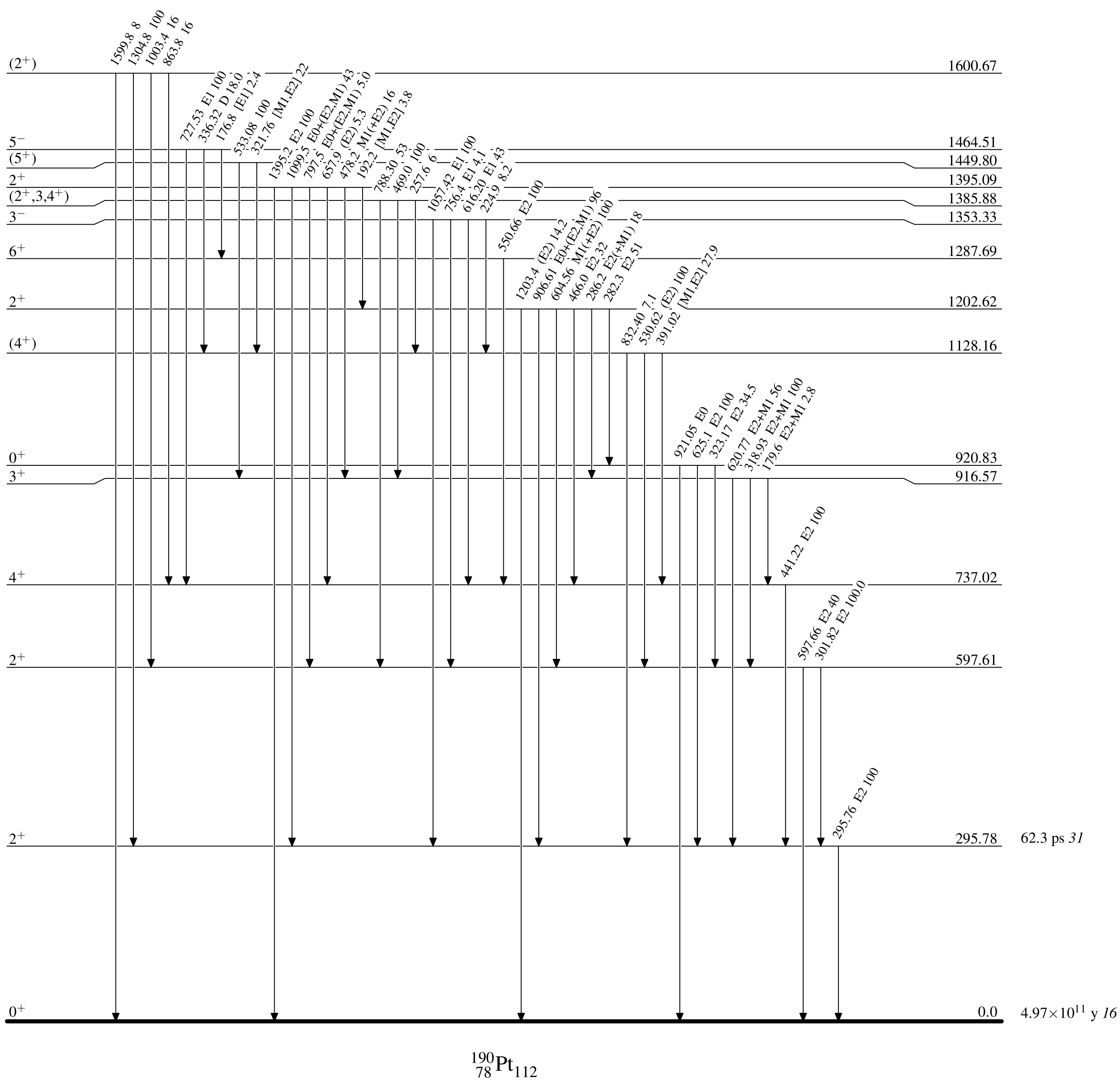


$^{190}_{78}Pt_{112}$

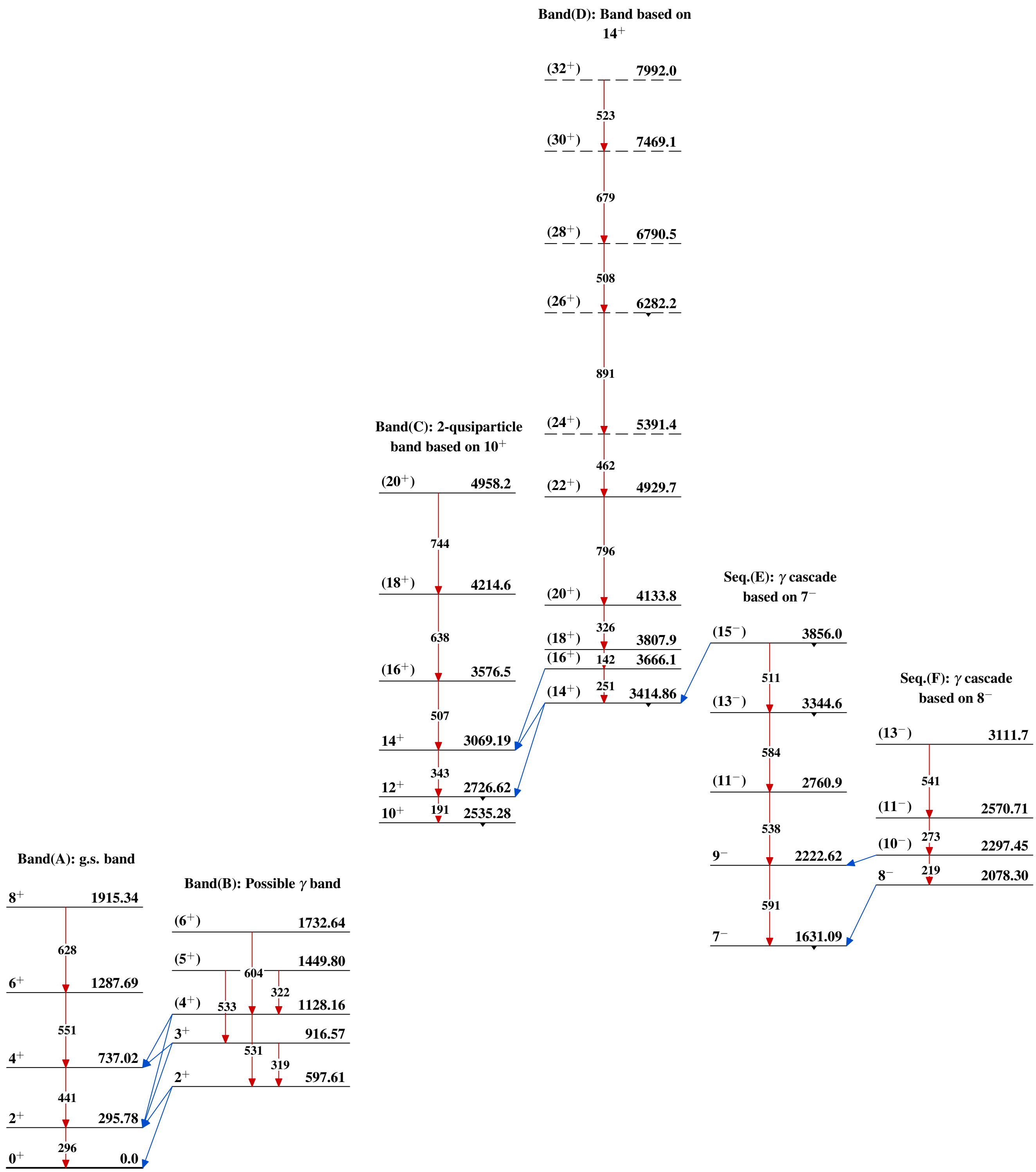
Adopted Levels, Gammas

Level Scheme (continued)

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

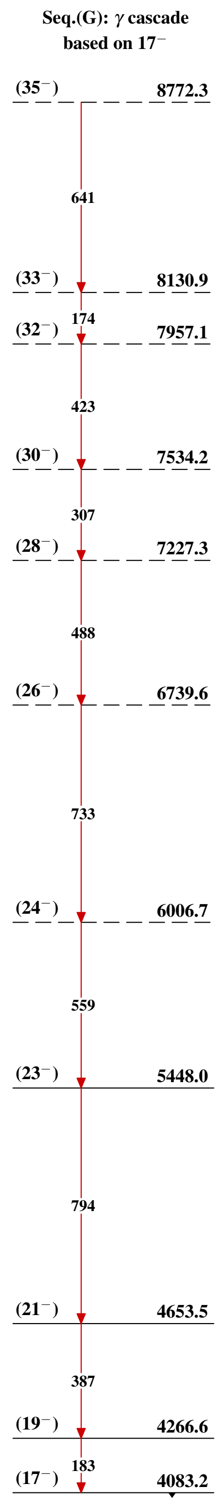


Adopted Levels, Gammas



$^{190}_{78}Pt_{112}$

Adopted Levels, Gammas (continued)



$^{190}_{78}Pt_{112}$

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113,1871 (2012)	15-Jun-2012

Q(β^-)=−3516 *16*; S(n)=8662 *4*; S(p)=6870.3 *24*; Q(α)=2422 *3* 2012Wa38
Note: Current evaluation has used the following Q record −3516 16 *8662* 3 *6870.3* *24* 2422.2 *26* 2003Au03,2011AuZZ.
S(n), S(p), Q(α) from 2011AuZZ (cf. 8666 *3*, 6875.4 *19*, 2418.6 *22* from 2003Au03).

Other Reactions:

^{196}Pt(n,5nγ) (2001Ta31): E(n)=1-250 MeV from spallation n source; observed known 317γ, 468γ, 581γ and 589γ; measured prompt γ production cross sections.

^{180}Hf(^{12}C,X), E=65 MeV (2009Ma24, 2011Ma12): sum spin spectrometer in 4π configuration; measured high-energy GDR γ spectrum (4-6 fold gated using spin spectrometer) and γ anisotropy (θ(lab)=135°, 90°); searched for shape-phase transition; data analysis is ongoing.

See, e.g., 1987Ne09, 1988Bo31, 1988Le22, and 1990Hi08 for hfs and isotope shift data.

Theory (partial list only):

Interacting boson model calculation of ^{192}Pt level scheme: 2011No01, 2009Ga15.

Calculation of β and γ band energies using Bohr Hamiltonian with Morse potential: 2010Bo25.

Relativistic energy density functional calculation of low-lying level energies and B(E2) values (2011Ni07).

Density-dependent cluster model calculation of α decay $T_{1/2}$ (9x10^{22} y; 2011Qi12).

Interacting-boson-model calculation of collective structural evolution: 2011No15.

^{192}Pt Levels

Cross Reference (XREF) Flags

A	^{192}Ir β^- decay (73.829 d)	E	^{192}Pt(α,α')	I	^{186}W(^{11}B,p4nγ)
B	^{192}Ir β^- decay (1.45 min)	F	Coulomb excitation	J	^{198}Pt(^{136}Xe,Xγ)
C	^{192}Au ε decay	G	^{193}Ir(p,2nγ)	K	^{192}Os(^{82}Se,Xγ)
D	^{190}Os(α,2nγ), ^{192}Os(α,4nγ)	H	^{194}Pt(p,t)		

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0&	0+#	stable	ABCDEFGHIJK	$T_{1/2}(\alpha)$>6x10^{16} y (specific activity measurements, 1966Ka23). $T_{1/2}(\alpha)$>1.3x10^{17} to ^{188}Os(2$^+$, 155) and $T_{1/2}(\alpha)$>2.6x10^{17} to ^{188}Os(4$^+$, 478) (2011Be08). Others: 1956Po16, 1961Pe23, 1963Gr08. Calculated value: 9.05x10^{22} y (2011Qi12; density-dependent cluster model). $\langle r^2\rangle^{1/2}$(charge)=5.418 *9* (2004An14).
316.50645& *15*	2+#	43.7 ps *9*	ABCDEFGHIJK	μ=+0.590 *18*; Q=+0.55 *21* μ: Weighted average of following data after adjustment for consistency with adopted $T_{1/2}$: +0.559 *45* if $T_{1/2}$=43.0 ps (IPAC; 1989Ra17, from 1975Ka42), +0.574 *34* if $T_{1/2}$=44.4 ps (IPAC, 1992Al21 and 1992Bo20), +0.636 *34* if $T_{1/2}$=43.0 ps (transient field IPAC, 1992Br03), +0.594 *34* if $T_{1/2}$=43.0 ps (transient field IPAC, 1995An15). Additional information 1. Q: Coulomb excitation reorientation (1989Ra17, from 1987Gy01). Other value: +0.62 *6* (Coulomb excitation reorientation, 1989Ra17 from unpublished report referenced in 1987Gy01). J$^\pi$: E2 γ to 0$^+$. $T_{1/2}$: deduced from B(E2) in Coulomb excitation and adopted γ-ray properties. Other value (Coulomb excitation): 48.5 ps *5* (Doppler-shift recoil-distance measurements, 1977Jo05). Other values (^{192}Ir β^- decay (73.829 d)): 27 ps *4* ($\gamma\gamma$(t), 1962De14), 35 ps *3* ($\gamma\gamma$(t), 1966Sc06), 34 ps *5* (γce(t), 1970Be08), 42.8 ps *15* ($\beta\gamma\gamma$(t), 1973Sm01), 33 ps *4* (cece(t), 1976Bu20). Other: 1965Bu06 (<29 ps).

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Adopted Levels, Gammas (continued)

^{192}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
612.46318[a] *18*	2^{+}[@]	26.5 ps *15*	ABCDEFGH	μ=+0.61 *8* μ: weighted average of +0.72 *14* (IPAC, 1989Ra17 from 1975Ka42) and +0.56 *9* (transient field IPAC, 1992Br03). J^{π}: E2 γ to 0^{+}. $T_{1/2}$: $\beta\gamma\gamma$(t) in ^{192}Ir β^{-} decay (73.829 d) (1973Sm01). Other values (^{192}Ir β^{-} decay (73.829 d)): 24 ps *13* (cece(t), 1965Bu06), 20.1 ps *21* (γce(t), 1970Be08), 26.0 ps *26* (cece(t), 1976Bu20). Other value (Coulomb excitation): 31 ps *6* (deduced from B(E2)).
784.5759[&] *4*	4^{+}[#]	4.2 ps *2*	A CDEFGHIJK	μ=+1.12 *12* μ: From transient field IPAC (1992Br03; relative to ^{194}Pt(328) or ^{196}Pt(356)). Other: +1.6 *11* (IPAC, 1989Ra17; datum of 1969Ke11 recalculated for consistency with adopted $T_{1/2}$). B(E4)=0.041 from (α,α'). J^{π}: E2 468γ to 2^{+}; g.s. band member. $T_{1/2}$: Doppler-shift recoil-distance measurements in Coulomb excitation (1977Jo05). Other values (^{192}Ir β^{-} decay (73.829 d)): 11.8 ps *21* ($\beta\gamma$(t) and $\beta\gamma\gamma$(t), 1966Sc06), 5 ps *4* (cece(t), 1975Aw01), 13 ps *10* (cece(t) and βce(t), 1976Bu20), 6.0 ps *17* (βce(t), 1978Bu02).
920.91852[a] *22*	3^{+}[@]	21.3 ps *21*	A CD FG	J^{π}: M1+E2 136γ to 4^{+} 785; M1+E2 208γ to 2^{+} 612. $T_{1/2}$: βce(t) in ^{192}Ir β^{-} decay (73.829 d) (1978Bu02) (if $T_{1/2}$(612.5 level)=26.5 ps *15*). Other values (^{192}Ir β^{-} decay (73.829 d)): 26 ps *4* (cece(t) and βce(t), 1976Bu20), <24 ps (cece(t), 1965Bu06).
1195.169 *18*	0^{+}		C H	J^{π}: E0 transition to 0^{+}.
1201.0452[a] *5*	4^{+}[@]		A CDEFGH	B(E4)≈0.1 from (α,α'). J^{π}: M1+E2 416γ to 4^{+} 785; E2 intraband 589γ to 2^{+} 612.
1365.40[&] *6*	6^{+}[#]	1.8 ps *7*	D FGHIJK	J^{π}: E2 581γ to 4^{+} 785; g.s. band member. $T_{1/2}$: Doppler-shift recoil-distance measurements in Coulomb excitation (1977Jo05).
1378.046 *18*	3^{-}	41 ps *9*	A CDEFGH	XREF: E(1390). J^{π}: E1+M2 593γ to 4^{+} 785; E1(+M2) 1062γ to 2^{+} 316. $T_{1/2}$: deduced from B(E3) in Coulomb excitation and adopted γ-ray properties.
1383.95[d] *7*	$(5)^{-}$		A CD GH J	J^{π}: E1 599γ to 4^{+} 785; J=5 from band assignment.
1406.35 *4*	3^{+}		A CD GH J	J^{π}: M1+E2 1090γ to 2^{+} 317; 485γ to 3^{+} 921; log *ft*=8.8 from 4^{+}.
1439.263 *20*	2^{+}		C GH	J^{π}: M1+E2+E0 827γ to 2^{+} 612; 1439γ to 0^{+} g.s.; 655γ to 4^{+} 785.
1481.78[a] *8*	5^{+}[@]		D FG	J^{π}: E2 561γ to 3^{+} 921; band assignment.
1518.35[d] *8*	$(7)^{-}$	1.85 ns *17*	D GH J	μ=+3.4 *8* (2006Le06) J^{π}: E2 134γ to $(5)^{-}$ 1384; band assignment. $T_{1/2}$: $\gamma\gamma$(t) in ^{190}Os(α,2nγ), ^{192}Os(α,4nγ) (average value). μ: Based on g−factor=+0.48 *12* in (α,2nγ) from IPAD.
1546.93 *4*	(0^{+})		C H	J^{π}: L(p,t)=(0);
1576.368 *17*	2^{+}		C GH	J^{π}: E2 1576γ to 0^{+} g.s.; M1+E2+E0 1260γ to 2^{+} 317.
1629.30 *6*	0^{+}		C H	J^{π}: L(p,t)=0. Consistent with E2 1313γ to 2^{+} 317; however α(K)exp for 1017γ to 2^{+} 612 exceeds α(K)(M1).
1666.63 *5*	(2,3,4)		CD G	J^{π}: 746γ to 3^{+} 921; 289γ to 3^{-} 1378; log *ft*=9.4 from 1^{-}.
1739.431 *15*	$(1)^{-}$		C G	J^{π}: E1 1423γ to 2^{+} 317; 1739γ to 0^{+} g.s.
1746.41[c] *11*	$(6)^{-}$		D G	J^{π}: M1+E2 γ to $(5)^{-}$ 1384; band assignment.
1766.09 *4*	$(2,3)^{+}$		C	J^{π}: E2(+M1) 1450γ to 2^{+} 317; 565γ to 4^{+} 1201; log *ft*=9.0 from 1^{-}.
1793.503 *24*	$(2)^{+}$		C H	XREF: H(1792.3). J^{π}: M1+E2+E0 1477γ to 2^{+} 317.
1800.3 *1*			H	

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Adopted Levels, Gammas (continued)

^{192}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
1857.4 *1*			H	
1869[a]	6^+[@]		F	J^{π}: assignment to γ band.
1880.02 *4*	3^+		C H	XREF: H(1878.6). J^{π}: M1 1564γ to 2^+ 317; M1+E2 1095γ to 4^+ 785.
1881.5 *3*	0^+		H	J^{π}: L(p,t)=0.
1894.478 *20*	$(2,3)^-$		C	J^{π}: E1 1282γ to 2^+ 612; 974γ to 3^+ 921; log *ft*=8.4 from 1^-.
1897.7 *1*			H	
1934.7 *1*	(4^+)		H	J^{π}: L(p,t)=3,4; analogy with ^{194}Pt and ^{196}Pt.
1964.51[c] *13*	$(8)^-$		D G J	J^{π}: M1+E2 446γ to $(7)^-$ 1518; band assignment.
1972.5 *1*			H	
1976.25 *4*	$(2)^+$		C	J^{π}: M1 1660γ to 2^+ 317; L(p,t)=(2).
1981.5 *1*			H	
2017.0 *2*			H	
2018.37[&] *13*	8^+[#]		D FG I K	J^{π}: E2 653γ to 6^+ 1365; g.s. band member.
2041.81 *3*	$(2^-,3^-)$		C H	J^{π}: 1429γ to 2^+ 612; 1257γ to 4^+ 785; log *ft*=9.1 from 1^-. M1 1114γ from π=− 3155; M1 917γ from π=− 2958. However, α(K)exp favors E2 for 1257γ to π=+ 612.
2047.89 *4*	$(2)^+$		C	J^{π}: M1 1731γ to 2^+ 317; 2048γ to 0^+ g.s.; 1263γ to 4^+.
2068.4 *3*			H	
2073.95 *4*	2^+		C H	J^{π}: E2 2074γ to 0^+ g.s.
2096.9 *3*			H	
2103.22[d] *11*	$(9)^-$		D G	J^{π}: E2 585γ to $(7)^-$ 1518; band assignment.
2110.9 *1*	0^+		H	J^{π}: L(p,t)=0.
2113.20[a] *20*	7^+[@]		D FG	
2120.21 *5*	(2^+)		C	J^{π}: 2120γ to 0^+ g.s.; 1199γ to 3^+ 921; 742γ to 3^- 1378.
2129.52 *3*	(1^-)		C H	XREF: H(2128.9). J^{π}: E1 2130γ to 0^+ g.s.; 752γ to 3^- 1378. However, multipolarities of 1517γ and 1813γ may not be consistent with that of 2130γ.
2136.2 *1*			H	
2142.96 *4*	$(3)^-$		C	J^{π}: M1 765γ to 3^- 1378; 1530γ to 2^+ 612; 1358γ to 4^+ 785. log *ft*=9.1 from 1^-.
2149.385 *23*	1^+		C H	XREF: H(2149.7). J^{π}: M1 2149γ to 0^+ g.s.; M1 1833γ to 2^+ 317.
2161.64 *4*			C	J^{π}: 1549γ to 2^+ 612, 2141γ to 3^+ 921 so $J^{\pi}=(1^+,2,3,4^+)$.
2162.7 *1*			H	
2171.36 *4*	2^+		C	J^{π}: M1+E2+E0 1855γ to 2^+ 317; E2 1388γ to 4^+ 785; M1(+E2) 1250γ to 3^+ 921.
2172.37[f] *13*	$(10)^-$	272 ns *23*	D J	μ=−0.012 *10* (2006Le06) J^{π}: M1 γ to $(9)^-$ 2103; bandhead assignment, with probable configuration ν 9/2[505]+ν 11/2[615], consistent with measured g-factor and analogous structure in ^{190}Os (2006Le06). $T_{1/2}$: weighted average of 250 ns *30* (1976Cu02) and 310 ns *30* (1976Hj01) from $\gamma\gamma$(t) in ^{190}Os(α,2nγ), ^{192}Os(α,4nγ) and 235 ns *47* from fragment-$\gamma\gamma$(t) in ^{198}Pt(^{136}Xe,Xγ) using 317γ-468γ pair as double γ-ray gate (2004Va03, 2004Re11). μ: Based on g-factor=−0.0012 *10* in (α,2nγ) from IPAD. Other: 0.10 *6* from g-factor=0.010 *6* from 2001Ko41.
2183.2 *2*			H	
2191.30 *4*	$(2^+,3^-)$		C	J^{π}: 1406γ to 4^+ 785; 452γ to $(1)^-$ 1739.
2199.3 *1*			H	
2208.7 *3*			H	
2217.12 *6*	$(2)^+$		C	J^{π}: M1 1605γ to 2^+ 612; 1433γ to 4^+ 785; 478γ to $(1)^-$ 1739.
2236.82 *3*	$(1,2)^+$		C	J^{π}: M1 1624γ to 2^+ 612; 1296γ to (0^+) 1547.
2237.52 *4*	$(2)^+$		C	J^{π}: M1 1921γ to 2^+ 317; M1+E2 1317γ to 3^+ 921; 2237γ to 0^+ g.s.;

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Adopted Levels, Gammas (continued)

^{192}Pt Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
			1037γ to 4+ 1201.
2257.26 *3*	(2)−	C	Jπ: E1 1941γ to 2+ 317; E1 1336γ to 3+ 921; log ft=7.4 from 1−. However, adopted Jπ implies M2 multipolarity for 2257γ.
2264.9 *1*		H	
2287.3 *2*		H	
2296.06 *4*	(1,2)+	C	Jπ: M1 1980γ to 2+ 317; 1101γ to 0+ 1195; log ft=7.8 (log $f^{1u}t$≤8.5) from 1−.
2300.9 *1*		H	
2313.5 *6*	(8,9,10)	D	Jπ: D 210γ to (9)− 2103.
2319.11 *3*	1+	C	Jπ: M1 2336γ to 0+ g.s.; M1 1707γ to 2+ 612.
2321.1 *2*		H	
2335.464 *19*	1+	C	Jπ: M1 2335.5γ to 0+ g.s.
2343.1 *3*		H	
2349.5 *1*		H	
2366.4 *3*		H	
2375.392 *25*	(1,2)+	C	Jπ: M1 2059γ to 2+ 317; M1 225γ to 1+ 2149.
2378.0 *2*		H	
2385.6 *3*		H	
2394.3 *2*		H	
2399.270 *24*	(1,2)+	C	Jπ: M1 2083γ to 2+ 317; M1 250γ to 1+ 2149.
2402.6 *2*		H	
2408.34 *3*	(2)+	C	Jπ: M1 2092γ to 2+ 317; M1 1487γ to 3+ 921; (E2) 2408γ to 0+ g.s.
2415.4 *2*		H	
2420.3 *2*		H	
2422.78 *4*	(1,2)+	C	Jπ: M1 2106γ to 2+ 317; M1,E2 2423γ to 0+ g.s.
2435.37 *6*	3+	C H	Jπ: M1 1823γ to 2+ 612; M1+E2+E0 1514γ to 3+ 921. log $f^{1u}t$>8.5.
2453.43 *8*	2+	C	Jπ: M1+E2+E0 1840γ to 2+ 612; M1 2137γ to 2+ 317.
2456.1 *1*		H	
2469.5 *2*		H	
2472.27 *5*	2+	C	Jπ: M1 2156γ to 2+ 317; M1+E2+E0 1860γ to 2+ 612.
2477.9 *1*		H	
2483.64 *5*	≤3	C	Jπ: log ft=8.4 from 1−. 2167γ to 2+ 317 makes Jπ=0+ unlikely; log ft rules out 3−.
2486.29 *4*	(2)−	C	Jπ: M1 747γ to (1)− 1739; M1 1108γ to 3− 1378.
2491.4 *2*	0+	H	Jπ: L(p,t)=0.
2500.2 *3*	0+	H	Jπ: L(p,t)=0.
2508.84 *6*	(2,3)+	C	Jπ: M1 1588γ to 3+ 921; log ft=8.2 (log $f^{1u}t$=8.7) from 1−.
2511.75[g] *23*	(11)−	D	Jπ: M1+E2 339γ to (10)− 2172; band assignment.
2512.3 *2*		H	
2518.99[b] *16*	(10)+	D F I K	Jπ: E2 501γ to 8+ 2018; band assignment.
2523.37 *16*	(10+)	I	
2530.3[c] *6*	(10−)	D	
2532.46 *5*	1+	C H	Jπ: M1 2533γ to 0+ g.s.; M1 2216γ to 2+ 317.
2537.5 *1*		H	
2546.5 *2*		H	
2549.42 *7*	(2)+	C	Jπ: M1,E2 1937γ to 2+ 612; 1171γ to 3− 1378; 810γ to (1)− 1739.
2557.5 *2*		H	
2560.15 *5*	(1+,2)	C	Jπ: 1639γ to 3+ 921; 821γ to (1)− 1739; log ft=8.2 from 1−.
2562.96 *5*	(2)+	C	Jπ: M1 1950γ to 2+ 612; 1778γ to 4+ 785; log ft=7.6 log $f^{1u}t$<8.5) from 1−.
2565.0 *3*		H	
2573.5 *2*		H	
2583.37[e] *21*	(10+)	D F	
2585.23 *5*	(2)+	C	Jπ: M1 1664γ to 3+ 921; 2585γ to 0+ g.s.; 1800γ to 4+ 785.
2591[a]	8+[@]	F H	XREF: H(2590.8). Jπ: band assignment in Coulomb excitation.
2602.97 *4*	(2)+	C	Jπ: M1 2286γ to 2+ 317; 2603γ to 0+ g.s.; 1225γ to 3− 1378.
2604.76 *4*	(1,2)−	C	Jπ: M1 865γ to (1)− 1739; 1227γ to 3− 1378.

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Adopted Levels, Gammas (continued)

^{192}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
2607.1 *1*			H	
2614.29 *9*	(2$^+$)		C	J^{π}: E2 2614γ to 0$^+$ g.s.; M1 1693γ to 3$^+$ 921.
2623.72[b] *18*	(12)$^+$	2.62 ns *18*	D F I K	μ=−2.2 *11* (2006Le06) J^{π}: E2 105γ to (10)$^+$ 2519; band structure. $T_{1/2}$: in-beam direct timing of conversion electrons in ^{190}Os(α,2nγ), ^{192}Os(α,4nγ) (1978Ti02). Other values from (α,xnγ): 3.5 ns *5* (1976Cu02), 2.6 ns *5* (1976Hj01). μ: From g-factor=−0.18 *9* (2006Le06) in (α,2nγ) from IPAD.
2626.5 *1*			H	
2626.64[f] *24*	(12)$^-$		D	J^{π}: E2 454γ to (10)$^-$ 2172; band assignment.
2629.24 *4*	2$^+$		C	J^{π}: M1+E2+E0 2017γ to 2$^+$ 612; 2629γ to 0$^+$ g.s.
2635.23 *6*	1$^+$		C	J^{π}: M1 2635γ to 0$^+$ g.s.
2641.1 *3*	(12$^+$)		I	
2645.4 *2*			H	
2647.32 *6*	(2)$^-$		C	J^{π}: E1 2035γ to 2$^+$ 612; 1726γ to 3$^+$ 921; log *ft*=7.6 from 1$^-$.
2653.2 *2*			H	
2658.46 *9*	(1,2)$^+$		C	J^{π}: $\Delta\pi$=no 2658γ to 0$^+$ g.s.; 2342γ to 2$^+$ 317.
2674.2 *2*			H	
2683.9 *1*			H	
2703.3 *2*			H	
2709.1[d] *3*	(11)$^-$		D	J^{π}: E2 606γ to (9)$^-$ 2103; band assignment.
2709.3 *1*			H	
2721.4 *2*			H	
2729.4[&]	10$^+$[#]		F	
2730.73 *6*	(2)$^-$		C	J^{π}: M1 1352γ to 3$^-$ 1378; M1 991γ to (1)$^-$ 1739.
2732.2 *2*			H	
2743.0 *1*	(0$^+$)		H	J^{π}: L(p,t)=(0).
2757.4 *2*			H	
2764.0 *2*			H	
2770.7[i] *7*	(13$^+$)		I	
2775.21 *6*			C H	J^{π}: 2459γ to 2$^+$ 317; 1036γ to (1)$^-$ 1739; log *ft*=8.3 from 1$^-$.
2784.1 *2*			H	
2793.4 *2*			H	
2794.25 *7*	($\leq$2)		C	J^{π}: 1054γ to (1)$^-$ 1739; 2182γ to 2$^+$ 612; log *ft*=8.5 from 1$^-$.
2800.5 *2*			H	
2812.2 *1*			H	
2832.89 *7*	(1,2,3)$^+$		C	J^{π}: M1 2220γ to 2$^+$ 612; log *ft*=7.7 from 1$^-$.
2834.60 *6*	(2$^+$)		C	J^{π}: 1639γ to 0$^+$ 1195; 1913γ to 3$^+$ 921; 1634γ to 4$^+$ 1201.
2841.7 *2*			H	
2856.13 *5*	(2)$^-$		C	J^{π}: M1 1117γ to (1)$^-$ 1739; 2244γ to 2$^+$ 612; log *ft*=7.7 from 1$^-$.
2857.07 *5*	(2$^-$)		C	J^{π}: E1 2541γ to 2$^+$ 317; 1936γ to 3$^+$ 921; log *ft*=7.6 from 1$^-$.
2890.93 *4*	(2)$^-$		C	J^{π}: E1 2575 to 2$^+$ 317; 1152γ to (1)$^-$ 1739; 1970γ to 3$^+$ 921; log *ft*=7.4 from 1$^-$.
2933.03? *23*	(12)$^+$		D	J^{π}: E2 414γ to (10)$^+$ 2519.
2936.37[e] *25*	(12$^+$)		D F	
2945.90 *24*	(11)$^+$		D	J^{π}: M1+E2 427γ to (10)$^+$ 2519.
2947.00 *5*	(2$^-$)		C	J^{π}: M1 1053γ to (1$^-$) 1894; 2026γ to 3$^+$ 921.
2950.2? *4*			D	
2950.43 *9*	(1,2$^+$)		C	J^{π}: E2 1511γ to (2$^+$) 1439; 1755γ to 0$^+$ 1195.
2958.75 *4*	(2,3)$^-$		C	J^{π}: M1 1580γ to 3$^-$ 1378; 1219γ to (1)$^-$ 1739; 2038γ to 3$^+$ 921.
2998.24[b] *21*	(14)$^+$		D F I K	J^{π}: E2 375γ to (12)$^+$ 2624; band assignment.
3022.26[g] *25*	(13$^-$)		D	
3027.38 *5*	(2,3)$^-$		C	J^{π}: M1 1288γ to (1)$^-$ 1739; 2106γ to 3$^+$ 921; 1649γ to 3$^-$ 1378.
3031.00 *7*	($\leq$3)		C	J^{π}: 1291γ to (1)$^-$ 1739.

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Adopted Levels, Gammas (continued)

^{192}Pt Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
3068.4 *3*	(14+)	I	
3080.1? *3*	(14+)	D	
3082.4[c] *6*	(12−)	D	Jπ: Q intraband 552γ to (10−) 2530.
3127.19 *4*	(1−,2−)	C	Jπ: M1 998γ to (1−) 2130; 674γ to 2+ 2453.
3137.4 *4*	(12+)	I	
3155.74 *4*	(2,3)−	C	Jπ: M1,E2 1416γ to (1)− 1739; E1 2543γ to 2+ 612; 2235γ to 3+ 921.
3184.7[i] *9*	(15+)	I	
3189.52 *7*	(2,3−)	C	Jπ: 2269γ to 3+ 921; 1450γ to (1)− 1739; 1811γ to 3− 1378.
3225.5 *3*	(13+)	D	
3357.5[d] *6*	(13−)	D	
3400.0? *5*		D	Jπ: possible 320γ to (14+) 3080 suggests J=(12 to 16).
3504.7[h] *7*	(16+)	I	
3542.1[b] *3*	(16)+	D F I K	Jπ: E2 543γ to (14)+ 2998; band assignment.
3569.3? *4*		D	
3673.8? *5*		D	Jπ: D+Q 274γ to 3400.
3674.1[i] *10*	(17+)	I	
3695.3[g] *3*	(15)−	D	Jπ: E1 697γ to (14)+ 2998; band assignment.
3778.7[h] *7*	(18+)	I	
3883.3 *4*		D	Jπ: D+Q 188γ to (15)− 3695 so J=(14,15,16).
3923.6[g] *3*	(17−)	D	
4160.4[f] *4*		D	Jπ: intraband 237γ to (17−) 3923 is probably ΔJ=1. If so, Jπ=(18−).
4199.7[h] *8*	(20+)	I	
4204.2[b] *4*	(18)+	D F I K	Jπ: E2 662γ to (16)+ 3542; band assignment.
4320.5? *4*		D	
4950.7[b] *6*	(20+)	D F I K	

[†] From least-squares fit to adopted Eγ for levels with known γ deexcitation; from cross referenced datasets otherwise.

[‡] From γ-ray multipolarities, coincidence data, and band structure in ^{190}Os(α,2nγ), ^{192}Os(α,4nγ) and Coulomb excitation, except where noted; continuing Jπ patterns established.

[#] Based on smooth progression of level energies and independently established Jπ(g.s.) and mult(317γ), definite Jπ has been assigned to all members of the g.s. band.

[@] Based on smooth progression of level energies and independently established Jπ(612) and mult(308γ), definite Jπ has been assigned to all members of the γ vibration band.

[&] Band(A): Kπ=0+ g.s. band.

[a] Band(B): Kπ=2+ quasi-γ vibration band.

[b] Band(C): neutron superband (1976Hj01,1976Cu02).

[c] Band(D): Kπ=(5)−, α=1 band (1976Hj01,1976Cu02). Semidecoupled band; primarily a two-proton excitation including π $h_{11/2}$ coupled with π $d_{3/2}$ or π $s_{1/2}$ (2006Le06).

[d] Band(d): Kπ=(5)−, α=0 band (1976Hj01,1976Cu02). See comment on signature partner band.

[e] Band(E): Aligned proton band (1976Hj01,1976Cu02). Proton superband (1981HuZV).

[f] Band(F): Kπ=(10)−, α=0 band (1976Hj01,1976Cu02). Built on 2172-keV 10− isomer; probable configuration=((ν 9/2[505])+(ν 11/2[615]) (2006Le06).

[g] Band(f): Kπ=(10)−, α=1 band (1976Hj01,1976Cu02). See comment on signature partner band.

[h] Band(G): π=+, α=0 band fragment. Built on (16+) 3505 level.

[i] Band(H): π=+, α=1 band fragment. Built on (13+) 2271 level.

Adopted Levels, Gammas (continued)

$\gamma(^{192}$Pt)

E_i(level)	J^π_i	E_γ†	I_γ‡	E_f	J^π_f	Mult.†	δ†	αd	$I_{(\gamma+ce)}$	Comments
316.50645	2+	316.50618# *17*	100#	0.0	0+	E2#		0.0841		B(E2)(W.u.)=57.2 *12*
612.46318	2+	295.95650 *15*	100.00 *23*	316.50645	2+	M1+E2	+10.0 *4*	0.1047		B(M1)(W.u.)=2.45×10^{-4} *24*; B(E2)(W.u.)=109 *7* I_γ: from β^- decay (73.829 d). Other δ: +6 *2* in (α,xnγ).
		612.4621 *3*	19.0 *3*	0.0	0+	E2		0.01536		B(E2)(W.u.)=0.55 *4* I_γ: unweighted average of 19.30 *13* from ε decay and 18.61 *26* from β^- decay (73.829 d). Others: 14 *3* from (α,xnγ), 17.4 *15* from (p,2nγ).
784.5759	4+	468.0688# *3*	100#	316.50645	2+	E2#		0.0291		B(E2)(W.u.)=89 *5*
920.91852	3+	136.3# *1*	0.67# *8*	784.5759	4+	M1+E2#	+3.5# *+39−16*	1.53 *19*		B(M1)(W.u.)=0.00015 *+31−15*; B(E2)(W.u.)=38 *10* Other Iγ: 0.52 *13* from ε decay.
		308.45507# *17*	100.00# *22*	612.46318	2+	M1+E2#	+7.20# *3*	0.0943		B(M1)(W.u.)=4.8×10^{-4} *5*; B(E2)(W.u.)=102 *10* δ: other δ: ≥4.5 from α(K)exp in ^{192}Au ε decay; 6.5 *+10−7* from α(K)exp (1974Vo13) in β^- decay; +7 *2* in (α,xnγ).
		604.41105# *25*	27.66# *6*	316.50645	2+	M1+E2#	−1.48# *2*	0.0258		B(M1)(W.u.)=2.9×10^{-4} *3*; B(E2)(W.u.)=0.68 *7* Other Iγ: 30.7 *5* from ε decay.
1195.169	0+	582.70 *3*	100.0 *15*	612.46318	2+	E2		0.01722		
		878.70 *4*	30.5 *7*	316.50645	2+	E2				
		1195.26 *13*		0.0	0+	E0			0.51 *9*	
1201.0452	4+	280.27# *24*	0.18# *9*	920.91852	3+	M1(+E2)#	≤5.4#	0.25 *12*		
		416.4688# *7*	14.8# *5*	784.5759	4+	M1+E2#	+2.9# *10*	0.049 *10*		Other Iγ: 14.0 *13* in ε decay, 39 *14* in (α,xnγ), 8.0 *15* in Coulomb excitation, 28 *3* in (p,2nγ). Other δ: +6 *2* in (α,xnγ), 3.9 *+7−14* in β^- decay.
		588.5810# *7*	100.00# *22*	612.46318	2+	E2#		0.01682		
		884.5365# *7*	6.45# *15*	316.50645	2+	E2#				Other Iγ: 7.9 *7* from ε decay, 6.6 *16* from (p,2nγ), 8 *3* from (α,xnγ).
1365.40	6+	580.83 *6*	100	784.5759	4+	E2		0.01734		B(E2)(W.u.)=70 *30* Eγ: weighted average of 580.80 *8* from (p,2nγ), 580.88 *12* from (α,2nγ) and 580.9 *2* from (^{11}B,p4nγ). Other Eγ: 585 in ^{198}Pt(^{136}Xe,Xγ).

Adopted Levels, Gammas (continued)

γ(^{192}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[†]	δ[†]	α[d]	Comments
1378.046	3^-	176.95 *4*	10.4 *9*	1201.0452	4^+	[E1]		0.0954	B(E1)(W.u.)=4.8×10^{-5} *12* E_γ: weighted average of 176.98 *4* from β^- decay (73.829 d), 176.84 *8* from ε decay and 176.8 *3* from (p,2nγ). I_γ: weighted average of 8.1 *19* from β^- decay (73.829 d), 11.3 *11* from ε decay and 10 *2* from (p,2nγ).
		593.55 *12*	79.7 *15*	784.5759	4^+	E1+M2	−0.07 *2*		B(E1)(W.u.)=9.6×10^{-6} *22*; B(M2)(W.u.)=0.6 *4* E_γ: unweighted average of 593.38 *5*, 594.0 *3* and 593.5 *3* from β^- decay (73.829 d), 593.46 *4* from ε decay and 593.39 *12* from (p,2nγ) (weighted average is 593.43 *5*). I_γ: weighted average of 79.1 *19* from β^- decay (73.829 d), 81.7 *27* from ε decay and 72 *8* from (p,2nγ). Mult.,δ: from $\gamma\gamma(\theta)$ and γ-ray linear polarization (oriented nuclei) in β^- decay (73.829 d) and α(K)exp in Au ε decay. Other: 0.11 *+5−11* from α(K)exp in ε decay.
		765.67 *15*	2.26 *27*	612.46318	2^+	E1+M2	0.20 *+10−12*		B(E1)(W.u.)=1.2×10^{-7} *4*; B(M2)(W.u.)=0.04 *4* E_γ: weighted average of 765.8 *3* from β^- decay (73.829 d), 765.6 *2* from ε decay and 765.7 *3* from (p,2nγ). I_γ: from ε decay. Others: 2.5 *11* from β^- decay (73.829 d) and 18 *4* from (p,2nγ). Mult.,δ: from β^- decay (73.829 d).
		1061.55[c] *5*	100.0[b] *22*	316.50645	2^+	E1(+M2)[#]	+0.04[#] *+5−3*		B(E1)(W.u.)=2.1×10^{-6} *5*; B(M2)(W.u.)=0.014 *+35−14* E_γ: weighted average of 1061.49 *4* from β^- decay (73.829 d), 1061.62 *4* from ε decay and 1061.46 *15* from (p,2nγ).
		1378.40 *21*	1.51 *27*	0.0	0^+	(E3)		0.00613	B(E3)(W.u.)=11.1 *20* B(E3)(W.u.): from measured B(E3)↑=0.17 *3* in Coulomb excitation. Other B(E3)↑: 0.19 from (α,α'). E_γ: unweighted average of 1378.0 *2*, 1378.2 *3*, 1378.8 *10*, 1378.0 *5*, 1379.0 *5* from β^- decay (73.829 d) and 1378.0 *2* from ε decay (weighted average is 1378.16 *15*). Other Iγ: 2.3 *6* from β^- decay (73.829 d). Mult.: K/L consistent with E3, but α(K)exp favors E2 in ^{192}Ir β^- decay (73.829 d).
1383.95	$(5)^-$	182.92 *14*	3.0[@] *4*	1201.0452	4^+	D+Q			E_γ: weighted average from (α,xnγ) and (p,2nγ). Mult.: from $\gamma(\theta)$ in (α,xnγ).
		599.37 *8*	100[@] *6*	784.5759	4^+	E1			E_γ: weighted average from β^- decay (73.829 d), (α,xnγ), (p,2nγ). Mult.: from (α,xnγ).
1406.35	3^+	485.45 *6*	100 *8*	920.91852	3^+				
		1089.82[c] *8*	24.6[b] *23*	316.50645	2^+	M1+E2[#]	1.8[#] *+14−6*		

$^{192}_{78}$Pt$_{114}$-8

$\gamma(^{192}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[†]	δ[†]	α[d]	$I_{(\gamma+ce)}$	Comments
1439.263	2^+	244.05 *8*	2.9 *3*	1195.169	0^+					
		518.28 *10*	28 *4*	920.91852	3^+					
		654.68 *9*	3.4 *4*	784.5759	4^+					
		826.79 *8*	3.6 *3*	612.46318	2^+	M1+E2+E0		0.046 *11*		α: based on α(K)exp.
		1122.80 *5*	100.0 *16*	316.50645	2^+	M1(+E2+E0)		0.0155 *25*		α: based on α(K)exp.
		1439.22 *12*	4.8 *5*	0.0	0^+					
1481.78	5^+	560.86[@] *8*	100	920.91852	3^+	E2[a]		0.0188		
1518.35	$(7)^-$	134.39[@] *8*	100 *6*	1383.95	$(5)^-$	E2[a]		1.511		B(E2)(W.u.)=39 *5* I_γ: from (α,xnγ).
		152.96[@] *10*	16.5 *15*	1365.40	6^+	(E1)[a]		0.1380		B(E1)(W.u.)=1.9×10^{-6} *3* I_γ: from (α,xnγ); I(153γ):I(134γ)=26 *5* in (p,2nγ).
1546.93	(0^+)	934.41 *8*	100 *3*	612.46318	2^+	[E2]				
		1230.45 *6*	8.3 *8*	316.50645	2^+					
		1546.96 *15*		0.0	0^+	(E0)			1.00 *11*	$I_{(\gamma+ce)}$: deduced from Ice(K) in ε decay and theoretical K/L ratios for E0 transitions (1969Ha61).
1576.368	2^+	375.26 *8*	0.34 *7*	1201.0452	4^+					
		381.25 *8*	0.76 *7*	1195.169	0^+					
		655.44 *3*	6.83 *24*	920.91852	3^+	M1(+E2)	0.5 *+5−6*	0.033 *8*		
		791.6 *2*	0.24 *3*	784.5759	4^+					
		963.93 *5*	20.0 *10*	612.46318	2^+	M1(+E2+E0)		0.020 *4*		α: estimated from α(K)exp.
		1260.0 *2*	0.56 *12*	316.50645	2^+	M1+E2+E0		0.31 *10*		α: estimated from α(K)exp.
		1576.38 *4*	100.0 *24*	0.0	0^+	E2				
1629.30	0^+	1016.81 *7*	8.9 *11*	612.46318	2^+					
		1312.85 *10*	100 *11*	316.50645	2^+	E2				
1666.63	(2,3,4)	288.59 *5*	100 *9*	1378.046	3^-					
		745.67 *10*	23 *5*	920.91852	3^+					Other Iγ: 72 *11* from (p,2nγ).
1739.431	$(1)^-$	192.50 *9*	0.52 *17*	1546.93	(0^+)					
		361.33 *5*	6.0 *7*	1378.046	3^-					
		544.19 *8*	1.47 *14*	1195.169	0^+					
		819[e]	<0.03	920.91852	3^+					
		1126.97 *3*	48.6 *16*	612.46318	2^+	E1				
		1422.91 *3*	100.0 *17*	316.50645	2^+	E1				
		1739.49 *10*	6.7 *5*	0.0	0^+	(E1)				
1746.41	$(6)^-$	362.45[@] *8*	100	1383.95	$(5)^-$	M1+E2[a]	+0.4 *1*	0.166 *9*		δ: from (α,xnγ).
1766.09	$(2,3)^+$	565.13 *10*	6.0 *8*	1201.0452	4^+					
		1449.68 *8*	100 *8*	316.50645	2^+	E2(+M1)				
1793.503	$(2)^+$	872.59 *5*	67 *3*	920.91852	3^+	E2				
		1181.05 *7*	36 *3*	612.46318	2^+	M1,E2				
		1477.00 *10*	100 *6*	316.50645	2^+	M1+E2+E0				

Adopted Levels, Gammas (continued)

γ(^{192}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[†]	δ[†]	α[d]	Comments
1869	6^+	668	100	1201.0452	4^+				E_γ: From Coulomb excitation.
1880.02	3^+	959.1 2	6.3 10	920.91852	3^+				
		1095.42 6	40.0 25	784.5759	4^+	M1+E2			
		1267.52 10	48 5	612.46318	2^+	M1			
		1563.74 19	100 30	316.50645	2^+	M1			
1894.478	$(2,3)^-$	516.43 8	61 3	1378.046	3^-				
		973.57 7	47 3	920.91852	3^+				
		1281.99 4	100 4	612.46318	2^+	E1			
		1577.95 5	61 4	316.50645	2^+				
1964.51	$(8)^-$	446.20[@] 11	100	1518.35	$(7)^-$	M1+E2[a]	+0.5 1	0.091 5	δ: from (α,xnγ).
1976.25	$(2)^+$	1055.3 2	12.5 21	920.91852	3^+				
		1363.79 9	100 7	612.46318	2^+	M1			
		1659.78 7	93 7	316.50645	2^+	M1			
2018.37	8^+	652.95[@] 12	100	1365.40	6^+	E2[a]		0.01331	
2041.81	$(2^-,3^-)$	663.73 19	5.3 16	1378.046	3^-				
		1121.00 9	58 5	920.91852	3^+				
		1257.22 6	74 5	784.5759	4^+				Mult.: α(K)exp in ε decay suggests E2, contrary to adopted J^π(2041).
		1429.34 7	100 5	612.46318	2^+				
		1724.95 21	6.3 16	316.50645	2^+				
2047.89	$(2)^+$	669.77 10	2.64 25	1378.046	3^-				
		1127.02 8	9.9 8	920.91852	3^+				
		1263.31 6	6.3 7	784.5759	4^+				Mult.: α(K)exp in ε decay suggests M1 but ce line may be contaminated. Level scheme requires E2.
		1435.39 6	36.4 17	612.46318	2^+	M1			
		1731.4 1	100 4	316.50645	2^+	M1			
		2047.8 3	1.2 3	0.0	0^+				
2073.95	2^+	634.69 8	38 5	1439.263	2^+				
		695.8 3	15 4	1378.046	3^-				
		1153.02 7	21 4	920.91852	3^+				
		1757.7 4	13 5	316.50645	2^+				
		2073.7 3	100 10	0.0	0^+	E2			
2103.22	$(9)^-$	584.85[@] 9	100	1518.35	$(7)^-$	E2[a]		0.01707	
2113.20	7^+	631.42[@] 18	100	1481.78	5^+				
2120.21	(2^+)	742.15 13	15 5	1378.046	3^-				
		1199.29 8	71 10	920.91852	3^+				
		1507.75 9	41 10	612.46318	2^+				
		2120.1 2	100 10	0.0	0^+				
2129.52	(1^-)	235.09 10	4.6 11	1894.478	$(2,3)^-$				
		335.97 9	4.9 11	1793.503	$(2)^+$				
		690.20 8	9.3 11	1439.263	2^+				

From ENSDF

$^{192}_{78}$Pt$_{114}$-10

$\gamma(^{192}$Pt) (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[‡]	E_f	J^{π}_f	Mult.[†]	δ[†]	α[d]	Comments
2129.52	(1⁻)	751.50 *9*	9.9 *11*	1378.046	3⁻				
		934.35 *7*	58 *6*	1195.169	0⁺				
		1517.05 *9*	46 *4*	612.46318	2⁺				Mult.: α(K)(E1)<α(K)exp<α(K)(E2) in ε decay. E2 inconsistent with mult(2130γ) from same level.
		1813.00 *7*	100 *4*	316.50645	2⁺				Mult.: α(K)exp in ε decay favors E2 (inconsistent with mult(2130γ)).
		2129.57 *10*	63 *6*	0.0	0⁺	E1			
2142.96	(3)⁻	736.61 *8*	36 *5*	1406.35	3⁺				
		764.91 *5*	100 *10*	1378.046	3⁻	M1		0.0259	
		1222.10 *7*	45 *6*	920.91852	3⁺				
		1358.33 *10*	27 *3*	784.5759	4⁺				
		1530.4 *1*	49 *6*	612.46318	2⁺				
2149.385	1⁺	355.93 *10*	0.26 *11*	1793.503	(2)⁺				
		573.05 *10*	1.26 *11*	1576.368	2⁺				
		1536.91 *4*	17.7 *6*	612.46318	2⁺	M1			
		1832.83 *4*	100 *6*	316.50645	2⁺	M1			
		2149.4 *2*	1.53 *17*	0.0	0⁺	M1			
2161.64		1240.67 *8*	44 *4*	920.91852	3⁺				
		1549.24 *8*	100 *12*	612.46318	2⁺				
2171.36	2⁺	1250.47 *6*	20.6 *13*	920.91852	3⁺	M1(+E2)	0.6 *+5−6*		
		1386.75 *5*	44.4 *19*	784.5759	4⁺	E2			
		1559.0 *2*	100 *6*	612.46318	2⁺	E2(+M1)	≤1.6		
		1855.0 *3*	12.5 *13*	316.50645	2⁺	M1+E2+E0		0.039 *8*	α: estimated from α(K)exp.
		2171.5 *3*	75 *13*	0.0	0⁺	[E2]			
2172.37	(10)⁻	69.12[a] *10*	80 *7*	2103.22	(9)⁻	M1[a]		3.47	B(M1)(W.u.)=4.0×10⁻⁵ *6* I_{γ}: from (α,xnγ).
		207.93[a] *15*	100 *9*	1964.51	(8)⁻	(E2)[a]		0.315	B(E2)(W.u.)=0.0166 *24* I_{γ}: from (α,xnγ).
2191.30	(2⁺,3⁻)	451.89 *12*	6.5 *22*	1739.431	(1)⁻				
		813.2 *2*	17.4 *26*	1378.046	3⁻				
		1270.33 *6*	100 *9*	920.91852	3⁺				
		1406.75 *5*	23.5 *26*	784.5759	4⁺				
2217.12	(2)⁺	477.69 *10*	17 *4*	1739.431	(1)⁻				
		1296.0 *3*	51 *8*	920.91852	3⁺				
		1432.55 *8*	66 *7*	784.5759	4⁺				
		1604.67 *13*	100 *10*	612.46318	2⁺	M1			
2236.82	(1,2)⁺	356.77 *15*	0.39 *12*	1880.02	3⁺				
		443.33 *8*	0.61 *9*	1793.503	(2)⁺				
		689.88 *6*	10.3 *3*	1546.93	(0⁺)				
		1624.35 *3*	100 *3*	612.46318	2⁺	M1			
2237.52	(2)⁺	661.0 *3*	0.61[@] *11*	1576.368	2⁺				

$^{192}_{78}Pt_{114}$-11

γ(^{192}Pt) (continued)

E_i(level)	J^{π}_i	E_γ[†]	I_γ[‡]	E_f	J^{π}_f	Mult.[†]	α[d]	Comments
2237.52	(2)$^+$	798.2 3	0.73 10	1439.263	2$^+$			
		1036.5 1	0.94 11	1201.0452	4$^+$			
		1042.2 2	0.43 8	1195.169	0$^+$			
		1316.56 7	7.1 4	920.91852	3$^+$	M1+E2		
		1921.05 6	58.8 25	316.50645	2$^+$	M1		
		2237.3 2	100 6	0.0	0$^+$			
2257.26	(2)$^-$	817.95 10	2.0 4	1439.263	2$^+$			
		879.28 6	5.4 8	1378.046	3$^-$			
		1336.31 4	37.5 17	920.91852	3$^+$	E1		
		1644.77 6	42 4	612.46318	2$^+$	E1		
		1940.80 10	100 8	316.50645	2$^+$	E1		
		2257	2.5	0.0	0$^+$			
2296.06	(1,2)$^+$	401.60 16	1.2 4	1894.478	(2,3)$^-$			
		556.59 8	4.9 6	1739.431	(1)$^-$			
		856.83 8	2.5 4	1439.263	2$^+$			
		1100.94 9	2.2 5	1195.169	0$^+$			
		1683.34 25	16.9 15	612.46318	2$^+$	M1		
		1979.58 8	100 15	316.50645	2$^+$	M1		
2313.5	(8,9,10)	210.3[a] 5	100	2103.22	(9)$^-$	D		Mult.: from $\gamma(\theta)$ in (α,xnγ).
2319.11	1$^+$	879.96 8	1.7 5	1439.263	2$^+$			
		1398.16 9	2.21 24	920.91852	3$^+$	(E2)		Mult.: some M1 admixture allowed by α(K)exp in ε decay but not permitted by level scheme.
		1706.63 3	100 3	612.46318	2$^+$	M1		
		2002.54 8	36 5	316.50645	2$^+$			
		2319.35 25	64 6	0.0	0$^+$	M1		
2335.464	1$^+$	186.1 1	0.43 8	2149.385	1$^+$			
		261.50 5	0.67 12	2073.95	2$^+$			
		359.23 8	0.62 10	1976.25	(2)$^+$			
		440.91 7	0.53 8	1894.478	(2,3)$^-$			
		759.10 5	47.5 8	1576.368	2$^+$	M1	0.0264	
		896.20 6	7.5 5	1439.263	2$^+$	M1	0.01728	
		1140.32 4	75.0 17	1195.169	0$^+$	M1		
		1414.49 5	8.5 7	920.91852	3$^+$	E2		
		1723.00 4	100 5	612.46318	2$^+$	M1		
		2018.8 2	40 5	316.50645	2$^+$	M1		
		2335.5 2	42 5	0.0	0$^+$	M1		
2375.392	(1,2)$^+$	225.97 8	22.3 8	2149.385	1$^+$	M1	0.665	
		495.36 9	4.1 5	1880.02	3$^+$			
		581.89 8	3.5 4	1793.503	(2)$^+$			
		799.05 7	10.8 8	1576.368	2$^+$	M1+E2	0.016 8	
		936.14 5	53.9 23	1439.263	2$^+$	E2		
		1762.90 4	100 15	612.46318	2$^+$	E2(+M1)		

$^{192}_{78}$Pt$_{114}$-12

γ(^{192}Pt) (continued)

E_i(level)	J^π_i	E_γ [†]	I_γ [‡]	E_f	J^π_f	Mult. [†]	δ [†]	α [d]	Comments
2375.392	(1,2)$^+$	2058.9 *1*	29 *6*	316.50645	2$^+$	M1			
		2375.71 *25*		0.0	0$^+$				Observed only in ce spectrum in ε decay.
2399.270	(1,2)$^+$	249.83 *7*	27.6 *14*	2149.385	1$^+$	M1		0.504	
		519.25 *9*	8.3 *7*	1880.02	3$^+$				
		822.90 *5*	55 *3*	1576.368	2$^+$	E2			
		960.02 *6*	24.8 *21*	1439.263	2$^+$	E2(+M1)	≥1.8		
		1204.8 [e] *5*		1195.169	0$^+$				E_γ: reported in ce spectrum only in ε decay.
		1786.79 *4*	100 *8*	612.46318	2$^+$	(E2)			
		2082.79 *6*	83 *7*	316.50645	2$^+$	M1			
		2399.74 [e] *25*		0.0	0$^+$				E_γ: reported in ce spectrum only in ε decay.
2408.34	(2)$^+$	668.91 *5*	100 *11*	1739.431	(1)$^-$				
		968.93 *15*	32 *5*	1439.263	2$^+$	M1		0.01418	
		1001.96 *8*	16 *4*	1406.35	3$^+$				
		1207.28 *9*	100 *11*	1201.0452	4$^+$				
		1487.38 *8*	72 *11*	920.91852	3$^+$	M1			
		1795.75 *20*	33 *5*	612.46318	2$^+$	M1(+E2)			
		2091.90 *7*	100 *11*	316.50645	2$^+$	M1			
		2408.4 *2*	100 *17*	0.0	0$^+$	(E2)			
2422.78	(1,2)$^+$	683.32 *8*	6.1 *6*	1739.431	(1)$^-$				
		1227.6 *1*	1.7 *4*	1195.169	0$^+$				
		1810.39 *9*	4.2 *4*	612.46318	2$^+$				
		2106.25 *5*	72 *11*	316.50645	2$^+$	M1			
		2422.9 *3*	100 *11*	0.0	0$^+$	M1,E2			
2435.37	3$^+$	1057.3 *2*	10.9 *19*	1378.046	3$^-$				
		1514.44 *11*	9.1 *25*	920.91852	3$^+$	M1+E2+E0			
		1822.90 *8*	100 *6*	612.46318	2$^+$	M1			
		2118.9 *2*	26 *3*	316.50645	2$^+$				
2453.43	2$^+$	1840.94 *10*	37 *7*	612.46318	2$^+$	M1+E2+E0			
		2137.0 *3*	100 *10*	316.50645	2$^+$	M1			
2472.27	2$^+$	1551.39 *8*	9 *3*	920.91852	3$^+$				
		1687.61 *9*	9.6 *22*	784.5759	4$^+$				
		1859.82 *9*	37 *4*	612.46318	2$^+$	M1+E2+E0			
		2155.74 *10*	100 *13*	316.50645	2$^+$	M1			
2483.64	≤3	1871.10 *10*	61 *9*	612.46318	2$^+$				
		2167.15 *11*	100 *9*	316.50645	2$^+$				
2486.29	(2)$^-$	591.75 *9*	52 *4*	1894.478	(2,3)$^-$				
		692.84 *9*	4.4 *6*	1793.503	(2)$^+$				
		746.85 *6*	100 *4*	1739.431	(1)$^-$	M1		0.0275	
		1108.26 *8*	14.6 *15*	1378.046	3$^-$	M1		0.01010	
		1565.39 *7*	94 *4*	920.91852	3$^+$				
		2169.6 *2*	42 *6*	316.50645	2$^+$				

$^{192}_{78}$Pt$_{114}$-13

$\gamma(^{192}Pt)$ (continued)

E_i(level)	J^{π}_i	E_γ[†]	I_γ[‡]	E_f	J^{π}_f	Mult.[†]	δ[†]	α[d]	Comments
2486.29	$(2)^-$	2486.4 *3*	18.3 *21*	0.0	0^+				
2508.84	$(2,3)^+$	1307.8 *2*	7.4 *11*	1201.0452	4^+				
		1587.86 *9*	100 *6*	920.91852	3^+	M1			
		1896.40 *8*	34 *3*	612.46318	2^+				
2511.75	$(11)^-$	339.37[a] *20*	100	2172.37	$(10)^-$	M1+E2[a]	−0.4 *1*	0.198 *10*	δ: from (α,xnγ).
2518.99	$(10)^+$	500.62[a] *10*	100	2018.37	8^+	E2[a]		0.0247	
2523.37	(10^+)	505.0[&] *1*	100	2018.37	8^+				
2530.3	(10^-)	565.8[a] *5*	100	1964.51	$(8)^-$	[E2]		0.0184	Mult.: E2 for doublet of comparable strength gammas in (α,xnγ).
2532.46	1^+	382.9 *3*	2.3 *10*	2149.385	1^+				
		1093.1 *1*	11.1 *13*	1439.263	2^+				
		1337.35 *8*	7.1 *7*	1195.169	0^+				
		1919.95 *8*	24 *3*	612.46318	2^+				
		2216.05 *15*	100 *6*	316.50645	2^+	M1			
		2532.8 *5*	26 *4*	0.0	0^+	M1			
2549.42	$(2)^+$	809.99 *11*	15.8 *26*	1739.431	$(1)^-$				
		1171.44 *12*	12.6 *26*	1378.046	3^-				
		1936.9 *1*	100 *5*	612.46318	2^+	M1,E2			
2560.15	$(1^+,2)$	665.73 *8*	24 *3*	1894.478	$(2,3)^-$				
		680.06 *13*	4.4 *22*	1880.02	3^+				
		820.71 *6*	18.7 *26*	1739.431	$(1)^-$				
		1639.2 *2*	25 *3*	920.91852	3^+				
		2243.5 *2*	100 *17*	316.50645	2^+				
2562.96	$(2)^+$	769.45 *8*	6.1 *8*	1793.503	$(2)^+$	M1+E2+E0			
		1184.9 *3*	6.6 *9*	1378.046	3^-				
		1641.91 *16*	11.4 *12*	920.91852	3^+				
		1778.39 *6*	18.6 *12*	784.5759	4^+				
		1950.46 *13*	100.0 *23*	612.46318	2^+	M1			
		2246.55 *15*	28 *5*	316.50645	2^+				
2583.37	(10^+)	411.03[a] *20*	73 *8*	2172.37	$(10)^-$	[E1]			I_γ: from (α,xnγ).
		564.9[a] *4*	100 *30*	2018.37	8^+	[E2]		0.0185	I_γ: from (α,xnγ). Mult.: E2 for doublet of comparable strength gammas in (α,xnγ).
2585.23	$(2)^+$	1008.85 *15*	6.3 *11*	1576.368	2^+	E2			
		1207.22 *10*	2.1 *7*	1378.046	3^-				
		1384.00 *15*	8.3 *12*	1201.0452	4^+				
		1664.2 *1*	15.4 *16*	920.91852	3^+	M1			
		1800.68 *7*	6.1 *9*	784.5759	4^+				
		1972.85 *15*	100 *12*	612.46318	2^+	M1			
		2268.8 *3*	10.0 *16*	316.50645	2^+				
		2585.3 *2*	11.4 *16*	0.0	0^+				

$^{192}_{78}Pt_{114}$-14

γ(^{192}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[†]	α[d]	Comments
2591	8^+	722	100	1869	6^+			E_γ: From Coulomb excitation.
2602.97	$(2)^+$	809.46 *7*	16 *3*	1793.503	$(2)^+$			
		836.88 *10*	28 *4*	1766.09	$(2,3)^+$			
		1224.9 *2*	27 *6*	1378.046	3^-			
		1682.09 *9*	64 *7*	920.91852	3^+			
		2286.43 *7*	100 *14*	316.50645	2^+	M1		
		2602.8 *3*	61 *7*	0.0	0^+			
2604.76	$(1,2)^-$	347.45 *15*	38 *13*	2257.26	$(2)^-$			
		443.19 *10*	14.4 *25*	2161.64				
		484.53 *9*	23 *3*	2120.21	(2^+)			
		710.27 *6*	88 *6*	1894.478	$(2,3)^-$	M1	0.0313	
		865.33 *6*	100 *6*	1739.431	$(1)^-$	M1	0.0189	
		1226.8 *2*	15.6 *25*	1378.046	3^-			
		1992.25 *9*	100 *6*	612.46318	2^+			
2614.29	(2^+)	1419.2 *2*	7.6 *11*	1195.169	0^+			
		1693.29 *24*	25.3 *27*	920.91852	3^+	M1		
		2001.75 *15*	25.3 *27*	612.46318	2^+			
		2297.8 *2*	44.0 *13*	316.50645	2^+	M1		
		2614.3 *2*	100 *13*	0.0	0^+	E2		
2623.72	$(12)^+$	(40.4)	<0.0020	2583.37	(10^+)	[E2]	329	B(E2)(W.u.)≤0.13 I_γ: from (α,2nγ), (α,4nγ). E_γ: 40.4 *3* from level energy difference.
		104.73[a] *10*	100 *8*	2518.99	$(10)^+$	E2[a]	4.05	B(E2)(W.u.)=52 *7* I_γ: from (α,xnγ).
2626.64	$(12)^-$	454.32[a] *25*	100	2172.37	$(10)^-$	E2[a]	0.0314	
2629.24	2^+	479.84 *8*	3.0 *8*	2149.385	1^+			
		653.02 *8*	3.8 *6*	1976.25	$(2)^+$			
		734.67 *15*	4.1 *6*	1894.478	$(2,3)^-$			
		749.24 *7*	8.8 *8*	1880.02	3^+			
		889.77 *9*	21.9 *16*	1739.431	$(1)^-$			
		2016.81 *15*	17.2 *16*	612.46318	2^+	M1+E2+E0		
		2312.8 *3*	100 *5*	316.50645	2^+	M1,E2		
		2629.4 *4*	63 *16*	0.0	0^+			
2635.23	1^+	841.70 *10*	2.1 *6*	1793.503	$(2)^+$			
		1088.35 *9*	10.6 *14*	1546.93	(0^+)			
		1440.03 *17*	3.9 *6*	1195.169	0^+			
		2318.67 *11*	23 *3*	316.50645	2^+			
		2635.1 *3*	100 *17*	0.0	0^+	M1		
2641.1	(12^+)	122.1[&] *2*	100	2518.99	$(10)^+$			
2647.32	$(2)^-$	1726.35 *10*	21.7 *25*	920.91852	3^+			
		2034.87 *7*	100 *17*	612.46318	2^+	E1		

$^{192}_{78}$Pt$_{114}$-15

$\gamma(^{192}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[†]	α[d]	Comments
2658.46	$(1,2)^+$	2341.94 *9*	100 *7*	316.50645	2^+			
		2658.4 *3*	55 *6*	0.0	0^+	M1,E2		
2709.1	$(11)^-$	605.92[a] *25*	100	2103.22	$(9)^-$	E2[a]	0.01574	
2729.4	10^+	711	100	2018.37	8^+			E_γ: from Coulomb excitation.
2730.73	$(2)^-$	688.88 *10*	13 *3*	2041.81	$(2^-,3^-)$			
		991.35 *8*	80 *7*	1739.431	$(1)^-$	M1	0.01338	
		1352.60 *9*	65 *6*	1378.046	3^-	M1		
		2414.4 *2*	100 *13*	316.50645	2^+			
2770.7	(13^+)	147.0[&] *5*	100	2623.72	$(12)^+$			
2775.21		880.73 *12*	15 *4*	1894.478	$(2,3)^-$			
		895.19 *10*	19 *4*	1880.02	3^+			
		1035.75 *10*	33 *5*	1739.431	$(1)^-$			
		2458.75 *15*	100 *9*	316.50645	2^+			
2794.25	(≤ 2)	899.70 *13*	24 *6*	1894.478	$(2,3)^-$			
		1054.84 *7*	100 *12*	1739.431	$(1)^-$			
		2181.8 *3*	53 *7*	612.46318	2^+			
2832.89	$(1,2,3)^+$	671.15 *15*	4.7 *12*	2161.64				
		1256.7 *3*	31 *6*	1576.368	2^+			
		1393.67 *14*	10.6 *19*	1439.263	2^+			
		2220.41 *10*	38 *3*	612.46318	2^+	M1		
		2516.4 *3*	100 *6*	316.50645	2^+			
2834.60	(2^+)	1068.4 *2*	8.2 *14*	1766.09	$(2,3)^+$			
		1428.32 *14*	3.6 *7*	1406.35	3^+			
		1633.56 *8*	13.6 *21*	1201.0452	4^+			
		1639.43 *9*	9.6 *14*	1195.169	0^+			
		1913.6 *2*	19.3 *25*	920.91852	3^+			
		2518.0 *3*	100 *18*	316.50645	2^+			
2856.13	$(2)^-$	961.65 *10*	28.2 *26*	1894.478	$(2,3)^-$	M1	0.01445	
		1090.54 *15*	4.4 *10*	1766.09	$(2,3)^+$			
		1116.60 *6*	100 *5*	1739.431	$(1)^-$	M1		
		2243.74 *20*	19.5 *21*	612.46318	2^+			
2857.07	(2^-)	727.60 *13*	4.6 *13*	2129.52	(1^-)	M1	0.0294	
		1479.03 *5*	62 *5*	1378.046	3^-			
		1936.07 *8*	8.0 *10*	920.91852	3^+			
		2541.0 *10*	100 *5*	316.50645	2^+	E1		
2890.93	$(2)^-$	761.35 *13*	5.8 *13*	2129.52	(1^-)			
		849.12 *9*	11.8 *21*	2041.81	$(2^-,3^-)$			
		996.6 *2*	31.6 *26*	1894.478	$(2,3)^-$	M1	0.01320	
		1097.6 *2*	6.1 *16*	1793.503	$(2)^+$			
		1151.51 *8*	21.1 *24*	1739.431	$(1)^-$			
		1512.75 *13*	24 *4*	1378.046	3^-			

$^{192}_{78}Pt_{114}$-16

Adopted Levels, Gammas (continued)

$\gamma(^{192}$Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[†]	δ[†]	α[d]	Comments
2890.93	$(2)^-$	1969.99 *8*	29.0 *26*	920.91852	3^+				
		2278.4 *2*	17.4 *21*	612.46318	2^+				
		2574.8 *4*	100 *16*	316.50645	2^+	E1			
2933.03?	$(12)^+$	414.04[ae] *16*	100	2518.99	$(10)^+$	E2[a]		0.0399	
2936.37	(12^+)	353.00[a] *12*	100	2583.37	(10^+)	E2[a]		0.0616	
2945.90	$(11)^+$	426.91[a] *18*	100	2518.99	$(10)^+$	M1+E2[a]	+0.5 *1*	0.102 *6*	δ: from (α,xnγ).
2947.00	(2^-)	905.2 *2*	14.2 *23*	2041.81	$(2^-,3^-)$				
		1052.55 *9*	77 *8*	1894.478	$(2,3)^-$	M1		0.01150	
		1153.42 *16*	5.8 *15*	1793.503	$(2)^+$				
		1180.96 *10*	10.0 *15*	1766.09	$(2,3)^+$				
		1207.50 *10*	6.9 *15*	1739.431	$(1)^-$				
		2026.2 *2*	11.2 *23*	920.91852	3^+				
		2630.4 *2*	100 *15*	316.50645	2^+				
2950.2?		438.5[ae] *3*	100	2511.75	$(11)^-$				
2950.43	$(1,2^+)$	902.52 *11*	7.9 *17*	2047.89	$(2)^+$				
		1511.11 *20*	23 *4*	1439.263	2^+	E2			
		1755.4 *3*	8.0 *13*	1195.169	0^+				
		2634.0 *3*	100 *25*	316.50645	2^+				
2958.75	$(2,3)^-$	701.47 *9*	3.1 *6*	2257.26	$(2)^-$				
		797.09 *11*	2.0 *6*	2161.64					
		815.79 *8*	22 *3*	2142.96	$(3)^-$	M1		0.0220	
		917.01 *9*	12.5 *16*	2041.81	$(2^-,3^-)$	M1		0.01630	
		982.49 *11*	1.1 *3*	1976.25	$(2)^+$				
		1192.49 *15*	2.8 *6*	1766.09	$(2,3)^+$				
		1219.4 *1*	8.0 *13*	1739.431	$(1)^-$				
		1519.43 *12*	6.7 *11*	1439.263	2^+				
		1580.64 *8*	100 *5*	1378.046	3^-	M1			
		2037.86 *12*	4.4 *8*	920.91852	3^+				
		2346.4 *2*	28 *3*	612.46318	2^+				
2998.24	$(14)^+$	227.5[&] *3*	29 *4*	2770.7	(13^+)				I_γ: from (^{11}B,p4nγ).
		374.51[a] *12*	100 *8*	2623.72	$(12)^+$	E2[a]		0.0523	I_γ: from (^{11}B,p4nγ).
3022.26	(13^-)	395.64[a] *20*	27 *4*	2626.64	$(12)^-$	(M1+E2)[a]		0.09 *5*	I_γ: from (α,xnγ).
		510.4[a] *5*	100 *26*	2511.75	$(11)^-$				I_γ: from (α,xnγ).
3027.38	$(2,3)^-$	985.65 *15*	16 *3*	2041.81	$(2^-,3^-)$				
		1132.93 *10*	19 *3*	1894.478	$(2,3)^-$				
		1233.95 *15*	12.0 *24*	1793.503	$(2)^+$				
		1261.3 *2*	6.0 *16*	1766.09	$(2,3)^+$				
		1287.7 *2*	60 *4*	1739.431	$(1)^-$	M1			
		1649.32 *8*	100 *12*	1378.046	3^-				
		2106.42 *9*	52 *4*	920.91852	3^+				
		2415.1 *3*	56 *4*	612.46318	2^+				

γ(^{192}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[†]	α[d]	Comments
3031.00	(≤3)	547.32 *8*	25 *4*	2483.64	≤3			
		901.5 *2*	31 *4*	2129.52	(1^-)			
		1291.60 *9*	100 *7*	1739.431	$(1)^-$			
3068.4	(14^+)	427.3[&] *1*	100	2641.1	(12^+)			
3080.1?	(14^+)	147.07[ae] *12*	100	2933.03?	$(12)^+$	(E2)[a]	1.075	
3082.4	(12^-)	552.1[a] *3*	100	2530.3	(10^-)	Q		Mult.: from $\gamma(\theta)$ in (α,xnγ).
3127.19	(1^-,2^-)	643.56 *8*	14.0 *20*	2483.64	≤3			
		673.76 *11*	9.5 *20*	2453.43	2^+			
		704.4 *1*	10.5 *25*	2422.78	$(1,2)^+$			
		791.65 *8*	17.0 *25*	2335.464	1^+			
		831.18 *9*	14.0 *25*	2296.06	$(1,2)^+$			
		997.68 *5*	100 *10*	2129.52	(1^-)	M1	0.01317	
		1387.78 *9*	39 *5*	1739.431	$(1)^-$			
3137.4	(12^+)	614.0[&] *3*	100	2523.37	(10^+)			
3155.74	$(2,3)^-$	994.10 *10*	4.7 *9*	2161.64				
		1113.93 *8*	18.1 *19*	2041.81	(2^-,3^-)	M1		
		1261.1 *2*	4.0 *8*	1894.478	$(2,3)^-$			
		1362.22 *10*	6.6 *9*	1793.503	$(2)^+$			
		1389.68 *9*	8.3 *9*	1766.09	$(2,3)^+$			
		1416.29 *8*	36 *4*	1739.431	$(1)^-$	M1,E2		
		1579.2 *3*	47 *4*	1576.368	2^+			
		1777.8 *2*	3.6 *8*	1378.046	3^-			
		2234.84 *7*	100 *6*	920.91852	3^+			
		2543.1 *2*	57 *15*	612.46318	2^+	E1		
3184.7	(15^+)	414.0[&] *5*	100	2770.7	(13^+)			
3189.52	(2,3^-)	1147.65 *17*	24 *6*	2041.81	(2^-,3^-)			
		1295.00 *10*	49 *9*	1894.478	$(2,3)^-$			
		1450.0 *2*	100 *13*	1739.431	$(1)^-$			
		1811.57 *15*	55 *7*	1378.046	3^-			
		2268.7 *2*	64 *7*	920.91852	3^+			
3225.5	(13^+)	279.57[a] *18*	100	2945.90	$(11)^+$	(E2)[a]	0.1218	
3357.5	(13^-)	648.4[a] *5*	100	2709.1	$(11)^-$			
3400.0?		319.9[ae] *4*	100	3080.1?	(14^+)			
3504.7	(16^+)	320.0[&] *2*	100	3184.7	(15^+)			
3542.1	$(16)^+$	543.85[a] *20*	100	2998.24	$(14)^+$	E2[a]	0.0202	
3569.3?		489.2[ae] *3*	100	3080.1?	(14^+)	D+Q[a]		
3673.8?		273.83[ae] *18*	100	3400.0?		D+Q		Mult.: from $\gamma(\theta)$ in (α,xnγ).
3674.1	(17^+)	489.4[&] *8*	100	3184.7	(15^+)			
3695.3	$(15)^-$	673.01[a] *25*	100 *10*	3022.26	(13^-)	E2[a]	0.01245	I_γ: from (α,xnγ).

$^{192}_{78}$Pt$_{114}$-18

Adopted Levels, Gammas (continued)

γ(^{192}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[†]	α[d]	Comments
3695.3	(15)$^-$	697.0[a] *3*	57 *7*	2998.24	(14)$^+$	E1[a]		I_γ: from (α,xnγ).
3778.7	(18$^+$)	274.0[&] *3*	100	3504.7	(16$^+$)			
3883.3		188.03[a] *20*	100	3695.3	(15)$^-$	D+Q		Mult.: from $\gamma(\theta)$ in (α,xnγ).
3923.6	(17$^-$)	228.34[a] *15*	100 *9*	3695.3	(15)$^-$	(E2)[a]	0.231	I_γ: from (α,xnγ).
		381.5[a] *3*	24 *9*	3542.1	(16)$^+$			I_γ: from (α,xnγ).
4160.4		236.84[a] *16*	100	3923.6	(17$^-$)	D+Q		Mult.: from $\gamma(\theta)$ in (α,xnγ).
4199.7	(20$^+$)	421.0[&] *3*	100	3778.7	(18$^+$)			
4204.2	(18)$^+$	662.1[a] *3*	100	3542.1	(16)$^+$	E2[a]	0.01291	
4320.5?		160.10[ae] *20*	100	4160.4				
4950.7	(20$^+$)	746.5[a] *4*	100	4204.2	(18)$^+$			

[†] From ^{192}Au ε decay, except where noted.
[‡] Relative photon branching from each level; values are from ^{192}Au ε decay, except where noted.
[#] From ^{192}Ir β^- decay (73.829 d).
[@] Weighted average from ^{190}Os(α,2nγ), ^{192}Os(α,4nγ) and ^{193}Ir(p,2nγ).
[&] From (^{11}B,p4nγ).
[a] From ^{190}Os(α,2nγ), ^{192}Os(α,4nγ).
[b] Weighted average from ^{192}Ir β^- decay (73.829 d), ^{192}Au ε decay, and ^{193}Ir(p,2nγ).
[c] Weighted average from ^{192}Ir β^- decay (73.829 d), ^{192}Au Au ε decay, (α,xnγ), ^{193}Ir(p,2nγ).
[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.
[e] Placement of transition in the level scheme is uncertain.

$^{192}_{78}$Pt$_{114}$-19

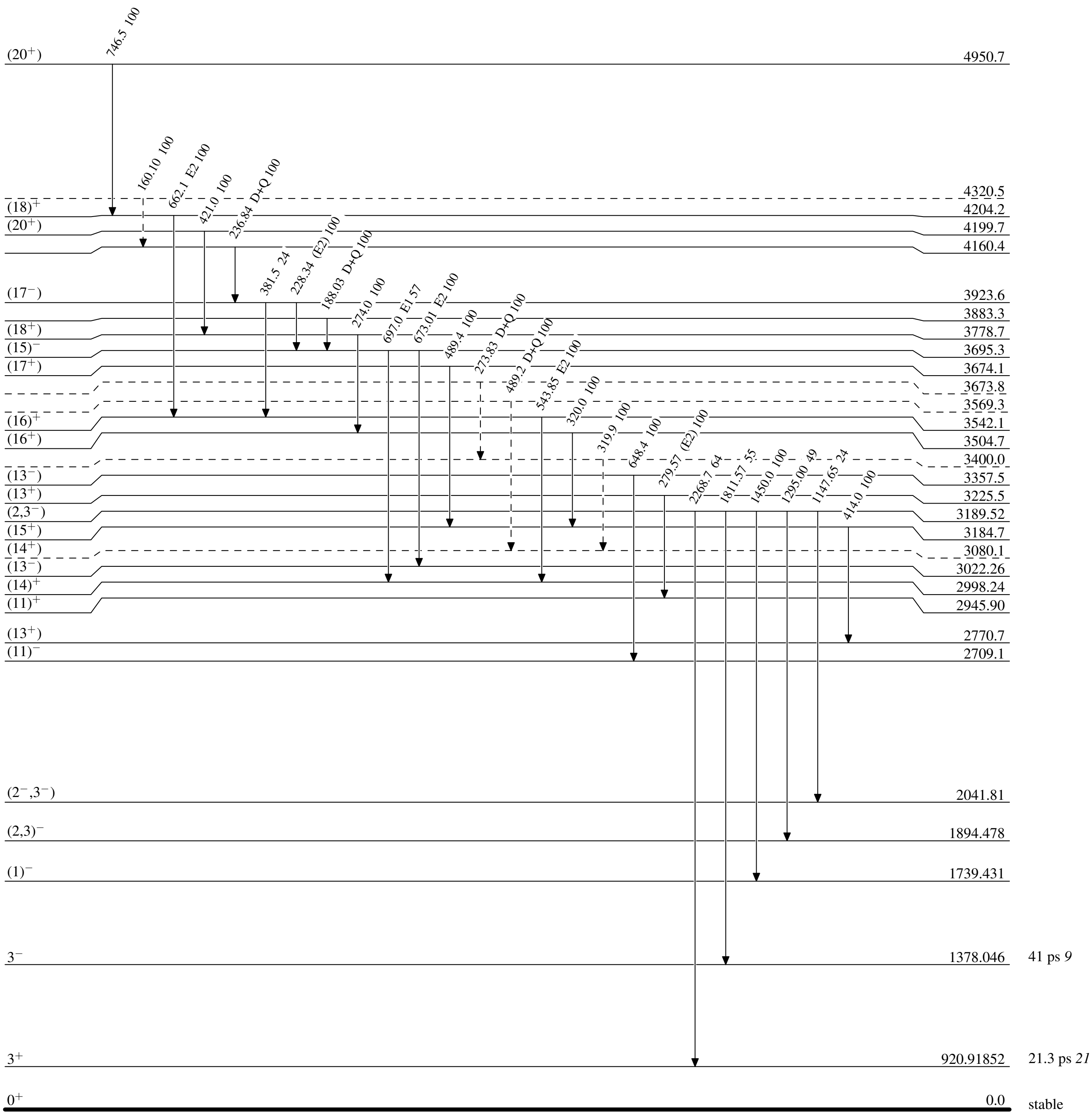
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

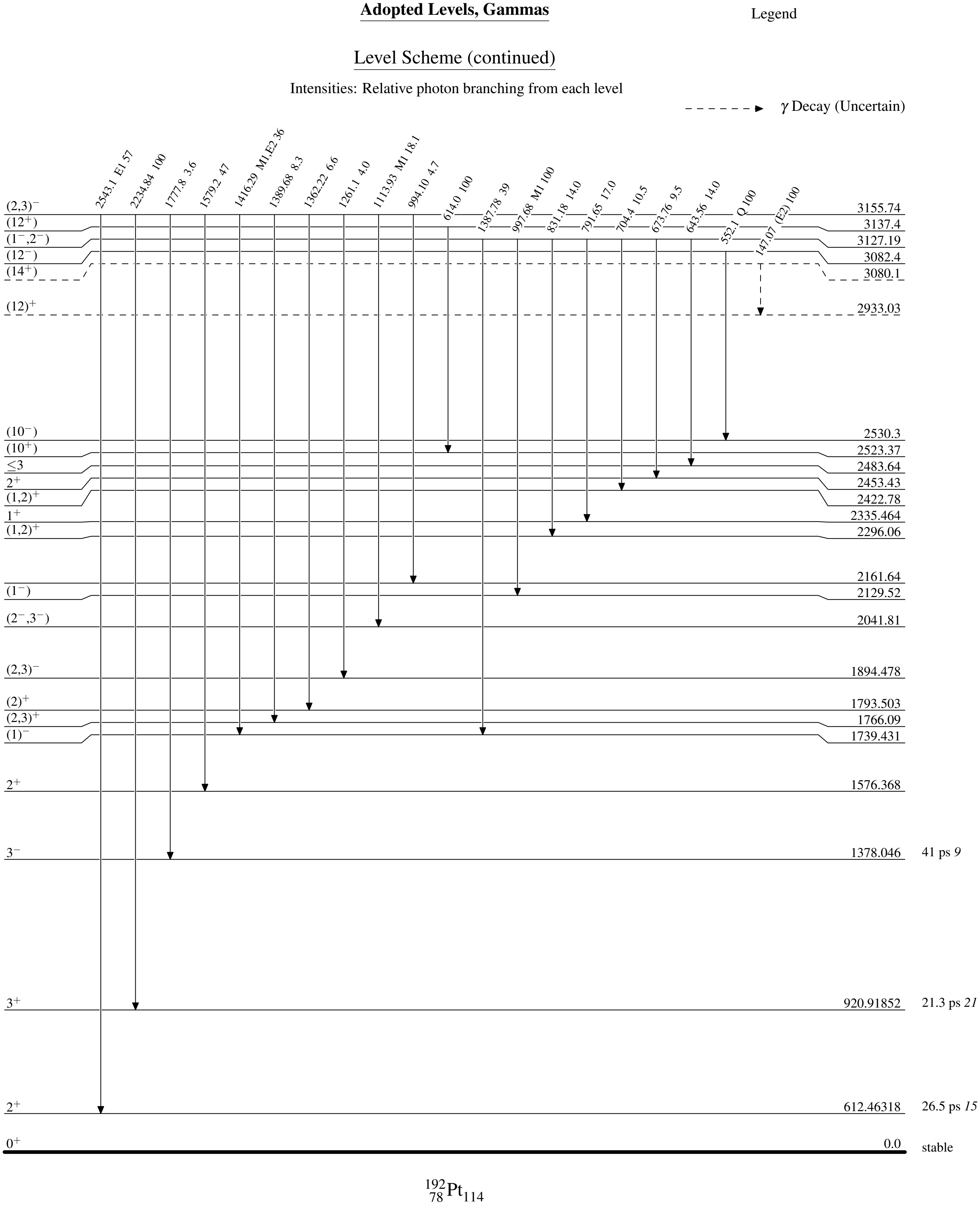


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

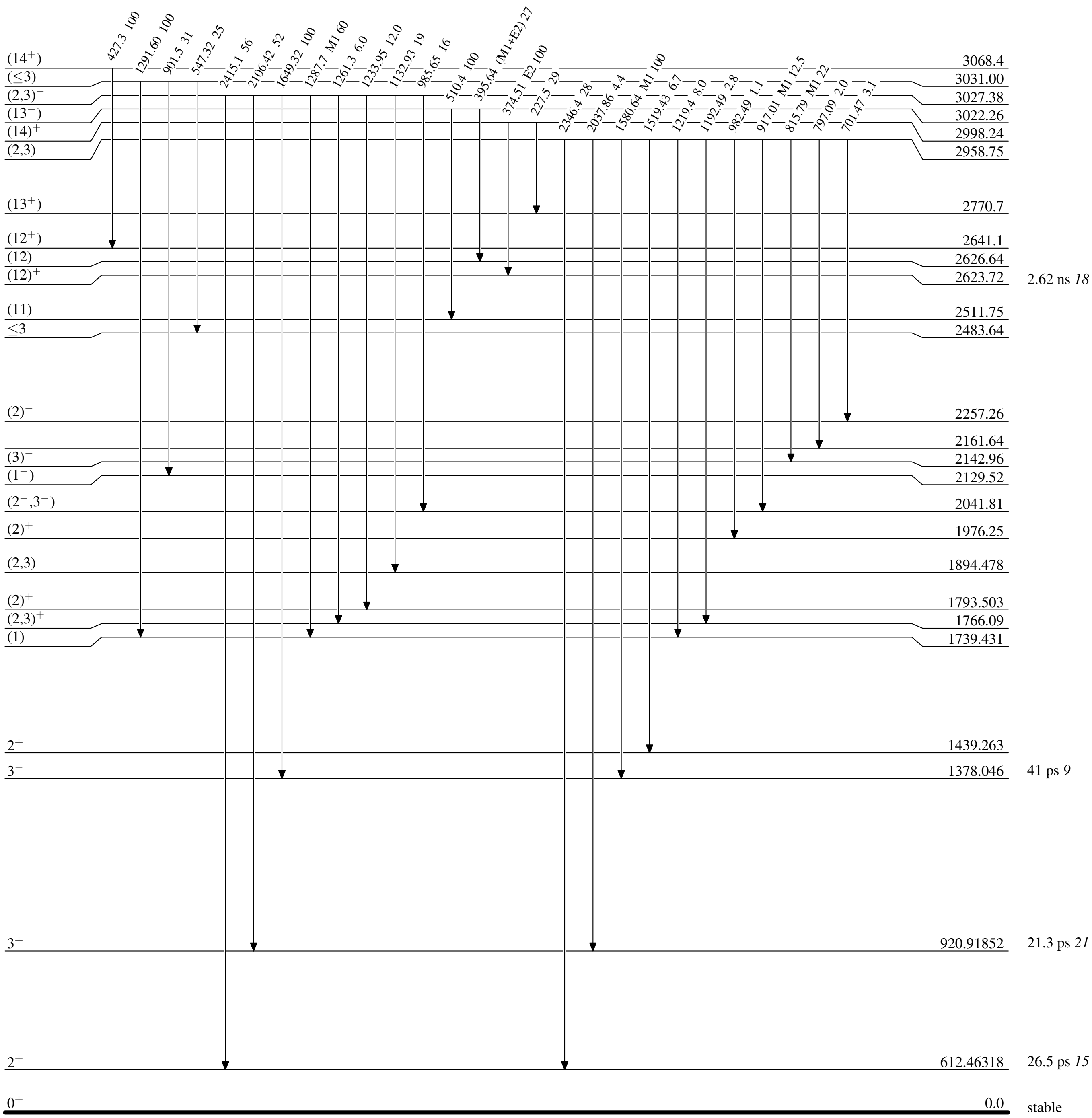
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

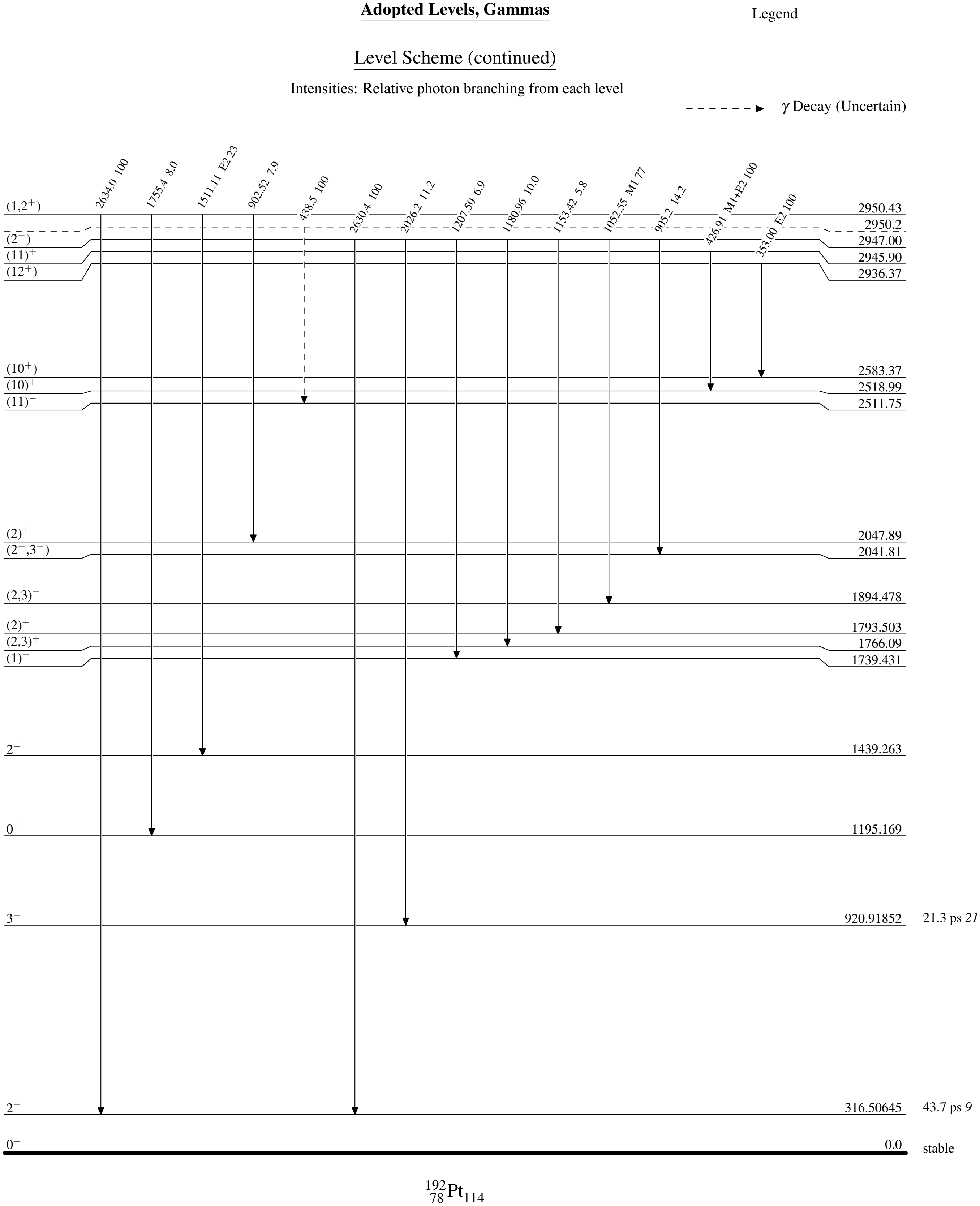


$^{192}_{78}$Pt$_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



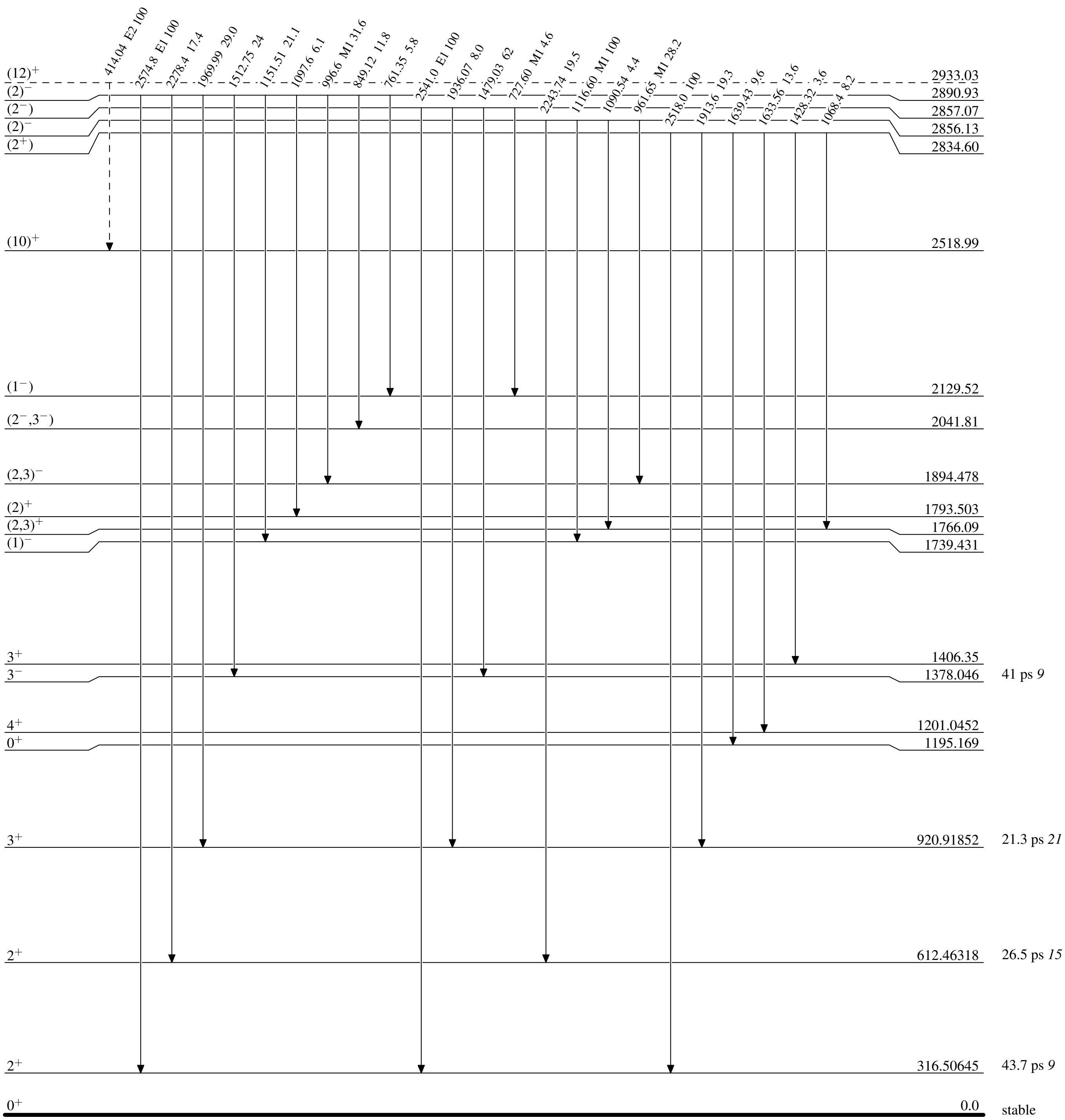
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

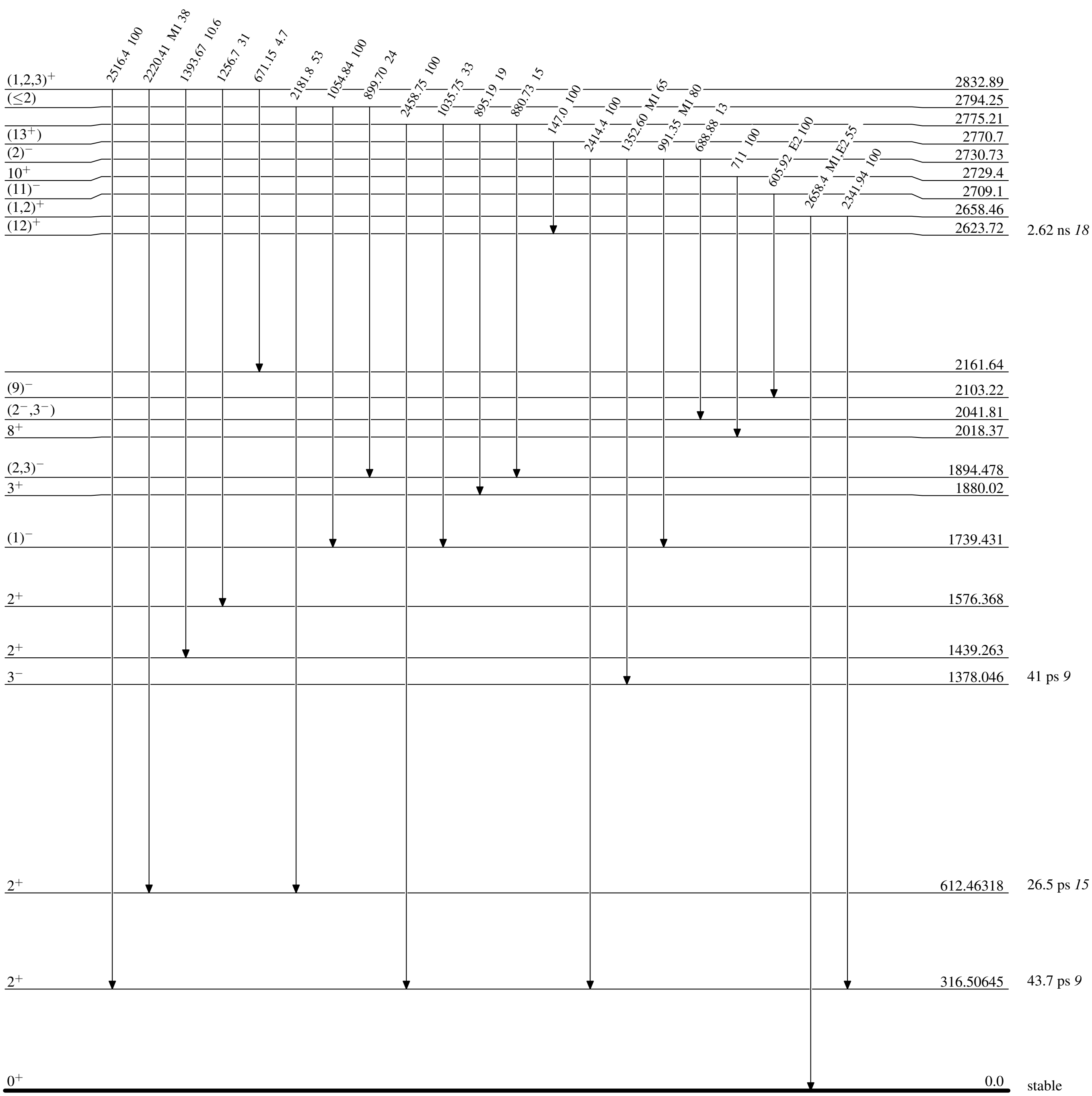


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

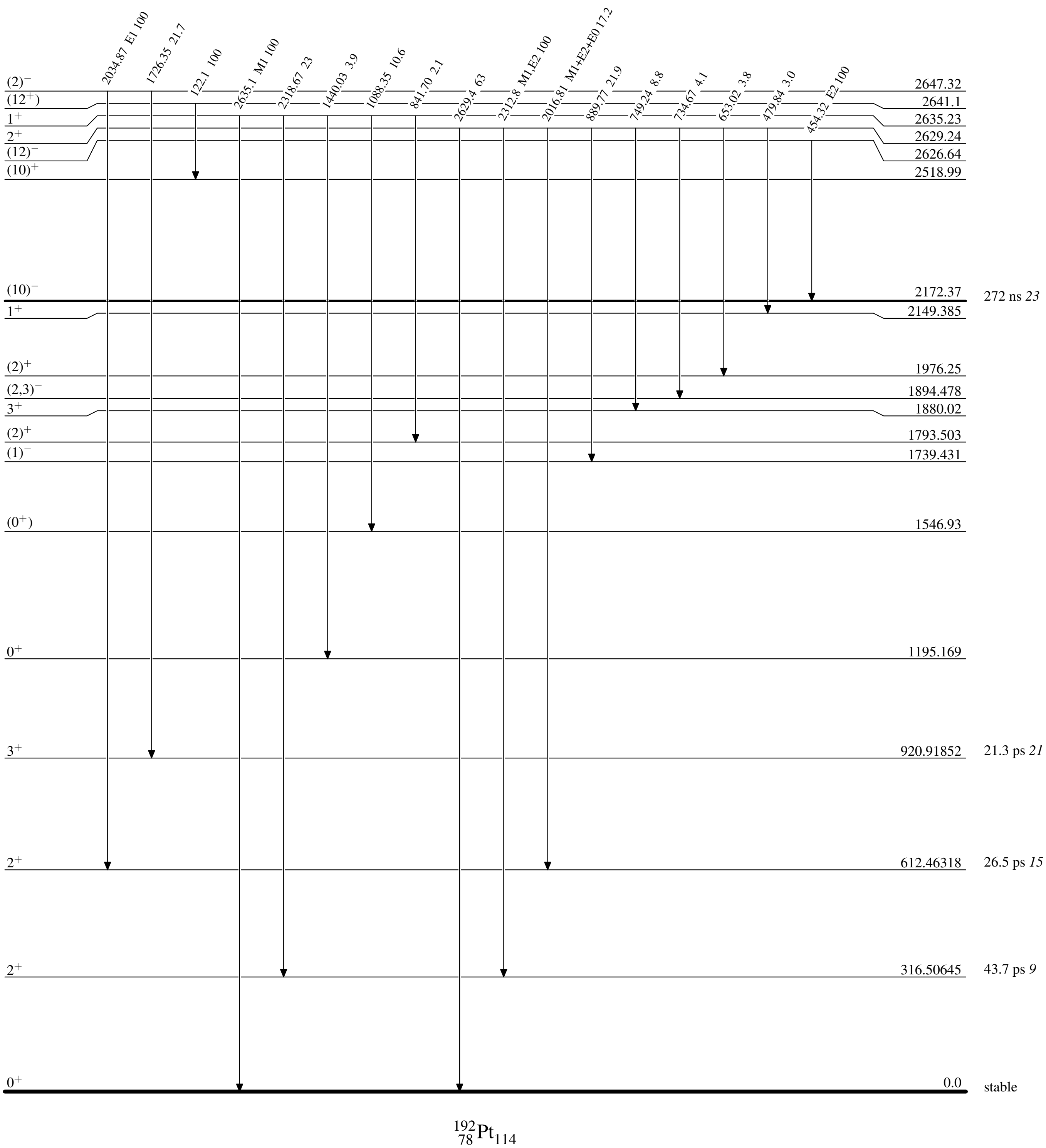


$^{192}_{78}Pt_{114}$

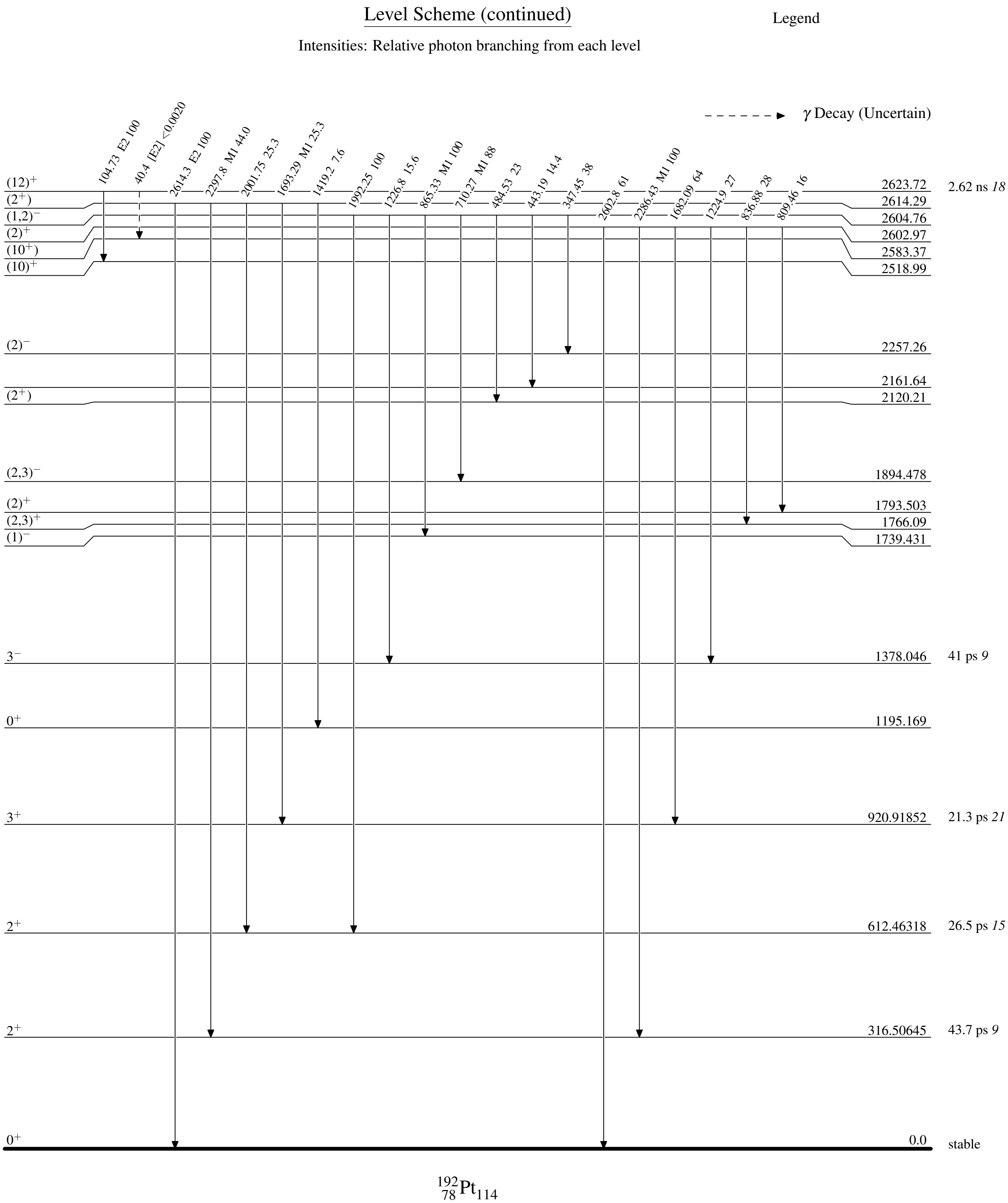
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



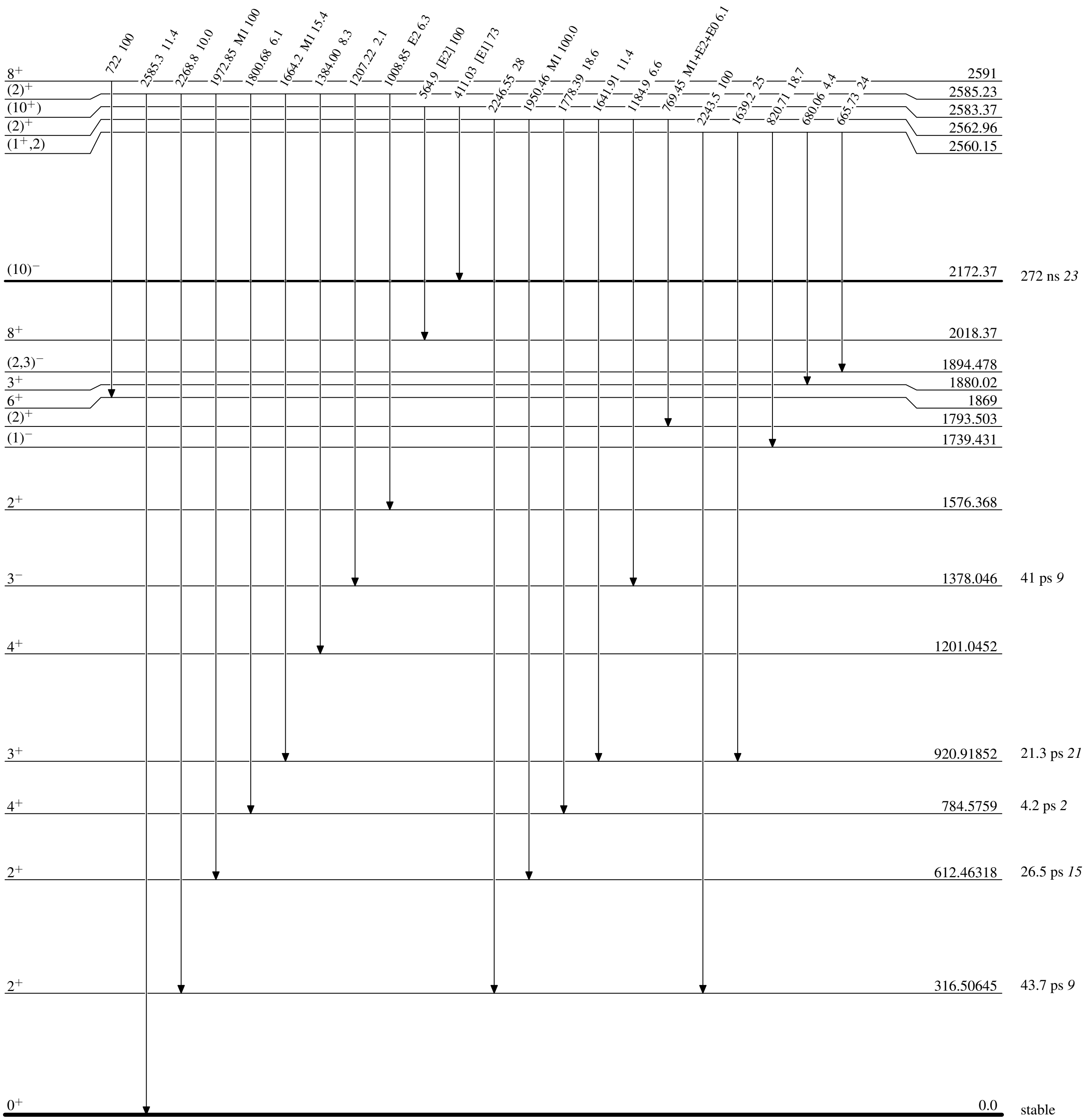
Adopted Levels, Gammas



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

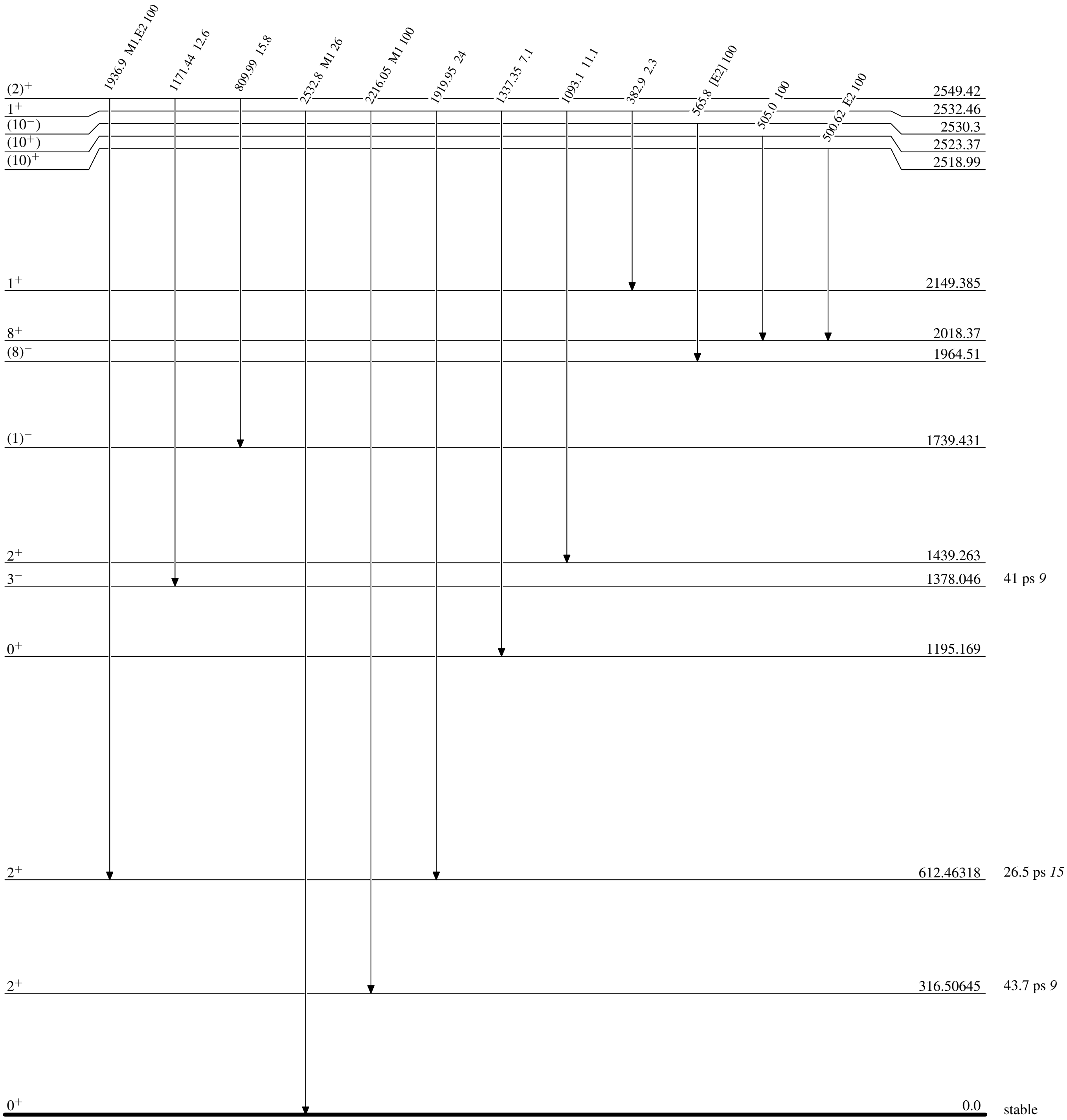


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

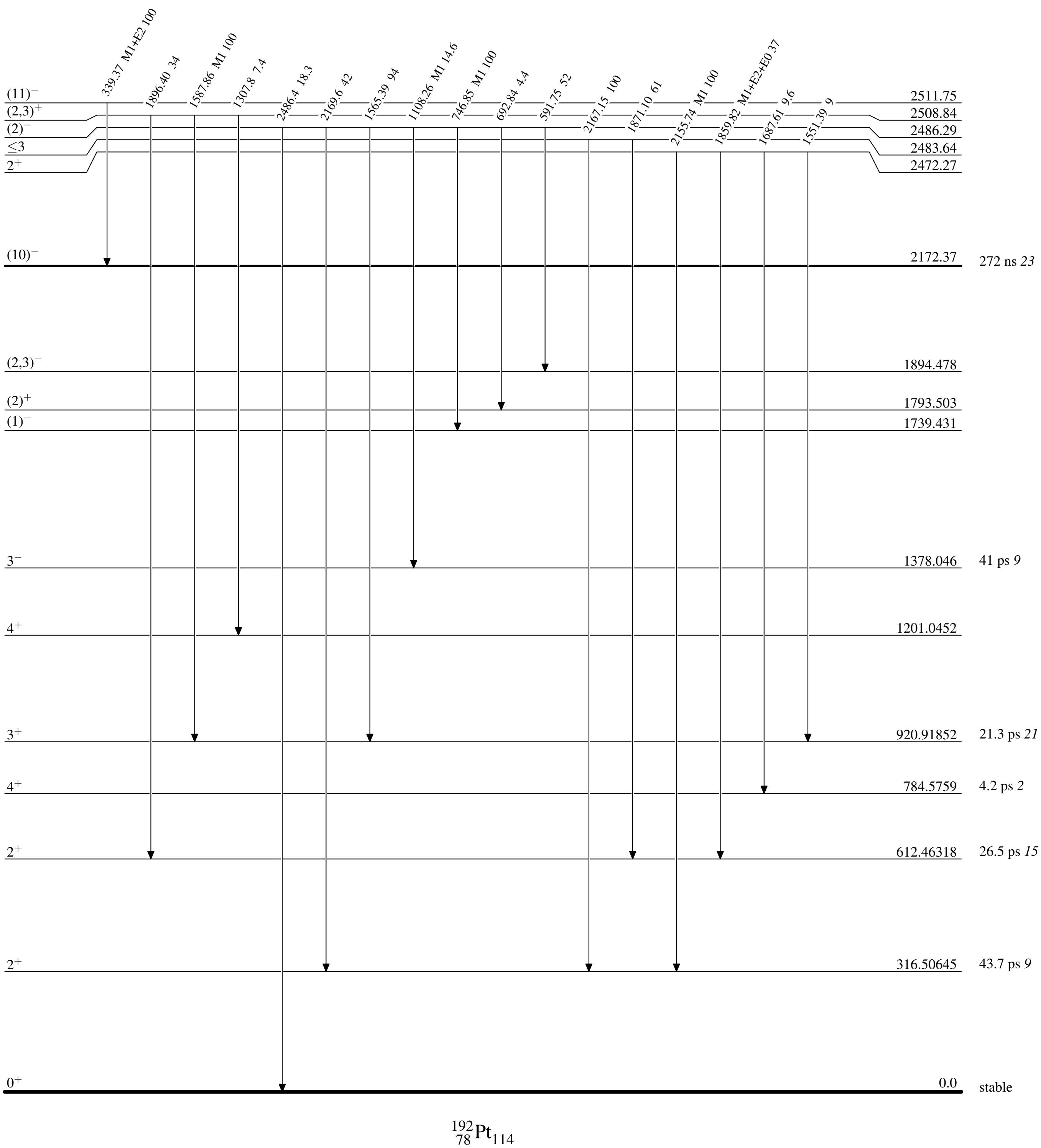


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

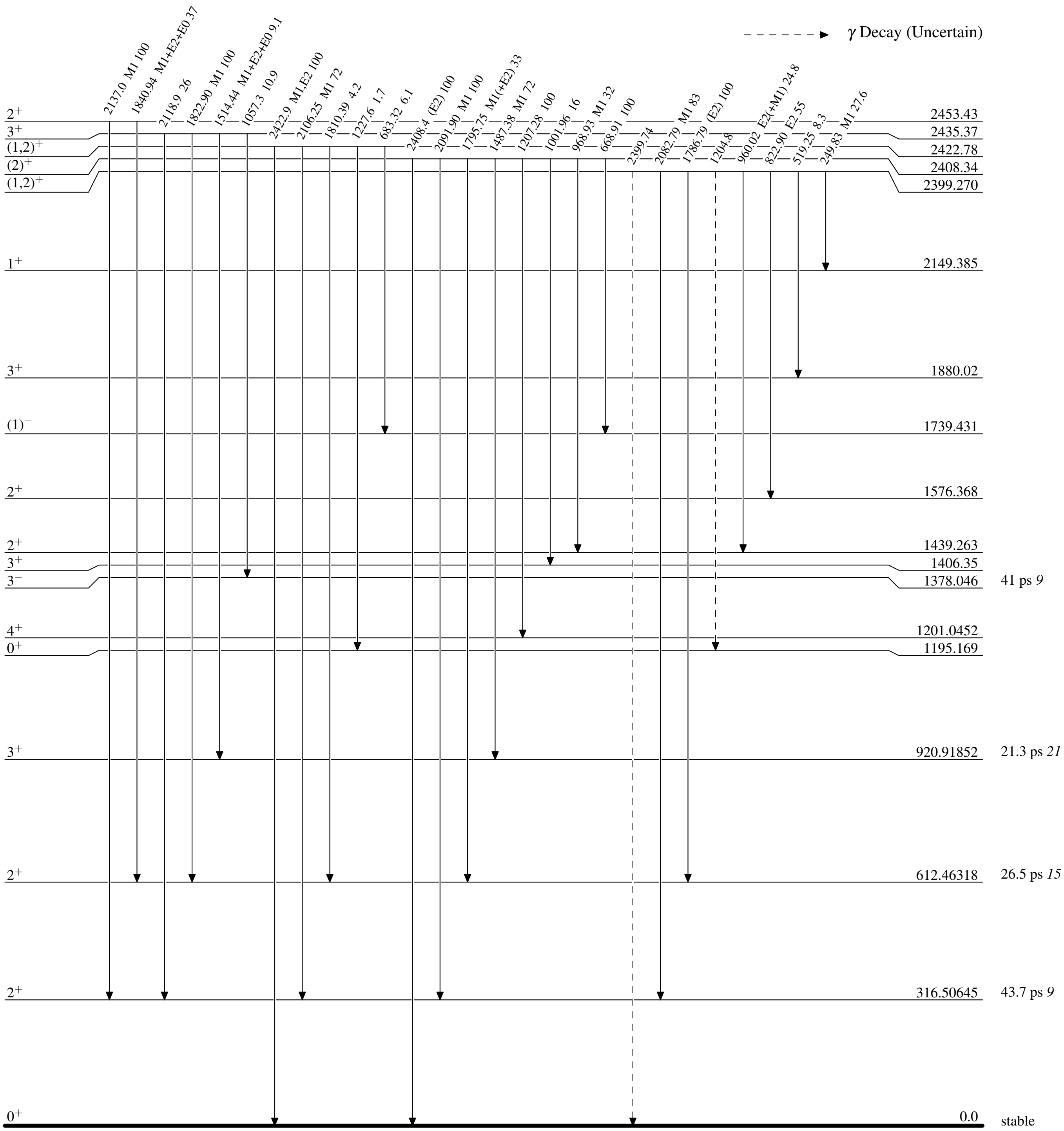
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

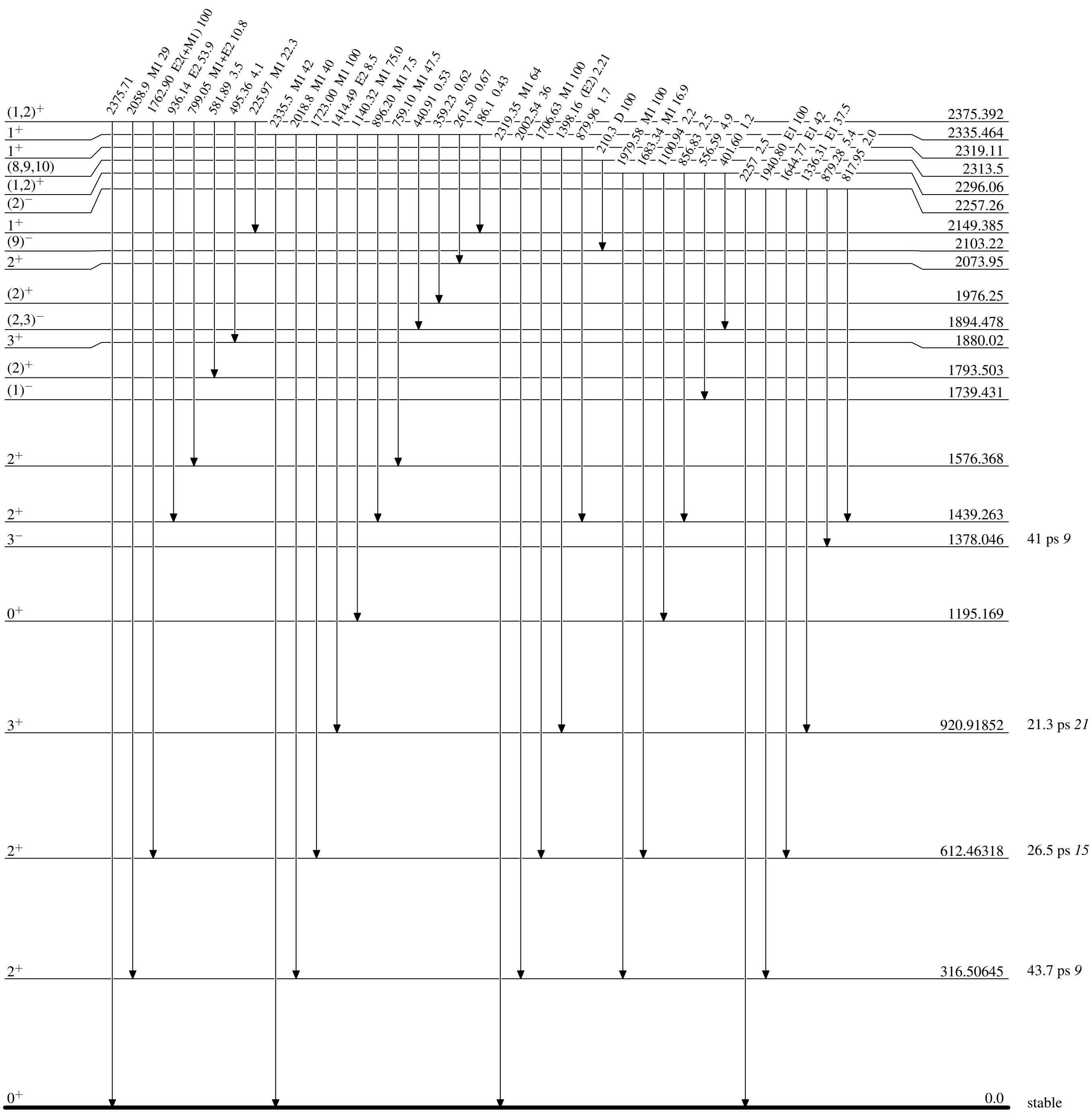


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

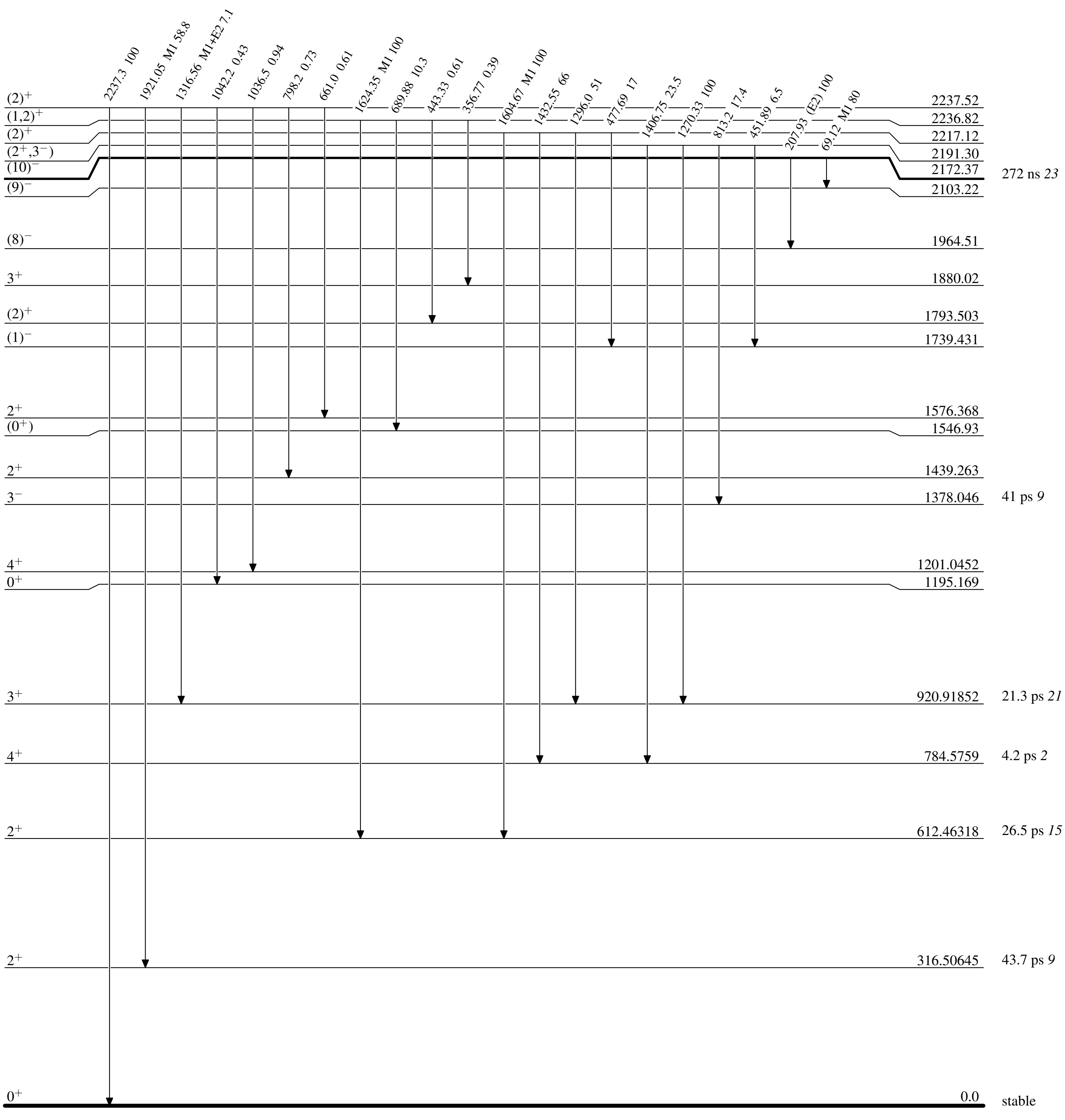


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

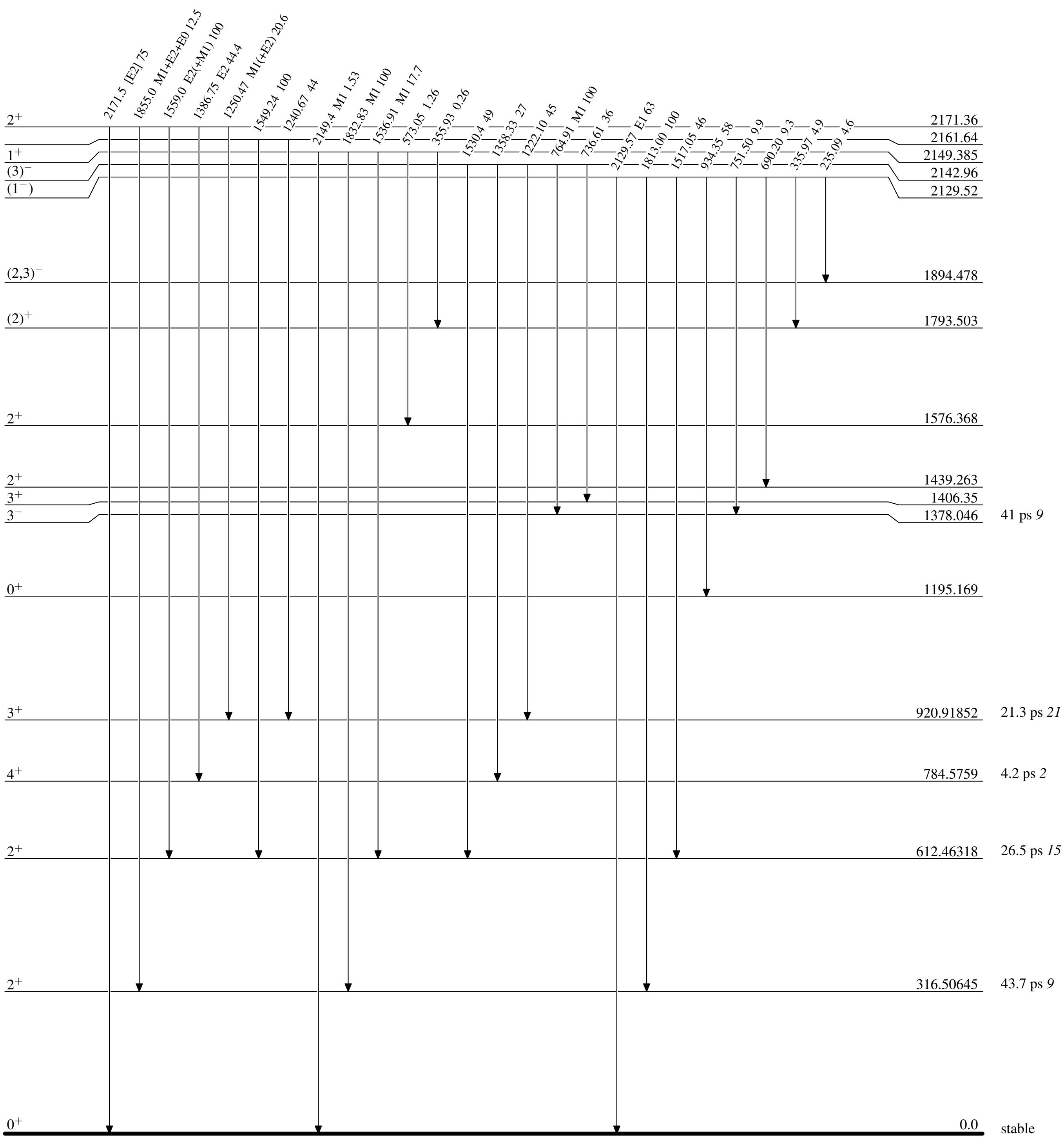


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

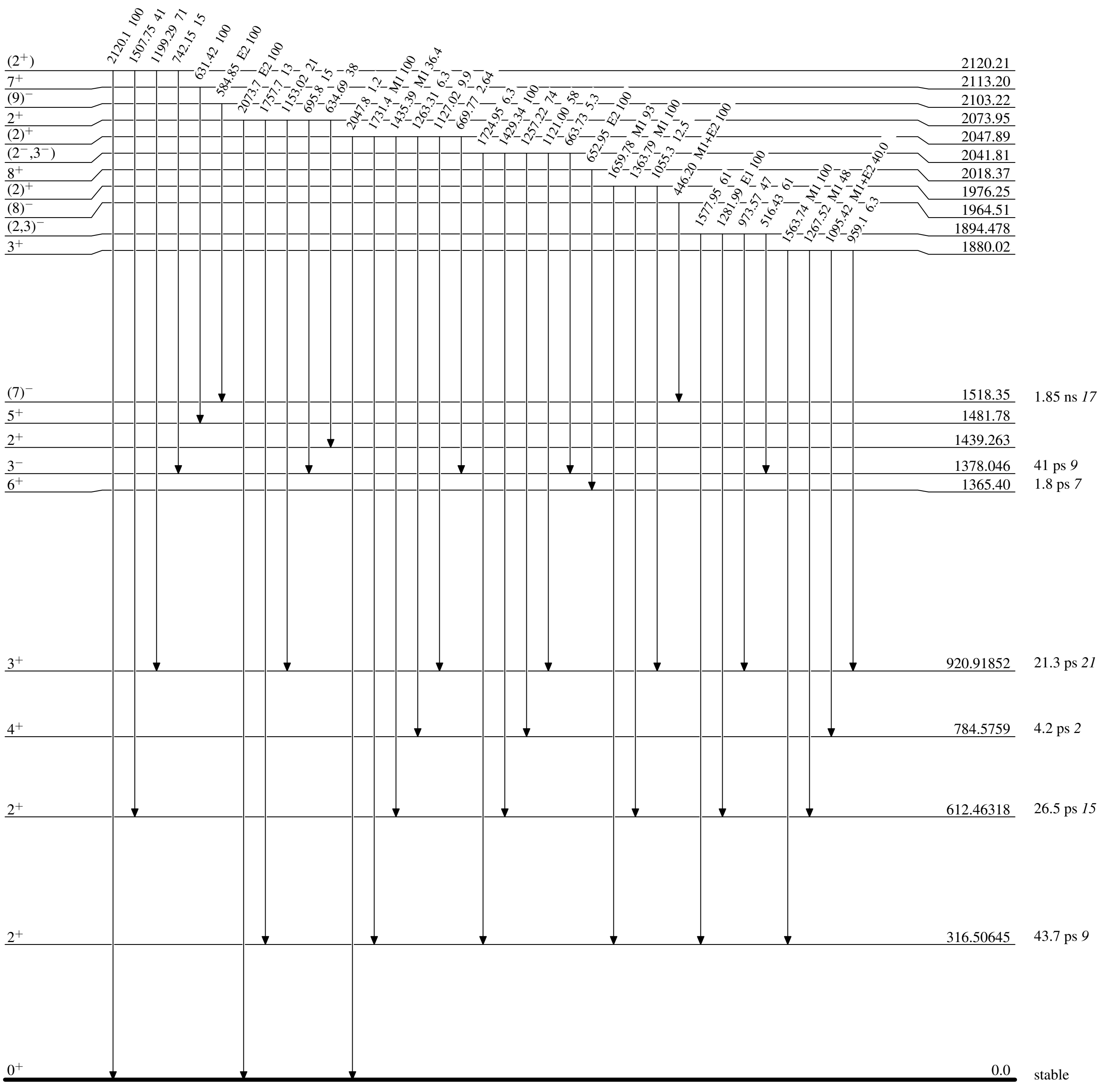


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{192}_{78}Pt_{114}$

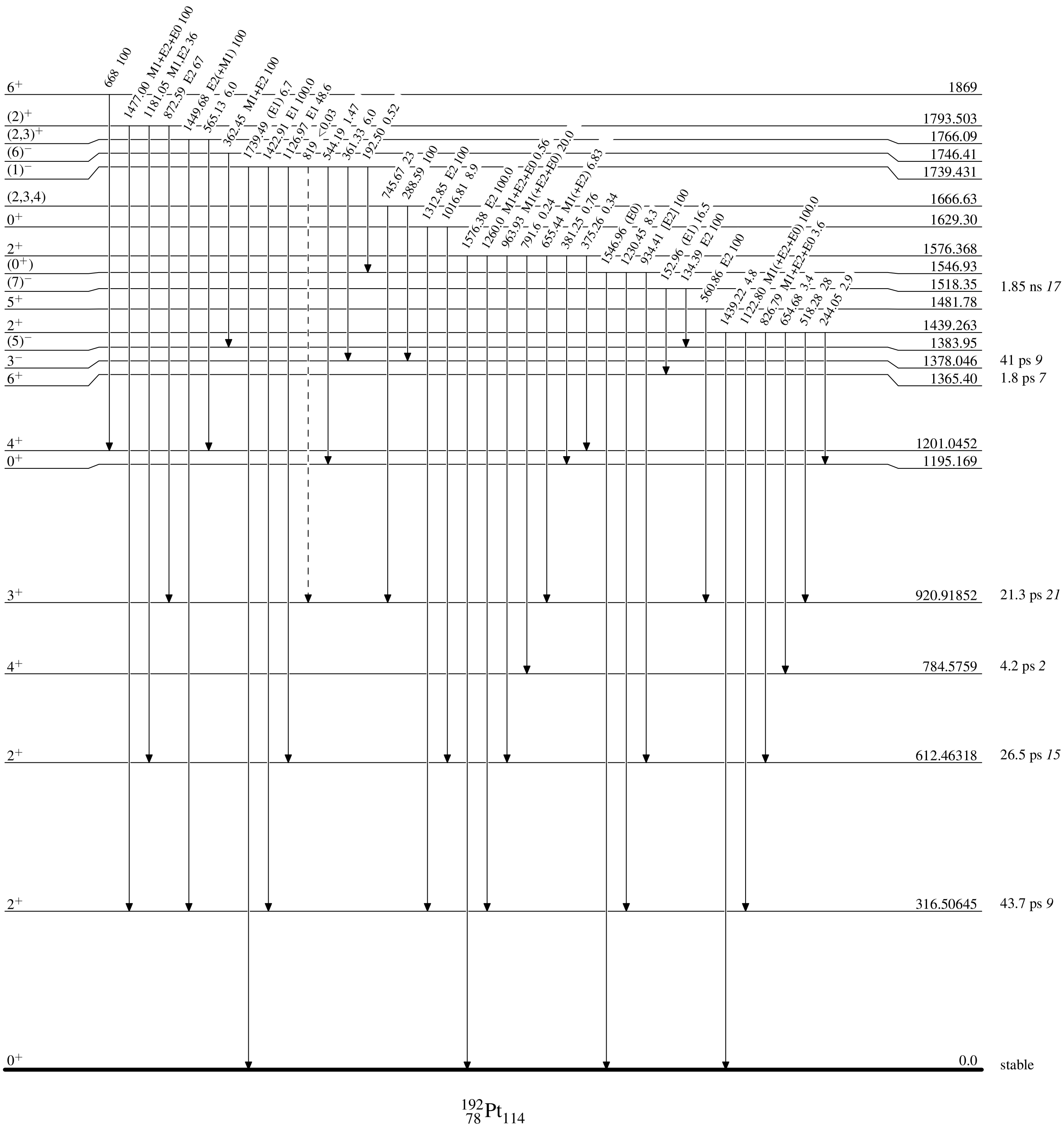
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - -▶ γ Decay (Uncertain)

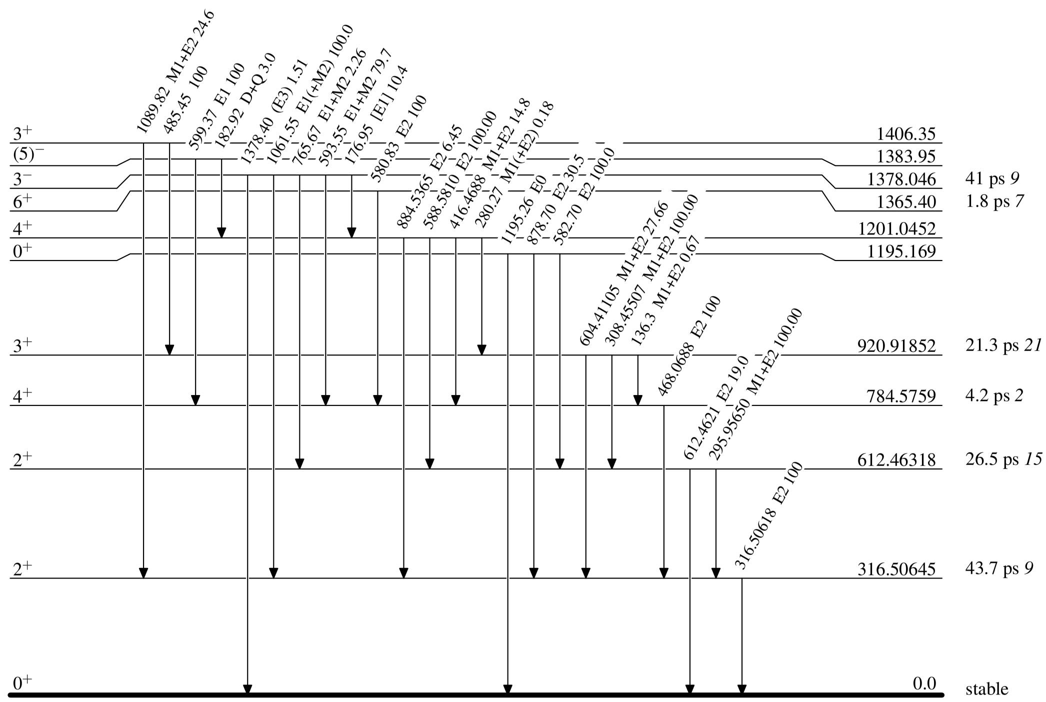


$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas

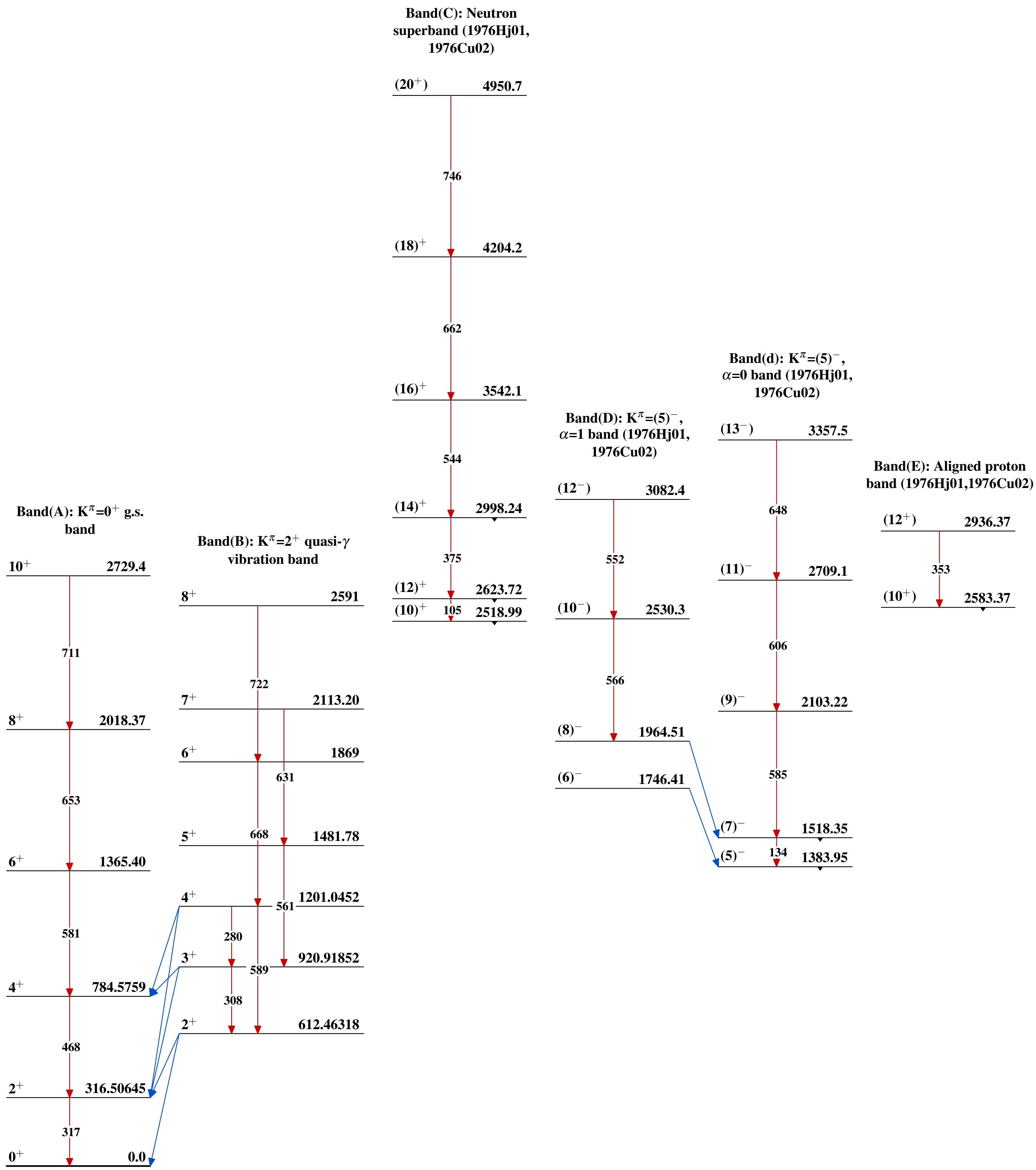
Level Scheme (continued)

Intensities: Relative photon branching from each level



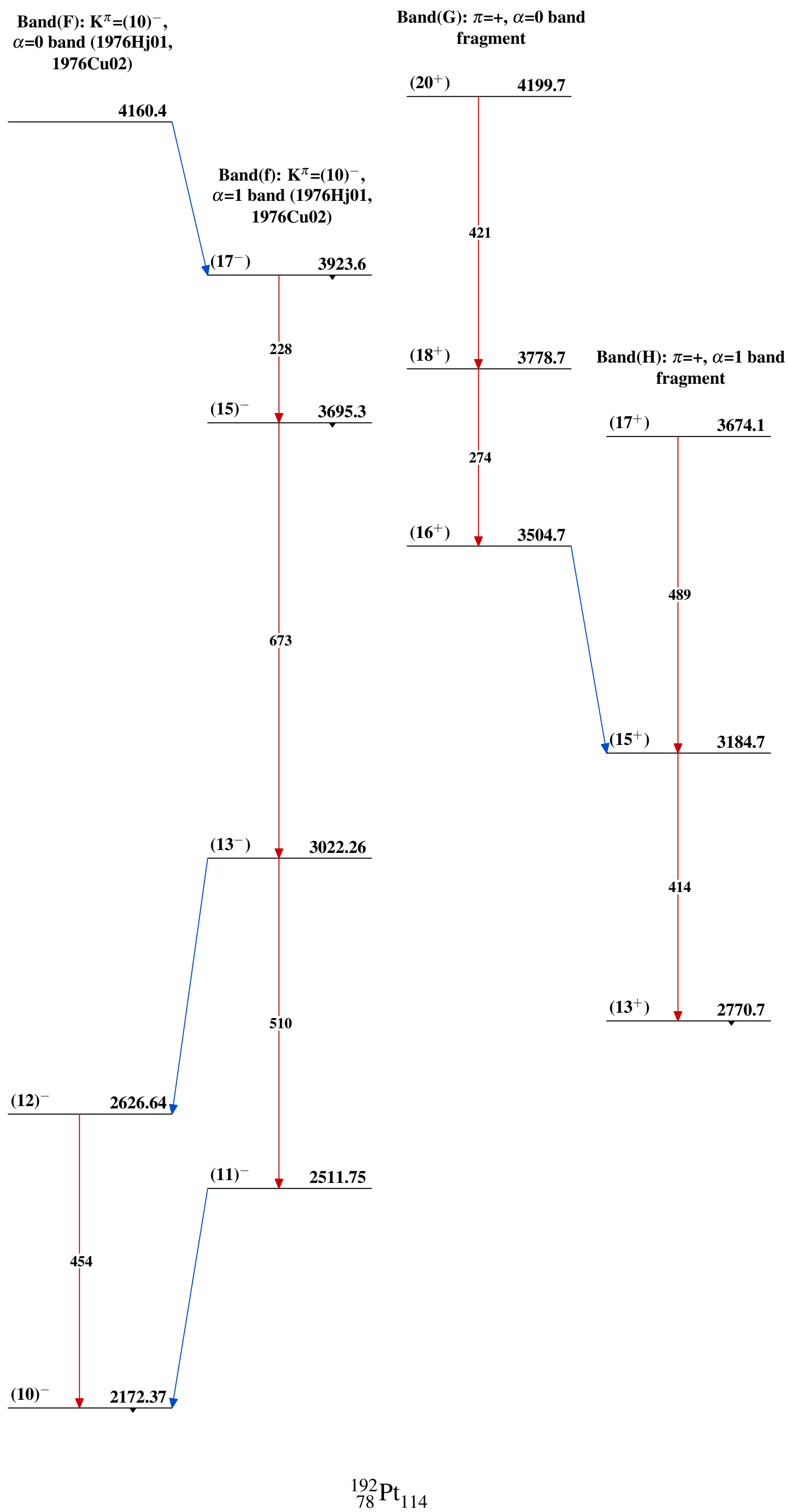
$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas



$^{192}_{78}Pt_{114}$

Adopted Levels, Gammas (continued)



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^-)=−2548.2 *21*; S(n)=8351.7 *13*; S(p)=7512.8 *13*; Q(α)=1522.8 *5* 2021Wa16
S(2n)=14614.2 *25*, S(2p)=13455.7 *23* (2021Wa16).
Other reactions:
^{194}Pt(n,n′): 1989Cl08.
^{194}Pt(^{7}Li,^{7}Li′): 1984Da12.
^{195}Pt(γ,n): 2004Be49: measured isomer yields.
Additional information 1.
^{195}Pt(p,pn): 1970Co18.
^{194}Pt(^{76}Se,^{76}Se); ^{194}Pt(^{82}Se,^{82}Se): 1992Wo04.
^{194}Pt(γ,γ'): 1972Sh38.
Photonuclear reactions: 1974Da08.
^{196}Pt(n,xnyp) E=1-250 MeV: 2001Ta31: measured prompt γ, excitation functions.
Mass measurements: 2016Ei01, 2013Sh30, 2005Sh52, 1985De40, 1960Bh02.
Isotope shift: 1995Kr05.
1984Bu19: measured hyperfine structure (hfs), magnetic dipole hfs constants, electronic g(J) factors using ABMR technique.
Theoretical references: consult the NSR database (www.nndc.bnl.gov/nsr/) for 208 primary references dealing with nuclear structure calculations.

^{194}Pt Levels

Band assignments are from ^{197}Au(^{209}Bi,Xγ) (2015Ta25) and ^{192}Os(^{82}Se,Xγ) (2005Jo11).

Cross Reference (XREF) Flags

A	^{194}Ir β^- decay (19.18 h)	H	^{194}Pt(γ,γ')	O	^{195}Pt(d,t)
B	^{194}Ir β^- decay (171 d)	I	^{194}Pt(e,e′)	P	^{196}Pt(p,t)
C	^{194}Au ε decay (38.02 h)	J	^{194}Pt(n,n′γ),(n,n′)	Q	^{197}Au(p,α)
D	^{192}Os(α,2nγ)	K	^{194}Pt(pol p,p′)	R	^{197}Au(^{209}Bi,Xγ)
E	^{192}Os(^{82}Se,Xγ)	L	^{194}Pt(p,p′),(d,d′),(α,α')	S	Coulomb excitation
F	^{192}Pt(t,p)	M	^{194}Pt(^{12}C,^{12}C′)	T	Muonic atom
G	^{193}Ir(^{3}He,d)	N	^{195}Pt(p,d)		

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$	XREF	Comments
0.0[@]	0$^+$	stable	ABCDEFGHIJKLMNOPQRST	J$^{\pi}$: absence of hyperfine splitting (1935Fu06) consistent with J=0. <r^2>$^{1/2}$=5.4236 fm *25* (2013An02 evaluation). Δ<r^2>(^{192}Pt,^{194}Pt)=0.052 fm^2 *5*, average of 0.051 fm^2 *5* (1988Le22) and 0.053 fm^2 *5* (1987Ne09). Δ<r^2>(^{194}Pt,^{196}Pt)=0.054 fm^2 *5*, from 0.054 fm^2 5 (1988Le22) and 0.055 fm^2 *5* (1987Ne09). Others: 1992Hi07, 1988Bo31.
328.473[@] *4*	2$^+$	41.7 ps *17*	ABCDE GHIJKLMNOPQRST	μ=+0.59 *2* (1992Br03,2020StZV) Q=+0.48 *14* (1986Gy04,2016St14) J$^{\pi}$: 328.5γ E2 to 0$^+$. Also L(p,p′)=L(p,t)=2 from 0$^+$. T$_{1/2}$: from B(E2)=1.649 *15* in Coulomb excitation. Uncertainty of 1% seems to be statistical only. Evaluators have assumed an uncertainty of 4% in deducing level half-life and B(E2)(W.u.). Others: 45.0 ps *24* from recoil-distance method (RDM) in Coulomb excitation , 51 ps *7* from Γ_{γ} in (γ,γ') (1972Sh38), 35.0 ps *35* from $\gamma\gamma$(t) in ^{194}Ir β^- decay (1972Be53); 50.5 ps *22*

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				from RDM in Coulomb excitation (1971NoZV). μ: transient field integral perturbed angular correlations in Coulomb excitation (1992Br03). Others: +0.60 *3* (1995An15), +0.592 *44* (1991St04), 0.406 *12* (1982Le02, 1987Be08), 0.600 *23* (1975Ka42), +0.70 *6* (1974Ga31), 0.64 *6* (1972Do18), 0.49 *3* (1970Ke14), +0.54 *8* (1969Ku06), 0.64 *8* (1967Ka16), 0.52 *5* (1966Ag02), 0.45 *4* (1965Ke11), 0.66 *30* (1965Sp03), Values from 1975Ka42, 1970Ke14, 1966Ag02, 1965Ke11 are from IPAC technique in ^{194}Ir β^- decay and have been adjusted for adopted $T_{1/2}$ of 328.5 level based on their measured precession angles (see ^{194}Ir β^- decay dataset for original values of g-factors). Other values are from different techniques in Coulomb excitation. Additional information 2. Q: from Coulomb excitation reorientation (1986Gy04). Others: +0.63 *6* (1978Ba38), 0.125 *17* (1983Ch35), +0.77 *50* (1973Gr06), 0.64 *16* or 0.87 *18* (1969Gl08, 1968Gl01), 0.25 *17* (quoted by 1983Ch35 from muonic data of 1979HoZX). 1987Hi04 deduced Q=0.18 from a fit to (n,n′) scattering data. β_2=−0.154 *2* from 1981De12 in (p,p′), −0.170 *5* from 1987Hi04 in (n,n′), −0.15 from 1980Se05 in (p,t).
622.024[&] *4*	2^+	35 ps *4*	A CD GH JKLMNOPQ ST	μ=+0.56 *11* (1992Br03,2020StZV) Q=−0.5 *5* (1978Ba38,2014StZZ) J^{π}: 622.0γ E2 to 0^+; E0 component in 293.5γ to 2^+; L(p,t)=2 from 0^+. $T_{1/2}$: from ce-γ(t) in ^{194}Ir β^- (1972Be53). Other: 42 ps *3* from B(E2)(from g.s.)=0.0080 *4* in Coulomb excitation and adopted %I(γ+ce)=11.15 *15* for 622.0γ. μ: from g(622)/g(328)=0.95 *18*, transient field integral perturbed angular correlations in Coulomb excitation (1992Br03), and μ(328)=+0.60 *3*. Others: 0.69 *9* (1975Ka42), 0.55 *11* (1970Ke14), 0.53 *14* (1966Ag02), 0.46 *9* (1965Ke11), using IPAC method in ^{194}Ir β^- decay and adjusted for adopted $T_{1/2}$. Additional information 3. Q: from Coulomb excitation reorientation (1978Ba38). Not listed in 2020StZV evaluation. β_2(Coulomb)=−0.154 *2* ((p,p′), 1981De12). Other: (α,α') (1976Ba35).
811.288[@] *7*	4^+	3.7 ps *2*	ABCDE IJKLMN PQRST	μ=+1.12 *12* (1992Br03,2020StZV) Q=+0.5 *10* (1978Ba38,2014StZZ) J^{π}: 482.8γ E2 to 2^+; L(p,p′)=L(p,t)=4 from 0^+. $T_{1/2}$: from Doppler-shift recoil-distance method in Coulomb excitation (1977Jo05). Others: 4.8 ps *14* from DSAM in 1977St26 in Coulomb excitation; 4.7 ps *2* from B(E2)(from 328.5, 2^+)=0.78 *3* in Coulomb excitation. μ: from g(811)/g(328)=0.95 *10*, transient field integral perturbed angular correlations in Coulomb excitation (1992Br03), and μ(328)=+0.60 *3*. Q: from Coulomb excitation reorientation (1978Ba38). Value is not listed in 2020StZV evaluation. β_4=−0.0455 *10* ((p,p′), 1981De12), −0.040 *5* ((n,n′), 1987Hi04). Others: (^{12}C,^{12}C′) (1979Ba19); (α,α') (1976Ba35).
922.772[&] *6*	3^+		A CD J L N Q S	J^{π}: spin=3 from $\gamma\gamma(\theta)$ in ^{194}Ir β^- decay (1973Si22); 300.8γ and 594.3γ E2(+M1) to 2^+.
1229.520[&] *10*	4^+	3.8 ps *6*	A CD IJKL NOPQ S	J^{π}: L(p,p′)=L(p,t)=4 from 0^+; 607.5γ E2 to 2^+.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: from Doppler-shift attenuation method in Coulomb excitation (1977St26). Other: 1.53 ps +7−9 from B(E2)(from 622.0, 2^+)=0.64 +3−2 in Coulomb excitation (1996Wu07) and adopted %I(γ+ce)=81.0 12 for 607.5γ.
1267.200 6	0^+	6.1 ps 14	A C G J N PQ S	J^{π}: spin=0 from $\gamma\gamma(\theta)$ in ^{194}Ir β^-; 645.2γ and 938.7γ E2 to 2^+. $T_{1/2}$: from B(E2)(from 622 level)=0.011 +3−2 (1996Wu07) in Coulomb excitation and adopted branching ratio %I(γ+ce)=66.9 4 for 645.2γ.
1373.772[a] 17	(5^-)		BCDE J L N PQRST	J^{π}: 562.5γ (E1) to 4^+; $\gamma(\theta)$ in (n,n′γ) consistent with J=5 not J=4 or 3; L(p,p′)=(5) from 0^+.
1411.83[@] 8	6^+	1.6 ps 5	B DE J L P RST	J^{π}: L(p,t)=6 from 0^+; 600.5γ E2 to 4^+. $T_{1/2}$: from Doppler-shift attenuation method in Coulomb excitation (1977St26). Other: 1.11 ps +3−8 from B(E2)(from 811.0, 4^+)=0.93 +7−2 (1996Wu07) in Coulomb excitation.
1422.21 11	(3,4)$^+$		D J N PQ S	J^{π}: L(p,d)=3 gives J^{π}=2^+,3^+,4^+. Absence of g.s. transition disfavors 2^+.
1432.551 6	3^-	110 ps +10−9	A CD IJ L P S	J^{π}: L(p,p′)=L(p,t)=3 from 0^+; 1104.0γ E1 to 2^+, 621.3γ E1 to 4^+. $T_{1/2}$: from B(E3)=0.120 8 in Coulomb excitation and adopted %I(γ+ce)=1.93 4 for 1432.5γ. Other: B(E3)=0.157 13 from (e,e′) (1988Bo08) gives $T_{1/2}$=84 ps +10−8.
1479.272 6	0^+		A C g J n Pq	J^{π}: L(p,t)=0 from 0^+; also E0 transition to 0^+.
1485.04[a] 16	(7^-)	3.45 ns 12	B DE g L n PqR	μ=+1.8 6 (2006Le06,2020StZV) J^{π}: L(p,p′)=(7) from 0^+; 111.4γ (E2) to (5^-). $T_{1/2}$: from $\gamma\gamma$(t) in ^{194}Ir β^- decay (171 d) (1970To14). μ: from g=+0.26 8 (IPAD method in (α,2nγ),2006Le06).
1498.77[&] 20	(5^+)		D J	J^{π}: 576$\gamma(\theta)$ in (α,2nγ) and (n,n′γ) consistent with stretched E2 to 3^+. Also absence of transitions to levels with J≤2.
1512.004 6	2^+		A C G J L N PQ	J^{π}: 700.7γ E2 to 4^+, 244.8γ and 1512.1γ (E2) to 0^+.
1529 2			L	E(level): from (p,p′) only.
1547.281 8	0^+	0.175 ps +14−11	A C J L N PQ S	J^{π}: spin=0 from $\gamma\gamma(\theta)$ in ^{194}Ir β^- (19.18 h); E0 transition to 0^+. $T_{1/2}$: from B(E2)(from 328.5, 2^+)=0.0191 +11−13 (1996Wu07) and adopted %I(γ+ce)=79.5 4 for 1218.8γ.
1584 3	(0^+,1^+,2^+)		N	E(level): from (p,d) only. J^{π}: L(p,d)=(1) from $1/2^-$.
1592.8 3	(5^+)		D	J^{π}: $\gamma(\theta)$ of 670γ to 3^+ consistent with mult=Q. The ΔJ=2 transition is E2 rather than M2.
1622.197 7	2^+		A C G J NO Q	XREF: O(1640). J^{π}: 1622.2γ E2 to 0^+.
1670.667 7	2^+		A C G J L N PQ	J^{π}: spin=2 from $\gamma\gamma(\theta)$ in ^{194}Ir β^- (19.15 h); 1048.6γ M1 to 2^+.
1737.427 14	(3^-)		C L	J^{π}: 223.9γ (M1+E2) from 2^-; 363.1γ to (5^-).
1778.578 10	2^+		A C G J N PQ	XREF: G(1780). J^{π}: $\gamma\gamma(\theta)$ in ^{194}Au ε decay gives J=1 or 2; 855.8γ to 3^+ is not E2 or M2 based on ce data

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Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				in ^{194}Au ε decay; 1156.5γ M1(+E2) to 2^+. L(^{3}He,d)=0+2 from $3/2^+$ also gives 1^+ or 2^+. A possible 345.98γ to 3^- supports 2^+ but not 1^+.
1783.52[b] 11	(6^-)		D J	J^{π}: $\gamma(\theta)$ in (α,2nγ); 409.75γ M1+E2 to (5^-).
1797.390 5	1^-		A C J L N P	J^{π}: 318.1γ, 530.2γ, 1797.4γ E1 to 0^+; 364.8γ E2 to 3^-.
1802.646? 14	$1^+,2^+$		C	J^{π}: 1802.6γ M1,E2 γ to 0^+.
1816.591 8	$(2)^+$		C J L N PQ	J^{π}: L(p,d)=1+3 from $1/2^-$; possible 1816.3γ to 0^+.
1871.6 1	$2^+,3^+,4^+$		g L N PQ	XREF: g(1880). E(level): from (p,t). Others: 1870 1 in (p,p′), 1869 3 in (p,d), 1873 5 in (p,α). J^{π}: L(p,d)=3 from $1/2^-$.
1888.35 9	(2,3,4)		g J q	XREF: g(1880)q(1890). J^{π}: 455.8$\gamma(\theta)$ to 3^- does not allow ΔJ=2.
1893.588 12	0^+		A C L N Pq	XREF: q(1890). J^{π}: L(p,t)=0 from 0^+; (E0) transition to 0^+; L(p,d)=1 from $1/2^-$.
1912.9 1	(4^+)		KL PQ	E(level): from (p,t). Others: 1911 5 in (p,α). J^{π}: L(p,p′)=L(p,t)=(4) from 0^+.
1924.285 8	1^+		A C G J	XREF: G(1920). J^{π}: 1924.3γ M1 γ to 0^+.
1925.85 7	(6^+)	1.3 ps 2	S	J^{π}: 696.4γ to 4^+, 514.0γ to 6^+; absence of γ rays to levels with J<4. $T_{1/2}$: from Doppler-shift attenuation method in Coulomb excitation (1977St26).
1930.368 9	2^+		A C J l n P	XREF: l(1932)n(1932). J^{π}: L(p,d)=1+3 from $1/2^-$; 1601.9γ M1(+E2) to 2^+, 1930.4γ to 0^+, 1119.1γ to 4^+.
1934.7 1			l n P	XREF: l(1932)n(1932). E(level): from (p,t).
1948.9 1			L P	E(level): from (p,t). Other: 1948 3 from (p,p′).
1961.332 7	2^-		C J	J^{π}: 163.95γ M1+E2 to 1^-, 528.77γ M1+E2 to 3^-; also E1 γs to 2^+.
1974 2			L q	XREF: q(1979). E(level): from (p,p′).
1981.3 1			L Pq	XREF: q(1979). E(level): from (p,t). Other: 1981 2 from (p,p′).
1984.4 3	$(6,7,8^+)$		D	J^{π}: 572.6γ to 6^+; absence of γ to J<6.
1991.69 20	(7^-)		D N Pq	XREF: D(?)q(1996). J^{π}: L(p,d)=6 from $1/2^-$ for a group at 1993; M1,E2 γ to (7^-); L(p,t)=(6,7) from 0^+.
1999.8[b] 3	(8^-)		D q	XREF: q(1996). J^{π}: 514.8γ M1+E2 to (7^-) and 514.8$\gamma(\theta)$.
2003.659 13	(2^+)		A C G J P	XREF: G(2000). J^{π}: L(^{3}He,d)=0+2 for a group at 2000 20; 1675.2γ (M1) to 2^+, 1080.9γ (M1(+E2)) to 3^+; 2003.65γ to 0^+.
2032.8 1			L NoPQ	XREF: N(2025)o(2030). E(level): from (p,t). Others: 2030 2 from (p,p′), 2025 10 from (p,d), 2028 5 from (p,α).
2043.718 6	1^+		A C J no	XREF: n(2049)o(2030). J^{π}: 2043.7γ M1 γ to 0^+; L(p,d)=1 from $1/2^-$.
2046.2 3			P	E(level): level seen in (p,t) only; it is different from the 2047.5, (9^-) level populated in (HI,xnγ).
2047.52[a] 17	(9^-)		B DE R	J^{π}: 562.5γ (E2) to (7^-); possible band assignment.
2053.018 17	$(2)^+$		A C J n P	XREF: n(2049). J^{π}: weak β^- feeding from 1^- (log ft=9.0) and weak ε feeding

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Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				from 1^- (log *ft*=9.0); possible 1241.9γ to 4^+, 162.6γ M1(+E2) from 1^+.
2063.746 *9*	2^+		A C J NoPQ	J^{π}: 1140.99γ M1 to 3^+; spin=1 or 2 from $\gamma\gamma(\theta)$ in ^{194}Au ε decay; L(p,d)=1 from $1/2^-$.
2073.6 *2*			L oP	E(level): from (p,t). Other: 2072 *3* from (p,p′).
2085.475 *11*	0^+		A C NoP	XREF: N(2090)o(2080). E(level): the observed group at E=2090 *5* in (p,d) with L=1+3 is either a doublet or a different level. J^{π}: E0 transition to 0^+.
2099.55[@] *12*	$(8)^+$	1.1 ps *3*	B DE RS	J^{π}: 687.7γ (E2), ΔJ=(2) to 6^+; absence of transitions to levels with J <6; E2 excitation in Coulomb excitation. $T_{1/2}$: from Doppler-shift attenuation method in Coulomb excitation (1977St26). Other: 0.65 ps *+7−4* from B(E2)(from 1411.9, 6^+)=0.73 *+5−7* in Coulomb excitation.
2109.068 *13*	$(2)^+$		A C L noP	XREF: L(2104)n(2115)o(2130). J^{π}: ce data from ^{194}Au ε decay (38.02 h) give Mult=D+Q for 1186.37γ to 3^+ and 1487.08γ to 2^+; L(p,d)=1+3 from $1/2^-$ for a group at E=2115 *5*, a possible 2109+2114 doublet, favors 2^+.
2114.106 *8*	1^+		A C no	XREF: n(2115)o(2130). J^{π}: 846.96γ and 2114.1γ M1 γ to 0^+. Other: J=2 from (1786γ)(328γ)(θ) in ^{194}Ir β^- decay (19.18 h) (1965Ma10) is inconsistent.
2117.7 *1*			P	
2126.5 *1*	(4^+)		L oPq	XREF: o(2130)q(2129). E(level): from (p,t). Other: 2126 *2* from (p,p′). J^{π}: L(p,p′)=L(p,t)=(4) from 0^+.
2131.126 *11*	(2^+)		C g noPq	XREF: g(2150)n(2138)o(2130)q(2129). J^{π}: possible 1802.6γ (doublet) M1,E2 to 2^+, possible 1319.7γ to 4^+ and possible 2131.08γ to 0^+.
2134.123 *14*	$1^+,2^+$		A C g J no q	XREF: g(2150)n(2138)o(2130)q(2129). J^{π}: 1805.7γ M1(+E2) to 2^+; spin=1 or 2 from $\gamma\gamma(\theta)$ in ^{194}Au ε decay (38.02 h).
2140.696 *12*	$(1^+,2^+)$		A C g J noP	XREF: g(2150)n(2138)o(2130). J^{π}: 1812.2γ (M1) to 2^+, 2140.7γ to 0^+.
2154 *2*	3^-		L	J^{π}: L(p,p′)=3 from 0^+.
2157.995 *14*	$(2)^+$		A C g J n Pq	XREF: g(2150)n(2161)q(2163). J^{π}: 1829.5γ M1(+E2) to 2^+, 1346.7γ to 4^+; spin=1 or 2 from $\gamma\gamma(\theta)$ in ^{194}Au ε decay (38.02 h).
2163.747 *10*	0^+		C n Pq	XREF: n(2161)q(2163). XREF: S(2163). J^{π}: E0 transition to 0^+; 1835.3γ E2 to 2^+.
2165 *2*	(5^-)		L q	XREF: q(2163). J^{π}: L(p,p′)=(5) form 0^+.
2175.4 *1*			PQ	E(level): from (p,t). Other: 2171 *5* from (p,α).
2184.910 *12*	$1^+,2^+$		C P	J^{π}: 1562.89γ M1(+E2) to 2^+; spin=1 or 2 from $\gamma\gamma(\theta)$ in ^{194}Au ε decay (38.02 h).
2192.9 *1*	$(6^-,7^-)$		L N P	E(level): from (p,t). Others: 2192 *4* from (p,p′) and 2191 *10* from (p,d). J^{π}: L(p,d)=6 from $1/2^-$ for an unresolved doublet at E=2191 *20*, assuming $i_{13/2}$ shell.
2214.525 *9*	(2^+)		C J N Pq	XREF: q(2210). J^{π}: 1291.8γ (M1(+E2)) to 3^+, 702.5γ (M1) to 2^+, 2214.47γ to 0^+; L(p,d)=1+3 from $1/2^-$ suggesting 2^+ for a group at 2214 *5*.
2215.534 *6*	1^+		C J q	XREF: q(2210). J^{π}: 668.2γ, 736.2γ, 948.3γ M1 to 0^+.
2219.0 *3*			L P	E(level): from (p,t). Other: 2222 *2* from (p,p′).

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Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)†	J^{π}‡	XREF	Comments
2228.3 *1*		P	
2239.636 *8*	(2)$^-$	C n	XREF: n(2240). J^{π}: 1617.6γ E1 to 2$^+$, 1316.9γ to 3$^+$; ε feeding from 1$^-$ (log *ft*=7.7).
2246 *2*	3$^-$	L n	XREF: n(2240). E(level): from (p,p′). J^{π}: L(p,p′)=3 from 0$^+$.
2248.2 *1*	(4$^+$)	P	J^{π}: L(p,t)=(4) from 0$^+$.
2250.665? *21*	(1,2$^+$)	C	J^{π}: possible 1922.2γ to 2$^+$ and 2250.7γ to 0$^+$.
2275.6 *1*	(2$^+$,3$^+$,4$^+$)	N PQ	E(level): from (p,t). Others: 2270 *5* from (p,d), 2269 *5* from (p,α). J^{π}: L(p,d)=(3) from 1/2$^-$.
2287.376 *10*	(1$^+$,2$^+$)	C L P	XREF: L(2285). J^{π}: 1958.9γ (M1(+E2)) to 2$^+$, 2287.3γ to 0$^+$; ε feeding from 1$^-$ (log *ft*=7.8).
2297.2 *1*	(7$^-$,8$^+$)	P	J^{π}: L(p,t)=(7,8) from 0$^+$.
2298.157 *8*	1$^+$	C J n	XREF: n(2302). E(level): the 2302 group in (p,d) with L(p,d)=1+3 (implying J^{π}=2$^+$) may be a doublet or a different level. J^{π}: 818.9γ, 1031.0γ, 2298.2γ M1 to 0$^+$.
2309.0 *1*		P	
2309.6 *3*	(11$^-$)	D	J^{π}: 262.1$\gamma(\theta)$ to (9$^-$) is consistent with ΔJ=2.
2311.875 *8*	2$^+$	C L n	XREF: L(2309)n(2302). J^{π}: strong E0 component in 1983.4γ to 2$^+$, 1500.7γ (E2) to 4$^+$, 2311.9γ (E2) to 0$^+$; 197.8γ M1 to 1$^+$.
2324.1 *1*	(6$^-$,7$^-$)	L N P	XREF: N(2332). E(level): from (p,t). Others: 2323 *4* from (p,p′), 2332 *5* from (p,d). J^{π}: L(p,d)=6 from 1/2$^-$ assuming $i_{13/2}$ orbit for a group at E=2332 *5*.
2356.059 *14*	0$^+$	C l	J^{π}: E0 transition to 0$^+$. E(level): 2356.3 *1* (2010Il03) and 2353 *2* (1979De25) in (p,t) with L=(4) (1979De25) suggesting (4$^+$) and non-zero L(p,t) in 2010Il03 has been listed as a separate level, assuming that angular distributions in (p,t) are correct.
2356.3 *1*	(4$^+$)	l P	E(level): 2356.3 *1* from 2010Il03 and 2353 *2* from 1979De25 in (p,t), with L(p,t)=(4) in 1979De25 and non-zero L(p,t) in 2010Il03 is probably a different level from 2356.059, 0$^+$ level, assuming that angular distributions in (p,t) are correct.
2365.932 *21*	1$^+$	C l n	XREF: l(2370)n(2363). J^{π}: 2365.9γ M1 to 0$^+$. The group at 2363 *5* in (p,d) with L=(1+3) suggesting (2$^+$) could be a doublet; the $\sigma(\theta)$ data in (p,d) also consistent with L=(1+4).
2369.9 *1*		l n P	XREF: l(2370)n(2363). E(level): from (p,t). J^{π}: see comment for 2365 level.
2385.2 *1*		P	
2397.321 *14*	2$^+$	C J L NoP	XREF: L(2395)N(2394)o(2410)P(2395.3). E(level): other: 2395.3 *5* from (p,t) may be a different level. J^{π}: L(p,d)=1+3 from 1/2$^-$ for a group at 2394 *5*.
2407.8 *1*		L noP	XREF: L(2404)n(2411)o(2410). E(level): from (p,t). Other: 2404 *2* from (p,p′).
2412.744 *13*	1$^+$	C l no	XREF: l(2418)n(2411)o(2410). J^{π}: 2412.7γ M1 to 0$^+$. L(p,d)=(0) from 1/2$^-$ suggesting (0$^-$,1$^-$) for a group at 2411 *10* is inconsistent.
2423.6 *4*	(6$^+$,7,8$^+$)	B l no	XREF: B(?)l(2418)n(2427)o(2410). J^{π}: 1011.8γ to 6$^+$, possible 324.0γ to (8)$^+$.
2429.5 *1*		n P	XREF: n(2427). E(level): from (p,t).
2438.44 *19*	(10$^+$)	B DE R	J^{π}: 338.8γ (E2), ΔJ=2 to (8)$^+$, 391.0γ (E1) to (9$^-$); possible

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Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				configuration=$\pi h^{-2}_{11/2}$ (2006Le06) from (^{82}Se,Xγ) .
2444.5 *1*	(0⁺,1⁺,2⁺)		N P	XREF: N(2450). E(level): from (p,t). Jπ: L(p,d)=(1) for a group at 2450 *5*.
2451.1[c] *13*	(12⁺)	5.9 ns *8*	D R	μ=−2.0 *8* (2006Le06,2014StZZ) XREF: D(?). $T_{1/2}$: weighted average of 6.4 ns *8* from ^{194}Ir β⁻ decay (171 d) and 5 ns *1* from (α,2nγ). Jπ: possible band member of $i^{-2}_{13/2}$ configuration from systematics and g factor measurements. $T_{1/2}$: βγ(t) in ^{194}Ir β⁻ decay (1970To14). Other 5 ns *1* in (α,2nγ). Other: 6.6 ns *6* only listed in Fig. 1 of 2015Ta25, with no data shown. μ: from g=−0.17 *7* (IPAD method in (α,2nγ),2006Le06). Value is not listed in 2020StZV evaluation.
2457.3 *1*			P	
2473.3 *3*	(0⁺,1⁺,2⁺)		N P	E(level): from (p,t). Other: 2472 *5* from (p,d). Jπ: L(p,d)=1(+3) from 1/2⁻.
2481.9 *1*			P	
2500.9 *2*			g n P	XREF: g(2520)n(2500). E(level): from (p,t). Other: 2500 *10* from (p,d) for a triplet. Jπ: L(p,d)=(1+3) from 1/2⁻ suggesting (2⁺) for a triplet of unresolved levels at 2500, 2515 and 2530; L(^{3}He,d)=0+2 from 3/2⁺ suggesting 1⁺,2⁺ for a group at 2520 *25* also for a composite peak.
2511.0 *1*	0⁺		n P	XREF: n(2515). Jπ: L(p,t)=0 from 0⁺.
2517.20 *24*	1[#]		gH n P	XREF: g(2520)n(2515). E(level): other: 2517.6 *2* from (p,t).
2528.1 *1*	(2⁺)		g n P	XREF: g(2520)n(2530). Jπ: L(p,t)=(2) from 0⁺.
2536 *3*			g L n	XREF: g(2520)n(2530). E(level): from (p,p′).
2544.3 *1*	3⁻		L noP	XREF: n(2530)o(2560). E(level): from (p,t). Other: 2543 *3* from (p,p′). Jπ: L(p,p′)=3 from 0⁺.
2554.1 *1*			noP	XREF: n(2557)o(2560). E(level): from (p,t). Jπ: L(p,d)=(1+3) suggesting (2⁺) for a group at 2557 *10*.
2557.8 *2*			noP	XREF: n(2557)o(2560). E(level): from (p,t). Jπ: L(p,d)=(1+3) suggesting (2⁺) for a group at 2557 *10*.
2569.9 *1*	(6⁺)		l oP	XREF: l(2575)o(2560). E(level): from (p,t). Jπ: L(p,t)=(6) from 0⁺.
2577.30 *24*	1[#]		H l oP	XREF: l(2575)o(2560). E(level): other: 2576.7 *1* from (p,t).
2586.6 *1*			L P	E(level): from (p,t). Other: 2586 *5* from (p,p′).
2599.5 *1*			P	
2607.9 *3*			n P	XREF: n(2615). E(level): from (p,t). Jπ: L(p,d)=(1) giving (0⁺,1⁺,2⁺) for a group at 2615 *10*, probably a doublet.
2616.4 *1*			n P	XREF: n(2615). E(level): from (p,t).

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Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	J^π[‡]	$T_{1/2}$	XREF	Comments
				J^π: L(p,d)=(1) giving ($0^+,1^+,2^+$) for a group at 2615 *10*, probably a doublet.
2630.6 *1*			n P	XREF: n(2640). E(level): from (p,t). J^π: L(p,d)=(3) giving ($2^+,3^+,4^+$) for a group at 2640 *10*, probably a doublet.
2640.0 *1*	(4^+)		n P	XREF: n(2640). E(level): from (p,t). J^π: L(p,t)=(4) from 0^+.
2660.5 *2*			n P	XREF: n(2667). J^π: L(p,d)=(1) giving ($0^+,1^+,2^+$) for a group at 2667 *10*, probably a doublet.
2663.4 *4*	($10,11,12^+$)		E	J^π: 225.0γ to (10^+).
2676.4 *1*	($0^+,1^+,2^+$)		L n P	XREF: n(2667). E(level): from (p,t). Other: 2677 *3* from (p,p′). J^π: L(p,d)=(1) giving ($0^+,1^+,2^+$) for a group at 2667 *10*, probably a doublet.
2685.7 *1*	($2^+,3^+,4^+$)		L n P	XREF: n(2690). E(level): from (p,t). Other: 2688 *5* from (p,p′). J^π: L(p,d)=(3) from $1/2^-$ for a group at 2690 *10*.
2689.25 *12*	(8^+)	0.61 ps *+9−11*	S	J^π: 763.4γ to (6^+); absence of transitions to levels with J<6. $T_{1/2}$: from B(E2)(from 1925.9, 6^+)=0.46 *+10−6* (1996Wu07) in Coulomb excitation.
2695.3 *1*			L n P	XREF: L(2698)n(2690). E(level): from (p,t). Other: 2698 *3* from (p,p′).
2700.1[a] *3*	(11^-)		DE R	J^π: 652.6γ ΔJ=(2) to (9^-); possible band assignment.
2703.1 *2*	(6^+)		noP	XREF: n(2710)o(2720). J^π: L(p,t)=(6) from 0^+.
2710.5 *2*			noP	XREF: n(2710)o(2720).
2717.9 *2*			noP	XREF: n(2710)o(2720).
2720.2 *3*	1[#]		H noP	XREF: n(2710)o(2720). E(level): other: 2721.7 *1* from (p,t).
2739.7 *1*			noP	XREF: n(2743)o(2720). J^π: L(p,d)=(1+3) suggesting (2^+) for an unresolved doublet at 2743 *10*.
2747.0 *1*			n P	XREF: n(2743). J^π: L(p,d)=(1+3) suggesting (2^+) for an unresolved doublet at 2743 *10*.
2755.4 *1*			P	
2769.9 *2*	(0^+)		P	J^π: L(p,t)=(0) from 0^+.
2771.9 *4*			P	
2783 *10*	(2^+)		N	E(level): probably a doublet. J^π: L(p,d)=(1+3) from $1/2^-$.
2795.1 *2*			P	
2799.6 *1*			P	
2805.3 *2*			P	
2817.3 *2*	(2^+)		N P	XREF: N(2826). J^π: L(p,d)=(1+3) suggesting (2^+) for a group at 2826 *10*.
2842.1[c] *13*	(14^+)		DE R	XREF: E(2829). J^π: 391.0γ to (12^+); band member.
2842.2 *1*			P	
2848.6[@] *10*	(10^+)	1.05 ps *+30−22*	E S	J^π: 749γ to $(8)^+$; band assignment. $T_{1/2}$: from B(E2)(from 2099,8^+)=0.28 *+7−6* (1996Wu07) in Coulomb excitation.

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Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
2850.2 *1*			P	
2855.8 *1*			g P	XREF: g(2880).
2862.7 *1*			g n P	XREF: g(2880)n(2870).
2878.7 *2*			g n P	XREF: g(2880)n(2870). J^{π}: L(^{3},d)=0+2 suggesting $1^+,2^+$ for a group at 2880 *29*, probably a multiplet of 2856+2863+2879+2895+2908 levels.
2882.4 *1*			g P	XREF: g(2880).
2895 *3*	(2^+)		g N P	XREF: g(2880). J^{π}: L(p,d)=(1+3) suggesting (2^+) for a doublet of unresolved levels at 2895 *10* and 2908 *10*.
2908 *10*			g N	XREF: g(2880). J^{π}: see comments for 2895 level.
2916.6 *10*	(10^+)	0.54 ps *+26−12*	E S	J^{π}: 817γ to $(8)^+$; no γ to levels with J<8. $T_{1/2}$: from B(E2)(from 2099,8^+)=0.35 *+9−11* (1996Wu07) in Coulomb excitation.
2956 *10*	(2^+)		N	J^{π}: L(p,d)=(1+3) from $1/2^-$.
2980 *10*			g No	XREF: g(3010)o(2990). J^{π}: see comments for 3000 level.
2990.1?[a] *11*	(13^-)		E	J^{π}: 290γ to (11^-); band member.
3000 *10*	(2^+)		g No	XREF: g(3010)o(2990). E(level): from (p,d). J^{π}: L(p,d)=(1+3) from $1/2^-$. L(^{3}He,d)=(0) suggesting ($1^+,2^+$) for a group at 3010 *30*, probably a multiplet of 2980+3000+3015+3033 levels.
3000.11 *22*	1[#]		gH o	XREF: g(3010)o(2990).
3014.81 *22*	1[#]		gH	XREF: g(3010).
3033 *10*	(2^+)		g N	XREF: g(3010). J^{π}: L(p,d)=(1+3) from $1/2^-$.
3057.8? *4*	($10,11,12^+$)		E	J^{π}: possible 619.4γ to (10^+).
3065 *10*	($0^+,1^+,2^+$)		N	J^{π}: L(p,d)=(1) from $1/2^-$.
3078 *10*	(2^+)		N	J^{π}: L(p,d)=(1+3) from $1/2^-$.
3078.81 *22*	1[#]		H	
3100 *10*	(2^+)		N	J^{π}: L(p,d)=(1+3) from $1/2^-$ for an unresolved doublet.
3132 *10*	($0^+,1^+,2^+$)		N	J^{π}: L(p,d)=(1) from $1/2^-$.
3141.11 *24*	1[#]		H	
3170 *10*	(2^+)		N	J^{π}: L(p,d)=(1+3) from $1/2^-$.
3198 *10*	(2^+)		N	J^{π}: L(p,d)=(1+3) from $1/2^-$.
3225 *10*	($0^+,1^+,2^+$)		N	J^{π}: L(p,d)=(1) from $1/2^-$.
3351.31 *22*	1[#]		H	
3375.24 *22*	1[#]		H	
3383.01 *24*	1[#]		H	
3417.12 *22*	1[#]		H	
3421.4 *3*	1[#]		H	
3427.71 *24*	1[#]		H	
3459.31 *24*	1[#]		H	
3465.2 *3*	1[#]		H	
3477.01 *24*	1[#]		H	
3497.9 *3*	1[#]		H	
3499.7[c] *13*	(16^+)		E R	XREF: E(3487). J^{π}: 657.6γ to (14^+); possible band member.
3545.3 *3*	1[#]		H	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{194}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	XREF	Comments
3697.5 *3*	1[#]	H	
3703.3 *4*	1[#]	H	
3717.02 *24*	1[#]	H	
3726.8 *4*	1[#]	H	
3747.1 *3*	1[#]	H	
3754.7[c] *13*	(18^+)	E R	XREF: E(3670). E(level): 3683 from reverse ordering of 183-255 cascade in (^{82}Se,Xγ). J^{π}: 255.0γ to (16^+); possible band member.
3813.62 *24*	1[#]	H	
3890.22 *24*	1[#]	H	
3937.7[c] *14*	(20^+)	E R	XREF: E(3925). J^{π}: 183.0γ to (18^+); possible band member.
4529.8 *14*	(22^+)	E R	XREF: E(4517). J^{π}: 592.1γ to (20^+); possible band member.
4541.7[c] *17*	(22^+)	R	J^{π}: 604γ to (20^+); possible band member.
4896.7[c] *20*	(24^+)	R	J^{π}: 355γ to (22^+); possible band member.
5336.7[c] *22*	(26^+)	R	J^{π}: 440γ to (24^+); possible band member.

† From a least-squares fit to γ-ray energies for levels populated in γ-ray studies. For levels reported in particle transfer reactions only, weighted averages of available values have been taken.

‡ For levels populated in (α,2nγ) reaction, it is assumed that spin values are generally in ascending order as the excitation energy increases. Above ≈2 MeV excitation energy, the J^{π} values based only on L-transfers are given in parentheses, since the level density is high and identification of individual levels is difficult. The exception to this is $J^{\pi}=3^-$ well defined L=3 transitions (at 2154, 2246, 2543) in (pol p,p′).

\# From (γ,γ').

@ Band(A): g.s. band.

& Band(B): γ-vibrational band.

a Band(C): Negative parity band, odd spin.

b Band(D): Negative parity band, even spin.

c Band(E): Yrast oblate structure based on $i^{-2}_{13/2}$.

$\gamma(^{194}Pt)$

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. &	δ &	α a	Comments
328.473	2^+	328.469 *6*	100	0.0	0^+	E2		0.0755	B(E2)(W.u.)=49.5 *20* α(K)=0.0488 *7*; α(L)=0.0202 *3*; α(M)=0.00504 *7* α(N)=0.001236 *18*; α(O)=0.000202 *3*; α(P)=4.97×10^{-6} *7* E_γ: weighted average of 328.467 *10* from ^{194}Ir β^- decay (19.18 h), 328.470 *6* from ^{194}Au ε decay (38.02 h), and 328.45 *3* from (n,n′γ). Others: 328.5 *5* from ^{194}Ir β^- decay (171 d), 328.5 *1* from (α,2nγ), and 328.5 *1* from Coulomb excitation.
622.024	2^+	293.547 *7*	100.0 *10*	328.473	2^+	E2+M1+E0	+15 *2*	0.1060 *16*	B(M1)(W.u.)=8.8×10^{-5} *+45−27*; B(E2)(W.u.)=89 *+12−10* α(K)=0.0654 *10*; α(L)=0.0308 *5*; α(M)=0.00771 *11* α(N)=0.00189 *3*; α(O)=0.000307 *5*; α(P)=6.58×10^{-6} *10* E_γ: weighted average of 293.544 *10* from ^{194}Ir β^- decay (19.18 h) and 293.549 *7* from ^{194}Au ε decay (38.02 h). Others: 293.55 *7* from (α,2nγ), 293.50 *5* from (n,n′γ), and 293.5 *1* from Coulomb excitation. I_γ: from ^{194}Au ε decay (38.02 h). Others: 100.0 *11* from ^{194}Ir β^- decay (19.18 h), 100 *6* from (α,2nγ), 100 *5* from (n,n′γ), and 1.0E2 *5* from muonic atom. δ: for δ(E2/M1), from $\gamma\gamma(\theta)$ in ^{194}Au ε decay. ρ^2(E0)=0.00046 *16* (1999Wo07 evaluation). E0/E2 mixing ratio(q)=−0.17 to +0.24 with penetration parameter (λ)=−170 to +270 (1971Do12). α: for E2.
		622.007 *10*	13.68 *15*	0.0	0^+	E2		0.01483	B(E2)(W.u.)=0.286 *+44−35* E_γ: weighted average of 622.003 *20* from ^{194}Ir β^- decay (19.18 h), 622.010 *10* from ^{194}Au ε decay (38.02 h), 621.8 *1* from (α,2nγ), 622.0 *2* from (n,n′γ), and 622.0 *1* from Coulomb excitation. I_γ: weighted average of 13.40 *16* from ^{194}Ir β^- decay (19.18 h), 13.85 *12* from ^{194}Au ε decay (38.02 h), 19 *6* from (α,2nγ), and 12.2 *14* from (n,n′γ).
811.288	4^+	482.806 *8*	100	328.473	2^+	E2		0.0270	B(E2)(W.u.)=85.1 *+48−44* E_γ: weighted average of 482.823 *13* from ^{194}Ir β^- decay (19.18 h), 482.6 *5* from ^{194}Ir β^- decay (171 d), 482.800 *8* from ^{194}Au ε decay (38.02 h), 482.75 *12* from (α,2nγ), 482.80 *6* from (n,n′γ), and 482.9 *1* from Coulomb excitation.
922.772	3^+	111.4 *4*	0.49 *15*	811.288	4^+	[M1,E2]		4.0 *9*	α(K)=2.3 *17*; α(L)=1.3 *7*; α(M)=0.32 *17* α(N)=0.08 *4*; α(O)=0.013 *6*; α(P)=0.00026 *20* γ seen in ^{194}Ir β^- only (1976Cl03).
		300.750 *7*	100.0 *10*	622.024	2^+	E2(+M1)	>5	0.102 *5*	α(K)=0.064 *4*; α(L)=0.0283 *5*; α(M)=0.00706 *11* α(N)=0.00173 *3*; α(O)=0.000283 *5*; α(P)=6.5×10^{-6} *5* E_γ: from ^{194}Au ε decay (38.02 h). Others: 300.751 *10* from ^{194}Ir β^- decay (19.18 h), 300.74 *8* from (α,2nγ), 300.74 *7* from (n,n′γ),

γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	Comments
									and 300.6 *1* from Coulomb excitation. I_γ: from ^{194}Au ε decay (38.02 h). Others: 100.0 *11* from ^{194}Ir β^- decay (19.18 h), 100 *7* from (α,2nγ), and 100 *5* from (n,n′γ).
922.772	3$^+$	594.292 *10*	18.63 *14*	328.473	2$^+$	E2(+M1)	>10	0.0166 *3*	E_γ: weighted average of 594.288 *10* from ^{194}Ir β^- decay (19.18 h) and 594.299 *14* from ^{194}Au ε decay (38.02 h). Others: 594.3 *3* from (α,2nγ) and 594.3 *2* from (n,n′γ). I_γ: weighted average of 18.87 *30* from ^{194}Ir β^- decay (19.18 h) and 18.58 *14* from ^{194}Au ε decay (38.02 h). Others: 14 *5* from (α,2nγ) and 11.3 *10* from (n,n′γ). I_γ: 11.3 *9* from (n,n′γ) not used in averaging. δ: >+50 or <−10 ($\gamma\gamma(\theta)$ in ^{194}Ir β^-). ce data in ^{194}Au ε decay give 0.8 *+6−4*.
1229.520	4$^+$	418.19 *3*	14.6 *14*	811.288	4$^+$	(E2(+M1))	>3	0.043 *5*	B(M1)(W.u.)=9.2×10^{-4} *+29−92*; B(E2)(W.u.)=18 *+8−4* α(K)=0.031 *4*; α(L)=0.0091 *5*; α(M)=0.00223 *9* α(N)=0.000548 *23*; α(O)=9.2×10^{-5} *5*; α(P)=3.3×10^{-6} *5* E_γ: weighted average of 418.27 *7* from ^{194}Ir β^- decay (19.18 h), 418.195 *23* from ^{194}Au ε decay (38.02 h), 418.2 *3* from (α,2nγ), 417.96 *11* from (n,n′γ), and 418.1 *1* from Coulomb excitation. I_γ: weighted average of 16.2 *22* from ^{194}Ir β^- decay (19.18 h), 14.3 *15* from ^{194}Au ε decay (38.02 h), 14 *4* from (α,2nγ), and 14.4 *14* from (n,n′γ).
		607.498 *10*	100.0 *11*	622.024	2$^+$	E2		0.01565	B(E2)(W.u.)=21.5 *+46−34* E_γ: weighted average of 607.502 *24* from ^{194}Ir β^- decay (19.18 h), 607.496 *10* from ^{194}Au ε decay (38.02 h), 607.5 *2* from (α,2nγ), 607.63 *9* from (n,n′γ), and 607.5 *1* from Coulomb excitation. I_γ: from ^{194}Au ε decay (38.02 h). Others: 100 *19* from ^{194}Ir β^- decay (19.18 h), 100 *20* from (α,2nγ), and 100 *9* from (n,n′γ).
		901.073 *25*	8.6 *11*	328.473	2$^+$	[E2]		0.00674	B(E2)(W.u.)=0.26 *+9−7* E_γ: weighted average of 901.077 *25* from ^{194}Au ε decay (38.02 h) and 901.0 *1* from Coulomb excitation. Others: 900.9 *6* from (α,2nγ) and 901.05 *17* from (n,n′γ). I_γ: unweighted average of 10.7 *4* from ^{194}Au ε decay (38.02 h), 8 *4* from (α,2nγ), and 7.2 *7* from (n,n′γ).
1267.200	0$^+$	645.166 *9*	100.0 *10*	622.024	2$^+$	E2		0.01367	B(E2)(W.u.)=8.2 *+25−16* E_γ: weighted average of 645.169 *10* from ^{194}Ir β^- decay (19.18 h) and 645.164 *9* from ^{194}Au ε decay (38.02 h). Others: 645.16 *10* from (n,n′γ) and 645.2 *1* from Coulomb excitation. I_γ: from ^{194}Ir β^- decay (19.18 h). Others: 100.0 *22* from ^{194}Au ε decay (38.02 h) and 100 *11* from (n,n′γ).
		938.719 *9*	49.9 *7*	328.473	2$^+$	E2		0.00621	B(E2)(W.u.)=0.63 *+20−13* E_γ: weighted average of 938.719 *10* from ^{194}Ir β^- decay (19.18 h),

Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	α[a]	$I_{(\gamma+ce)}$	Comments
									938.720 *9* from ^{194}Au ε decay (38.02 h), and 938.6 *2* from (n,n′γ). I_γ: weighted average of 50.7 *15* from ^{194}Ir β^- decay (19.18 h), 49.7 *5* from ^{194}Au ε decay (38.02 h), and 61 *6* from (n,n′γ).
1267.200	0^+	1267.36 *16*		0.0	0^+	E0		0.11 *1*	q^2_K(E0/E2)=0.337 *23*, X(E0/E2)=0.0082 *5*, ρ^2(E0)=0.00019 *10* (2005Ki02,evaluation). Other: ρ^2(E0)=0.00016 *8* (1999Wo07,evaluation).
1373.772	(5^-)	144.5 *2*	1.21 *35*	1229.520	4^+				E_γ,I_γ: γ seen in (α,2nγ) only.
		562.482 *15*	100 *33*	811.288	4^+	(E1)	0.00646		E_γ: weighted average of 562.4 *5* from ^{194}Ir β^- decay (171 d), 562.478 *14* from ^{194}Au ε decay (38.02 h), 562.5 *1* from (α,2nγ), 562.64 *8* from (n,n′γ), and 562.4 *1* from Coulomb excitation. I_γ: from (α,2nγ).
1411.83	6^+	600.5 *1*	100	811.288	4^+	E2	0.01607		B(E2)(W.u.)=67 *+30−16* E_γ: from (α,2nγ). Others: 600.5 *5* from ^{194}Ir β^- decay (171 d), 600.3 *2* from (n,n′γ), and 600.6 *1* from Coulomb excitation. Mult.: from ce data in ^{194}Ir β^- decay (171 d).
1422.21	$(3,4)^+$	499.48 *12*	100 *10*	922.772	3^+				E_γ: weighted average of 499.4 *2* from (α,2nγ), 499.65 *9* from (n,n′γ), and 499.3 *1* from Coulomb excitation. I_γ: from (n,n′γ).
		1093.6 *2*	23.4 *24*	328.473	2^+				E_γ: weighted average of 1093.9 *2* from (n,n′γ) and 1093.5 *1* from Coulomb excitation. I_γ: from (n,n′γ).
1432.551	3^-	59.2 *4*	0.023 *6*	1373.772	(5^-)	(E2)	50.9 *19*		B(E2)(W.u.)=14 *+7−5* α(L)=38.2 *14*; α(M)=9.9 *4* α(N)=2.40 *9*; α(O)=0.372 *14*; α(P)=0.000406 *12* E_γ,I_γ: from ^{194}Ir β^- decay (19.18 h) only.
		203.04 *3*	16.3 *15*	1229.520	4^+	E1	0.0675		B(E1)(W.u.)=2.09×10^{-5} *+42−37* α(K)=0.0555 *8*; α(L)=0.00929 *13*; α(M)=0.00214 *3* α(N)=0.000525 *8*; α(O)=9.07×10^{-5} *13*; α(P)=4.85×10^{-6} *7* E_γ: weighted average of 203.056 *21* from ^{194}Ir β^- decay (19.18 h), 202.96 *5* from ^{194}Au ε decay (38.02 h), and 202.8 *2* from (n,n′γ). I_γ: unweighted average of 18.7 *9* from ^{194}Ir β^- decay (19.18 h), 16.61 *32* from ^{194}Au ε decay (38.02 h), and 13.6 *17* from (n,n′γ).
		621.256 *15*	38.89 *29*	811.288	4^+	E1	0.00527		B(E1)(W.u.)=1.74×10^{-6} *+21−19* E_γ: weighted average of 621.295 *36* from ^{194}Ir β^- decay (19.18 h) and 621.250 *14* from ^{194}Au ε decay (38.02 h). Others: 621.8 *1* from (α,2nγ) and 621.4 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Others: 39 *4* from ^{194}Ir β^- decay (19.18 h), 63 *31* from (α,2nγ), and 37.3 *34* from (n,n′γ).

$^{194}_{78}Pt_{116}$-13

Adopted Levels, Gammas (continued)

γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	α[a]	$I_{(\gamma+ce)}$	Comments
1432.551	3^-	810.547 *14*	9.7 *12*	622.024	2^+	E1	0.00313		B(E1)(W.u.)=1.96×10^{-7} *+47−40* E_γ: weighted average of 810.569 *18* from ^{194}Ir β^- decay (19.18 h), 810.533 *14* from ^{194}Au ε decay (38.02 h), 811.0 *5* from (α,2nγ), 810.5 *2* from (n,n′γ), and 811 *1* from Coulomb excitation. I_γ: unweighted average of 9.67 *19* from ^{194}Ir β^- decay (19.18 h), 8.27 *9* from ^{194}Au ε decay (38.02 h), 13 *6* from (α,2nγ), and 7.8 *9* from (n,n′γ).
		1104.064 *10*	100.0 *9*	328.473	2^+	E1	1.77×10^{-3}		B(E1)(W.u.)=8.0×10^{-7} *9* E_γ: weighted average of 1104.073 *10* from ^{194}Ir β^- decay (19.18 h), 1104.056 *10* from ^{194}Au ε decay (38.02 h), 1104.0 *3* from (α,2nγ), 1104.01 *8* from (n,n′γ), and 1104 *1* from Coulomb excitation. I_γ: from ^{194}Au ε decay (38.02 h). Others: 100.0 *14* from ^{194}Ir β^- decay (19.18 h), 100 *16* from (α,2nγ), and 100 *5* from (n,n′γ).
		1432.542 *14*	3.28 *6*	0.0	0^+	[E3]	0.00566		B(E3)(W.u.)=7.7 *+11−9* E_γ: from ^{194}Au ε decay (38.02 h). Other: 1432.56 *8* from ^{194}Ir β^- decay (19.18 h). I_γ: weighted average of 3.33 *14* from ^{194}Ir β^- decay (19.18 h) and 3.27 *6* from ^{194}Au ε decay (38.02 h).
1479.272	0^+	857.234 *18*	0.974 *22*	622.024	2^+	[E2]	0.00746		E_γ: weighted average of 857.224 *14* from ^{194}Ir β^- decay (19.18 h) and 857.265 *24* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 0.976 *13* from ^{194}Ir β^- decay (19.18 h) and 0.69 *17* from ^{194}Au ε decay (38.02 h).
		1150.788 *10*	100.0 *10*	328.473	2^+	E2	0.00416		E_γ: weighted average of 1150.799 *12* from ^{194}Ir β^- decay (19.18 h) and 1150.780 *10* from ^{194}Au ε decay (38.02 h). Other: 1150.8 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Other: 100.0 *11* from ^{194}Ir β^- decay (19.18 h).
		1479.33 *11*		0.0	0^+	E0		5.5 *4*	q^2_K(E0/E2)=10.4 *4*, X(E0/E2)=0.410 *16* (2005Ki02 evaluation).
1485.04	(7^-)	111.4 *2*	100	1373.772	(5^-)	(E2)	3.15		B(E2)(W.u.)=34.5 *13* α(K)=0.617 *9*; α(L)=1.90 *4*; α(M)=0.492 *8* α(N)=0.1201 *20*; α(O)=0.0187 *3*; α(P)=6.66×10^{-5} *10* E_γ: from (α,2nγ). Other: 111.7 *5* from ^{194}Ir β^- decay (171 d). Mult.: deduced from intensity balance in ^{194}Ir β^- decay (171 d).
1498.77	(5^+)	576.0 *2*	100	922.772	3^+				E_γ: from (α,2nγ).
1512.004	2^+	244.781 *19*	3.06 *7*	1267.200	0^+	(E2)	0.184		α(K)=0.1019 *15*; α(L)=0.0623 *9*; α(M)=0.01576 *22*

Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	Comments
									α(N)=0.00386 *6*; α(O)=0.000620 *9*; α(P)=9.98×10^{-6} *14* E_γ: weighted average of 244.769 *19* from ^{194}Ir β^- decay (19.18 h) and 244.798 *22* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 2.91 *16* from ^{194}Ir β^- decay (19.18 h) and 3.09 *7* from ^{194}Au ε decay (38.02 h).
1512.004	2$^+$	589.207 *10*	44.3 *8*	922.772	3$^+$	E2+M1	2.2 *+6−4*	0.0226 *23*	E_γ: weighted average of 589.202 *19* from ^{194}Ir β^- decay (19.18 h) and 589.208 *10* from ^{194}Au ε decay (38.02 h). Other: 589.18 *11* from (n,n′γ). I_γ: unweighted average of 45.1 *5* from ^{194}Ir β^- decay (19.18 h) and 43.5 *4* from ^{194}Au ε decay (38.02 h). Other: 34 *4* from (n,n′γ) is discrepant.
		700.680 *16*	8.93 *16*	811.288	4$^+$	E2		0.01140	E_γ: weighted average of 700.687 *20* from ^{194}Ir β^- decay (19.18 h) and 700.675 *16* from ^{194}Au ε decay (38.02 h). Other: 700.5 *2* from (n,n′γ). I_γ: unweighted average of 8.77 *9* from ^{194}Ir β^- decay (19.18 h) and 9.08 *9* from ^{194}Au ε decay (38.02 h). Other: 44 *4* from (n,n′γ) is discrepant.
		889.980 *10*	17.78 *18*	622.024	2$^+$	E2+M1	+0.50 *16*	0.0155 *12*	E_γ: weighted average of 889.986 *10* from ^{194}Ir β^- decay (19.18 h) and 889.969 *14* from ^{194}Au ε decay (38.02 h). Other: 889.90 *15* from (n,n′γ). I_γ: weighted average of 17.67 *18* from ^{194}Ir β^- decay (19.18 h) and 18.08 *30* from ^{194}Au ε decay (38.02 h). Other: 29.3 *29* from (n,n′γ) is discrepant. δ: from ce and $\gamma\gamma(\theta)$ in ^{194}Au ε decay (38.02 h). Other: +1.51 *40* from $\gamma(\theta)$ in ^{194}Ir β^- decay (19.18 h).
		1183.537 *10*	100.0 *9*	328.473	2$^+$	M1+E2	+1.09 *+18−16*	0.0061 *4*	E_γ: weighted average of 1183.539 *10* from ^{194}Ir β^- decay (19.18 h) and 1183.535 *10* from ^{194}Au ε decay (38.02 h). Other: 1183.60 *12* from (n,n′γ). I_γ: from ^{194}Ir β^- decay (19.18 h). Others: 100.0 *10* from ^{194}Au ε decay (38.02 h) and 100 *7* from (n,n′γ). δ: unweighted average of +1.32 *9* (1983Ri14) and +0.9 *1* (1973Si22) from $\gamma(\theta)$ in ^{194}Ir β^- decay (19.18 h) and +1.09 *+18−16* from ce and $\gamma\gamma(\theta)$ in ^{194}Au ε decay (38.02 h).
		1512.071[#] *14*	7.5 *10*	0.0	0$^+$	(E2)		0.00255	E_γ: weighted average of 1511.98 *10* from ^{194}Ir β^- decay (19.18 h) and 1512.073 *14* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 7.9 *10* from ^{194}Ir β^- decay (19.18 h) and 6.7 *15* from ^{194}Au ε decay (38.02 h). Level-energy difference=1512.998.
1547.281	0$^+$	925.260 *14*	25.5 *6*	622.024	2$^+$	E2		0.00639	B(E2)(W.u.)=14.4 *+10−12* E_γ: weighted average of 925.269 *14* from ^{194}Ir β^- decay

From ENSDF

γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.&	δ&	α[a]	$I_{(\gamma+ce)}$	Comments
										(19.18 h) and 925.251 *14* from ^{194}Au ε decay (38.02 h). Others: 925.5 *3* from (n,n′γ) and 925.3 *1* from Coulomb excitation. I_γ: unweighted average of 24.94 *23* from ^{194}Ir β^- decay (19.18 h) and 26.12 *26* from ^{194}Au ε decay (38.02 h). Other: 48 *4* from (n,n′γ) is discrepant.
1547.281	0^+	1218.802 *10*	100.0 *9*	328.473	2^+	E2		0.00373		B(E2)(W.u.)=14.3 *+10−11* E_γ: weighted average of 1218.813 *10* from ^{194}Ir β^- decay (19.18 h), 1218.791 *10* from ^{194}Au ε decay (38.02 h), 1218.75 *13* from (n,n′γ), and 1218.8 *1* from Coulomb excitation. I_γ: from ^{194}Ir β^- decay (19.18 h). Others: 100.0 *10* from ^{194}Au ε decay (38.02 h) and 100 *10* from (n,n′γ).
		1547.9 *4*		0.0	0^+	E0			0.23 *2*	E_γ,Mult.: transition seen only in ce data in ^{194}Au ε decay (38.02 h). q^2_K(E0/E2)=0.53 *4*, X(E0/E2)=0.0238 *18*, ρ^2(E0)=0.010 *4* (2005Ki02,evaluation). Other: ρ^2(E0)=0.011 *4* (1999Wo07, evaluation).
1592.8	(5^+)	670.0 *3*	100	922.772	3^+					E_γ: from (α,2nγ) only.
1622.197	2^+	699.29@ *4*	8.0 *4*	922.772	3^+	[M1,E2]		0.022 *11*		E_γ: unweighted average of 699.332 *29* from ^{194}Ir β^- decay (19.18 h) and 699.257 *18* from ^{194}Au ε decay (38.02 h). I_γ: unweighted average of 7.60 *25* from ^{194}Ir β^- decay (19.18 h) and 8.43 *23* from ^{194}Au ε decay (38.02 h).
		1000.178 *10*	84 *8*	622.024	2^+	M1+E2	1.38 *+13−12*	0.0081 *4*		E_γ: weighted average of 1000.173 *10* from ^{194}Ir β^- decay (19.18 h) and 1000.190 *15* from ^{194}Au ε decay (38.02 h). Other: 999.99 *14* from (n,n′γ). I_γ: unweighted average of 76.2 *9* from ^{194}Ir β^- decay (19.18 h), 99 *7* from ^{194}Au ε decay (38.02 h), and 76 *8* from (n,n′γ).
		1293.716 *14*	79 *6*	328.473	2^+	E2+M1+E0	−0.9 *1*	0.0192 *8*		E_γ: weighted average of 1293.723 *14* from ^{194}Ir β^- decay (19.18 h) and 1293.708 *14* from ^{194}Au ε decay (38.02 h). Other: 1293.5 *2* from (n,n′γ). I_γ: unweighted average of 71.4 *6* from ^{194}Ir β^- decay (19.18 h), 73.7 *7* from ^{194}Au ε decay (38.02 h), and 91 *10* from (n,n′γ). δ: E2/M1 ratio from $\gamma\gamma(\theta)$ in ^{194}Ir β^- decay (19.18 h). α: from ^{194}Au ε decay.
		1622.185 *14*	100.0 *10*	0.0	0^+	E2		0.00229		E_γ: from ^{194}Ir β^- decay (19.18 h). Others: 1622.185 *14* from ^{194}Au ε decay (38.02 h) and

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Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	$I_{(\gamma+ce)}$	Comments
										1622.4 *3* from (n,n′γ).

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Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	Comments
									I_γ: from ^{194}Au ε decay (38.02 h). Others: 100.0 *11* from ^{194}Ir β^- decay (19.18 h) and 100 *10* from (n,n′γ).
1670.667	2^+	747.88[c] *4*	0.321 *19*	922.772	3^+	[M1,E2]		0.019 *9*	E_γ,I_γ: from ^{194}Au ε decay (38.02 h) only.
		859.382 *24*	4.44 *6*	811.288	4^+	(E2)		0.00742	E_γ: weighted average of 859.396 *25* from ^{194}Ir β^- decay (19.18 h) and 859.370 *24* from ^{194}Au ε decay (38.02 h). I_γ: from ^{194}Au ε decay (38.02 h). Other: 4.38 *20* from ^{194}Ir β^- decay (19.18 h).
		1048.640 *10*	66.4 *7*	622.024	2^+	M1		0.01161	E_γ: weighted average of 1048.655 *14* from ^{194}Ir β^- decay (19.18 h), 1048.633 *10* from ^{194}Au ε decay (38.02 h), and 1048.55 *13* from (n,n′γ). I_γ: weighted average of 66.4 *7* from ^{194}Ir β^- decay (19.18 h) and 66.4 *7* from ^{194}Au ε decay (38.02 h). Other: 93 *9* from (n,n′γ).
		1342.187 *12*	100.0 *10*	328.473	2^+	M1+E2	−0.23 *9*	0.00612 *16*	E_γ: weighted average of 1342.204 *10* from ^{194}Ir β^- decay (19.18 h), 1342.170 *10* from ^{194}Au ε decay (38.02 h), and 1342.12 *14* from (n,n′γ). I_γ: from ^{194}Ir β^- decay (19.18 h). Others: 100.0 *19* from ^{194}Au ε decay (38.02 h) and 100 *10* from (n,n′γ).
		1670.672 *14*	14.4 *4*	0.0	0^+	(E2)		0.00219	E_γ: weighted average of 1670.680 *16* from ^{194}Ir β^- decay (19.18 h) and 1670.665 *14* from ^{194}Au ε decay (38.02 h). I_γ: unweighted average of 14.87 *13* from ^{194}Ir β^- decay (19.18 h) and 14.00 *14* from ^{194}Au ε decay (38.02 h).
1737.427	(3^-)	304.886 *17*	100.0 *21*	1432.551	3^-	[M1,E2]		0.19 *10*	α(K)=0.15 *10*; α(L)=0.033 *7*; α(M)=0.0079 *13* α(N)=0.0019 *3*; α(O)=0.00034 *7*; α(P)=1.7×10^{-5} *11*
		363.10[@] *18*	34 *8*	1373.772	(5^-)	[E2]		0.0569	α(K)=0.0383 *6*; α(L)=0.01413 *20*; α(M)=0.00350 *5* α(N)=0.000859 *13*; α(O)=0.0001418 *20*; α(P)=3.94×10^{-6} *6*
		814.59 *6*	34.8 *21*	922.772	3^+	[E1]		0.00310	
1778.578	2^+	345.984[c] *20*	1.03 *5*	1432.551	3^-	[E1]		0.0187	
		855.823 *17*	14.09 *14*	922.772	3^+	(M1+E2)	0.53 *+22−24*	0.0168 *17*	α(K)=0.0139 *15*; α(L)=0.00224 *20*; α(M)=0.00052 *5* α(N)=0.000128 *12*; α(O)=2.30×10^{-5} *21*; α(P)=1.54×10^{-6} *17*
		1156.542 *16*	100.0 *10*	622.024	2^+	M1(+E2)	<0.2	0.00898 *16*	E_γ: weighted average of 1156.48 *4* from ^{194}Ir β^-

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Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	Comments
									decay (19.18 h), 1156.550 *14* from ^{194}Au ε decay (38.02 h), and 1156.5 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Others: 100 *4* from ^{194}Ir β^- decay (19.18 h) and 100 *10* from (n,n′γ).
1778.578	2^+	1450.25 *13*	71 *7*	328.473	2^+	M1+E2	−0.27 *10*	0.00506 *15*	α(K)=0.00414 *13*; α(L)=0.000645 *19*; α(M)=0.000148 *5* α(N)=3.66×10^{-5} *11*; α(O)=6.61×10^{-6} *19*; α(P)=4.55×10^{-7} *14*; α(IPF)=7.69×10^{-5} *18* E_γ: unweighted average of 1450.137 *14* from ^{194}Ir β^- decay (19.18 h), 1450.098 *14* from ^{194}Au ε decay (38.02 h), and 1450.5 *2* from (n,n′γ). I_γ: unweighted average of 61.6 *24* from ^{194}Ir β^- decay (19.18 h), 68.6 *7* from ^{194}Au ε decay (38.02 h), and 84 *9* from (n,n′γ).
		1778.39 *14*	8.3 *3*	0.0	0^+	(E2)		0.00201	E_γ: unweighted average of 1778.25 *14* from ^{194}Ir β^- decay (19.18 h) and 1778.532 *20* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 9.2 *8* from ^{194}Ir β^- decay (19.18 h) and 8.19 *27* from ^{194}Au ε decay (38.02 h).
1783.52	(6^-)	409.75 *10*	100	1373.772	(5^-)	M1+E2	+0.4 *1*	0.119 *6*	α(K)=0.098 *6*; α(L)=0.0165 *6*; α(M)=0.00383 *13* α(N)=0.00095 *3*; α(O)=0.000169 *6*; α(P)=1.10×10^{-5} *6* E_γ: weighted average of 409.8 *1* from (α,2nγ) and 409.69 *10* from (n,n′γ). Mult.,δ: from $\gamma(\theta)$ and ce data in (α,2nγ).
1797.390	1^-	250.102 *17*	0.549 *7*	1547.281	0^+	E1		0.0404	α(K)=0.0333 *5*; α(L)=0.00546 *8*; α(M)=0.001258 *18* α(N)=0.000308 *5*; α(O)=5.36×10^{-5} *8*; α(P)=2.98×10^{-6} *5*
		318.122 *10*	3.189 *28*	1479.272	0^+	E1		0.0227	
		364.840 *6*	23.51 *23*	1432.551	3^-	E2		0.0562	α(K)=0.0378 *6*; α(L)=0.01390 *20*; α(M)=0.00344 *5* α(N)=0.000844 *12*; α(O)=0.0001394 *20*; α(P)=3.90×10^{-6} *6* E_γ: weighted average of 364.852 *10* from ^{194}Ir β^- decay (19.18 h), 364.836 *6* from ^{194}Au ε decay (38.02 h), and 364.8 *2* from (n,n′γ). I_γ: weighted average of 23.45 *28* from ^{194}Ir β^- decay (19.18 h) and 23.55 *23* from ^{194}Au ε decay (38.02 h). Other: 69 *7* from (n,n′γ) is discrepant.
		530.177 *10*	9.10 *7*	1267.200	0^+	E1		0.00730	E_γ: weighted average of 530.184 *14* from ^{194}Ir β^- decay (19.18 h) and 530.173 *10* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 9.16 *7* from ^{194}Ir β^- decay (19.18 h) and 9.03 *8* from ^{194}Au ε decay (38.02 h).
		1175.369 *10*	31.6 *3*	622.024	2^+	E1		1.60×10^{-3}	E_γ: weighted average of 1175.377 *10* from ^{194}Ir β^-

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$\gamma(^{194}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ[&]	α[a]	$I_{(\gamma+ce)}$	Comments
										decay (19.18 h), 1175.360 *10* from ^{194}Au ε decay (38.02 h), and 1175.4 *2* from (n,n′γ). I_γ: weighted average of 31.69 *28* from ^{194}Ir β^- decay (19.18 h), 31.52 *28* from ^{194}Au ε decay (38.02 h), and 25.9 *24* from (n,n′γ).
1797.390	1^-	1468.907 *10*	100.0 *7*	328.473	2^+	E1		1.23×10^{-3}		E_γ: weighted average of 1468.910 *10* from ^{194}Ir β^- decay (19.18 h) and 1468.904 *10* from ^{194}Au ε decay (38.02 h). Other: 1468.99 *12* from (n,n′γ). I_γ: from ^{194}Ir β^- decay (19.18 h). Others: 100.0 *10* from ^{194}Au ε decay (38.02 h) and 100 *11* from (n,n′γ).
		1797.406 *14*	8.93 *24*	0.0	0^+	E1		1.16×10^{-3}		E_γ: weighted average of 1797.408 *14* from ^{194}Ir β^- decay (19.18 h) and 1797.404 *14* from ^{194}Au ε decay (38.02 h). I_γ: unweighted average of 9.16 *7* from ^{194}Ir β^- decay (19.18 h) and 8.69 *8* from ^{194}Au ε decay (38.02 h).
1802.646?	$1^+,2^+$	1802.637[b] *14*	100[b]	0.0	0^+	M1,E2		0.0026 *7*		
1816.591	$(2)^+$	304.8[c] *3*	159 *15*	1512.004	2^+					E_γ,I_γ: reported in (n,n′γ) only.
		894.29 *22*	85 *17*	922.772	3^+	(M1+E2)	1.1 +*8*−*4*	0.0116 *25*		E_γ: unweighted average of 894.07 *18* from ^{194}Au ε decay (38.02 h) and 894.51 *13* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Other: 113 *11* from (n,n′γ).
		1005.292[c] *13*	46.1 *7*	811.288	4^+					
		1194.530 *19*	100 *15*	622.024	2^+	(E2)		0.00388		E_γ: weighted average of 1194.529 *14* from ^{194}Au ε decay (38.02 h) and 1194.8 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Other: 100 *11* from (n,n′γ).
		1488.94[#] *15*	31.9 *19*	328.473	2^+					E_γ: weighted average of 1489.01 *9* from ^{194}Au ε decay (38.02 h) and 1488.6 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Other: 217 *28* from (n,n′γ). Level-energy difference=1488.112.
		1816.33 *17*	<3.4	0.0	0^+					
1888.35	(2,3,4)	455.80 *9*	100	1432.551	3^-					E_γ: from (n,n′γ). Mult.: $\gamma(\theta)$ does not allow ΔJ=2.

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γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	$I_{(\gamma+ce)}$	Comments
1893.588	0^+	1565.118 *14*	100 *4*	328.473	2^+					E_γ: weighted average of 1565.116 *14* from ^{194}Ir β^- decay (19.18 h) and 1565.20 *8* from ^{194}Au ε decay (38.02 h).
		1893.1[c] *4*		0.0	0^+	(E0)			1.2 *3*	E_γ,Mult.: from ce data only in ^{194}Au ε decay.
1924.285	1^+	126.82[c] *4*	0.281 *25*	1797.390	1^-	[E1]		0.222		α(K)=0.181 *3*; α(L)=0.0322 *5*; α(M)=0.00747 *11* α(N)=0.00182 *3*; α(O)=0.000309 *5*; α(P)=1.478$\times10^{-5}$ *21*
		253.61 *7*	0.159 *18*	1670.667	2^+	M1(+E2)	<1.4	0.38 *11*		α(K)=0.30 *11*; α(L)=0.062 *4*; α(M)=0.0146 *6* α(N)=0.00360 *14*; α(O)=0.00063 *5*; α(P)=3.3$\times10^{-5}$ *12*
		412.288 *17*	0.893 *12*	1512.004	2^+	(M1+E2)	0.9 *+8−5*	0.09 *3*		α(K)=0.072 *25*; α(L)=0.014 *3*; α(M)=0.0032 *6* α(N)=0.00079 *14*; α(O)=0.00014 *3*; α(P)=8.E−6 *3*
		1001.481[c] *28*	0.590 *22*	922.772	3^+	[E2]		0.00546		
		1302.255 *14*	13.30 *12*	622.024	2^+	(M1+E2)	0.56 *+22−23*	0.0059 *5*		
		1595.806 *14*	90 *3*	328.473	2^+	M1+E2	−0.071 *21*	0.00420		E_γ: weighted average of 1595.802 *23* from ^{194}Ir β^- decay (19.18 h) and 1595.807 *14* from ^{194}Au ε decay (38.02 h). Other: 1595.6 *2* from (n,n′γ). I_γ: unweighted average of 84.5 *13* from ^{194}Ir β^- decay (19.18 h), 91.7 *9* from ^{194}Au ε decay (38.02 h), and 93 *10* from (n,n′γ).
		1924.289 *25*	100.0 *15*	0.0	0^+	M1		0.00290		E_γ: weighted average of 1924.327 *28* from ^{194}Ir β^- decay (19.18 h), 1924.273 *20* from ^{194}Au ε decay (38.02 h), and 1924.0 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Others: 100.0 *19* from ^{194}Ir β^- decay (19.18 h) and 100 *10* from (n,n′γ).
1925.85	(6^+)	514.0 *1*	6 *4*	1411.83	6^+					Branching ratio for 514γ, 696γ and 1114γ deduced from $T_{1/2}$(1926 level) and B(E2) values from 1996Wu07 in Coulomb excitation.
		696.4 *1*	100 *20*	1229.520	4^+					
		1114.5 *1*	12 *4*	811.288	4^+					
1930.368	2^+	308.17[c] *4*	1.59 *13*	1622.197	2^+					
		1007.582 *14*	25.9 *4*	922.772	3^+	(M1+E2)	1.1 *+5−3*	0.0088 *13*		E_γ: from ^{194}Au ε decay (38.02 h). Others: 1007.55 *7* from ^{194}Ir β^- decay (19.18 h) and 1007.57 *9* from (n,n′γ). I_γ: weighted average of 27.7 *32* from ^{194}Ir β^- decay (19.18 h) and 25.89 *34* from ^{194}Au ε decay (38.02 h). Other: 149 *15* from (n,n′γ).

Adopted Levels, Gammas (continued)

γ(^{194}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ[&]	α[a]	Comments
1930.368	2+	1119.117 *22*	27.7 *5*	811.288	4+	[E2]		0.00439	E_γ: weighted average of 1119.118 *16* from ^{194}Au ε decay (38.02 h) and 1118.7 *3* from (n,n′γ). I_γ: weighted average of 27.6 *5* from ^{194}Au ε decay (38.02 h) and 30.1 *32* from (n,n′γ). Mult.: D+Q suggested in ce data (^{194}Au ε decay) is inconsistent with ΔJ=2 from level scheme.
		1308.328 *14*	62.2 *5*	622.024	2+	(M1+E2)	1.7 *+11−5*	0.0042 *6*	E_γ: weighted average of 1308.304 *40* from ^{194}Ir β^- decay (19.18 h) and 1308.331 *14* from ^{194}Au ε decay (38.02 h). Other: 1308.3 *2* from (n,n′γ). I_γ: weighted average of 62.9 *19* from ^{194}Ir β^- decay (19.18 h), and 62.2 *5* from ^{194}Au ε decay (38.02 h). Other: 122 *14* in (n,n′γ).
		1601.913 *20*	100.0 *11*	328.473	2+	M1(+E2)	<−0.2	0.00414 *7*	E_γ: weighted average of 1601.947 *17* from ^{194}Ir β^- decay (19.18 h), 1601.891 *14* from ^{194}Au ε decay (38.02 h), and 1601.8 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Others: 100.0 *19* from ^{194}Ir β^- decay (19.18 h), 100 *11* from (n,n′γ).
		1930.35 *9*	0.70 *18*	0.0	0+	[E2]		0.00182	
1961.332	2−	144.742[c] *15*	0.60 *4*	1816.591	(2)+	[E1]		0.1589	α(K)=0.1295 *19*; α(L)=0.0226 *4*; α(M)=0.00524 *8* α(N)=0.001277 *18*; α(O)=0.000218 *3*; α(P)=1.079×10^{-5} *16*
		163.951 *24*	7.22 *18*	1797.390	1−	M1+E2	0.50 *+7−8*	1.45 *5*	α(K)=1.13 *6*; α(L)=0.244 *7*; α(M)=0.0582 *20* α(N)=0.0143 *5*; α(O)=0.00249 *7*; α(P)=0.000128 *7*
		223.911 *21*	1.92 *4*	1737.427	(3−)	(M1+E2)	1.7 *+14−5*	0.36 *8*	α(K)=0.24 *7*; α(L)=0.0901 *14*; α(M)=0.0223 *4* α(N)=0.00548 *9*; α(O)=0.000904 *17*; α(P)=2.6×10^{-5} *9*
		290.688 *14*	11.48 *18*	1670.667	2+	E1		0.0281	α(K)=0.0232 *4*; α(L)=0.00375 *6*; α(M)=0.000864 *12* α(N)=0.000212 *3*; α(O)=3.70×10^{-5} *6*; α(P)=2.12×10^{-6} *3*
		339.01 *13*	0.592 *21*	1622.197	2+	[E1]		0.0196	
		449.317 *12*	8.56 *7*	1512.004	2+	(E1)		0.01040	
		528.773 *9*	100.0 *11*	1432.551	3−	M1+E2	−1.68 *+8−7*	0.0336 *10*	α(K)=0.0265 *9*; α(L)=0.00542 *12*; α(M)=0.00128 *3* α(N)=0.000317 *7*; α(O)=5.51×10^{-5} *13*; α(P)=2.89×10^{-6} *10* E_γ: weighted average of 528.773 *8* from ^{194}Au ε decay (38.02 h) and 529.0 *2* from (n,n′γ).
		1038.567 *14*	17.57 *18*	922.772	3+	E1		0.00198	
		1339.251[@] *14*	12.68 *14*	622.024	2+	E1		1.34×10^{-3}	
		1632.847 *16*	15.07 *18*	328.473	2+	E1		1.17×10^{-3}	

Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ [†]	I_γ [†]	E_f	J^π_f	Mult. [&]	δ [&]	α [a]	Comments
1984.4	(6,7,8$^+$)	572.6 3	100	1411.83	6$^+$				E_γ: from (α,2nγ) only.
1991.69	(7$^-$)	506.7 2	100 14	1485.04	(7$^-$)	M1,E2		0.05 3	α(K)=0.040 23; α(L)=0.007 3; α(M)=0.0017 6 α(N)=0.00043 15; α(O)=8.E−5 3; α(P)=4.E−6 3 Mult.: from ce and $\gamma(\theta)$ in (α,2nγ).
		617.8 3	17 6	1373.772	(5$^-$)				
1999.8	(8$^-$)	514.8 2	100	1485.04	(7$^-$)	M1+E2	+0.5 1	0.062 4	α(K)=0.051 3; α(L)=0.0086 4; α(M)=0.00199 8 α(N)=0.000492 20; α(O)=8.8×10^{-5} 4; α(P)=5.7×10^{-6} 4 Mult.,δ: from ce and $\gamma(\theta)$ data in (α,2nγ).
2003.659	(2$^+$)	1080.90 11	16.5 14	922.772	3$^+$	(M1(+E2))	<0.4	0.0103 5	
		1675.174 18	100.0 7	328.473	2$^+$	(M1)		0.00379	E_γ: weighted average of 1675.147 24 from ^{194}Ir β^- decay (19.18 h), 1675.188 18 from ^{194}Au ε decay (38.02 h), and 1675.27 15 from (n,n′γ).
		2003.651 19	8.6 4	0.0	0$^+$	[E2]		1.75×10^{-3}	
2043.718	1$^+$	227.05 [c] 11	0.094 10	1816.591	(2)$^+$	[M1,E2]		0.45 21	α(K)=0.33 21; α(L)=0.087 3; α(M)=0.0210 6 α(N)=0.00516 11; α(O)=0.00088 4; α(P)=3.7×10^{-5} 25
		265.091 [c] 27	0.140 7	1778.578	2$^+$	[M1,E2]		0.29 15	α(K)=0.22 14; α(L)=0.052 7; α(M)=0.0124 10 α(N)=0.0031 3; α(O)=0.00052 7; α(P)=2.4×10^{-5} 16
		373.11 4	0.175 9	1670.667	2$^+$	[M1,E2]		0.11 6	α(K)=0.09 6; α(L)=0.018 5; α(M)=0.0042 11 α(N)=0.0010 3; α(O)=0.00018 6; α(P)=1.0×10^{-5} 6
		421.59 6	0.740 14	1622.197	2$^+$	[M1,E2]		0.08 5	α(K)=0.06 4; α(L)=0.012 4; α(M)=0.0029 9 α(N)=0.00072 21; α(O)=0.00013 5; α(P)=7.E−6 5
		531.702 [c] 15	0.645 14	1512.004	2$^+$	[M1,E2]		0.044 23	α(K)=0.035 20; α(L)=0.0065 24; α(M)=0.0015 6 α(N)=0.00037 13; α(O)=6.6×10^{-5} 25; α(P)=3.9×10^{-6} 23
		564.444 [c] 7	0.492 5	1479.272	0$^+$	[M1]		0.0568	α(K)=0.0470 7; α(L)=0.00753 11; α(M)=0.001734 25 α(N)=0.000429 6; α(O)=7.73×10^{-5} 11; α(P)=5.26×10^{-6} 8
		776.70 [@] 6	0.069 7	1267.200	0$^+$	[M1]		0.0249	α(K)=0.0206 3; α(L)=0.00327 5; α(M)=0.000753 11 α(N)=0.000186 3; α(O)=3.36×10^{-5} 5; α(P)=2.30×10^{-6} 4
		1120.961 17	0.950 17	922.772	3$^+$	[E2]		0.00438	
		1421.683 14	9.0 7	622.024	2$^+$	M1(+E2)	<0.2	0.00542 10	E_γ: weighted average of 1421.72 4 from ^{194}Ir β^- decay (19.18 h) and 1421.679 14 from

$^{194}_{78}Pt_{116}$-23

Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^{π}_i	E_{γ}†	I_{γ}†	E_f	J^{π}_f	Mult.&	δ&	α[a]	$I_{(\gamma+ce)}$	Comments
										^{194}Au ε decay (38.02 h). I_{γ}: unweighted average of 8.3 *4* from ^{194}Ir β^- decay (19.18 h) and 9.75 *9* from ^{194}Au ε decay (38.02 h).
2043.718	1^+	1715.237 *16*	19.82 *24*	328.473	2^+	E2+M1	−1.10 *12*	0.00279 *10*		E_{γ}: weighted average of 1715.243 *25* from ^{194}Ir β^- decay (19.18 h) and 1715.235 *16* from ^{194}Au ε decay (38.02 h). Other: 1715.2 *2* from (n,n′γ). I_{γ}: weighted average of 20.0 *4* from ^{194}Ir β^- decay (19.18 h) and 19.75 *24* from ^{194}Au ε decay (38.02 h). Other: 49 *5* from (n,n′γ) is discrepant.
		2043.723 *15*	100.0 *7*	0.0	0^+	M1		0.00263		E_{γ}: weighted average of 2043.727 *17* from ^{194}Ir β^- decay (19.18 h) and 2043.719 *15* from ^{194}Au ε decay (38.02 h). Other: 2043.5 *2* from (n,n′γ). I_{γ}: from ^{194}Au ε decay (38.02 h). Others: 100.0 *9* from ^{194}Ir β^- decay (19.18 h) and 100 *10* from (n,n′γ).
2047.52	(9^-)	562.5 *1*	100	1485.04	(7^-)	(E2)		0.0187		E_{γ}: from (α,2nγ). Other: 562.4 *5* from ^{194}Ir β^- decay (171 d). Mult.: from ce data in ^{194}Ir β^- decay (171 d).
2053.018	$(2)^+$	1241.93[c] *7*	10.8 *9*	811.288	4^+	[E2]		0.00361		
		1430.992 *22*	100.0 *9*	622.024	2^+	[M1,E2]		0.0041 *13*		E_{γ}: weighted average of 1430.95 *4* from ^{194}Ir β^- decay (19.18 h), 1430.996 *14* from ^{194}Au ε decay (38.02 h), and 1431.6 *3* from (n,n′γ). I_{γ}: from ^{194}Au ε decay (38.02 h). Other: 100 *11* from ^{194}Ir β^- decay (19.18 h).
		1724.53 *3*	77.7 *8*	328.473	2^+	[M1,E2]		0.0028 *8*		E_{γ}: weighted average of 1724.535 *27* from ^{194}Ir β^- decay (19.18 h) and 1724.40 *14* from ^{194}Au ε decay (38.02 h). I_{γ}: from ^{194}Au ε decay (38.02 h). Other: 79 *5* from ^{194}Ir β^- decay (19.18 h).
2063.746	2^+	1140.990 *20*	6.51 *11*	922.772	3^+	M1		0.00939		
		1441.714 *14*	54.0 *7*	622.024	2^+	M1(+E2)	<0.6	0.0050 *4*		E_{γ}: weighted average of 1441.733 *19* from ^{194}Ir β^- decay (19.18 h) and 1441.703 *14* from ^{194}Au ε decay (38.02 h). Other: 1441.6 *3* from (n,n′γ). I_{γ}: weighted average of 55.2 *14* from ^{194}Ir β^- decay (19.18 h), 53.7 *6* from ^{194}Au ε decay (38.02 h), and 62 *6* from (n,n′γ).
		1735.253 *14*	100.0 *11*	328.473	2^+	M1+E2	+0.12 *6*	0.00351 *6*		E_{γ}: weighted average of 1735.272 *21* from ^{194}Ir β^- decay (19.18 h) and 1735.245 *14* from ^{194}Au ε decay (38.02 h). Other: 1735.2 *2* from (n,n′γ). I_{γ}: from ^{194}Au ε decay (38.02 h). Others: 100.0 *18*

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Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	$I_{(\gamma+ce)}$	Comments
										from ^{194}Ir β^- decay (19.18 h) and 100 *11* from (n,n′γ).
2063.746	2^+	2063.764 *21*	1.92 *9*	0.0	0^+	[E2]		1.70×10^{-3}		
2085.475	0^+	288.13[c] *4*	2.31 *7*	1797.390	1^-	[E1]		0.0287		α(K)=0.0237 *4*; α(L)=0.00384 *6*; α(M)=0.000883 *13* α(N)=0.000217 *3*; α(O)=3.78×10^{-5} *6*; α(P)=2.16×10^{-6} *3*
		1463.439 *14*	100.0 *10*	622.024	2^+	(E2)		0.00270		E_γ: weighted average of 1463.445 *14* from ^{194}Ir β^- decay (19.18 h) and 1463.434 *14* from ^{194}Au ε decay (38.02 h). I_γ: from ^{194}Au ε decay (38.02 h). Other: 100.0 *11* from ^{194}Ir β^- decay (19.18 h).
		1756.995 *14*	8.65 *11*	328.473	2^+	(E2)		0.00204		E_γ: weighted average of 1756.93 *7* from ^{194}Ir β^- decay (19.18 h) and 1756.998 *14* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 8.1 *4* from ^{194}Ir β^- decay (19.18 h) and 8.67 *8* from ^{194}Au ε decay (38.02 h).
		2085.8 *4*		0.0	0^+	E0			0.57 *4*	E_γ,Mult.: seen only in ce data in ^{194}Au ε decay (38.02 h). q^2_K(E0/E2)=61 *21*, X(E0/E2)=6.1 *21* (2005Ki02,evaluation).
2099.55	$(8)^+$	687.7 *1*	100	1411.83	6^+	(E2)		0.01188		B(E2)(W.u.)=50 *+18−11* E_γ: from (α,2nγ) and Coulomb excitation. Others: 687.8 *5* from ^{194}Ir β^- decay (171 d). Mult.: from ce data in ^{194}Ir β^- decay (171 d) and γ(θ) in (α,2nγ) with ΔJ=(2).
2109.068	$(2)^+$	1186.37 *4*	55.7 *9*	922.772	3^+	(E2+M1)	1.1 *+6−4*	0.0060 *10*		E_γ: unweighted average of 1186.408 *26* from ^{194}Ir β^- decay (19.18 h) and 1186.325 *19* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 56.4 *9* from ^{194}Ir β^- decay (19.18 h) and 54.8 *10* from ^{194}Au ε decay (38.02 h).
		1487.080 *22*	100.0 *8*	622.024	2^+	(M1(+E2))	<0.3	0.00483 *12*		E_γ: unweighted average of 1487.058 *14* from ^{194}Ir β^- decay (19.18 h) and 1487.102 *16* from ^{194}Au ε decay (38.02 h). I_γ: from ^{194}Ir β^- decay (19.18 h). Other: 100.0 *10* from ^{194}Au ε decay (38.02 h).
		1780.560 *18*	25.1 *10*	328.473	2^+					E_γ: weighted average of 1780.571 *18* from ^{194}Ir β^- decay (19.18 h) and 1780.543

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Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f	Mult.[&]	δ[&]	α[a]	$I_{(\gamma+ce)}$	Comments
										22 from ^{194}Au ε decay (38.02 h).

$^{194}_{78}Pt_{116}$-26

Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	Comments
									I_γ: unweighted average of 26.1 *4* from ^{194}Ir β^- decay (19.18 h) and 24.1 *4* from ^{194}Au ε decay (38.02 h).
2114.106	1^+	190.05[c] *8*	0.82 *15*	1924.285	1^+	M1		1.077	α(K)=0.887 *13*; α(L)=0.1461 *21*; α(M)=0.0338 *5* α(N)=0.00835 *12*; α(O)=0.001503 *22*; α(P)=0.0001014 *15*
		491.967[c] *25*	1.25 *6*	1622.197	2^+				
		566.91[c] *4*	0.82 *5*	1547.281	0^+	[M1]		0.0561	α(K)=0.0465 *7*; α(L)=0.00744 *11*; α(M)=0.001715 *24* α(N)=0.000424 *6*; α(O)=7.64×10^{-5} *11*; α(P)=5.20×10^{-6} *8*
		602.053 *18*	2.10 *9*	1512.004	2^+				
		846.96 *12*	9.78 *9*	1267.200	0^+	M1		0.0200	Mult.: ce data give δ(E2/M1)<0.4, ΔJ^π requires M1.
		1492.055 *18*	42.1 *6*	622.024	2^+	M1(+E2)	<0.5	0.00466 *24*	E_γ: weighted average of 1492.020 *27* from ^{194}Ir β^- decay (19.18 h) and 1492.065 *14* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 41.1 *9* from ^{194}Ir β^- decay (19.18 h) and 42.4 *5* from ^{194}Au ε decay (38.02 h).
		1785.634 *17*	100.0 *9*	328.473	2^+	M1(+E2)	−0.04 *3*	0.00333	E_γ: weighted average of 1785.631 *21* from ^{194}Ir β^- decay (19.18 h) and 1785.636 *17* from ^{194}Au ε decay (38.02 h). I_γ: from ^{194}Ir β^- decay (19.18 h).
		2114.100 *14*	60.9 *17*	0.0	0^+	M1		0.00250	E_γ: from ^{194}Au ε decay (38.02 h). Other: 2114.099 *26* from ^{194}Ir β^- decay (19.18 h). I_γ: unweighted average of 59.2 *6* from ^{194}Ir β^- decay (19.18 h) and 62.6 *6* from ^{194}Au ε decay (38.02 h). Mult.: ce data gives δ(E2/M1)<0.5, ΔJ^π requires M1.
2131.126	(2^+)	1208.372 *18*	100.0 *29*	922.772	3^+				
		1319.70[c] *4*	39.4 *25*	811.288	4^+	[E2]		0.00322	
		1509.08[c] *3*	49 *4*	622.024	2^+				
		1802.637[b] *14*	<817[b]	328.473	2^+	M1,E2		0.0026 *7*	
		2131.08[c] *7*	6.5 *8*	0.0	0^+	[E2]		1.65×10^{-3}	
2134.123	$1^+,2^+$	1512.073 *14*	37 *4*	622.024	2^+	M1,E2		0.0037 *11*	E_γ: from ^{194}Au ε decay (38.02 h). Others: 1512.15 *21* from ^{194}Ir β^- decay (19.18 h) and 1511.6 *4* from (n,n′γ).

$\gamma(^{194}$Pt) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.&	δ&	α[a]	$I_{(\gamma+ce)}$	Comments
										I_γ: weighted average of 41 *6* from ^{194}Ir β^- decay (19.18 h), 43 *4* from ^{194}Au ε decay (38.02 h), and 32.2 *34* from (n,n′γ).
2134.123	$1^+,2^+$	1805.727@ *14*	100.0 *8*	328.473	2^+	M1(+E2)	<0.5	0.00313 *14*		E_γ: from ^{194}Ir β^- decay (19.18 h). Others: 1805.729 *14* from ^{194}Au ε decay (38.02 h) and 1805.7 *2* from (n,n′γ). I_γ: from ^{194}Ir β^- decay (19.18 h). Others: 100.0 *14* from ^{194}Au ε decay (38.02 h) and 100 *10* from (n,n′γ).
2140.696	$(1^+,2^+)$	1518.657 *14*	100.0 *9*	622.024	2^+	(M1(+E2))	<0.7	0.0043 *4*		E_γ: weighted average of 1518.652 *22* from ^{194}Ir β^- decay (19.18 h) and 1518.659 *14* from ^{194}Au ε decay (38.02 h). Other: 1518.7 *2* from (n,n′γ). I_γ: from ^{194}Au ε decay (38.02 h). Other: 100.0 *22* from ^{194}Ir β^- decay (19.18 h).
		1812.225 *17*	44.8 *9*	328.473	2^+	(M1)		0.00324		E_γ: weighted average of 1812.18 *7* from ^{194}Ir β^- decay (19.18 h) and 1812.228 *17* from ^{194}Au ε decay (38.02 h). I_γ: weighted average of 33 *9* from ^{194}Ir β^- decay (19.18 h) and 44.9 *7* from ^{194}Au ε decay (38.02 h).
		2140.71 *8*	0.45 *18*	0.0	0^+					
2157.995	$(2)^+$	1346.68 *4*	6.40 *10*	811.288	4^+					
		1535.781# *21*	6.1 *23*	622.024	2^+					E_γ: level-energy difference=1535.965.
		1829.519 *14*	100.0 *10*	328.473	2^+	M1(+E2)	<0.3	0.00313 *7*		E_γ: from ^{194}Au ε decay (38.02 h). Others: 1829.524 *33* from ^{194}Ir β^- decay (19.18 h) and 1829.4 *2* from (n,n′γ).
2163.747	0^+	49.7 *3*	6.2 *17*	2114.106	1^+	M1		9.12 *21*		α(L)=7.02 *16*; α(M)=1.62 *4* α(N)=0.402 *10*; α(O)=0.0722 *17*; α(P)=0.00486 *11*
		239.443 *17*	12.5 *5*	1924.285	1^+	M1		0.567		α(K)=0.467 *7*; α(L)=0.0766 *11*; α(M)=0.01769 *25* α(N)=0.00438 *7*; α(O)=0.000788 *11*; α(P)=5.32×10^{-5} *8*
		366.365 *22*	7.43 *23*	1797.390	1^-	[E1]		0.01639		
		1541.715 *18*	6.14 *9*	622.024	2^+	[E2]		0.00248		
		1835.274 *14*	100.0 *9*	328.473	2^+	E2		0.00193		
		2164.1 *4*		0.0	0^+	E0			3.1 *2*	E_γ,Mult.: seen in ce data only. q^2_K(E0/E2)=15.8 *10*, X(E0/E2)=1.73 *11* (2005Ki02,evaluation).
2184.910	$1^+,2^+$	752.47[c] *7*	1.00 *11*	1432.551	3^-					
		1262.27 *15*	8.78 *15*	922.772	3^+					
		1562.891 *14*	100.0 *11*	622.024	2^+	M1(+E2)	<0.3	0.00432 *11*		
		1856.403 *17*	13.19 *18*	328.473	2^+					

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Adopted Levels, Gammas (continued)

γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	Comments
2214.525	(2$^+$)	397.84[c] *5*	0.208 *19*	1816.591	(2)$^+$				
		702.54 *4*	1.47 *4*	1512.004	2$^+$	(M1)		0.0322	α(K)=0.0267 *4*; α(L)=0.00425 *6*; α(M)=0.000977 *14* α(N)=0.000242 *4*; α(O)=4.36×10^{-5} *7*; α(P)=2.98×10^{-6} *5*
		781.974 *17*	2.140 *27*	1432.551	3$^-$	[E1]		0.00335	
		1291.765 *14*	4.81 *8*	922.772	3$^+$	(M1(+E2))	<0.3	0.00675 *18*	
		1592.489 *14*	64.0 *11*	622.024	2$^+$	M1(+E2)	<0.3	0.00415 *10*	
		1885.95 *7*	100.0 *23*	328.473	2$^+$	M1(+E2)	<0.3	0.00296 *7*	
		2214.47 *5*	0.57 *15*	0.0	0$^+$	[E2]		1.60×10^{-3}	
2215.534	1$^+$	101.46 *4*	0.269 *17*	2114.106	1$^+$	M1		6.39	α(K)=5.26 *8*; α(L)=0.875 *13*; α(M)=0.202 *3* α(N)=0.0501 *7*; α(O)=0.00901 *13*; α(P)=0.000606 *9*
		106.51 *4*	0.400 *17*	2109.068	(2)$^+$	M1		5.56	α(K)=4.58 *7*; α(L)=0.761 *11*; α(M)=0.1759 *25* α(N)=0.0435 *7*; α(O)=0.00783 *11*; α(P)=0.000527 *8*
		151.83 *3*	3.18 *8*	2063.746	2$^+$	M1		2.03	α(K)=1.667 *24*; α(L)=0.276 *4*; α(M)=0.0637 *9* α(N)=0.01577 *22*; α(O)=0.00284 *4*; α(P)=0.000191 *3*
		162.58 *4*	1.12 *4*	2053.018	(2)$^+$	M1(+E2)	<0.7	1.52 *16*	α(K)=1.20 *18*; α(L)=0.247 *20*; α(M)=0.058 *6* α(N)=0.0144 *15*; α(O)=0.00252 *19*; α(P)=0.000136 *22*
		171.837 *23*	3.07 *6*	2043.718	1$^+$	M1		1.428	α(K)=1.176 *17*; α(L)=0.194 *3*; α(M)=0.0448 *7* α(N)=0.01110 *16*; α(O)=0.00200 *3*; α(P)=0.0001346 *19*
		211.87 *3*	0.225 *17*	2003.659	(2$^+$)				
		285.315[#] *14*	2.197 *25*	1930.368	2$^+$	(M1+E2)	1.5 *+3−2*	0.187 *18*	α(K)=0.137 *16*; α(L)=0.0382 *11*; α(M)=0.00930 *21* α(N)=0.00229 *6*; α(O)=0.000386 *12*; α(P)=1.49×10^{-5} *19* E_γ: level-energy difference=285.166.
		291.52[@] *7*	1.04 *14*	1924.285	1$^+$	E2(+M1)	>2.0	0.130 *23*	α(K)=0.086 *21*; α(L)=0.0328 *14*; α(M)=0.0081 *3* α(N)=0.00200 *7*; α(O)=0.000329 *15*; α(P)=9.0×10^{-6} *25*
		321.960[c] *18*	0.381 *14*	1893.588	0$^+$				
		398.937 *8*	0.526 *19*	1816.591	(2)$^+$				
		418.200 *25*	2.14 *17*	1797.390	1$^-$	[E1]		0.01218	
		436.90 *9*	0.537 *17*	1778.578	2$^+$				
		544.826 *17*	1.096 *25*	1670.667	2$^+$	(M1(+E2))	<0.7	0.055 *7*	α(K)=0.046 *6*; α(L)=0.0075 *8*; α(M)=0.00174 *17* α(N)=0.00043 *4*; α(O)=7.7×10^{-5} *8*; α(P)=5.1×10^{-6} *7*
		593.37 *3*	12.74 *11*	1622.197	2$^+$	M1+E2	−0.25 *18*	0.048 *4*	α(K)=0.040 *3*; α(L)=0.0064 *4*; α(M)=0.00147 *8*

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Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[†]	E_f	J^{π}_f	Mult.[&]	δ[&]	α[a]	Comments
									α(N)=0.000364 *20*; α(O)=6.6×10^{-5} *4*; α(P)=4.4×10^{-6} *4*
2215.534	1$^+$	668.247 *17*	4.79 *6*	1547.281	0$^+$	M1		0.0366	α(K)=0.0304 *5*; α(L)=0.00484 *7*; α(M)=0.001114 *16* α(N)=0.000276 *4*; α(O)=4.96×10^{-5} *7*; α(P)=3.39×10^{-6} *5*
		703.525 *14*	17.92 *17*	1512.004	2$^+$	M1+E2	+0.24 *6*	0.0310 *8*	α(K)=0.0256 *7*; α(L)=0.00410 *9*; α(M)=0.000945 *20* α(N)=0.000234 *5*; α(O)=4.21×10^{-5} *9*; α(P)=2.86×10^{-6} *7*
		736.249 *14*	5.51 *33*	1479.272	0$^+$	M1		0.0285	α(K)=0.0237 *4*; α(L)=0.00376 *6*; α(M)=0.000865 *13* α(N)=0.000214 *3*; α(O)=3.86×10^{-5} *6*; α(P)=2.64×10^{-6} *4*
		948.323 *9*	100.0 *8*	1267.200	0$^+$	M1		0.01497	E_{γ}: from ^{194}Au ε decay (38.02 h). Other: 948.3 *2* from (n,n′γ). I_{γ}: from ^{194}Au ε decay (38.02 h). Other: 100 *10* from (n,n′γ).
		1593.530 *20*	33.4 *6*	622.024	2$^+$	(M1+E2)	0.74 *8*	0.00356 *11*	
		1887.030 *23*	90 *11*	328.473	2$^+$	(M1+E2)	+0.75 *24*	0.00260 *18*	E_{γ}: other: 1886.6 *2* from (n,n′γ). I_{γ}: other: 141 *14* from (n,n′γ).
		2215.509 *16*	7.32 *14*	0.0	0$^+$	M1		0.00235	
2239.636	(2)$^-$	442.225[c] *19*	3.42 *11*	1797.390	1$^-$				
		807.119 *21*	6.9 *22*	1432.551	3$^-$				
		1316.857 *14*	32.05 *28*	922.772	3$^+$				
		1617.604 *14*	100.0 *11*	622.024	2$^+$	E1		1.18×10^{-3}	
		1911.154 *14*	55.1 *6*	328.473	2$^+$	E1		1.17×10^{-3}	
2250.665?	(1,2$^+$)	1922.171[c] *22*	100.0 *19*	328.473	2$^+$				
		2250.73[c] *6*	0.77 *7*	0.0	0$^+$				
2287.376	(1$^+$,2$^+$)	173.3 *3*	2.9 *11*	2114.106	1$^+$				
		243.65 *3*	4.52 *26*	2043.718	1$^+$				
		490.030[c] *22*	4.15 *15*	1797.390	1$^-$				
		1665.321 *18*	17.06 *22*	622.024	2$^+$				
		1958.898 *14*	100.0 *11*	328.473	2$^+$	(M1(+E2))	<0.6	0.00268 *14*	
		2287.28 *5*	0.37 *7*	0.0	0$^+$				
2298.157	1$^+$	189.17 *6*	0.88 *13*	2109.068	(2)$^+$	M1		1.091	α(K)=0.899 *13*; α(L)=0.1480 *21*; α(M)=0.0342 *5* α(N)=0.00846 *12*; α(O)=0.001523 *22*; α(P)=0.0001027 *15*
		500.737 *24*	1.37 *7*	1797.390	1$^-$	[E1]		0.00824	
		627.59[@] *3*	1.00 *7*	1670.667	2$^+$	[M1,E2]		0.029 *15*	α(K)=0.023 *13*; α(L)=0.0041 *16*; α(M)=0.0010

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Adopted Levels, Gammas (continued)

γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	δ[&]	α[a]	Comments
									4 α(N)=0.00024 *9*; α(O)=4.2×10^{-5} *17*; α(P)=2.6×10^{-6} *14*
2298.157	1$^+$	675.943 *16*	9.43 *9*	1622.197	2$^+$	M1(+E2)	<0.4	0.0340 *17*	α(K)=0.0281 *15*; α(L)=0.00452 *19*; α(M)=0.00104 *5* α(N)=0.000257 *11*; α(O)=4.63×10^{-5} *20*; α(P)=3.13×10^{-6} *17*
		786.07[c] *5*	0.83 *5*	1512.004	2$^+$	[M1,E2]		0.017 *8*	
		818.856 *18*	7.24 *9*	1479.272	0$^+$	M1		0.0217	
		1030.997 *23*	2.31 *7*	1267.200	0$^+$	M1		0.01212	
		1676.111 *21*	16.13 *13*	622.024	2$^+$	(M1)		0.00379	
		1969.680 *14*	100.0 *9*	328.473	2$^+$	M1+E2	−0.35 *4*	0.00268 *5*	E_γ: from ^{194}Au ε decay (38.02 h). Other: 1969.6 *3* from (n,n′γ).
		2298.171 *17*	5.68 *8*	0.0	0$^+$	M1		0.00224	
2309.6	(11$^-$)	262.1 *2*	100	2047.52	(9$^-$)				
2311.875	2$^+$	197.82 *7*	2.5 *6*	2114.106	1$^+$	M1		0.963	α(K)=0.793 *12*; α(L)=0.1305 *19*; α(M)=0.0302 *5* α(N)=0.00746 *11*; α(O)=0.001343 *19*; α(P)=9.06×10^{-5} *13*
		387.65[c] *5*	1.78 *18*	1924.285	1$^+$	[M1,E2]		0.10 *6*	α(K)=0.08 *5*; α(L)=0.016 *5*; α(M)=0.0038 *10* α(N)=0.00093 *25*; α(O)=0.00016 *5*; α(P)=9.E−6 *6*
		689.61[c] *3*	2.86 *11*	1622.197	2$^+$	[M1,E2]		0.023 *11*	
		799.857[c] *26*	3.14 *14*	1512.004	2$^+$	[M1,E2]		0.016 *8*	
		1081.8 *19*	<5.2	1229.520	4$^+$	[E2]		0.00469	
		1388.93 *19*	9.30 *21*	922.772	3$^+$	[M1,E2]		0.0044 *15*	
		1500.66[c] *13*	16.7 *21*	811.288	4$^+$	(E2)		0.00259	
		1689.845 *14*	73.9 *11*	622.024	2$^+$	(M1(+E2))	<0.4	0.00362 *12*	
		1983.411 *17*	20.66 *21*	328.473	2$^+$	M1+E2+E0		0.026 *4*	α: from α(K)exp in ^{194}Au ε decay.
		2311.856 *14*	100.0 *14*	0.0	0$^+$	(E2)		1.56×10^{-3}	
2356.059	0$^+$	69.6[@] *3*	4.5 *15*	2287.376	(1$^+$,2$^+$)	[M1]		3.40 *7*	α(L)=2.61 *5*; α(M)=0.605 *12* α(N)=0.150 *3*; α(O)=0.0269 *5*; α(P)=0.00181 *4* E_γ,I_γ: seen in ce data, with intensity deduced from measured I(ceL) and theoretical α(L1)=2.35 assuming Mult=M1.
		140.514 *18*	100.0 *22*	2215.534	1$^+$	M1		2.52	α(K)=2.08 *3*; α(L)=0.344 *5*; α(M)=0.0794 *12* α(N)=0.0197 *3*; α(O)=0.00354 *5*; α(P)=0.000238 *4*
		431.61[c] *6*	4.7 *5*	1924.285	1$^+$	[M1]		0.1149	α(K)=0.0950 *14*; α(L)=0.01535 *22*; α(M)=0.00354 *5* α(N)=0.000876 *13*; α(O)=0.0001577 *22*; α(P)=1.070×10^{-5} *15*
		843.89[c] *20*	<2.33	1512.004	2$^+$	[E2]		0.00770	

Adopted Levels, Gammas (continued)

$\gamma(^{194}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	α[a]	$I_{(\gamma+ce)}$	Comments
2356.059	0^+	2027.608[c] *20*	8.95 *23*	328.473	2^+	[E2]	1.73×10^{-3}		
		2357.0 *8*		0.0	0^+	E0		0.20 *2*	E_γ,Mult.: seen in ce data only.
2365.932	1^+	1743.77 *15*	47.5 *6*	622.024	2^+				
		2365.919 *21*	100.0 *14*	0.0	0^+	M1	0.00218		
2397.321	2^+	435.935[c] *28*	35.1 *18*	1961.332	2^-	[E1]	0.01111		
		1474.37 *7*	81 *4*	922.772	3^+	[M1,E2]	0.0038 *12*		
		1775.795[#] *27*	100.0 *18*	622.024	2^+	[M1,E2]	0.0027 *7*		E_γ: level-energy difference=1775.289.
		2068.869 *17*	88 *6*	328.473	2^+	[M1,E2]	0.0021 *5*		E_γ: other: 2068.8 *5* from (n,n′γ).
		2397.25 *4*	15.9 *9*	0.0	0^+	[E2]	1.52×10^{-3}		Mult.: ce data in ^{194}Au ε decay (30.02 h) suggests M3, which disagrees with E2 expected from $J^\pi=2^+$ for 2397 level.
2412.744	1^+	1790.6 *1*	10.2 *17*	622.024	2^+				
		2084.290 *17*	100 *7*	328.473	2^+				
		2412.693 *19*	40.0 *7*	0.0	0^+	M1	0.00213		
2423.6	$(6^+,7,8^+)$	324.0[c] *5*	≈56	2099.55	$(8)^+$				
		1011.8 *5*	100 *6*	1411.83	6^+				
2438.44	(10^+)	338.8 *2*	100 *6*	2099.55	$(8)^+$	(E2)	0.0691		α(K)=0.0453 *7*; α(L)=0.0181 *3*; α(M)=0.00450 *7* α(N)=0.001103 *16*; α(O)=0.000181 *3*; α(P)=4.63×10^{-6} *7* E_γ: from (α,2nγ). Other: 338.8 *5* from ^{194}Ir β^- decay (171 d). I_γ: from ^{194}Ir β^- decay (171 d). Others: 100 *16* from (α,2nγ) and 100 *11* from (^{82}Se,Xγ). Mult.: from ce data in ^{194}Ir β^- decay (171 d); $\gamma(\theta)$ in (α,2nγ) consistent with ΔJ=2.
		391.0 *2*	64 *4*	2047.52	(9^-)	(E1)	0.01415		E_γ: from (α,2nγ). Other: 390.8 *5* from ^{194}Ir β^- decay (171 d). I_γ: from ^{194}Ir β^- decay (171 d). Other: 63 *19* from (α,2nγ). Mult.: from ce data in ^{194}Ir β^- decay (171 d).
2451.1	(12^+)	(12.7 *12*)		2438.44	(10^+)				E_γ: from ^{194}Ir β^- decay (171 d).
2517.20	1	2188.7[‡c]	<35[‡]	328.473	2^+				
		2517.2[‡] *4*	100[‡]	0.0	0^+				
2577.30	1	2248.8[‡c]	<28[‡]	328.473	2^+				
		2577.3[‡] *4*	100[‡]	0.0	0^+				
2663.4	$(10,11,12^+)$	225.0	100	2438.44	(10^+)				E_γ: from (^{82}Se,Xγ) only.
2689.25	(8^+)	763.4 *1*	100	1925.85	(6^+)	[E2]	0.00949		B(E2)(W.u.)=53 +*12*−*7* E_γ: from Coulomb excitation only.
2700.1	(11^-)	652.6 *2*	100	2047.52	(9^-)				E_γ: from (α,2nγ). γ also reported in (^{82}Se,Xγ) and (^{209}Bi,Xγ). Mult.: $\gamma(\theta)$ in (α,2nγ) consistent with ΔJ=2.

Adopted Levels, Gammas (continued)

γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[&]	α[a]	Comments
2720.2	1	2391.7[‡c]	<52[‡]	328.473	2^+			
		2720.2[‡] *5*	100[‡]	0.0	0^+			
2842.1	(14^+)	391.0 *2*	100	2451.1	(12^+)			E_γ: from (α,2nγ).
2848.6	(10^+)	749 *1*	100	2099.55	$(8)^+$	[E2]	0.00988	B(E2)(W.u.)=34 *+9−8* E_γ: from Coulomb excitation.
2916.6	(10^+)	817 *1*	100	2099.55	$(8)^+$	[E2]	0.00824	B(E2)(W.u.)=43 *+12−14* E_γ: from Coulomb excitation.
2990.1?	(13^-)	290	100	2700.1	(11^-)			
3000.11	1	2671.6[‡c]	<10.0[‡]	328.473	2^+			
		3000.1[‡] *3*	100[‡]	0.0	0^+			
3014.81	1	2686.3[‡]	55[‡] *8*	328.473	2^+			
		3014.8[‡] *3*	100[‡]	0.0	0^+			
3057.8?	($10,11,12^+$)	619.4[c]	100	2438.44	(10^+)			
3078.81	1	2750.3[‡c]	<15.0[‡]	328.473	2^+			
		3078.8[‡] *3*	100[‡]	0.0	0^+			
3141.11	1	2812.6[‡c]	<26[‡]	328.473	2^+			
		3141.1[‡] *4*	100[‡]	0.0	0^+			
3351.31	1	3022.8[‡]	27[‡] *17*	328.473	2^+			
		3351.3[‡] *3*	100[‡]	0.0	0^+			
3375.24	1	2753.2[‡]	100[‡] *13*	622.024	2^+			
		3375.2[‡] *3*	78[‡]	0.0	0^+			
3383.01	1	3054.5[‡c]	<23.0[‡]	328.473	2^+			
		3383.0[‡] *4*	100[‡]	0.0	0^+			
3417.12	1	3088.6[‡c]	<6.0[‡]	328.473	2^+			
		3417.1[‡] *3*	100[‡]	0.0	0^+			
3421.4	1	3092.9[‡c]	<18.0[‡]	328.473	2^+			
		3421.4[‡] *5*	100[‡]	0.0	0^+			
3427.71	1	3099.2[‡c]	<25.0[‡]	328.473	2^+			
		3427.7[‡] *4*	100[‡]	0.0	0^+			
3459.31	1	3130.8[‡c]	<16.0[‡]	328.473	2^+			
		3459.3[‡] *4*	100[‡]	0.0	0^+			
3465.2	1	3136.7[‡c]	<72[‡]	328.473	2^+			
		3465.2[‡] *7*	100[‡]	0.0	0^+			
3477.01	1	3148.5[‡c]	<36[‡]	328.473	2^+			
		3477.0[‡] *4*	100[‡]	0.0	0^+			
3497.9	1	3169.4[‡c]	<64[‡]	328.473	2^+			

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γ(^{194}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Comments
3497.9	1	3497.9[‡] *6*	100[‡]	0.0	0^+	
3499.7	(16^+)	657.6		2842.1	(14^+)	E_γ: from (^{82}Se,Xγ). γ also reported in (^{209}Bi,Xγ).
3545.3	1	3216.8[‡c]	<33[‡]	328.473	2^+	
		3545.3[‡] *5*	100[‡]	0.0	0^+	
3697.5	1	3369.0[‡c]	<52[‡]	328.473	2^+	
		3697.4[‡] *5*	100[‡]	0.0	0^+	
3703.3	1	3703.3[‡] *4*		0.0	0^+	
3717.02	1	3388.5[‡c]	<36[‡]	328.473	2^+	
		3717.0[‡] *4*	100[‡]	0.0	0^+	
3726.8	1	3726.8[‡] *4*		0.0	0^+	
3747.1	1	3418.6[‡c]	<26[‡]	328.473	2^+	
		3747.1[‡] *6*	100[‡]	0.0	0^+	
3754.7	(18^+)	255.0		3499.7	(16^+)	E_γ: from (^{82}Se,Xγ) and (^{209}Bi,Xγ).
3813.62	1	3485.1[‡c]	<16.0[‡]	328.473	2^+	
		3813.6[‡] *4*	100[‡]	0.0	0^+	
3890.22	1	3561.7[‡c]	<30[‡]	328.473	2^+	
		3890.2[‡] *4*	100[‡]	0.0	0^+	
3937.7	(20^+)	183.0		3754.7	(18^+)	E_γ: from (^{82}Se,Xγ) and (^{209}Bi,Xγ).
4529.8	(22^+)	592.1		3937.7	(20^+)	E_γ: from (^{82}Se,Xγ). Other: 529 from (^{209}Bi,Xγ).
4541.7	(22^+)	604		3937.7	(20^+)	E_γ: from (^{209}Bi,Xγ) only.
4896.7	(24^+)	355		4541.7	(22^+)	E_γ: from (^{209}Bi,Xγ) only.
5336.7	(26^+)	440		4896.7	(24^+)	E_γ: from (^{209}Bi,Xγ) only.

[†] Unless otherwise noted, values are from ^{194}Au ε decay (38.02 h) for transitions from levels up to 2413. Above 2413 level, values are from various reactions, as specifically noted. All E0 transitions are from ^{194}Au ε decay.

[‡] From (γ,γ') only.

[#] Very poor fit; uncertainty has been increased by a factor of 5 in the fitting procedure by evaluators.

[@] Poor fit; uncertainty has been increase by a factor of 2 in the fitting procedure by evaluators.

[&] From ce and $\gamma\gamma(\theta)$ data in ^{194}Au ε decay, unless otherwise noted.

[a] 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.

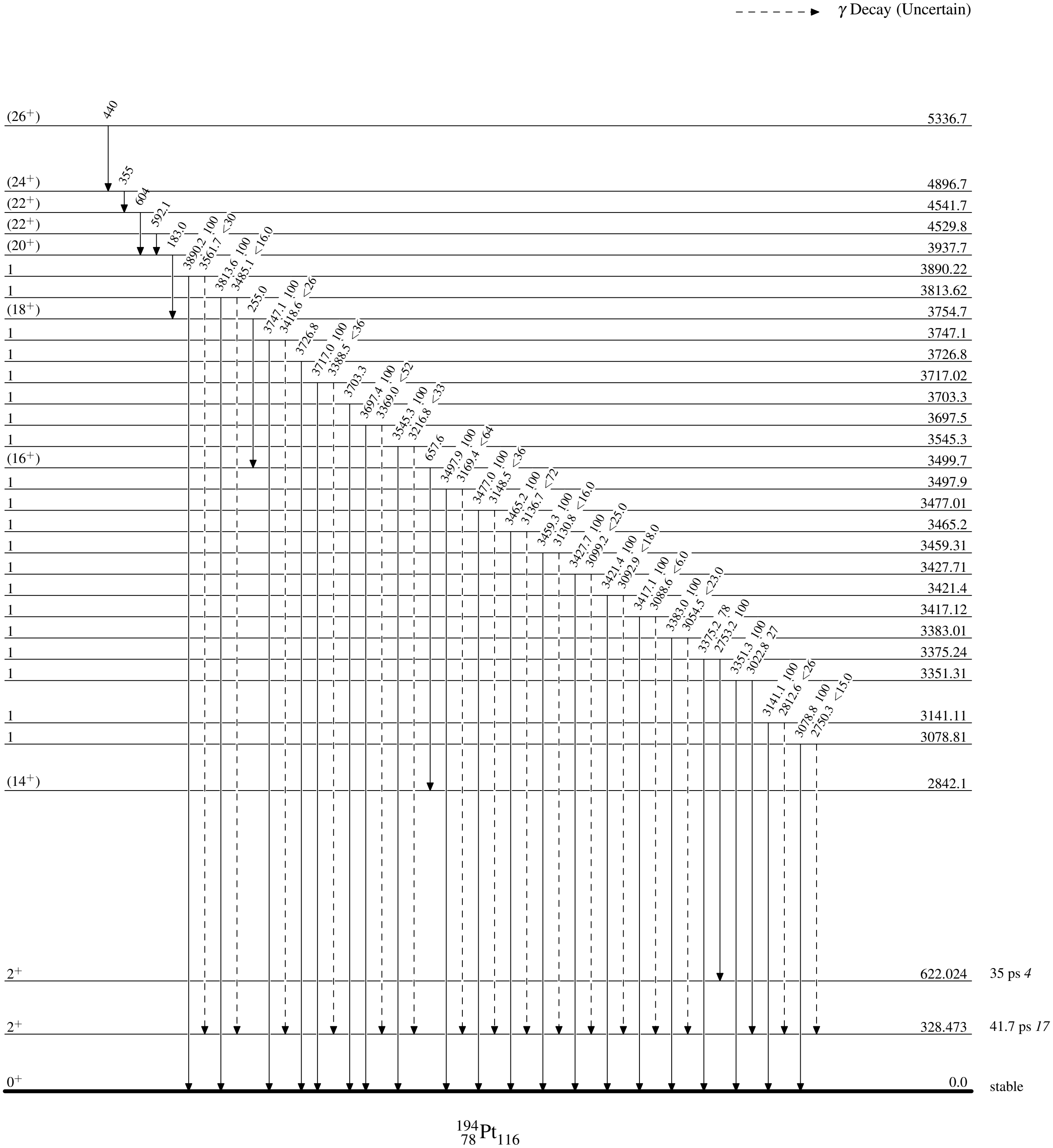
[b] Multiply placed with undivided intensity.

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

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



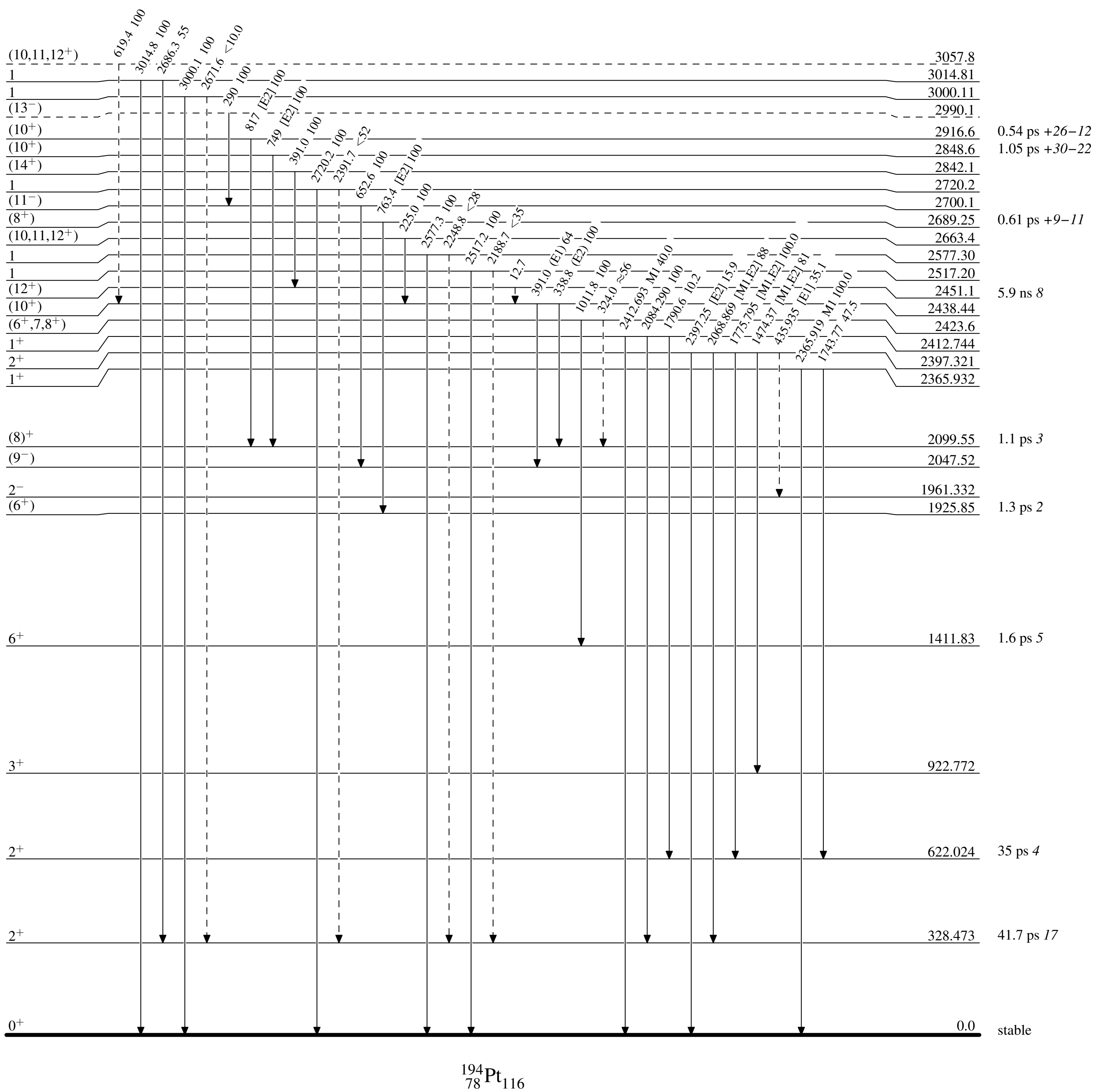
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

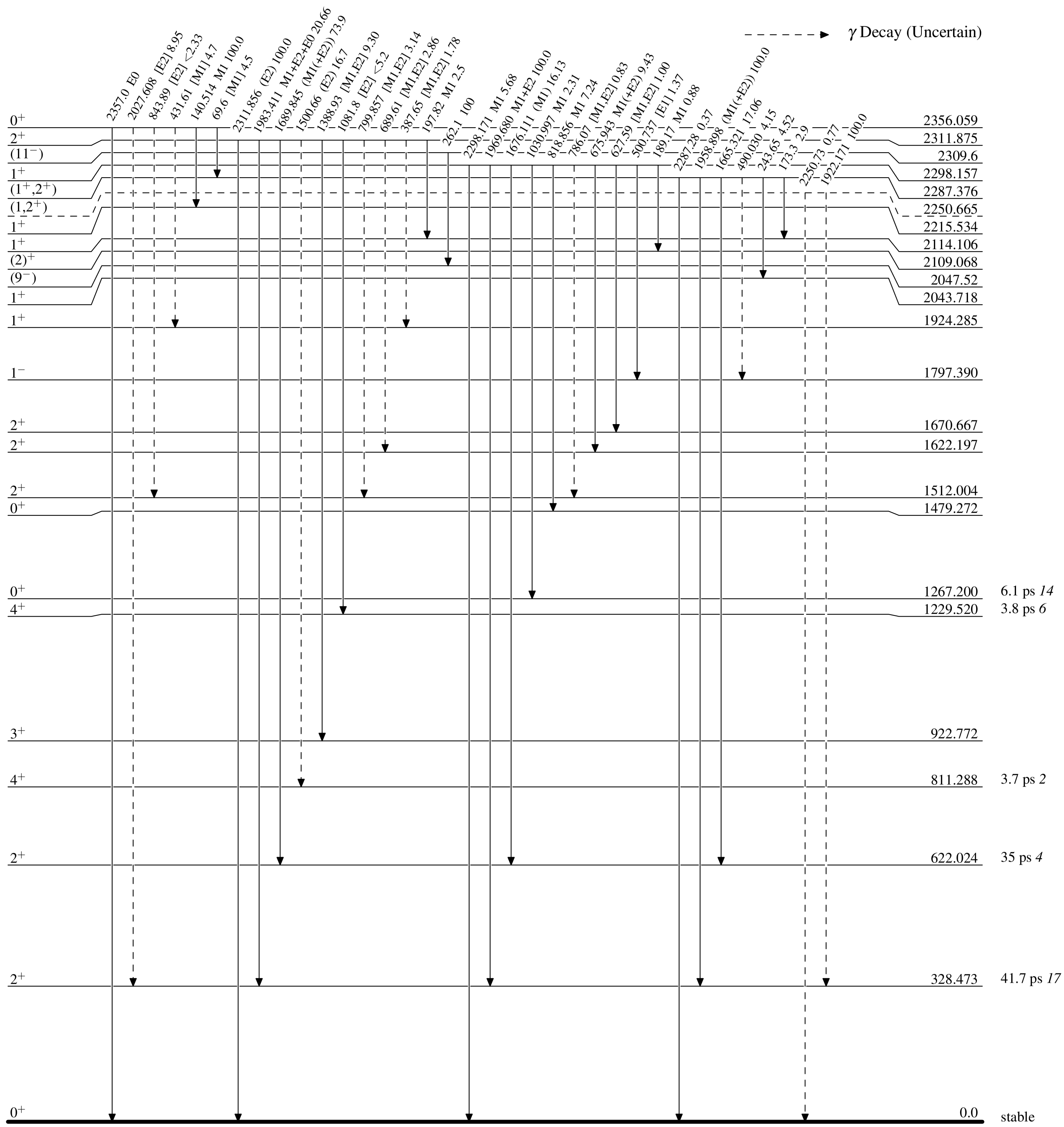


Adopted Levels, Gammas

Level Scheme (continued)

Legend

Intensities: Relative photon branching from each level



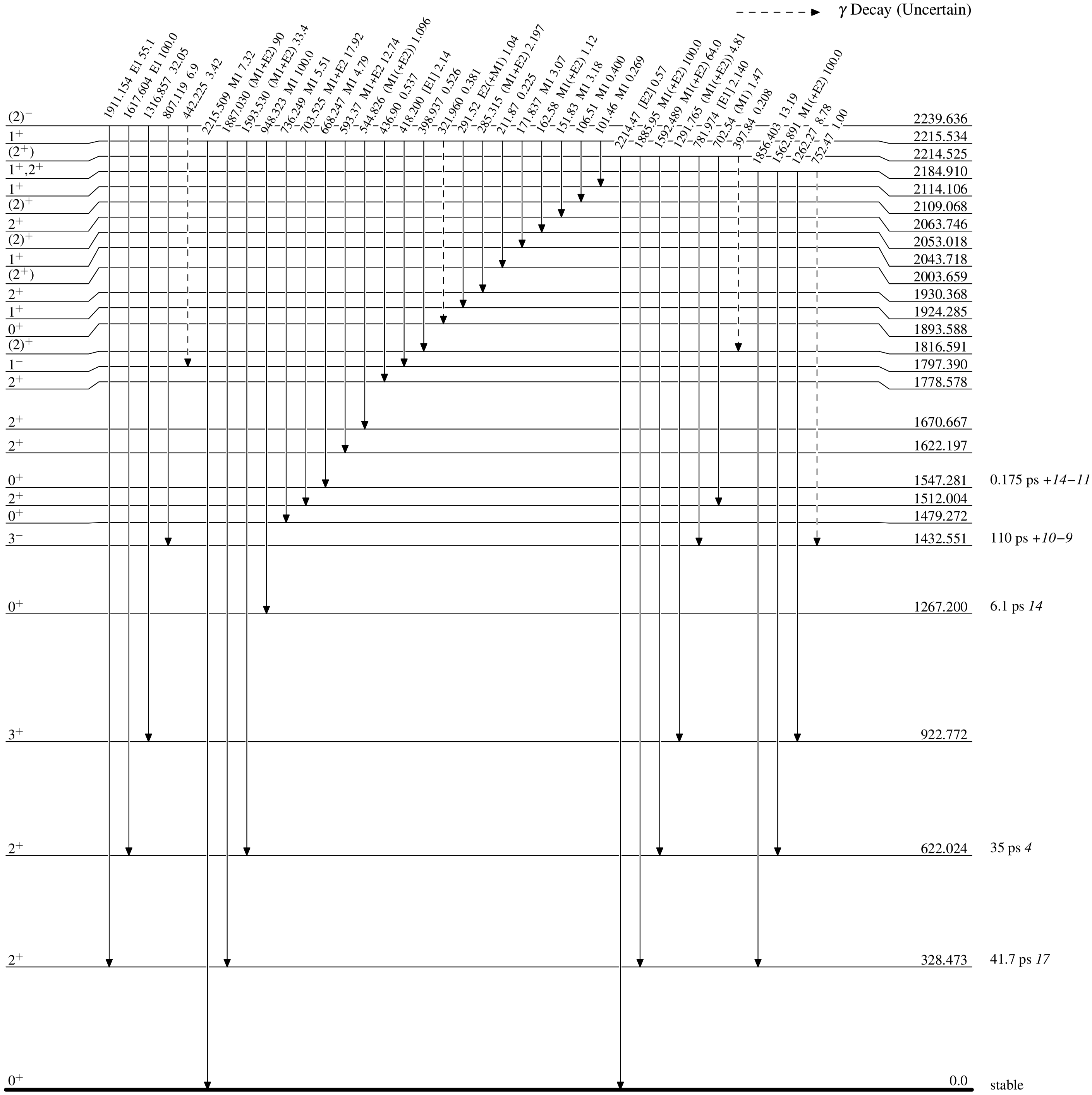
$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

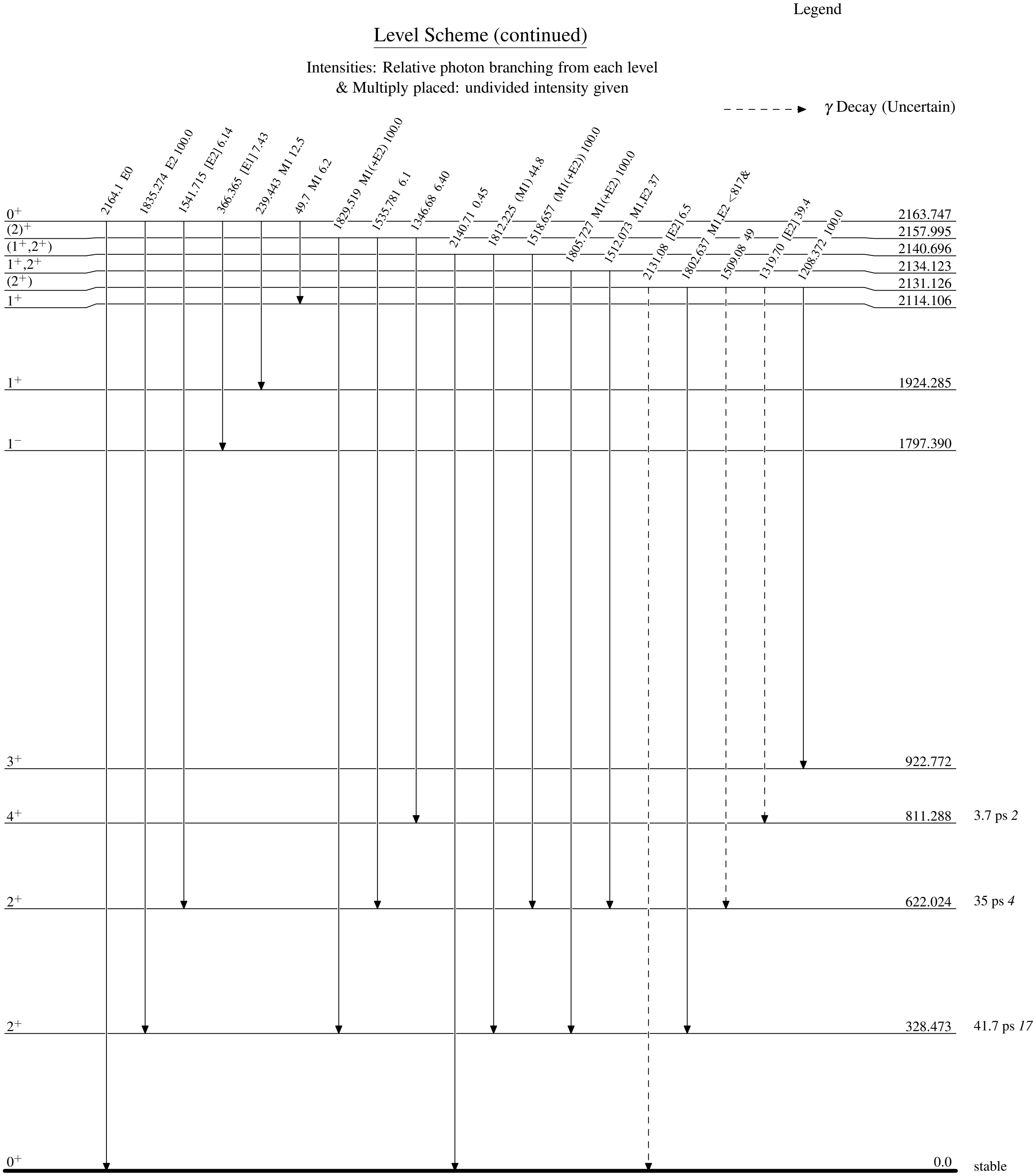


$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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

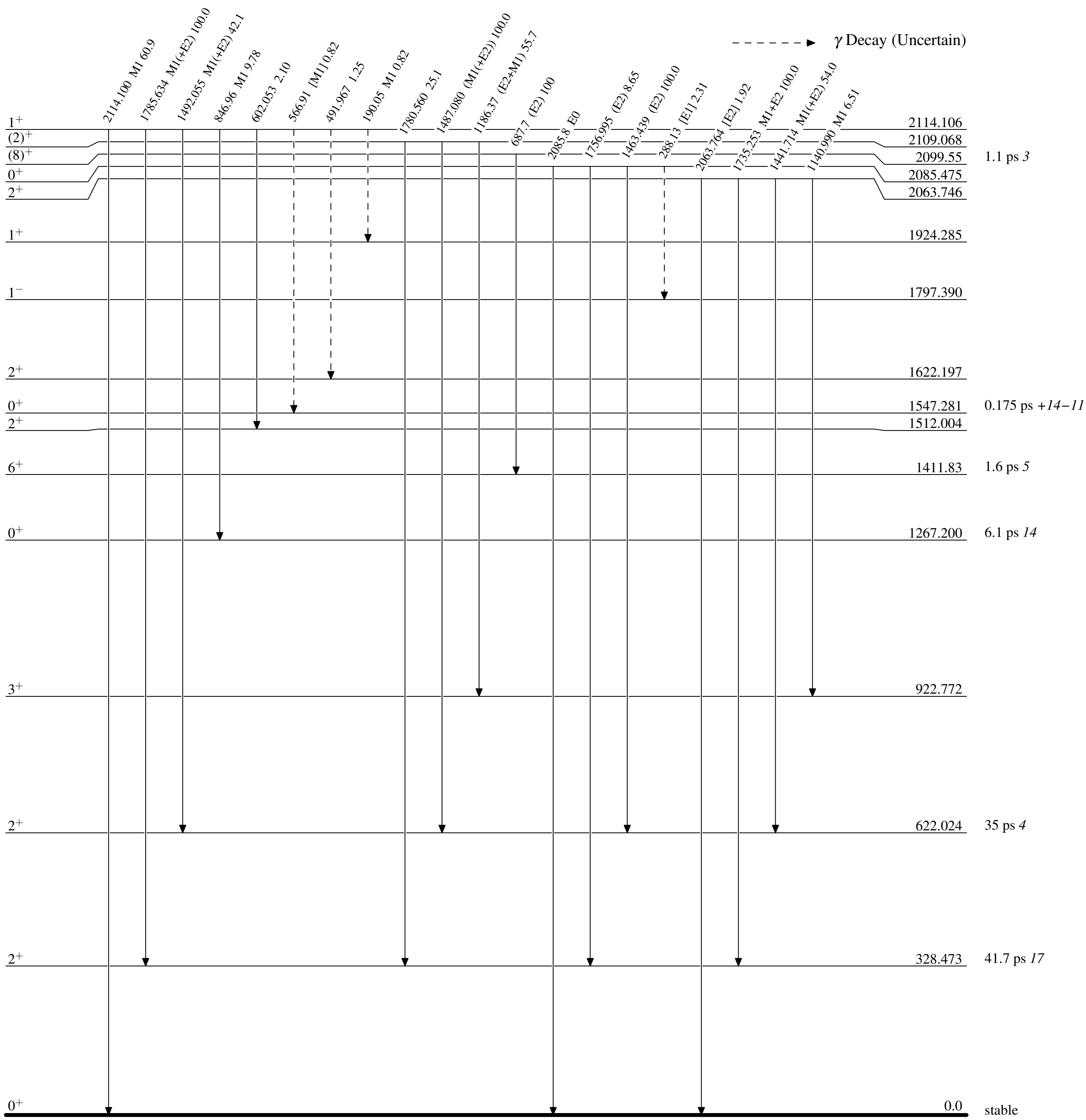


$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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

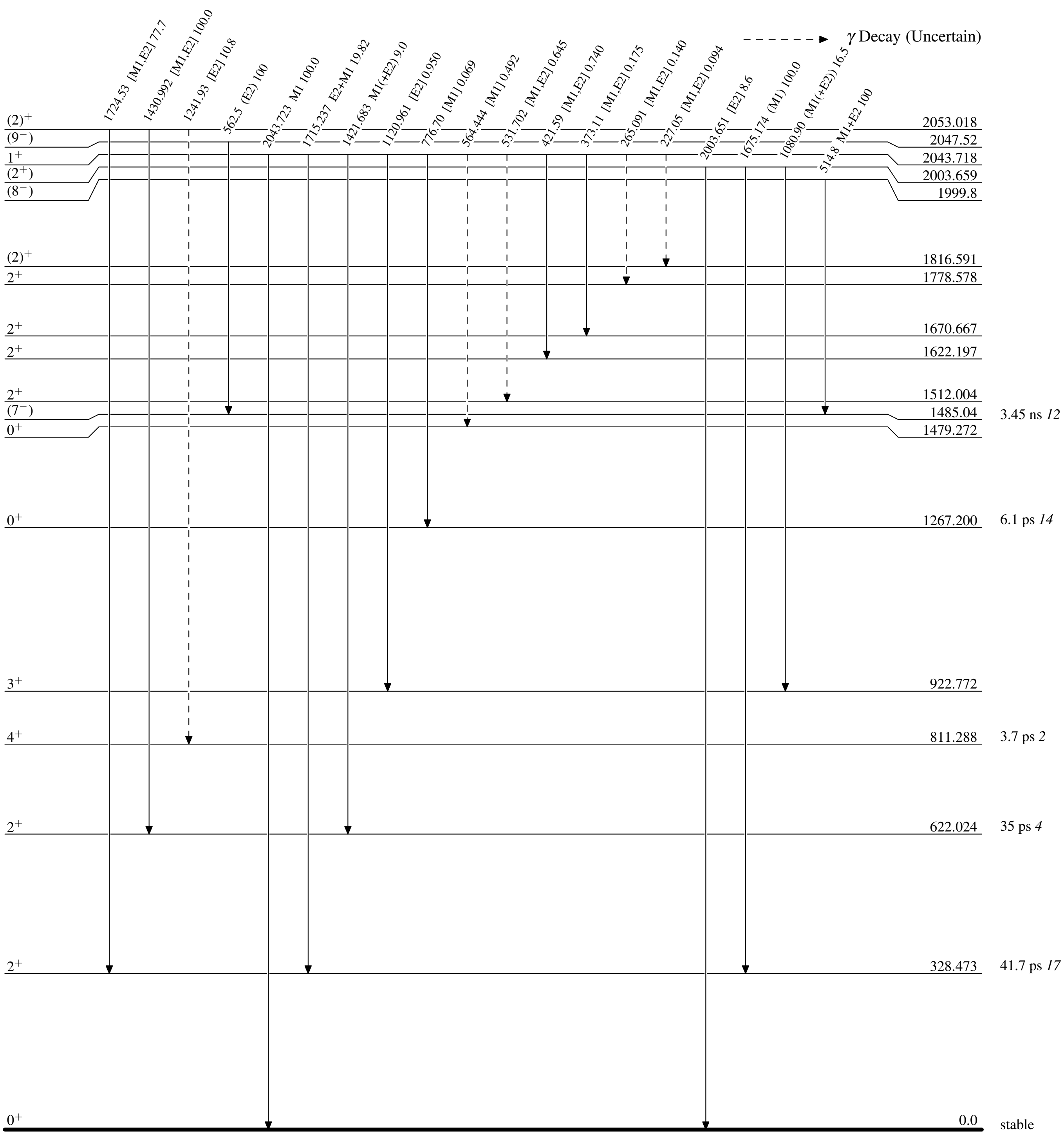


$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

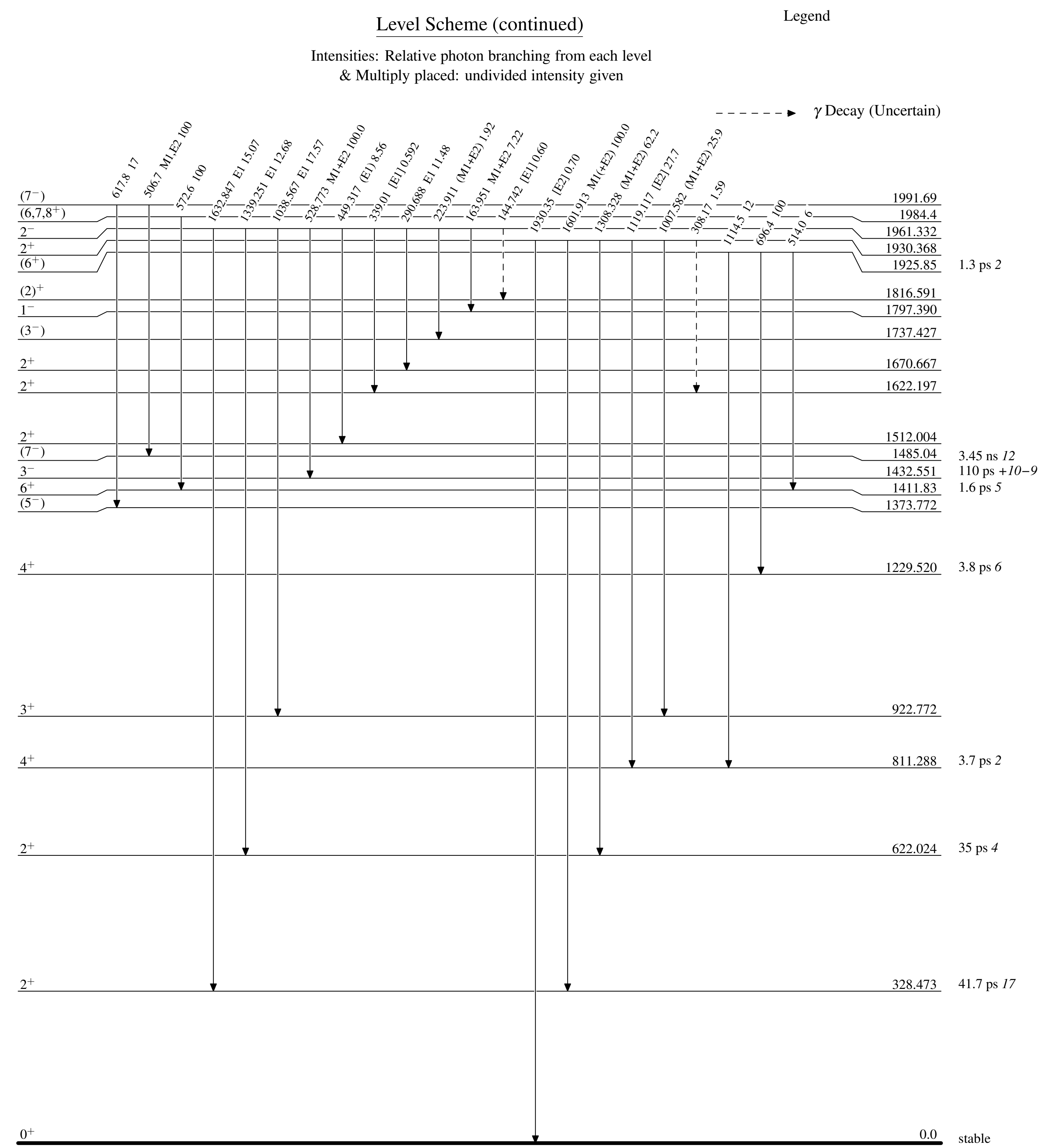
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



Adopted Levels, Gammas

Level Scheme (continued)

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

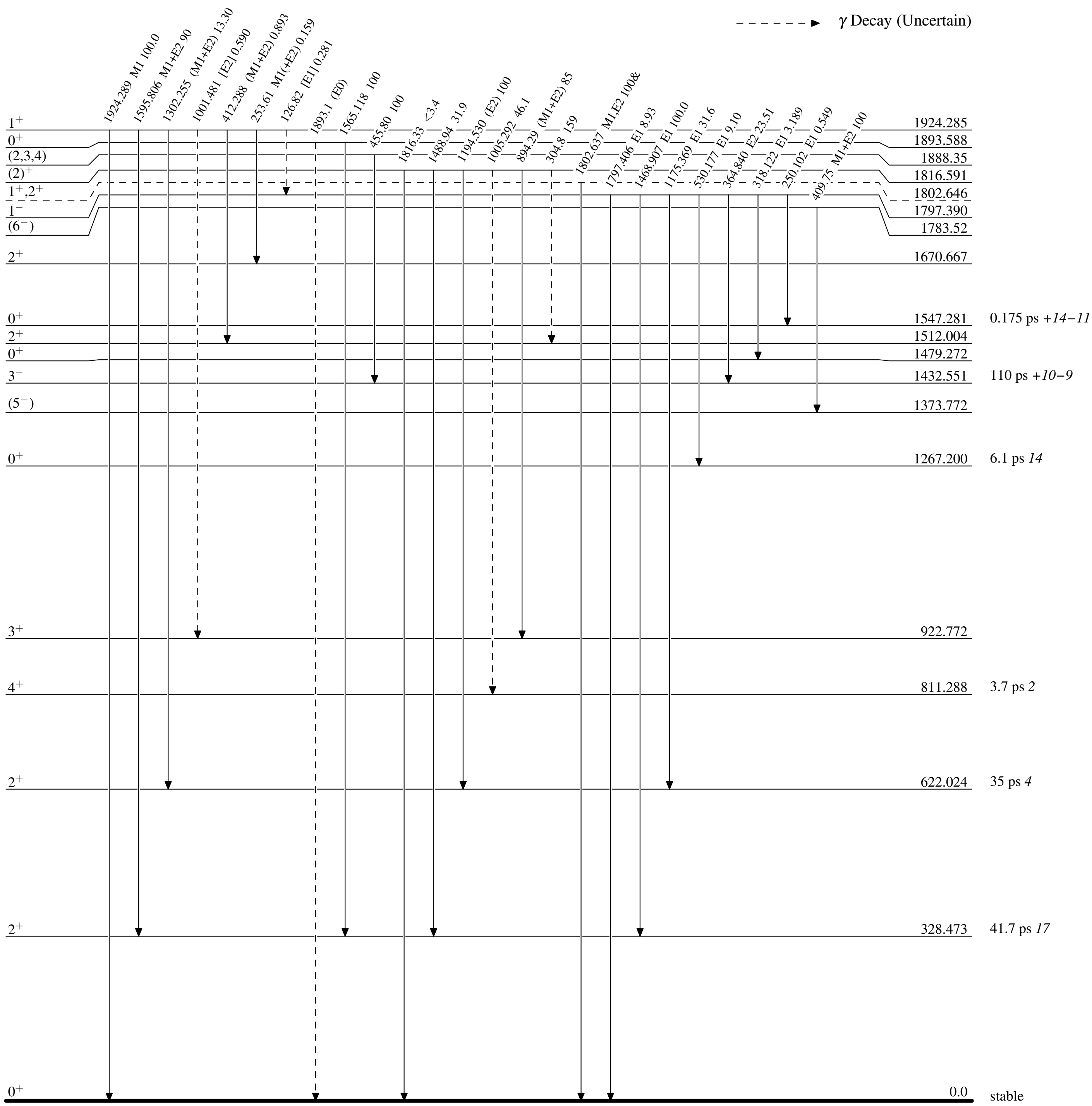


$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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

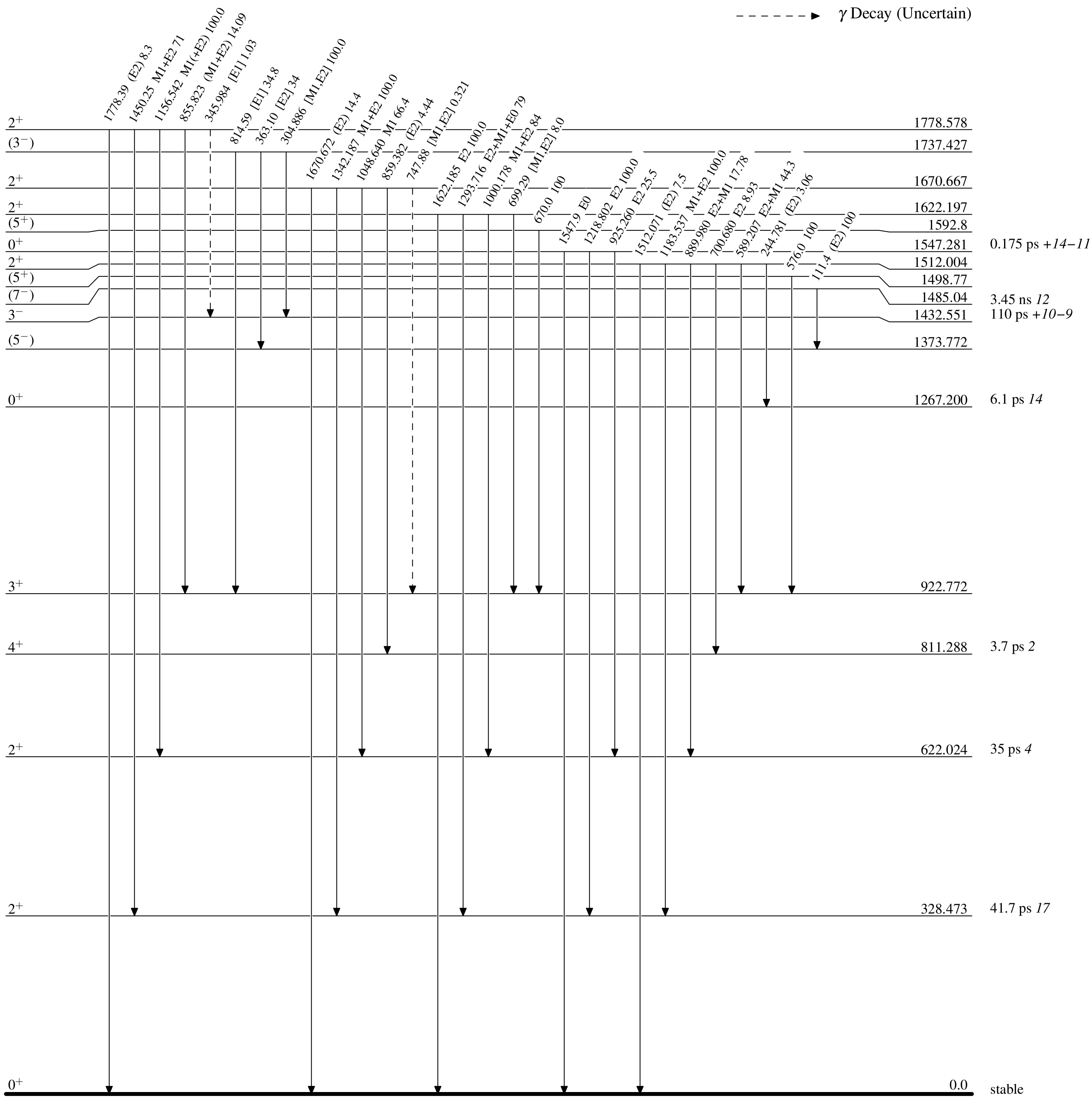


$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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

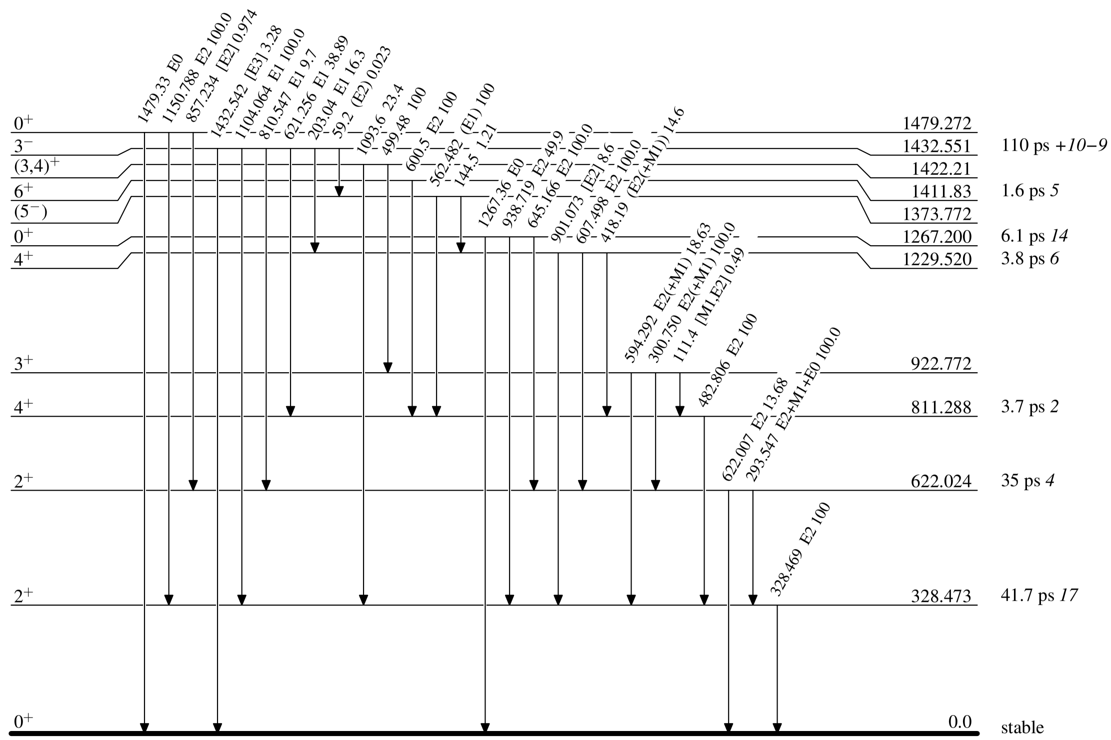


$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

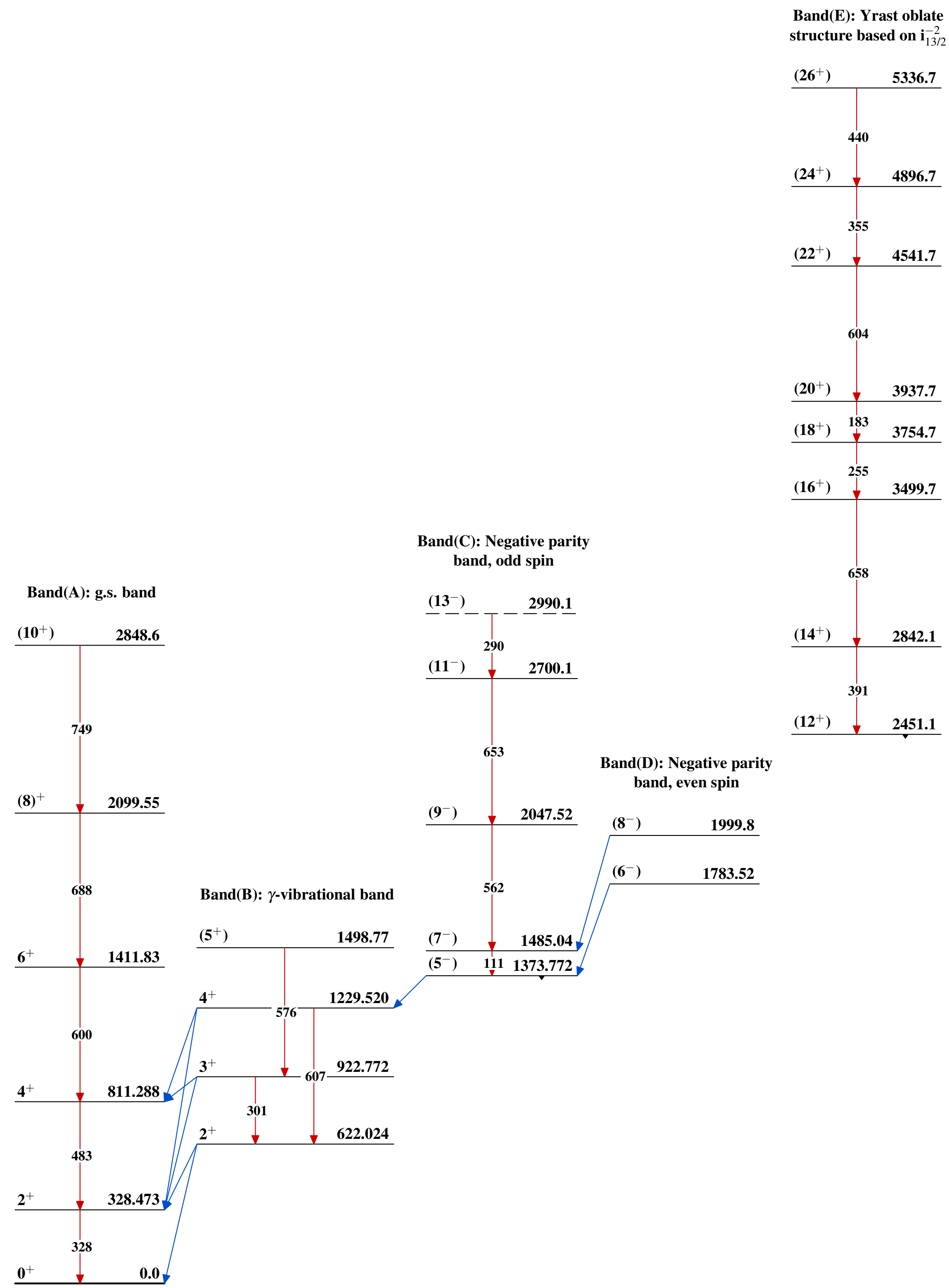
Level Scheme (continued)

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



$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas



$^{194}_{78}Pt_{116}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong	NDS 108, 1093 (2007)	1-Jan-2006

$Q(\beta^-)=-1507$ *3*; S(n)=7921.93 *13*; S(p)=8241.5 *21*; $Q(\alpha)=812$ *3* 2012Wa38

Note: Current evaluation has used the following Q record.

$Q(\beta^-)=-1507$ *3*; S(n)=7921.92 *13*; S(p)=8246.6 *17*; $Q(\alpha)=808.1$ *26* 2003Au03

Other reactions: ^{197}Au(p,2p): 1990Co31.

^{196}Pt(n,xnypγ) (2001Ta31): E(n)=1-250 MeV. White spectrum spallation neutron source; prompt γ-rays measured with Compton-suppressed HPGe detectors.

Photonuclear reactions: 1987Da29.

Hyperfine structure and isotope-shift measurements: 1992Hi07, 1990Hi08, 1988Bo31, 1988Le22, 1987Ne09.

Cross section and yield measurements: 1991Se04, 1990HoZV, 1988Bo08, 1988Co16, 1988Co19.

Nuclear structure calculations: 1993Fe07, 1993Wo06, 1993Za05, 1992Da02, 1992Ba59, 1992La05, 1992Sh18, 1991Ku17, 1991Li08, 1991Na14, 1990Ha27, 1990Lo06, 1990Ma47, 1990Mu18, 1990Na19, 1990Su08, 1989Bo24, 1989Gu01, 1989Ia01, 1988Ba47, 1988Bh04, 1988Bh07, 1988Ca15, 1988Ga23, 1988Hi07, 1988Sa37, 1988Va19, 1988Zg01, 1997De21, 1997De28, 1997Ha33.

^{196}Pt Levels

There are additional tentative higher-energy levels reported in (n,γ) E=thermal.

Cross Reference (XREF) Flags

A	^{196}Ir β^- decay (52 s)	H	^{195}Pt(n,γ) E=2 keV: av res	O	^{197}Au(μ^-,nγ)
B	^{196}Ir β^- decay (1.40 h)	I	^{195}Pt(d,p)	P	^{197}Au(d,^{3}He)
C	^{196}Au ε decay (6.1669 d)	J	^{196}Pt(e,e′)	Q	^{198}Pt(p,t)
D	^{194}Pt(t,p)	K	^{196}Pt(n,n′γ)	R	^{196}Pt(γ,γ′)
E	^{195}Pt(n,γ) E=thermal	L	^{196}Pt(d,pnγ)	S	^{196}Pt(p,p′γ)
F	^{195}Pt(n,γ) E=11.9 eV	M	^{196}Pt(p,p′),(pol p,p′),(d,d′)		
G	^{195}Pt(n,γ) E=19.6 eV	N	Coulomb excitation		

E(level)[†]	J$^{\pi}$[a]	T$_{1/2}$	XREF	Comments
0.0[‡]	0$^+$	stable	ABCDEFGHIJKLMNOPQ S	J$^{\pi}$: absence of hyperfine splitting (1935Fu06) consistent with J=0. Δ<r^2>(^{194}Pt,^{196}Pt)=0.926 fm^2 *4* (1987Ne09).
355.6841[‡] *20*	2$^+$	34.15 ps *15*	ABCDEFGHIJKLMNOPQ S	J$^{\pi}$: from E2 γ to 0$^+$ level. T$_{1/2}$: from B(E2)=1.372 *6*. Others: 35.4 ps *35* (RDM,1971NoZT), 30.2 ps 21 (delayed coin, 1972Be53), and 32.2 ps *15* (1981Bo32) (value recommended by 1981Bo32 based on their RDM, composite RDM, and DSA measurements). B(E2)↑: Weighted average of 1.368 *4* (1992Li14) and 1.382 *6* (1985Fe03, 1986Gy04). Others: see Coulomb excitation. μ: +0.588 *46* (1991St04), +0.604 *48* (1993Ta07). Compilation: 2005St24. μ: Others: +0.534 *14* from weighted average of g-factor measurements, see Coulomb excitation. Q: +0.62 *8* (1992Li14). Compilation: 2005St24. MOME2 Others: +0.63 *7* (based on Coulomb excitation), 0.51 *18* or 0.58 *18* (1969Gl08) dependent upon the + or − sign of interference; +0.56 *18* (1978LeZA); +0.84 *6* (quoted by 1981Bo32); 0.82 *6* (quoted by 1985Fe03 from 1978SpZW); +0.78 *6* (1981Bo32); +0.79 *12* (1985Fe03).
688.693[#] *5*	2$^+$	33.8 ps *7*	A CDEFGHI KLMNOPQ S	J$^{\pi}$: L=2 in ^{198}Pt(p,t). T$_{1/2}$: weighted average of 35.1 ps *29* (value recommended by

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Adopted Levels, Gammas (continued)

^{196}Pt Levels (continued)

E(level)[†]	J^{π}[a]	$T_{1/2}$	XREF	Comments
				1981Bo32 based on their RDM, composite RDM, and DSA measurements), 36 ps *3* (ce-γ(t),1972Be53), and 33.6 ps *8* from B(E2)=0.368 *9* (see Coulomb excitation, assuming E0 fraction of 333γ is negligible). μ=+0.54 *9* (1992Br03). Compilation: 2005St24. μ: Others: 0.49 *10* from g/g(356 level)=0.92 *19* (1981St24), see Coulomb excitation. Q=−0.39 *16* (1992Li14). Compilation: 2005St24.
876.865[‡] *5*	4^+	3.55 ps *5*	BCDEF IJKLMNOPQ S	B(E4)↑=0.0186 *21* J^{π}: L=4 in (p,t). $T_{1/2}$: weighted average of 3.5 ps *3* (value recommended by 1981Bo32 based on their RDM, composite RDM, and DSA measurements), and 3.55 ps *5* from B(E2) (weighted average of 1971Mi08, 1990Ma37, and 1992Li14. See Coulomb excitation). B(E4)↑: From ^{196}Pt(e,e′). Other: B(E4)=0.0308 *23* from (pol p,p′). B(E4)=0.012 *8* (1992Li14) from Coulomb excitation. μ=+1.38 *16* (1992Br03). Compilation: 2005St24. μ: Others: 1.11 *10* from g=0.277 *26*, see Coulomb excitation. Q=1.03 *12* (1992Li14). Compilation: 2005St24.
1015.044[#] *5*	3^+		C EF I KLMN P S	J^{π}: E2 γ to 2^+, γ-band member, nonpopulation of this level in ^{196}Pt(n,γ) E=2 keV.
1135.312[@] *5*	0^+	4.2 ps *+17−6*	A DEFGHI N PQ	J^{π}: L=0 in (p,t). $T_{1/2}$: from B(E2) and branching of 779γ. Others: 6 ps *3* (composite RDM, 1981Bo32), >2.6 ps or >3.1 ps (depending on the extreme feeding assumptions) (1990Bo29).
1270.214[&] *7*	5^-	1.1 ns *2*	BCDEF J LMNO Q	B(E5)↑=0.00204 *20* (1992Po09) J^{π}: E1 γ to 4^+, L=5 in (p,p′). $T_{1/2}$: from delayed coincidence (1970To14) in ^{196}Ir β^- decay (1.40 h).
1293.308[#] *7*	4^+	2.6 ps *+7−4*	DEF IJ LMN PQ	B(E4)↑=0.0224 *24* J^{π}: L=4 in (p,p′). $T_{1/2}$: weighted average of 2.9 ps *6* (RDM 1981Bo32) and 2.4 ps *+11−3* from B(E2). See Coulomb excitation. B(E4)↑: Weighted average of 0.0201 *28* from (e,e′) and 0.025 *3* from (pol p,p′).
1361.585[@] *5*	2^+		CDEF HI K MN Q	XREF: M(1350). J^{π}: E2 γ to 2^+, γ's to 0^+ and 4^+. $T_{1/2}$: $T_{1/2}$=50 ps *+44−19* computed from B(E2)=0.0008 *+7−3* in Coulomb excitation and adopted γ-ray properties.
1373.60[&] *19*	7^-	5.2 ns *2*	B J LMN PQ	μ=−0.21 *14* XREF: P(1380). J^{π}: E2 γ to 5^-, L=7 in (p,p′). $T_{1/2}$: from γ(θ,H,t) (1983GoZP). Others: 4.01 ns *16* from delayed coin (1970ToZZ), 4.0 ns (1984Sc19). μ: From g=−0.03 *2* (1983GoZP). Compilation: 2005St24.
1402.727 *10*	0^+	1.6 ps *3*	A DEFGHI Q S	J^{π}: L=0 in (p,t). $T_{1/2}$: from >1.29 ps for lower limit; <1.9 ps for upper limit (1990Bo29).
1429.74? *25*	(5^-,6^+)		B	J^{π}: γ′s from 2455 to 7^- and 9^-, from 1430 to 4^+, and a connecting 2455 to 1430 γ give J^{π}(2455)=7^- or 8, and J^{π}(1430)=5 or 6^+.
1447.043 *7*	3^-	0.62 ns *17*	CDEF J MNO Q S	β_3=0.050 *5* (1988Co19) B(E3)↑=0.103 *4* J^{π}: E1 γ to 2^+, L=3 in (p,t).

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Adopted Levels, Gammas (continued)

^{196}Pt Levels (continued)

E(level)[†]	J^{π}[a]	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: deduced from B(E3) and adopted γ-ray properties. See Coulomb excitation. B(E3)↑: See Coulomb excitation.
1525.8[‡] *5*	6^+	0.98 ps *+11−5*	LMN pQ	XREF: p(1530). J^{π}: g.s. band member. $T_{1/2}$: weighted average of 1.0 ps *3* (RDM, 1981Bo32) and 0.98 ps +12-5 from B(E2). See Coulomb excitation. Q=−0.18 *26* (1992Li14). Compilation: 2005St24.
1535.8 *6*	4^+		D LMN pQ S	B(E4)↑=0.0045 *8* (1991Se04) XREF: p(1530). Related to the K=4 two-phonon γ-vibration. J^{π}: γ's to 2^+ and 3^+, L=4 in (p,p′).
1604.494 *10*	2^+		DEF H M PQ	XREF: Q(1606),p(1600). J^{π}: L=2 in (p,p′) and (p,t).
1609.74[#] *20*	(5^+)		KL N	J^{π}: from boson expansion theory (1980We08) and γ-band systematics (1983Ra24), γ's to 3^+.
1677.256 *12*	2^+		DEFGHI M PQ S	XREF: P(1670). XREF: Q(1675),p(1670). J^{π}: E0 component in 989γ to 2^+.
1679.81[&] *20*	(6^-)		LM	J^{π}: from level energy systematics in ^{196}Pt(d,pnγ), γ's to 5^-.
1754.655 *9*	$3^-,4^+$		EF M	J^{π}: γ's from 2469 to 0^+ and 2^+, from 1755 to 3^- and 5^-, and a connecting 2469 to 1755 γ give J^{π}(2469)=1^- or 2^+, and J^{π}(1755)=3^- or 4^+.
1795.09 *6*	$2^+,(1^-)$		dEFGH Q	XREF: d(1798). J^{π}: γ's to 2^+ and 0^+ gives 1, 2^+. ARC suggests 0^+, 2^+, (0^-, 1^-, 2^-).
1802.302 *10*	$1^+,2^+$		dEFGH	XREF: d(1798). J^{π}: γ's to 0^+ and 2^+. ARC suggests 0^+, 1^+, 2^+.
1804.80 *10*	$(3^+),4^+$		K	J^{π}: E2 γ to 2^+.
1820.69[&] *24*	9^-	<1 ns	B L N	J^{π}: E2 γ to 7^-, negative-parity band member. $T_{1/2}$: from $\gamma\gamma$(t) (1968Ja06) in ^{196}Ir β^- decay (1.40 h).
1823.23 *6*	0^+		A DEF H M Q	XREF: d(1819),M(1826),Q(1824). J^{π}: L=0 in ^{198}Pt(p,t) and ^{194}Pt(t,p).
1825.715 *8*	2^+		EF	J^{π}: γ's to 0^+ and 3^- allows 1^- or 2^+. ARC gives 0^+,1^+,2^+, so perhaps 1^- is ruled out.
1831.99 *13*	3^+		K	J^{π}: M1+E2 γ to 2^+,3^+,4^+.
1847.348 *18*	2^+		DEF H Q S	XREF: d(1846),Q(1848). J^{π}: L=2 in ^{198}Pt(p,t) and ^{194}Pt(t,p).
1853.659 *12*	2^+		EF H	J^{π}: γ's to 0^+ and 4^+.
1883.34 *9*	$3^+,4^+$		D J M PQ S	B(E4)↑=0.0400 *19* XREF: M(1887),p(1880),Q(1884). J^{π}: M1+E2 γ to 2^+,4^+, L=4 in ^{196}Pt(p,p′). B(E4)↑: Weighted average of 0.044 *13* (1985Bo14), 0.0398 *19* (1991Se04), and 0.044 *13* (1992Po09).
1888.139 *13*	$1^+,2^+$	1.3 ps *+8−6*	EFGH	J^{π}: γ's to 0^+ and 2^+, ARC gives 1^+,(0^+, 2^+). $T_{1/2}$: from Doppler broadening (1990Bo29) in ^{195}Pt(n,γ) E=thermal.
1901.7[&] *3*	(8^-)		L	J^{π}: from level energy systematics in ^{196}Pt(d,pnγ), γ's to 7^-.
1901.89 *10*	5,6,7		K	J^{π}: From excitation functions in 2002Ta14.
1918.54 *4*	0^+		A DEF H	XREF: d(1916). J^{π}: E0 to 0^+, γ's to 2^+.
1932.01 *11*	$0^+,1^+,2^+$		DEF H Q	XREF: d(1935). J^{π}: γ's to 2^+, ARC gives 0^+,1^+,2^+.

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Adopted Levels, Gammas (continued)

^{196}Pt Levels (continued)

E(level)[†]	J^{π}[a]	$T_{1/2}$	XREF	Comments
1957.25 *20*	(4),5$^+$,6$^+$		K	J^{π}: From excitation functions in 2002Ta14.
1968.906 *12*	1$^+$,(2$^+$)		DEFGH M P	XREF: d(1971),M(1964),p(1960). J^{π}: γ's to 0$^+$ and 2$^+$, L=2+4 in ^{197}Au(d,^{3}He).
1984.93 *5*	1$^+$,2$^+$		EF H K q	XREF: Q(1987). J^{π}: γ's to 0$^+$ and 3$^+$.
1988.218 *9*	1$^+$,2$^+$		EF q	XREF: Q(1987). J^{π}: J^{π}=0$^+$, 1$^+$ and 2$^+$ from E1 deexcitation from capture level 0$^-$, and 1$^-$, 0$^+$ is ruled out from γ's to 3$^-$.
1991.7 *4*	3,4$^+$		K	J^{π}: γ to 2$^+$, ARC in 1979Ci04, large uncertainties of A_2 and A_4 in 2002Ta14. 3 in figure 2 of 2002Ta14.
1998.96 *4*	2$^+$		EFGHi	XREF: I(2010). J^{π}: γ's to 0$^+$ and 4$^+$.
2002.36 *20*	(3$^+$),4$^+$		K	J^{π}: M1+E2 γ to 4$^+$.
2006 *4*	4$^+$		D iJK M q	XREF: I(2010),Q(2006). J^{π}: L=4 in (p,p′) and (t,p). A_2>0 inconsistent with the known spin assignment in 2002Ta14.
2007.4[#] *5*	6$^+$	0.77 ps *19*	i K N q	XREF: I(2010),Q(2006). J^{π}: E2 γ to 4$^+$, γ's to 6$^+$, γ-band member. $T_{1/2}$: deduced from B(E2) and adopted γ-ray properties, see Coulomb excitation.
2013.88 *3*	2$^+$		EFGHi	XREF: I(2010). J^{π}: γ's to 4$^+$ and 3$^-$, E1 γ from 0$^-$, 1$^-$ capture level in (n,γ) E=thermal.
2029.8 *3*	3$^+$		K	J^{π}: M1+E2 γ to 2$^+$.
2046.99 *6*	2$^+$		DEF H pq S	XREF: p(2050),Q(2052). J^{π}: γ's to 3$^+$, L=(2) natural parity in ^{194}Pt(t,p). E1 γ from 0$^-$, 1$^-$ capture level in (n,γ) E=thermal.
2055 *3*	1$^+$,2$^+$		M pq	XREF: p(2050),Q(2052). J^{π}: L=0+2 in ^{197}Au(d,^{3}He).
2067.06 *11*	5$^-$,6		K	J^{π}: From $\gamma(\theta)$ and excitation functions in 2002Ta14. 5,6,7 in figure 2 of 2002Ta14.
2069.29 *20*	0$^+$,1$^+$,2$^+$		EF H	J^{π}: γ's to 2$^+$.
2072	6$^+$		Q	J^{π}: from $\gamma(\theta)$ and DWBA in ^{198}Pt(p,t).
2084.30 *11*	4$^-$,5,6$^-$		K	J^{π}: From $\gamma(\theta)$ and excitation functions in 2002Ta14. (5) in figure 2 of 2002Ta14.
2087.327 *21*	3$^-$,4$^+$		EF	J^{π}: γ's to 2$^+$ and 5$^-$.
2093.0 *3*	(2$^+$)		DEFGH Q S	XREF: Q(2095). J^{π}: L=(2) in ^{194}Pt(t,p), γ's to 2$^+$ and 3$^-$.
2116 *2*			d M Q	XREF: d(2120).
2124.389 *22*	3$^-$,4$^+$		dEF pq	XREF: d(2120),p(2120),Q(2128). J^{π}: γ's to 2$^+$ and 5$^-$.
2126.935 *15*	2$^+$		dEF H M pq	XREF: d(2120),p(2120),Q(2128). J^{π}: γ's to 2$^+$ and 3$^-$, 4$^+$, L=2 in ^{197}Au(d,^{3}He). E1 γ from 0$^-$, 1$^-$ capture level in (n,γ) E=thermal.
2161.5? *4*	(9$^-$,10,11$^-$)		B	J^{π}: γ's to 9$^-$, γ's from (9$^-$,10,11$^-$).
2162.70 *8*	2$^+$		EFGH Q	XREF: Q(2164). J^{π}: γ's to 2$^+$ and 3$^-$.
2170.73 *19*	(5),6$^{(-)}$		K	J^{π}: From $\gamma(\theta)$ and excitation functions in 2002Ta14. 6$^-$,7$^-$ in figure 2 of 2002Ta14.
2174.43 *12*	0$^+$,2$^+$		DEF H m Q	XREF: M(2179). J^{π}: E1 γ from 0$^-$, 1$^-$ capture level in (n,γ) E=thermal.
2183.6 *3*	1$^+$,2$^+$		EF H m	XREF: M(2179). J^{π}: γ's to 0$^+$.
2199.45 *5*	0$^+$		DEF H Q	XREF: d(2196),Q(2193). J^{π}: L=0 in ^{194}Pt(t,p).

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Adopted Levels, Gammas (continued)

^{196}Pt Levels (continued)

E(level)[†]	Jπ[a]	T$_{1/2}$	XREF	Comments
2204.431 *12*	1$^+$,2$^+$		EFGH Q	Jπ: γ's to 0$^+$, E1 γ from 0$^-$, 1$^-$ capture level in (n,γ) E=thermal.
2229.6 *3*	2$^+$		EFGH	Jπ: γ's to 2$^+$ and 4$^+$.
2236.32 *21*	(5),6$^-$,7$^-$		K	Jπ: From excitation functions. (5),6,7 in figure 2 of 2002Ta14.
2244.57 *20*	3$^+$,4,5$^+$		K	Jπ: γ to 4$^+$, γ(θ) and excitation functions in 2004Ta14. 3$^+$,4$^+$,5$^+$,(6$^+$) in figure 2 of 2002Ta14.
2245.559 *14*	1$^+$,2$^+$	0.13 ps *4*	EFGH M RS	XREF: M(2243). T$_{1/2}$: from Γ$_0$/Γ=0.77 *3*, Γ$_0$=2.7 meV 9 in ^{196}Pt(γ,γ′). Jπ: γ's to 0$^+$, E1 γ from 0$^-$, 1$^-$ capture level in (n,γ) E=thermal.
2252.7[‡] *6*	8$^+$	0.42 ps *+4−5*	N	Jπ: E2 γ to 6$^+$, γ's to 7$^-$ and 9$^-$, ground-state band member. T$_{1/2}$: deduced from B(E2) and adopted γ-ray properties, see Coulomb excitation.
2262.428 *16*	2$^+$		dEF H Q S	XREF: d(2267). Jπ: γ's to 1$^+$ and 3$^+$, L=(2) in ^{194}Pt(t,p) for E=2267 *6*.
2271.2 *4*	2$^+$		d H K	XREF: d(2267). Jπ: M1+E2 γ to 2$^+$.
2277 *4*	9$^-$		Q	Jπ: from γ(θ) and DWBA (1981HyZY) in ^{198}Pt(p,t).
2280 *2*	4$^+$		J M	Jπ: L=4 in ^{196}Pt(p,p′).
2296 *4*	(7$^-$,8$^+$)		Q	Jπ: from L=7; Jπ=8$^+$, E=2293 keV from γ(θ) and DWBA (1981HyZY).
2309.23 *4*	(2)$^+$		DEF H M	XREF: d(2305),K(2305). Jπ: L=(2) in ^{194}Pt(t,p), γ's to 0$^+$ and 2$^+$.
2324.224 *22*	1$^+$,2$^+$		DEF H M	XREF: d(2326),M(2331). Jπ: γ's to 2$^+$ and 0$^+$.
2345.3 *3*	1$^+$,2$^+$		EF H M	XREF: M(2349). Jπ: γ's to 0$^+$.
2365.976 *19*	2$^+$		EF H M q	XREF: Q(2370). Jπ: γ's to 2$^+$ and 3$^-$.
2375.11 *19*	1$^+$,2$^+$		EF H q	XREF: Q(2370). Jπ: γ's to 0$^+$ and 2$^+$.
2383.33 *6*	0$^+$,1$^+$,2$^+$		EF H Q	XREF: Q(2386). Jπ: γ's to 2$^+$.
2393 *2*			M	
2403.66 *6*	2$^+$		EFGH	Jπ: γ's to 2$^+$ and 4$^+$.
2420.4 *1*	(2,3,4$^+$)	68 fs	K	Jπ: from data on γ(θ), excitation functions, decay patterns and T$_{1/2}$. See (n,n′γ). T$_{1/2}$: from DSA in (n,n′γ), ΔT$_{1/2}$=+400-37 (1993Di05).
2422.51 *4*	0$^+$,1$^+$,2$^+$		DEF H	XREF: d(2419). Jπ: γ's to 2$^+$.
2423.42 *7*	(1$^+$,2$^+$,3)	67 fs *+58−24*	K	Jπ: from data on γ(θ), excitation functions, decay patterns and T$_{1/2}$. See (n,n′γ). T$_{1/2}$: from DSA in (n,n′γ) (1993Di05).
2423.7 *3*	3$^-$		Q S	Jπ: γ to 2$^+$,3$^-$. γ(θ) and DWBA from 1981HyZY suggests 7$^-$.
2429.7 *4*	3$^-$	>166 fs	JK M	β$_3$=0.042 *4* (1988Co19) B(E3)↑=0.079 *10* Jπ: L=3 in ^{196}Pt(p,p′). T$_{1/2}$: from DSA in (n,n′γ) (1993Di05). B(E3)↑: Weighted average of 0.070 *14* (1988Co19) and 0.087 *14* (1992Po09).
2433.7 *2*	(0,1,2,3,4)	17 fs *+12−7*	K	Jπ: from data on γ(θ), excitation functions, decay patterns and T$_{1/2}$.

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Adopted Levels, Gammas (continued)

^{196}Pt Levels (continued)

E(level)[†]	J^{π}[a]	$T_{1/2}$	XREF	Comments
2438.0 *1*	(1^+,2,3,4^+)	53 fs +*37*−*17*	K	$T_{1/2}$: from DSA (1993Di05). J^{π}: from data on $\gamma(\theta)$, excitation functions, decay patterns and $T_{1/2}$. $T_{1/2}$: from DSA (1993Di05).
2443.93 *22*	2^+		DEFGH Q	XREF: d(2449),Q(2440). J^{π}: γ's to 2^+ and 4^+.
2454.2 *3*	(7^-,8^+)		B	J^{π}: see 1430 level.
2460.1 *3*	0^+,1^+,2^+		EF H Q	XREF: Q(2462). J^{π}: γ's to 2^+.
2468.0 *3*	10^-,11^-	<1 ns	B	J^{π}: E2 γ to 9^-, no γ to J^{π}<9. $T_{1/2}$: from $\beta\gamma$(t) measurements (1968Ja06) in ^{196}Ir β^- decay (1.40 h).
2469.85 *17*	1^-,2^+		EF H M	J^{π}: see 1755 level.
2488.238 *24*	1^+,2^+		dEF H	XREF: d(2489). J^{π}: γ's to 0^+ and 2^+.
2493.5 *11*	0^+,1^+,2^+		d GH	XREF: d(2489).
2505.12 *5*	2^+		EF H M	XREF: M(2505). J^{π}: γ's to 0^+, E1 γ from 0^-, 1^- capture level in (n,γ) E=thermal.
2527.84 *4*	1^+,2^+		dEF H Q	XREF: d(2529). J^{π}: γ's to 0^+ and 3^-, E1 γ from capture level in (n,γ) E=thermal.
2529.3 *3*	2^+		dEFGH Q	XREF: d(2529). J^{π}: γ's to 4^+, E1 γ from 0^-, 1^- capture level in (n,γ) E=thermal.
2545 *5*			m Q	XREF: M(2550).
2553.8 *8*	0^+,2^+		E H m Q	XREF: M(2550). J^{π}: E1 γ from 0^-, 1^- capture level in (n,γ) E=thermal. J^{π}: from the average capture results in ^{195}Pt(n,γ) E=2 keV.
2570.8 *7*	1^+	0.021 ps *4*	F H M R	J^{π}: from M1 excitation in ^{196}Pt(γ,γ'). $T_{1/2}$: from Γ_0/Γ=0.63 *6*, Γ_0=13.6 meV 22 in ^{196}Pt(γ,γ').
2586.9 *7*	0^+,2^+		d Hi M	XREF: d(2591),I(2600). J^{π}: L=(2) in ^{194}Pt(t,p).
2599.1 *9*	(0,1^-,2)		d F Hi	XREF: d(2591),I(2600). J^{π}: from the average capture results in ^{195}Pt(n,γ) E=2 keV.
2603.2 *2*	(1,2,3,4,5)	>66 fs	i K	XREF: I(2600). J^{π}: from data on $\gamma(\theta)$, excitation functions, decay patterns and $T_{1/2}$. $T_{1/2}$: from DSA (1993Di05).
2606.0 *1*	(2,3,4,5)	>111 fs	i K	XREF: I(2600). J^{π}: from data on $\gamma(\theta)$, excitation functions, decay patterns and $T_{1/2}$. $T_{1/2}$: from DSA (1993Di05).
2606.8 *8*	0^+,2^+,(1^+)		Hi q	XREF: I(2600),Q(2609). J^{π}: from the average capture results in ^{195}Pt(n,γ) E=2 keV.
2608.0 *2*	3^-	31 fs +*12*−*8*	i K M q	B(E3)↑=0.034 *7* (1988Co19); β_3=0.029 *3* (1988Co19) XREF: I(2600),Q(2609). J^{π}: L=3 in ^{196}Pt(p,p'). $T_{1/2}$: from DSA (1993Di05).
2614.5 *7*	0^+,1^+,2^+		E Hi q	XREF: I(2600),Q(2609). J^{π}: from the average capture results in ^{195}Pt(n,γ) E=2 keV.

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Adopted Levels, Gammas (continued)

^{196}Pt Levels (continued)

E(level)[†]	J$^{\pi}$[a]	T$_{1/2}$	XREF	Comments
2626.4 *1*	(1,2,3)	83 fs	K	J$^{\pi}$: from data on $\gamma(\theta)$, excitation functions, decay patterns and T$_{1/2}$. T$_{1/2}$: from DSA, ΔT$_{1/2}$=+527-42 (1993Di05).
2629.9 *8*	2^{+}		D H Q	XREF: d(2626),Q(2627). J$^{\pi}$: 0^{+},2^{+},(0^{-},1^{-},2^{-}) from the average capture results. J$^{\pi}$: L=(2) in ^{194}Pt(t,p).
2631.1 *1*	(2^{+},3,4^{+})	24 fs *+14−8*	K	J$^{\pi}$: from data on $\gamma(\theta)$, excitation functions, decay patterns and T$_{1/2}$. T$_{1/2}$: from DSA (1993Di05).
2638 *3*	3^{-}		J M Q	B(E3)↑=0.071 *10*; β_3=0.042 *4* (1988Co19) XREF: Q(2635). J$^{\pi}$: L=3 in ^{196}Pt(p,p′). B(E3)↑: Weighted average of 0.070 *14* (1988Co19) and 0.072 *13* (1992Po09).
2659.8 *8*	0^{+},1^{+},2^{+}		E GHi Q	XREF: I(2670),Q(2655). J$^{\pi}$: from the average capture results in ^{195}Pt(n,γ) E=2 keV.
2667.246 *23*	1^{+},2^{+}	0.14 ps *+2−1*	DEF Hi Q	XREF: I(2670). J$^{\pi}$: γ's to 0^{+}. T$_{1/2}$: from Doppler broadening (1990Bo29).
2676 *3*			i Q	XREF: I(2670).
2692.2 *8*			D K	
2711.0 *1*	3^{-}	>55 fs	K M	B(E3)↑=0.051 *10* (1988Co19); β_3=0.036 *4* (1988Co19) J$^{\pi}$: L=3 in ^{196}Pt(p,p′). T$_{1/2}$: from DSA (1993Di05).
2723 *5*			D	
2729	11^{-}		Q	J$^{\pi}$: from $\gamma(\theta)$ and DWBA in ^{198}Pt(p,t) (1981HyZY).
2736.1	(1^{+})	0.13 ps *5*	R	J$^{\pi}$: from M1 excitation in ^{196}Pt(γ,γ'). T$_{1/2}$: from Γ_0/Γ=1, Γ_0=3.6 meV 13 in ^{196}Pt(γ,γ').
2749.6[#] *6*	(7^{-},8^{+})	0.46 ps *+8−6*	N	J$^{\pi}$: γ's to 6^{+} and 9^{-}. T$_{1/2}$: deduced from B(E2) and adopted γ-ray properties.
2757 *4*			D Q	XREF: d(2756).
2766 *3*			Q	
2774 *4*			D M	XREF: d(2774).
2779 *3*			Q	
2797 *3*			M	
2817 *6*			D	
2824.0	1^{+}	7.1 fs *13*	R	J$^{\pi}$: from M1 excitation in ^{196}Pt(γ,γ'). T$_{1/2}$: from Γ_0/Γ=0.41 *4*, Γ_0=27.5 meV 42 in ^{196}Pt(γ,γ').
2834 *5*			D	
2875.4	1^{+},(2)$^{+}$	0.088 ps *15*	D R	J$^{\pi}$: J^{π}=1^{+} from M1 excitation in ^{196}Pt(γ,γ'), L=(2) in ^{194}Pt(t,p). T$_{1/2}$: from Γ_0/Γ=1, Γ_0=5.2 meV 9 in ^{196}Pt(γ,γ').
2888.8? *4*	(9^{-},10,11^{-})		B	J$^{\pi}$: γ's to 11^{-} and 9^{-}, log *ft*=6.5 from (10,11^{-}).
2974	9^{-}		Q	J$^{\pi}$: from $\gamma(\theta)$ and DWBA (1981HyZY) in ^{198}Pt(p,t).
3044.0[‡] *9*	(10^{+})		N	J$^{\pi}$: γ's to 8^{+}, ground-state band member.
3124.2	1,2	0.13 ps *4*	R	J$^{\pi}$: γ excitation in ^{196}Pt(γ,γ'). T$_{1/2}$: from Γ_0/Γ=1, Γ_0=3.5 meV 10 in ^{196}Pt(γ,γ').
3131.8	1,2	0.13 ps *4*	R	J$^{\pi}$: γ excitation in ^{196}Pt(γ,γ'). T$_{1/2}$: from Γ_0/Γ=1, Γ_0=3.4 meV 10 in ^{196}Pt(γ,γ').
3161.9 *4*	(9^{-},10,11^{-})		B	J$^{\pi}$: γ's to 11^{-} and 9^{-}, log *ft*=5.9 from (10,11^{-}).
3176.3? *4*	(9^{-})		B	J$^{\pi}$: γ's to 7^{-} and 9^{-}, log *ft*=6.7 from (10,11^{-}).
3214.8? *4*	(9^{-})		B	J$^{\pi}$: γ's to 7^{-} and 9^{-}, log *ft*=6.5 from (10,11^{-}).
3298.0	2^{+}	0.029 ps *4*	R	J$^{\pi}$: γ excitation in ^{196}Pt(γ,γ').

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Adopted Levels, Gammas (continued)

^{196}Pt Levels (continued)

E(level)[†]	J^{π}[a]	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: from Γ_0/Γ=1, Γ_0=15.7 meV 21 in ^{196}Pt(γ,γ').
3303.5 *3*	(10,11$^-$)		B	J^{π}: γ's to 11$^-$ and 9$^-$, log *ft*=5.1 from (10,11$^-$).
3366.8	1,2	0.13 ps *3*	R	J^{π}: γ excitation in ^{196}Pt(γ,γ'). $T_{1/2}$: from Γ_0/Γ=1, Γ_0=3.5 meV 7 in ^{196}Pt(γ,γ').
3424.3	1,2	0.064 ps *12*	R	J^{π}: γ excitation in ^{196}Pt(γ,γ'). $T_{1/2}$: from Γ_0/Γ=1, Γ_0=7.1 meV 13 in ^{196}Pt(γ,γ').

[†] From least-squares fit to Eγ's. In addition to the (d,p) levels shown, broad peaks at 2010 *20*, 2600 *20*, and 2670 *20* are reported. Each of these could correspond to one or more Adopted Levels.

[‡] Band(A): ground-state rotational band.

[#] Band(B): γ vibrational band.

[@] Band(C): Band based on the 0+(2) state Related either to the β-vibration or to the K=0 two-phonon γ-vibration.

[&] Band(D): semi-decoupled negative-parity band.

[a] From the average capture results in ^{195}Pt(n,γ) E=2 keV, and other arguments as noted.

Adopted Levels, Gammas (continued)

$\gamma(^{196}Pt)$

E_i(level)	J^π_i	E_γ [†]	I_γ [‡]	E_f	J^π_f	Mult. [d]	δ [f]	α [g]	Comments
355.6841	2^+	355.684 *2*	100.0	0.0	0^+	E2		0.0603	α(K)=0.0402 *6*; α(L)=0.01520 *22*; α(M)=0.00377 *6*; α(N+..)=0.001081 *16* B(E2)(W.u.)=40.60 *20* Mult.: based on α(K)exp=0.0395 *22* (1962Ja10),0.041 *3* and 0.042 *3* (1962Ge07), 0.0367 *24* (1960De17), 0.042 *3* (1956Th10). Supported by K/L=2.1 *1*, L/M+=2.9 *7*; see also ^{196}Au ε decay and ^{196}Pt Coulomb excitation. Measured prompt yrast γ production cross sections in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
688.693	2^+	332.983 *24*	100.0 *23*	355.6841	2^+	E0+M1+E2	−5.2 *5*	0.0782 *17*	B(E2)(W.u.)=54 *+11−12*; B(M1)(W.u.)=0.00058 *+13−9* α(K)=0.0523 *14*; α(L)=0.0197 *3*; α(M)=0.00488 *7*; α(N+..)=0.001399 *21* δ: from ^{196}Au ε decay (6.1669 d). Mult.: ce(E0)/I$\gamma\approx$0.003 or 0.009 from Q^2=ce(E0)/ce(E2)$\approx$0.05 or 0.17 with α(K)=0.0529 from ^{196}Au ε decay. B(M1)(W.u.) and B(E2)(W.u.) values corrected, B. Singh, Aug 13, 2021. Previous value of B(M1)(W.u.)=0.0158 *7* in this dataset was incorrect since it corresponded to pure M1 for 332.98γ, not M1+E2, δ=−5.2 *5*. Note that E0 admixture is considered insignificant, as indicated by measured ce(E0)/I$\gamma\approx$0.003 or 0.009 in ^{196}Au ε decay. Measured prompt nonyrast γ production cross sections in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
		688.76 *10*	<0.0005	0.0	0^+	(E2)		0.01184	α(K)=0.00924 *13*; α(L)=0.00199 *3*; α(M)=0.000473 *7*; α(N+..)=0.0001375 *20* B(E2)(W.u.)<7.8×10^{-6} B(E2)(W.u.) value edited, B. Singh, Aug 13, 2021. Previous value was 4×10^{-6} *4* in this dataset.
876.865	4^+	521.175 *5*	100	355.6841	2^+	E2		0.0224	α(K)=0.01667 *24*; α(L)=0.00436 *6*; α(M)=0.001055 *15*; α(N+..)=0.000305 *5* B(E2)(W.u.)=60.0 *9* Measured prompt yrast γ production cross sections in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
1015.044	3^+	138.178 *4*	1.3 *4*	876.865	4^+	[M1]		2.65	α(K)=2.18 *3*; α(L)=0.360 *5*; α(M)=0.0833 *12*; α(N+..)=0.0246 *4*
		326.349 *4*	100 *8*	688.693	2^+	E2		0.0769	α(K)=0.0496 *7*; α(L)=0.0207 *3*; α(M)=0.00516 *8*; α(N+..)=0.001478 *21* Mult.: from K/L=2.7 *8* in ^{195}Pt(n,γ) E=thermal. Measured prompt nonyrast γ production cross sections in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
		659.389 *12*	4.4 *9*	355.6841	2^+	(M1)		0.0379	α(K)=0.0314 *5*; α(L)=0.00501 *7*; α(M)=0.001153 *17*; α(N+..)=0.000340 *5*
1135.312	0^+	446.613 *3*	39 *3*	688.693	2^+	E2		0.0328	B(E2)(W.u.)=18 *10*

$\gamma(^{196}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[d]	α[g]	$I_{(\gamma+ce)}$	Comments
									α(K)=0.0236 *4*; α(L)=0.00704 *10*; α(M)=0.001723 *25*; α(N+..)=0.000496 *7* Mult.: from K/L=2.4 *9* in ^{195}Pt(n,γ) E=thermal.
1135.312	0^+	779.630 *7*	100 *8*	355.6841	2^+	E2	0.00908		B(E2)(W.u.)=2.8 *15* α(K)=0.00720 *10*; α(L)=0.001445 *21*; α(M)=0.000342 *5*; α(N+..)=9.96×10^{-5} *14* Mult.: from α(K)exp=0.017 *7* in ^{195}Pt(n,γ) E=thermal.
		1135.3 *7*		0.0	0^+	E0		<0.024	$I_{(\gamma+ce)}$: Iε: Ice(K)/Σ Iγ <0.01 (1982Ka28), Σ Iγ/Iγ(779γ)=1.39. ce(K)<0.6 (1982Ka28). ce(K): ce(K) is given for per 1000 capture events where it is assumed that 80% percent of capture events populate the 2(1)$^+$ state ce(K)<0.01% for E0 branch, relative to the total depopulating intensity from 1135-keV level (1982Ka28). X(E0)=B(E0)[0$^+$ to 0+(0)]/B(E2)[0$^+$ to 2+(356)]<0.005 (1982Ka28) in ^{195}Pt(n,γ) E=thermal.
1270.214	5^-	393.346 *7*	100	876.865	4^+	E1	0.01396		B(E1)(W.u.)=2.9×10^{-6} *6* α(K)=0.01159 *17*; α(L)=0.00182 *3*; α(M)=0.000419 *6*; α(N+..)=0.0001220 *17* Measured prompt yrast γ production cross sections in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
		914.6 *3*	0.30 *5*	355.6841	2^+	[E3]	0.01533		B(E3)(W.u.)=2.7 *7* α(K)=0.01145 *16*; α(L)=0.00295 *5*; α(M)=0.000716 *10*; α(N+..)=0.000209 *3* α: E3 α(theory)′s mult. By 0.975 *10* (Cf. 1990Ne01). I_γ,E_γ: from ^{196}Ir β^- decay (1.40 h). Mult.: γ′s to 2$^+$, and from recommended upper limits for γ-ray strengths.
1293.308	4^+	416.443 *6*	17 *5*	876.865	4^+				α(K)= 0.0346; α(L)=0.00968; α(M)=0.00235; α(N+..)=0.00072 B(M1)(W.u.)=0.0076 *25*; B(E2)(W.u.)=17 *6* Mult.: from recommended upper limits for γ-ray strengths. δ: extrapolated using a theoretical model of Greiner (1966Gr32), see Coulomb excitation (1990Ma37). 1966GrZX reference corrected to 1966Gr32, B. Singh, Aug 13, 2021.
		604.616 *7*	100 *8*	688.693	2^+	[E2]	0.01582		α(K)=0.01211 *17*; α(L)=0.00283 *4*; α(M)=0.000680 *10*; α(N+..)=0.000197 *3* B(E2)(W.u.)=29 *+6−29* Mult.: from γ′s to 2$^+$ and Coulomb excitation.
		937.62 *7*	17 *2*	355.6841	2^+	[E2]	0.00622		α(K)=0.00502 *7*; α(L)=0.000926 *13*; α(M)=0.000217 *3*; α(N+..)=6.34×10^{-5} *9* B(E2)(W.u.)=0.56 *+12−17* Mult.: from γ′s to 2$^+$ and Coulomb excitation.
1361.585	2^+	226.270 *3*	4.3 *10*	1135.312	0^+	[E2]	0.238		B(E2)(W.u.)=5 *5* α(K)=0.1244 *18*; α(L)=0.0855 *12*; α(M)=0.0217 *3*; α(N+..)=0.00618 *9*
		346.541 *3*	22 *4*	1015.044	3^+	[M1]	0.207		B(M1)(W.u.)=0.0010 *9* α(K)=0.1707 *24*; α(L)=0.0277 *4*; α(M)=0.00640 *9*; α(N+..)=0.00189 *3*

From ENSDF

Adopted Levels, Gammas (continued)

$\gamma(^{196}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[d]	α[g]	$I_{(\gamma+ce)}$	Comments
1361.585	2^+	484.707 *25*	4.7 *13*	876.865	4^+	[E2]	0.0267		B(E2)(W.u.)=0.13 *12* α(K)=0.0196 *3*; α(L)=0.00544 *8*; α(M)=0.001323 *19*; α(N+..)=0.000382 *6*
		672.900 *7*	100 *7*	688.693	2^+	(M1+E2)	0.024 *12*		B(M1)(W.u.)=0.0003 *3*; B(E2)(W.u.)=0.26 *23* α(K)=0.020 *10*; α(L)=0.0034 *14*; α(M)=0.0008 *3*; α(N+..)=0.00023 *9* Mult.: from α(K)exp and K/L in ^{195}Pt(n,γ) E=thermal.
		1005.894 *20*	80 *7*	355.6841	2^+				
		1361.0 *10*	18 *3*	0.0	0^+	[E2]	0.00305		B(E2)(W.u.)=0.0025 *24* α(K)=0.00249 *4*; α(L)=0.000410 *6*; α(M)=9.48×10^{-5} *14*; α(N+..)=5.61×10^{-5} *8* E_γ: from ^{196}Au ε decay.
1373.60	7^-	103.3 *2*	100[@]	1270.214	5^-	E2	4.28 *7*		α(K)=0.685 *10*; α(L)=2.70 *5*; α(M)=0.699 *12*; α(N+..)=0.197 *4* B(E2)(W.u.)=25.9 *13*
1402.727	0^+	714.041 *20*	<2.4[a]	688.693	2^+	[E2]	0.01095		B(E2)(W.u.)<0.41 α(K)=0.00858 *12*; α(L)=0.00181 *3*; α(M)=0.000430 *6*; α(N+..)=0.0001250 *18*
		1047.044 *20*	100 *7*	355.6841	2^+	(E2)	0.00500		B(E2)(W.u.)<5.0 α(K)=0.00406 *6*; α(L)=0.000720 *10*; α(M)=0.0001681 *24*; α(N+..)=4.92×10^{-5} *7*
		1402.7 *7*		0.0	0^+	E0		1.36 *16*	ce(K)=26.9 *11* (1982Ka28). ce(K): Iε is given for per 1000 capture events where it is assumed that 80% of capture events populate the 2(1)$^+$ state. ce(K)=0.90% for E0 branch, relative to the total depopulating intensity from 1403-keV level (1982Ka28). $I_{(\gamma+ce)}$: Iε: From Ice(K)/Σ Iγ=0.90 (1982Ka28), Σ Iγ/Iγ(1047γ)=1.024. X(E0)=B(E0)[O+ to 0+(0)]/B(E2)[0$^+$ to 2+(356)]=0.092 (1982Ka28).
1429.74?	(5^-,6^+)	553.0 *3*	100	876.865	4^+	[E2]	0.0194		α(K)=0.01465 *21*; α(L)=0.00366 *6*; α(M)=0.000882 *13*; α(N+..)=0.000255 *4*
1447.043	3^-	176.830 *3*	8.7 *23*	1270.214	5^-	[E2]	0.551		B(E2)(W.u.)=4.1 *16* α(K)=0.231 *4*; α(L)=0.241 *4*; α(M)=0.0617 *9*; α(N+..)=0.01749 *25*
		431.982 *24*	8.7 *13*	1015.044	3^+	[E1,M2]	0.19 *18*		B(E1)(W.u.)=1.1×10^{-7} *4*; B(M2)(W.u.)=2.6 *9* α(K)=0.15 *14*; α(L)=0.03 *3*; α(M)=0.007 *7*; α(N+..)=0.0021 *21*
		570.203 *18*	4.7 *13*	876.865	4^+	(E1+M2)	0.08 *8*		α(K)=0.07 *7*; α(L)=0.013 *13* B(E1)(W.u.)=(2.5×10^{-8} *10*); B(M2)(W.u.)=(0.36 *14*) Mult.: α(K)exp=0.016 *6* consistent with E1+M2 or M1+E2. The decay scheme requires Δπ=yes. α(K)exp gives δ=0.31 *+9−11*.
		758.358 *10*	20 *7*	688.693	2^+	E1	0.00356		B(E1)(W.u.)=9.E−8 *4* α(K)=0.00298 *5*; α(L)=0.000445 *7*; α(M)=0.0001016 *15*; α(N+..)=2.98×10^{-5} *5*

$^{196}_{78}Pt_{118}$-11

$\gamma(^{196}Pt)$ (continued)

E_i(level)	J^{π}_i	E_γ[†]	I_γ[‡]	E_f	J^{π}_f	Mult.[d]	α[g]	Comments
								Measured prompt nonyrast γ production cross sections in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
1447.043	3^-	1091.331 *17*	100 *7*	355.6841	2^+	E1	0.00181	B(E1)(W.u.)=1.5×10^{-7} *5* α(K)=0.001521 *22*; α(L)=0.000222 *4*; α(M)=5.06×10^{-5} *7*; α(N+..)=1.486×10^{-5} *21* Measured prompt nonyrast γ production cross sections in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
		1446.84[i] *12*	15[i] *3*	0.0	0^+	[E3]	0.00554	B(E3)(W.u.)=5.9 *21* α(K)=0.00441 *7*; α(L)=0.000849 *12*; α(M)=0.000200 *3*; α(N+..)=7.99×10^{-5} *12* α: E3 α(theory)′s mult. By 0.975 *10* (Cf. 1990Ne01).
1525.8	6^+	649.3 *7*	100[b]	876.865	4^+	[E2]	0.01348	α(K)=0.01043 *15*; α(L)=0.00233 *4*; α(M)=0.000556 *8*; α(N+..)=0.0001614 *24* B(E2)(W.u.)=73 *+4−73* Mult.: from Coulomb excitation.
1535.8	4^+	521 *1*	100[b] *7*	1015.044	3^+	[M1,E2]	0.046 *24*	α(K)=0.037 *21*; α(L)=0.0068 *25*; α(M)=0.0016 *6*; α(N+..)=0.00047 *17*
		847 *1*	0.18[b] *7*	688.693	2^+	[E2]	0.00765	α(K)=0.00611 *9*; α(L)=0.001178 *17*; α(M)=0.000278 *4*; α(N+..)=8.10×10^{-5} *12*
		1180 *1*	0.22[b] *9*	355.6841	2^+	[E2]	0.00397	α(K)=0.00325 *5*; α(L)=0.000554 *8*; α(M)=0.0001288 *19*; α(N+..)=4.04×10^{-5} *6*
1604.494	2^+	201.769 *6*	4 *1*	1402.727	0^+	(E2)	0.349	α(K)=0.1662 *24*; α(L)=0.1375 *20*; α(M)=0.0351 *5*; α(N+..)=0.00995 *14* Mult.: from K/L in ^{195}Pt(n,γ) E=thermal.
		589.434 *20*	4 *2*	1015.044	3^+	[M1,E2]	0.034 *17*	α(K)=0.027 *15*; α(L)=0.0049 *19*; α(M)=0.0011 *4*; α(N+..)=0.00033 *13*
		727.581 *23*	44 *9*	876.865	4^+	(E2)	0.01051	α(K)=0.00826 *12*; α(L)=0.001722 *25*; α(M)=0.000409 *6*; α(N+..)=0.0001190 *17* Mult.: from ce(K) in ^{195}Pt(n,γ) E=thermal.
		915.80 *6*	40 *4*	688.693	2^+	[M1,E2]	0.011 *5*	α(K)=0.009 *5*; α(L)=0.0016 *6*; α(M)=0.00036 *14*; α(N+..)=0.00011 *4*
		1248.84 *3*	100 *9*	355.6841	2^+	E0+M1+E2	0.0055 *20*	α(K)exp=0.058 *5* (1982Ka28) α(K)=0.0046 *17*; α(L)=0.00073 *24*; α(M)=0.00017 *6*; α(N+..)=6.2×10^{-5} *19* ce(K): Relative to 1249γ intensity as 100 from 1982Ka28. Mult.: from α(K)exp in ^{195}Pt(n,γ) E=thermal.
		1604.3 *3*	20 *4*	0.0	0^+	[E2]	0.00233	α(K)=0.00185 *3*; α(L)=0.000294 *5*; α(M)=6.76×10^{-5} *10*; α(N+..)=0.0001218 *17*
1609.74	(5^+)	594.7 *2*	100[&]	1015.044	3^+	[E2]	0.01643	α(K)=0.01254 *18*; α(L)=0.00297 *5*; α(M)=0.000713 *10*; α(N+..)=0.000207 *3*
1677.256	2^+	315.58 *8*	3 *1*	1361.585	2^+	[M1,E2]	0.18 *9*	α(K)=0.14 *9*; α(L)=0.030 *7*; α(M)=0.0071 *12*; α(N+..)=0.0021 *4*
		541.942 *20*	5 *1*	1135.312	0^+	[E2]	0.0204	α(K)=0.01531 *22*; α(L)=0.00388 *6*; α(M)=0.000937 *14*; α(N+..)=0.000271 *4*
		662.188 *16*	13 *3*	1015.044	3^+	[M1,E2]	0.025 *13*	α(K)=0.021 *11*; α(L)=0.0036 *14*; α(M)=0.0008 *3*; α(N+..)=0.00024 *10*
		800.38 *5*	5 *1*	876.865	4^+	[E2]	0.00860	α(K)=0.00683 *10*; α(L)=0.001353 *19*; α(M)=0.000320 *5*; α(N+..)=9.32×10^{-5} *13*

$^{196}_{78}Pt_{118}$-12

γ(^{196}Pt) (continued)

E_i(level)	J^π_i	E_γ [†]	I_γ [‡]	E_f	J^π_f	Mult. [d]	α [g]	$I_{(\gamma+ce)}$	Comments
1677.256	2^+	988.54 *7*	21 *3*	688.693	2^+	E0+M1+E2	0.010 *4*		α(K)exp=0.089 *11* (1982Ka28); ce(K)=1.6 *3* α(K)=0.008 *4*; α(L)=0.0013 *5*; α(M)=0.00030 *11*; α(N+..)=9.E−5 *4* ce(K): Relative to 1678γ intensity as 100 from 1982Ka28. α(K)(E2)=0.0046; α(K)(M1)=0.015. Mult.: from α(K)exp in ^{195}Pt(n,γ) E=thermal. E0 violates the O(6) selection rules for both σ and τ (1982Ka28).
		1321.74 *4*	60 *20*	355.6841	2^+	[M1,E2]	0.0049 *17*		α(K)=0.0040 *14*; α(L)=0.00064 *21*; α(M)=0.00015 *5*; α(N+..)=6.9×10^{-5} *20*
		1677.5 *2*	100 *13*	0.0	0^+	[E2]	0.00218		α(K)=0.001702 *24*; α(L)=0.000269 *4*; α(M)=6.18×10^{-5} *9*; α(N+..)=0.0001481 *21*
1679.81	(6^-)	409.6 *2*	100 [&]	1270.214	5^-	[M1,E2]	0.09 *5*		α(K)=0.07 *5*; α(L)=0.014 *5*; α(M)=0.0033 *10*; α(N+..)=0.0010 *3*
1754.655	$3^-,4^+$	307.616 *9*	73 *14*	1447.043	3^-	[M1,E2]	0.19 *10*		α(K)=0.15 *9*; α(L)=0.032 *7*; α(M)=0.0077 *13*; α(N+..)=0.0022 *4*
		484.438 *11*	100 *32*	1270.214	5^-	[M1,E2]	0.06 *3*		α(K)=0.05 *3*; α(L)=0.009 *4*; α(M)=0.0020 *7*; α(N+..)=0.00063 *22*
		877.77 *3*	86 *14*	876.865	4^+	[E1,M2]	0.024 *22*		α(K)=0.020 *18*; α(L)=0.003 *4*; α(M)=0.0008 *8*; α(N+..)=0.00024 *22*
1795.09	$2^+,(1^-)$	1106.6 *2*	40 *7*	688.693	2^+				
		1439.38 *6*	100 *8*	355.6841	2^+				
		1795.0 *3*	25 *6*	0.0	0^+				
1802.302	$1^+,2^+$	440.709 *9*	3 *2*	1361.585	2^+	[M1,E2]	0.07 *4*		α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0026 *9*; α(N+..)=0.0008 *3*
		666.99 *3*	2 *1*	1135.312	0^+				
		1113.72 *4*	19 *3*	688.693	2^+	[M1,E2]	0.007 *3*		α(K)=0.006 *3*; α(L)=0.0010 *4*
		1446.84 [i] *12*	12 [i] *3*	355.6841	2^+	[M1,E2]	0.0040 *13*		α(K)=0.0033 *11*; α(L)=0.00052 *16*; α(M)=0.00012 *4*; α(N+..)=9.9×10^{-5} *24*
		1802.3 *2*	100 *8*	0.0	0^+				
1804.80	$(3^+),4^+$	443.21 *10*	100	1361.585	2^+	E2	0.0335		α(K)=0.0240 *4*; α(L)=0.00722 *11*; α(M)=0.001767 *25*; α(N+..)=0.000509 *8*
1820.69	9^-	447.1 *2*	100 [@]	1373.60	7^-	E2	0.0327		B(E2)(W.u.)>0.45 α(K)=0.0235 *4*; α(L)=0.00702 *10*; α(M)=0.001717 *25*; α(N+..)=0.000495 *7*
1823.23	0^+	1134.55 *8*	<0.8 [a]	688.693	2^+	[E2]	0.00428		α(K)=0.00349 *5*; α(L)=0.000604 *9*; α(M)=0.0001404 *20*; α(N+..)=4.18×10^{-5} *6*
		1467.53 *8*	100 *10*	355.6841	2^+	[E2]	0.00268		α(K)=0.00217 *3*; α(L)=0.000351 *5*; α(M)=8.11×10^{-5} *12*; α(N+..)=8.01×10^{-5} *12*
		1823.2 *4*		0.0	0^+	E0		<0.11	ce(K)<0.6 (1982Ka28). ce(K): Iε is given for 1000 capture events where it is assumed that 80% of capture events populate the 2(1)$^+$ state. ce(K)<0.08% for E0 branch, relative to the total depopulating intensity from 1823-keV level (1982Ka28).

$^{196}_{78}$Pt$_{118}$-13

γ(^{196}Pt) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$[†]	I$_\gamma$[‡]	E$_f$	J$^\pi_f$	Mult.[d]	α[g]	Comments
								X(E0)=B(E0)(0$^+$ to 0+(0))/B(E2)(0$^+$ to 2+(356))<0.03 (1982Ka28).
1825.715	2$^+$	378.675 *14*	22 *3*	1447.043	3$^-$	[E1]	0.01520	α(K)=0.01262 *18*; α(L)=0.00199 *3*; α(M)=0.000458 *7*; α(N+..)=0.0001333 *19*
		423.00 *3*	9 *1*	1402.727	0$^+$	[E2]	0.0378	α(K)=0.0267 *4*; α(L)=0.00841 *12*; α(M)=0.00206 *3*; α(N+..)=0.000594 *9*
		464.126 *9*	4.2 *9*	1361.585	2$^+$			
		690.403 *12*	17 *3*	1135.312	0$^+$	[E2]	0.01177	α(K)=0.00919 *13*; α(L)=0.00197 *3*; α(M)=0.000470 *7*; α(N+..)=0.0001367 *20*
		1137.01 *3*	32 *10*	688.693	2$^+$			
		1826.0 *2*	100 *8*	0.0	0$^+$	[E2]	0.00195	α(K)=0.001459 *21*; α(L)=0.000227 *4*; α(M)=5.22×10^{-5} *8*; α(N+..)=0.000207 *3*
1831.99	3$^+$	816.94 *14*	100 *3*	1015.044	3$^+$	M1+E2[e]	0.015 *7*	α(K)=0.012 *6*; α(L)=0.0021 *8*; α(M)=0.00048 *18*; α(N+..)=0.00014 *6*
		955.5 *5*	7 *2*	876.865	4$^+$	M1+E2[e]	0.010 *5*	α(K)=0.009 *4*; α(L)=0.0014 *6*; α(M)=0.00032 *12*; α(N+..)=0.00010 *4*
		1143.2 *3*	32 *3*	688.693	2$^+$	M1+E2[e]	0.007 *3*	α(K)=0.0056 *22*; α(L)=0.0009 *4*; α(M)=0.00021 *7*; α(N+..)=6.3×10^{-5} *22*
		1476.01		355.6841	2$^+$	M1+E2[e]	0.0038 *12*	α(K)=0.0031 *10*; α(L)=0.00049 *15*; α(M)=0.00011 *4*; α(N+..)=0.00011 *3*
1847.348	2$^+$	242.858 *17*	1.1 *5*	1604.494	2$^+$	[M1,E2]	0.37 *18*	α(K)=0.28 *18*; α(L)=0.069 *5*; α(M)=0.0166 *5*; α(N+..)=0.00482 *21*
		1158.82 *13*	5 *1*	688.693	2$^+$	E0+M1+E2	0.0066 *25*	α(K)exp<0.02 (1982Ka28); ce(K)≤0.06 α(K)=0.0054 *21*; α(L)=0.0009 *3*; α(M)=0.00020 *7*; α(N+..)=6.1×10^{-5} *21* ce(K): Relative to 1492γ intensity as 100 from 1982Ka28. Mult.: from ^{195}Pt(n,γ) E=thermal.
		1491.60 *4*	100 *9*	355.6841	2$^+$	[M1,E2]	0.0038 *12*	α(K)=0.0030 *10*; α(L)=0.00048 *14*; α(M)=0.00011 *4*; α(N+..)=0.00011 *3*
1853.659	2$^+$	560.354 *10*	9.6 *24*	1293.308	4$^+$	[E2]	0.0189	α(K)=0.01424 *20*; α(L)=0.00352 *5*; α(M)=0.000848 *12*; α(N+..)=0.000246 *4*
		1497.85 *6*	100 *9*	355.6841	2$^+$	[M1,E2]	0.0037 *12*	α(K)=0.0030 *10*; α(L)=0.00048 *14*; α(M)=0.00011 *4*; α(N+..)=0.00012 *3*
		1853.6 *3*	20 *3*	0.0	0$^+$	[E2]	0.00191	α(K)=0.001420 *20*; α(L)=0.000221 *3*; α(M)=5.07×10^{-5} *8*; α(N+..)=0.000219 *3*
1883.34	3$^+$,4$^+$	589.99 *11*		1293.308	4$^+$	M1+E2[e]	0.034 *17*	α(K)=0.027 *15*; α(L)=0.0049 *19*; α(M)=0.0011 *4*; α(N+..)=0.00033 *13*
		868.22 *19*	100 *2*	1015.044	3$^+$			
		1195.0 *2*	47 *2*	688.693	2$^+$	M1+E2[e]	0.0061 *23*	α(K)=0.0051 *19*; α(L)=0.0008 *3*; α(M)=0.00019 *7*; α(N+..)=6.0×10^{-5} *20*
		1527.56		355.6841	2$^+$			
1888.139	1$^+$,2$^+$	526.58 *3*	2.6 *7*	1361.585	2$^+$	[M1,E2]	0.045 *24*	B(M1)(W.u.)=0.0006 *4*; B(E2)(W.u.)=0.8 *6* α(K)=0.036 *20*; α(L)=0.0066 *25*; α(M)=0.0016 *6*; α(N+..)=0.00046 *16*
		752.823 *14*	13 *2*	1135.312	0$^+$			
		1199.50 *4*	66 *13*	688.693	2$^+$	[M1,E2]	0.0061 *23*	B(M1)(W.u.)=0.0013 *9*; B(E2)(W.u.)=0.34 *22* α(K)=0.0050 *19*; α(L)=0.0008 *3*; α(M)=0.00019 *7*; α(N+..)=6.0×10^{-5} *20*
		1532.30[i] *5*	72[i] *20*	355.6841	2$^+$	[M1,E2]	0.0036 *11*	B(M1)(W.u.)=0.0007 *5*; B(E2)(W.u.)=0.11 *8* α(K)=0.0029 *9*; α(L)=0.00045 *13*; α(M)=0.00010 *3*; α(N+..)=0.00013 *3*
		1888.4 *2*	100 *8*	0.0	0$^+$			
1901.7	(8$^-$)	528.1 *2*	100[&]	1373.60	7$^-$	[M1,E2]	0.045 *23*	α(K)=0.036 *20*; α(L)=0.0066 *24*; α(M)=0.0015 *6*; α(N+..)=0.00045 *16*
1901.89	5,6,7	631.68 *10*	100	1270.214	5$^-$			
1918.54	0$^+$	1229.65 *13*	18 *4*	688.693	2$^+$	[E2]	0.00367	α(K)=0.00301 *5*; α(L)=0.000508 *8*; α(M)=0.0001177 *17*; α(N+..)=4.17×10^{-5} *6*
		1562.85 *5*	100 *10*	355.6841	2$^+$	[E2]	0.00242	α(K)=0.00194 *3*; α(L)=0.000310 *5*; α(M)=7.13×10^{-5} *10*; α(N+..)=0.0001080 *16*

$^{196}_{78}$Pt$_{118}$-14

$\gamma(^{196}\mathrm{Pt})$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[d]	α[g]	$I_{(\gamma+ce)}$	Comments
1918.54	0^+	1918.5 *8*		0.0	0^+	E0		0.16 *3*	ce(K)=1.4 *2* (1982Ka28). ce(K): Iε is given for 1000 capture events where it is assumed that 80% of capture events populate the $2(1)^+$ state. ce(K)=0.088% for E0 branch, relative to the total depopulating intensity from 1919-keV level (1982Ka28). X(E0)=B(E0)[0^+ to 0+(0)]/B(E2)[0^+ to 2+(356)]=0.060 (1982Ka28).
1932.01	$0^+,1^+,2^+$	1576.32 *11*	100	355.6841	2^+				
1957.25	$(4),5^+,6^+$	1080.39 *20*	100	876.865	4^+				B(E2)↓=0.49 *6* (2002Ta14)
1968.906	$1^+,(2^+)$	566.174 *8*	23 *6*	1402.727	0^+				
		833.58 *5*	31 *3*	1135.312	0^+				
		1613.1 *3*	14 *3*	355.6841	2^+				
		1969.1 *2*	100 *13*	0.0	0^+				
1984.93	$1^+,2^+$	623.34 *5*	100 *17*	1361.585	2^+	[M1,E2]	0.029 *15*		α(K)=0.024 *13*; α(L)=0.0042 *16*; α(M)=0.0010 *4*; α(N+..)=0.00029 *11*
		849.74[j] *9*	58 *17*	1135.312	0^+				
		969.94 *12*	67 *17*	1015.044	3^+				
		1296.6 *3*	100 *15*	688.693	2^+				
1988.218	$1^+,2^+$	541.174 *7*	35 *8*	1447.043	3^-				
		626.636 *18*	14 *2*	1361.585	2^+				
		1632.4 *2*	100 *8*	355.6841	2^+				
1991.7	$3,4^+$	1303.0 *4*	100	688.693	2^+				
1998.96	2^+	705.65 *4*	13 *3*	1293.308	4^+	[E2]	0.01123		α(K)=0.00879 *13*; α(L)=0.00186 *3*; α(M)=0.000443 *7*; α(N+..)=0.0001289 *18*
		1643.4 *2*	100 *8*	355.6841	2^+	[M1,E2]	0.0031 *9*		α(K)=0.0025 *7*; α(L)=0.00038 *11*; α(M)=8.8×10^{-5} *24*; α(N+..)=0.00017 *4*
		1999.3 *4*	42 *13*	0.0	0^+	[E2]	1.76×10^{-3}		α(K)=0.001238 *18*; α(L)=0.000191 *3*; α(M)=4.37×10^{-5} *7*; α(N+..)=0.000282 *4*
2002.36	$(3^+),4^+$	1125.5 *2*	100	876.865	4^+	M1+E2[e]	0.007 *3*		α(K)=0.0058 *23*; α(L)=0.0009 *4*; α(M)=0.00022 *8*; α(N+..)=6.4×10^{-5} *23*
2006	4^+	735.67 *9*	100	1270.214	5^-				
2007.4	6^+	481.4 *7*	9.2[b] *18*	1525.8	6^+	[E2,M1]	0.06 *3*		α(K)=0.05 *3*; α(L)=0.009 *4*; α(M)=0.0021 *7*; α(N+..)=0.00064 *22* B(M1)(W.u.)=0.010 *3*; B(E2)(W.u.)=16 *5* Mult.: γ′s to 6^+. δ: extrapolated using a theoretical model of Greiner (1966GrZX) see Coulomb excitation (1990Ma37). 1966GrZX: w.greiner nucl.phys. 80 *417* (1966).
		714.0 *7*	100[b] *3*	1293.308	4^+	E2	0.01095		B(E2)(W.u.)=49 *13* α(K)=0.00859 *13*; α(L)=0.00181 *3*; α(M)=0.000430 *7*; α(N+..)=0.0001250 *18* Mult.: from Coulomb excitation.

$^{196}_{78}\mathrm{Pt}_{118}$-15

$\gamma(^{196}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[d]	α[g]	Comments
2007.4	6^+	1130.7 *7*	9.8[b] *12*	876.865	4^+	E2	0.00431	B(E2)(W.u.)=0.48 *14* α(K)=0.00352 *5*; α(L)=0.000608 *9*; α(M)=0.0001414 *20*; α(N+..)=4.20×10^{-5} *6* Mult.: from Coulomb excitation.
2013.88	2^+	566.55[j] *4*	57 *14*	1447.043	3^-	[E1]	0.00636	α(K)=0.00531 *8*; α(L)=0.000811 *12*; α(M)=0.000186 *3*; α(N+..)=5.42×10^{-5} *8*
		1137.01 *3*	1.0×10^2 *5*	876.865	4^+	[E2]	0.00426	α(K)=0.00348 *5*; α(L)=0.000601 *9*; α(M)=0.0001397 *20*; α(N+..)=4.17×10^{-5} *6*
2029.8	3^+	1014.25[j]		1015.044	3^+			
		1341.4 *3*	82 *7*	688.693	2^+	M1+E2[e]	0.0047 *16*	α(K)=0.0039 *14*; α(L)=0.00062 *20*; α(M)=0.00014 *5*; α(N+..)=7.3×10^{-5} *20*
		1672.7 *7*	100 *7*	355.6841	2^+	M1+E2[e]	0.0030 *8*	α(K)=0.0024 *7*; α(L)=0.00037 *10*; α(M)=8.4×10^{-5} *23*; α(N+..)=0.00019 *4*
2046.99	2^+	1031.93 *8*	17 *3*	1015.044	3^+	[M1]	0.01209	α(K)=0.01004 *14*; α(L)=0.001578 *22*; α(M)=0.000363 *5*; α(N+..)=0.0001070 *15*
		1358.30 *8*	100 *9*	688.693	2^+	[M1,E2]	0.0046 *16*	α(K)=0.0038 *13*; α(L)=0.00060 *19*; α(M)=0.00014 *5*; α(N+..)=7.6×10^{-5} *21*
		1691.7[j] *2*	33 *6*	355.6841	2^+	[M1,E2]	0.0029 *8*	α(K)=0.0023 *7*; α(L)=0.00036 *10*; α(M)=8.2×10^{-5} *22*; α(N+..)=0.00019 *5*
2067.06	5^-,6	796.85 *11*	100	1270.214	5^-			
2069.29	0^+,1^+,2^+	1713.6 *2*	100	355.6841	2^+			
2084.30	4^-,5,6^-	814.09 *11*	100	1270.214	5^-			
2087.327	3^-,4^+	726.0[h] *7*	46[h] *10*	1361.585	2^+			
		817.112 *20*	85 *8*	1270.214	5^-			
		1210.2 *4*	44 *10*	876.865	4^+			
		1397.9[j] *4*	38 *13*	688.693	2^+			
		1731.9 *3*	100 *18*	355.6841	2^+			
2093.0	(2^+)	245.655[j] *5*	3.4 *14*	1847.348	2^+			
		645.95[j] *3*	11 *3*	1447.043	3^-			
		1404.6[j] *2*	29 *3*	688.693	2^+			
		1736.9[j] *2*	100 *8*	355.6841	2^+			
2124.389	3^-,4^+	677.34 *3*	38 *14*	1447.043	3^-			
		854.18 *3*	55 *10*	1270.214	5^-			
		1768.9 *5*	100 *24*	355.6841	2^+			
2126.935	2^+	372.292[j] *22*	2.2 *10*	1754.655	3^-,4^+			α(K)= 0.471; α(L)= 0.1008; α(M)=0.02407; α(N+..)=0.00753
		522.440 *11*	40 *11*	1604.494	2^+			
		1771.5 *3*	100 *11*	355.6841	2^+			
2161.5?	(9^-,10,11^-)	340.7 *4*	100	1820.69	9^-			
2162.70	2^+	715.3[h] *4*	8[h] *2*	1447.043	3^-			
		1473.97 *8*	100 *17*	688.693	2^+			
		1807.3 *2*	92 *9*	355.6841	2^+			
2170.73	(5),$6^{(-)}$	900.52 *19*	100	1270.214	5^-			

$^{196}_{78}Pt_{118}$-16

Adopted Levels, Gammas (continued)

γ(^{196}Pt) (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[‡]	E_f	J^{π}_f	Mult.[d]	α[g]	$I_{(\gamma+ce)}$	Comments
2174.43	$0^+,2^+$	1485.81 *15*	100 *22*	688.693	2^+				
		1818.6 *2*	78 *17*	355.6841	2^+				
2183.6	$1^+,2^+$	1048.3 *7*	48 *14*	1135.312	0^+				
		2183.6 *3*	100 *13*	0.0	0^+				
2199.45	0^+	1510.75 *5*	100	688.693	2^+				
		2199.4 *8*		0.0	0^+	E0		0.128 *15*	ce(K)=1.1 *2* (1982Ka28). ce(K): Iε is given for 1000 capture events where it is assumed that 80% of capture events populate the 2(1)$^+$ state. ce(K)=0.085% for E0 branch, relative to the total depopulating intensity from 2199-keV level (1982Ka28).
2204.431	$1^+,2^+$	316.27[j] *3*	47 *26*	1888.139	$1^+,2^+$				
		402.130 *7*	68 *11*	1802.302	$1^+,2^+$				
		1069.4 *2*	79 *21*	1135.312	0^+	[E2]	0.00480		α(K)=0.00390 *6*; α(L)=0.000687 *10*; α(M)=0.0001602 *23*; α(N+..)=4.69$\times10^{-5}$ *7*
		1515.5 *3*	100 *32*	688.693	2^+				
		1848.7 *4*	95 *21*	355.6841	2^+				
2229.6	2^+	1353.0[hj] *4*	17[h] *7*	876.865	4^+	[E2]	0.00308		α(K)=0.00252 *4*; α(L)=0.000415 *6*; α(M)=9.60$\times10^{-5}$ *14*; α(N+..)=5.47$\times10^{-5}$ *8*
		1873.9 *3*	100 *11*	355.6841	2^+				
2236.32	$(5),6^-,7^-$	966.11 *21*	100	1270.214	5^-				
2244.57	$3^+,4,5^+$	1367.7 *2*	100	876.865	4^+				
2245.559	$1^+,2^+$	443.258 *9*	14 *3*	1802.302	$1^+,2^+$				
		641.12[j] *4*	16 *3*	1604.494	2^+				
		2245.8 *3*	100 *7*	0.0	0^+				
2252.7	8^+	432 *1*	19[b] *3*	1820.69	9^-	[E1]	0.01133 *17*		α(K)=0.00943 *14*; α(L)=0.001471 *22*; α(M)=0.000337 *5*; α(N+..)=9.85$\times10^{-5}$ *15* B(E1)(W.u.)=0.00089 *+18−17*
		727.4 *7*	100[b] *3*	1525.8	6^+	[E2]	0.01052		α(K)=0.00827 *12*; α(L)=0.001723 *25*; α(M)=0.000409 *6*; α(N+..)=0.0001190 *17* B(E2)(W.u.)=78 *+10−78* Mult.: from Coulomb excitation.
		878 *1*	5.7[b] *11*	1373.60	7^-	[E1]	0.00269		α(K)=0.00226 *4*; α(L)=0.000335 *5*; α(M)=7.63$\times10^{-5}$ *11*; α(N+..)=2.24$\times10^{-5}$ *4* B(E1)(W.u.)=3.2$\times10^{-5}$ *+8−7*
2262.428	2^+	293.522 *10*	26[a] *5*	1968.906	$1^+,(2^+)$	[M1,E2]	0.21 *11*		α(K)=0.17 *11*; α(L)=0.037 *7*; α(M)=0.0089 *12*; α(N+..)=0.0026 *4*
		1246.8 *6*	33[a] *10*	1015.044	3^+	[M1]	0.00752		α(K)=0.00624 *9*; α(L)=0.000976 *14*; α(M)=0.000224 *4*; α(N+..)=8.05$\times10^{-5}$ *12*
		1573.5 *3*	100[a] *25*	688.693	2^+				
		1907.0 *6*	21[a] *5*	355.6841	2^+				

Adopted Levels, Gammas (continued)

γ(^{196}Pt) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[d]	α[g]	Comments
2271.2	2^+	1582.5 *4*	100	688.693	2^+	M1+E2[e]	0.0033 *10*	α(K)=0.0027 *8*; α(L)=0.00042 *12*; α(M)=0.00010 *3*; α(N+..)=0.00015 *4*
2309.23	$(2)^+$	461.86 *3*	2.5 *5*	1847.348	2^+	[M1,E2]	0.06 *4*	α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0022 *7*; α(N+..)=0.00066 *22*
		947.4 *6*	11 *5*	1361.585	2^+	[M1,E2]	0.011 *5*	α(K)=0.009 *4*; α(L)=0.0015 *6*
		1620.7 *3*	52 *9*	688.693	2^+			
		1953.1 *6*	14[a] *5*	355.6841	2^+			
		2310.9[i] *3*	100[i] *18*	0.0	0^+	[E2]	1.56×10^{-3}	α(K)=0.000954 *14*; α(L)=0.0001446 *21*; α(M)=3.31×10^{-5} *5*; α(N+..)=0.000425 *6*
2324.224	$1^+,2^+$	470.567 *19*	4.4 *15*	1853.659	2^+	[M1,E2]	0.06 *4*	α(K)=0.05 *3*; α(L)=0.009 *4*; α(M)=0.0022 *8*; α(N+..)=0.00068 *23*
		1188.9 *2*	29 *6*	1135.312	0^+			
		1635.2 *2*	100 *15*	688.693	2^+			
2345.3	$1^+,2^+$	1330.6 *5*	52 *16*	1015.044	3^+			
		1656.5 *3*	100 *13*	688.693	2^+			
		2344.1 *10*	0.10[c]	0.0	0^+			
2365.976	2^+	761.482 *16*	100 *13*	1604.494	2^+	[M1,E2]	0.018 *9*	α(K)=0.015 *8*; α(L)=0.0026 *11*
		918.81 *14*	78 *9*	1447.043	3^-	[E1]	0.00247	α(K)=0.00208 *3*; α(L)=0.000307 *5*; α(M)=6.99×10^{-5} *10*; α(N+..)=2.05×10^{-5} *3*
2375.11	$1^+,2^+$	770.8 *4*	7[a] *4*	1604.494	2^+			
		1686.6 *3*	39 *10*	688.693	2^+			
		2374.8 *3*	100 *10*	0.0	0^+			
2383.33	$0^+,1^+,2^+$	369.46 *5*	15 *8*	2013.88	2^+			
		1694.3 *4*	100 *23*	688.693	2^+			
2403.66	2^+	418.73 *3*	24[a] *6*	1984.93	$1^+,2^+$	[M1,E2]	0.08 *5*	α(K)=0.07 *4*; α(L)=0.013 *5*; α(M)=0.0031 *9*; α(N+..)=0.0010 *3*
		726.0[h] *7*	39[ha] *6*	1677.256	2^+	[M1,E2]	0.020 *10*	α(K)=0.016 *9*; α(L)=0.0028 *11*; α(M)=0.00065 *25*; α(N+..)=0.00019 *8*
		956.4 *5*	65 *22*	1447.043	3^-	[E1]	0.00230	α(K)=0.00193 *3*; α(L)=0.000284 *4*; α(M)=6.48×10^{-5} *9*; α(N+..)=1.90×10^{-5} *3*
		1042.4 *6*	14[a] *6*	1361.585	2^+	[M1,E2]	0.008 *4*	α(K)=0.007 *3*; α(L)=0.0011 *4*; α(M)=0.00026 *10*; α(N+..)=8.E−5 *3*
		1526.7 *2*	100[a] *16*	876.865	4^+	[E2]	0.00252	α(K)=0.00202 *3*; α(L)=0.000325 *5*; α(M)=7.48×10^{-5} *11*; α(N+..)=9.67×10^{-5} *14*
2420.4	$(2,3,4^+)$	1731.7 *1*	100	688.693	2^+			
2422.51	$0^+,1^+,2^+$	423.7 *3*	6.5 *22*	1998.96	2^+			
		568.85 *3*	4.3 *14*	1853.659	2^+			
		2066.5 *3*	100 *14*	355.6841	2^+			
2423.42	$(1^+,2^+,3)$	1408.4 *1*	18 *5*	1015.044	3^+			
		2067.7 *1*	100 *5*	355.6841	2^+			
2423.7	3^-	976.7 *3*	100 *25*	1447.043	3^-			
		2067.6 *7*	92 *42*	355.6841	2^+			

$\gamma(^{196}Pt)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[d]	α[g]	Comments
2429.7	3^-	1552.9 *3*	100	876.865	4^+			
2433.7	(0,1,2,3,4)	2078.0 *2*	100	355.6841	2^+			
2438.0	$(1^+,2,3,4^+)$	1076.4 *1*	56 *8*	1361.585	2^+			
		1422.9 *1*	100 *10*	1015.044	3^+			
		1749.0 *2*	37 *12*	688.693	2^+			
2443.93	2^+	430.2[j] *3*	40 *9*	2013.88	2^+	[M1,E2]	0.08 *4*	α(K)=0.06 *4*; α(L)=0.012 *4*; α(M)=0.0028 *9*; α(N+..)=0.00081 *25*
		1150.8 *3*	100 *20*	1293.308	4^+	[E2]	0.00416	α(K)=0.00340 *5*; α(L)=0.000585 *9*; α(M)=0.0001360 *19*; α(N+..)=4.10×10^{-5} *6*
		1428.7 *3*	87 *20*	1015.044	3^+	[M1]	0.00541	α(K)=0.00444 *7*; α(L)=0.000692 *10*; α(M)=0.0001587 *23*; α(N+..)=0.0001165 *17*
2454.2	$(7^-,8^+)$	633.5 *3*	100[@] *4*	1820.69	9^-			
		1024.6 *3*	23[@] *3*	1429.74?	$(5^-,6^+)$			
		1080.5 *5*	10[@] *2*	1373.60	7^-			
2460.1	$0^+,1^+,2^+$	2104.4 *3*	100	355.6841	2^+			
2468.0	$10^-,11^-$	647.3 *2*	100[@]	1820.69	9^-	E2	0.01357	B(E2)(W.u.)>0.073 α(K)=0.01050 *15*; α(L)=0.00235 *4*; α(M)=0.000561 *8*; α(N+..)=0.0001628 *23* Mult.: from ^{196}Ir β^- decay (1.40 h).
2469.85	$1^-,2^+$	715.3[h] *4*	10[h] *3*	1754.655	$3^-,4^+$			α(K)= 0.0676; α(L)=0.01250 E_γ: questionable energy value.
		1334.3 *3*	33 *7*	1135.312	0^+			α(K)=0.00260; α(L)=0.00043
		2114.4 *3*	56 *7*	355.6841	2^+			
		2469.7[i] *4*	100[i] *3*	0.0	0^+			
2488.238	$1^+,2^+$	225.810 *18*	16 *7*	2262.428	2^+			
		1353.0[hj] *4*	30[h] *11*	1135.312	0^+			
		1799.5 *4*	100 *23*	688.693	2^+			
		2132.9 *7*	45 *16*	355.6841	2^+			
		2488.1 *6*	59 *9*	0.0	0^+			
2505.12	2^+	1143.53 *5*	40 *8*	1361.585	2^+			
		2149.1 *7*	26 *10*	355.6841	2^+			
		2505.2 *4*	100 *10*	0.0	0^+			
2527.84	$1^+,2^+$	639.701 *32*	13 *3*	1888.139	$1^+,2^+$			
		1080.5[j] *4*	18 *8*	1447.043	3^-			α(K)=0.00155; α(L)=0.00023
		1839.4 *3*	100 *13*	688.693	2^+			
		2526.9 *10*	0.53[c]	0.0	0^+			
2529.3	2^+	775.1 *5*	15[a] *6*	1754.655	$3^-,4^+$			α(K)= 0.0541; α(L)=0.00984
		2173.5 *3*	100[a] *24*	355.6841	2^+			
2570.8	1^+	1883	<100	688.693	2^+	(M1)	0.00301	α(K)=0.00224 *4*; α(L)=0.000346 *5*; α(M)=7.93×10^{-5} *12*; α(N+..)=0.000349 *5* B(M1)(W.u.)=0.06 *+7−6* E_γ,I_γ,Mult.: from ^{196}Pt(γ,γ').

$^{196}_{78}Pt_{118}$-19

Adopted Levels, Gammas (continued)

$\gamma(^{196}\mathrm{Pt})$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[d]	α[g]	Comments
2570.8	1^+	2216	33 *8*	355.6841	2^+	(E2)	1.60×10^{-3}	B(E2)(W.u.)=1.8 *9* α(K)=0.001029 *15*; α(L)=0.0001566 *22*; α(M)=3.58×10^{-5} *5*; α(N+..)=0.000381 *6* E_γ,I_γ,Mult.: from ^{196}Pt(γ,γ').
		2571	56 *9*	0.0	0^+	M1	0.00202	B(M1)(W.u.)=0.025 *11* α(K)=0.001041 *15*; α(L)=0.0001594 *23*; α(M)=3.65×10^{-5} *6*; α(N+..)=0.000788 *11* E_γ,I_γ,Mult.: from ^{196}Pt(γ,γ').
2603.2	(1,2,3,4,5)	1588.1 *1*	100	1015.044	3^+			E_γ: from level scheme deduced by evaluators, $E\gamma$=1558.1 keV from fig. 2 and table 1 of 1993Di05 may misprint.
2606.0	(2,3,4,5)	1729.2 *1*	100	876.865	4^+			
2608.0	3^-	2252.3 *1*	100	355.6841	2^+			
2626.4	(1,2,3)	1264.8 *1*	100 *5*	1361.585	2^+			
		1938.3 *3*	37 *5*	688.693	2^+			
2631.1	$(2^+,3,4^+)$	2275.4 *2*	100	355.6841	2^+			
2667.246	$1^+,2^+$	698.23 *4*	6.5 *12*	1968.906	$1^+,(2^+)$			
		748.66 *6*	3.8 *15*	1918.54	0^+			
		864.72[j] *8*	2.8 *6*	1802.302	$1^+,2^+$			
		1062.66 *6*	9 *2*	1604.494	2^+			
		1264.6 *2*	13 *2*	1402.727	0^+	[E2]	0.00349	α(K)=0.00285 *4*; α(L)=0.000478 *7*; α(M)=0.0001108 *16*; α(N+..)=4.39×10^{-5} *7* B(E2)(W.u.)=0.97 *+18−22*
		1305.59 *4*	40 *3*	1361.585	2^+			
		1532.30[i] *5*	35[i] *12*	1135.312	0^+	[E2]	0.00250	α(K)=0.00201 *3*; α(L)=0.000322 *5*; α(M)=7.42×10^{-5} *11*; α(N+..)=9.84×10^{-5} *14* B(E2)(W.u.)=1.0 *1*
		1978.6 *2*	100 *8*	688.693	2^+			
		2310.9[i] *3*	38[i] *8*	355.6841	2^+			
2692.2		2336.5 *6*	100	355.6841	2^+			
2711.0	3^-	2022.2 *1*	100 *8*	688.693	2^+			
		2355.3 *1*	59 *8*	355.6841	2^+			
2736.1	(1^+)	2736.1	100	0.0	0^+			
2749.6	$(7^-,8^+)$	497 *1*	26[b] *9*	2252.7	8^+			
		742 *1*	100[b] *11*	2007.4	6^+			
		930 *1*	20[b] *5*	1820.69	9^-			
		1375 *1*	11[b] *5*	1373.60	7^-			
2824.0	1^+	2135	38 *13*	688.693	2^+	(M1)	0.00246	α(K)=0.001643 *23*; α(L)=0.000253 *4*; α(M)=5.80×10^{-5} *9*; α(N+..)=0.000509 *8* B(M1)(W.u.)=0.050 *20* E_γ,I_γ,Mult.: from ^{196}Pt(γ,γ').
		2468	105 *18*	355.6841	2^+	(E2)	1.50×10^{-3}	B(E2)(W.u.)=5.6 *16* α(K)=0.000848 *12*; α(L)=0.0001276 *18*; α(M)=2.92×10^{-5} *4*;

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Adopted Levels, Gammas (continued)

$\gamma(^{196}Pt)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[†]	I_{γ}[‡]	E_f	J^{π}_f	Mult.[d]	α[g]	Comments
								α(N+..)=0.000497 *7* E_{γ},I_{γ},Mult.: from ^{196}Pt(γ,γ').
2824.0	1^+	2824	100 *15*	0.0	0^+	M1	0.00193	B(M1)(W.u.)=0.057 *15* α(K)=0.000827 *12*; α(L)=0.0001264 *18*; α(M)=2.89×10^{-5} *4*; α(N+..)=0.000943 *14* E_{γ},I_{γ},Mult.: from ^{196}Pt(γ,γ').
2875.4	1^+,$(2)^+$	2875.4	100	0.0	0^+			
2888.8?	(9^-,10,11^-)	420.9 *3*	96 *37*	2468.0	10^-,11^-			
		727.3 *2*	100 *37*	2161.5?	(9^-,10,11^-)			
		1068 *2*	2.7 *7*	1820.69	9^-			
3044.0	(10^+)	791.3 *7*	100[b]	2252.7	8^+	[E2]	0.00880	α(K)=0.00699 *10*; α(L)=0.001392 *20*; α(M)=0.000329 *5*; α(N+..)=9.59×10^{-5} *14*
3124.2	1,2	3124.2	100	0.0	0^+			
3131.8	1,2	3131.8	100	0.0	0^+			
3161.9	(9^-,10,11^-)	693.9 *2*	100[@] *7*	2468.0	10^-,11^-			
		1341.5 *5*	6.6[@] *7*	1820.69	9^-			
3176.3?	(9^-)	722.0[#] *4*	100 *10*	2454.2	(7^-,8^+)			
		1355.8[#] *5*	9.0 *15*	1820.69	9^-			
3214.8?	(9^-)	760.6[#] *3*	100 *6*	2454.2	(7^-,8^+)			
		1394.0[#] *5*	9.5 *19*	1820.69	9^-			
3298.0	2^+	3298.0	100	0.0	0^+			
3303.5	(10,11^-)	835.6 *2*	100[@] *3*	2468.0	10^-,11^-			
		849.4 *3*	8.0[@] *8*	2454.2	(7^-,8^+)			
		1482.5 *4*	36[@] *3*	1820.69	9^-			
3366.8	1,2	3366.8	100	0.0	0^+			
3424.3	1,2	3424.3	100	0.0	0^+			

[†] From ^{195}Pt(n,γ) E=thermal, except where noted. For primary γ observed following neutron capture see ^{195}Pt(n,γ). For unplaced γ's (not listed here) see ^{196}Ir β^- decay (1.40 h), ^{195}Pt(n,γ) E=thermal and E=11.9 eV, and Coulomb excitation.

[‡] Relative photon branching ratios from each level, obtained mainly from ^{195}Pt(n,γ) E=thermal, except where noted.

[#] Placement based primarily on decay scheme.

[@] From ^{196}Ir β^- decay (1.40 h).

[&] From ^{196}Pt(d,pnγ).

[a] From ^{195}Pt(n,γ) E=11.9 eV.

[b] From Coulomb excitation.

[c] Photons per 100 n-captures in natural Pt (1970Ro05).

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Adopted Levels, Gammas (continued)

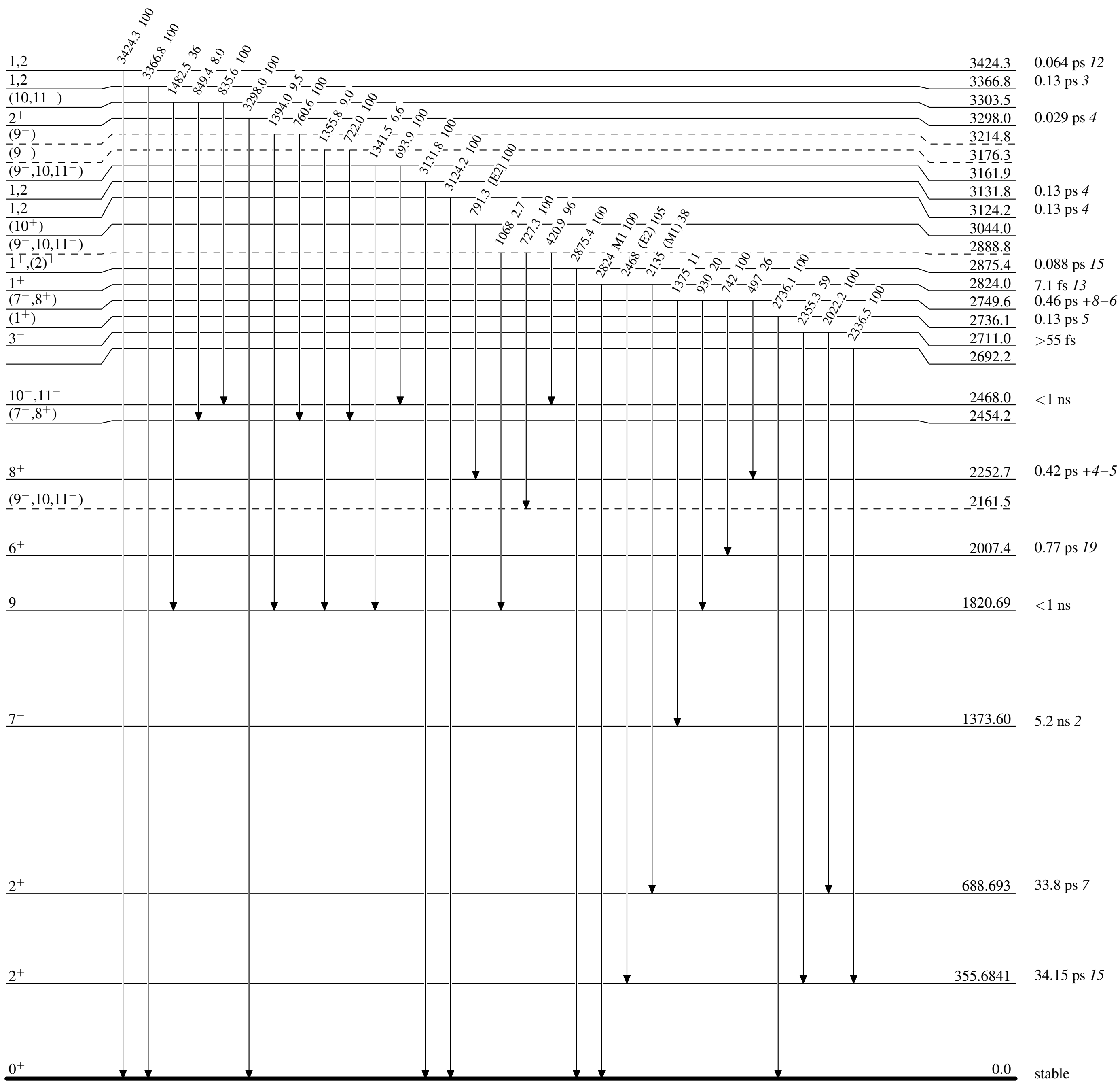
$\gamma(^{196}Pt)$ (continued)

[d] From α(K)exp, K/L, L/M+ in ^{196}Au ε decay (6.1669 d) and ^{196}Ir β^- decay (1.40 h), except where noted.
[e] From $\gamma(\theta)$ in 2002Ta14.
[f] From $\gamma\gamma(\theta)$ in ^{196}Au ε decay (6.1669 d) when sign is given; otherwise, the value is given in Coulomb excitation.
[g] 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.
[h] Multiply placed with undivided intensity.
[i] Multiply placed with intensity suitably divided.
[j] Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

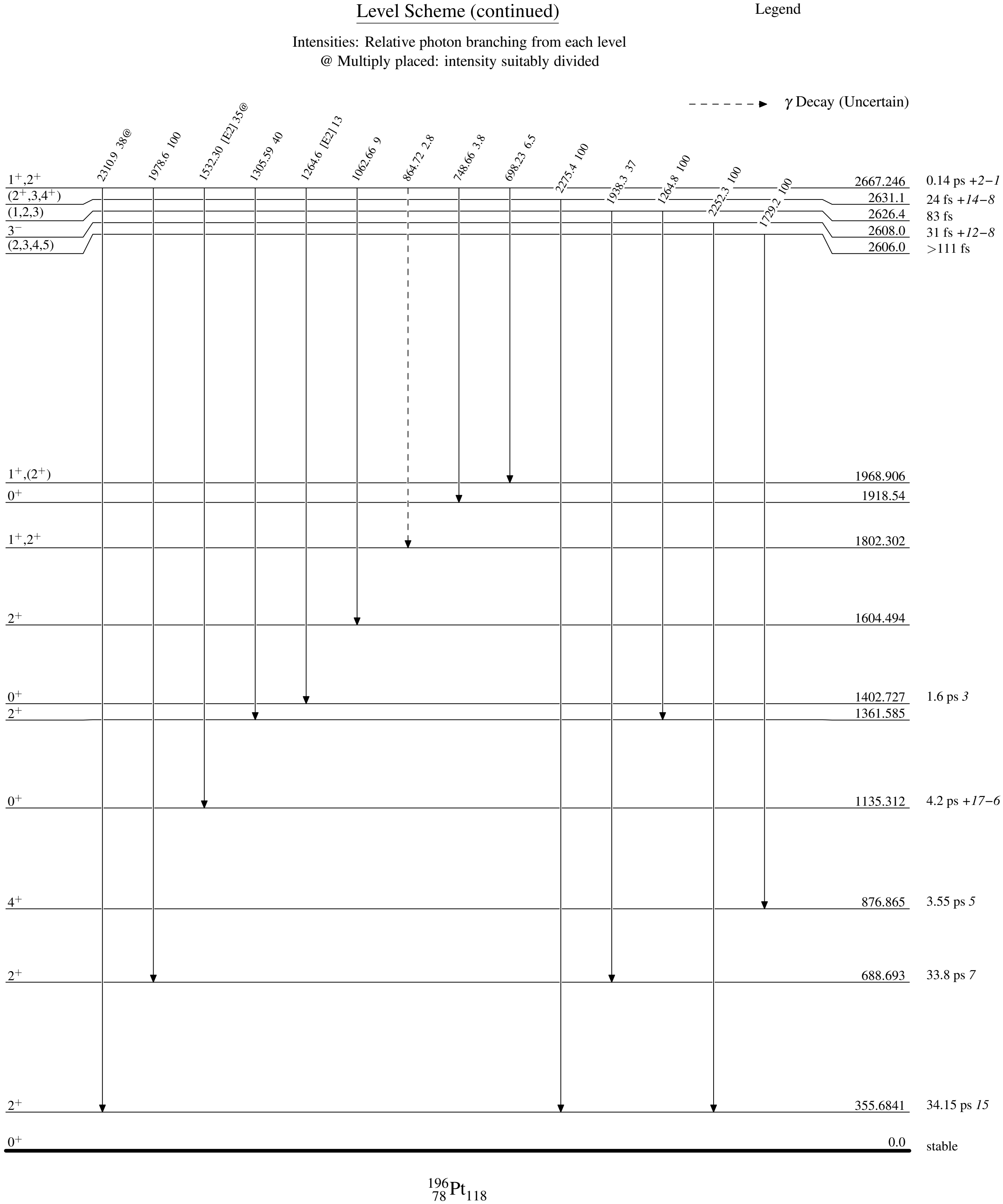


$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

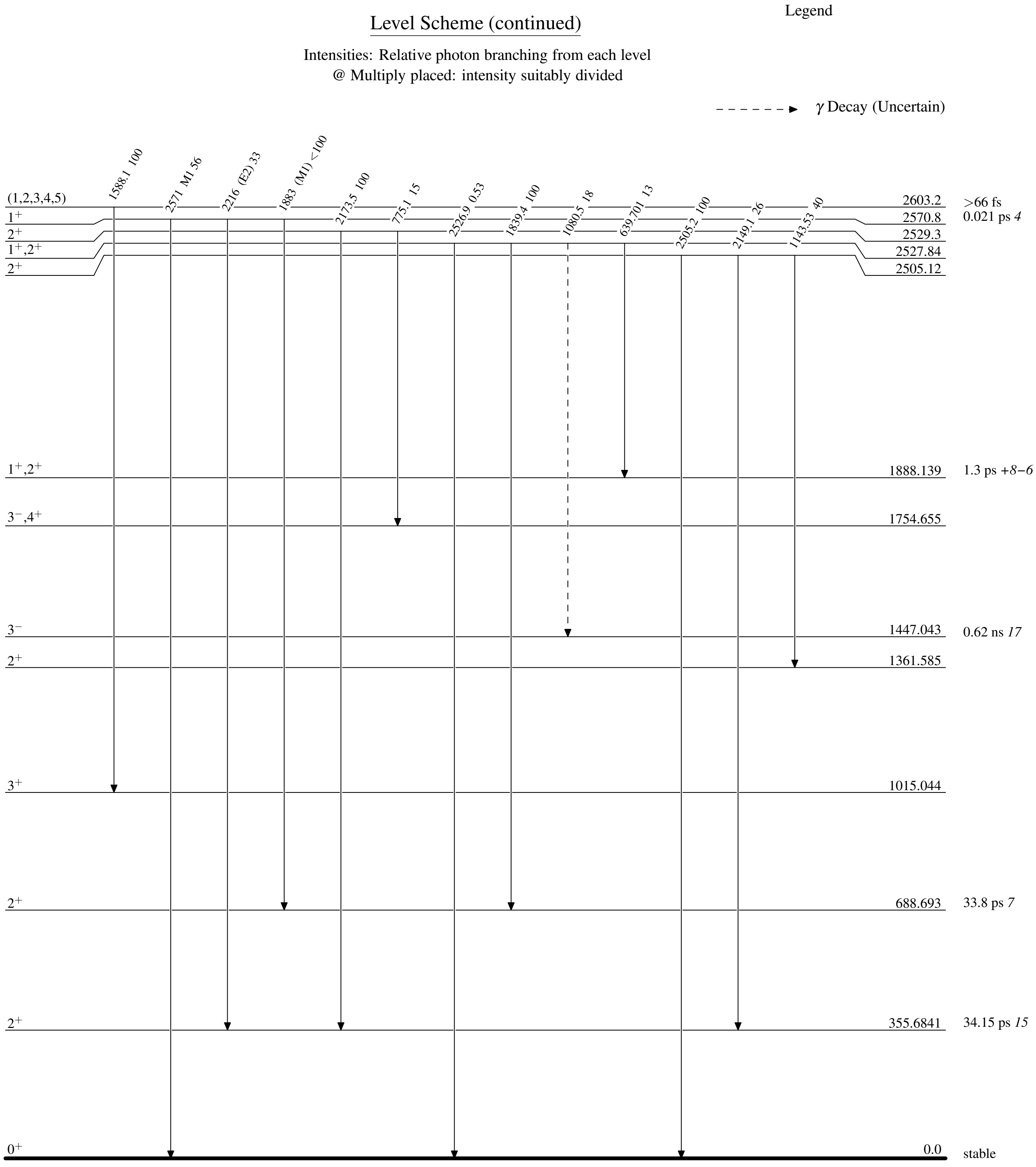
Intentsities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

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



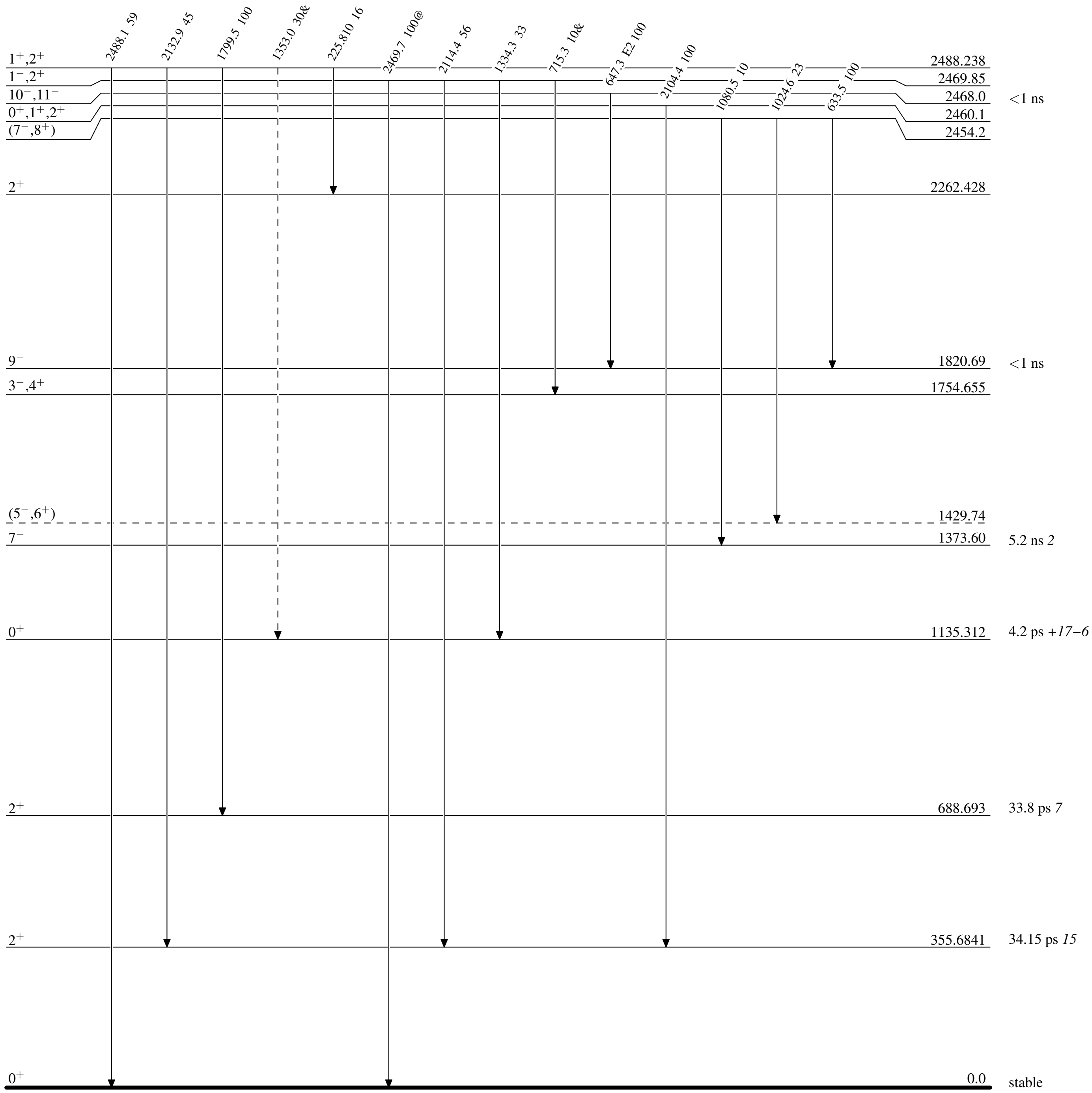
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

γ Decay (Uncertain)

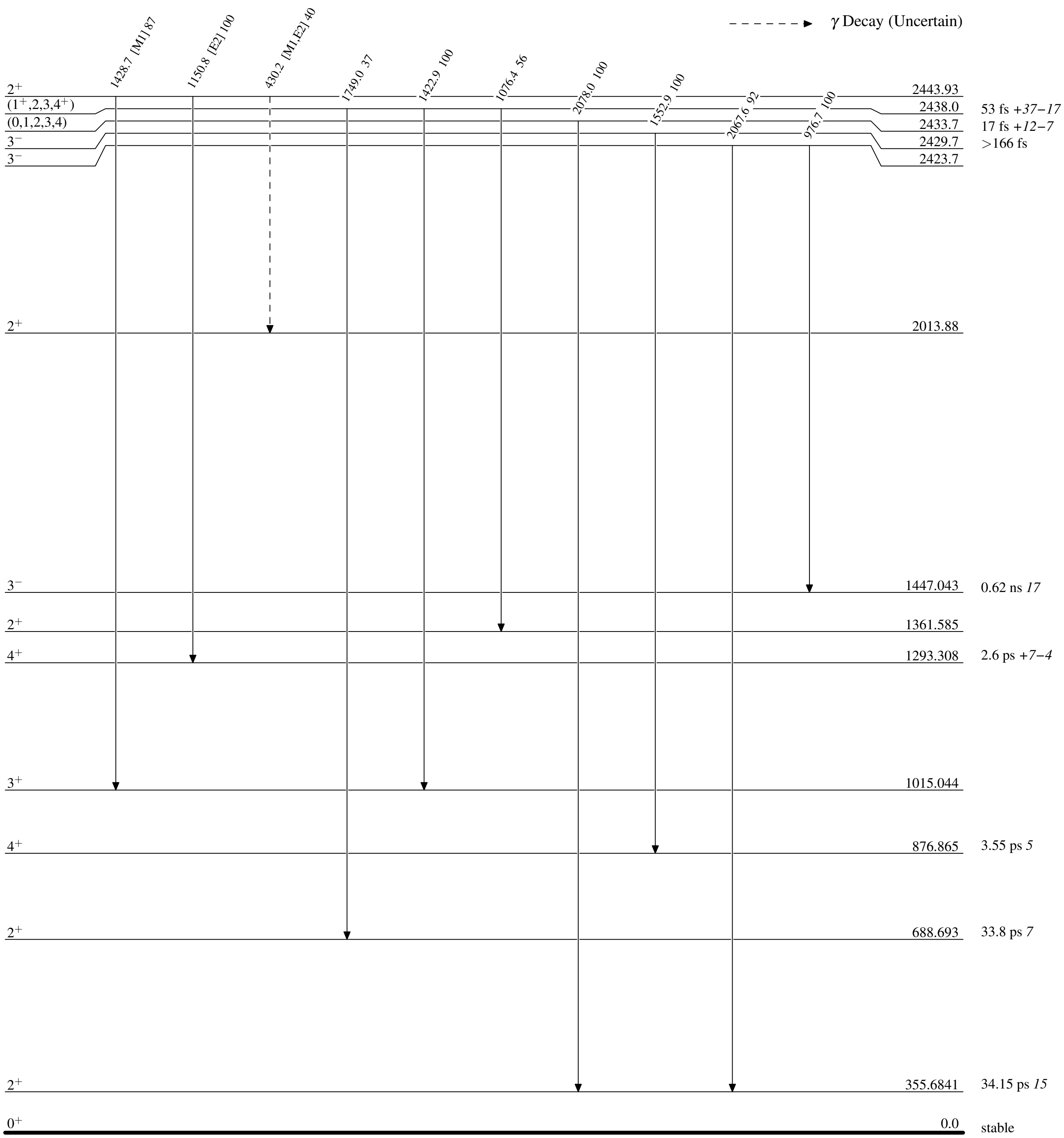


$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

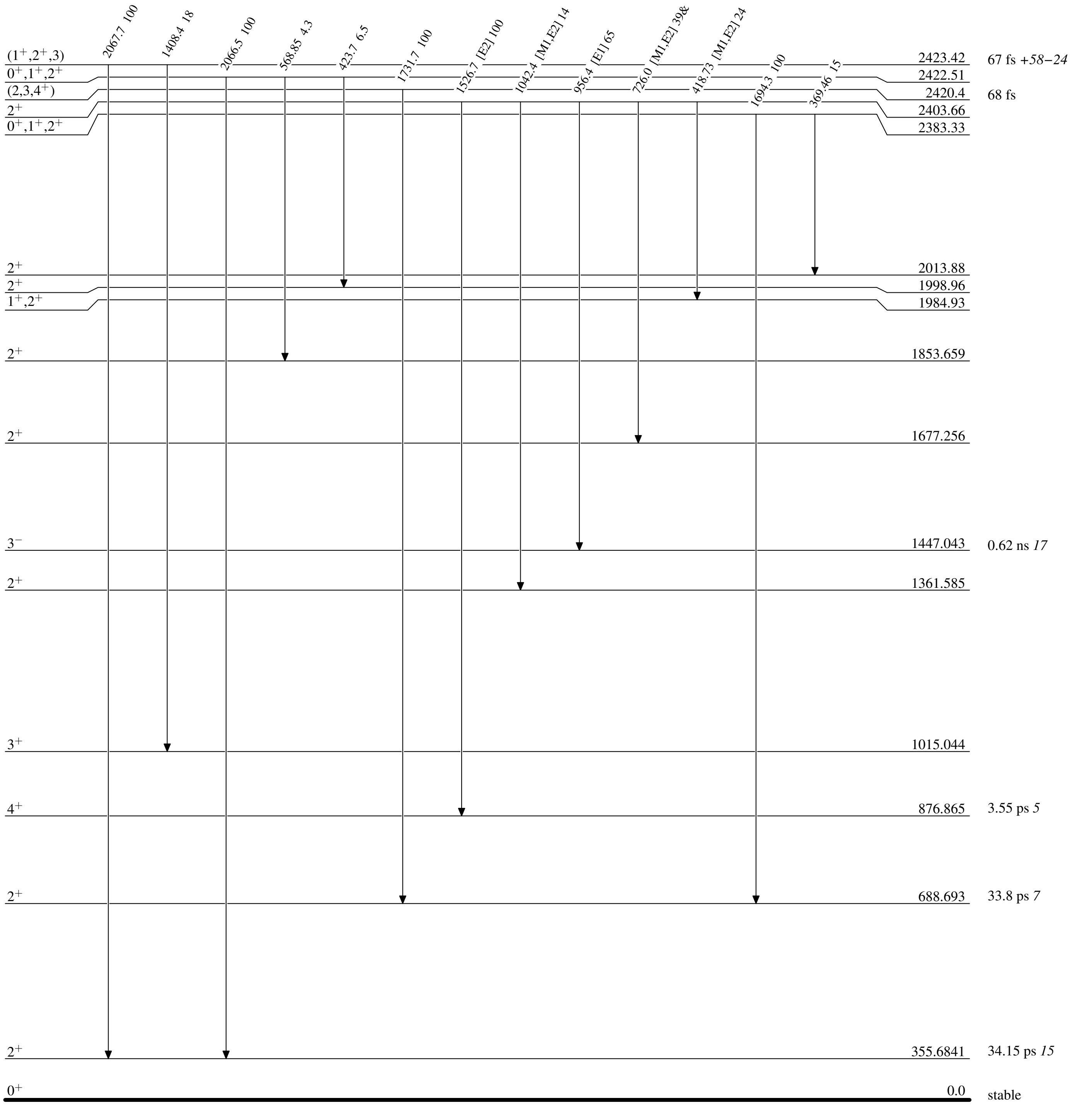
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

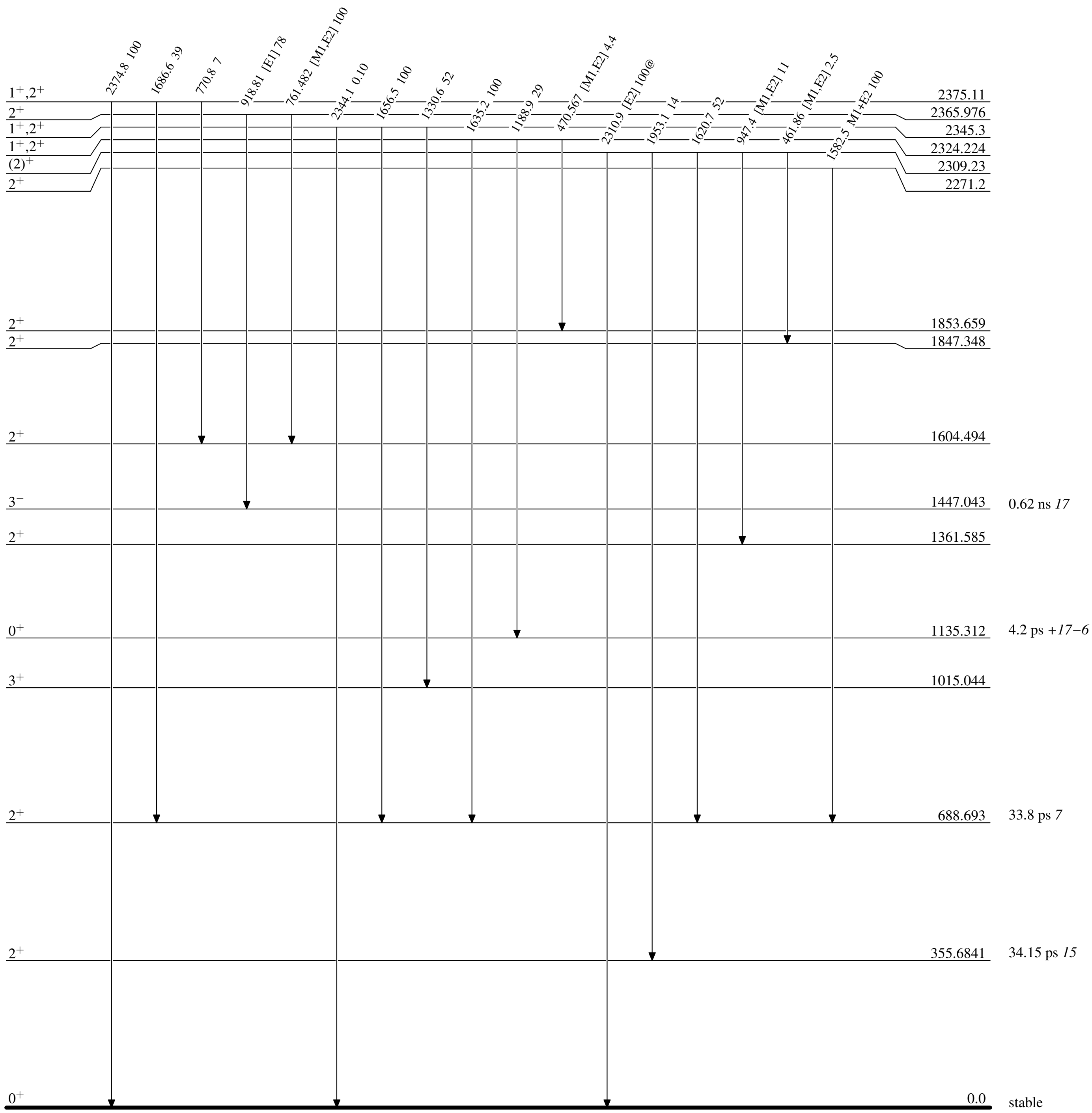
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

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



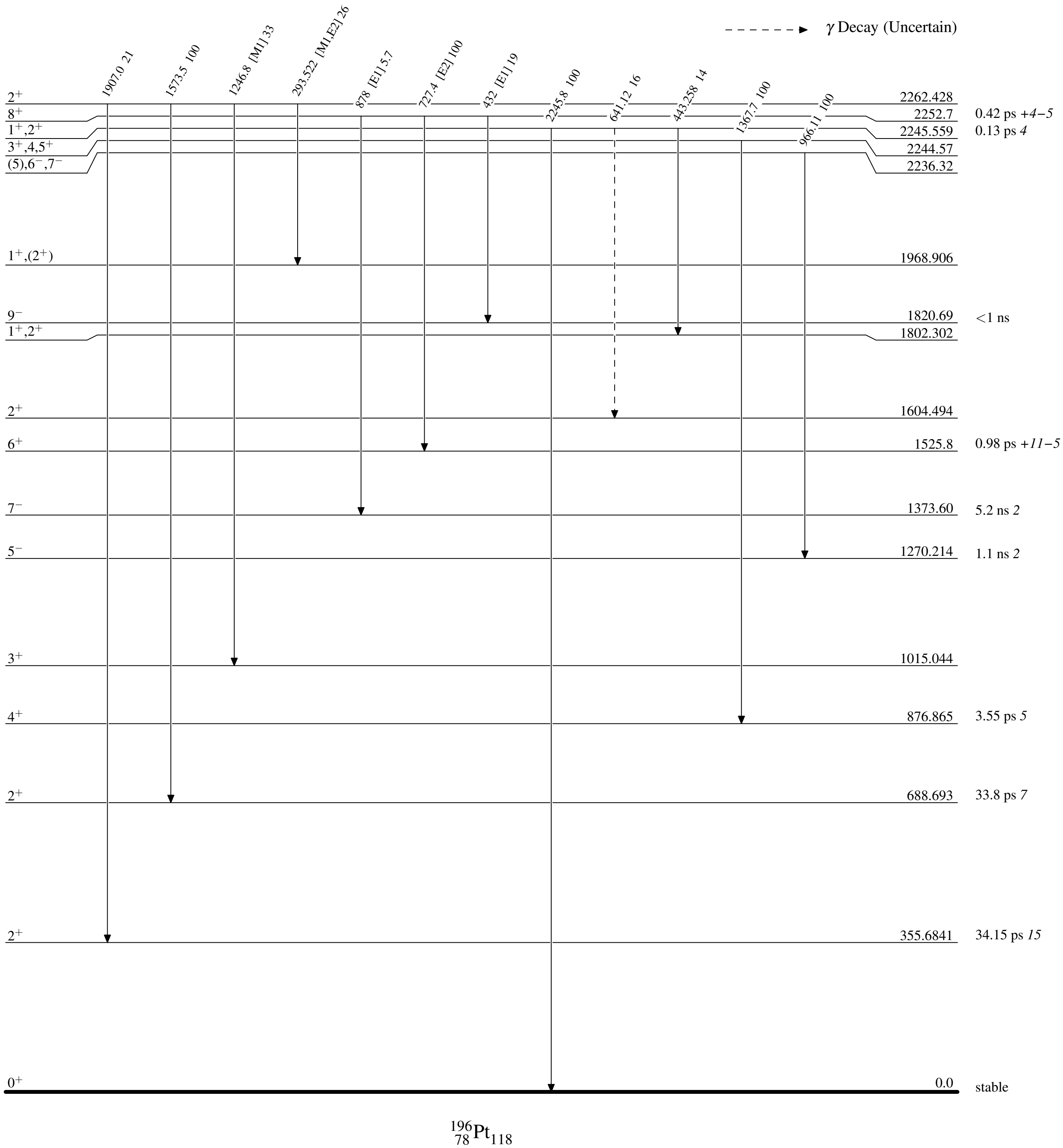
$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

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

Legend



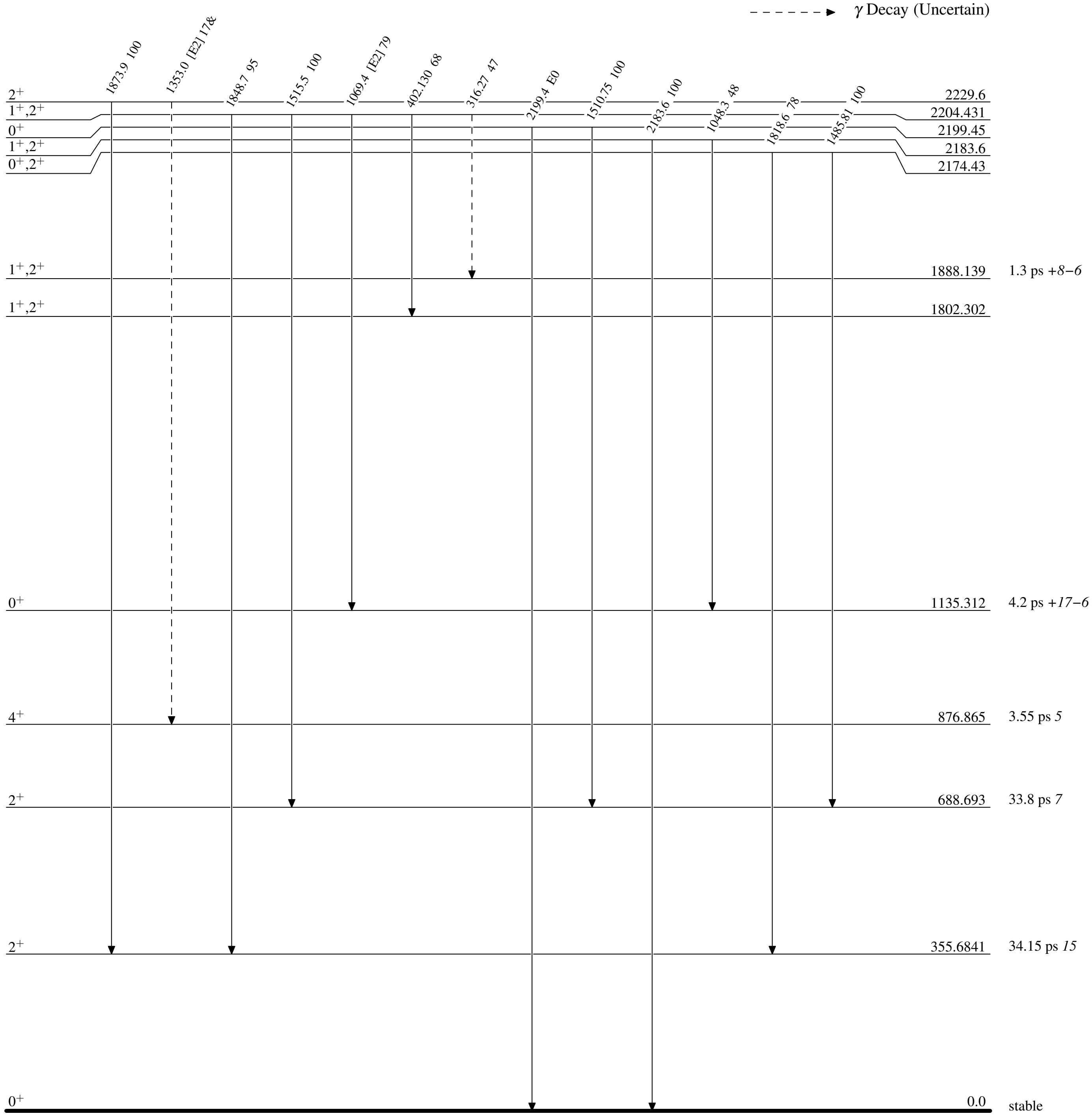
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

γ Decay (Uncertain)



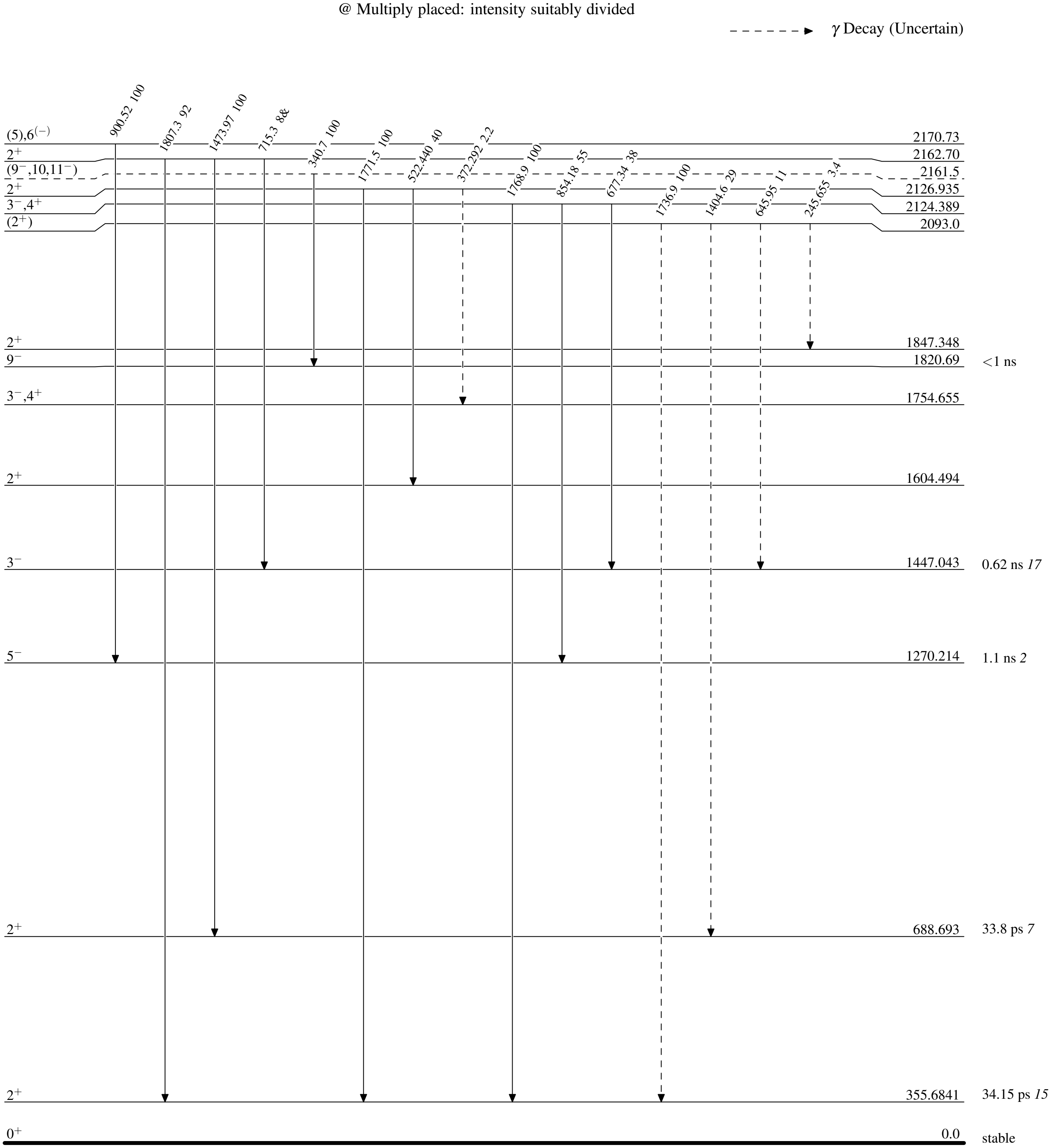
$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

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

Legend



$^{196}_{78}Pt_{118}$

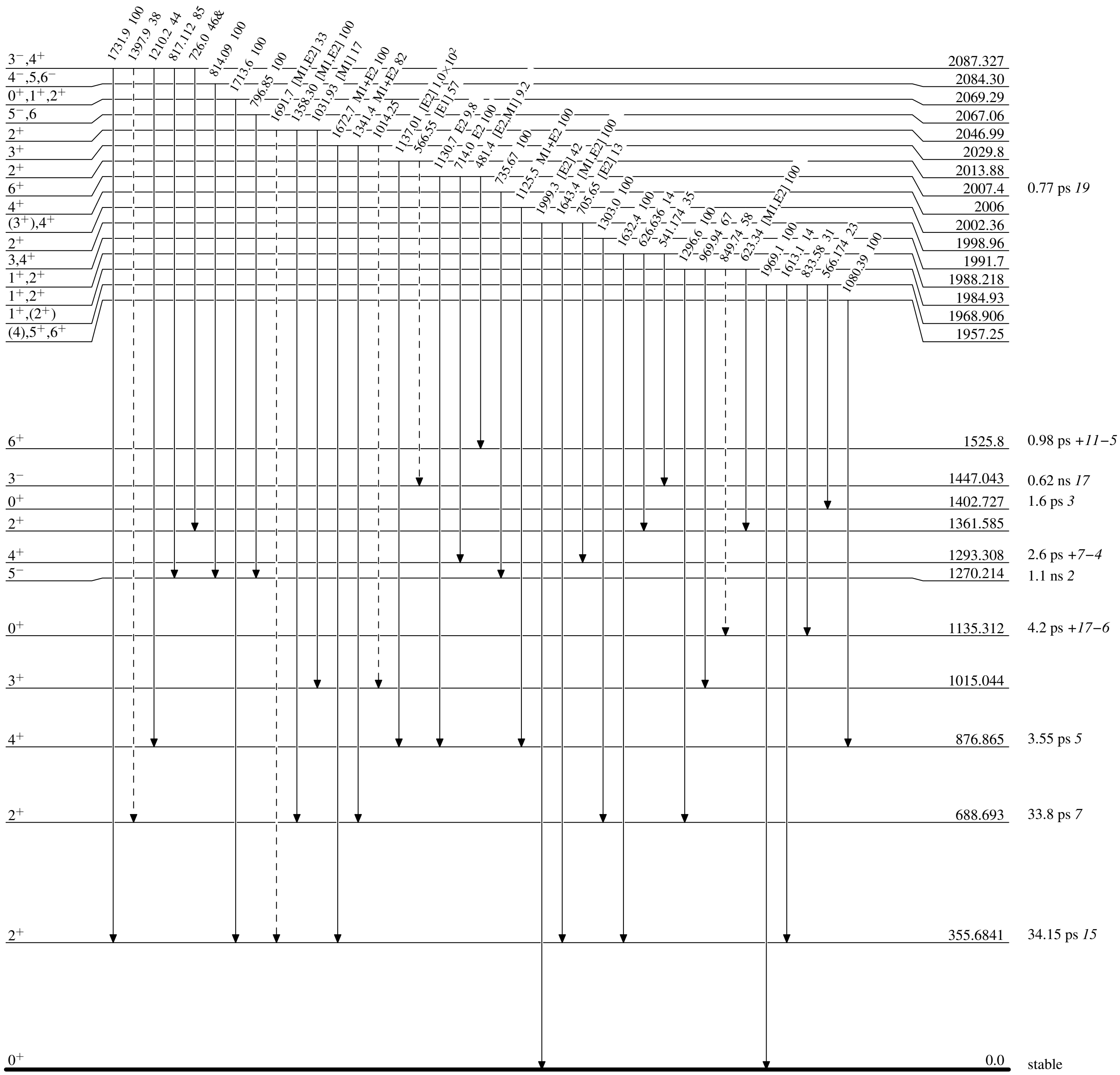
Adopted Levels, Gammas

Level Scheme (continued)

Legend

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

- - - - - -► γ Decay (Uncertain)

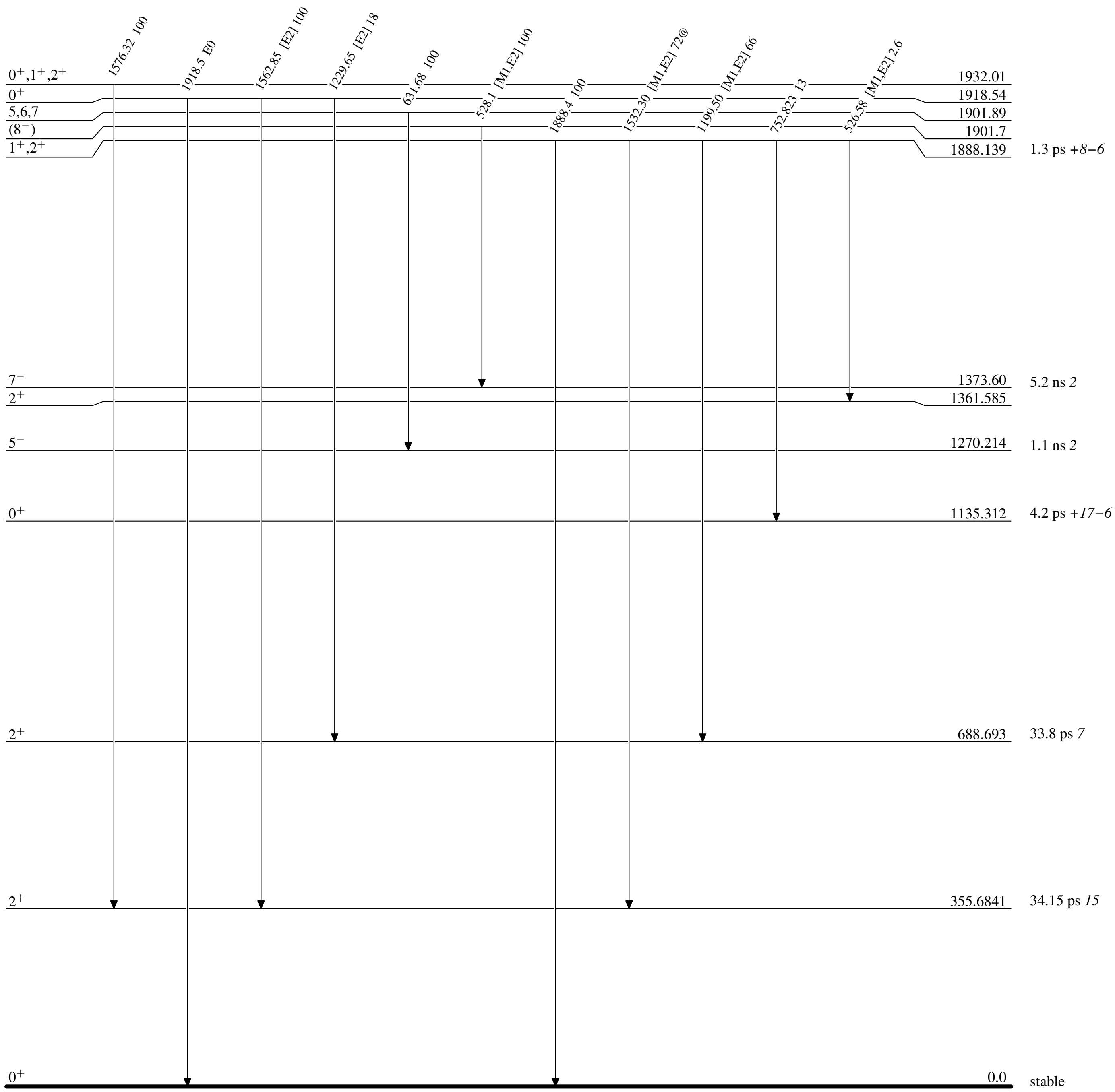


$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

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

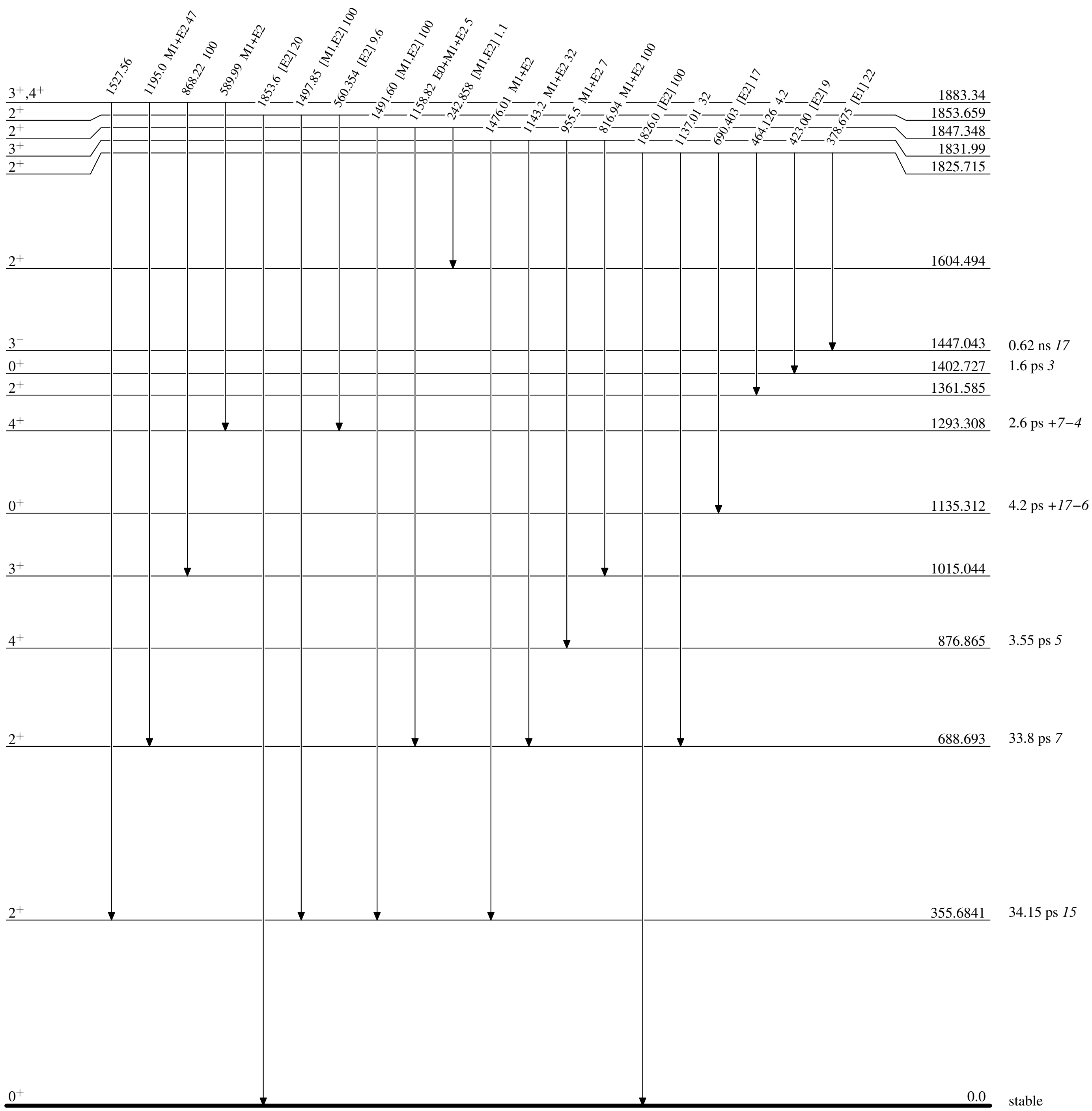


$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

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

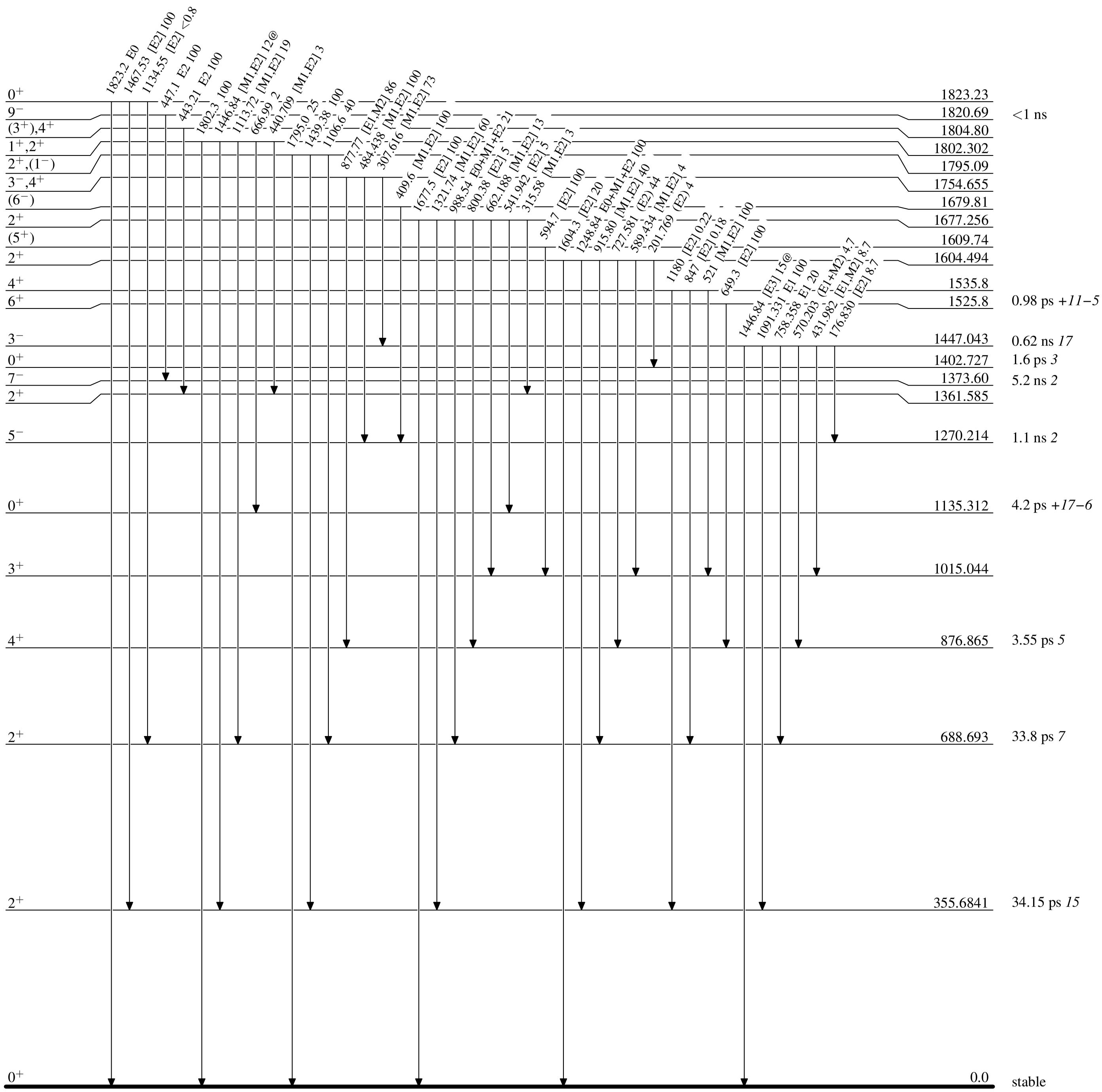


$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

Level Scheme (continued)

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

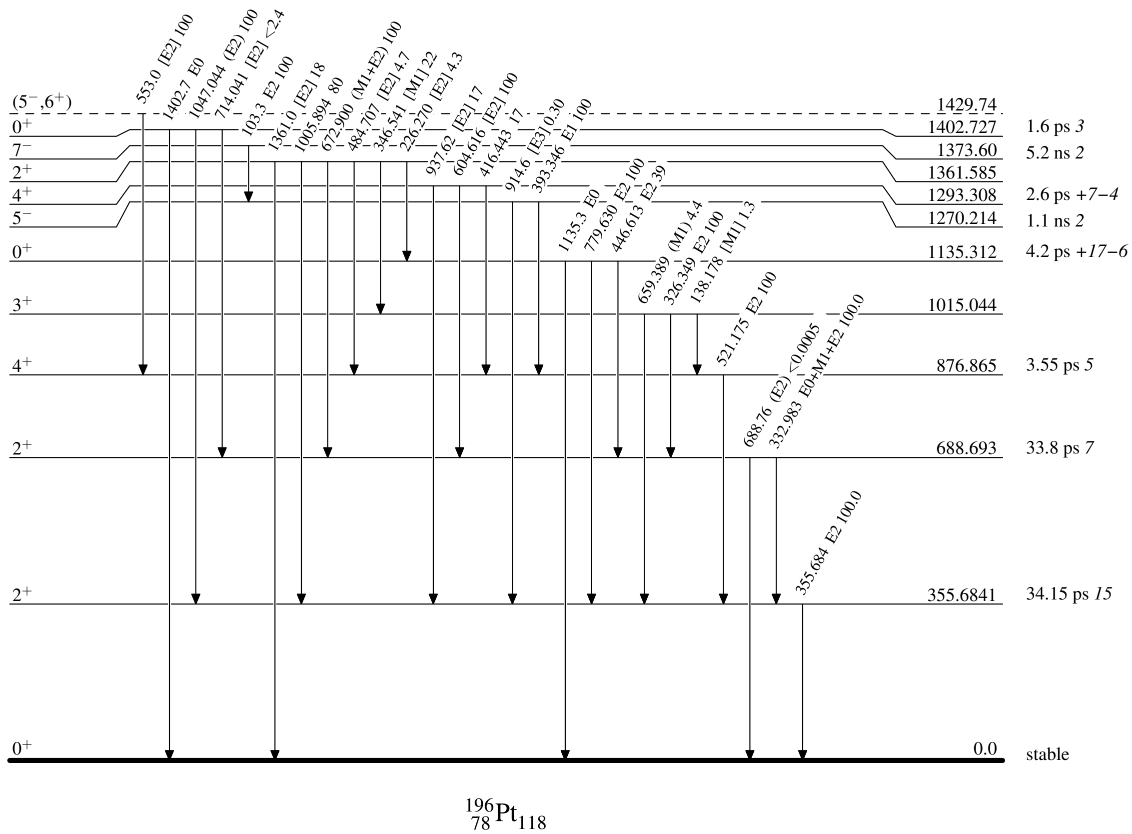


$^{196}_{78}Pt_{118}$

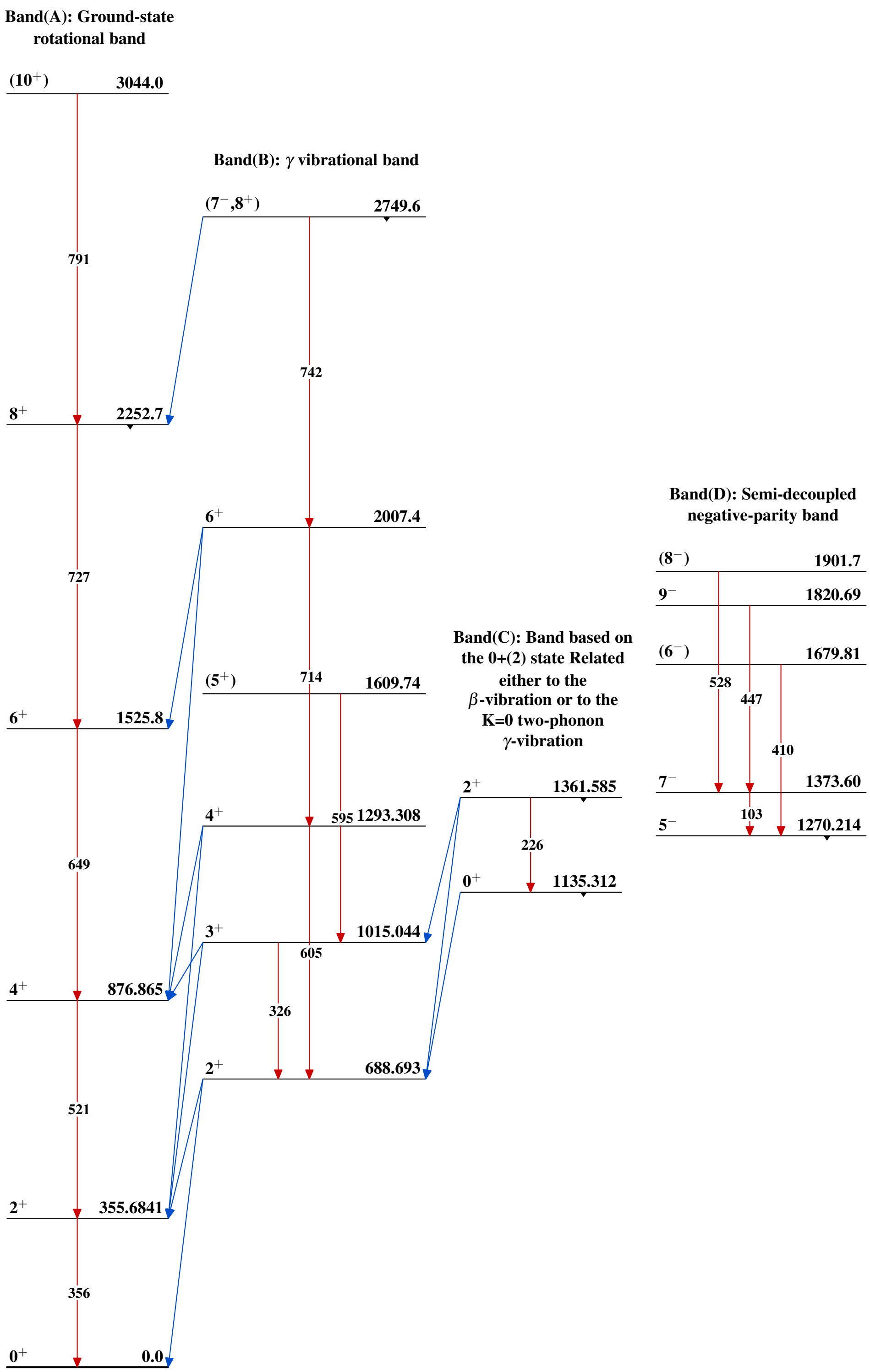
Adopted Levels, Gammas

Level Scheme (continued)

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



Adopted Levels, Gammas



$^{196}_{78}Pt_{118}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 133, 221 (2016)	1-Dec-2015

Q(β^-)=−323.7 *21*; S(n)=7555.1 *21*; S(p)=8929 *20*; Q(α)=107 *4* 2012Wa38
For interacting boson model theory, see 1985Su05, 1985Zi03, 1985Sc07, and 1983Ve02.

^{198}Pt Levels

Cross Reference (XREF) Flags

A	^{198}Ir β^- decay	E	^{198}Pt(d,d′)	I	^{198}Pt(^{136}Xe,Xγ)
B	^{196}Pt(t,p)	F	^{198}Pt(α,α')	J	^{9}Be(^{208}Pb,Xγ)
C	^{198}Pt(n,n′),(n,n′γ)	G	^{198}Pt(d,pnγ)		
D	^{198}Pt(p,p′),(p,p′γ)	H	Coulomb excitation		

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	XREF	Comments
0.0[@]	0$^+$	stable	ABCDEFGHIJ	%2β^-=? β_2=−0.103; β_4=−0.039 T$_{1/2}$: Double β^- decay to ^{198}Hg. From measurements of double β^- decay, half-life limits for decay to ^{198}Hg g.s. have been determined: T$_{1/2}$(2β^-)≥3.5×10^{18} y (2011Be32, value given for double β^- decay to the 411.8 keV state of ^{198}Hg including both two-neutrino and neutrinoless processes based on a fitted peak of 13 counts *10*, which excludes 29 counts at 90% confidence level). β_2, β_4: From (α,α') and (p,p′), unweighted average. <r^2>$^{1/2}$=5.440 fm *6* (2004An14). Δ<r^2>=0.151 fm^2 *6* (1992Hi07), relative to ^{194}Pt; other Δ<r^2>=0.209 fm^2 *11*, Δ<β^2>=−0.0181 *10* (1988Le22), relative to ^{190}Pt; <β^2>$^{1/2}$=0.11 (1981Mo24). J$^\pi$: From L=0 in ^{196}Pt(t,p).
407.22[@] *5*	2$^+$	22.25 ps *15*	ABCDEFGHIJ	μ=+0.63 *2* (1995An15,2011StZZ) T$_{1/2}$: From B(E2)=1.090 *7* (Coulomb excitation). Others: 24.0 ps *8* (B(E2)=1.01 *3*), 24.3 ps *21* (1981Bo32), 23.3 ps *11* (1980Ke04), 23.2 ps *8* (1983St18) in Coulomb excitation. μ: Transient field integral perturbed angular correlation (TF); and ^{194}Pt standard (1995An15). Others: +0.70 *6* (1993Ta07, TF; ^{194}Pt standard), +0.59 *7* (1991St04, TF), +0.69 *6* (1981St13, TF; ^{196}Pt standard), +0.62 *10* (1979Ha06, TF; ^{194}Pt standard). Q=+0.42 *12* or +0.54 *12* (1989Ra17,1986Gy04,2011StZZ). Q: Coulomb Excitation Reorientation(CER). Other: +1.2 *5* (1969Gl08).
774.72[b] *7*	2$^+$	27 ps *4*	BCDEFGHIJ	μ=+0.61 *11* (1992Br03,2011StZZ) β_2=−0.109 *5* μ: Re-evaluated data. Other: +0.72 *13* (1981St13, TF; ^{196}Pt standard). β_2: From (p,p′), (p,p′γ). J$^\pi$: From $\gamma(\theta)$ in ^{198}Pt(n,n′),(n,n′γ).
914.52 *21*	0$^+$		A CD	J$^\pi$: From n′(θ) in ^{198}Pt(n,n′),(n,n′γ).
985.07[@] *8*	4$^+$	3.3 ps *3*	BCDEFGHIJ	β_4=−0.030 *1* XREF: B(990)E(960)F(991). μ=+1.2 *2* (1992Br03,2011StZZ, Re-evaluated). Other: +1.4 *3* (1981St13. TF; ^{196}Pt standard). β_4: From (p,p′), (p,p′γ). J$^\pi$: From $\gamma(\theta)$ in ^{198}Pt(n,n′),(n,n′γ).
1140 *20*			E	
1248.01 *10*	(3$^+$)		CD G I	J$^\pi$: From n′(θ) in ^{198}Pt(n,n′),(n,n′γ).
1279.44 *9*	2$^+$	9.7 ps *5*	CDE GH	XREF: E(1240-1280).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{198}Pt Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$[#]	XREF	Comments
				J^{π}: From $\gamma(\theta)$ in Coulomb excitation.
1286.14[b] 16	(4$^+$)	9.3 ps 22	BCD FGHI	β_4=−0.026 1 β_4: From (p,p′), (p,p′γ). J^{π}: From L=(4) in ^{196}Pt(t,p).
1367.03 10	(5$^-$)		BCD G IJ	J^{π}: From $\gamma(\theta)$ in ^{198}Pt(n,n′),(n,n′γ).
1445.32 22			CD	
1481.23 21	0$^+$		BCD	J^{π}: From L=0 in ^{196}Pt(t,p).
1501.93[&] 14	(7$^-$)	3.4 ns 2	D G IJ	$T_{1/2}$: From ce(t) in ^{198}Pt(d,pnγ). Configuration=$(((\pi h_{11/2})^{-1}d_{3/2})+((\nu i_{13/2})^{-1}p_{1/2}))$ (1987CoZY).
1517 8			B E	XREF: E(1530).
1550.39 18	(2$^+$)		BCD	J^{π}: From L=(2) in ^{196}Pt(t,p).
1636.93 21	(2$^+$)		BCD	J^{π}: From L=(2) in ^{196}Pt(t,p).
1656.68 19			BCD	
1672.13 12	(1,2)		C	J^{π}: From ^{198}Pt(n,n′γ).
1680.33 15	3$^-$		BCD G	β_3=0.050 5 β_3: From (p,p′), (p,p′γ).
1714.17[@] 22	(6$^+$)	<0.7 ps	C GHI	J^{π}: From interacting boson approximation calculations and systematics of even Pt isotopes (1981Bo32).
1718 5	(2$^+$)		B	J^{π}: From L=(2) in ^{196}Pt(t,p).
1722 3			D F	L=3 suggested by 1976Ba35 in (α,α′) for E=1722 probably corresponds to the 1680 level. L(1722)=3 is not confirmed by 1981De12.
1741.13 14			E G I	XREF: E(1750).
1784.52 22	(4$^+$)		BCD	β_4=−0.019 2 β_4: From (p,p′), (p,p′γ).
1815 6			B	
1827 4			D	
1849.21? 22			G	
1869 5	0$^+$		B	J^{π}: From L=0 in ^{196}Pt(t,p).
1892 5	(4$^+$)		B D	XREF: D(1900). J^{π}: From L=(4) in ^{196}Pt(t,p).
1943.9[b] 3	6$^+$		B G I	XREF: B(1938). J^{π}: From band structure.
1949 2	(2$^+$)		B D	XREF: B(1956). J^{π}: From L=(2) in ^{196}Pt(t,p).
1979.43 25			B D G	XREF: D(1971).
1995.83 25			D G I	XREF: D(2000).
2059 6			B	
2070 2			D	
2083 7	(4$^+$)		B	J^{π}: From L=(4) in ^{196}Pt(t,p).
2089.0[&] 9	(9$^-$)		I	J^{π}: From band analysis.
2120 2	(2$^+$)		B D	XREF: D(2100). J^{π}: From L=(2) in ^{196}Pt(t,p).
2155 2	(4$^+$)		B D	XREF: B(2149). J^{π}: From L=(4) in ^{196}Pt(t,p).
2160.0[a] 9	(8$^-$)		I	J^{π}: Band head.
2178 2	(2$^+$)		B D	XREF: B(2170). J^{π}: From L=(2) in ^{196}Pt(t,p).
2229 6	(2$^+$)		B E	XREF: E(2210). J^{π}: From L=(2) in ^{196}Pt(t,p).
2252 7			B	
2289 6	(4$^+$)		B	J^{π}: From L=(4) in ^{196}Pt(t,p).
2319 2	(2$^+$)		B DE	XREF: B(2325)E(2330). J^{π}: From L=(2) in ^{196}Pt(t,p).
2339? 2			D	
2356 2	(2$^+$)		B D	XREF: B(2352).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{198}Pt Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
				Jπ: From L=(2) in ^{196}Pt(t,p).
2387 *2*			B D	XREF: B(2373).
2411 *6*	(2^+)		B	Jπ: From L=(2) in ^{196}Pt(t,p).
2441 *2*	(3^-)		B D	β_3=0.037 *4* β_3: From (p,p′), (p,p′γ).
2469 *2*			B D	
2514 *3*	(3^-)		B DE	β_3=0.020 *2* XREF: B(2530). β_3: From (p,p′), (p,p′γ).
2527.1[@] *9*	(8^+)		I	
2573 *3*			B D	
2603.5 *5*	(3^-)		D	β_3=0.052 *5* β_3: From (p,p′), (p,p′γ).
2633 *3*			B D	XREF: B(2628).
2666 *3*			B D	XREF: B(2683).
2680.0[a] *13*	(10^-)		I	
2726 *3*			DE	XREF: E(2730).
2747[b] *2*	8^+		B I	XREF: B(2740). Jπ: From band structure.
2782 *3*			B D	
2796 *3*	(3^-)		D	β_3=0.037 *4* β_3: From (p,p′), (p,p′γ).
2802 *7*	0^+		B	Jπ: From L=0 in ^{196}Pt(t,p).
2826 *3*	(3^-)		D	β_3=0.041 *4* β_3: From (p,p′), (p,p′γ).
2884 *3*			D	
2912.0[&] *9*	(11^-)		D I	XREF: D(2910).
3005 *4*			D	
3017.0[a] *17*	(12^-)	36 ns *2*	D I	XREF: D(3018). E(level): It is assumed that the isomer decays directly by 337γ, but possibility of a low-energy γ transition preceding 337γ is not ruled out. $T_{1/2}$: (Target like recoil fragments)γ(t) (2004Va03,2004Re11); 407γ and 658γ double γ-ray gates.
3170 *5*			D	
3197 *5*			D	

† For the states connected by γ′s, E(level)′s are from Adopted Gamma radiations by using least-squares fit to data, others are from (p,p′), except as noted.
‡ From L value measured in ^{198}Pt(p,p′),(p,p′γ), except as noted.
# From recoil distance measurements in Coulomb excitation (1981Bo32), except as noted.
@ Band(A): g.s. band.
& Band(B): Band based on (7^-), α=1.
a Band(b): Band based on (8^-), α=0.
b Band(C): 2^+ band.

Adopted Levels, Gammas (continued)

$\gamma(^{198}Pt)$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	α&	Comments
407.22	2+	407.21 5	100	0.0	0+	[E2]		0.0417	B(E2)(W.u.)=31.81 22
774.72	2+	367.48 6	100 7	407.22	2+	M1+E2	−2.9 +4−6	0.068 4	B(M1)(W.u.)=0.0016 5; B(E2)(W.u.)=37 7 Mult.: From mult=D+Q (Coulomb excitation), and RUL. δ: From Coulomb excitation (1981St13,1981Bo32).
		774.8 2	3.8 10	0.0	0+	[E2]		0.00920	B(E2)(W.u.)=0.038 12
914.52	0+	507.3 2	100	407.22	2+	[E2]		0.0239	B(E2)(W.u.)=26 7
985.07	4+	577.82 6	100	407.22	2+	[E2]		0.01755	B(E2)(W.u.)=38 4
1248.01	(3+)	473.27 7	100	774.72	2+				
1279.44	2+	504.7 3	23 7	774.72	2+	[M1,E2]		0.05 3	B(M1)(W.u.)=0.0015 10; B(E2)(W.u.)=2.2 15
		872.18 8	100 10	407.22	2+	[M1,E2]		0.013 6	B(M1)(W.u.)=0.0013 8; B(E2)(W.u.)=0.6 4
		1279.7 3	27 7	0.0	0+	[E2]		0.00341	B(E2)(W.u.)=0.05 3
1286.14	(4+)	300.9‡ 2	11‡	985.07	4+				
		511.6‡ 2	100‡	774.72	2+				
1367.03	(5−)	381.96 6	100	985.07	4+				
1445.32		670.6 2	100	774.72	2+				
1481.23	0+	1074.0 2	100	407.22	2+				
1501.93	(7−)	134.9‡ 1	100‡	1367.03	(5−)	[E2]		1.489	B(E2)(W.u.)=21.8 13
1550.39	(2+)	775.8 3	60 16	774.72	2+				
		1143.1 2	100 8	407.22	2+				
1636.93	(2+)	1229.7 2	100	407.22	2+				
1656.68		671.0# 4	#	985.07	4+				
		1249.6 2	100	407.22	2+				
1672.13	(1,2)	424.1 1	37 11	1248.01	(3+)				
		897.2 2	100 16	774.72	2+				
		1265.2 2	53 11	407.22	2+				
1680.33	3−	313.3# 2	22# 7	1367.03	(5−)				
		400.7# 3	33# 9	1279.44	2+				
		432.2# 4	11# 7	1248.01	(3+)				
		695.4# 3	100# 15	985.07	4+				
		1273.4# 5	52# 15	407.22	2+				
1714.17	(6+)	729.1‡ 2	100‡	985.07	4+	[E2]		0.01047	B(E2)(W.u.)>57
1741.13		374.1‡ 1	100‡	1367.03	(5−)				
1784.52	(4+)	1009.8 2	100	774.72	2+				
1849.21?		601.2‡ 2	100‡	1248.01	(3+)				
1943.9	6+	657.8‡ 2	100‡	1286.14	(4+)				
1979.43		477.5‡ 2	100‡	1501.93	(7−)				
1995.83		493.9‡ 2	100‡	1501.93	(7−)				
2089.0	(9−)	587@	100@	1501.93	(7−)				
2160.0	(8−)	658@	100@	1501.93	(7−)				
2527.1	(8+)	813@	100@	1714.17	(6+)				
2603.5	(3−)	923.2# 4	100#	1680.33	3−				
2680.0	(10−)	520@	100@	2160.0	(8−)				
2747	8+	802@	100@	1943.9	6+				
2912.0	(11−)	385@	100@	2527.1	(8+)				
		752@	100@	2160.0	(8−)				

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{198}Pt)$ (continued)

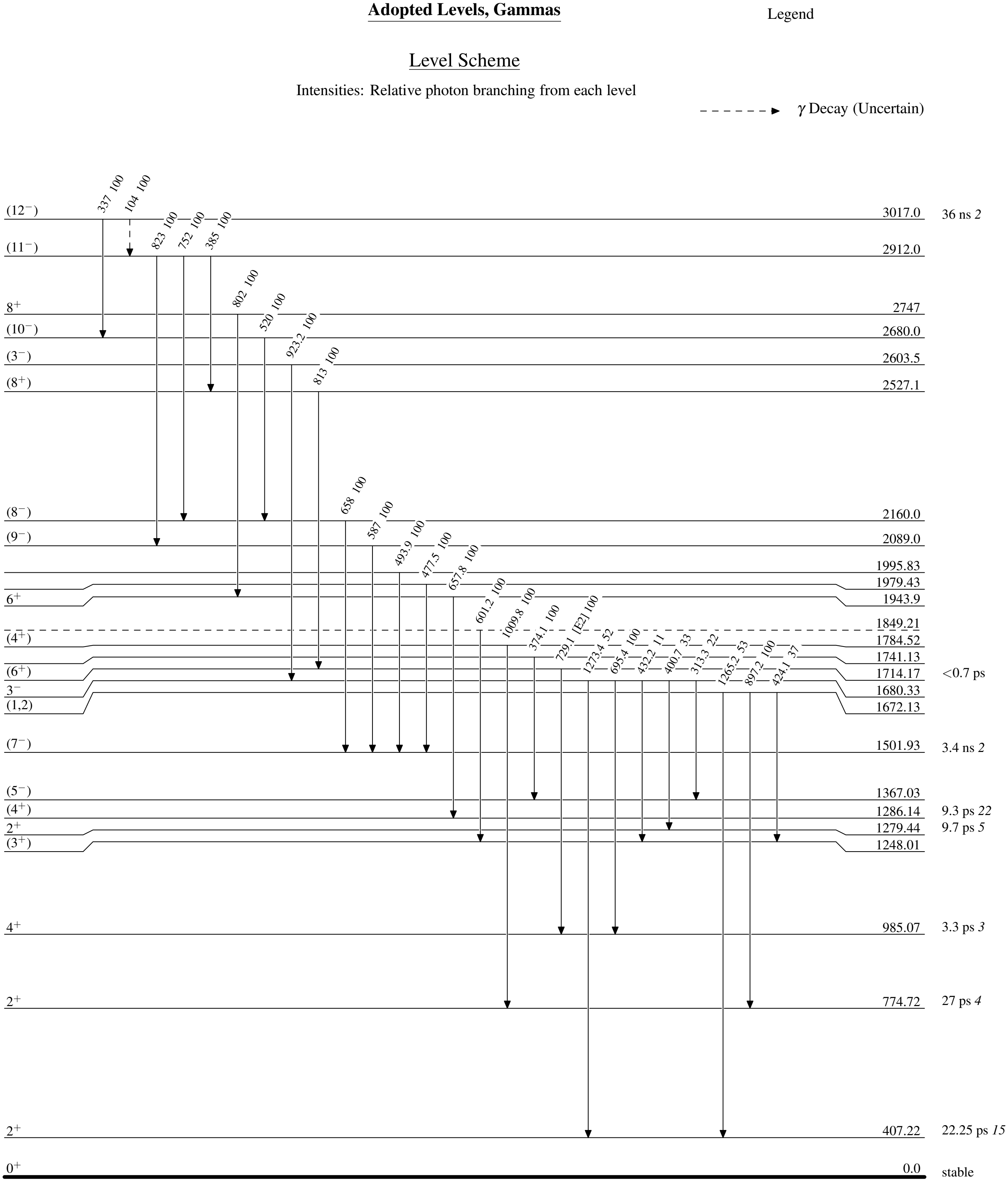
E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f
2912.0	(11^-)	823[@]	100[@]	2089.0	(9^-)
3017.0	(12^-)	104[@a]	100[@]	2912.0	(11^-)
		337[@]	100[@]	2680.0	(10^-)

† From $^{198}Pt(n,n'),(n,n'\gamma)$, except as noted.
‡ From $^{198}Pt(d,pn\gamma)$.
# From $^{198}Pt(p,p'),(p,p'\gamma)$.
@ From $^{198}Pt(^{136}Xe,X\gamma)$.
& Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
a Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

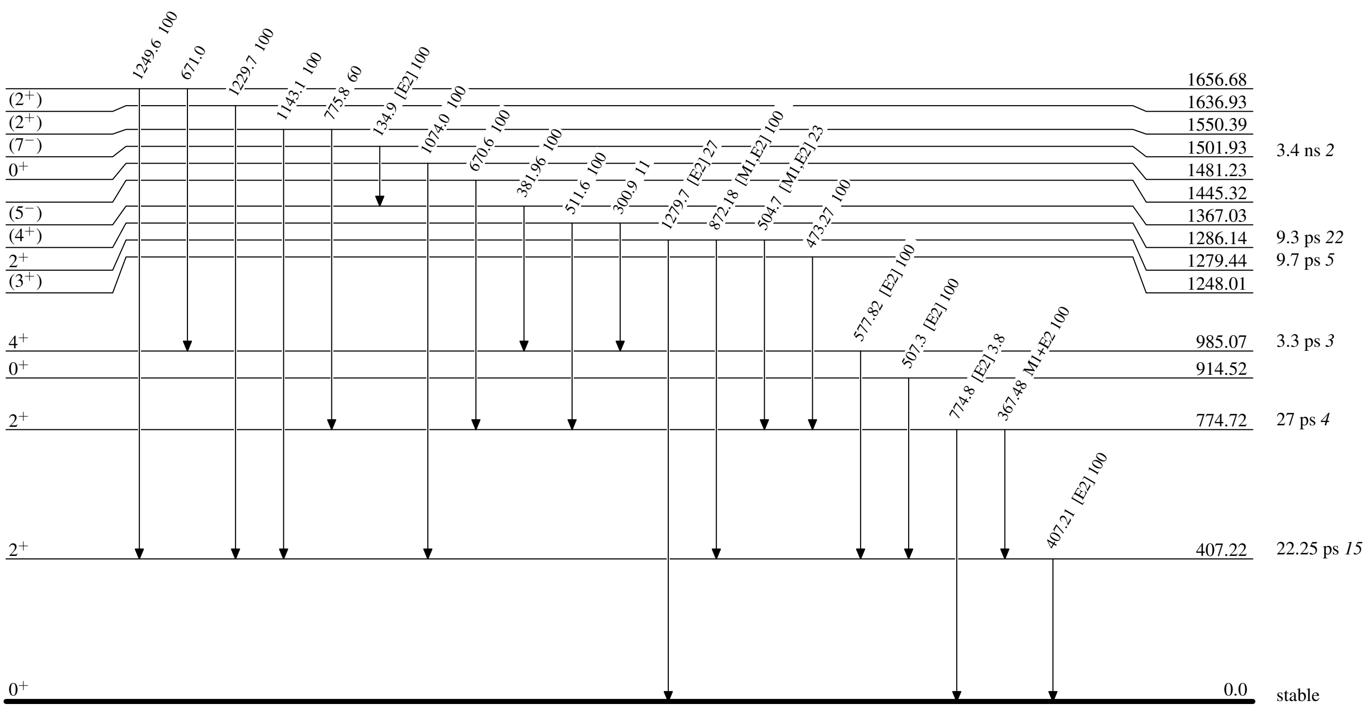


$^{198}_{78}Pt_{120}$

Adopted Levels, Gammas

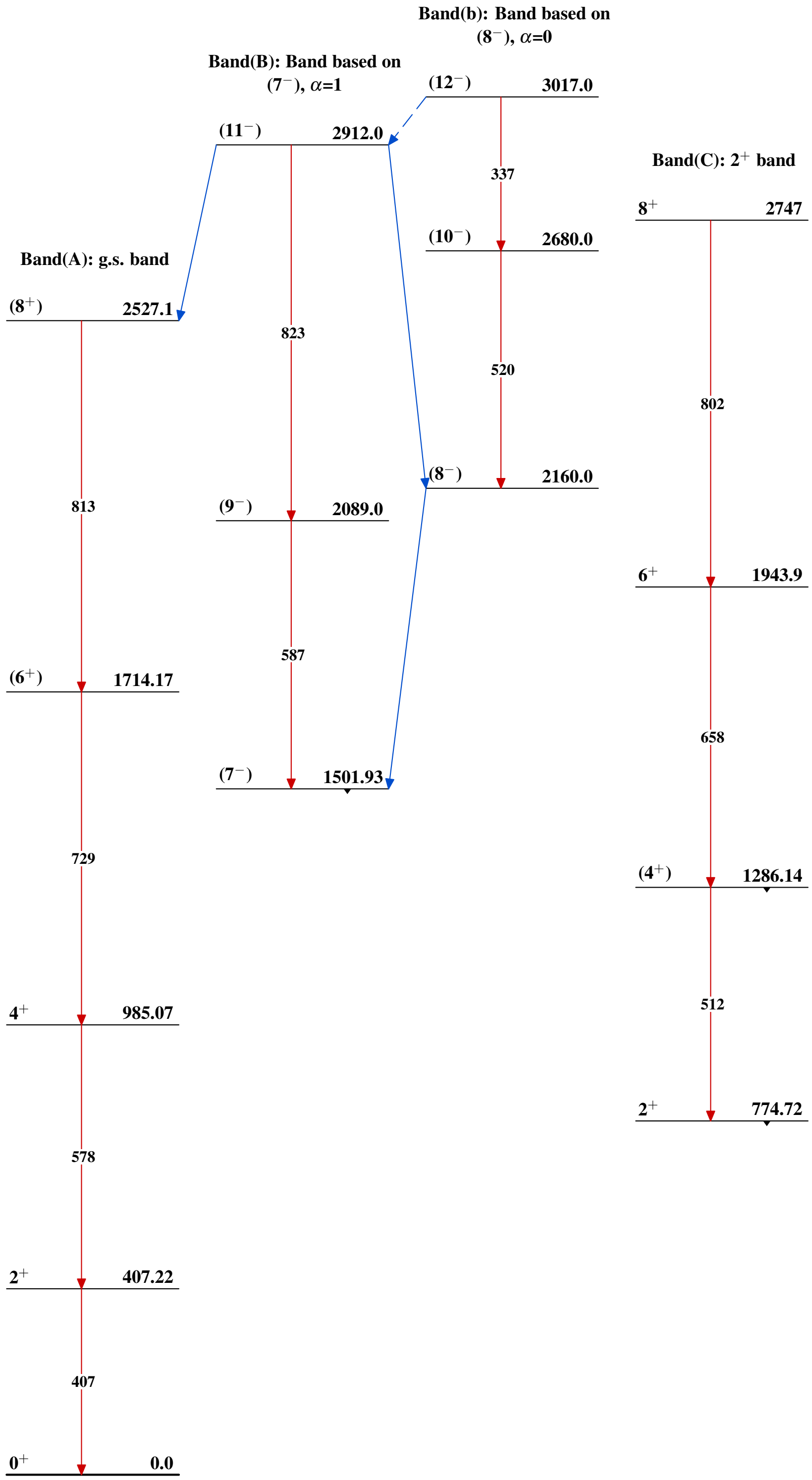
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{198}_{78}Pt_{120}$

Adopted Levels, Gammas



$^{198}_{78}Pt_{120}$