Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 130, 21 (2015)	15-Jul-2015

Q(β^-)=−7867 *25*; S(n)=9865 *20*; S(p)=3986 *29*; Q(α)=4951 *5* 2012Wa38
Q(εp)=93 *29*, S(2n)=17875 *17*, S(2p)=6384 *21* (2012Wa38).
Hyperfine structure measurements: 1999Ro28 (also 2000Le40,1999Sa40).
Mass measurement: 2000Ra23 (Schottky mass spectrometry).
Structure calculations: 2015Bu05, 2014Ga08, 2013Ra33, 2012Bh11, 2011Ga35, 2011No01, 2010Sh24, 2010Ro06, 2009Ga15, 2008Mo14, 2008Sa21, 2006Pa39, 2005Mc08, 2005Mc09, 2001Th11, 1999Da18, 1997Es01, 1989Ch23, 1988Ch40, 1987Be06, 1987Hs01, 1987Ve06, 1986Dr05, 1981Sa31, 1973Zi03.
Additional information 1.
First identification of ^{182}Pt isotope by 1963Gr08.

^{182}Pt Levels

Average g factor: <g>=+0.36 *5*, for 6^+ to 12^+ states in the high-spin quasi-continuum (2002Ro12,2002Ro36,2014StZZ).

Cross Reference (XREF) Flags

- A ^{182}Au ε decay (15.5 s)
- B ^{183}Hg εp decay (9.4 s)
- C ^{186}Hg α decay (1.38 min)
- D ^{170}Yb(^{16}O,4nγ)

E(level)†	Jπ‡	$T_{1/2}$#	XREF	Comments
0.0@	0^+	2.67 min *12*	ABCD	%ε+%β^+=99.962 *2*; %α=0.038 *2* (<r^2>)$^{1/2}$(rms charge radius)=5.3969 fm *41* (2013An02,evaluation). δ<r>^{2}(^{194}Pt−^{182}Pt)=−0.279 fm^2 *10* (1999Ro28). %α: from 1995Bi01. Others: 0.023 (1963Gr08,1966Si08). $T_{1/2}$: weighted average of 2.6 min *1* (γ timing,1972Fi12), 3.0 min *2* (α timing,1966Si08) and 2.5 min *5* (1963Gr08). Additional information 2.
154.97@ *9*	2^+	479 ps *30*	A D	μ=+0.46 *8* (2002Ro36,2014StZZ) μ: perturbed $\gamma\gamma(\theta)$ from oriented nuclei (PDCO method) in high-spin reactions (2002Ro36,2002Ro12). Jπ: E2 γ to 0^+.
419.62@ *12*	4^+	32.5 ps *20*	A D	μ=+1.7 *8* (2002Ro36,2014StZZ) μ: perturbed $\gamma\gamma(\theta)$ from oriented nuclei (PDCO method) in high-spin reactions (2002Ro36,2002Ro12). Jπ: ΔJ=2, E2 γ to 2^+.
499.70& *14*	0^+		A D	Jπ: E0 transition to 0^+.
667.77a *12*	2^+		A D	Jπ: E2 γ to 0^+; E0+E2(+M1) γ to 2^+.
774.85@ *17*	6^+	5.28 ps *35*	A D	Jπ: ΔJ=2, E2 γ to 4^+.
856.26& *11*	2^+		A D	Jπ: E2 γ to 0^+.
942.70a *17*	(3^+)		A D	Jπ: (E2+M1) γ to 2^+; γ to 4^+; probable band assignment.
1034.04a *14*	$(4)^+$		A D	Jπ: M1+E2 γ to 4^+; γ to 2^+; probable band assignment.
1152.07 *22*	(0^+)		A	Jπ: (0) from $\gamma\gamma(\theta)$, although other spins cannot be ruled out; (E2) γ to 2^+.
1182.06 *14*	(2^+)		A	Jπ: (E0+M1+E2) γ to 2^+.
1205.76@ *19*	8^+	2.26 ps *21*	D	Jπ: ΔJ=2, E2 to 6^+.
1239.92& *13*	4^+		A D	Jπ: E2 γ to 6^+; E0+E2(+M1) γ to 4^+.
1305.80a *19*	(5^+)		A D	Jπ: γs to 6^+ and 4^+; probable band assignment.

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Adopted Levels, Gammas (continued)

^{182}Pt Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
1311.71 *17*	2^+		A	Jπ: E0 γ to 2^+.
1419.60 *18*	(4^+)		A	Jπ: (E2) γ to 2^+; possible γ to 6^+.
1437.6[a] *5*	(6^+)		D	Jπ: γs to 4^+ and 6^+; probable band assignment.
1473.85 *18*			A	Jπ: γs to (4^+) and 2^+.
1502.47 *24*			A	Jπ: γ to 2^+.
1521.82 *23*			A	Jπ: γ to 4^+.
1542.55 *17*	$(2^+,3,4^+)$		A	Jπ: γs to 4^+ and 2^+.
1568.92 *23*			A	Jπ: γ to 4^+.
1649.5[&] *5*	6^+		D	Jπ: ΔJ=(2) γ to 4^+; γ to 6^+; band assignment.
1670.7[f] *5*	(5^-)		D	Jπ: ΔJ=(1) γ to 4^+; possible bandhead.
1684.53 *23*			A	Jπ: γ to 4^+.
1698.36[@] *22*	10^+	1.09 ps *14*	D	Jπ: ΔJ=2 γ to 8^+; band assignment.
1730.6[a] *6*	(7^+)		D	Jπ: γs to (5^+), 6^+ and 8^+; probable band assignment.
1845.5[g] *8*	(6^-)		D	Jπ: ΔJ=(1) γ to (5^+).
1864.1 *5*	(6^+)		D	Jπ: ΔJ=(2) γ to $(4)^+$; ΔJ=(1) γ to (5^+); γ to 6^+.
1889.23 *23*			A	Jπ: γ to 4^+.
1924.7[f] *5*	(7^-)		D	
1955.6[d] *5*	(7^-)		D	Jπ: ΔJ=1 γ to 8^+; ΔJ=2 γ to (5^-); γ to 6^+.
2082.6[c] *10*	(8^-)		D	Jπ: ΔJ=1, (M1+E2) γ to (7^-); band assignment.
2117.5[&] *12*	8^+		D	Jπ: γ to 6^+; band assignment.
2149.9[g] *7*	(8^-)		D	
2241.2[f] *7*	(9^-)		D	Jπ: ΔJ=2 γ to (7^-).
2241.9[d] *10*	(9^-)		D	Jπ: ΔJ=1, (M1+E2) γ to (8^-); band assignment.
2242.0[@] *7*	12^+	1.18 ps *7*	D	Jπ: ΔJ=2 γ to 10^+; band assignment.
2427.7[c] *11*	(10^-)		D	Jπ: ΔJ=1, (M1+E2) γ to (9^-); band assignment.
2504.1[g] *8*	(10^-)		D	
2615.4[f] *7*	(11^-)		D	Jπ: ΔJ=2 γ to (9^-).
2635.2[d] *12*	(11^-)		D	Jπ: ΔJ=1, (M1+E2) γ to (10^-); band assignment.
2690.2[b] *8*	(12^+)		D	
2832.0[@] *7*	14^+	1.11 ps *14*	D	Jπ: ΔJ=(2) γ to 12^+; band assignment.
2860.4[c] *13*	(12^-)		D	Jπ: ΔJ=1, (M1+E2) γ to (11^-); band assignment.
2931.8[g] *9*	(12^-)		D	
3046.9[f] *9*	(13^-)		D	
3096.5[e] *8*	(13^-)		D	Jπ: γs to 12^+ and 14^+.
3103.5[d] *13*	(13^-)		D	Jπ: ΔJ=2 γ to (11^-); ΔJ=1 γ to (12^-).
3168.4[b] *9*	(14^+)		D	
3289.6 *10*	$(12,13,14^+)$		D	Jπ: γ to 12^+.
3357.9[c] *14*	(14^-)		D	Jπ: ΔJ=(2) γ to (12^-).
3425.4[g] *11*	(14^-)		D	
3460.5[@] *8*	16^+	<2.57 ps	D	Jπ: ΔJ=2 γ to 14^+; band assignment. $T_{1/2}$: effective half-life; side feeding correction could not be applied.
3480.0[e] *9*	(15^-)		D	Jπ: ΔJ=(1) γ to 14^+.
3542.6[f] *10*	(15^-)		D	Jπ: ΔJ=2 γ to (13^-).
3629.4[d] *14*	(15^-)		D	Jπ: ΔJ=2 γ to (13^-).
3645.2[b] *9*	(16^+)		D	
3906.3[c] *15*	(16^-)		D	Jπ: ΔJ=2 γ to (14^-); ΔJ=1 γ to (15^-).
3971.2[g] *11*	(16^-)		D	Jπ: ΔJ=2 γ to (14^-).
3982.4[e] *10*	(17^-)		D	Jπ: ΔJ=(2) γ to (15^-).
4078.1[f] *13*	(17^-)		D	Jπ: ΔJ=(2) γ to (15^-).

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Adopted Levels, Gammas (continued)

^{182}Pt Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
4094.3[@] 8	18$^+$	D	Jπ: ΔJ=2 γ to 16$^+$; band assignment.
4203.6[d] 15	(17$^-$)	D	Jπ: ΔJ=(2) γ to (15$^-$).
4232.0[b] 9	(18$^+$)	D	
4500.5[c] 16	(18$^-$)	D	Jπ: ΔJ=(2) γ to (16$^-$).
4555.4[g] 13	(18$^-$)	D	
4569.6[e] 11	(19$^-$)	D	Jπ: ΔJ=2 γ to (17$^-$).
4657.0[f] 15	(19$^-$)	D	Jπ: ΔJ=(2) γ to (17$^-$).
4728.5[@] 11	20$^+$	D	Jπ: ΔJ=(2) γ to 18$^+$; band assignment.
4825.2[d] 17	(19$^-$)	D	Jπ: ΔJ=(2) γ to (17$^-$).
4919.1[b] 10	(20$^+$)	D	
5139.7[c] 18	(20$^-$)	D	Jπ: ΔJ=2 γ to (18$^-$).
5167.2[g] 15	(20$^-$)	D	
5207.9[e] 15	(21$^-$)	D	Jπ: ΔJ=2 γ to (19$^-$).
5278.5[f] 18	(21$^-$)	D	Jπ: ΔJ=(2) γ to (19$^-$).
5403.2[@] 15	22$^+$	D	Jπ: ΔJ=(2) γ to 20$^+$; band assignment.
5494.4[d] 20	(21$^-$)	D	
5637.7[b] 14	(22$^+$)	D	
5775.7[c] 20	(22$^-$)	D	
5804.6[g] 18	(22$^-$)	D	
5893.9[e] 18	(23$^-$)	D	
5951.5[f] 21	(23$^-$)	D	Jπ: ΔJ=(2) γ to (21$^-$).
6126.8[@] 18	24$^+$	D	Jπ: ΔJ=(2) γ to 22$^+$; band assignment.
6208.4[d] 22	(23$^-$)	D	Jπ: ΔJ=(2) γ to (21$^-$).
6380.7[b] 18	(24$^+$)	D	
6399.7[c] 23	(24$^-$)	D	
6479.6[g] 21	(24$^-$)	D	
6624.9[e] 20	(25$^-$)	D	
6904.8[@] 21	26$^+$	D	
6961.4[d] 24	(25$^-$)	D	
7396.9[e] 23	(27$^-$)	D	

[†] From least-squares fit to Eγ data, normalized χ^2=0.7.

[‡] For high-spin (J>10) levels, the assignments are generally based on yrast pattern of population of levels in heavy-ion fusion reactions, γ(θ) data for selected transitions and band associations. Ascending spins with excitation energies are expected (and assumed here) in such reactions. When appropriate, separate arguments are also given. Stretched quadrupole (ΔJ=2) transitions are generally assumed as E2.

[#] From recoil-distance Doppler-shift method (2012Wa16,2012Gl01) for excited states.

[@] Band(A): K^π=0$^+$,g.s. band. Measured average g=+0.36 *5* for 6$^+$ to 12$^+$ states in the ground band (2002Ro12,2002Ro36) using perturbed γγ(θ) from oriented nuclei (PDCO method) in high-spin reactions.

[&] Band(B): K^π=0$^+$, oblate band.

[a] Band(C): K^π=2$^+$, γ band.

[b] Band(D): Band based on (12$^+$),α=0. Continuation of g.s. band.

[c] Band(E): $\nu i_{13/2}\otimes\nu h_{9/2}$,α=0.

[d] Band(e): $\nu i_{13/2}\otimes\nu h_{9/2}$,α=1.

[e] Band(F): $\pi i_{13/2}\otimes\pi h_{9/2}$,α=1. No evidence for a signature partner of this structure.

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Adopted Levels, Gammas (continued)

^{182}Pt Levels (continued)

[f] Band(G): $\nu i_{13/2} \otimes \nu p_{3/2}, \alpha=1$.
[g] Band(g): $\nu i_{13/2} \otimes \nu p_{3/2}, \alpha=0$.

Adopted Levels, Gammas (continued)

$\gamma(^{182}Pt)$

Theoretical B(E2) ratios for transitions from the second and third 2^+ and first 3^+ states are calculated by 2009Ga15 using IBA model with and without intruder states.

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	$I_{(\gamma+ce)}$	Comments
154.97	2^+	155.0 *1*	100	0.0	0^+	E2		0.885		α(K)=0.316 *5*; α(L)=0.428 *7*; α(M)=0.1100 *16* α(N)=0.0269 *4*; α(O)=0.00423 *6*; α(P)=3.00×10^{-5} *5* B(E2)(W.u.)=114 *8*
419.62	4^+	264.4 *2*	100	154.97	2^+	E2		0.1446		α(K)=0.0838 *12*; α(L)=0.0459 *7*; α(M)=0.01158 *17* α(N)=0.00283 *4*; α(O)=0.000458 *7*; α(P)=8.30×10^{-6} *12* B(E2)(W.u.)=192 *12*
499.70	0^+	344.8 *2*	100 *5*	154.97	2^+	E2		0.0658		α(K)=0.0434 *7*; α(L)=0.01697 *24*; α(M)=0.00422 *6* α(N)=0.001034 *15*; α(O)=0.0001701 *24*; α(P)=4.44×10^{-6} *7*
		499.3 *4*		0.0	0^+	E0			31 *7*	q^2_K(E0/E2)=4.6 *10*, X(E0/E2)=0.014 *3* (2005Ki02 evaluation).
667.77	2^+	513.0 *2*	100 *11*	154.97	2^+	E0+E2(+M1)		0.048 *25*		α(K)=0.039 *22*; α(L)=0.007 *3*; α(M)=0.0017 *6* α(N)=0.00041 *14*; α(O)=7.E−5 *3*; α(P)=4.3×10^{-6} *25* Mult.: E0 component is expected to be small as indicated by α(K)exp=0.044 *6* (1999Da18).
		667.8 *2*	34 *4*	0.0	0^+	E2		0.01266		α(K)=0.00984 *14*; α(L)=0.00216 *3*; α(M)=0.000514 *8* α(N)=0.0001266 *18*; α(O)=2.18×10^{-5} *3*; α(P)=1.042×10^{-6} *15*
774.85	6^+	355.1 *2*	100	419.62	4^+	E2		0.0603		α(K)=0.0402 *6*; α(L)=0.01521 *22*; α(M)=0.00377 *6* α(N)=0.000925 *13*; α(O)=0.0001525 *22*; α(P)=4.13×10^{-6} *6* B(E2)(W.u.)=292 *20*
856.26	2^+	356.5 *2*	17 *5*	499.70	0^+	[E2]		0.0599		α(K)=0.0400 *6*; α(L)=0.01507 *22*; α(M)=0.00374 *6* α(N)=0.000917 *13*; α(O)=0.0001512 *22*; α(P)=4.11×10^{-6} *6*
		436.5 *2*	22.7 *20*	419.62	4^+	E2		0.0348		α(K)=0.0248 *4*; α(L)=0.00758 *11*; α(M)=0.00186 *3* α(N)=0.000456 *7*; α(O)=7.63×10^{-5} *11*; α(P)=2.60×10^{-6} *4*
		701.2 *2*	8.7 *20*	154.97	2^+	E0+E2(+M1)	0.7 *+10−3*	0.86 *25*		Total conversion coefficient from α(K)exp=0.72 *21* (1974Ca28), multiplied by a factor of 1.2 to account for other shells.
		856.2 *2*	100 *3*	0.0	0^+	E2		0.00748		α(K)=0.00598 *9*; α(L)=0.001148 *16*; α(M)=0.000270 *4* α(N)=6.66×10^{-5} *10*; α(O)=1.164×10^{-5} *17*; α(P)=6.32×10^{-7} *9*
942.70	(3^+)	274.8[@] *3*	<15	667.77	2^+	[M1,E2]		0.26 *13*		α(K)=0.20 *13*; α(L)=0.046 *7*; α(M)=0.0110 *11* α(N)=0.0027 *3*; α(O)=0.00047 *8*; α(P)=2.2×10^{-5} *15*
		523.1 *2*	18.2 *22*	419.62	4^+	[M1,E2]		0.046 *24*		α(K)=0.037 *21*; α(L)=0.0068 *25*; α(M)=0.0016 *6* α(N)=0.00039 *14*; α(O)=7.E−5 *3*; α(P)=4.1×10^{-6} *24*

$^{182}_{78}Pt_{104}$-5

Adopted Levels, Gammas (continued)

γ(^{182}Pt) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	$I_{(\gamma+ce)}$	Comments
942.70	(3$^+$)	787.7 *2*	100 *14*	154.97	2$^+$	(E2+M1)	>5	0.0092 *4*		α(K)=0.0073 *3*; α(L)=0.00144 *4*; α(M)=0.000340 *9* α(N)=8.39×10^{-5} *23*; α(O)=1.46×10^{-5} *4*; α(P)=7.7×10^{-7} *3*
1034.04	(4)$^+$	366.1 *2*	50 *25*	667.77	2$^+$	[E2]		0.0556		α(K)=0.0375 *6*; α(L)=0.01373 *20*; α(M)=0.00340 *5* α(N)=0.000834 *12*; α(O)=0.0001378 *20*; α(P)=3.87×10^{-6} *6*
		614.5 *2*	100 *6*	419.62	4$^+$	M1+E2	1.4 *5*	0.025 *7*		α(K)=0.020 *6*; α(L)=0.0038 *8*; α(M)=0.00090 *16* α(N)=0.00022 *4*; α(O)=3.9×10^{-5} *8*; α(P)=2.2×10^{-6} *7*
		879.1 *2*	10 *4*	154.97	2$^+$					
1152.07	(0$^+$)	997.1 *2*	100	154.97	2$^+$	(E2)		0.00551		α(K)=0.00446 *7*; α(L)=0.000804 *12*; α(M)=0.000188 *3* α(N)=4.64×10^{-5} *7*; α(O)=8.16×10^{-6} *12*; α(P)=4.70×10^{-7} *7*
1182.06	(2$^+$)	326.0 *2*	39 *8*	856.26	2$^+$	[M1,E2]		0.16 *9*		α(K)=0.13 *8*; α(L)=0.027 *6*; α(M)=0.0064 *12* α(N)=0.0016 *3*; α(O)=0.00027 *7*; α(P)=1.4×10^{-5} *9*
		682.3 *2*	6.1 *15*	499.70	0$^+$					
		762.3 *2*	6.1 *15*	419.62	4$^+$					
		1027.1 *2*	100 *11*	154.97	2$^+$	(E0+M1+E2)	>2.7	0.0102 *19*		Total conversion coefficient from α(K)exp=0.0085 *16* (1999Da18), multiplied by a factor of 1.2 to account for other shells.
1205.76	8$^+$	430.9 *1*	100	774.85	6$^+$	E2		0.0360		α(K)=0.0256 *4*; α(L)=0.00791 *11*; α(M)=0.00194 *3* α(N)=0.000476 *7*; α(O)=7.96×10^{-5} *12*; α(P)=2.67×10^{-6} *4* B(E2)(W.u.)=266 *25*
1239.92	4$^+$	383.0 *2*	66 *12*	856.26	2$^+$	[E2]		0.0492		α(K)=0.0337 *5*; α(L)=0.01174 *17*; α(M)=0.00290 *4* α(N)=0.000712 *10*; α(O)=0.0001179 *17*; α(P)=3.49×10^{-6} *5*
		465.0 *2*	24 *7*	774.85	6$^+$	E2		0.0296		E$_\gamma$: poor fit, level-energy difference=383.7. α(K)=0.0215 *3*; α(L)=0.00619 *9*; α(M)=0.001511 *22* α(N)=0.000371 *6*; α(O)=6.24×10^{-5} *9*; α(P)=2.26×10^{-6} *4*
		572.5 *2*	41 *12*	667.77	2$^+$					
		820.5 *2*	34 *5*	419.62	4$^+$	E0+E2(+M1)		0.20 *7*		Total conversion coefficient from α(K)exp=0.17 *6* (1999Da18), multiplied by a factor of 1.2 to account for other shells.
		1085.2 *2*	100 *7*	154.97	2$^+$	(E2)		0.00466		α(K)=0.00380 *6*; α(L)=0.000665 *10*; α(M)=0.0001550 *22* α(N)=3.82×10^{-5} *6*; α(O)=6.75×10^{-6} *10*; α(P)=4.00×10^{-7} *6*
1305.80	(5$^+$)	271[@] *1*		1034.04	(4)$^+$					E$_\gamma$: from ^{170}Yb(^{16}O,4nγ) only.
		363.1[@] *2*	≈45	942.70	(3$^+$)	[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*
		531.0 *2*	45 *36*	774.85	6$^+$					

$^{182}_{78}Pt_{104}$-6

Adopted Levels, Gammas (continued)

γ(^{182}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[#]	$I_{(\gamma+ce)}$	Comments
1305.80	(5$^+$)	886.3 *2*	100 *27*	419.62	4$^+$				
1311.71	2$^+$	455.6 *4*		856.26	2$^+$	E0		40 *8*	
		812.1 *2*	100 *24*	499.70	0$^+$				
		1156.6 *2*	52 *8*	154.97	2$^+$				
		1310.8[@] *4*	48 *8*	0.0	0$^+$				
1419.60	(4$^+$)	386.0[@] *2*	≈59	1034.04	(4)$^+$	[M1,E2]	0.10 *6*		α(K)=0.08 *5*; α(L)=0.016 *5*; α(M)=0.0038 *10* α(N)=0.00094 *25*; α(O)=0.00016 *5*; α(P)=9.E−6 *6*
		644.1[@] *2*	≈12	774.85	6$^+$				
		751.9 *2*	100 *29*	667.77	2$^+$	(E2)	0.00980		α(K)=0.00774 *11*; α(L)=0.001583 *23*; α(M)=0.000375 *6* α(N)=9.24×10^{-5} *13*; α(O)=1.603×10^{-5} *23*; α(P)=8.19×10^{-7} *12*
		999.9 *2*	53 *18*	419.62	4$^+$				
1437.6	(6$^+$)	133 *1*		1305.80	(5$^+$)				
		404 *1*		1034.04	(4)$^+$				
		662 *1*		774.85	6$^+$				
		1017 *1*		419.62	4$^+$				
1473.85		439.7 *2*	93 *13*	1034.04	(4)$^+$				
		617.7 *2*	100 *53*	856.26	2$^+$				
1502.47		834.7 *2*	100	667.77	2$^+$				
1521.82		1102.2 *2*	100	419.62	4$^+$				
1542.55	(2$^+$,3,4$^+$)	1122.9 *2*	88 *33*	419.62	4$^+$				
		1387.6 *2*	100 *33*	154.97	2$^+$				
1568.92		1149.3 *2*	100	419.62	4$^+$				
1649.5	6$^+$	410 *1*		1239.92	4$^+$				
		875 *1*		774.85	6$^+$				
		1229 *1*	100 *11*	419.62	4$^+$	(Q)			
1670.7	(5$^-$)	432 *1*		1239.92	4$^+$				
		636[@] *1*		1034.04	(4)$^+$				
		896 *1*		774.85	6$^+$				
		1250 *1*	100 *13*	419.62	4$^+$	(D)			
1684.53		1264.9 *2*	100	419.62	4$^+$				
1698.36	10$^+$	492.6 *1*	100	1205.76	8$^+$	E2	0.0257		B(E2)(W.u.)=2.8×10^2 *4*
1730.6	(7$^+$)	427 *1*		1305.80	(5$^+$)				
		523 *1*		1205.76	8$^+$				
		955 *1*	100 *17*	774.85	6$^+$				
1845.5	(6$^-$)	540 *1*	100	1305.80	(5$^+$)	(D)			
1864.1	(6$^+$)	559 *1*	46 *15*	1305.80	(5$^+$)	(D)			
		831 *1*	58 *10*	1034.04	(4)$^+$	(Q)			
		1089 *1*	100 *12*	774.85	6$^+$				
		1443 *1*	56 *15*	419.62	4$^+$				
1889.23		1469.6 *2*	100	419.62	4$^+$				
1924.7	(7$^-$)	254.1 *10*	100 *13*	1670.7	(5$^-$)				
		275 *1*	72 *6*	1649.5	6$^+$				

$^{182}_{78}Pt_{104}$-7

Adopted Levels, Gammas (continued)

γ(^{182}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
1924.7	(7⁻)	487 *1*		1437.6	(6⁺)				
		719 *1*	60 *9*	1205.76	8⁺				
		1149 *1*		774.85	6⁺				
1955.6	(7⁻)	91.5 *10*	50 *18*	1864.1	(6⁺)				
		285 *1*	100 *11*	1670.7	(5⁻)	Q			
		306.0 *10*	87 *16*	1649.5	6⁺				
		518 *1*		1437.6	(6⁺)				
		750 *1*	58 *11*	1205.76	8⁺	D			
2082.6	(8⁻)	127.0 *10*	100	1955.6	(7⁻)	(M1+E2)	+0.25 *15*	3.28 *15*	α(K)=2.63 *20*; α(L)=0.49 *5*; α(M)=0.116 *14* α(N)=0.029 *4*; α(O)=0.0050 *5*; α(P)=0.000302 *23*
2117.5	8⁺	468 *1*		1649.5	6⁺				
2149.9	(8⁻)	225 *1*		1924.7	(7⁻)				
		304.7 *10*	100 *11*	1845.5	(6⁻)				
		419 *1*		1730.6	(7⁺)				
2241.2	(9⁻)	316.1 *10*	100 *6*	1924.7	(7⁻)	Q			
		1036 *1*		1205.76	8⁺				
2241.9	(9⁻)	159.3 *10*	43 *4*	2082.6	(8⁻)	(M1+E2)	−0.21 *7*	1.73 *5*	α(K)=1.41 *5*; α(L)=0.246 *8*; α(M)=0.0573 *19* α(N)=0.0142 *5*; α(O)=0.00253 *7*; α(P)=0.000161 *6*
		286.3 *10*	100 *9*	1955.6	(7⁻)	(Q)			
2242.0	12⁺	543.5 *10*	100	1698.36	10⁺	E2		0.0203	B(E2)(W.u.)=162 *10*
2427.7	(10⁻)	185.8 *10*	36 *3*	2241.9	(9⁻)	(M1+E2)	−0.21 *6*	1.12 *3*	α(K)=0.91 *3*; α(L)=0.157 *4*; α(M)=0.0366 *9* α(N)=0.00904 *21*; α(O)=0.00162 *4*; α(P)=0.000104 *4*
		345.1 *10*	100 *6*	2082.6	(8⁻)	Q			
2504.1	(10⁻)	263 *1*		2241.2	(9⁻)				
		353.9 *10*	100 *35*	2149.9	(8⁻)				
2615.4	(11⁻)	374.2 *1*	100	2241.2	(9⁻)	Q			
2635.2	(11⁻)	207.4 *10*	32 *3*	2427.7	(10⁻)	(M1+E2)	−0.18 *7*	0.827 *22*	α(K)=0.678 *20*; α(L)=0.1146 *23*; α(M)=0.0266 *6* α(N)=0.00657 *14*; α(O)=0.001177 *24*; α(P)=7.73×10^{-5} *24*
		393.2 *10*	100 *6*	2241.9	(9⁻)	(Q)			
2690.2	(12⁺)	448 *1*		2242.0	12⁺				
		992 *1*		1698.36	10⁺				
2832.0	14⁺	590.0 *1*	100	2242.0	12⁺	E2		0.0167	B(E2)(W.u.)=114 *15*
2860.4	(12⁻)	225.2 *10*	100 *10*	2635.2	(11⁻)	(M1+E2)	−0.29 *15*	0.64 *4*	α(K)=0.52 *4*; α(L)=0.0905 *18*; α(M)=0.0211 *5* α(N)=0.00521 *11*; α(O)=0.000929 *19*; α(P)=5.9×10^{-5} *5*
		432.7 *10*		2427.7	(10⁻)				
2931.8	(12⁻)	317 *1*		2615.4	(11⁻)				
		427.4 *10*	100 *18*	2504.1	(10⁻)				
3046.9	(13⁻)	431.2 *10*		2615.4	(11⁻)				
3096.5	(13⁻)	264 *1*		2832.0	14⁺				
		407 *1*		2690.2	(12⁺)				
		854.4 *10*	100 *14*	2242.0	12⁺				
3103.5	(13⁻)	243.1 *10*	18 *2*	2860.4	(12⁻)	D(+Q)	−0.02 *5*		
		468.4 *10*	100 *9*	2635.2	(11⁻)	Q			

Adopted Levels, Gammas (continued)

$\gamma(^{182}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
3168.4	(14^+)	336.2 *10*		2832.0	14^+				
		478 *1*		2690.2	(12^+)				
3289.6	$(12,13,14^+)$	599 *1*		2690.2	(12^+)				
		1048 *1*		2242.0	12^+				
3357.9	(14^-)	254.4 *10*	21 *4*	3103.5	(13^-)				
		497.5 *10*	100 *6*	2860.4	(12^-)	(Q)			
3425.4	(14^-)	493.8 *10*	100	2931.8	(12^-)				
3460.5	16^+	628.5 *1*	100	2832.0	14^+	E2		0.01449	B(E2)(W.u.)>36
3480.0	(15^-)	383.4 *10*	79 *11*	3096.5	(13^-)				
		433 *1*		3046.9	(13^-)				
		648.3 *10*	100 *15*	2832.0	14^+	(D)			
3542.6	(15^-)	446 *1*		3096.5	(13^-)				
		495.6 *10*	100 *19*	3046.9	(13^-)	Q			
3629.4	(15^-)	271.5 *10*	20 *6*	3357.9	(14^-)				
		525.9 *1*	100 *9*	3103.5	(13^-)	Q			
3645.2	(16^+)	186 *1*		3460.5	16^+				
		476.4 *10*		3168.4	(14^+)				
		812.6 *10*		2832.0	14^+				
3906.3	(16^-)	276.9 *10*	23 *2*	3629.4	(15^-)	D(+Q)	−0.04 *8*		
		548.4 *10*	100 *9*	3357.9	(14^-)	Q			
3971.2	(16^-)	428 *1*		3542.6	(15^-)				
		546.0 *10*	100 *14*	3425.4	(14^-)	Q			
3982.4	(17^-)	502.4 *10*	100 *10*	3480.0	(15^-)	(Q)			
		522 *1*		3460.5	16^+				
4078.1	(17^-)	535.9 *10*	100	3542.6	(15^-)	(Q)			
4094.3	18^+	633.8 *1*	100	3460.5	16^+	Q			
4203.6	(17^-)	297.3 *10*	28 *8*	3906.3	(16^-)				
		574.2 *10*	100 *9*	3629.4	(15^-)	(Q)			
4232.0	(18^+)	138 *1*		4094.3	18^+				
		587.0 *10*		3645.2	(16^+)				
		771.1 *10*		3460.5	16^+				
4500.5	(18^-)	296.9 *10*	45 *13*	4203.6	(17^-)				
		594.2 *10*	100 *9*	3906.3	(16^-)	(Q)			
4555.4	(18^-)	477 *1*		4078.1	(17^-)				
		583.7 *10*	100 *14*	3971.2	(16^-)				
4569.6	(19^-)	587.2 *1*	100	3982.4	(17^-)	Q			
4657.0	(19^-)	579.7 *10*	100	4078.1	(17^-)	(Q)			
4728.5	20^+	634.6 *10*	100	4094.3	18^+	(Q)			
4825.2	(19^-)	324.7 *10*		4500.5	(18^-)				
		621.6 *10*	100 *13*	4203.6	(17^-)	(Q)			
4919.1	(20^+)	191 *1*		4728.5	20^+				
		687.0 *10*		4232.0	(18^+)				
		824.6 *10*		4094.3	18^+				

$^{182}_{78}Pt_{104}$-9

Adopted Levels, Gammas (continued)

γ(^{182}Pt) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.[‡]
5139.7	(20$^-$)	314.5 *10*		4825.2	(19$^-$)	
		639.2 *10*	100	4500.5	(18$^-$)	Q
5167.2	(20$^-$)	511 *1*		4657.0	(19$^-$)	
		611.1 *10*	100	4555.4	(18$^-$)	
5207.9	(21$^-$)	638.3 *10*	100	4569.6	(19$^-$)	Q
5278.5	(21$^-$)	621.5 *10*	100	4657.0	(19$^-$)	(Q)
5403.2	22$^+$	674.7 *10*	100	4728.5	20$^+$	(Q)
5494.4	(21$^-$)	669.2 *10*	100	4825.2	(19$^-$)	
5637.7	(22$^+$)	718.6 *10*		4919.1	(20$^+$)	
5775.7	(22$^-$)	636 *1*		5139.7	(20$^-$)	
5804.6	(22$^-$)	637.4 *10*		5167.2	(20$^-$)	
5893.9	(23$^-$)	686 *1*		5207.9	(21$^-$)	
5951.5	(23$^-$)	673 *1*	100	5278.5	(21$^-$)	(Q)
6126.8	24$^+$	723.6 *10*	100	5403.2	22$^+$	(Q)
6208.4	(23$^-$)	714 *1*	100	5494.4	(21$^-$)	(Q)
6380.7	(24$^+$)	743 *1*		5637.7	(22$^+$)	
6399.7	(24$^-$)	624 *1*		5775.7	(22$^-$)	
6479.6	(24$^-$)	675 *1*		5804.6	(22$^-$)	
6624.9	(25$^-$)	731 *1*		5893.9	(23$^-$)	
6904.8	26$^+$	778.0 *10*	100	6126.8	24$^+$	
6961.4	(25$^-$)	753 *1*		6208.4	(23$^-$)	
7396.9	(27$^-$)	772 *1*		6624.9	(25$^-$)	

[†] For transitions from levels up to 1034 keV, weighted averages of values from ^{182}Au ε decay and ^{170}Yb(^{16}O,4nγ) are taken. Above this excitation energy, there are no levels common between the two studies.

[‡] From ^{182}Au ε decay for transitions from low-spin (J<7), for higher spin levels, values or assignments are from (^{16}O,4nγ).

[#] 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.

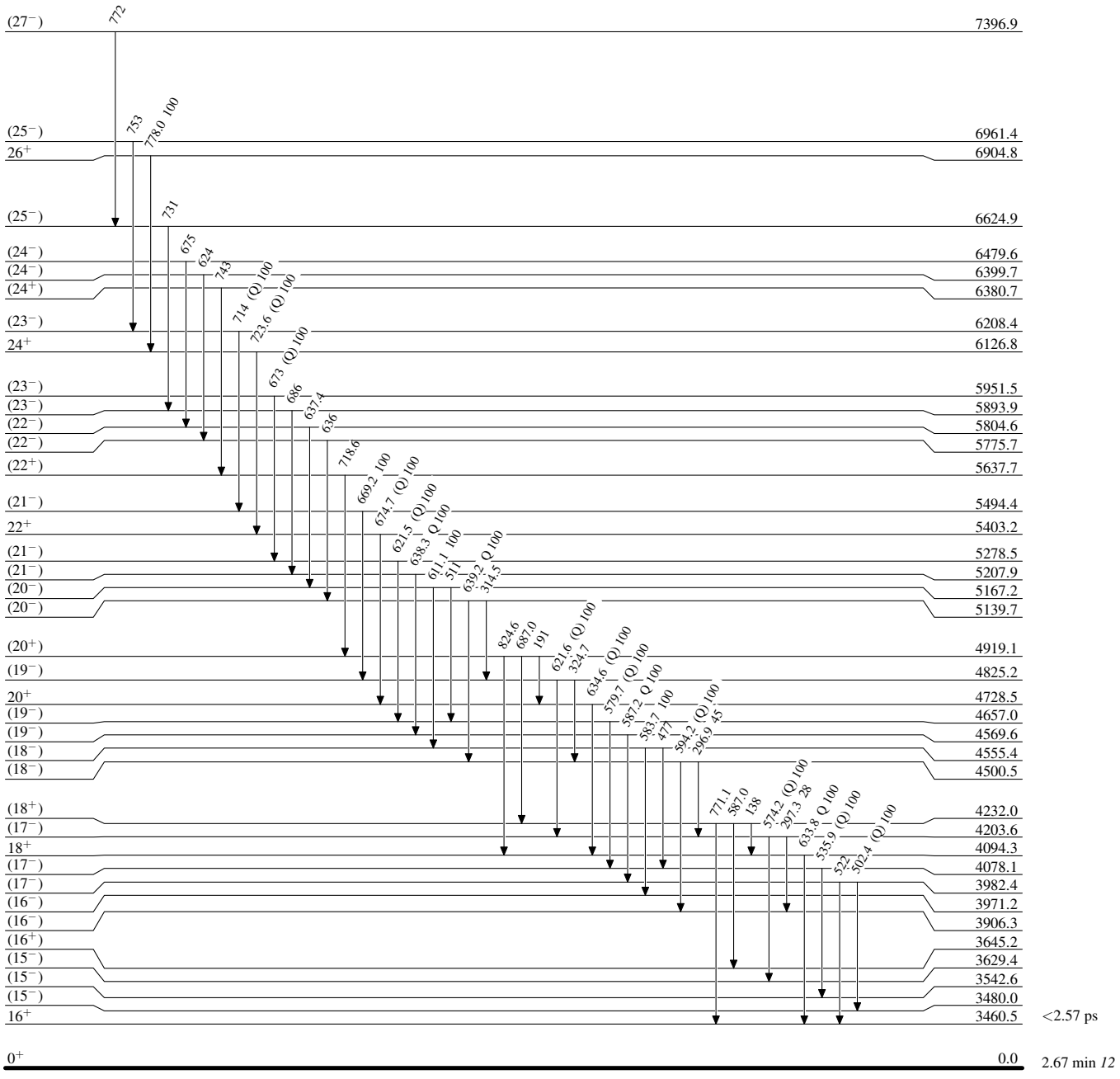
[@] Placement of transition in the level scheme is uncertain.

$^{182}_{78}Pt_{104}$-10

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

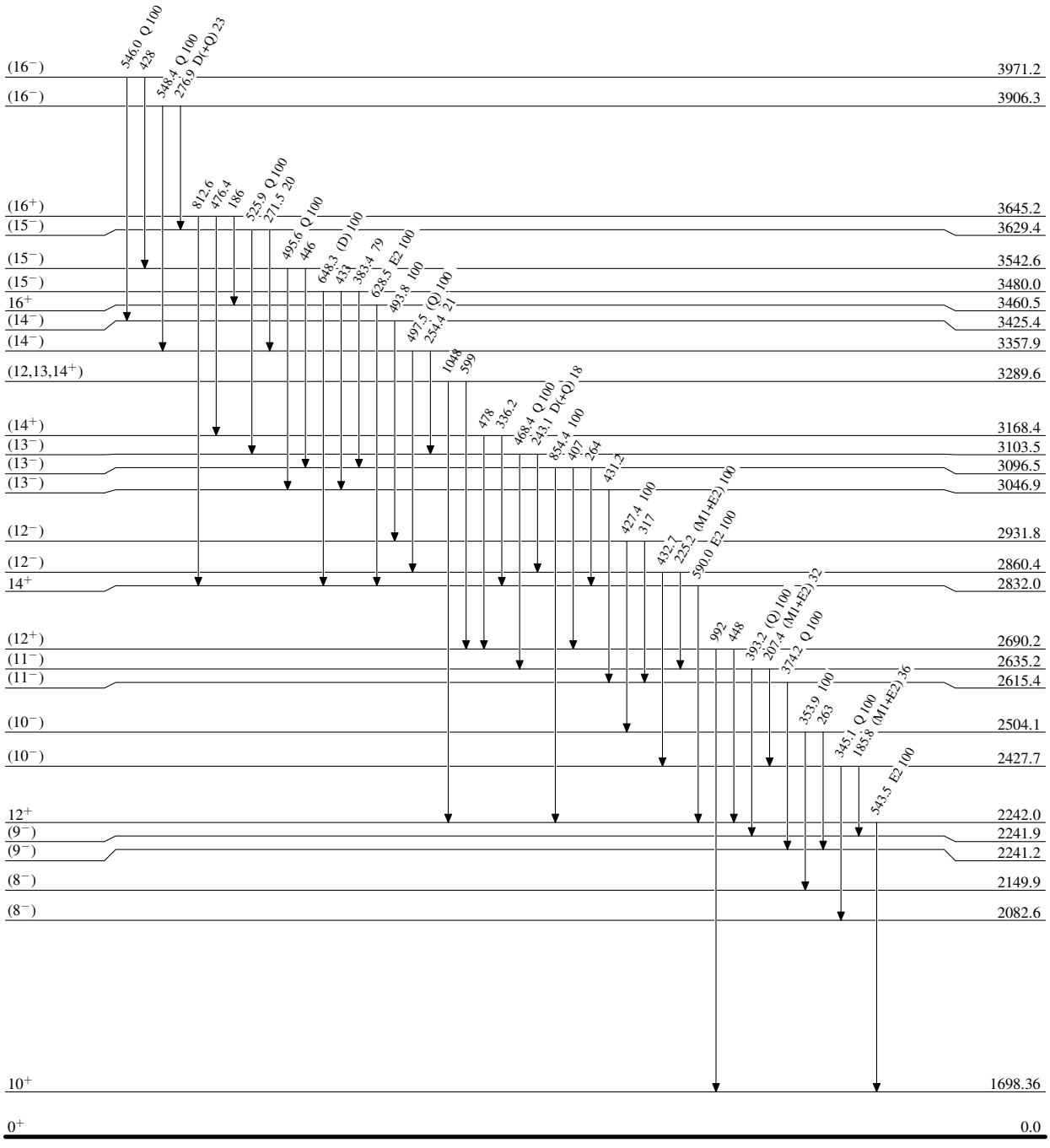


$^{182}_{78}Pt_{104}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



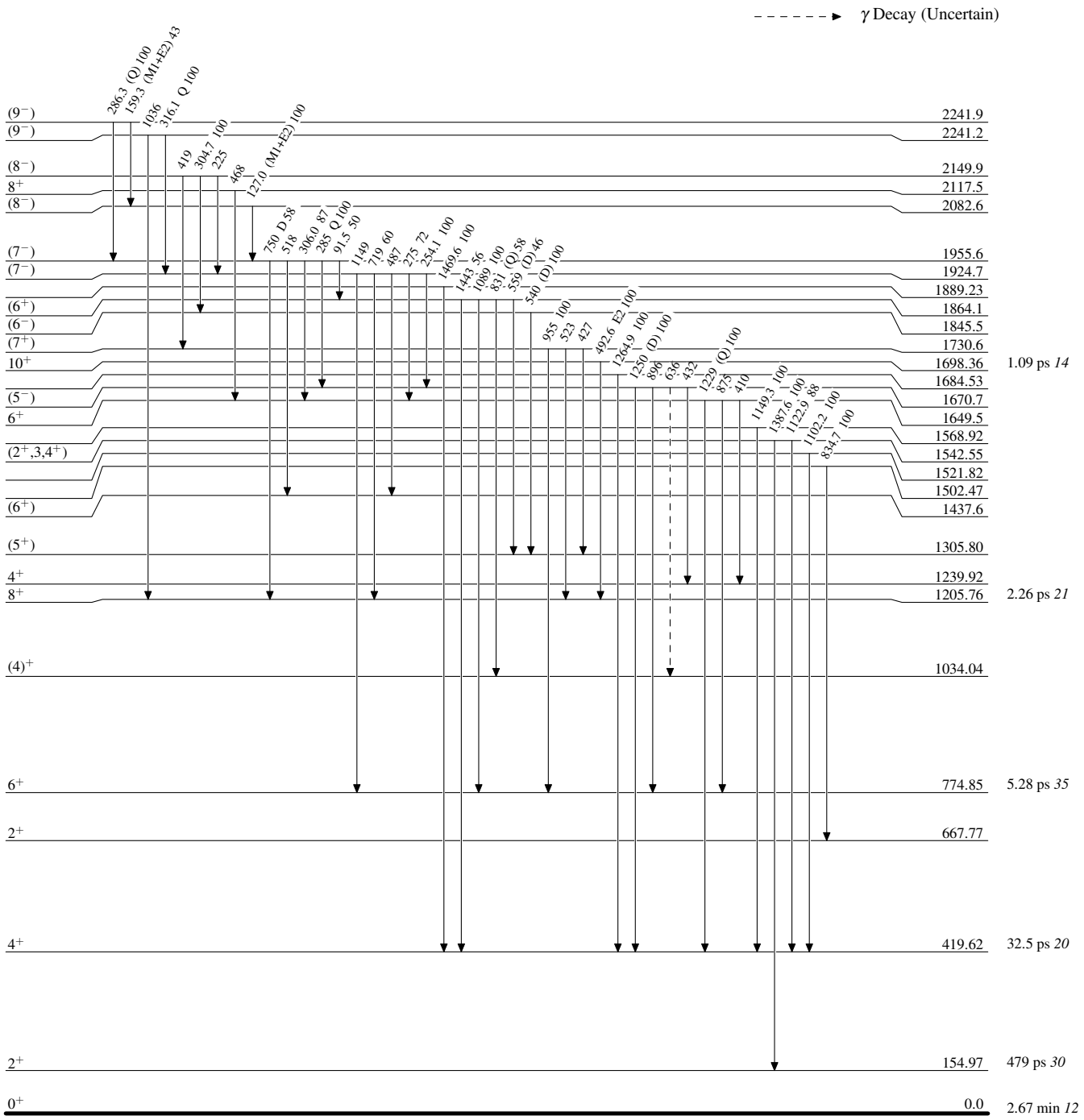
$^{182}_{78}Pt_{104}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{182}_{78}Pt_{104}$

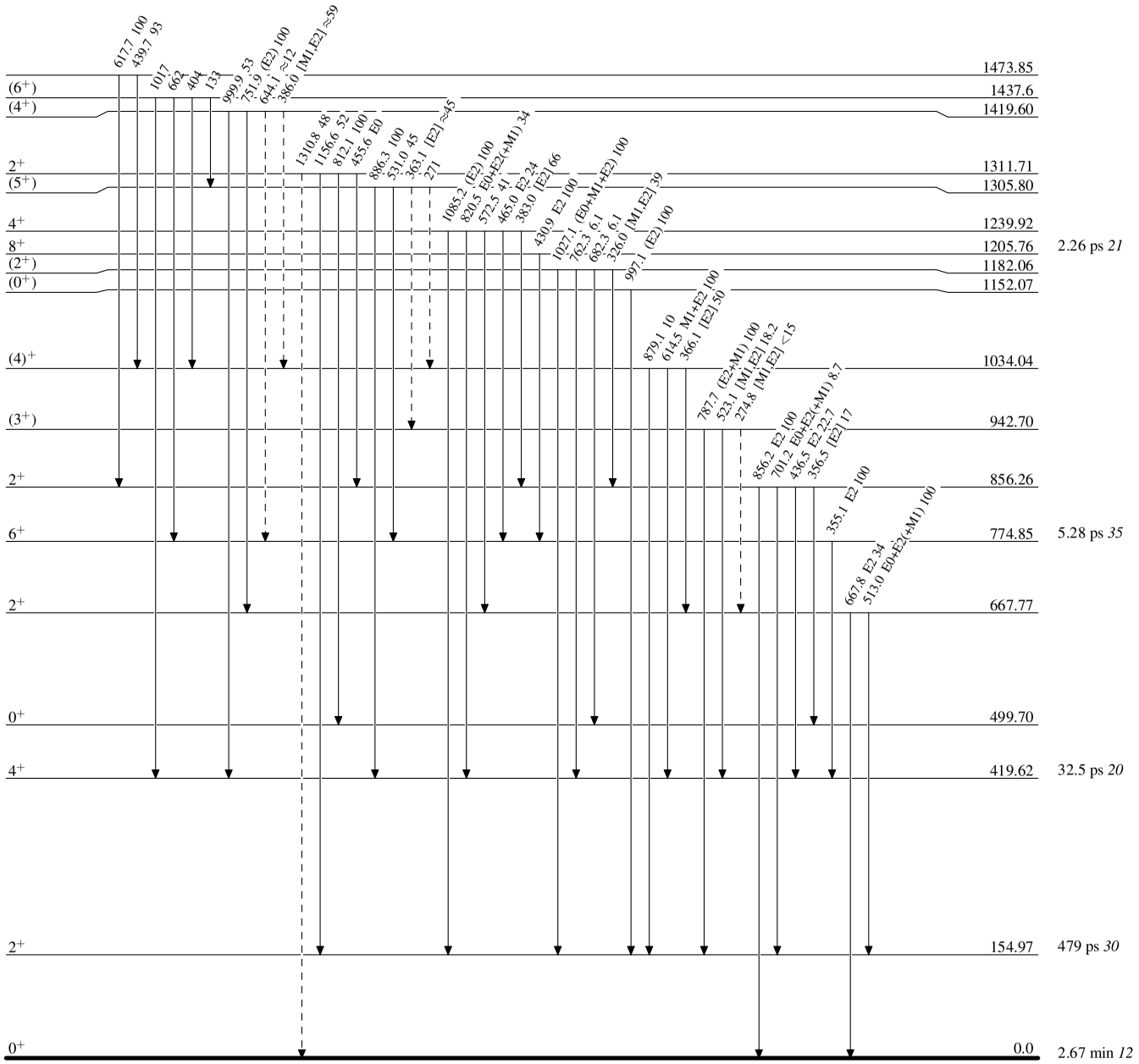
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

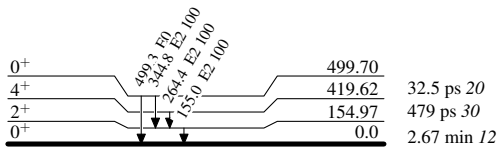


$^{182}_{78}Pt_{104}$

Adopted Levels, Gammas

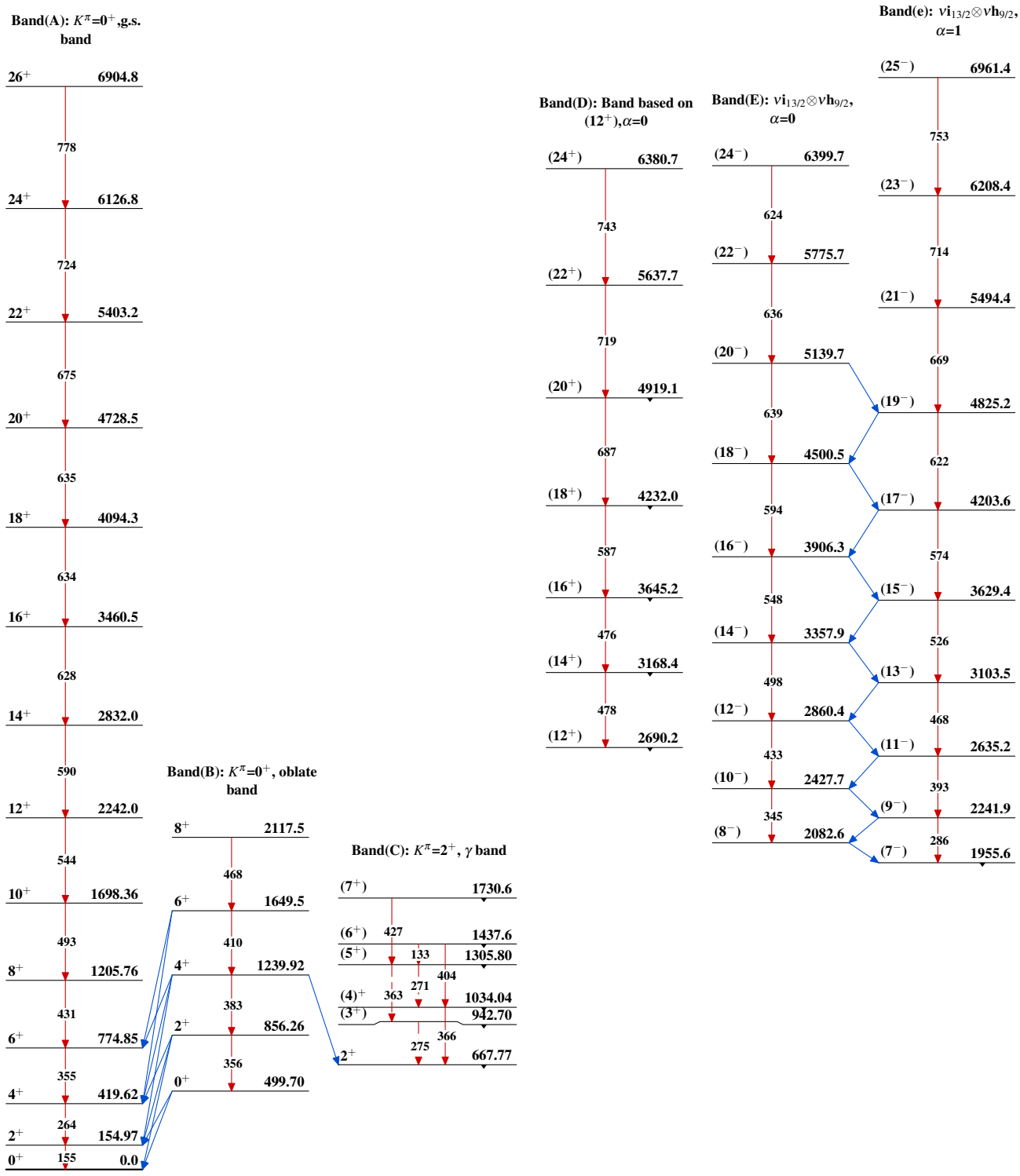
Level Scheme (continued)

Intensities: Relative photon branching from each level



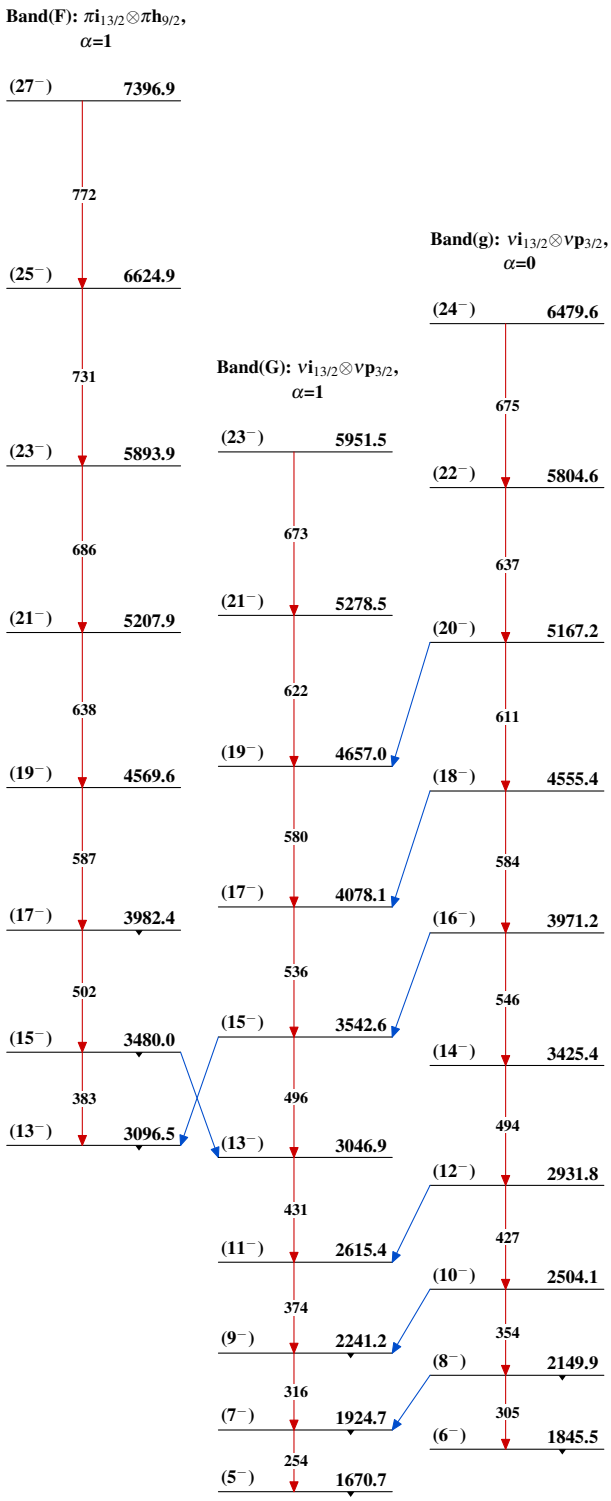
$^{182}_{78}Pt_{104}$

Adopted Levels, Gammas



$^{182}_{78}Pt_{104}$

Adopted Levels, Gammas (continued)



$^{182}_{78}Pt_{104}$