Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 126, 151 (2015)	1-Feb-2015

Q(β^-)=−8841 *23*; S(n)=10239 *14*; S(p)=3645 *16*; Q(α)=5240 *30* 2012Wa38
S(2n)=18581 *15*; S(2p)=5469 *17*; Q(εp)=1295 *20* (2012Wa38).
Iγ(x): Additional information 1.
α: Additional information 2.

^{180}Pt Levels

Cross Reference (XREF) Flags

- A ^{180}Au ε decay
- B ^{181}Hg εp decay
- C ^{184}Hg α decay
- D (HI,xnγ)

E(level)†	Jπ	$T_{1/2}$‡	XREF	Comments
0.0#	0^+	56 s *3*	ABCD	%ε+%β^+≈99.7; %α≈0.3 $T_{1/2}$: weighted average of 60 s *3* (1993Me13), 50 s *5* (1966Si08), and 53 s *4* (1968De01). %α: from 1966Si08. δ<r^2>=−0.360 *11* relative to ^{194}Pt (2000Le40).
153.24# *7*	2^+	374 ps *35*	ABCD	μ=+0.64 *12* Jπ: E2 153γ to 0^+; band member. μ: from IPAC (1998Br33). Other: +0.70 *16* from PDCO (extracted from Fig 19 of 2002Ro36 by evaluator).
410.73# *8*	4^+	22.9 ps *28*	AB D	μ=+1.6 *6* XREF: B(?). Jπ: E2 258γ to 2^+; band member. μ: from PDCO (extracted from Fig 19 of 2002Ro36 by evaluator).
478.13@ *15*	0^+		A CD	Jπ: E0 478 transition to 0^+.
677.48& *8*	2^+		A	Jπ: E0+E2 524γ to 2^+.
757.06# *15*	6^+	≤35 ps	A D	Jπ: E2 346.5γ to 4^+; band member.
861.39@ *7*	2^+		A	Jπ: E0+M1+E2 708γ to 2^+, E2 861γ to 0^+.
962.68& *10*	$3^{(+)}$		A D	Jπ: J=3 from γγ(θ) in ^{180}Au ε decay; (E2) 809γ to 2^+, 552γ to 4^+; band member.
1049.25& *13*	(4^+)		A	Jπ: (M1+E2) 639γ to 4^+, 896γ to 2^+; band member.
1177.7 *7*	0^+		A	Jπ: (E2) 1024γ to 2^+, γγ(θ) in ^{180}Au ε decay.
1181.49# *18*	8^+		D	Jπ: E2 424γ to 6^+; band member.
1187.22 *18*	2^+		A D	Jπ: E0+M1+E2 1034γ to 2^+.
1248.18@ *15*	(4^+)		A D	Jπ: 1095γ to 2^+, 837γ to 4^+; band member.
1315.24& *14*	(5^+)		D	Jπ: E2 352γ to $3^{(+)}$, 905γ to 4^+, possible 558γ to 6^+.
1351.11 *18*	2^+		A	Jπ: E0(+M1+E2) 490γ to 2^+.
1387.6 *7*			A	
1491.2 *7*			A	
1535.0 *5*	$(2^+,3,4^+)$		A	Jπ: 1124γ to 4^+, 1382γ to 2^+.
1587.64c *18*	$(4,5^+)$		D	Jπ: 625γ to $3^{(+)}$, 272γ to (5^+).
1614.70a *15*	$(5^-,4^+)$		D	Jπ: 858γ to 6^+, 1204γ to 4^+; systematics of negative parity bands in neighboring Os isotopes favors the $J^\pi=5^-$ assignment.
1649.90@ *19*	(6^+)		D	Jπ: 402γ to (4^+); band member.

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Adopted Levels, Gammas (continued)

^{180}Pt Levels (continued)

E(level)[†]	Jπ	XREF	Comments
1674.28[#] 23	10+	D	Jπ: E2 493γ to 8+; band member.
1727.24[&] 17	(7+)	D	Jπ: E2 412γ to (5+), 970γ to 6+.
1815.03[c] 16	(6,7+)	D	Jπ: (E2) 227γ to (4,5+); band member.
1852.20[a] 17	(7−,6+)	D	Jπ: E2 238γ to (4+,5−); band member.
1915.34[d] 19	(6,7+)	D	Jπ: 328γ to (4,5+), 600γ to (5+).
2012.23[c] 21	(7,8+)	D	Jπ: 362γ to (6+), 831γ to 8+.
2107.24[c] 17	(8,9+)	D	Jπ: (E2) 380γ to (7+), (E2) 292γ to (6,7+); band member.
2161.9 3		D	
2168.94[a] 23	(9−,8+)	D	Jπ: E2 317γ to (6+,7−), 495γ to 10+; band member.
2182.92[d] 18	(8,9+)	D	Jπ: (E2) 268γ to (6,7+); band member.
2198.4?[&] 7	(9+)	D	Jπ: 471γ to (7+), 1017γ to 8+; band member.
2229.2[#] 3	12+	D	Jπ: E2 555γ to 10+; band member.
2286.65[b] 19	(8,9)	D	Jπ: (D) 179γ to (8,9+), 275γ to (7,8+).
2401.6? 7		D	
2444.34[b] 21	(9,10)	D	Jπ: (D) 158γ to (8,9−).
2455.0[f] 3	(9,10)	D	Jπ: (D) 286γ to (8+,9−).
2556.7[a] 3	(11−,10+)	D	Jπ: E2 388γ to (8+,9−); band member.
2557.98[d] 21	(10,11+)	D	Jπ: 375γ to (8,9+); band member.
2626.10[b] 22	(10,11)	D	Jπ: (E2) 340γ to (8,9), (D) 182γ to (9,10); band member.
2764.7[e] 3	(12+)	D	Jπ: (E2) 1090γ to 10+.
2834.20[b] 24	(11,12)	D	Jπ: E2 390γ to (9,10), (D) 208γ to (10,11); band member.
2841.6[#] 3	14+	D	Jπ: E2 612γ to 12+; band member.
2872.7[f] 3	(11,12)	D	Jπ: (E2) 418γ to (9,10); band member.
3006.3[d] 3	(12,13+)	D	Jπ: 448γ to (10−,11+); band member.
3007.8[a] 4	(13−,12+)	D	Jπ: E2 451γ to (10+,11−); band member.
3050.5[b] 3	(12,13)	D	Jπ: (D) 216γ to (11,12), 425γ to (10,11); band member.
3208.8[e] 3	(14+)	D	Jπ: (E2) 444γ to (12+), (E2) 980γ to 12+; band member.
3301.9[b] 3	(13,14)	D	Jπ: 251γ to (12,13), E2 468γ to (11,12); band member.
3361.3[f] 4	(13,14)	D	Jπ: E2 489γ to (11,12); band member.
3504.9[#] 4	16+	D	Jπ: E2 663γ to 14+; band member.
3507.1[a] 4	(15−,14+)	D	Jπ: E2 499γ to (12+,13−); band member.
3510.2[d] 4	(14,15+)	D	Jπ: 504γ to (12,13+); band member.
3544.7[b] 8	(14,15)	D	Jπ: (D) 243γ to (13,14), 494γ to (12,13); band member.
3571.6 4		D	
3676.6[e] 3	(16+)	D	Jπ: (E2) 468γ to (14+), (E2) 835γ to 14+; band member.
3832.9[b] 3	(15,16)	D	Jπ: E2 531γ to (13,14); band member.
3911.1[f] 4	(15,16)	D	Jπ: E2 550γ to (13,14); band member.
4044.2[a] 4	(17−,16+)	D	Jπ: E2 537γ (E2) to (14+,15−); band member.
4063.4[d] 4	(16,17+)	D	Jπ: 553γ to (14,15+); band member.
4099.7[b] 13	(16,17)	D	Jπ: (E2) 555γ to (14,15); band member.
4126.0 4		D	
4180.9[e] 4	(18+)	D	Jπ: (E2) 505γ (E2) to (16+), (E2) 676γ to 16+; band member.
4252.7[#] 4	18+	D	Jπ: E2 747γ to 16+; band member.
4420.9[b] 11	(17,18)	D	Jπ: (E2) 588γ to (15,16); band member.
4512.5[f] 5	(17,18)	D	Jπ: E2 601γ to (15,16); band member.
4639.8[a] 5	(19−,18+)	D	Jπ: E2 596γ to (16+,17−); band member.
4661.1[d] 5	(18,19+)	D	Jπ: 598γ to (16,17+); band member.

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Adopted Levels, Gammas (continued)

^{180}Pt Levels (continued)

E(level)[†]	Jπ	XREF	Comments
4676.3 *5*		D	
4709.7?[b] *16*	(18,19)	D	Jπ: (E2) 610γ to (16,17); band member.
4804.4[e] *4*	(20$^+$)	D	Jπ: (E2) 623γ (E2) to (18$^+$); band member.
4984.6[#] *4*	20$^+$	D	Jπ: E2 732γ to 18$^+$; band member.
5062.9[b] *15*	(19,20)	D	Jπ: (E2) 642γ to (17,18); band member.
5160.6[f] *5*	(19,20)	D	Jπ: (E2) 648γ to (17,18); band member.
5289.3[a] *5*	(21$^-$,20$^+$)	D	Jπ: (E2) 650γ to (18$^+$,19$^-$); band member.
5293.0[d] *5*	(20,21$^+$)	D	Jπ: 632γ to (18,19$^+$); band member.
5399.8 *11*		D	
5468.2[e] *5*	(22$^+$)	D	Jπ: (E2) 664γ to (20$^+$); band member.
5728.5[#] *8*	22$^+$	D	Jπ: (E2) 744γ to 20$^+$; band member.
5753.9[b] *18*	(21,22)	D	Jπ: 691γ to (19,20); band member.
5852.6[f] *11*	(21,22)	D	Jπ: 692γ to (19,20); band member.
5938.0?[d] *11*	(22,23$^+$)	D	Jπ: 645γ to (20,21$^+$); band member.
5947.6[a] *6*	(23$^-$,22$^+$)	D	Jπ: 658γ to (20$^+$,21$^-$); band member.
6007.3 *9*		D	
6178.7[e] *5*	(24$^+$)	D	Jπ: (E2) 710γ to (22$^+$); band member.
6490.9?[b] *20*		D	
6525.6 *11*		D	
6551.5[#] *13*	(24$^+$)	D	Jπ: 823γ to 22$^+$; band member.
6580.6[f] *15*	(23,24)	D	Jπ: 728γ to (21,22); band member.
6618.4[a] *6*	(25$^-$,24$^+$)	D	Jπ: 671γ to (22$^+$,23$^-$); band member.
6935.8[e] *5*	(26$^+$)	D	Jπ: (E2) 757γ to (24$^+$); band member.
7237.6? *15*		D	
7434.5[#] *16*	(26$^+$)	D	Jπ: 883γ to (24$^+$); band member.

[†] From a least-squares fit to Eγ by evaluator.
[‡] From RDM measurements in (HI,xnγ), except where noted.
[#] Band(A): Kπ=0$^+$ g.s. rotational band.
[@] Band(B): Kπ=0$^+$ β-vibrational band.
[&] Band(C): Kπ=2$^+$ γ-vibrational band.
[a] Band(D): Kπ=(5$^-$,4$^+$) rotational band.
[b] Band(E): Kπ=(8,9$^-$) rotational band.
[c] Band(F): Kπ=(4,5$^+$) rotational band.
[d] Band(G): Kπ=(6,7$^+$) rotational band.
[e] Band(H): Kπ=(12$^+$) rotational band.
[f] Band(I): Kπ=(9,10) rotational band.

Adopted Levels, Gammas (continued)

γ(^{180}Pt)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[&]	α	Comments
153.24	2+	153.3[#] *1*	100	0.0	0+	E2		0.922	α(K)=0.324 *5*; α(L)=0.449 *7*; α(M)=0.1156 *17*; α(N)=0.0282 *4*; α(O)=0.00444 *7* α(P)=3.08×10^{-5} *5* B(E2)(W.u.)=154 *15* Mult.: from ce data in (HI,xnγ).
410.73	4+	257.6[#] *1*	100	153.24	2+	E2		0.1569	α(K)=0.0895 *13*; α(L)=0.0508 *8*; α(M)=0.01284 *18*; α(N)=0.00314 *5*; α(O)=0.000507 *8* α(P)=8.83×10^{-6} *13* B(E2)(W.u.)=3.1×10^{2} *4* Mult.: from ce data in (HI,xnγ).
478.13	0+	324.7[#] *2*		153.24	2+	[E2]		0.0781	α(K)=0.0502 *7*; α(L)=0.0211 *3*; α(M)=0.00526 *8*; α(N)=0.001289 *19*; α(O)=0.000211 *3* α(P)=5.11×10^{-6} *8*
		478[#]		0.0	0+	E0[@]			
677.48	2+	199.4[#] *4*	1.7[#] *14*	478.13	0+	[E2]		0.363 *6*	α(K)=0.171 *3*; α(L)=0.1444 *24*; α(M)=0.0369 *6*; α(N)=0.00901 *15*; α(O)=0.001434 *24* α(P)=1.635×10^{-5} *25*
		267.0[#] *5*	1.0[#] *7*	410.73	4+	[E2]		0.1403 *22*	α(K)=0.0818 *12*; α(L)=0.0442 *7*; α(M)=0.01114 *18*; α(N)=0.00273 *5*; α(O)=0.000441 *7* α(P)=8.11×10^{-6} *12*
		524.3[#] *1*	100[#] *2*	153.24	2+	E0+E2[@]		0.072 *6*	α: from sum of α(K)exp, α(L)exp, and α(M)exp in ^{180}Au ε decay.
		677.5[#] *1*	36[#] *3*	0.0	0+	[E2]		0.01227	α(K)=0.00956 *14*; α(L)=0.00208 *3*; α(M)=0.000495 *7*; α(N)=0.0001218 *17*; α(O)=2.10×10^{-5} *3* α(P)=1.012×10^{-6} *15*
757.06	6+	346.5 *2*	100	410.73	4+	E2		0.0649	α(K)=0.0429 *6*; α(L)=0.01668 *24*; α(M)=0.00414 *6*; α(N)=0.001016 *15*; α(O)=0.0001672 *24* α(P)=4.39×10^{-6} *7* B(E2)(W.u.)≥50 Mult.: from ce data in (HI,xnγ).
861.39	2+	184.3[#] *5*	1.6[#] *10*	677.48	2+				
		382.9[#] *3*	14[#] *3*	478.13	0+	(E2)[@]		0.0492	α(K)=0.0337 *5*; α(L)=0.01175 *17*; α(M)=0.00290 *5*; α(N)=0.000712 *11*; α(O)=0.0001180 *17* α(P)=3.49×10^{-6} *5*
		450.7[#] *1*	19.3[#] *21*	410.73	4+	(E2)[@]		0.0321	α(K)=0.0231 *4*; α(L)=0.00684 *10*; α(M)=0.001672 *24*; α(N)=0.000411 *6*; α(O)=6.89×10^{-5} *10* α(P)=2.42×10^{-6} *4*
		708.2[#] *1*	16[#] *2*	153.24	2+	E0+M1+E2[@]	2.0 *+36−11*	0.24 *10*	α(K)=0.012 *7*; α(L)=0.0023 *9*; α(M)=0.00054 *19*; α(N)=0.00013 *5*; α(O)=2.3×10^{-5} *9*

$^{180}_{78}Pt_{102}$-4

Adopted Levels, Gammas (continued)

γ(^{180}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[&]	α	Comments
									α(P)=1.3×10^{-6} *7* α: from sum of α(K)exp and α(L)exp in ^{180}Au ε decay.
861.39	2$^+$	861.3[#] *1*	100[#] *7*	0.0	0$^+$	E2[@]		0.00739	α(K)=0.00591 *9*; α(L)=0.001132 *16*; α(M)=0.000266 *4*; α(N)=6.56×10^{-5} *10* α(O)=1.147×10^{-5} *16*; α(P)=6.25×10^{-7} *9*
962.68	3$^{(+)}$	285.8[#] *4*	3.2[#] *6*	677.48	2$^+$				
		551.9[#] *1*	12.8[#] *16*	410.73	4$^+$				
		809.4[#] *1*	100[#] *4*	153.24	2$^+$	(E2)[@]		0.00840	α(K)=0.00668 *10*; α(L)=0.001316 *19*; α(M)=0.000311 *5*; α(N)=7.66×10^{-5} *11* α(O)=1.334×10^{-5} *19*; α(P)=7.07×10^{-7} *10*
1049.25	(4$^+$)	372.0[#] *4*	15[#] *4*	677.48	2$^+$	[E2]		0.0532	α(K)=0.0361 *6*; α(L)=0.01299 *19*; α(M)=0.00321 *5*; α(N)=0.000788 *12*; α(O)=0.0001303 *19* α(P)=3.73×10^{-6} *6*
		638.5[#] *1*	100[#] *13*	410.73	4$^+$	(M1+E2)[@]		0.028 *14*	α(K)=0.022 *12*; α(L)=0.0039 *15*; α(M)=0.0009 *4*; α(N)=0.00023 *9*; α(O)=4.0×10^{-5} *16* α(P)=2.5×10^{-6} *14*
		895.8[#]	17[#] *8*	153.24	2$^+$	[E2]		0.00682	α(K)=0.00548 *8*; α(L)=0.001031 *15*; α(M)=0.000242 *4*; α(N)=5.97×10^{-5} *9*; α(O)=1.045×10^{-5} *15* α(P)=5.79×10^{-7} *9*
1177.7	0$^+$	500.3[#]	13[#] *8*	677.48	2$^+$	[E2]		0.0247	α(K)=0.0182 *3*; α(L)=0.00493 *7*; α(M)=0.001198 *17*; α(N)=0.000294 *5*; α(O)=4.97×10^{-5} *7* α(P)=1.92×10^{-6} *3*
		1024.3[#]	100[#] *10*	153.24	2$^+$	(E2)[@]		0.00522	α(K)=0.00424 *6*; α(L)=0.000757 *11*; α(M)=0.0001767 *25*; α(N)=4.36×10^{-5} *6* α(O)=7.68×10^{-6} *11*; α(P)=4.46×10^{-7} *7*
1181.49	8$^+$	424.3 *2*	100	757.06	6$^+$	E2		0.0375	α(K)=0.0265 *4*; α(L)=0.00832 *12*; α(M)=0.00204 *3*; α(N)=0.000501 *7*; α(O)=8.37×10^{-5} *12* α(P)=2.77×10^{-6} *4* Mult.: from ce data in (HI,xnγ).
1187.22	2$^+$	326.2[#] *5*	≤3[#]	861.39	2$^+$				
		708.9[#]	2.5[#] *17*	478.13	0$^+$	[E2]		0.01112	α(K)=0.00871 *13*; α(L)=0.00184 *3*; α(M)=0.000438 *7*; α(N)=0.0001078 *15*; α(O)=1.86×10^{-5} *3* α(P)=9.23×10^{-7} *13*
		776.6[#] *4*	5.6[#] *13*	410.73	4$^+$	[E2]		0.00916	α(K)=0.00725 *11*; α(L)=0.001459 *21*; α(M)=0.000345 *5*; α(N)=8.50×10^{-5} *12* α(O)=1.478×10^{-5} *21*; α(P)=7.67×10^{-7} *11*
		1033.9[#] *2*	100[#] *4*	153.24	2$^+$	E0+M1+E2[@]	>5.7	0.00523 *13*	α(K)=0.00425 *11*; α(L)=0.000753 *17*; α(M)=0.000176 *4*; α(N)=4.33×10^{-5} *10* α(O)=7.65×10^{-6} *17*; α(P)=4.48×10^{-7} *12*

$^{180}_{78}Pt_{102}$-5

Adopted Levels, Gammas (continued)

γ(^{180}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
1248.18	(4$^+$)	386.6[#] *3*	90[#] *40*	861.39	2$^+$	[E2]	0.0479	α(K)=0.0330 *5*; α(L)=0.01137 *17*; α(M)=0.00281 *4*; α(N)=0.000689 *10*; α(O)=0.0001142 *17* α(P)=3.41×10^{-6} *5*
		571.9[#]	≈27[#]	677.48	2$^+$	[E2]	0.0180	α(K)=0.01363 *19*; α(L)=0.00332 *5*; α(M)=0.000799 *12*; α(N)=0.000196 *3*; α(O)=3.35×10^{-5} *5* α(P)=1.441×10^{-6} *21*
		837.4[#] *4*	40[#] *30*	410.73	4$^+$			
		1094.5[#] *3*	100[#] *21*	153.24	2$^+$	[E2]	0.00459	α(K)=0.00374 *6*; α(L)=0.000653 *10*; α(M)=0.0001521 *22*; α(N)=3.75×10^{-5} *6* α(O)=6.62×10^{-6} *10*; α(P)=3.93×10^{-7} *6*
1315.24	(5$^+$)	352.5 *2*	19 *6*	962.68	3$^{(+)}$	E2	0.0618	α(K)=0.0411 *6*; α(L)=0.01569 *23*; α(M)=0.00389 *6*; α(N)=0.000955 *14*; α(O)=0.0001573 *23* α(P)=4.22×10^{-6} *6*
		558[b] *1*		757.06	6$^+$			
		904.6 *2*	100 *9*	410.73	4$^+$	(M1+E2)	0.012 *5*	α(K)=0.010 *5*; α(L)=0.0016 *6*; α(M)=0.00037 *14*; α(N)=9.E−5 *4*; α(O)=1.6×10^{-5} *7* α(P)=1.1×10^{-6} *5* Mult.: D+Q from DCO ratio in (HI,xnγ), Δπ=no from level scheme.
1351.11	2$^+$	388.0[#] *5*	17[#] *10*	962.68	3$^{(+)}$			
		490[#]		861.39	2$^+$	E0(+M1+E2)[@]	0.05 *3*	α(K)=0.044 *25*; α(L)=0.008 *3*; α(M)=0.0019 *7*; α(N)=0.00047 *16*; α(O)=8.E−5 *3*; α(P)=5.E−6 *3*
		673.7[#]	≈7[#]	677.48	2$^+$			
		872.9[#] *3*	100[#] *11*	478.13	0$^+$	E2[@]	0.00719	α(K)=0.00576 *8*; α(L)=0.001096 *16*; α(M)=0.000258 *4*; α(N)=6.35×10^{-5} *9*; α(O)=1.111×10^{-5} *16* α(P)=6.09×10^{-7} *9*
		940.6[#] *3*	80[#] *30*	410.73	4$^+$	[E2]	0.00618	α(K)=0.00498 *7*; α(L)=0.000919 *13*; α(M)=0.000215 *3*; α(N)=5.31×10^{-5} *8*; α(O)=9.32×10^{-6} *13* α(P)=5.26×10^{-7} *8*
		1197.8[#] *4*	22[#] *4*	153.24	2$^+$			
		1351.4[#]	≈69[#]	0.0	0$^+$	[E2]	0.00309	α(K)=0.00252 *4*; α(L)=0.000416 *6*; α(M)=9.63×10^{-5} *14*; α(N)=2.37×10^{-5} *4*; α(O)=4.22×10^{-6} *6* α(P)=2.64×10^{-7} *4*
1387.6		710.4[#]	50[#] *30*	677.48	2$^+$			
		1234.1[#]	100[#] *30*	153.24	2$^+$			
1491.2		528.2[#]	40[#] *30*	962.68	3$^{(+)}$			
		814.0[#]	100[#] *50*	677.48	2$^+$			
1535.0	(2$^+$,3,4$^+$)	571.7[#]	21[#] *14*	962.68	3$^{(+)}$			
		858.1[#]	32[#] *18*	677.48	2$^+$			

$^{180}_{78}Pt_{102}$-6

Adopted Levels, Gammas (continued)

γ(^{180}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
1535.0	(2⁺,3,4⁺)	1124.0[#]	100[#] *10*	410.73	4⁺			
		1382.0[#]	75[#] *14*	153.24	2⁺			
1587.64	(4,5⁺)	272.2 *2*	90 *30*	1315.24	(5⁺)			
		625 *1*	100 *40*	962.68	3⁽⁺⁾			
		1177 *1*	50 *20*	410.73	4⁺			
1614.70	(5⁻,4⁺)	366.2 *2*	61 *7*	1248.18	(4⁺)			
		858.0 *2*	100 *15*	757.06	6⁺			
		1204.0 *2*	71 *15*	410.73	4⁺			
1649.90	(6⁺)	401.8 *2*	100	1248.18	(4⁺)			
1674.28	10⁺	492.8 *2*	100	1181.49	8⁺	E2	0.0257	α(K)=0.0189 *3*; α(L)=0.00517 *8*; α(M)=0.001256 *18*; α(N)=0.000309 *5*; α(O)=5.21×10^{-5} *8* α(P)=1.99×10^{-6} *3* Mult.: from ce data in (HI,xnγ).
1727.24	(7⁺)	412.2 *2*	58 *15*	1315.24	(5⁺)	E2	0.0404	α(K)=0.0283 *4*; α(L)=0.00916 *13*; α(M)=0.00225 *4*; α(N)=0.000553 *8*; α(O)=9.21×10^{-5} *13* α(P)=2.95×10^{-6} *5*
		970.3 *2*	100 *19*	757.06	6⁺	(M1+E2)	0.010 *5*	α(K)=0.008 *4*; α(L)=0.0014 *5*; α(M)=0.00031 *12*; α(N)=8.E−5 *3*; α(O)=1.4×10^{-5} *6*; α(P)=9.E−7 *4* Mult.: (D+Q) from DCO ratio in (HI,xnγ), Δπ=no from level scheme.
1815.03	(6,7⁺)	200 *1*		1614.70	(5⁻,4⁺)			
		227.4 *2*	24 *3*	1587.64	(4,5⁺)	E2	0.234	α(K)=0.1228 *18*; α(L)=0.0838 *13*; α(M)=0.0213 *3*; α(N)=0.00521 *8*; α(O)=0.000834 *12* α(P)=1.191×10^{-5} *17*
		499.7 *2*	100 *11*	1315.24	(5⁺)	E2	0.0248	α(K)=0.0183 *3*; α(L)=0.00495 *7*; α(M)=0.001202 *17*; α(N)=0.000295 *5*; α(O)=4.99×10^{-5} *7* α(P)=1.93×10^{-6} *3*
		1057.8 *2*	71 *6*	757.06	6⁺	(D)		
1852.20	(7⁻,6⁺)	202.3 *2*	9 *3*	1649.90	(6⁺)			
		237.6 *2*	33 *1*	1614.70	(5⁻,4⁺)	E2	0.203	α(K)=0.1099 *16*; α(L)=0.0702 *11*; α(M)=0.0178 *3*; α(N)=0.00435 *7*; α(O)=0.000699 *10* α(P)=1.072×10^{-5} *16*
		670.6 *2*	100 *9*	1181.49	8⁺			
1915.34	(6,7⁺)	327.5 *2*		1587.64	(4,5⁺)			
		600.2[b] *2*		1315.24	(5⁺)			
2012.23	(7,8⁺)	160 *1*		1852.20	(7⁻,6⁺)			
		198 *1*		1815.03	(6,7⁺)			
		362.4 *2*		1649.90	(6⁺)			
		397 *1*		1614.70	(5⁻,4⁺)			
		831 *1*		1181.49	8⁺			
2107.24	(8,9⁺)	292.2 *2*	100 *10*	1815.03	(6,7⁺)	(E2)	0.1065	α(K)=0.0652 *10*; α(L)=0.0312 *5*; α(M)=0.00784 *12*; α(N)=0.00192 *3*; α(O)=0.000312 *5* α(P)=6.55×10^{-6} *10*

$^{180}_{78}Pt_{102}$-7

Adopted Levels, Gammas (continued)

γ(^{180}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
2107.24	(8,9$^+$)	379.9 *2*	25 *4*	1727.24	(7$^+$)	(E2)	0.0503	α(K)=0.0344 *5*; α(L)=0.01207 *17*; α(M)=0.00298 *5*; α(N)=0.000732 *11*; α(O)=0.0001212 *18* α(P)=3.55×10^{-6} *5*
		925.7 *2*	28 *4*	1181.49	8$^+$			
2161.9		347[b] *1*		1815.03	(6,7$^+$)			
		980[ab] *1*	*a*	1181.49	8$^+$			
2168.94	(9$^-$,8$^+$)	316.7 *2*		1852.20	(7$^-$,6$^+$)	E2	0.0839	α(K)=0.0534 *8*; α(L)=0.0231 *4*; α(M)=0.00577 *9*; α(N)=0.001415 *20*; α(O)=0.000231 *4* α(P)=5.41×10^{-6} *8*
		494.7 *2*		1674.28	10$^+$			
2182.92	(8,9$^+$)	267.5 *2*		1915.34	(6,7$^+$)	(E2)	0.1395	α(K)=0.0814 *12*; α(L)=0.0439 *7*; α(M)=0.01106 *16*; α(N)=0.00271 *4*; α(O)=0.000438 *7* α(P)=8.07×10^{-6} *12*
		367.6 *2*		1815.03	(6,7$^+$)			
		456.1 *2*		1727.24	(7$^+$)			
2198.4?	(9$^+$)	471 *1*		1727.24	(7$^+$)			
		1017 *1*		1181.49	8$^+$			
2229.2	12$^+$	554.8 *2*	100	1674.28	10$^+$	E2	0.0193	α(K)=0.01455 *21*; α(L)=0.00362 *5*; α(M)=0.000874 *13*; α(N)=0.000215 *3*; α(O)=3.66×10^{-5} *6* α(P)=1.537×10^{-6} *22*
2286.65	(8,9)	125 *1*		2161.9				
		179.4 *2*	59 *18*	2107.24	(8,9$^+$)	(D)		
		274.5 *2*	100 *14*	2012.23	(7,8$^+$)			
		434.5[b] *2*		1852.20	(7$^-$,6$^+$)			
2401.6?		1221[b] *1*	100	1181.49	8$^+$			
2444.34	(9,10)	157.7 *2*	31 *9*	2286.65	(8,9)	(D)		
		282.4 *2*	53 *13*	2161.9				
		337.0 *2*	100 *19*	2107.24	(8,9$^+$)			
2455.0	(9,10)	286 *1*	14 *4*	2168.94	(9$^-$,8$^+$)	(D)		
		347.7 *2*	100 *29*	2107.24	(8,9$^+$)	(D)		
2556.7	(11$^-$,10$^+$)	387.8 *2*	100	2168.94	(9$^-$,8$^+$)	E2	0.0475	α(K)=0.0327 *5*; α(L)=0.01125 *16*; α(M)=0.00278 *4*; α(N)=0.000681 *10*; α(O)=0.0001130 *16* α(P)=3.39×10^{-6} *5*
2557.98	(10,11$^+$)	375.1 *2*		2182.92	(8,9$^+$)			
		450.7 *2*		2107.24	(8,9$^+$)			
2626.10	(10,11)	181.7 *2*	29 *10*	2444.34	(9,10)	(D)		
		339.6 *2*	100 *19*	2286.65	(8,9)	(E2)	0.0687	α(K)=0.0450 *7*; α(L)=0.0179 *3*; α(M)=0.00446 *7*; α(N)=0.001093 *16*; α(O)=0.000180 *3* α(P)=4.60×10^{-6} *7*
2764.7	(12$^+$)	364 *1*		2401.6?				
		536 *1*	25 *21*	2229.2	12$^+$			

$^{180}_{78}Pt_{102}$-8

Adopted Levels, Gammas (continued)

γ(^{180}Pt) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult.[‡]	α	Comments
2764.7	(12$^+$)	1090.5 *2*	100 *17*	1674.28	10$^+$	(E2)	0.00462	α(K)=0.00376 *6*; α(L)=0.000658 *10*; α(M)=0.0001533 *22*; α(N)=3.78×10^{-5} *6* α(O)=6.68×10^{-6} *10*; α(P)=3.96×10^{-7} *6*
2834.20	(11,12)	208.0 *2*	23 *5*	2626.10	(10,11)	(D)		
		379[b]		2455.0	(9,10)			
		389.8 *2*	100 *36*	2444.34	(9,10)	E2	0.0469	α(K)=0.0323 *5*; α(L)=0.01106 *16*; α(M)=0.00273 *4*; α(N)=0.000669 *10*; α(O)=0.0001111 *16* α(P)=3.35×10^{-6} *5*
2841.6	14$^+$	612.2 *2*	100	2229.2	12$^+$	E2	0.01538	α(K)=0.01180 *17*; α(L)=0.00273 *4*; α(M)=0.000656 *10*; α(N)=0.0001614 *23* α(O)=2.77×10^{-5} *4*; α(P)=1.249×10^{-6} *18*
2872.7	(11,12)	417.7 *2*		2455.0	(9,10)	(E2)	0.0390	α(K)=0.0275 *4*; α(L)=0.00876 *13*; α(M)=0.00215 *3*; α(N)=0.000529 *8*; α(O)=8.81×10^{-5} *13* α(P)=2.86×10^{-6} *4*
		429[b] *1*		2444.34	(9,10)			
3006.3	(12,13$^+$)	448.3 *2*	100	2557.98	(10,11$^+$)			
3007.8	(13$^-$,12$^+$)	451.1 *2*	100	2556.7	(11$^-$,10$^+$)	E2	0.0320	α(K)=0.0230 *4*; α(L)=0.00682 *10*; α(M)=0.001667 *24*; α(N)=0.000410 *6*; α(O)=6.87×10^{-5} *10* α(P)=2.41×10^{-6} *4*
3050.5	(12,13)	216.0 *2*		2834.20	(11,12)	(D)		
		424.6 *2*		2626.10	(10,11)			
3208.8	(14$^+$)	367 *1*		2841.6	14$^+$			
		444.3 *2*	100 *20*	2764.7	(12$^+$)	(E2)	0.0333	α(K)=0.0238 *4*; α(L)=0.00716 *10*; α(M)=0.001753 *25*; α(N)=0.000430 *6*; α(O)=7.21×10^{-5} *11* α(P)=2.49×10^{-6} *4*
		980[a] *1*	100[a] *10*	2229.2	12$^+$	(E2)	0.00570	α(K)=0.00461 *7*; α(L)=0.000837 *12*; α(M)=0.000196 *3*; α(N)=4.82×10^{-5} *7*; α(O)=8.48×10^{-6} *12* α(P)=4.86×10^{-7} *7*
3301.9	(13,14)	251.2 *2*	13 *3*	3050.5	(12,13)			
		467.8 *2*	100 *18*	2834.20	(11,12)	E2	0.0292	α(K)=0.0212 *3*; α(L)=0.00608 *9*; α(M)=0.001482 *21*; α(N)=0.000364 *6*; α(O)=6.12×10^{-5} *9* α(P)=2.23×10^{-6} *4*
3361.3	(13,14)	488.6 *2*	100	2872.7	(11,12)	E2	0.0262	α(K)=0.0192 *3*; α(L)=0.00530 *8*; α(M)=0.001290 *19*; α(N)=0.000317 *5*; α(O)=5.35×10^{-5} *8* α(P)=2.02×10^{-6} *3*
3504.9	16$^+$	663.2 *2*	100	2841.6	14$^+$	E2	0.01286	α(K)=0.00999 *14*; α(L)=0.00220 *3*; α(M)=0.000524 *8*; α(N)=0.0001291 *18*; α(O)=2.22×10^{-5} *4* α(P)=1.057×10^{-6} *15*
3507.1	(15$^-$,14$^+$)	499.1 *2*	100	3007.8	(13$^-$,12$^+$)	E2	0.0249	α(K)=0.0183 *3*; α(L)=0.00497 *7*; α(M)=0.001207 *17*; α(N)=0.000297 *5*; α(O)=5.01×10^{-5} *7* α(P)=1.93×10^{-6} *3*
3510.2	(14,15$^+$)	503.9 *2*	100	3006.3	(12,13$^+$)			

$^{180}_{78}Pt_{102}$-9

Adopted Levels, Gammas (continued)

γ(^{180}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
3544.7	(14,15)	243 *1*		3301.9	(13,14)	(D)		
		494 *1*		3050.5	(12,13)			
3571.6		563.9 *2*	100	3007.8	(13^-,12^+)			
3676.6	(16^+)	467.9 *2*	100 *13*	3208.8	(14^+)	(E2)	0.0292	α(K)=0.0212 *3*; α(L)=0.00607 *9*; α(M)=0.001481 *21*; α(N)=0.000364 *6*; α(O)=6.12×10^{-5} *9* α(P)=2.22×10^{-6} *4*
		835.0 *2*	57 *10*	2841.6	14^+	(E2)	0.00787	α(K)=0.00628 *9*; α(L)=0.001220 *17*; α(M)=0.000287 *4*; α(N)=7.08×10^{-5} *10* α(O)=1.236×10^{-5} *18*; α(P)=6.64×10^{-7} *10*
3832.9	(15,16)	531.0 *2*	100	3301.9	(13,14)	E2	0.0214	α(K)=0.01600 *23*; α(L)=0.00412 *6*; α(M)=0.000997 *14*; α(N)=0.000245 *4*; α(O)=4.16×10^{-5} *6* α(P)=1.689×10^{-6} *24*
3911.1	(15,16)	549.8 *2*	100	3361.3	(13,14)	E2	0.0197	α(K)=0.01484 *21*; α(L)=0.00372 *6*; α(M)=0.000898 *13*; α(N)=0.000221 *3*; α(O)=3.75×10^{-5} *6* α(P)=1.567×10^{-6} *22*
4044.2	(17^-,16^+)	537.1 *2*	100	3507.1	(15^-,14^+)	E2	0.0208	α(K)=0.01561 *22*; α(L)=0.00398 *6*; α(M)=0.000963 *14*; α(N)=0.000237 *4*; α(O)=4.02×10^{-5} *6* α(P)=1.648×10^{-6} *24*
4063.4	($16,17^+$)	553.2 *2*	100	3510.2	($14,15^+$)			
4099.7	(16,17)	555 *1*	100	3544.7	(14,15)	(E2)	0.0193	α(K)=0.01454 *22*; α(L)=0.00362 *6*; α(M)=0.000873 *13*; α(N)=0.000215 *4*; α(O)=3.65×10^{-5} *6* α(P)=1.536×10^{-6} *23*
4126.0		554.5 *2*		3571.6				
		618.8 *2*		3507.1	(15^-,14^+)			
4180.9	(18^+)	505 *1*	32 *8*	3676.6	(16^+)	(E2)	0.0242	α(K)=0.0179 *3*; α(L)=0.00479 *8*; α(M)=0.001163 *18*; α(N)=0.000286 *5*; α(O)=4.83×10^{-5} *8* α(P)=1.88×10^{-6} *3*
		675.8 *2*	100 *21*	3504.9	16^+	(E2)	0.01234	α(K)=0.00961 *14*; α(L)=0.00209 *3*; α(M)=0.000498 *7*; α(N)=0.0001226 *18*; α(O)=2.11×10^{-5} *3* α(P)=1.017×10^{-6} *15*
4252.7	18^+	576.2 *2*	55 *18*	3676.6	(16^+)			
		747 *1*	100 *12*	3504.9	16^+	E2	0.00994	α(K)=0.00784 *12*; α(L)=0.001609 *24*; α(M)=0.000381 *6*; α(N)=9.40×10^{-5} *14* α(O)=1.630×10^{-5} *24*; α(P)=8.30×10^{-7} *12*
4420.9	(17,18)	588 *1*	100	3832.9	(15,16)	(E2)	0.01686	α(K)=0.01285 *19*; α(L)=0.00306 *5*; α(M)=0.000736 *11*; α(N)=0.000181 *3*; α(O)=3.10×10^{-5} *5* α(P)=1.359×10^{-6} *20*
4512.5	(17,18)	601.4 *2*	100	3911.1	(15,16)	E2	0.01601	α(K)=0.01225 *18*; α(L)=0.00287 *4*; α(M)=0.000690 *10*; α(N)=0.0001698 *24* α(O)=2.91×10^{-5} *4*; α(P)=1.296×10^{-6} *19*
4639.8	(19^-,18^+)	595.6 *2*	100	4044.2	(17^-,16^+)	E2	0.01637	α(K)=0.01250 *18*; α(L)=0.00295 *5*; α(M)=0.000710 *10*; α(N)=0.0001746 *25* α(O)=2.99×10^{-5} *5*; α(P)=1.323×10^{-6} *19*
4661.1	($18,19^+$)	597.7 *2*	100	4063.4	($16,17^+$)			
4676.3		550.3 *2*		4126.0				
		632[b] *1*		4044.2	(17^-,16^+)			

$^{180}_{78}Pt_{102}$-10

Adopted Levels, Gammas (continued)

γ(^{180}Pt) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
4709.7?	(18,19)	610[b] *1*	100	4099.7	(16,17)	(E2)	0.01550	α(K)=0.01189 *18*; α(L)=0.00276 *4*; α(M)=0.000663 *10*; α(N)=0.0001630 *24* α(O)=2.79×10^{-5} *5*; α(P)=1.258×10^{-6} *19*
4804.4	(20$^+$)	552[b] *1*	7 *5*	4252.7	18$^+$			
		623.5 *2*	100 *16*	4180.9	(18$^+$)	(E2)	0.01475	α(K)=0.01135 *16*; α(L)=0.00260 *4*; α(M)=0.000623 *9*; α(N)=0.0001532 *22*; α(O)=2.63×10^{-5} *4* α(P)=1.202×10^{-6} *17*
4984.6	20$^+$	732.0 *2*		4252.7	18$^+$	E2	0.01038	α(K)=0.00816 *12*; α(L)=0.001695 *24*; α(M)=0.000402 *6*; α(N)=9.91×10^{-5} *14* α(O)=1.717×10^{-5} *24*; α(P)=8.64×10^{-7} *13*
		803[b] *1*		4180.9	(18$^+$)			
5062.9	(19,20)	642 *1*	100	4420.9	(17,18)	(E2)	0.01382	α(K)=0.01068 *16*; α(L)=0.00240 *4*; α(M)=0.000574 *9*; α(N)=0.0001412 *21*; α(O)=2.43×10^{-5} *4* α(P)=1.131×10^{-6} *17*
5160.6	(19,20)	648.1 *2*	100	4512.5	(17,18)	(E2)	0.01353	α(K)=0.01047 *15*; α(L)=0.00234 *4*; α(M)=0.000559 *8*; α(N)=0.0001375 *20*; α(O)=2.37×10^{-5} *4* α(P)=1.109×10^{-6} *16*
5289.3	(21$^-$,20$^+$)	649.5 *2*	100	4639.8	(19$^-$,18$^+$)	(E2)	0.01347	α(K)=0.01043 *15*; α(L)=0.00232 *4*; α(M)=0.000555 *8*; α(N)=0.0001367 *20*; α(O)=2.35×10^{-5} *4* α(P)=1.104×10^{-6} *16*
5293.0	(20,21$^+$)	631.9 *2*	100	4661.1	(18,19$^+$)			
5399.8		760 *1*	100	4639.8	(19$^-$,18$^+$)			
5468.2	(22$^+$)	485[b] *1*		4984.6	20$^+$			
		663.7 *2*		4804.4	(20$^+$)	(E2)	0.01284	α(K)=0.00997 *14*; α(L)=0.00219 *3*; α(M)=0.000523 *8*; α(N)=0.0001288 *18*; α(O)=2.22×10^{-5} *4* α(P)=1.056×10^{-6} *15*
5728.5	22$^+$	744 *1*		4984.6	20$^+$	(E2)	0.01002	α(K)=0.00790 *12*; α(L)=0.001626 *24*; α(M)=0.000385 *6*; α(N)=9.49×10^{-5} *14* α(O)=1.647×10^{-5} *24*; α(P)=8.37×10^{-7} *12*
		924[b] *1*		4804.4	(20$^+$)			
5753.9	(21,22)	691 *1*	100	5062.9	(19,20)			
5852.6	(21,22)	692 *1*	100	5160.6	(19,20)			
5938.0?	(22,23$^+$)	645[b] *1*	100	5293.0	(20,21$^+$)			
5947.6	(23$^-$,22$^+$)	658.3 *2*	100	5289.3	(21$^-$,20$^+$)			
6007.3		718 *1*	100	5289.3	(21$^-$,20$^+$)			
6178.7	(24$^+$)	710.5 *2*	100	5468.2	(22$^+$)	(E2)	0.01106	α(K)=0.00867 *13*; α(L)=0.00183 *3*; α(M)=0.000435 *7*; α(N)=0.0001072 *15*; α(O)=1.85×10^{-5} *3* α(P)=9.18×10^{-7} *13*
6490.9?		737[b] *1*	100	5753.9	(21,22)			
6525.6		578 *1*	100	5947.6	(23$^-$,22$^+$)			
6551.5	(24$^+$)	823[b] *1*	100	5728.5	22$^+$			
6580.6	(23,24)	728 *1*	100	5852.6	(21,22)			
6618.4	(25$^-$,24$^+$)	611[b] *1*		6007.3				

$^{180}_{78}Pt_{102}$-11

Adopted Levels, Gammas (continued)

$\gamma(^{180}Pt)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
6618.4	$(25^-,24^+)$	670.8 *2*		5947.6	$(23^-,22^+)$			
6935.8	(26^+)	757.1 *2*	100	6178.7	(24^+)	(E2)	0.00966	α(K)=0.00763 *11*; α(L)=0.001555 *22*; α(M)=0.000368 *6*; α(N)=9.07×10^{-5} *13* α(O)=1.576×10^{-5} *22*; α(P)=8.08×10^{-7} *12*
7237.6?		712[b] *1*	100	6525.6				
7434.5	(26^+)	883[b] *1*	100	6551.5	(24^+)			

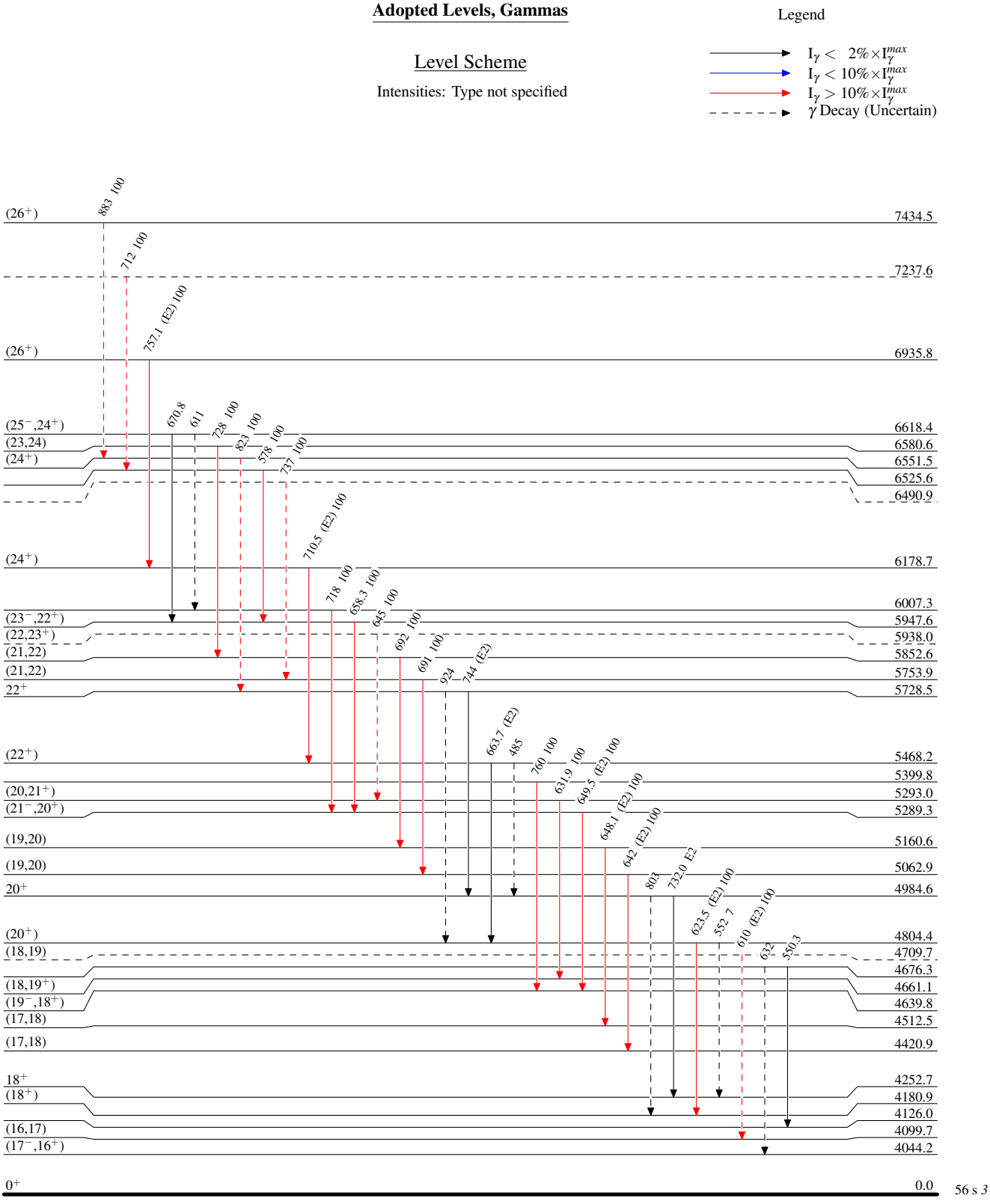
[†] From (HI,xnγ), except where noted.
[‡] From DCO ratios in (HI,xnγ), except where noted. Transitions with measured Q character are adopted here as pure E2.
[#] From ^{180}Au ε decay.
[@] From angular distribution coefficients and electron conversion coefficients in ^{180}Au ε decay.
[&] From $\gamma\gamma(\theta)$ in ^{180}Au ε decay.
[a] Multiply placed with intensity suitably divided.
[b] Placement of transition in the level scheme is uncertain.

$^{180}_{78}Pt_{102}$-12

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

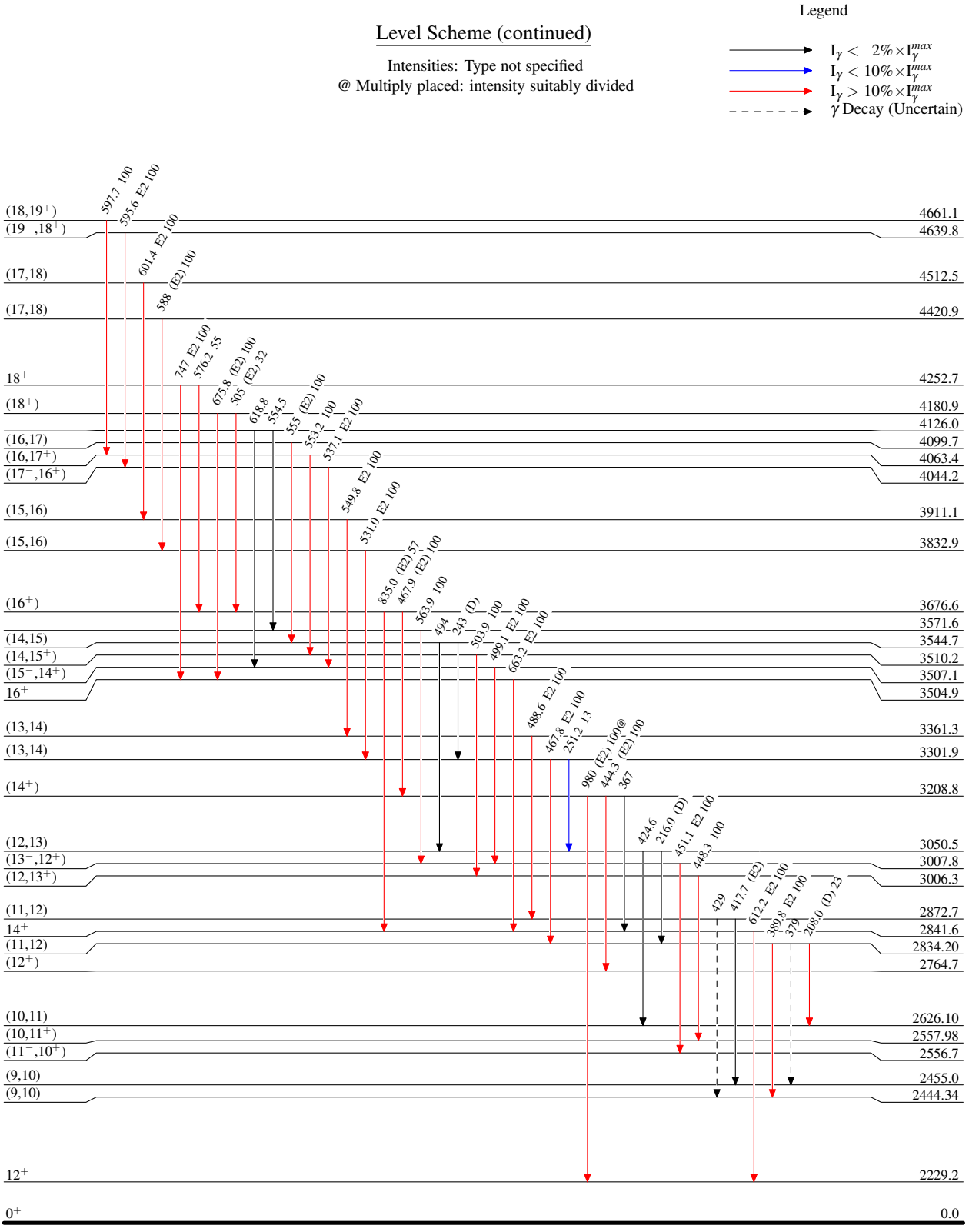


$^{180}_{78}Pt_{102}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
@ Multiply placed: intensity suitably divided

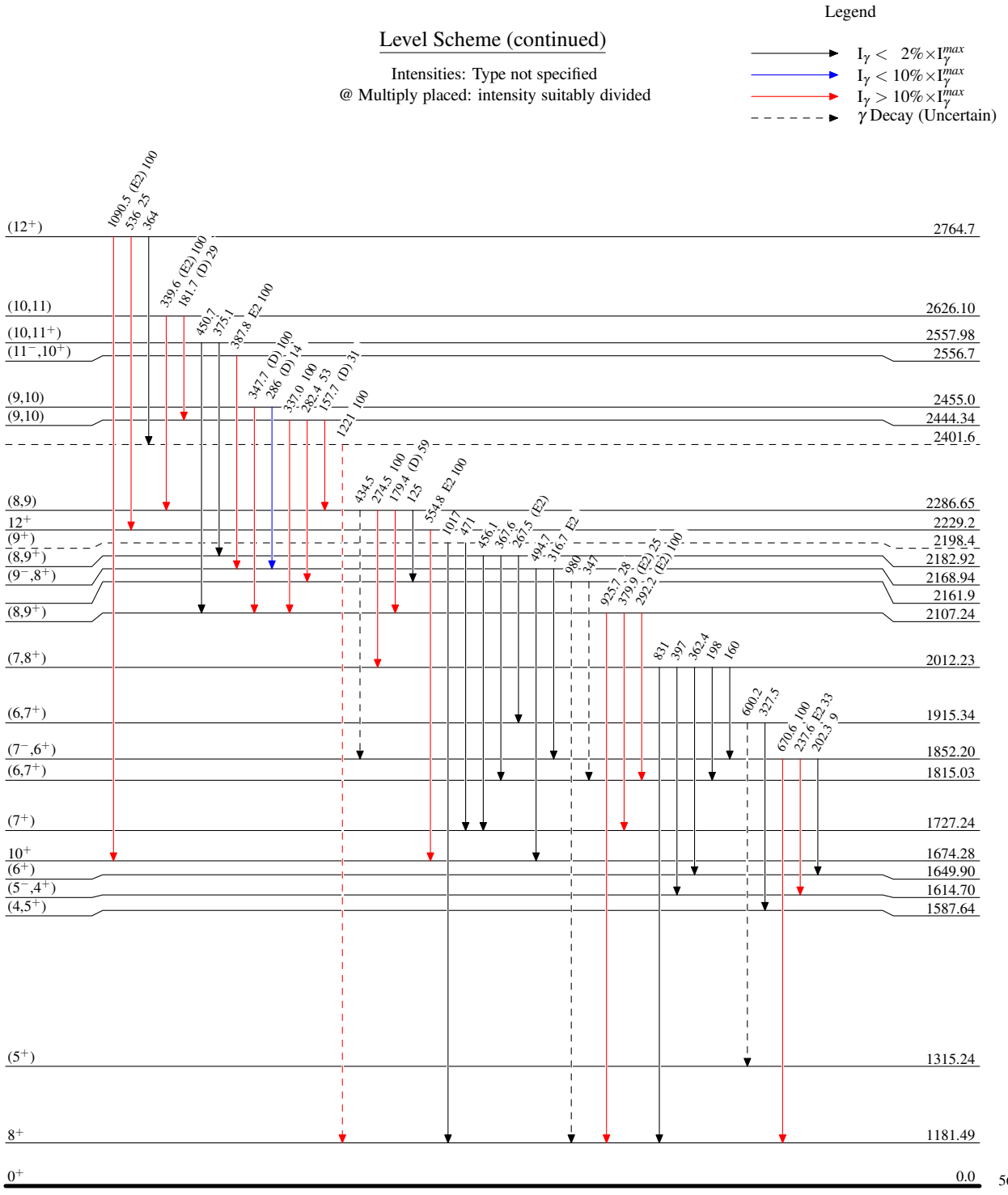


$^{180}_{78}Pt_{102}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
@ Multiply placed: intensity suitably divided



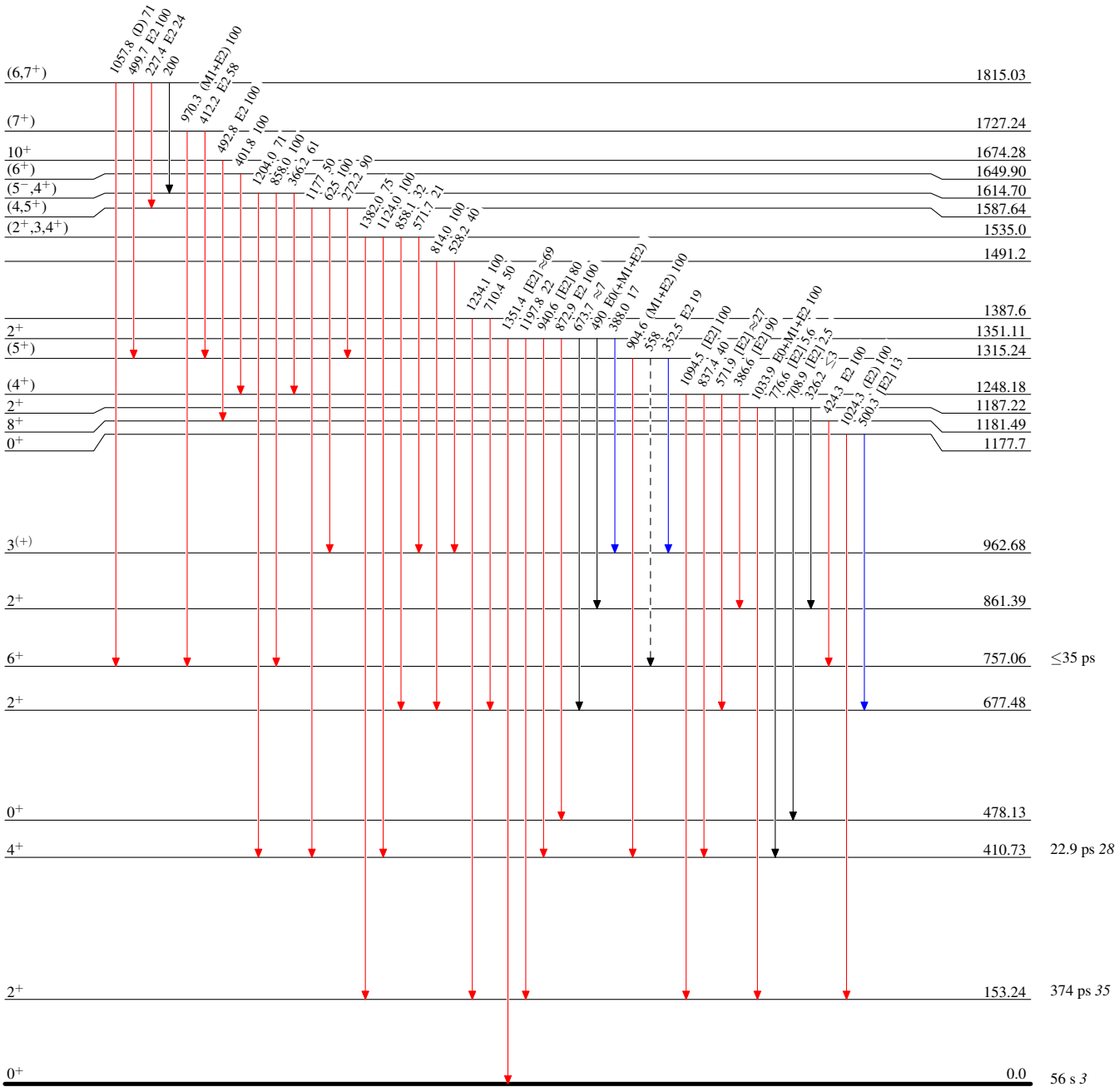
$^{180}_{78}Pt_{102}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



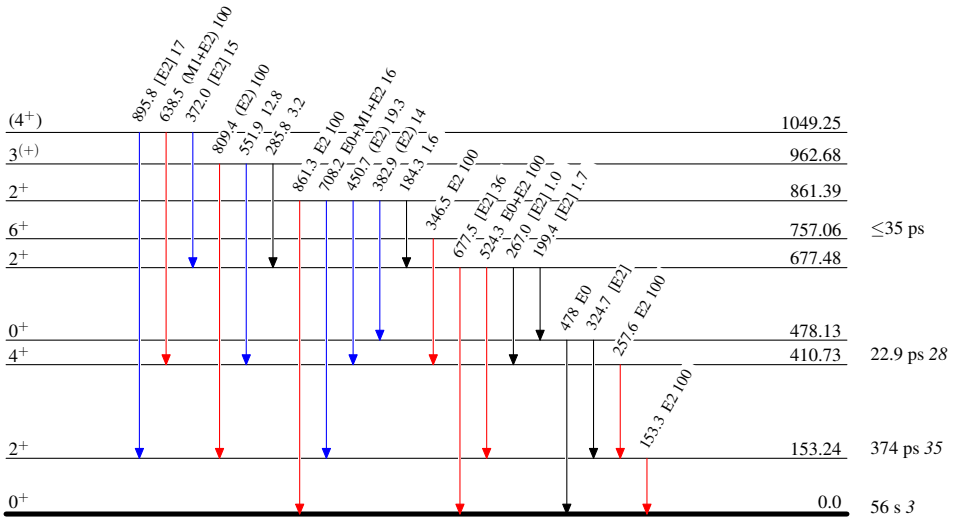
$^{180}_{78}Pt_{102}$

Adopted Levels, Gammas

Level Scheme (continued)

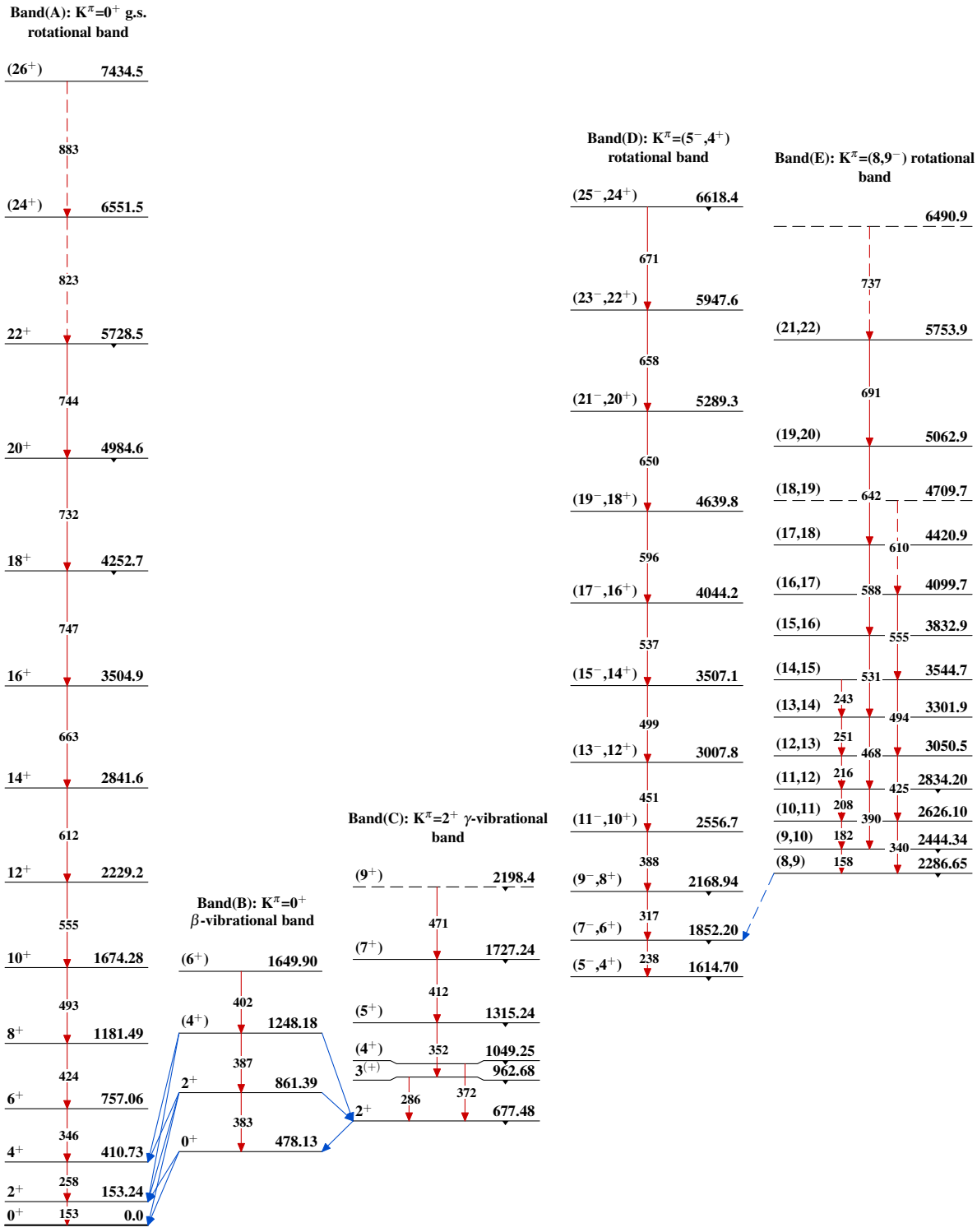
Intensities: Type not specified
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

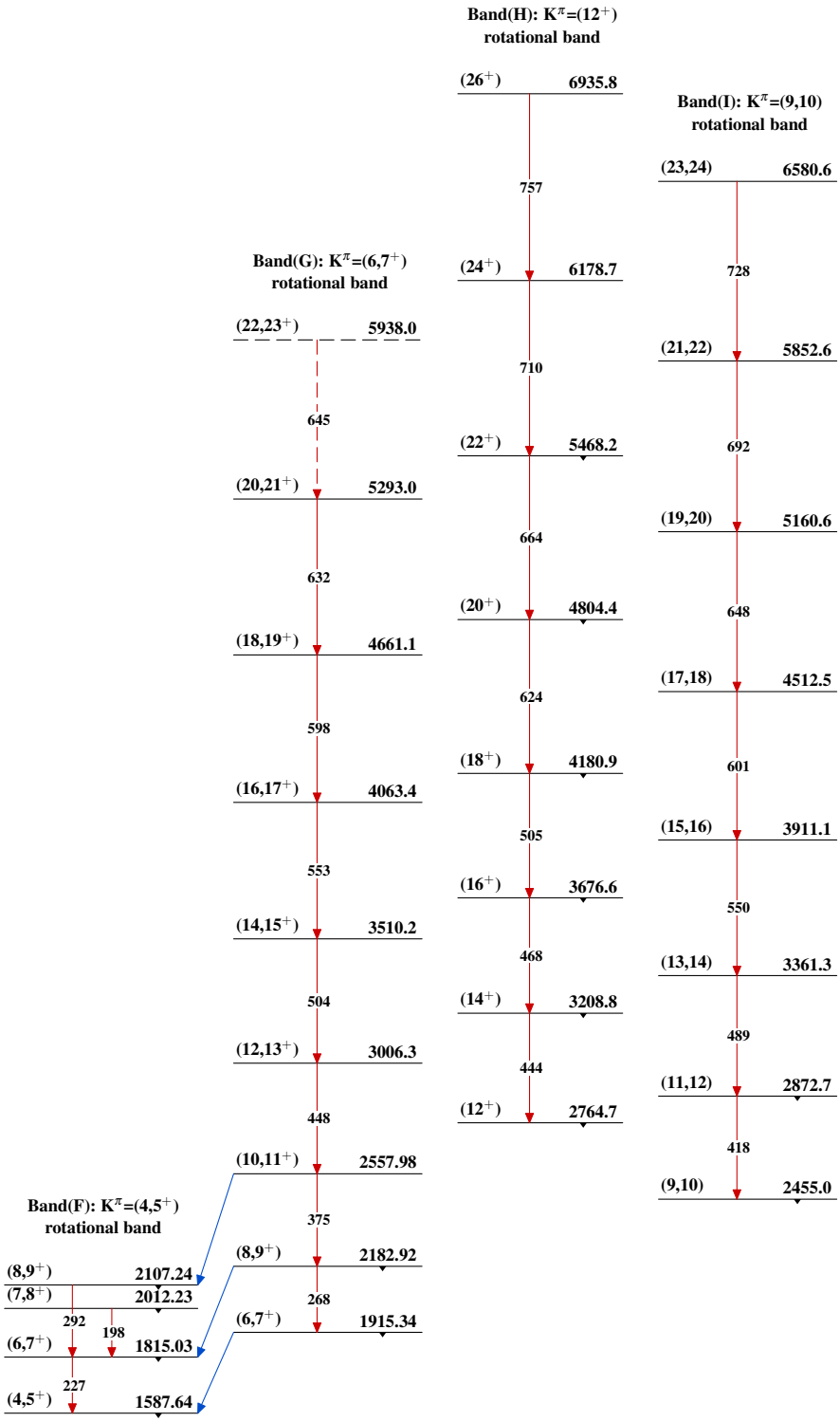


$^{180}_{78}Pt_{102}$

Adopted Levels, Gammas



Adopted Levels, Gammas (continued)



$^{180}_{78}Pt_{102}$