Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 195,368 (2024)	1-Dec-2023

Q(β^-)=−1900 *6*; S(n)=6463 *4*; S(p)=6234 *4*; Q(α)=3096 *4* 2021Wa16

Other studies:

2008Er03 – ^{197}Au(γ,6n), E < 67.7 MeV, measured integrated cross section 63 mb *15* (unit listed as MeV mb) and yield (5.0 *7*) × 10^4 with respect to 1 of ^{197}Au(γ,n).

2013Fa03: Measured ^{186}W(^{9}Be,X), E=41, 45, 49, 53 MeV, fusion and one-neutron stripping reaction cross sections; for ^{191}Pt σ(E): 156.6 mb *139* (E=41 MeV), 257.3 mb *211* (E=45 MeV); 211.6 mb *171* (E=49 MeV), 138.2 mb *138* (E=53 MeV).

2015Ju02: Measured production of residual radionuclides in Pb(p,x), E=250 MeV. For ^{191}Pt the production cross section is σ=27.13 ms *95*.

2016Ka36: ^{209}Bi(^{11}B,X), E=146.0 MeV, cumulative production cross section σ=5.81 mb *62*; ^{181}Ta(^{11}B,X), E=125.7 and 245.4 MeV, cumulative production cross section σ=4.6 mb *8*.

2019Ba40: ^{204,206,207,208}Pb(d,X), E=4.4 GeV, measured reaction products, deduced cumulative cross sections 11.9 mb *12*, 12.4 mb *23*, 11.8 mb *25*, and 16.1 mb *25*, respectively.

2019De15: ^{198}Pt(^{136}Xe,X), E(c.m.)=451 MeV, measured cumulative and independent yields, 5.60 mb *1* and 4.50 mb *45*, respectively.

2020De09: Measured cumulative and independent yields of the ^{204}Hg + ^{208}Pb,E(lab) = 1143 MeV, reaction fragments. σ(CY)=1.76 mb *60* and σ(IY)=1.22 mb *41*.

2020Ch32: ^{209}Bi(p,X), E=1.4 GeV; measured reaction products.

^{191}Pt Levels

The band configurations, appearing in footnotes, are given in function of the following states, identified by the letters in parentheses: (A) $\nu i_{13/2}$, α=+1/2, $i_x\approx$6 h; (B) $\nu i_{13/2}$, α=−1/2; (C) $\nu i_{13/2}$, α=+1/2, $i_x\approx$4 h; (F) $\nu h_{9/2}$, α=+1/2; (G) νj, α=−1/2; (H) νj, α=+1/2; (e) $\pi h_{11/2}$, α=−1/2; (f) $\pi h_{11/2}$, α=+1/2; (a) πj, α=+1/2; (b) πj, α=−1/2.

Isotope shifts: 1990Hi08, 1989Du01, 1988Ro20.

Cross Reference (XREF) Flags

A	^{191}Pt IT decay (104 μs)	E	^{190}Os(α,3nγ)
B	^{191}Au ε decay (3.18 h)	F	^{192}Pt(p,d),(d,t)
C	^{186}W(^{11}B,p5nγ)	G	^{192}Pt(^{3}He,α)
D	^{189}Os(α,2nγ),^{191}Ir(d,2nγ)		

E(level)†	J$^\pi$	$T_{1/2}$	XREF	Comments
0.0	3/2$^-$	2.83 d *2*	ABCDEF	%ε=100 μ=−0.499 *5*; Q=−0.87 *4* No α (<5×10^{-6}%) (1963Ka17). Nuclear charge radius: <r^2>$^{1/2}$=5.411 fm *3* (2004An14). J$^\pi$: atomic beam (1975Ru06). Parity from L=1 in (p,d). $T_{1/2}$: Unweighted average of 2.861 d *9* (unweighted average of discrepant raw data in 2000Mo05, nat Pt(γ,n), HPGe detector, dead-time correction – supersedes 2.862 d *7* (2000Zi04)) and 2.802 d *13* (1994Pa46, ^{191}Ir(p,n), chemical separation, HPGe detector, pulser method, uncertainty transformed to 1 σ level). Others: 3.00 d *2* (1949Wi08), 3.2 d *2* (1953Sw20), 2.90 d *5* (1954Co29), 3.0 d *3* (1955Sm42), 2.8 d *3* (1962Li12), 2.9 d *2* (1963Gr22), 2.9 d *2* (1970Ba56), 2.71 d *6* (1970Sc20). μ: From 2019StZV, 1988Ro20, 1989Du01 – Resonance ionization mass spectroscopy. Other values: −0.494 *8* (1992Hi07) – resonance ionization mass spectroscopy; 0.500 *10* (1985Ed05), 0.499 *10* (1985Oh05), and 0.506 *11* (1981La25) radiative detection of NMR; −0.46 *+14−4* (1980Be27) static (low temperature) nuclear orientation and Mossbauer detection of oriented nuclei (1987Be36).

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Adopted Levels, Gammas (continued)

^{191}Pt Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				Q: From 2016St14 (1992Hi07 – resonance ionization mass spectroscopy). Other values: −0.89 *5* (1988Ro20 – Resonance ionization mass spectroscopy); −0.98 *5* (1989Du01 – resonance ionization mass spectroscopy (no Sternheimer correction)); −0.64 *26* (1985Ed05 – radiative detection of NMR).
9.554 *16*	$(5/2)^-$		AB DEF	J^π: L=(3) in (p,d),(d,t), component of 1+(3) in the g.s.; 283.9γ M1+E2 from $(5/2)^-$ and 442.3γ M1 transition from 451.8 (L=1(+4) in (p,d)) can be used to exclude 7/2 for this level for J^π(451.8)=$(3/2)^-$.
30.399 *9*	$1/2^-,3/2^-$		B FG	J^π: 1/2,1/3 from L=1 in (p,d). 263.09γ E2 from J^π(293.45)=$(5/2)^-$ favors 1/2, while gamma transitions from J^π(253.9)=$(7/2,5/2)^-$ favors $3/2^-$.
100.668 *20*	$(9/2)^-$	>1 μs	AB DEF	J^π: L=5,6 in (p,d); 48.37γ M2 from $(13/2)^+$, 91.11γ E2 to $(5/2,7/2)^-$. $T_{1/2}$: from ^{191}Pt IT decay (104 μs) (1976Pi03).
149.040[@] *22*	$(13/2)^+$	104 μs *4*	ABCDEFG	J^π: L=6 in (p,d) and 6,5 in (^{3}He,α), 322.0γ E2 from $(17/2)^+$ at 471. $T_{1/2}$: from ^{191}Pt IT decay (104 μs).
158.81 *3*	$1/2^-,3/2^-,5/2^-$		B	J^π: 158.8γ M1+E2 to $3/2^-$.
166.518 *13*	$(3/2)^-$		B F	J^π: L=1,3 in (p,d) yields $(1/2,3/2,5/2,7/2)^-$ and 126.9γ M1+E2 from $(5/2)^-$ and 408.2γ M1+E2 from $(1/2)^-$ may be used to exclude 1/2,5/2,7/2.
173.432[&] *23*	$(11/2)^+$		BCDEF	J^π: 24.4γ M1+E2 to $(13/2)^+$, 132.9γ M1+E2 from $(9/2)^+$.
253.947 *21*	$(7/2,5/2)^-$		B	J^π: 253.9γ E2 to $3/2^-$; 244.4γ M1+E2 to $(5/2)^-$.
277.880 *21*	$(3/2,5/2)^-$		B	J^π: 277.9γ M1 to $3/2^-$, 268.3γ M1+E2 to $(5/2,7/2)^-$.
281.188 *25*	$(3/2,5/2,7/2)^-$		B	J^π: 792.8γ E1 from $(5/2)^+$.
293.457 *14*	$(5/2)^-$		B F	J^π: 192.8γ E2 to $(9/2)^-$, 293.5γ M1+E2 to $3/2^-$.
306.34 *3*	$(9/2)^+$		B D FG	J^π: L=4 in (^{3}He,α) and (p,d), 132.9γ M1+E2 to $(11/2)^+$.
399.835 *19*	$7/2^-$		B FG	J^π: L=3 in (p,d) and (^{3}He,α), 399.84γ E2 to $3/2^-$.
451.84 *3*	$(3/2)^-$		B f	XREF: f(452.0). J^π: L=1+(4) in (p,d), corresponding to 453.8 keV and this level; 421.4γ M1 to $(1/2)^-$ and 442.3γ M1 to $(5/2)^-$; for 453.8 keV level 147.5γ M1 to $(9/2)^+$ and 280.4γ E2 to $(11/2)^+$. Therefore, in (p,d), L=1 for 451.8 level, and L=(4) for 453.8.
453.83 *3*	$(7/2)^+$		B D f	XREF: f(452.0). J^π: see comment for 451.8 keV level spin assignment. 7/2,9/3 from L=4 in (p,d) and 9/3 may be excluded for 280.4γ E2 to 173.4 keV level for J^π(173.4)=$(11/2)^+$.
471.08[@] *9*	$(17/2)^+$		CDE	J^π: 322.0γ stretched E2 to $(13/2)^+$.
487.584 *17*	$(7/2)^-$		B FG	J^π: L=3 in (p,d); 386.9γ M1+E2 to $(9/2)^-$.
529.31[&] *7*	$(15/2)^+$		CDE	J^π: 380.3γ M1 to $(13/2)^+$, 355.9γ stretched E2 to $(11/2)^+$.
535.29 *3*	$(3/2,5/2)^-$		B	J^π: 368.7γ M1+E2 to $(3/2)^-$; 525.8γ M1 to $(5/2)^-$.
560[#] *4*	$1/2^-,3/2^-$		F	J^π: L=1 in (p,d).
574.66 *4*	$(1/2)^-$		B	J^π: 574.5γ M1+E2 to $3/2^-$, 544.3γ E2 to $(5/2)^-$.
594.29 *6*	$^-$		B	J^π: 340.3γ (M1) to $(7/2,5/2)^-$.
599.36 *9*	$(15/2)^+$		CDE	J^π: 450.2γ M1 to $(13/2)^+$, 559.2 (Q) from $(19/2)^+$.
613.15 *4*	$(1/2,3/2,5/2)^-$		B F	J^π: 446.6γ (M1) to $(3/2)^-$ ($\Delta\pi$=no from α in ^{191}Au ε decay which excludes E1 but not E2).
625.85 *9*	$^-$		B	J^π: 467.0γ (M1) to $1/2^-,3/2^-,5/2^-$.
660.23 *3*	$(5/2)^+$		B D g	XREF: g(658). J^π: 353.9γ (E2) to $(9/2)^+$, 413.7γ M1+E2 from $(5/2)^+$.
662.27 *5*	$(3/2,5/2)^-$		B g	XREF: g(658). J^π: 495.7γ M1 to $(3/2)^-$; 411.5γ from $(5/2)^+$.
690.0[#] *25*	$5/2^-,7/2,9/2^+$		F	J^π: L=3,4 in (p,d).
732.37 *8*	$1/2^-,3/2^-$		B F	J^π: L=1 in (p,d).
810[#] *5*	$(11/2^+,13/2^+)$		Fg	XREF: g(800).

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Adopted Levels, Gammas (continued)

^{191}Pt Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				Jπ: L=(6) in (^{3}He,α), L=6,5 in (p,d).
863.93 *5*	(5/2)$^+$		B	Jπ: 410.1γ M1+E2 to (7/2)$^+$, 210.1γ M1+E2 from (5/2)$^+$, 557.5γ E2 to (9/2)$^+$,
885[#] *5*	(1/2$^-$,3/2$^-$)		F	Jπ: L=(1) in (p,d).
919.19 *14*	(15/2$^+$,17/2$^+$)		DE	Jπ: 390.0γ D(+Q) to (15/2)$^+$; 383.7γ D(+Q) from (17/2,19/2)$^+$.
929.20 *15*			B f	XREF: f(925).
951.08[@] *12*	(21/2)$^+$		CDE	Jπ: 480.0γ stretched E2 to (17/2)$^+$.
965[‡] *10*	(11/2$^+$,13/2$^+$)		G	Jπ: L=(6) in (^{3}He,α).
986.46 *7*			B	
989.49[&] *10*	(19/2)$^+$		CDE	Jπ: 460.2γ stretched E2 to (15/2)$^+$.
996.4 *4*	(13/2$^+$)		D	Jπ: 525.3γ (Q) to (17/2)$^+$, 847.0γ to (13/2)$^+$.
1074.03 *3*	(5/2)$^+$		B	Jπ: 586.4γ E1 to (7/2)$^-$, log *ft*≈5.8 in ^{191}Au ε decay from 3/2$^+$.
1113.49 *8*	(5/2)$^+$		B	Jπ: 659.7γ M1+E2 to (7/2)$^+$, 1113.6γ to 3/2$^-$.
1158.56 *11*	(19/2)$^+$		CDE	Jπ: 687.4γ D(+Q) to (17/2)$^+$, 223.0γ (E1) from (21/2)$^-$.
1174.65 *9*	$^-$		B	Jπ: 920.7γ (M1) to (5/2$^-$,7/2)$^-$, 561.7γ (M1) to (1/2,3/2,5/2)$^-$.
1194[‡] *10*	(11/2$^+$,13/2$^+$)		G	Jπ: L=(6) in (^{3}He,α).
1289.97 *15*			B	Jπ: 627.7γ (M1) to (3/2,5/2,7/2)$^-$.
1300.9 *3*			B	Jπ: 1023.0γ (M1) to (3/2,5/2)$^-$.
1302.75 *16*	(17/2,19/2)$^+$		DE	Jπ: 831.6γ D(+Q) to (17/2)$^+$, 351.7γ to (21/2)$^+$, 703.9γ to (15/2)$^+$.
1309.67 *19*	(15/2$^+$,17/2,19/2$^+$)		D	Jπ: 151.1γ to (19/2)$^+$, 780.1γ to (15/2)$^+$.
1381.53[d] *12*	(21/2)$^-$		CDE	Jπ: see comment on J^π for 2826.5 keV, (33/2)$^-$ level. A_2=+0.44 *11* and A_4=−0.11 *8* for 430.4γ in (^{11}B,p5nγ) is consistent for a ΔJ=0 transition.
1453.3 *3*			B	
1471.55 *19*			DE	
1545.82[d] *16*	(25/2)$^-$	1.07 ns *6*	CDE	Jπ: 164.3γ E2 to (21/2$^-$). see comment on J^π for 2826.5 keV level. $T_{1/2}$: from ce-α(t) in (α,3nγ) (1978Ti02).
1550.41[@] *22*	(25/2)$^+$		CDE	Jπ: 599.3γ stretched Q to (21/2)$^+$.
1590.73 *24*	(19/2,21/2,23/2)		DE	Jπ: 209.1γ D(+Q) to (21/2)$^-$.
1862.87[e] *22*	(27/2)$^-$		CdE	XREF: d(1861.6). Jπ: 317.0γ D to (25/2)$^-$, 262.5 (M1) from (29/2)$^-$.
1925.2 *4*			E	
1939.2 *4*			E	
2125.32[d] *22*	(29/2)$^-$		C E	Jπ: 262.5γ (M1) to (27/2$^-$), 579.5γ (E2) to (25/2$^-$). see comment on J^π for 2826.5 keV level.
2151.6[f] *4*	(29/2)$^-$		C	Jπ: 605.7γ stretched Q to (25/2)$^-$.
2233.4[@] *3*	(29/2)$^+$		C E	Jπ: 683.0γ stretched Q to (25/2)$^+$.
2385.4[g] *3*	(29/2)$^-$		C E	Jπ: 840.0γ to (25/2)$^-$, 441.2γ from (33/2)$^-$.
2467.6[e] *4*	(31/2)$^-$		C	Jπ: 604.5γ stretched Q to (27/2)$^-$.
2581.4 *4*	(33/2$^-$)		E	Jπ: 456.1γ (stretched Q) to (29/2)$^-$.
2608.2[f] *5*	(33/2)$^-$		C	Jπ: 456.6γ stretched Q to (29/2)$^-$.
2738.2[d] *5*	(33/2)$^-$		C	Jπ: 613.2γ stretched Q to (29/2)$^-$.
2825.0[a] *6*	(33/2)$^+$		C	Jπ: 591.6γ stretched E2 to (29/2)$^+$.
2826.5[g] *5*	(33/2)$^-$		C	Jπ: From 3317.3 keV (35/2)$^+$ level to 989.5 keV (19/2)$^+$, the sequence: 490.6γ D(+Q); 701.0γ (stretched E2); 579.6γ stretched (E2); 164.3γ E2, and 392.0γ (E1) to (19/2)$^+$, defines that 490.6γ is E1 and all transitions are stretched and therefore the intermediate-level spins are (33/2)$^-$, (29/2)$^-$, (25/2)$^-$, and (21/2)$^-$.
2890.2[h] *4*	(33/2)$^-$		C	Jπ: 504.7γ stretched Q to (29/2)$^-$.
2940.8[@] *4*	(33/2)$^+$		C E	Jπ: 707.1 (stretched E2) to (29/2)$^+$. Configuration=Aef.

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Adopted Levels, Gammas (continued)

^{191}Pt Levels (continued)

E(level)[†]	J$^\pi$	XREF	Comments
2956.6 *5*	$(33/2)^+$	C	J$^\pi$: 723.4γ stretched Q to $(29/2)^+$.
3108.9[e] *7*	$(35/2)^-$	C	J$^\pi$: 641.3γ stretched Q to $(31/2)^-$.
3189.0[h] *5*	$(37/2)^-$	C	J$^\pi$: 298.8γ stretched Q to $(33/2)^-$.
3272.2[a] *7*	$(37/2)^+$	C	J$^\pi$: 447.2γ stretched Q to $(33/2)^+$.
3277.9 *5*		C	
3299.5 *5*	$(37/2^+)$	C	J$^\pi$: 358.6γ (stretched Q) to $(33/2)^+$.
3301.3[f] *5*	$(37/2)^-$	C	J$^\pi$: 693.1γ stretched Q to $(33/2)^-$.
3317.3 *5*	$(35/2)^+$	C	Configuration=Bef. J$^\pi$: π=+ (see 3452.0 keV level); 376.6γ D(+Q) to $(33/2)^+$; yrast level from intensity of feeding.
3433.2[d] *7*	$(37/2)^-$	C	J$^\pi$: 695.0γ to $(33/2)^-$, rotational band structure.
3452.0[b] *4*	$(39/2)^+$	C	J$^\pi$: 151.0γ and 263.0γ D (E1 in (^{11}B,p5nγ)) to π=− levels and 134.5γ (E2) to 3317 keV level gives π=+ for this and 3317 levels; yrast level from intensity of feeding.
3679.0[b] *6*	$(43/2)^+$	C	J$^\pi$: 227.0γ stretched Q to $(39/2)^+$.
3685.1 *7*		C	
3716.6[h] *7*	$(41/2)^-$	C	J$^\pi$: 527.6γ stretched Q to $(37/2)^-$.
3780.5[e] *8*	$(39/2^-)$	C	J$^\pi$: 671.6γ stretched Q to $(35/2^-)$.
3874.1[a] *8*	$(41/2)^+$	C	J$^\pi$: 602.0γ stretched Q to $(37/2)^+$.
4005.1[c] *7*	$(45/2^+)$	C	J$^\pi$: 326.1γ D to $(43/2)^+$, band member.
4329.9[b] *7*	$(47/2)^+$	C	J$^\pi$: 650.9γ stretched Q to $(43/2)^+$.
4389.3[h] *9*	$(45/2^-)$	C	J$^\pi$: 672.7γ (stretched Q) to $(41/2)^-$.
4419.4[e] *10*	$(43/2^-)$	C	J$^\pi$: 638.9γ stretched Q to $(39/2^-)$.
4515.9[c] *7*	$(49/2^+)$	C	J$^\pi$: 780.6γ stretched Q from $(53/2^+)$.
4587.7[a] *8*	$(45/2)^+$	C	J$^\pi$: 713.6γ stretched Q to $(41/2)^+$.
4630.1 *11*	(43/2,45/2)	C	J$^\pi$: 210.7γ (D) to $(43/2^-)$.
4991.9[b] *8*	$(51/2)^+$	C	J$^\pi$: 662.0γ stretched Q to $(47/2)^+$.
5296.5[c] *8*	$(53/2^+)$	C	J$^\pi$: 280.0γ from $(53/2)^+$, rotational band structure.
5366.0[a] *8*	$(49/2)^+$	C	J$^\pi$: 778.3γ stretched Q to $(45/2)^+$.
5437.9[b] *9*	$(55/2)^+$	C	J$^\pi$: 446.0γ stretched Q to $(51/2)^+$.
5576.5[a] *9*	$(53/2)^+$	C	J$^\pi$: 210.5γ stretched Q to $(49/2)^+$.
5882.9[b] *11*	$(59/2)^+$	C	J$^\pi$: 445.0γ stretched Q to $(55/2)^+$.
6121.6[a] *10*	$(57/2)^+$	C	J$^\pi$: 545.1γ stretched Q to $(53/2)^+$.
6148.9 *12*	$(63/2^+)$	C	J$^\pi$: 266.0γ (stretched Q) to $(59/2)^+$.

[†] Deduced by evaluator from a least-squares fit to adopted γ-ray energies.
[‡] From ^{192}Pt(^{3}He,α).
[#] From ^{192}Pt(p,d).
[@] Band(A): A band, $\nu i^{-1}_{13/2}$, α=+1/2, favored.
[&] Band(a): B band, $\nu i^{-1}_{13/2}$, α=−1/2, unfavored.
[a] Band(B): ABC band, α=+1/2.
[b] Band(C): ABFeb band, α=−1/2.
[c] Band(c): ABFea band, α=+1/2.
[d] Band(D): Beb and BCH band, α=+1/2.
[e] Band(d): Bea and BCG band, α=−1/2.
[f] Band(E): ABH band, α=+1/2.
[g] Band(F): BCF band, α=+1/2.
[h] Band(G): ABF band, α=+1/2.

Adopted Levels, Gammas (continued)

$\gamma(^{191}Pt)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α[g]	Comments
9.554	$(5/2)^-$	(9.56)		0.0	$3/2^-$				
30.399	$1/2^-,3/2^-$	30.40 *1*	100	0.0	$3/2^-$	M1+E2	0.034 *17*	40.4 *20*	α(L)=31.0 *15*; α(M)=7.2 *4* α(N)=1.78 *9*; α(O)=0.319 *14*; α(P)=0.02070 *29*
100.668	$(9/2)^-$	91.11 *2*	100	9.554	$(5/2)^-$	E2		7.23 *10*	B(E2)(W.u.)<0.17 α(K)=0.754 *11*; α(L)=4.86 *7*; α(M)=1.259 *18* α(N)=0.307 *4*; α(O)=0.0477 *7*; α(P)=0.0001103 *15*
149.040	$(13/2)^+$	48.37 *1*	100	100.668	$(9/2)^-$	M2		455 *6*	B(M2)(W.u.)=0.0745 *+32−29* α(L)=339 *5*; α(M)=89.2 *13* α(N)=22.43 *31*; α(O)=3.88 *5*; α(P)=0.2032 *29*
158.81	$1/2^-,3/2^-,5/2^-$	158.86 *3*	100	0.0	$3/2^-$	M1+E2	0.59 *22*	1.53 *14*	α(K)=1.17 *16*; α(L)=0.279 *20*; α(M)=0.067 *6* α(N)=0.0165 *14*; α(O)=0.00283 *18*; α(P)=0.000132 *19*
166.518	$(3/2)^-$	136.09 *2*	20.5 *21*	30.399	$1/2^-,3/2^-$	M1+E2	0.42 *8*	2.56 *8*	α(K)=2.00 *10*; α(L)=0.435 *20*; α(M)=0.104 *6* α(N)=0.0255 *14*; α(O)=0.00442 *19*; α(P)=0.000228 *11*
		156.97 *5*	14.9 *21*	9.554	$(5/2)^-$				
		166.50 *2*	100 *7*	0.0	$3/2^-$	M1+E2	0.53 *8*	1.37 *5*	α(K)=1.06 *5*; α(L)=0.234 *6*; α(M)=0.0559 *18* α(N)=0.0138 *4*; α(O)=0.00238 *6*; α(P)=0.000120 *7*
173.432	$(11/2)^+$	24.39 *1*	100	149.040	$(13/2)^+$	M1+E2	0.158 *29*	1.7×10^2 *4*	α(L)=129 *28*; α(M)=32 *7* α(N)=7.7 *17*; α(O)=1.27 *26*; α(P)=0.0394 *6*
253.947	$(7/2,5/2)^-$	223.63 *5*	8.7 *7*	30.399	$1/2^-,3/2^-$				
		244.38 *4*	38 *3*	9.554	$(5/2)^-$	M1+E2	0.62 *14*	0.438 *32*	α(K)=0.347 *31*; α(L)=0.0697 *13*; α(M)=0.01648 *24* α(N)=0.00407 *6*; α(O)=0.000711 *15*; α(P)=3.9×10^{-5} *4*
		253.95 *3*	100 *7*	0.0	$3/2^-$	E2		0.1641 *23*	α(K)=0.0928 *13*; α(L)=0.0538 *8*; α(M)=0.01359 *19* α(N)=0.00333 *5*; α(O)=0.000536 *8*; α(P)=9.14×10^{-6} *13*
277.880	$(3/2,5/2)^-$	247.50 *4*	10.4 *7*	30.399	$1/2^-,3/2^-$	M1+E2	2.3 *1*	0.232 *5*	α(K)=0.151 *5*; α(L)=0.0612 *9*; α(M)=0.01524 *21* α(N)=0.00374 *5*; α(O)=0.000614 *9*; α(P)=1.59×10^{-5} *5*
		268.33 *4*	27.4 *21*	9.554	$(5/2)^-$	M1+E2	0.31 *21*	0.390 *35*	α(K)=0.319 *33*; α(L)=0.0548 *17*; α(M)=0.01273 *31* α(N)=0.00315 *8*; α(O)=0.000562 *19*; α(P)=3.6×10^{-5} *4*
		277.86 *3*	100 *7*	0.0	$3/2^-$	M1		0.376 *5*	α(K)=0.311 *4*; α(L)=0.0507 *7*; α(M)=0.01172 *16* α(N)=0.00290 *4*; α(O)=0.000522 *7*; α(P)=3.53×10^{-5} *5*
281.188	$(3/2,5/2,7/2)^-$	271.65 *3*	100	9.554	$(5/2)^-$	M1+E2	1.00 *10*	0.267 *15*	α(K)=0.204 *14*; α(L)=0.0477 *9*; α(M)=0.01144 *19* α(N)=0.00282 *5*; α(O)=0.000484 *10*; α(P)=2.27×10^{-5} *16*

$^{191}_{78}Pt_{113}$-5

Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α[g]	Comments
293.457	(5/2)$^-$	126.92 *2*	2.2 *4*	166.518	(3/2)$^-$	M1+E2	0.56 *+24−25*	3.02 *23*	α(K)=2.23 *35*; α(L)=0.60 *9*; α(M)=0.145 *25* α(N)=0.036 *6*; α(O)=0.0061 *9*; α(P)=0.00025 *4*
		192.82 *4*	3.8 *5*	100.668	(9/2)$^-$	E2		0.407 *6*	α(K)=0.1862 *26*; α(L)=0.1664 *23*; α(M)=0.0425 *6* α(N)=0.01039 *15*; α(O)=0.001651 *23*; α(P)=1.773×10^{-5} *25*
		263.09 *3*	23.0 *15*	30.399	1/2$^-$,3/2$^-$	E2		0.1469 *21*	α(K)=0.0849 *12*; α(L)=0.0468 *7*; α(M)=0.01181 *17* α(N)=0.00289 *4*; α(O)=0.000467 *7*; α(P)=8.40×10^{-6} *12*
		283.90 *3*	100 *6*	9.554	(5/2)$^-$	M1+E2	0.63 *+8−7*	0.287 *13*	α(K)=0.230 *12*; α(L)=0.0441 *9*; α(M)=0.01040 *19* α(N)=0.00257 *5*; α(O)=0.000451 *10*; α(P)=2.58×10^{-5} *14*
		293.45 *3*	42 *3*	0.0	3/2$^-$	M1+E2	0.9 *3*	0.23 *4*	α(K)=0.18 *4*; α(L)=0.0379 *24*; α(M)=0.0090 *5* α(N)=0.00222 *12*; α(O)=0.000386 *27*; α(P)=2.0×10^{-5} *4*
306.34	(9/2)$^+$	132.89 *2*	100 *8*	173.432	(11/2)$^+$	M1+E2	0.25 *4*	2.88 *5*	α(K)=2.32 *5*; α(L)=0.429 *10*; α(M)=0.1006 *28* α(N)=0.0248 *7*; α(O)=0.00440 *10*; α(P)=0.000265 *6*
		157.33 *5*	56 *8*	149.040	(13/2)$^+$				
399.835	7/2$^-$	106.36 *5*	1.1 *4*	293.457	(5/2)$^-$	M1+E2	1.0 *6*	4.7 *6*	α(K)=2.6 *14*; α(L)=1.6 *6*; α(M)=0.39 *16* α(N)=0.10 *4*; α(O)=0.016 *6*; α(P)=3.0×10^{-4} *16*
		145.95 *5*	2.2 *4*	253.947	(7/2,5/2)$^-$	(M1)		2.265 *32*	α(K)=1.865 *26*; α(L)=0.308 *4*; α(M)=0.0713 *10* α(N)=0.01764 *25*; α(O)=0.00317 *4*; α(P)=0.0002138 *30*
		390.25 *3*	57 *4*	9.554	(5/2)$^-$	M1+E2	0.41 *15*	0.1354 *99*	α(K)=0.111 *9*; α(L)=0.0188 *9*; α(M)=0.00436 *19* α(N)=0.00108 *5*; α(O)=0.000193 *10*; α(P)=1.25×10^{-5} *10*
		399.84 *4*	100 *7*	0.0	3/2$^-$	E2		0.0438 *6*	α(K)=0.0304 *4*; α(L)=0.01014 *14*; α(M)=0.002499 *35* α(N)=0.000613 *9*; α(O)=0.0001019 *14*; α(P)=3.16×10^{-6} *4*
451.84	(3/2)$^-$	421.44 *4*	100 *7*	30.399	1/2$^-$,3/2$^-$	M1(+E2)	0.55 *+18−17*	0.103 *10*	α(K)=0.084 *9*; α(L)=0.0145 *9*; α(M)=0.00338 *20* α(N)=0.00084 *5*; α(O)=0.000149 *10*; α(P)=9.4×10^{-6} *10*
		442.27 *5*	17.2 *15*	9.554	(5/2)$^-$	M1		0.1077 *15*	α(K)=0.0891 *12*; α(L)=0.01438 *20*; α(M)=0.00332 *5* α(N)=0.000820 *11*; α(O)=0.0001477 *21*; α(P)=1.003×10^{-5} *14*
		451.85[h] *5*	<42[h]	0.0	3/2$^-$				α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0024 *8*; α(N+..)=0.00070 *23* α(N)=0.00059 *19*; α(O)=0.00010 *4*; α(P)=6.E−6 *4*
453.83	(7/2)$^+$	147.49 *4*	29.5 *17*	306.34	(9/2)$^+$	M1,E2		1.6 *6*	α(K)=1.1 *7*; α(L)=0.42 *12*; α(M)=0.103 *34* α(N)=0.025 *8*; α(O)=0.0042 *11*; α(P)=1.2×10^{-4} *9* Mult.: D(+Q) in ^{189}Os(α,2nγ).
		280.40 *3*	100 *6*	173.432	(11/2)$^+$	E2		0.1207 *17*	α(K)=0.0723 *10*; α(L)=0.0366 *5*; α(M)=0.00919 *13* α(N)=0.002251 *32*; α(O)=0.000365 *5*; α(P)=7.22×10^{-6} *10*
471.08	(17/2)$^+$	322.0[d] *1*	100	149.040	(13/2)$^+$	E2		0.0800 *11*	α(K)=0.0513 *7*; α(L)=0.02174 *31*; α(M)=0.00543 *8*

$^{191}_{78}Pt_{113}$-6

Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α[g]	Comments
									α(N)=0.001330 *19*; α(O)=0.0002177 *31*; α(P)=5.21×10^{-6} *7* Mult.: From α in ^{189}Os(α,2nγ), E2 is the main component (1977Ke18); Q from γ(θ) in ^{190}Os(α,3nγ) (1977Sa01).
487.584	(7/2)$^-$	87.74 *2*	1.9 *3*	399.835	7/2$^-$	M1+E2	0.27 *+7−5*	9.61 *14*	α(K)=7.47 *28*; α(L)=1.64 *16*; α(M)=0.39 *4* α(N)=0.096 *10*; α(O)=0.0166 *16*; α(P)=0.000869 *31*
		194.14 *3*	69 *5*	293.457	(5/2)$^-$	M1+E2	0.41 *+8−6*	0.926 *33*	α(K)=0.742 *34*; α(L)=0.1410 *23*; α(M)=0.0332 *7* α(N)=0.00819 *16*; α(O)=0.001443 *22*; α(P)=8.4×10^{-5} *4*
		206.39 *3*	21 *9*	281.188	(3/2,5/2,7/2)$^-$				
		386.90 *3*	91 *6*	100.668	(9/2)$^-$	M1+E2	1.05 *+11−9*	0.098 *5*	α(K)=0.078 *5*; α(L)=0.0157 *5*; α(M)=0.00373 *11* α(N)=0.000919 *27*; α(O)=0.000160 *5*; α(P)=8.6×10^{-6} *6*
		478.04 *4*	100 *7*	9.554	(5/2)$^-$	M1+E2	0.90 *11*	0.061 *4*	α(K)=0.0491 *34*; α(L)=0.0090 *4*; α(M)=0.00211 *9* α(N)=0.000520 *22*; α(O)=9.2×10^{-5} *4*; α(P)=5.5×10^{-6} *4*
		487.61 *4*	70 *5*	0.0	3/2$^-$	E2		0.0263 *4*	α(K)=0.01932 *27*; α(L)=0.00534 *7*; α(M)=0.001298 *18* α(N)=0.000319 *4*; α(O)=5.38×10^{-5} *8*; α(P)=2.032×10^{-6} *28*
529.31	(15/2)$^+$	355.9[b] *1*	100[b] *8*	173.432	(11/2)$^+$	E2		0.0602 *8*	α(K)=0.0402 *6*; α(L)=0.01516 *21*; α(M)=0.00376 *5* α(N)=0.000923 *13*; α(O)=0.0001521 *21*; α(P)=4.13×10^{-6} *6* Mult.: From α(K)exp=0.057 *16* (α,2nγ), E2 is the main component (1977Ke18); Q from γ(θ) in ^{190}Os(α,3nγ) (1977Sa01).
		380.3 *1*	77 *7*	149.040	(13/2)$^+$	M1[e]		0.1610 *23*	α(K)=0.1330 *19*; α(L)=0.02157 *30*; α(M)=0.00498 *7* α(N)=0.001231 *17*; α(O)=0.0002217 *31*; α(P)=1.503×10^{-5} *21* E_γ: weighted average of 380.3 *1* from (α,2nγ) and 380.2 *1* from (α,3nγ). I_γ: weighted average of 71 *7* from (α,2nγ) and 84 *8* from (α,3nγ). Mult.: M1 predominant from (α,2nγ), D(+Q) from (α,3nγ).
535.29	(3/2,5/2)$^-$	368.66 *4*	51 *4*	166.518	(3/2)$^-$	M1+E2	1.3 *3*	0.099 *16*	α(K)=0.077 *14*; α(L)=0.0171 *13*; α(M)=0.00410 *27* α(N)=0.00101 *7*; α(O)=0.000174 *14*; α(P)=8.5×10^{-6} *16*
		376.56 *4*	49 *4*	158.81	1/2$^-$,3/2$^-$,5/2$^-$				
		525.79 *5*	100 *8*	9.554	(5/2)$^-$	M1		0.0683 *10*	α(K)=0.0565 *8*; α(L)=0.00908 *13*; α(M)=0.002092 *29* α(N)=0.000518 *7*; α(O)=9.32×10^{-5} *13*; α(P)=6.34×10^{-6} *9*
574.66	(1/2)$^-$	408.21 *6*	100 *13*	166.518	(3/2)$^-$	M1+E2	1.36 *23*	0.074 *8*	α(K)=0.057 *7*; α(L)=0.0124 *8*; α(M)=0.00295 *16* α(N)=0.00073 *4*; α(O)=0.000126 *8*; α(P)=6.3×10^{-6} *8*

$^{191}_{78}Pt_{113}$-7

Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α[g]	Comments
574.66	(1/2)$^-$	544.35 *10*	17 *4*	30.399	1/2$^-$,3/2$^-$				
		565.13 *5*	54 *6*	9.554	(5/2)$^-$	E2		0.01848 *26*	α(K)=0.01398 *20*; α(L)=0.00343 *5*; α(M)=0.000827 *12* α(N)=0.0002034 *28*; α(O)=3.47×10^{-5} *5*; α(P)=1.478×10^{-6} *21*
		574.54 *7*	19 *4*	0.0	3/2$^-$	M1+E2	1.8 *5*	0.026 *5*	α(K)=0.021 *4*; α(L)=0.0042 *5*; α(M)=0.00099 *12* α(N)=0.000245 *30*; α(O)=4.3×10^{-5} *6*; α(P)=2.3×10^{-6} *5*
594.29	$^-$	340.35 *5*	100	253.947	(7/2,5/2)$^-$	(M1)		0.2170 *30*	α(K)=0.1791 *25*; α(L)=0.0291 *4*; α(M)=0.00672 *9* α(N)=0.001664 *23*; α(O)=0.000300 *4*; α(P)=2.028×10^{-5} *28*
599.36	(15/2)$^+$	426[&] *3*	≈9[&]	173.432	(11/2)$^+$				
		450.3[b] *1*	100[&] *10*	149.040	(13/2)$^+$	M1[e]		0.1027 *14*	α(K)=0.0849 *12*; α(L)=0.01371 *19*; α(M)=0.00316 *4* α(N)=0.000782 *11*; α(O)=0.0001408 *20*; α(P)=9.56×10^{-6} *13* Mult.: From I_e measurements in (α,2nγ), M1 is the main component (1977Ke18); D(+Q) from γ(θ) in ^{190}Os(α,3nγ) (1977Sa01).
613.15	(1/2,3/2,5/2)$^-$	332.03 *5*	43 *5*	281.188	(3/2,5/2,7/2)$^-$				
		446.58 *6*	100 *10*	166.518	(3/2)$^-$	(M1)		0.1050 *15*	α(K)=0.0868 *12*; α(L)=0.01401 *20*; α(M)=0.00323 *5* α(N)=0.000799 *11*; α(O)=0.0001440 *20*; α(P)=9.77×10^{-6} *14*
625.85	$^-$	467.04 *8*	100	158.81	1/2$^-$,3/2$^-$,5/2$^-$	(M1)		0.0933 *13*	α(K)=0.0771 *11*; α(L)=0.01243 *17*; α(M)=0.00287 *4* α(N)=0.000709 *10*; α(O)=0.0001277 *18*; α(P)=8.68×10^{-6} *12*
660.23	(5/2)$^+$	206.39 *3*	45 *9*	453.83	(7/2)$^+$	D(+Q)[&]			
		353.88 *3*	100 *7*	306.34	(9/2)$^+$	(E2)		0.0611 *9*	α(K)=0.0407 *6*; α(L)=0.01547 *22*; α(M)=0.00384 *5* α(N)=0.000942 *13*; α(O)=0.0001552 *22*; α(P)=4.18×10^{-6} *6*
662.27	(3/2,5/2)$^-$	495.74 *5*	100	166.518	(3/2)$^-$	M1		0.0797 *11*	α(K)=0.0659 *9*; α(L)=0.01061 *15*; α(M)=0.002445 *34* α(N)=0.000605 *8*; α(O)=0.0001090 *15*; α(P)=7.41×10^{-6} *10*
732.37	1/2$^-$,3/2$^-$	701.94 *8*	100 *9*	30.399	1/2$^-$,3/2$^-$	(M1)		0.0323 *5*	α(K)=0.0267 *4*; α(L)=0.00426 *6*; α(M)=0.000980 *14* α(N)=0.0002423 *34*; α(O)=4.37×10^{-5} *6*; α(P)=2.98×10^{-6} *4*
		732.48 *16*	19 *3*	0.0	3/2$^-$	(M1)		0.0289 *4*	α(K)=0.02398 *34*; α(L)=0.00381 *5*; α(M)=0.000877 *12* α(N)=0.0002169 *30*; α(O)=3.91×10^{-5} *5*; α(P)=2.67×10^{-6} *4*
863.93	(5/2)$^+$	410.20 *15*	100 *19*	453.83	(7/2)$^+$	M1+E2	1.2 *4*	0.078 *18*	α(K)=0.061 *16*; α(L)=0.0127 *17*; α(M)=0.0030 *4*

$^{191}_{78}Pt_{113}$-8

Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α[g]	Comments
									α(N)=0.00074 *9*; α(O)=0.000129 *18*; α(P)=6.8×10^{-6} *19*
863.93	(5/2)$^+$	557.51 *8*	50 *8*	306.34	(9/2)$^+$	E2		0.01908 *27*	α(K)=0.01440 *20*; α(L)=0.00357 *5*; α(M)=0.000861 *12* α(N)=0.0002118 *30*; α(O)=3.61×10^{-5} *5*; α(P)=1.521×10^{-6} *21*
919.19	(15/2$^+$,17/2$^+$)	319.8[b] *2*	74[b] *9*	599.36	(15/2)$^+$	D(+Q)[&]			
		390.1[b] *2*	100[b] *10*	529.31	(15/2)$^+$	D(+Q)[a]			
		447.8[b] *3*	55[a] *9*	471.08	(17/2)$^+$				
929.20		316.5 *5*	≈83	613.15	(1/2,3/2,5/2)$^-$				
		647.97 *15*	100 *33*	281.188	(3/2,5/2,7/2)$^-$				
951.08	(21/2)$^+$	480.0[d] *1*	100	471.08	(17/2)$^+$	E2[e]		0.0274 *4*	α(K)=0.02001 *28*; α(L)=0.00560 *8*; α(M)=0.001365 *19* α(N)=0.000335 *5*; α(O)=5.65×10^{-5} *8*; α(P)=2.103×10^{-6} *29* Mult.: from α(K)exp=0.015 *4* (α,2nγ), E2 is the main component (1977Ke18); Q from γ(θ) in ^{190}Os(α,3nγ) (1977Sa01).
986.46		532.63 *6*	100	453.83	(7/2)$^+$				
989.49	(19/2)$^+$	390.1[&] *3*	18[&] *5*	599.36	(15/2)$^+$				
		460.2[d] *1*	100[a] *9*	529.31	(15/2)$^+$	E2[e]		0.0304 *4*	α(K)=0.02200 *31*; α(L)=0.00640 *9*; α(M)=0.001562 *22* α(N)=0.000384 *5*; α(O)=6.45×10^{-5} *9*; α(P)=2.307×10^{-6} *32* Mult.: from α(K)exp=0.029 *8* (α,2nγ).
		518.3[d] *2*	50[b] *5*	471.08	(17/2)$^+$	D(+Q)[a]		0.047 *25*	α(K)=0.038 *21*; α(L)=0.007 *3*; α(M)=0.0016 *6*; α(N+..)=0.00048 *17* α(N)=0.00040 *14*; α(O)=7.E−5 *3*; α(P)=4.2×10^{-6} *24*
996.4	(13/2$^+$)	525.3[&] *3*	83[&] *25*	471.08	(17/2)$^+$	(Q)[&]			
		847[&] *2*	100[&] *20*	149.040	(13/2)$^+$				
1074.03	(5/2)$^+$	210.09 *4*	3.5 *3*	863.93	(5/2)$^+$	M1+E2	0.35 *+16−14*	0.76 *5*	α(K)=0.61 *5*; α(L)=0.1109 *17*; α(M)=0.0259 *5* α(N)=0.00641 *13*; α(O)=0.001137 *16*; α(P)=7.0×10^{-5} *6*
		411.5 *2*	1.5 *3*	662.27	(3/2,5/2)$^-$				
		413.76 *4*	21.7 *14*	660.23	(5/2)$^+$	M1+E2	0.78 *+19−17*	0.095 *10*	α(K)=0.077 *8*; α(L)=0.0141 *9*; α(M)=0.00331 *19* α(N)=0.00082 *5*; α(O)=0.000144 *9*; α(P)=8.6×10^{-6} *10*

$^{191}_{78}Pt_{113}$-9

Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α[g]	Comments
1074.03	(5/2)$^+$	460.94 *12*	1.4 *2*	613.15	(1/2,3/2,5/2)$^-$				
		499.62 *12*	2.7 *3*	574.66	(1/2)$^-$				
		538.7 *3*	4.8 *8*	535.29	(3/2,5/2)$^-$	E1		0.00706 *10*	α(K)=0.00589 *8*; α(L)=0.000903 *13*; α(M)=0.0002068 *29* α(N)=5.09×10^{-5} *7*; α(O)=9.01×10^{-6} *13*; α(P)=5.64×10^{-7} *8*
		586.44 *3*	100	487.584	(7/2)$^-$	E1		0.00593 *8*	α(K)=0.00495 *7*; α(L)=0.000754 *11*; α(M)=0.0001724 *24* α(N)=4.24×10^{-5} *6*; α(O)=7.53×10^{-6} *11*; α(P)=4.76×10^{-7} *7*
		620.31 *8*	6.4 *6*	453.83	(7/2)$^+$	M1+E2	0.93 *24*	0.031 *4*	α(K)=0.025 *4*; α(L)=0.0044 *5*; α(M)=0.00102 *10* α(N)=0.000252 *26*; α(O)=4.5×10^{-5} *5*; α(P)=2.8×10^{-6} *4*
		674.22 *6*	40 *3*	399.835	7/2$^-$	E1		0.00448 *6*	α(K)=0.00374 *5*; α(L)=0.000564 *8*; α(M)=0.0001289 *18* α(N)=3.17×10^{-5} *4*; α(O)=5.65×10^{-6} *8*; α(P)=3.62×10^{-7} *5*
		767.75 *16*	1.2 *2*	306.34	(9/2)$^+$				
		780.51 *16*	1.5 *2*	293.457	(5/2)$^-$				
		792.78 *15*	4.2 *4*	281.188	(3/2,5/2,7/2)$^-$	E1		0.00327 *5*	α(K)=0.00274 *4*; α(L)=0.000408 *6*; α(M)=9.31×10^{-5} *13* α(N)=2.292×10^{-5} *32*; α(O)=4.09×10^{-6} *6*; α(P)=2.67×10^{-7} *4*
		820.07 *18*	2.1 *2*	253.947	(7/2,5/2)$^-$				
		1064.7 *3*	0.9 *1*	9.554	(5/2)$^-$				
		1074.2 *3*	1.0 *1*	0.0	3/2$^-$				
1113.49	(5/2)$^+$	451.21[h] *13*	<150[h]	662.27	(3/2,5/2)$^-$				
		625.85[i] *12*	100 *15*	487.584	(7/2)$^-$				
		659.69 *12*	32 *4*	453.83	(7/2)$^+$	M1+E2	1.2 *+4−3*	0.023 *4*	α(K)=0.0188 *30*; α(L)=0.0034 *4*; α(M)=0.00079 *9* α(N)=0.000194 *22*; α(O)=3.4×10^{-5} *4*; α(P)=2.07×10^{-6} *35*
		835.53 *16*	75 *4*	277.880	(3/2,5/2)$^-$	E1		0.00296 *4*	α(K)=0.002479 *35*; α(L)=0.000368 *5*; α(M)=8.39×10^{-5} *12* α(N)=2.068×10^{-5} *29*; α(O)=3.69×10^{-6} *5*; α(P)=2.420×10^{-7} *34*
		859.57 *19*	34 *4*	253.947	(7/2,5/2)$^-$				
		1113.6 *3*	28 *4*	0.0	3/2$^-$				
1158.56	(19/2)$^+$	207.5 *2*	6.8[b] *15*	951.08	(21/2)$^+$				E_γ: weighted average of 207.0 *5* from (^{11}B,p5nγ), 207.6 *3* from (α,2nγ), and 207.8 *6* from (α,3nγ).

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Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[g]	Comments
1158.56	$(19/2)^+$	559.2 *2*	60[b] *8*	599.36	$(15/2)^+$	(Q)[e]		E_γ: weighted average of 559.0 *5* from (^{11}B,p5nγ), 559.2 *2* from (α,2nγ), and 559.3 *3* from (α,3nγ).
		687.5 *1*	100[b] *8*	471.08	$(17/2)^+$	D(+Q)[e]		E_γ: weighted average of 687.0 *5* from (^{11}B,p5nγ), 687.5 *1* from (α,2nγ), and 687.3 *2* from (α,3nγ).
1174.65	–	561.72 *15*	33 *8*	613.15	$(1/2,3/2,5/2)^-$	(M1)	0.0575 *8*	α(K)=0.0476 *7*; α(L)=0.00763 *11*; α(M)=0.001757 *25* α(N)=0.000435 *6*; α(O)=7.83×10^{-5} *11*; α(P)=5.33×10^{-6} *7*
		580.5 *3*	≈42	594.29	–			
		880.77 *21*	92 *8*	293.457	$(5/2)^-$			
		896.58 *23*	67 *8*	277.880	$(3/2,5/2)^-$			
		920.81 *18*	42 *8*	253.947	$(7/2,5/2)^-$	(M1)	0.01613 *23*	α(K)=0.01339 *19*; α(L)=0.002112 *30*; α(M)=0.000486 *7* α(N)=0.0001201 *17*; α(O)=2.166×10^{-5} *30*; α(P)=1.485×10^{-6} *21*
		1164.9 *3*	100 *17*	9.554	$(5/2)^-$			
		1174.0[i] *4*	67 *8*	0.0	$3/2^-$			
1289.97		627.74 *15*	100 *25*	662.27	$(3/2,5/2)^-$	(M1)	0.0431 *6*	α(K)=0.0357 *5*; α(L)=0.00570 *8*; α(M)=0.001312 *18* α(N)=0.000324 *5*; α(O)=5.85×10^{-5} *8*; α(P)=3.99×10^{-6} *6* Mult.: from ^{191}Au ε decay.
		1035.80 *35*	42 *8*	253.947	$(7/2,5/2)^-$			
1300.9		1023.0 *3*	100	277.880	$(3/2,5/2)^-$	(M1)	0.01236 *17*	α(K)=0.01026 *14*; α(L)=0.001613 *23*; α(M)=0.000371 *5* α(N)=9.17×10^{-5} *13*; α(O)=1.654×10^{-5} *23*; α(P)=1.136×10^{-6} *16* Mult.: from ^{191}Au ε decay.
1302.75	$(17/2,19/2)^+$	144.2[&] *3*	17[&] *5*	1158.56	$(19/2)^+$			
		351.7[b] *3*	40[b] *7*	951.08	$(21/2)^+$			
		383.7[b] *3*	25[b] *7*	919.19	$(15/2^+,17/2^+)$	D(+Q)[a]		Mult.: from (α,3nγ).
		703.4[bi] *4*	41[a] *7*	599.36	$(15/2)^+$			I_γ: Other: ≈11 from (α,2nγ).
		831.6[b] *2*	100[a] *15*	471.08	$(17/2)^+$	D(+Q)[e]		
1309.67	$(15/2^+,17/2,19/2^+)$	151.1[&] *3*	28[&] *8*	1158.56	$(19/2)^+$			
		710[&] *1*	≈50[&]	599.36	$(15/2)^+$			
		780.1[&] *3*	88[&] *28*	529.31	$(15/2)^+$			
		838.9[&] *3*	100[&] *30*	471.08	$(17/2)^+$			
1381.53	$(21/2)^-$	223.0[d] *1*	100 *7*	1158.56	$(19/2)^+$	(E1)[f]	0.0535 *8*	α(K)=0.0440 *6*; α(L)=0.00730 *10*; α(M)=0.001684 *24* α(N)=0.000412 *6*; α(O)=7.15×10^{-5} *10*;

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Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[g]	Comments
								α(P)=3.89×10^{-6} *5* I_γ: weighted average of 100 *13* from (^{11}B,p5nγ), 100 *10* from (α,2nγ), and 100 *7* from (α,3nγ).
1381.53	(21/2)$^-$	392.0[d] *2*	53 *5*	989.49	(19/2)$^+$	(E1)[f]	0.01406 *20*	α(K)=0.01168 *16*; α(L)=0.001838 *26*; α(M)=0.000422 *6* α(N)=0.0001037 *15*; α(O)=1.825×10^{-5} *26*; α(P)=1.094×10^{-6} *15* I_γ: weighted average of 55 *9* from (^{11}B,p5nγ), 47 *10* from (α,2nγ), and 54 *5* from (α,3nγ).
		430.4[d] *2*	65 *6*	951.08	(21/2)$^+$			I_γ: weighted average of 66 *6* from (^{11}B,p5nγ), 68 *16* from (α,2nγ), and 63 *6* from (α,3nγ). Mult.: γ(θ) data in (^{11}B,p5nγ), (α,3nγ), (α,2nγ) is consistent with a ΔJ=0 transition. However, I_e(K)exp=0.4 for 430.3 K + 432 K in (α,2nγ) supports E2, although M1 was excluded as the main component (1977Ke18 – (α,2nγ)).
1453.3		1199.3 *3*	100	253.947	(7/2,5/2)$^-$			
1471.55		168.8[b] *1*	100	1302.75	(17/2,19/2)$^+$			Mult.: D(+Q) in ^{190}Os(α,3n) and (Q) in ^{189}Os(α,2n).
1545.82	(25/2)$^-$	164.3[d] *1*	100	1381.53	(21/2)$^-$	E2	0.716 *10*	B(E2)(W.u.)=39.4 *+24–22* α(K)=0.276 *4*; α(L)=0.331 *5*; α(M)=0.0851 *12* α(N)=0.02078 *30*; α(O)=0.00328 *5*; α(P)=2.61×10^{-5} *4* Mult.: Q in 1977Sa01 and 1977Ke18 (γ(θ) in ^{190}Os(α,3nγ) and ^{189}Os(α,2nγ), respectively); E2 from intensity balance (2005Ku01); M2 strength exceeds recommended upper limit with adopted level $T_{1/2}$.
1550.41	(25/2)$^+$	599.3[d] *2*	100	951.08	(21/2)$^+$	Q		Mult.: E2 in (^{11}B,p5nγ).
1590.73	(19/2,21/2,23/2)	209.2[b] *2*	100	1381.53	(21/2)$^-$	D(+Q)[a]		
1862.87	(27/2)$^-$	317.1[d] *2*	100	1545.82	(25/2)$^-$	D[e]		
1925.2		453.6[a] *3*	100	1471.55		(Q)[a]		
1939.2		393.4[a] *3*	100	1545.82	(25/2)$^-$	(Q)[a]		
2125.32	(29/2)$^-$	262.5[c] *2*	20 *8*	1862.87	(27/2)$^-$	(M1)	0.440 *6*	α(K)=0.363 *5*; α(L)=0.0594 *8*; α(M)=0.01371 *19* α(N)=0.00339 *5*; α(O)=0.000611 *9*; α(P)=4.13×10^{-5} *6* I_γ: Unweighted average of 27 *5* from (α,3nγ) and 12 *4* from (^{11}B,p5nγ). Mult.: M1 in (^{11}B,p5nγ), D(+Q) in (α,3nγ).
		579.4[c] *2*	100[c] *7*	1545.82	(25/2)$^-$	(E2)	0.01744 *24*	α(K)=0.01326 *19*; α(L)=0.00319 *4*; α(M)=0.000769 *11* α(N)=0.0001891 *27*; α(O)=3.23×10^{-5} *5*; α(P)=1.402×10^{-6} *20*
2151.6	(29/2)$^-$	288.9 *5*	24 *7*	1862.87	(27/2)$^-$	D		Mult.: M1 in (^{11}B,p5nγ).

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Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[g]	Comments
2151.6	$(29/2)^-$	605.7 *5*	100 *10*	1545.82	$(25/2)^-$	Q		Mult.: E2 in (^{11}B,p5nγ).
2233.4	$(29/2)^+$	683.0[c] *2*	100	1550.41	$(25/2)^+$	Q		Mult.: E2 in (^{11}B,p5nγ), (Q) in (α,3nγ).
2385.4	$(29/2)^-$	259.8[c] *3*	100 *18*	2125.32	$(29/2)^-$	D		Mult.: M1 in (^{11}B,p5nγ).
		840.0 *5*	36 *18*	1545.82	$(25/2)^-$			
2467.6	$(31/2)^-$	316.0 *5*	44 *13*	2151.6	$(29/2)^-$	D		
		342.4 *5*	44 *6*	2125.32	$(29/2)^-$	D	0.213	
		604.5 *5*	100 *13*	1862.87	$(27/2)^-$	Q		
2581.4	$(33/2^-)$	456.1[a] *3*	100	2125.32	$(29/2)^-$	(Q)[e]		
2608.2	$(33/2)^-$	456.6 *5*	100	2151.6	$(29/2)^-$	Q		
2738.2	$(33/2)^-$	613.2 *5*	100	2125.32	$(29/2)^-$	Q		
2825.0	$(33/2)^+$	591.6 *5*	100	2233.4	$(29/2)^+$	Q		
2826.5	$(33/2)^-$	441.2	13 *5*	2385.4	$(29/2)^-$			
		701.0 *5*	100 *11*	2125.32	$(29/2)^-$	(E2)	0.01139 *16*	α(K)=0.00891 *13*; α(L)=0.001896 *27*; α(M)=0.000451 *6* α(N)=0.0001111 *16*; α(O)=1.920×10^{-5} *27*; α(P)=9.44×10^{-7} *13*
2890.2	$(33/2)^-$	63.6[i]	12 *7*	2826.5	$(33/2)^-$			E_γ: From level energy difference in (^{11}B,p5nγ).
		282.0 *5*	20 *7*	2608.2	$(33/2)^-$	D		
		504.7 *5*	100 *13*	2385.4	$(29/2)^-$	Q		
		738.8 *5*	60 *13*	2151.6	$(29/2)^-$	(Q)		
2940.8	$(33/2)^+$	707.2[c] *3*	100	2233.4	$(29/2)^+$	(Q)		
2956.6	$(33/2)^+$	723.4 *5*	100	2233.4	$(29/2)^+$	Q		
3108.9	$(35/2)^-$	641.3 *5*	100	2467.6	$(31/2)^-$	Q		
3189.0	$(37/2)^-$	298.8 *5*	100	2890.2	$(33/2)^-$	Q		
3272.2	$(37/2)^+$	447.2 *5*	100	2825.0	$(33/2)^+$	Q		
3277.9		336.7 *5*	100	2940.8	$(33/2)^+$			
3299.5	$(37/2^+)$	343.0 *3*	31 *11*	2956.6	$(33/2)^+$			
		358.6 *5*	100 *13*	2940.8	$(33/2)^+$	(Q)		
3301.3	$(37/2)^-$	563.5 *5*	56 *11*	2738.2	$(33/2)^-$	Q		
		693.1 *5*	100 *22*	2608.2	$(33/2)^-$	Q		
3317.3	$(35/2)^+$	376.6 *5*	100 *11*	2940.8	$(33/2)^+$	D(+Q)		
		490.6 *5*	63 *11*	2826.5	$(33/2)^-$	D(+Q)		
3433.2	$(37/2)^-$	695.0 *5*	100	2738.2	$(33/2)^-$			
3452.0	$(39/2)^+$	134.5[@] *5*	57 *10*	3317.3	$(35/2)^+$	(E2)	1.506 *30*	α(K)=0.434 *7*; α(L)=0.806 *18*; α(M)=0.208 *5* α(N)=0.0507 *11*; α(O)=0.00795 *17*; α(P)=4.22×10^{-5} *7* Mult.: from intensity balance in (^{11}B,p5nγ); disagrees with γ(θ).
		151.0[@] *5*	33 *5*	3301.3	$(37/2)^-$	D		
		152.6[@] *5*	10 *3*	3299.5	$(37/2^+)$			
		173.7[@] *5*	9 *3*	3277.9				
		263.0[@] *5*	100 *10*	3189.0	$(37/2)^-$	D		
3679.0	$(43/2)^+$	227.0 *5*	100	3452.0	$(39/2)^+$	Q		

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Adopted Levels, Gammas (continued)

γ(^{191}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]
3685.1		385.6 *5*	100	3299.5	$(37/2^+)$		4991.9	$(51/2)^+$	476.0 *5*	26 *11*	4515.9	$(49/2^+)$	
3716.6	$(41/2)^-$	527.6 *5*	100	3189.0	$(37/2)^-$	Q			662.0 *5*	100 *16*	4329.9	$(47/2)^+$	Q
3780.5	$(39/2^-)$	671.6 *5*	100	3108.9	$(35/2)^-$	Q	5296.5	$(53/2^+)$	780.6 *5*	100	4515.9	$(49/2^+)$	Q
3874.1	$(41/2)^+$	602.0 *5*	100	3272.2	$(37/2)^+$	Q	5366.0	$(49/2)^+$	778.3 *5*	100 *33*	4587.7	$(45/2)^+$	Q
4005.1	$(45/2^+)$	326.1 *5*	100	3679.0	$(43/2)^+$	D			850.0 *5*	50 *33*	4515.9	$(49/2^+)$	
4329.9	$(47/2)^+$	650.9 *5*	100	3679.0	$(43/2)^+$	Q	5437.9	$(55/2)^+$	446.0 *5*	100	4991.9	$(51/2)^+$	Q
4389.3	$(45/2^-)$	672.7 *5*	100	3716.6	$(41/2)^-$	(Q)	5576.5	$(53/2)^+$	210.5 *5*	100 *17*	5366.0	$(49/2)^+$	Q
4419.4	$(43/2^-)$	638.9 *5*	100	3780.5	$(39/2^-)$	Q			280.0 *5*	25 *13*	5296.5	$(53/2^+)$	
4515.9	$(49/2^+)$	510.8 *5*	100	4005.1	$(45/2^+)$	Q	5882.9	$(59/2)^+$	445.0 *5*	100	5437.9	$(55/2)^+$	Q
4587.7	$(45/2)^+$	713.6 *5*	100	3874.1	$(41/2)^+$	Q	6121.6	$(57/2)^+$	545.1 *5*	100	5576.5	$(53/2)^+$	Q
4630.1	(43/2,45/2)	210.7 *5*	100	4419.4	$(43/2^-)$	(D)	6148.9	$(63/2^+)$	266.0 *5*	100	5882.9	$(59/2)^+$	(Q)

[†] Eγ and Iγ of transitions from levels below 1460 keV are from ^{191}Au ε decay, above this level – energies are from ^{186}W(^{11}B,p5nγ), unless otherwise noted.
[‡] From ^{191}Au ε decay for transitions from levels below 1301 keV, and from ^{186}W(^{11}B,p5nγ) for higher level energies, unless otherwise noted or commented. In a few cases, M1 or E1 and E2 assignments in (^{11}B,p5nγ) are adopted as D and Q by the evaluator.
[#] From conversion electron data in ^{191}Au ε decay.
[@] From (^{11}B,p5nγ).
[&] From ^{189}Os(α,2nγ).
[a] From ^{190}Os(α,3nγ).
[b] Weighted average of values from ^{190}Os(α,3nγ) and ^{189}Os(α,2nγ).
[c] Weighted average of values from ^{190}Os(α,3nγ) and ^{186}W(^{11}B,p5nγ).
[d] Weighted average of values from ^{189}Os(α,2nγ), ^{190}Os(α,3nγ) and ^{186}W(^{11}B,p5nγ).
[e] From ^{189}Os(α,2nγ), ^{190}Os(α,3nγ).
[f] E1 in (^{11}B,p5nγ), D(+Q) in (α,3nγ) and (α,2nγ). Evaluator adopts (E1) based on the γ-sequence from the 2826-keV level $(33/2)^-$. See the spin-parity arguments for 2826-keV level.
[g] Additional information 1.
[h] Multiply placed with undivided intensity.
[i] Placement of transition in the level scheme is uncertain.

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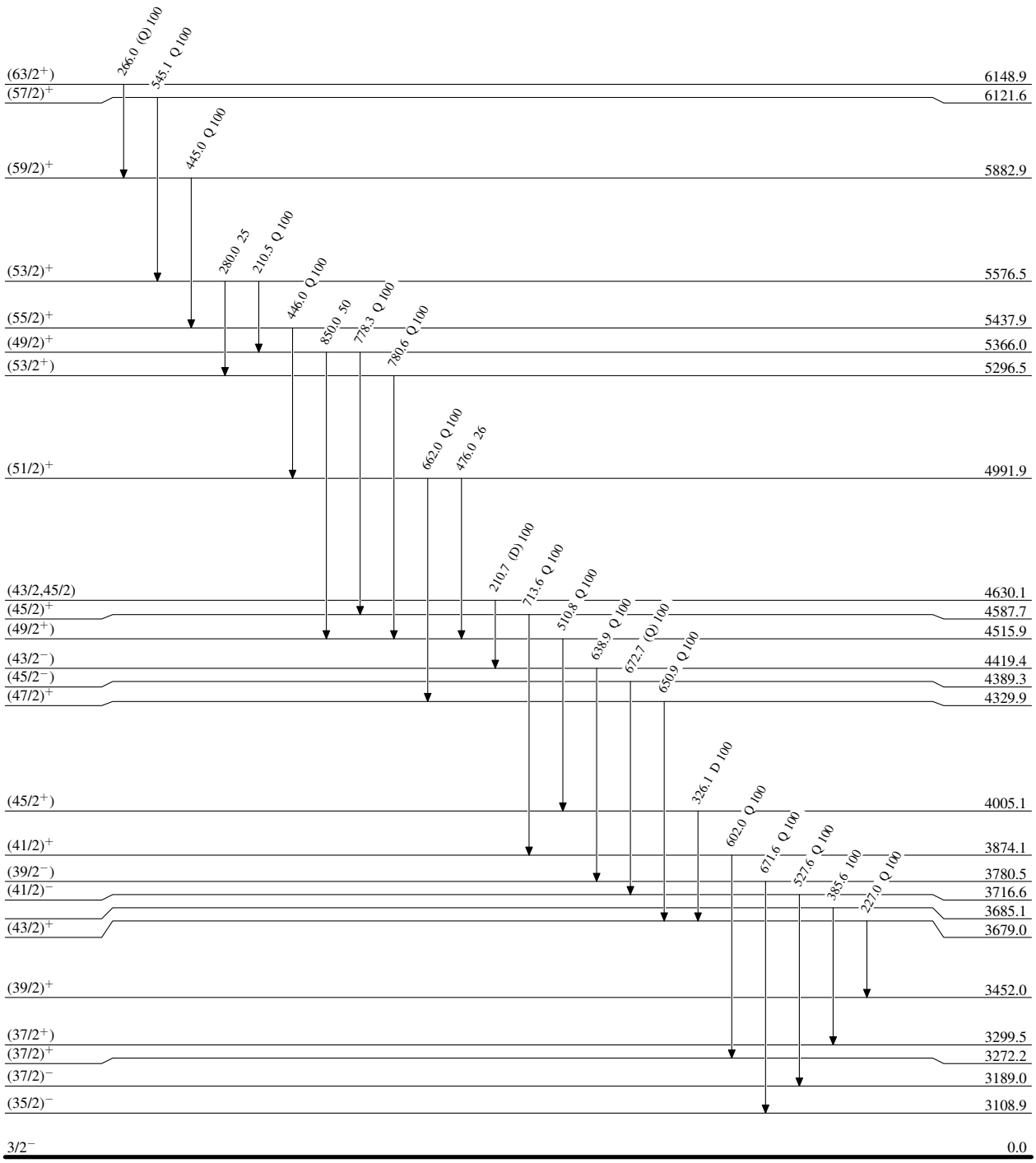
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{191}_{78}Pt_{113}$

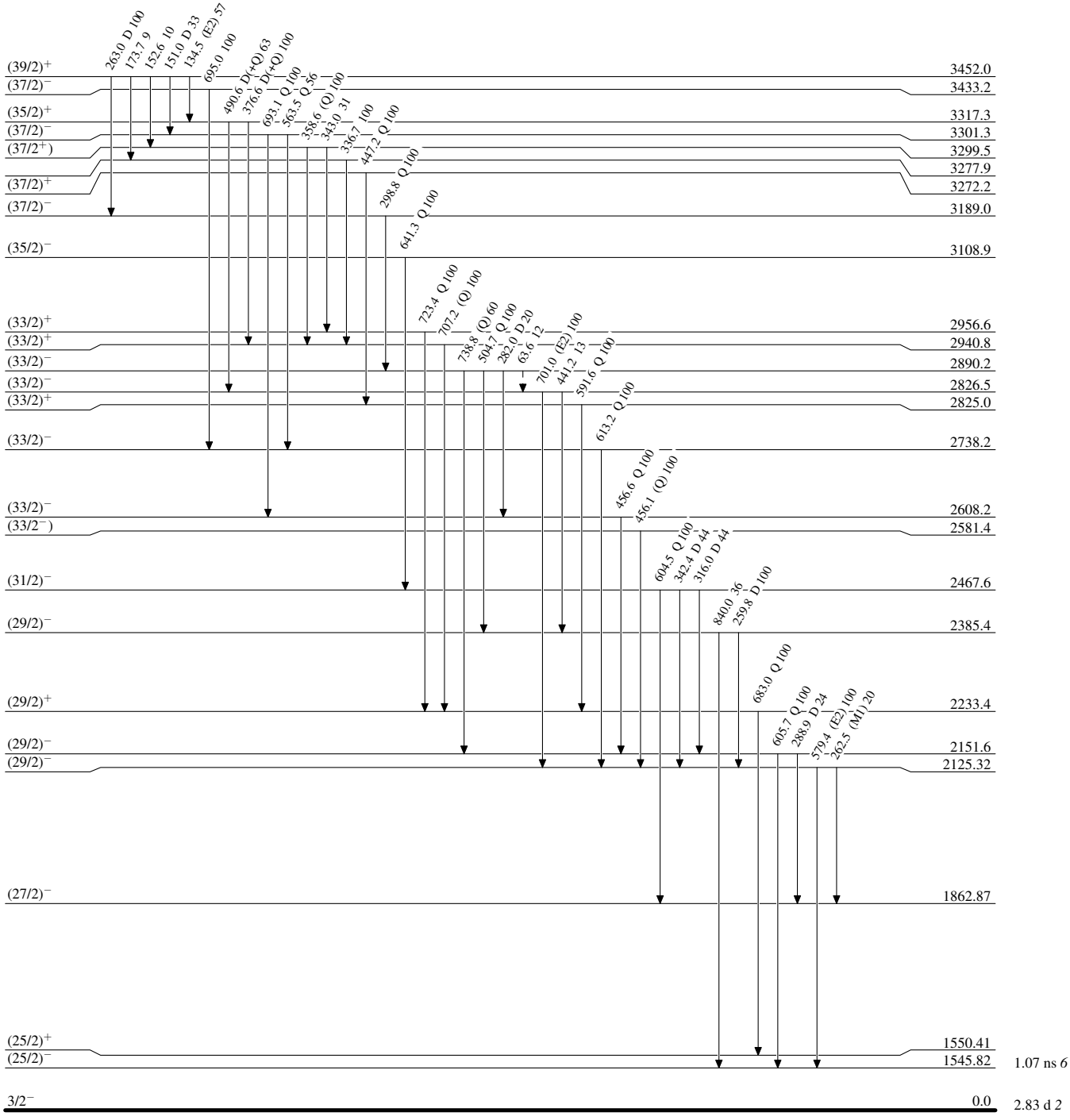
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{191}_{78}Pt_{113}$

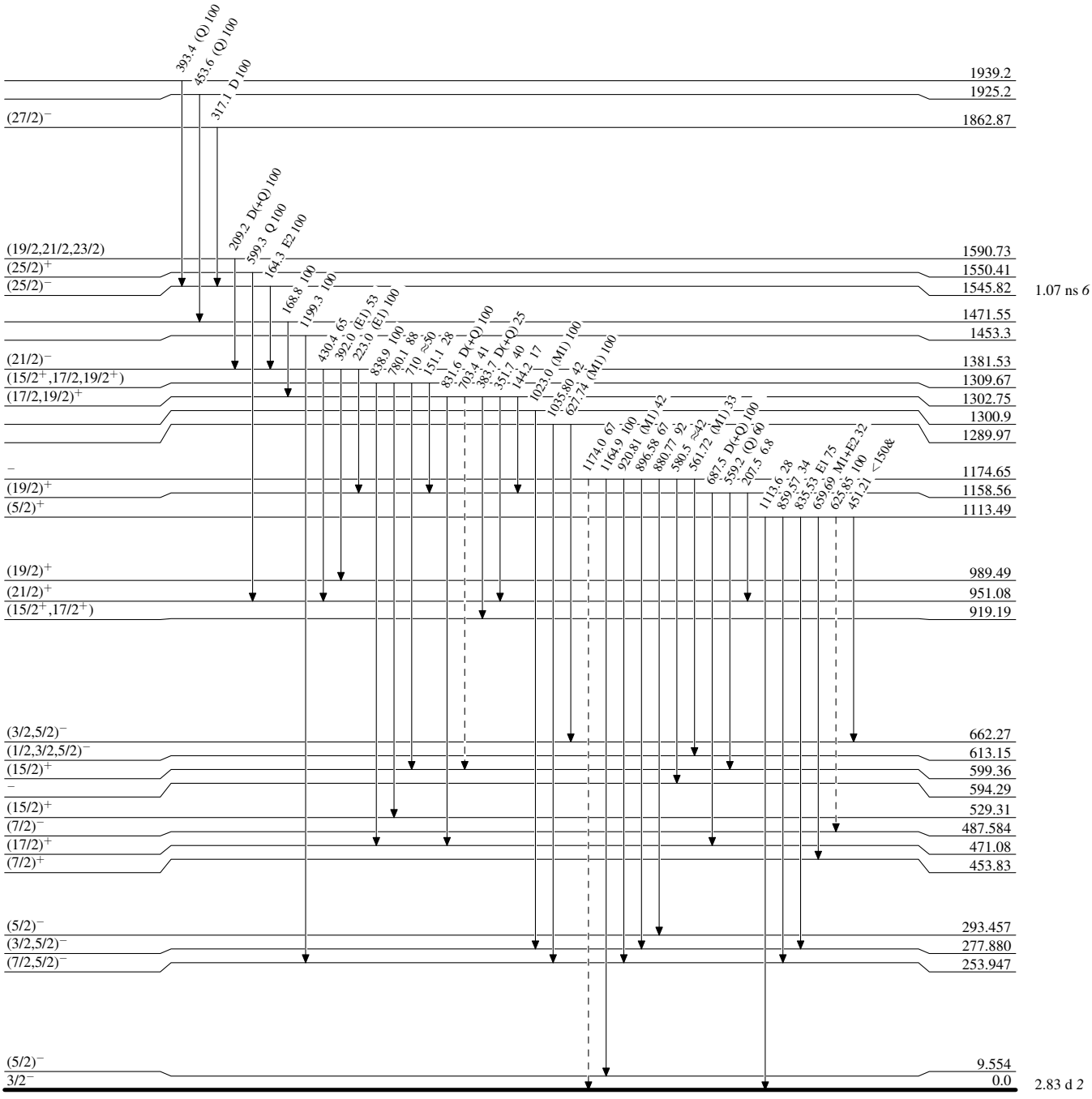
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

- - - - - - ► γ Decay (Uncertain)

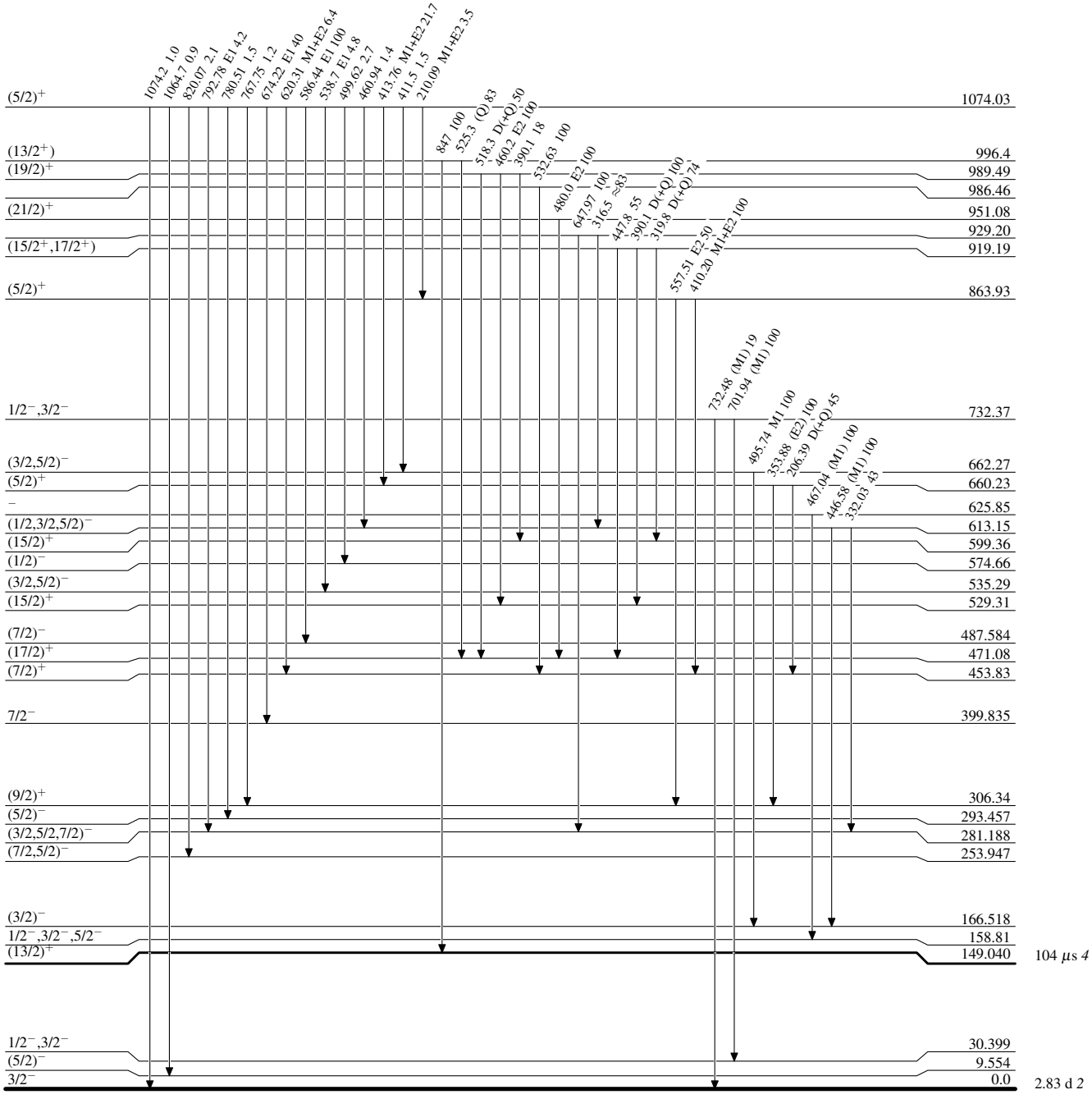


$^{191}_{78}Pt_{113}$

Adopted Levels, Gammas

Level Scheme (continued)

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

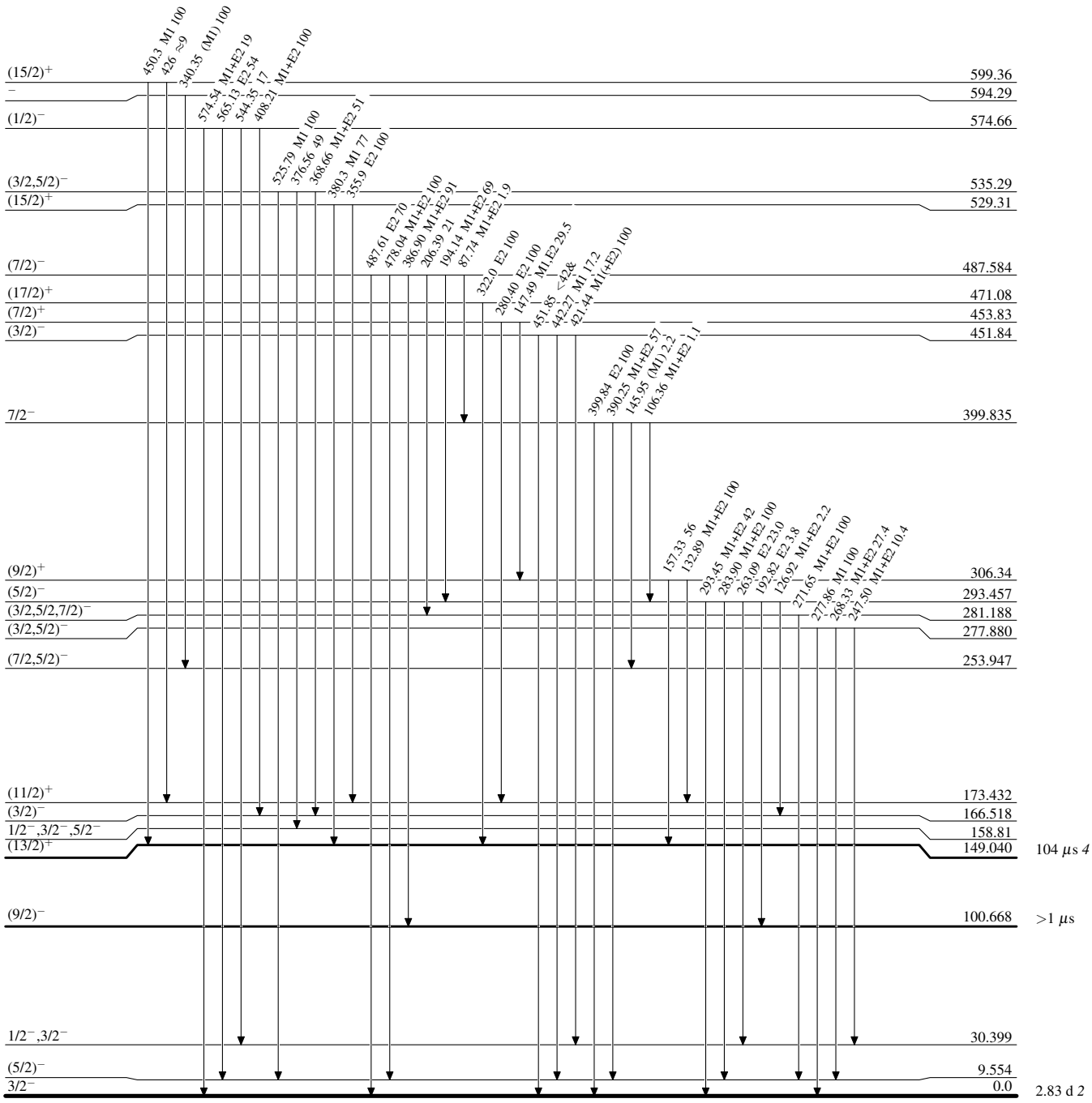


$^{191}_{78}Pt_{113}$

Adopted Levels, Gammas

Level Scheme (continued)

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



$^{191}_{78}Pt_{113}$

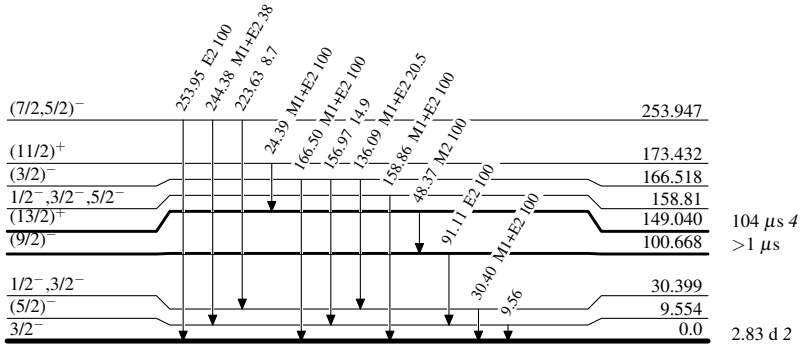
Adopted Levels, Gammas

Legend

Level Scheme (continued)

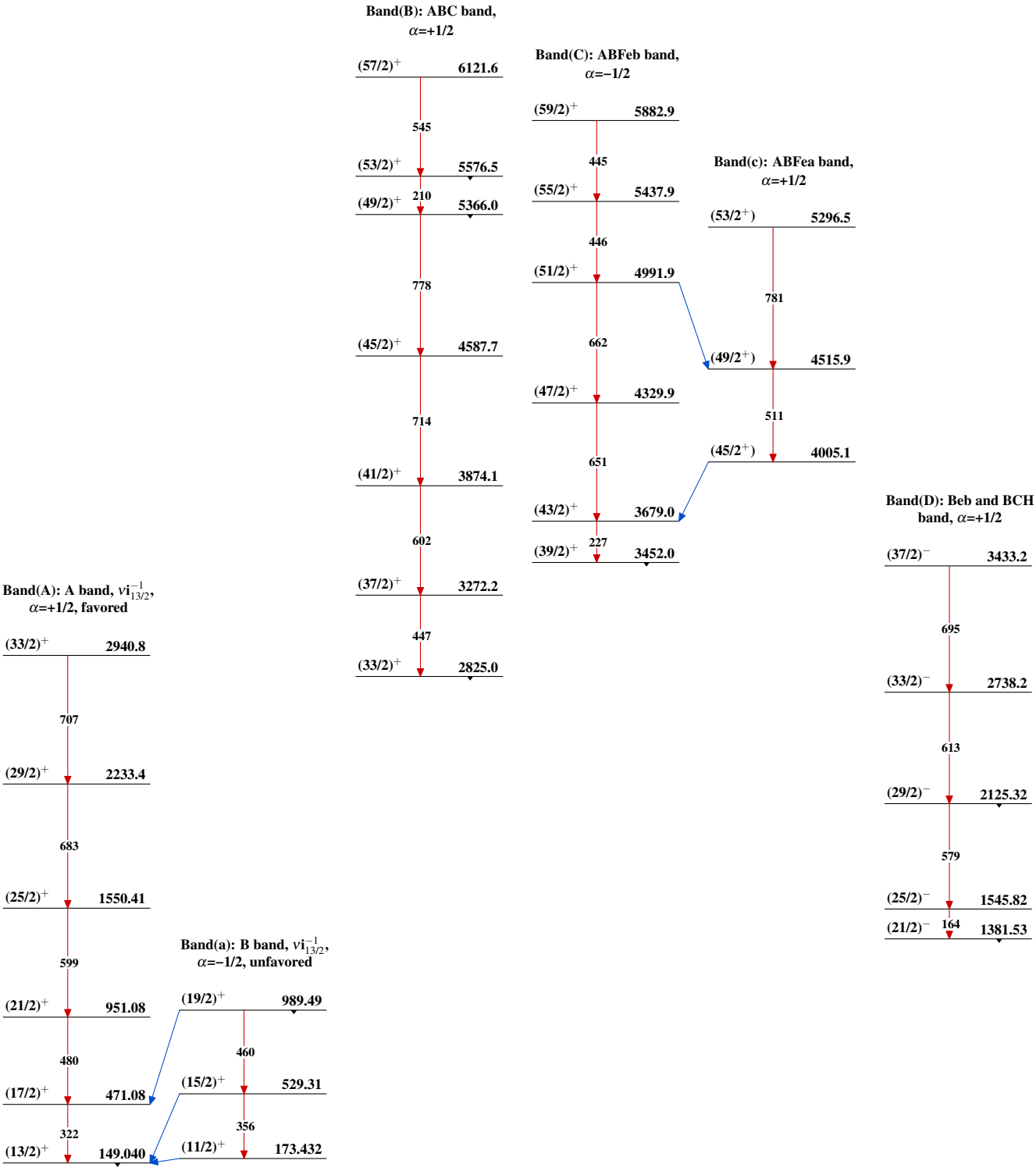
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)

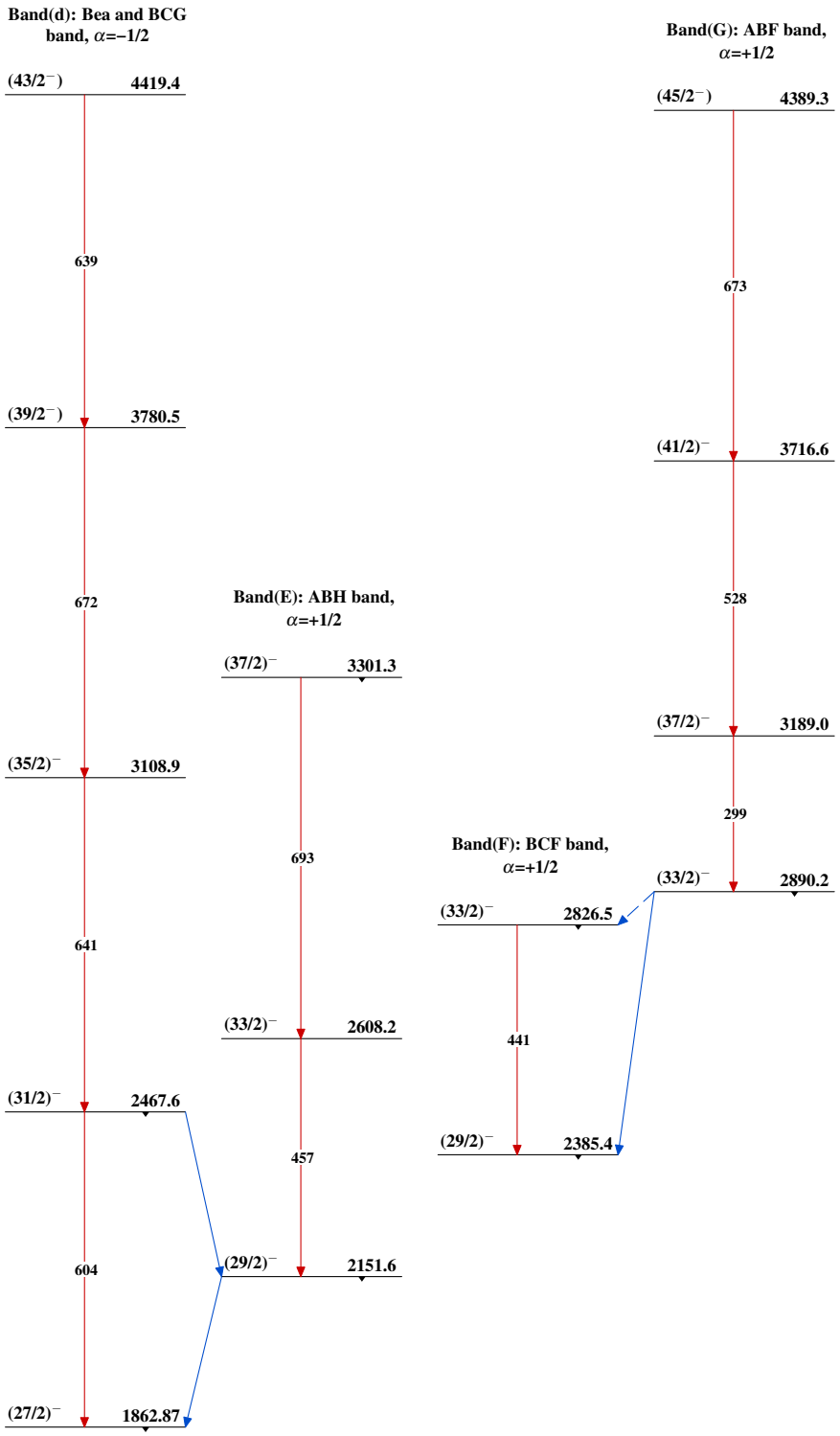


$^{191}_{78}Pt_{113}$

Adopted Levels, Gammas



Adopted Levels, Gammas (continued)



$^{191}_{78}Pt_{113}$