

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110,999 (2009)	1-Nov-2008

Q(β^-)=-3.66×10³ 3; S(n)=6.89×10³ 4; S(p)=4.80×10³ 3; Q(α)=4.55×10³ 6 [2012Wa38](#)

Note: Current evaluation has used the following Q record \$ -3710 40 6920 40 4830 30 4520 60 [2003Au03](#).

¹⁸⁷Pt Levels

Cross Reference (XREF) Flags

A	¹⁸⁷ Au ϵ decay	D	¹⁸¹ Ta(¹¹ B,5n γ)
B	¹⁷³ Yb(¹⁸ O,4n γ)	E	¹⁸⁶ Os(α ,3n γ)
C	¹⁷⁶ Yb(¹⁶ O,5n γ)		

E(level) [†]	J ^π	T _{1/2} ^c	XREF	Comments
0.0 ^j	3/2 ⁻	2.35 h 3	ABCDE	% ϵ +% β^+ =100 μ =-0.401 4; Q=-0.99 4 μ : weighted average of -0.397 5 (1989Du01 -resonance ion spectroscopy), 0.408 8 (1988Ed02 , 1990Ed01 -nuclear orientation NMR), -0.399 8 (2000Sa58 -Laser spectroscopy), -0.43 2 (1992Hi07 -Laser resonance ionization mass spectroscopy). Q: weighted average of -1.00 7 (1992Hi07 -Laser spectroscopy- Sternheimer shielding corrected), and -0.98 5 (2000SaZQ -Laser spectroscopy-Sternheimer shielding corrected). Others: -1.13 5 (1989Du01 -resonance ion spectroscopy), -1.3 3 (1990Ed01 -nuclear orientation with γ -detection), and -1.08 6 (2000Sa58 -Laser spectroscopy). J ^π : spin from atomic beam (1975Ru06). Parity from Schmidt diagram. T _{1/2} : from 1973Se13 . Other references: 2.2 h (1960Al20), 2.0 h 4 (1960Ba43), 3 h 1, 2.5 h 5 (1961Kr02), 2.6 h 3, 2.0 h 3 (1962Gr27), 3.1 h 5 (1963Gr22), and 2.1 h (1965Qa01). $\Delta\langle r^2 \rangle$ (¹⁸⁷ Pt, ¹⁹⁴ Pt)=-0.175 20 (1992Hi07); $\langle r^2 \rangle^{1/2}$ (¹⁸⁷ Pt)=5.407 4 fm (2004An14).
9.27 8	3/2 ⁻	≤1 ns	AB D	J ^π : From the analysis of experimental and theoretical A ₂ values for the 914.7 γ -235.7 γ and 235.7 γ -181.1 γ cascades. J ^π =1/2 ⁻ was ruled out from the cascade analysis in ¹⁸⁷ Au ϵ decay (1992Ro15).
25.53 ^k 11	(5/2 ⁻) ^{‡#}	0.7 ns 1	AB D	
51.25 11	(1/2,3/2) ⁻	0.30 ns 8	A	J ^π : systematics from ¹⁹¹ Pt, 51.2 γ M1+E2 to 3/2 ⁻ .
57.11 ^h 14	(7/2 ⁻) ^{‡#}	18 ns 2	ABCDE	
74.57 10	3/2 ⁻	0.50 ns 6	AB D	J ^π : From the cascade analysis of 706.1 γ -609.4 γ , 706.1 γ -374.4 γ , and 374.4 γ -185.8 γ including the experimental and theoretical A ₂ values The cascade analysis of 1189.4 γ -213.6 γ also leads to the same assignment (¹⁸⁷ Au ϵ decay - 1992Ro15).
174.38 ^g 22	(11/2 ⁺) ^{‡#}	311 μ s 15	AB DE	T _{1/2} : from (α ,3n γ) (1976Pi03).
190.43 11	3/2 ⁻		AB D	J ^π : 115.9 γ to 3/2 ⁻ state. J ^π =5/2 ⁻ was ruled out from the analysis of 590.6 γ -181.1 γ correlation, constraining the range of measured mixing ratio and the experimental and theoretical A ₂ values in ¹⁸⁷ Au ϵ decay (1992Ro15).
203.24 ^f 24	(13/2 ⁺) [@]		ABCDE	
204.3 ^j 3	(7/2 ⁻) [@]		B D	
225.7 ^h 4	(9/2 ⁻) [@]		BCD	
242.35 20	(9/2 ⁺)	≤0.5 ns	A	J ^π : 185.1 γ E1 to (7/2 ⁻).
260.50 12	3/2 ⁻	148 ps 7	A	J ^π : From the cascade analysis of 706.1 γ -609.4 γ , 706.1 γ -374.4 γ , and

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Adopted Levels, Gammas (continued) ^{187}Pt Levels (continued)

E(level) [†]	J ^π	XREF	Comments
			374.4γ-185.8γ including the experimental and theoretical A ₂ values (^{187}Au ε decay – 1992Ro15). 260.6γ E0+M1+E2 to 3/2 ⁻ . T _{1/2} : from ^{187}Au ε decay.
288.33 <i>l3</i>	5/2 ^{-b}	A	J ^π : From the cascade analysis of 1189.4γ-213.6γ including the experimental and theoretical A ₂ values (^{187}Au ε decay – 1992Ro15). 262.7γ E0+M1+E2 to (5/2 ⁻).
305.83 <i>k15</i>	(9/2 ⁻) [@]	B D	
426.34 <i>l1</i>	(3/2 ⁻) ^{&d}	A	
426.51 <i>23</i>	(9/2 ⁺)	A	J ^π : 456.7γ M1 from (7/2 ⁺), 223γ to (13/2 ⁺).
430.7 <i>h4</i>	(11/2 ⁻) [@]	BCD	
465.18 <i>g24</i>	(15/2 ⁺) [@]	B DE	
474.42 <i>16</i>		A	
480.65 <i>15</i>	(1/2 ⁻ , 3/2 ⁻)	A	J ^π : 471.4γ M1 to (1/2 ⁻) and 429.4γ M1(+E2) to (3/2 ⁻).
500.3 <i>j3</i>	(11/2 ⁻) [@]	B D	
505.09 <i>f25</i>	(17/2 ⁺) [@]	BCDE	
507.92 <i>13</i>	1/2 ⁻	A	J ^π : 247.4γ M1+E2 to 3/2 ⁻ state. A possible 3/2 ⁻ assignment is ruled out from the analysis of 833.0γ-247.4γ and 247.4γ-185.8γ cascade correlations including the experimental and theoretical A ₂ values (^{187}Au ε decay – 1992Ro15).
510.42 <i>18</i>		A	
525.06 <i>16</i>	(3/2 ⁻)	A	J ^π : 467.9γ (E2) to (7/2 ⁻), 473.8γ M1+E2 to (1/2 ⁻ , 3/2 ⁻).
572.80 <i>16</i>	(1/2 ⁻ , 3/2 ⁻)	A	J ^π : 498.3γ (M1+E2) to (3/2 ⁻ , 5/2 ⁻). 1979Be51 and 1983Gn01 (^{187}Au ε decay) expected E0 component (%E0≈60 (1979Be51)) for the 498γ due to high α(K) _{exp} value (α(K) _{exp} >0.58- 1979Be51 , α(K) _{exp} =0.8 3- 1983Gn01). Either of the E0 component or abnormal M1 conversion in the mass region for this element is possible, however 1992Ro15 states it is difficult to determine unambiguously. Without a specific J ^π assignment for this level, (M1+E2) is assigned by the evaluator.
588.06 <i>21</i>	(7/2 ⁺)	A	J ^π : 345.8γ M1 to (9/2 ⁺), 413.7γ to (3/2 ⁺).
599.11 <i>14</i>	(5/2 ⁻)	A	J ^π : 542.1γ M1+E2 to (7/2 ⁻), 547.6γ to (1/2 ⁻ , 3/2 ⁻), 172.7γ to (3/2 ⁻).
620.77 <i>14</i>	(1/2 ⁻ , 3/2 ⁻) ^{&}	A	J ^π : 620γ M1+E2 to 3/2 ⁻ , 720γ E1 from (1/2 ⁺) state.
632.88 <i>16</i>	(5/2 ⁺ , 7/2 ⁺)	A	J ^π : 390.5γ E2 to (9/2 ⁺), 206.3γ M1+E2 to (9/2 ⁺), 708γ from (1/2 ⁺).
635.02 <i>13</i>	(3/2 ⁻) ^{&}	A	J ^π : 609.5γ M1+E2 to (5/2 ⁻), 706γ E1 from (1/2 ⁺) state.
651.2 <i>h4</i>	(13/2 ⁻) [@]	BCD	
688.68 <i>18</i>	(3/2 ⁻)	A	J ^π : if 498.2 transition is E0+M1+E2. See ^{187}Au ε decay.
694.43 <i>k25</i>	(13/2 ⁻) [@]	B D	
781.28 <i>13</i>	(3/2 ⁻) ^b	A	J ^π : 590.9γ M1+E2 to 3/2 ⁻ state, 559.8γ (E1) feeding from 1/2 ⁺ state.
845.0 <i>3</i>		A	
883.17 <i>23</i>	(5/2 ⁺)	A	J ^π : 294.9γ M1+E2 to (7/2 ⁺) state, 456.7γ E2 to (9/2 ⁺) state.
886.8 <i>j4</i>	(15/2 ⁻) [@]	B D	
894.5 <i>h4</i>	(15/2 ⁻) [@]	BCD	
902.8 <i>g3</i>	(19/2 ⁺) [@]	B DE	
928.2 <i>5</i>	(17/2 ⁺) ^a	B DE	
942.9 <i>f3</i>	(21/2 ⁺) [@]	BCDE	
968.7 <i>3</i>		A	
1101.65 <i>25</i>		A	
1114.9 <i>3</i>		A	
1153.3 <i>h4</i>	(17/2 ⁻) [@]	BCD	
1161.0 <i>k4</i>	(17/2 ⁻) [@]	B D	
1179.1 <i>5</i>		A	
1212.5 <i>4</i>	(19/2 ⁺) ^a	B DE	
1304.10 <i>25</i>		A	
1328.29 <i>18</i>	(1/2 ⁺ , 3/2 ⁻)	A	J ^π : also (5/2 ⁺); 1319γ E1 to 3/2 ⁻ state.

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Adopted Levels, Gammas (continued) ^{187}Pt Levels (continued)

E(level) [†]	J ^π	XREF	Comments
1335.0 5		A	
1341.07 12	1/2 ⁺	A	J ^π : Cascade analysis of the 706.1γ-609.4γ, 706.1γ-374.4γ, and 374.4γ-185.8γ including the experimental and theoretical A ₂ values supports the J ^π =1/2 ⁺ assignment (¹⁸⁷ Au ε decay-1992Ro15).
1349.8 ^j 4	(19/2 ⁻) [@]	B D	
1364.90 22		A	
1388.07 24		A	
1398.8 5		A	
1400.2 11		E	
1409.1 4	(17/2 ⁻)	B D	J ^π : Assigned by 2007Zh09 (¹⁸ O,4nγ); 904γ to (17/2 ⁺), 944γ to (15/2 ⁺).
1418.1 5	(21/2) ^{‡#}	B D	
1430.0 ^h 5	(19/2 ⁻) [@]	B D	
1433.76 15	(3/2 ⁺)	A	J ^π : 1408γ E1 to (5/2 ⁻).
1442.6 6	(21/2 ⁻)	B	J ^π : Assigned by 2007Zh09, 281γ Q to (17/2 ⁻).
1453.0 ^g 3	(23/2 ⁺) [@]	B DE	
1478.02 15	(3/2 ⁺)	A	J ^π : γ's to (5/2 ⁻) and (5/2 ⁺ ,7/2 ⁺), log ft=5.92 from 1/2 ⁺ .
1496.2 ^f 4	(25/2 ⁺) [@]	BCDE	
1570.7 4		A	
1598.0 3		A	
1616.2 5		B D	
1657.9 ⁱ 3	(21/2 ⁻) ^e	B DE	
1691.6 ^k 6	(21/2 ⁻) [@]	B D	
1717.1 ^h 6	(21/2 ⁻) [@]	B D	
1777.86 23		A	
1789.8 4	(23/2 ⁺)	B D	J ^π : Assignment from (¹¹ B,5nγ) as a band member. 23/2 in (¹⁸ O,4nγ).
1839.9 ⁱ 4	(23/2 ⁻) [@]	B DE	
1869.6 ^j 7	(23/2 ⁻) [@]	B D	
1886.0 3		A	
1891.3 4		A	
1896.4 ⁱ 5	(25/2 ⁻) [@]	B D	
1970.4 3		A	
1987.8 7	(25/2) ^{‡#}	B D	
2006.7 ^h 6	(23/2 ⁻) [@]	B D	
2016.77 14	(3/2 ⁺ ,5/2 ⁺)	A	J ^π : and also (3/2 ⁻ ,7/2 ⁻) in the same ¹⁸⁷ Au ε decay (1986RoZI) dataset.
2027.98 16		A	
2038.62 15		A	
2070.7 ^k 6	(25/2 ⁻) [@]	B D	
2082.06 16		A	
2091.6 ^g 4	(27/2 ⁺) [@]	BCDE	XREF: C(2094).
2094.65 16		A	
2120.4 6		B	
2142.8 ^f 4	(29/2 ⁺) [@]	B DE	
2158.0 5		A	
2170.46 22		A	
2174.9 11	(27/2 ⁻) ^a	E	
2230.8 ⁱ 5	(27/2 ⁻) [@]	B D	
2263.8 ^h 6	(25/2 ⁻) [@]	B D	
2322.6 8	(25/2 ⁻)	B	J ^π : Assigned by 2007Zh09 (¹⁸ O,4nγ); 631γ Q to (21/2 ⁻).
2393.4 ^j 8	(27/2 ⁻) [@]	B D	
2424.8 5	(27/2) ^{‡#}	B D	

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Adopted Levels, Gammas (continued) ^{187}Pt Levels (continued)

E(level) [†]	J ^π	XREF	Comments
2433.6 ⁱ 5	(29/2 ⁻) [@]	B D	
2482.3 ^k 8	(29/2 ⁻) [@]	B D	
2493.1 ^h 7	(27/2 ⁻) [@]	B D	
2518.6 9	(29/2) ^{‡#}	B D	
2518.8 5	(29/2) ^{‡#}	B	
2570.9 3		A	
2608.6 7	(31/2 ⁻) ^{‡#}	B D	
2626.5 5	(29/2) ^{‡#}	B D	
2632.5 7	(31/2 ⁻) ^{‡#}	B D	
2654.1 9	(29/2) ^{‡#}	B D	
2744.6 ^g 5	(31/2 ⁺) [@]	B D	
2745.2 ^h 7	(29/2 ⁻) [@]	B D	
2781.6 6	(31/2 ⁻)	B	
2792.9 ⁱ 6	(31/2 ⁻) [@]	B D	
2852.2 9		B D	J ^π : 31/2 ⁻ in ($^{11}\text{B},5\text{n}\gamma$).
2852.4 ^f 5	(33/2 ⁺) [@]	B D	
2871.2 6	(31/2 ⁺) ^{‡#}	B D	
2900.6 6	(31/2) ^{‡#}	B D	
2915.0 ^j 10	(31/2 ⁻) [@]	B D	
2942.7 ⁱ 7	(33/2 ⁻) [@]	B D	
2996.1 ^k 10	(33/2 ⁻) [@]	B D	
3013.2 ^h 8	(31/2 ⁻) [@]	B D	
3017.4 7	(31/2) ^{‡#}	B	
3038.4 7	(33/2) ^{‡#}	B	
3039.2 6	(33/2) ^{‡#}	B D	
3068.5 7	(35/2 ⁻) ^{‡#}	B D	J ^π : (31/2 ⁻) in ($^{11}\text{B},5\text{n}\gamma$).
3075.7 8	(33/2) ^{‡#}	B	
3116.4 6		B D	J ^π : 33/2 ⁺ in ($^{11}\text{B},5\text{n}\gamma$).
3211.3 6	(33/2) ^{‡#}	B D	
3287.2 ^h 9	(33/2 ⁻) [@]	B	
3297.4 ⁱ 8	(35/2 ⁻) [@]	B D	
3332.5 ^g 6	(35/2 ⁺) [@]	B D	
3414.7 9	(35/2) ^{‡#}	B	
3488.5 ^f 6	(37/2 ⁺) [@]	B D	
3506.5 8		B	
3532.1 7	(35/2) ^{‡#}	B D	
3552.3 ⁱ 9	(37/2 ⁻) [@]	B D	
3574.0 8		B	
3575.1 6	(35/2 ⁺) ^{‡#}	B D	
3598.4 7	(37/2 ⁺)	B	J ^π : Assigned by 2007Zh09 ($^{18}\text{O},4\text{n}\gamma$), 746γ Q to (33/2 ⁺).
3606.6 ^k 11	(37/2 ⁻) [@]	B D	
3613.2 6	(35/2) ^{‡#}	B	
3617.2 9	(39/2 ⁻) ^{‡#}	B	
3720.7 9	(37/2) ^{‡#}	B	

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Adopted Levels, Gammas (continued) ^{187}Pt Levels (continued)

E(level) [†]	J ^π	XREF	Comments
3784.5 ¹⁰	(37/2) ^{‡#}	B	
3839.2 8		B	
3847.7 ^g 6	(39/2 ⁺) [@]	B	
3889.0 ⁱ 10	(39/2 ⁻) [@]	B D	J ^π : 41/2 ⁻ in (¹¹ B,5nγ).
3976.5 8		B D	J ^π : 39/2 ⁺ in (¹¹ B,5nγ).
3992.2 7	37/2 ^{‡#}	B	
4045.3 ^f 8	(41/2 ⁺) [@]	B D	
4075.9 10	(39/2) ^{‡#}	B	
4249.8 ⁱ 10	(41/2 ⁻) [@]	B D	
4256.0 9		B	
4307.2 ^k 12	(41/2 ⁻) [@]	B D	
4318.2 9		B	J ^π : J ^π =41/2 ⁺ in (¹⁸ O,4nγ).
4554.5 ⁱ 11	(43/2 ⁻) [@]	B D	J ^π : 45/2 ⁻ in (¹¹ B,5nγ).
4723.3 ^f 9	(45/2 ⁺) [@]	B D	
4986.3 ⁱ 12	(45/2 ⁻) [@]	B D	
5274.0 ⁱ 12	(47/2 ⁻) [@]	B D	
5510.3 ^f 11	(49/2 ⁺) [@]	B D	XREF: D(5515).

[†] From a least-squares adjustment to the γ -ray energies. Level energies of (¹¹B,5n γ) are consistently higher by about 3 MeV.

[‡] A $\gamma(M2+E3)-\gamma(M1)-\gamma(M1+E2)$ cascade connects the 3/2⁻ g.s. to the 25.5, 57.1, and 174.4 excited states establishing their J^π as 5/2⁻, (7/2⁻), and (11/2⁺), respectively.

Assigned by 2007Zh09 as member of band structure. Please see (¹⁸O,4n γ).

@ From band assignment.

& M1 transition to (5/2⁻) and log ft ≤ 7 from 1/2⁺.

^a Spin proposed by 1978DaZc on the basis of similarity to bands in ¹⁹¹Pt and ¹⁹³Pt.

^b From $\gamma\gamma(\theta)$ and deduced γ -ray multipolarities (¹⁸⁷Au ϵ decay).

^c From ¹⁸⁷Au ϵ decay (1979Be51), unless otherwise indicated.

^d The 369.2 γ and 375.1 γ with $\alpha(K)\text{exp}$ values of 0.04 2 and 0.04 3, respectively, from this level have dominant E2 contribution. The 369.2 γ feeds 7/2⁻ state and 375.1 γ feeds (1/2,3/2)⁻ state. Assuming an 914.6 γ E1 feeding from the 1341-keV level J^π=1/2⁺ to this level, J^π=3/2⁻ is assigned (¹⁸⁷Au ϵ decay). 1983Gn01 assigned J^π=5/2⁻ for this state.

^e The DCO ratio=0.96 9 of the 715 γ , feeding the 21/2⁺ state, indicates that the transition would be a stretched Q transition or a dipole transition that would connect levels with same spin values. Considering the observation of parallel 755.2 γ feeding the 19/2⁺ state, J^π=21/2⁻ is assigned ((¹⁸O,4n γ)-2007Zh09).

^f Band(A): configuration= ν I_{13/2}: $\alpha=1/2^+$.

^g Band(B): configuration= ν I_{13/2}: $\alpha=1/2^-$.

^h Band(C): configuration= ν 7/2⁻[503].

ⁱ Band(D): configuration= ν i²_{13/2} ν J(p_{3/2} or f_{5/2}).

^j Band(E): configuration= ν 3/2⁻[512].

^k Band(F): configuration= ν 1/2⁻[521].

Adopted Levels, Gammas (continued)

E _i (level)	J ^π _i	E _γ [†]	I _γ [†]	E _f	J ^π _f	Mult. [†]	γ(¹⁸⁷ Pt)		Comments
							δ [†]	α ^b	
9.27	3/2 ⁻	9.3 1	100	0.0	3/2 ⁻	M1		304 11	α(M)=234 9; α(N+..)=69.2 25 α(N)=58.0 21; α(O)=10.4 4; α(P)=0.700 25 B(M1)(W.u.)>0.085
25.53	(5/2 ⁻)	25.6 5	100	0.0	3/2 ⁻	M1+E2	≈0.5	≈6.8×10 ²	α(L)≈5.1×10 ² ; α(M)≈130; α(N+..)≈36 α(N)≈31; α(O)≈4.9; α(P)≈0.0312 B(M1)(W.u.)≈0.0022; B(E2)(W.u.)≈3.4×10 ²
51.25	(1/2,3/2) ⁻	25.7 5	≈0.008	25.53	(5/2 ⁻)	[E2]		3.1×10 ³ 4	B(E2)(W.u.)≈19 α(L)=2.31×10 ³ 24; α(M)=5.9×10 ² 6; α(N+..)=165 17 α(N)=143 15; α(O)=22.0 23; α(P)=0.0176 18
		51.2 4	100 17	0.0	3/2 ⁻	M1+E2	0.10 1	9.3 4	α(L)=7.1 3; α(M)=1.67 7; α(N+..)=0.490 18 α(N)=0.412 15; α(O)=0.073 3; α(P)=0.00442 12 B(M1)(W.u.)=0.051 19; B(E2)(W.u.)=8.E+1 4
57.11	(7/2 ⁻)	31.6 4	100	25.53	(5/2 ⁻)	M1		34.7 15	α(L)=26.7 11; α(M)=6.2 3; α(N+..)=1.82 8 α(N)=1.53 7; α(O)=0.275 12; α(P)=0.0185 8 B(M1)(W.u.)=0.00109 14
74.57	3/2 ⁻	49.0 4	39 5	25.53	(5/2 ⁻)	M1+E2	0.25 6	16 4	α(L)=13 3; α(M)=3.0 7; α(N+..)=0.88 19 α(N)=0.75 17; α(O)=0.13 3; α(P)=0.00482 19 B(M1)(W.u.)=0.010 5; B(E2)(W.u.)=1.0×10 ² 7
		65.3 4	≈100	9.27	3/2 ⁻	M1+E2	0.18 2	4.96 23	B(M1)(W.u.)≈0.10; B(E2)(W.u.)≈32 α(L)=3.80 18; α(M)=0.90 5; α(N+..)=0.262 13 α(N)=0.222 11; α(O)=0.0387 17; α(P)=0.00212 5
		74.5 4	≈37	0.0	3/2 ⁻	M1+E2	0.11 5	2.95 20	B(M1)(W.u.)≈0.027; B(E2)(W.u.)≈2 α(L)=2.27 15; α(M)=0.53 4; α(N+..)=0.156 11 α(N)=0.131 10; α(O)=0.0233 15; α(P)=0.00147 4
174.38	(11/2 ⁺)	117.2 4	100	57.11	(7/2 ⁻)	M2+E3	0.47 19	35.2 22	α(K)=18 3; α(L)=13 4; α(M)=3.3 10; α(N+..)=1.0 3 α(N)=0.82 24; α(O)=0.14 4; α(P)=0.0041 5 B(M2)(W.u.)=0.0031 6; B(E3)(W.u.)=31 21
190.43	3/2 ⁻	115.9 4	19.7 11	74.57	3/2 ⁻	M1+E2	+0.405 15	4.13 8	α(K)=3.17 6; α(L)=0.736 17; α(M)=0.176 4; α(N+..)=0.0513 12 α(N)=0.0434 10; α(O)=0.00747 17; α(P)=0.000364 7
		133.2 5	12 3	57.11	(7/2 ⁻)				
		164.9 3	21.3 21	25.53	(5/2 ⁻)	M1+E2	-0.245 25	1.55 3	α(K)=1.261 23; α(L)=0.224 4; α(M)=0.0523 9; α(N+..)=0.0154 3 α(N)=0.01292 22; α(O)=0.00230 4; α(P)=0.000144 3
		181.2 3	91 6	9.27	3/2 ⁻	M1+E2	+4.8 +23-12	0.536 24	α(K)=0.250 25; α(L)=0.215 4; α(M)=0.0548 10; α(N+..)=0.0156 3 α(N)=0.01340 25; α(O)=0.00213 4; α(P)=2.5×10 ⁻⁵ 3
		190.4 3	100 6	0.0	3/2 ⁻	M1+E2	>-17	0.426 7	α(K)=0.193 3; α(L)=0.176 3; α(M)=0.0449 7; α(N+..)=0.01272 20 α(N)=0.01096 17; α(O)=0.00174 3; α(P)=1.84×10 ⁻⁵ 3 δ: -35 +18-∞.

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]	δ^\dagger	α^b	Comments
203.24	(13/2 ⁺)	29.0 5	100	174.38	(11/2 ⁺)				
204.3	(7/2 ⁻)	178.8 [#] 5	45 [#] 14	25.53	(5/2 ⁻)	D ^a			
		204.2 [#] 5	100 [#] 31	0.0	3/2 ⁻	Q ^a			
225.7	(9/2 ⁻)	168.7 [@] 4	100	57.11	(7/2 ⁻)	D ^a			
242.35	(9/2 ⁺)	39.1 4	≈0.16	203.24	(13/2 ⁺)	[E2]		386 21	$\alpha(\text{L})=290$ 16; $\alpha(\text{M})=75$ 4; $\alpha(\text{N}+..)=20.9$ 12 $\alpha(\text{N})=18.1$ 10; $\alpha(\text{O})=2.80$ 15; $\alpha(\text{P})=0.00231$ 12 B(E2)(W.u.)>1.1×10 ² $\alpha(\text{L})=5.6$ 9; $\alpha(\text{M})=1.38$ 23; $\alpha(\text{N}+..)=0.40$ 7 $\alpha(\text{N})=0.34$ 6; $\alpha(\text{O})=0.056$ 9; $\alpha(\text{P})=0.00165$ 10 B(M1)(W.u.)>0.0041; B(E2)(W.u.)>55 $\alpha(\text{K})=0.0698$ 11; $\alpha(\text{L})=0.01182$ 18; $\alpha(\text{M})=0.00273$ 5; $\alpha(\text{N}+..)=0.000788$ 12 $\alpha(\text{N})=0.000667$ 10; $\alpha(\text{O})=0.0001150$ 18; $\alpha(\text{P})=6.02\times 10^{-6}$ 9 B(E1)(W.u.)>2.4×10 ⁻⁵ $\alpha(\text{K})=0.7$ 3; $\alpha(\text{L})=0.170$ 15; $\alpha(\text{M})=0.041$ 6; $\alpha(\text{N}+..)=0.0119$ 14 $\alpha(\text{N})=0.0101$ 13; $\alpha(\text{O})=0.00172$ 13; $\alpha(\text{P})=7.E-5$ 4 B(M1)(W.u.)=0.003 3; B(E2)(W.u.)=3.E+1 3 $\alpha(\text{K})=0.198$ 10; $\alpha(\text{L})=0.1174$ 18; $\alpha(\text{M})=0.0297$ 5; $\alpha(\text{N}+..)=0.00845$ 13 $\alpha(\text{N})=0.00726$ 12; $\alpha(\text{O})=0.001170$ 18; $\alpha(\text{P})=2.01\times 10^{-5}$ 12 B(M1)(W.u.)=9.1×10 ⁻⁵ 20; B(E2)(W.u.)=8.6 11 δ : +59 +∞-30 or -16 +8-∞ if J(51.2)=1/2; $\delta=-3.2$ 3 if J(51.2)=3/2 (1992Ro15). From $\alpha(\text{K})_{\text{exp}}=0.17$ assuming 5% uncertainty yields $\delta=5.2$ 11. B(M1)(W.u.)=0.00015 3 $\alpha(\text{K})=0.0972$ 25; $\alpha(\text{L})=0.0561$ 9; $\alpha(\text{M})=0.01418$ 22; $\alpha(\text{N}+..)=0.00404$ 7 $\alpha(\text{N})=0.00347$ 6; $\alpha(\text{O})=0.000560$ 9; $\alpha(\text{P})=9.6\times 10^{-6}$ 3 B(M1)(W.u.)=8.E-6 5; B(E2)(W.u.)=8.2 12 δ : %E0≈74 (1979Be51); X(E0/E2)=0.3 +12-0.1 with $\delta=-0.6$ +4-5 for M1+E2 (1992Ro15); penetration parameter $\lambda\approx-80$ with $\delta=-0.41$ 16 or $\lambda\approx 213$ with $\delta=-0.96$ 17 (1992Ro15). α : ≈3.9 - Estimated by the evaluator using $\delta=-0.6$ +4-5 and the $\Omega(\text{E0})$ values for K,L1,L2 shells (obtained using Bricc). $\alpha(\text{K})=3.3$ 17; $\alpha(\text{L})=2.2$ 8; $\alpha(\text{M})=0.57$ 22;
		68.1 4	≈12	174.38	(11/2 ⁺)	M1+E2	0.45 8	7.4 12	
		185.1 4	100 9	57.11	(7/2 ⁻)	E1		0.0852 13	
260.50	3/2 ⁻	186.0 4	100 6	74.57	3/2 ⁻	M1+E2	-0.8 +7-4	0.9 3	
		209.3 3	25.7 20	51.25	(1/2,3/2) ⁻	M1+E2	-3.2 3	0.354 11	
		234.9 4	6.0 8	25.53	(5/2 ⁻)				
		251.3 4	56 6	9.27	3/2 ⁻	M1+E2	-13 +4-11	0.172 4	
		260.6 3	22.5 16	0.0	3/2 ⁻	E0+M1+E2		≈3.9	
288.33	5/2 ⁻	97.7 4	14 3	190.43	3/2 ⁻	M1+E2	1.0 +11-5	6.3 6	

<u>Adopted Levels, Gammas (continued)</u>									
$\gamma(^{187}\text{Pt})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]	δ^\dagger	α^b	Comments
288.33	5/2 ⁻	213.6 3	89 6	74.57	3/2 ⁻	M1+E2	-5.2 3	0.305	$\alpha(\text{N}+..)=0.16 6$ $\alpha(\text{N})=0.14 6$; $\alpha(\text{O})=0.022 8$; $\alpha(\text{P})=0.00038 19$ $\alpha(\text{K})=0.162 4$; $\alpha(\text{L})=0.1083 17$; $\alpha(\text{M})=0.0275 5$; $\alpha(\text{N}+..)=0.00782 12$
		237.1 4	100 10	51.25	(1/2,3/2) ⁻	(E2)		0.204	$\alpha(\text{N})=0.00672 11$; $\alpha(\text{O})=0.001078 17$; $\alpha(\text{P})=1.60\times 10^{-5} 4$ $\alpha(\text{K})=0.1105 17$; $\alpha(\text{L})=0.0708 11$; $\alpha(\text{M})=0.0179 3$; $\alpha(\text{N}+..)=0.00510 8$
		262.7 4	24.0 19	25.53	(5/2 ⁻)	E0+M1+E2		≈ 6.3	$\alpha(\text{N})=0.00439 7$; $\alpha(\text{O})=0.000705 11$; $\alpha(\text{P})=1.078\times 10^{-5} 16$ δ : pure E2 if J(51.2)=1/2, -9.5 +4.5-73.1 if J(51.2)=3/2 (1992Ro15). δ : %E0 \approx 83 (1979Be51); X(E0/E2)>0.17 with $\delta^2 < 5$ (1992Ro15); penetration parameter $\lambda < -80$ or > 160 (1992Ro15). α : ≈ 6.3 - Estimated by the evaluator using $\delta \approx 2.2$ and the $\Omega(\text{E0})$ values for K,L1,L2 shells (obtained using Brice).
		278.8 4 288.2 4	19.2 19 18.3 19	9.27 0.0	3/2 ⁻ 3/2 ⁻	M1+E2		0.23 12	$\alpha(\text{K})=0.17 11$; $\alpha(\text{L})=0.039 7$; $\alpha(\text{M})=0.0094 12$; $\alpha(\text{N}+..)=0.0027 4$ $\alpha(\text{N})=0.0023 3$; $\alpha(\text{O})=0.00040 8$; $\alpha(\text{P})=1.9\times 10^{-5} 13$
305.83	(9/2 ⁻)	280.3 [#] 1	100 [#]	25.53	(5/2 ⁻)	Q ^a			
426.34	(3/2 ⁻)	138.1 5 165.8 5 235.8 4	9.6 22 3.7 11 25.6 22	288.33 260.50 190.43	5/2 ⁻ 3/2 ⁻ 3/2 ⁻	M1+E2	+0.30 +6-5	0.559 15	$\alpha(\text{K})=0.456 14$; $\alpha(\text{L})=0.0793 12$; $\alpha(\text{M})=0.0184 3$; $\alpha(\text{N}+..)=0.00543 8$ $\alpha(\text{N})=0.00456 7$; $\alpha(\text{O})=0.000814 13$; $\alpha(\text{P})=5.18\times 10^{-5} 17$ $\alpha(\text{K})=0.158 3$; $\alpha(\text{L})=0.0262 5$; $\alpha(\text{M})=0.00605 10$; $\alpha(\text{N}+..)=0.00178 3$ $\alpha(\text{N})=0.001496 24$; $\alpha(\text{O})=0.000269 5$; $\alpha(\text{P})=1.79\times 10^{-5} 4$ $\alpha(\text{K})=0.0368 6$; $\alpha(\text{L})=0.01333 19$; $\alpha(\text{M})=0.00330 5$; $\alpha(\text{N}+..)=0.000947 14$ $\alpha(\text{N})=0.000810 12$; $\alpha(\text{O})=0.0001338 20$; $\alpha(\text{P})=3.79\times 10^{-6} 6$ $\alpha(\text{K})\approx 0.0400$; $\alpha(\text{L})\approx 0.01306$; $\alpha(\text{M})\approx 0.00321$; $\alpha(\text{N}+..)\approx 0.000924$ $\alpha(\text{N})\approx 0.000789$; $\alpha(\text{O})\approx 0.0001313$; $\alpha(\text{P})\approx 4.20\times 10^{-6}$ $\alpha(\text{K})=0.105 4$; $\alpha(\text{L})=0.0177 5$; $\alpha(\text{M})=0.00410 10$; $\alpha(\text{N}+..)=0.00121 3$ $\alpha(\text{N})=0.001013 24$; $\alpha(\text{O})=0.000181 5$; $\alpha(\text{P})=1.19\times 10^{-5} 5$ δ : or -7 +2-6; Other: 1.1 4 from $\alpha(\text{K})_{\text{exp}}=0.07 2$ (¹⁸⁷ Au ϵ decay). $\alpha(\text{K})=0.092 13$; $\alpha(\text{L})=0.0155 14$; $\alpha(\text{M})=0.0036 3$;
		416.9 4	7.4 7	9.27	3/2 ⁻	(M1+E2)	<0.7	0.112 15	

Adopted Levels, Gammas (continued)

γ(¹⁸⁷Pt) (continued)

<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[†]</u>	<u>δ[†]</u>	<u>α^b</u>	<u>Comments</u>
426.34	(3/2 ⁻)	426.4 3	100 5	0.0	3/2 ⁻	M1+E2	+0.23 3	0.1146 20	α(N+..)=0.00106 9 α(N)=0.00089 8; α(O)=0.000159 14; α(P)=1.03×10 ⁻⁵ 15 α(K)=0.0945 17; α(L)=0.01547 24; α(M)=0.00357 6; α(N+..)=0.001054 17 α(N)=0.000884 14; α(O)=0.0001589 25; α(P)=1.064×10 ⁻⁵ 19
426.51	(9/2 ⁺)	184.2 4 223.0 4 252.2 4	19 6 16.2 15 100 10	242.35 (9/2 ⁺) 203.24 (13/2 ⁺) 174.38 (11/2 ⁺)					
430.7	(11/2 ⁻)	205.0 [#] 5 373.5 [#] 5	100 [#] 29 66 [#] 20	225.7 (9/2 ⁻) 57.11 (7/2 ⁻)		D ^a Q ^a			
465.18	(15/2 ⁺)	262.0 [#] 1 290.7 [#] 2	100 [#] 25 31 [#] 9	203.24 (13/2 ⁺) 174.38 (11/2 ⁺)		D ^a Q ^a			
474.42		417.2 4 423.2 4 448.7 4 465.3 4 474.3 4	100 11 68 6 91 6 21 6 68 9	57.11 (7/2 ⁻) 51.25 (1/2,3/2) ⁻ 25.53 (5/2 ⁻) 9.27 3/2 ⁻ 0.0 3/2 ⁻					
480.65	(1/2 ⁻ ,3/2 ⁻)	405.9 4	39 3	74.57 3/2 ⁻		M1		0.1353	α(K)=0.1118 16; α(L)=0.0181 3; α(M)=0.00417 6; α(N+..)=0.001232 18 α(N)=0.001033 15; α(O)=0.000186 3; α(P)=1.262×10 ⁻⁵ 18 α(K)=0.083 14; α(L)=0.0141 15; α(M)=0.0033 4; α(N+..)=0.00096 10 α(N)=0.00081 8; α(O)=0.000144 16; α(P)=9.3×10 ⁻⁶ 16 α(K)=0.0753 11; α(L)=0.01213 18; α(M)=0.00280 4; α(N+..)=0.000825 12 α(N)=0.000692 10; α(O)=0.0001246 18; α(P)=8.47×10 ⁻⁶ 12
		429.4 3	92 7	51.25 (1/2,3/2) ⁻		M1(+E2)	<0.8	0.101 16	
		471.4 3	100 7	9.27 3/2 ⁻		M1		0.0910	
500.3	(11/2 ⁻)	480.4 5 194.5 [#] 5 296.0 [#] 2	11.2 20 8 [#] 3 100 [#] 30	0.0 3/2 ⁻ 305.83 (9/2 ⁻) 204.3 (7/2 ⁻)		D ^a Q ^a			
505.09	(17/2 ⁺)	40 ^{‡d} 301.8 [#] 1		465.18 (15/2 ⁺) 203.24 (13/2 ⁺)		Q ^a			
507.92	1/2 ⁻	247.4 3	100 8	260.50 3/2 ⁻		M1+E2	+0.29 1	0.491 8	α(K)=0.401 6; α(L)=0.0691 10; α(M)=0.01607 24; α(N+..)=0.00473 7 α(N)=0.00397 6; α(O)=0.000710 11; α(P)=4.56×10 ⁻⁵ 7
		317.5 3 433.5 4 450.7 5 456.5 4	16.2 17 14.5 22 5.6 17 22 3	190.43 3/2 ⁻ 74.57 3/2 ⁻ 57.11 (7/2 ⁻) 51.25 (1/2,3/2) ⁻		M1		0.0991	α(K)=0.0819 12; α(L)=0.01322 19; α(M)=0.00305 5;

Adopted Levels, Gammas (continued)

$E_i(\text{level})$	J_i^π	$\gamma(^{187}\text{Pt})$ (continued)							Comments
		E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]	δ^\dagger	α^b	
									$\alpha(\text{N}+..)=0.000899$ 13 $\alpha(\text{N})=0.000754$ 11; $\alpha(\text{O})=0.0001357$ 20; $\alpha(\text{P})=9.22\times 10^{-6}$ 13
507.92	$1/2^-$	482.4 4 498.6 4	20 3 5.0 22	25.53 (5/2 ⁻) 9.27 3/2 ⁻		(M1+E2)		>1.1	α : Estimated by the evaluator from $\alpha(\text{K})\text{exp}>0.95$ (^{187}Au ε decay).
510.42		507.8 4 435.8 4 453.4 4	10.1 17 17 3 32 3	0.0 3/2 ⁻ 74.57 3/2 ⁻ 57.11 (7/2 ⁻)					
525.06	(3/2 ⁻)	484.8 3 236.6 4	100 7 67 9	25.53 (5/2 ⁻) 288.33 5/2 ⁻		E2		0.206	$\alpha(\text{K})=0.1111$ 17; $\alpha(\text{L})=0.0714$ 12; $\alpha(\text{M})=0.0181$ 3; $\alpha(\text{N}+..)=0.00515$ 8 $\alpha(\text{N})=0.00443$ 7; $\alpha(\text{O})=0.000711$ 11; $\alpha(\text{P})=1.083\times 10^{-5}$ 16
		450.5 4 467.9 4	49 7 78 9	74.57 3/2 ⁻ 57.11 (7/2 ⁻)		E2		0.0292	$\alpha(\text{K})=0.0212$ 3; $\alpha(\text{L})=0.00607$ 9; $\alpha(\text{M})=0.001481$ 22; $\alpha(\text{N}+..)=0.000427$ 6 $\alpha(\text{N})=0.000364$ 6; $\alpha(\text{O})=6.12\times 10^{-5}$ 9; $\alpha(\text{P})=2.22\times 10^{-6}$ 4
		473.8 4	51 7	51.25 (1/2,3/2) ⁻		M1+E2	1.0 +4-3	0.059 11	$\alpha(\text{K})=0.047$ 10; $\alpha(\text{L})=0.0089$ 11; $\alpha(\text{M})=0.00209$ 23; $\alpha(\text{N}+..)=0.00061$ 7 $\alpha(\text{N})=0.00052$ 6; $\alpha(\text{O})=9.1\times 10^{-5}$ 11; $\alpha(\text{P})=5.3\times 10^{-6}$ 11
572.80	(1/2 ⁻ ,3/2 ⁻)	500.1 5 515.8 4 284.5 4 312.1 4 382.4 5 498.3 4	64 7 100 7 33 3 63 5 15 3 15 7	25.53 (5/2 ⁻) 9.27 3/2 ⁻ 288.33 5/2 ⁻ 260.50 3/2 ⁻ 190.43 3/2 ⁻ 74.57 3/2 ⁻		(M1+E2)		>0.67	α : Estimated by the evaluator from $\alpha(\text{K})\text{exp}>0.58$ (^{187}Au ε decay).
588.06	(7/2 ⁺)	521.6 4 563.5 4 161.4 4	55 5 100 7 30.6 16	51.25 (1/2,3/2) ⁻ 9.27 3/2 ⁻ 426.51 (9/2 ⁺)		E2(+M1)	>4	0.79 3	$\alpha(\text{K})=0.32$ 4; $\alpha(\text{L})=0.355$ 8; $\alpha(\text{M})=0.0909$ 20; $\alpha(\text{N}+..)=0.0257$ 6 $\alpha(\text{N})=0.0222$ 5; $\alpha(\text{O})=0.00351$ 7; $\alpha(\text{P})=3.1\times 10^{-5}$ 4
		345.8 3	66 5	242.35 (9/2 ⁺)		M1+E2	1.5 3	0.109 15	$\alpha(\text{K})=0.083$ 14; $\alpha(\text{L})=0.0202$ 12; $\alpha(\text{M})=0.00487$ 25; $\alpha(\text{N}+..)=0.00141$ 8 $\alpha(\text{N})=0.00120$ 6; $\alpha(\text{O})=0.000205$ 13; $\alpha(\text{P})=9.0\times 10^{-6}$ 16
599.11	(5/2 ⁻)	413.7 3 172.7 4	100 8 25.8 16	174.38 (11/2 ⁺) 426.34 (3/2 ⁻)		M1+E2	0.6 3	1.19 15	$\alpha(\text{K})=0.92$ 17; $\alpha(\text{L})=0.211$ 15; $\alpha(\text{M})=0.051$ 5; $\alpha(\text{N}+..)=0.0147$ 12 $\alpha(\text{N})=0.0125$ 11; $\alpha(\text{O})=0.00215$ 13; $\alpha(\text{P})=0.000104$ 20
		408.7 4 524.5 4	29 3 39 5	190.43 3/2 ⁻ 74.57 3/2 ⁻					

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]	δ^\dagger	α^b	Comments
599.11	(5/2 ⁻)	542.1 3	100 7	57.11	(7/2 ⁻)	M1+E2	<0.8	0.055 9	$\alpha(\text{K})=0.045$ 8; $\alpha(\text{L})=0.0075$ 9; $\alpha(\text{M})=0.00174$ 20; $\alpha(\text{N}+..)=0.00051$ 6 $\alpha(\text{N})=0.00043$ 5; $\alpha(\text{O})=7.7\times 10^{-5}$ 10; $\alpha(\text{P})=5.0\times 10^{-6}$ 9
620.77	(1/2 ⁻ ,3/2 ⁻)	547.6 5	26 3	51.25	(1/2,3/2) ⁻	M1(+E2)	<1.5	0.80 22	$\alpha(\text{K})=0.61$ 23; $\alpha(\text{L})=0.145$ 9; $\alpha(\text{M})=0.035$ 4; $\alpha(\text{N}+..)=0.0101$ 9 $\alpha(\text{N})=0.0086$ 8; $\alpha(\text{O})=0.00147$ 7; $\alpha(\text{P})=7.E-5$ 3 $\alpha(\text{K})=0.027$ 13; $\alpha(\text{L})=0.0053$ 15; $\alpha(\text{M})=0.0012$ 4; $\alpha(\text{N}+..)=0.00036$ 10 $\alpha(\text{N})=0.00031$ 9; $\alpha(\text{O})=5.4\times 10^{-5}$ 16; $\alpha(\text{P})=3.0\times 10^{-6}$ 14
		599.1 3	32 3	0.0	3/2 ⁻				
		140.3 5	4.3 8	480.65	(1/2 ⁻ ,3/2 ⁻)				
		194.4 4	3.9 8	426.34	(3/2 ⁻)				
632.88	(5/2 ⁺ ,7/2 ⁺)	546.3 3	41.0 23	74.57	3/2 ⁻	M1+E2	>0.7	0.034 14	$\alpha(\text{K})=0.027$ 13; $\alpha(\text{L})=0.0053$ 15; $\alpha(\text{M})=0.0012$ 4; $\alpha(\text{N}+..)=0.00036$ 10 $\alpha(\text{N})=0.00031$ 9; $\alpha(\text{O})=5.4\times 10^{-5}$ 16; $\alpha(\text{P})=3.0\times 10^{-6}$ 14
		595.3 4	16.8 12	25.53	(5/2 ⁻)	M1+E2	1.3 +6-4	0.029 6	$\alpha(\text{K})=0.023$ 6; $\alpha(\text{L})=0.0043$ 7; $\alpha(\text{M})=0.00101$ 15; $\alpha(\text{N}+..)=0.00029$ 5 $\alpha(\text{N})=0.00025$ 4; $\alpha(\text{O})=4.4\times 10^{-5}$ 7; $\alpha(\text{P})=2.5\times 10^{-6}$ 6
		611.3 4	7.8 12	9.27	3/2 ⁻	M1+E2	<1.5	0.034 11	$\alpha(\text{K})=0.028$ 9; $\alpha(\text{L})=0.0047$ 12; $\alpha(\text{M})=0.00110$ 25; $\alpha(\text{N}+..)=0.00032$ 8 $\alpha(\text{N})=0.00027$ 7; $\alpha(\text{O})=4.9\times 10^{-5}$ 12; $\alpha(\text{P})=3.1\times 10^{-6}$ 10 δ : +0.24 3 if J(620)=3/2, 0 \pm 1.5 if J(620)=1/2 (¹⁸⁷ Au ϵ decay-1992Ro15).
		620.8 3	100 6	0.0	3/2 ⁻				
635.02	(3/2 ⁻)	208.7 4	11.2 13	426.34	(3/2 ⁻)	M1(+E2)	<0.9	0.71 12	$\alpha(\text{K})=0.36$ 13; $\alpha(\text{L})=0.122$ 3; $\alpha(\text{M})=0.0300$ 13; $\alpha(\text{N}+..)=0.0086$ 3 $\alpha(\text{N})=0.0074$ 3; $\alpha(\text{O})=0.001225$ 23; $\alpha(\text{P})=3.9\times 10^{-5}$ 16
		374.5 4	35 3	260.50	3/2 ⁻	E2		0.0467	$\alpha(\text{K})=0.0322$ 5; $\alpha(\text{L})=0.01099$ 16; $\alpha(\text{M})=0.00271$ 4; $\alpha(\text{N}+..)=0.000779$ 11 $\alpha(\text{N})=0.000665$ 10; $\alpha(\text{O})=0.0001104$ 16; $\alpha(\text{P})=3.34\times 10^{-6}$ 5
635.02	(3/2 ⁻)	374.5 4	35 3	260.50	3/2 ⁻	M1+E2	+0.52 1	0.143 8	$\alpha(\text{K})=0.56$ 12; $\alpha(\text{L})=0.1139$ 24; $\alpha(\text{M})=0.0270$ 11; $\alpha(\text{N}+..)=0.00788$ 25 $\alpha(\text{N})=0.00665$ 25; $\alpha(\text{O})=0.001162$ 19; $\alpha(\text{P})=6.4\times 10^{-5}$ 15
		444.7 4	5.9 13	190.43	3/2 ⁻	M1+E2	1.6 4	0.027 5	$\alpha(\text{K})=0.117$ 7; $\alpha(\text{L})=0.0204$ 7; $\alpha(\text{M})=0.00475$ 15; $\alpha(\text{N}+..)=0.00140$ 5 $\alpha(\text{N})=0.00117$ 4; $\alpha(\text{O})=0.000209$ 8; $\alpha(\text{P})=1.31\times 10^{-5}$ 8
		560.5 4	56 6	74.57	3/2 ⁻				
		578.0 4	23 2	57.11	(7/2 ⁻)				
		583.5 5	9 3	51.25	(1/2,3/2) ⁻				
609.5 3	29 3	25.53	(5/2 ⁻)	M1+E2	-0.66 +8-23	0.037 5	$\alpha(\text{K})=0.021$ 4; $\alpha(\text{L})=0.0042$ 5; $\alpha(\text{M})=0.00099$ 11; $\alpha(\text{N}+..)=0.00029$ 4 $\alpha(\text{N})=0.00024$ 3; $\alpha(\text{O})=4.3\times 10^{-5}$ 5; $\alpha(\text{P})=2.3\times 10^{-6}$ 5 $\alpha(\text{K})=0.030$ 4; $\alpha(\text{L})=0.0051$ 5; $\alpha(\text{M})=0.00119$ 11; $\alpha(\text{N}+..)=0.00035$ 4 $\alpha(\text{N})=0.00029$ 3; $\alpha(\text{O})=5.2\times 10^{-5}$ 5; $\alpha(\text{P})=3.4\times 10^{-6}$ 5 δ : or -2.6 +8-18 (1992Ro15). $\delta \approx 0.3$ from $\alpha(\text{K})_{\text{exp}}=0.036$.		

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{\dagger}</u>	<u>I_{γ}^{\dagger}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.^{\dagger}</u>	<u>δ^{\dagger}</u>	<u>α^{<i>b</i>}</u>	<u>Comments</u>
		625.8 4	9 3	9.27	3/2 ⁻				
		635.0 3	100 6	0.0	3/2 ⁻	M1+E2	+0.51 6	0.0361 12	$\alpha(\text{K})=0.0297$ 11; $\alpha(\text{L})=0.00490$ 14; $\alpha(\text{M})=0.00113$ 3; $\alpha(\text{N}+\dots)=0.000333$ 10

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. †	δ^\dagger	α^b	Comments
									$\alpha(\text{N})=0.000280$ 8; $\alpha(\text{O})=5.02\times 10^{-5}$ 15; $\alpha(\text{P})=3.31\times 10^{-6}$ 12
651.2	(13/2 ⁻)	220.5 [@] 3	80 ^{&} 24	430.7	(11/2 ⁻)	(M1+E2) ^a		0.49 23	$\alpha(\text{K})=0.36$ 23; $\alpha(\text{L})=0.0957$ 16; $\alpha(\text{M})=0.0232$ 11; $\alpha(\text{N}+..)=0.00672$ 19
		425.8 [@] 6	100 ^{&} 30	225.7	(9/2 ⁻)	(E2) ^a		0.0371	$\alpha(\text{N})=0.00571$ 22; $\alpha(\text{O})=0.00097$ 3; $\alpha(\text{P})=4.E-5$ 3 $\alpha(\text{K})=0.0263$ 4; $\alpha(\text{L})=0.00823$ 13; $\alpha(\text{M})=0.00202$ 3; $\alpha(\text{N}+..)=0.000581$ 9
688.68	(3/2 ⁻)	498.2 4 614.1 4 663.2 4 688.6 4	38 8 100 8 60 10 35 10	190.43 3/2 ⁻ 74.57 3/2 ⁻ 25.53 (5/2 ⁻) 0.0 3/2 ⁻					$\alpha(\text{N})=0.000496$ 8; $\alpha(\text{O})=8.28\times 10^{-5}$ 13; $\alpha(\text{P})=2.74\times 10^{-6}$ 4
694.43	(13/2 ⁻)	388.6 [#] 2	100 [#]	305.83	(9/2 ⁻)	Q ^a			
781.28	(3/2 ⁻)	270.8 5 306.8 5 354.9 4 492.9 4 590.9 3	10.6 24 10.6 24 49 5 26 6 84 6	510.42 474.42 426.34 (3/2 ⁻) 288.33 5/2 ⁻ 190.43 3/2 ⁻		M1+E2	+56 +40-16	0.01668	$\alpha(\text{K})=0.01272$ 18; $\alpha(\text{L})=0.00302$ 5; $\alpha(\text{M})=0.000726$ 11; $\alpha(\text{N}+..)=0.000211$ 3 $\alpha(\text{N})=0.000179$ 3; $\alpha(\text{O})=3.05\times 10^{-5}$ 5; $\alpha(\text{P})=1.346\times 10^{-6}$ 19
		706.7 4 724.3 4 730.3 4	94 14 16.5 24 100 8	74.57 3/2 ⁻ 57.11 (7/2 ⁻) 51.25 (1/2,3/2) ⁻		M1+E2	<3.5	0.020 9	$\alpha(\text{K})=0.017$ 8; $\alpha(\text{L})=0.0029$ 10; $\alpha(\text{M})=0.00066$ 23; $\alpha(\text{N}+..)=0.00019$ 7 $\alpha(\text{N})=0.00016$ 6; $\alpha(\text{O})=2.9\times 10^{-5}$ 11; $\alpha(\text{P})=1.8\times 10^{-6}$ 9 δ : +1.8 +3-2 or -0.01 6 if J(51.2)=1/2; +2.3 +1.2-6 or +0.78 +25-19 if J(51.2)=3/2 (¹⁸⁷ Au ϵ decay - 1992Ro15). $\delta \approx 0.4$ from $\alpha(\text{K})_{\text{exp}}=0.02$.
845.0		772.0 4 781.3 4 602.5 3	29 5 31 4 100	9.27 3/2 ⁻ 0.0 3/2 ⁻ 242.35 (9/2 ⁺)					
883.17	(5/2 ⁺)	250.2 4 294.9 3	27 7 100 7	632.88 (5/2 ⁺ ,7/2 ⁺) 588.06 (7/2 ⁺)		M1+E2		0.21 11	$\alpha(\text{K})=0.16$ 10; $\alpha(\text{L})=0.037$ 7; $\alpha(\text{M})=0.0088$ 12; $\alpha(\text{N}+..)=0.0025$ 4
		456.7 4	73 9	426.51 (9/2 ⁺)		E2		0.0310	$\alpha(\text{N})=0.0022$ 3; $\alpha(\text{O})=0.00037$ 8; $\alpha(\text{P})=1.8\times 10^{-5}$ 12 $\alpha(\text{K})=0.0224$ 4; $\alpha(\text{L})=0.00656$ 10; $\alpha(\text{M})=0.001602$ 23; $\alpha(\text{N}+..)=0.000462$ 7 $\alpha(\text{N})=0.000393$ 6; $\alpha(\text{O})=6.60\times 10^{-5}$ 10; $\alpha(\text{P})=2.35\times 10^{-6}$ 4

Adopted Levels, Gammas (continued)

E _i (level)	J _i ^π	γ(¹⁸⁷ Pt) (continued)						Comments
		E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult. [†]	α ^b	
886.8	(15/2 ⁻)	386.5 [#] 2	100 [#]	500.3	(11/2 ⁻)	Q ^a		
894.5	(15/2 ⁻)	243.5 [#] 5	40 [#] 12	651.2	(13/2 ⁻)	D ^a		
		463.8 [#] 2	100 [#] 30	430.7	(11/2 ⁻)	Q ^a		
902.8	(19/2 ⁺)	397.6 [#] 2	38 [#] 11	505.09	(17/2 ⁺)	D ^a		
		437.7 [#] 1	100 [#] 25	465.18	(15/2 ⁺)	Q ^a		
928.2	(17/2 ⁺)	463.0 [#] 5	100 [#]	465.18	(15/2 ⁺)			
942.9	(21/2 ⁺)	437.8 [@] 2	100	505.09	(17/2 ⁺)	Q ^a		
968.7		959.5 4	100 10	9.27	3/2 ⁻			
		968.7 4	62 6	0.0	3/2 ⁻			
1101.65		256.5 4	22 9	845.0				
		468.8 4	100 11	632.88	(5/2 ⁺ ,7/2 ⁺)			
1114.9		231.5 4	50 5	883.17	(5/2 ⁺)			
		482.3 4	100 20	632.88	(5/2 ⁺ ,7/2 ⁺)			
		526.9 4	55 10	588.06	(7/2 ⁺)			
1153.3	(17/2 ⁻)	258.7 [#] 5	36 [#] 11	894.5	(15/2 ⁻)	D ^a		
		502.2 [#] 5	100 [#] 30	651.2	(13/2 ⁻)	Q ^a		
1161.0	(17/2 ⁻)	466.6 [#] 2	100 [#]	694.43	(13/2 ⁻)	Q ^a		
1179.1		334.1 4	100	845.0				
1212.5	(19/2 ⁺)	707.4 [#] 5	100 [#]	505.09	(17/2 ⁺)			
1304.10		683.3 4	100 11	620.77	(1/2 ⁻ ,3/2 ⁻)			
		1229.2 4	36 6	74.57	3/2 ⁻			
		1253.2 4	67 6	51.25	(1/2,3/2) ⁻			
1328.29	(1/2 ⁺ ,3/2 ⁺)	901.8 4	4.7 12	426.34	(3/2 ⁻)			
		1067.8 5	6.2 8	260.50	3/2 ⁻			
		1277.2 4	10.5 12	51.25	(1/2,3/2) ⁻			
		1319.0 3	100 5	9.27	3/2 ⁻	E1	0.001361 19 α(K)=0.001091 16; α(L)=0.0001581 23; α(M)=3.59×10 ⁻⁵ 5; α(N+..)=7.61×10 ⁻⁵ α(N)=8.86×10 ⁻⁶ 13; α(O)=1.590×10 ⁻⁶ 23; α(P)=1.078×10 ⁻⁷ 16; α(IPF)=6.56×10 ⁻⁵ 10	
		1328.3 4	5.8 19	0.0	3/2 ⁻			
1335.0		908.7 4	100	426.34	(3/2 ⁻)			
1341.07	1/2 ⁺	559.8 4	21.0 21	781.28	(3/2 ⁻)	(E1)	0.00652 10 α(K)=0.00544 8; α(L)=0.000832 12; α(M)=0.000190 3; α(N+..)=5.57×10 ⁻⁵ 8 α(N)=4.68×10 ⁻⁵ 7; α(O)=8.31×10 ⁻⁶ 12; α(P)=5.22×10 ⁻⁷ 8 α(K)=0.00342 5; α(L)=0.000514 8; α(M)=0.0001173 17; α(N+..)=3.44×10 ⁻⁵ 5 α(N)=2.89×10 ⁻⁵ 4; α(O)=5.15×10 ⁻⁶ 8; α(P)=3.32×10 ⁻⁷ 5	
		706.0 3	22.0 15	635.02	(3/2 ⁻)	E1	0.00409 6	
		708.0 4	2.0 4	632.88	(5/2 ⁺ ,7/2 ⁺)			

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]	α^b	Comments
1341.07	1/2 ⁺	720.4 3	18.1 13	620.77	(1/2 ⁻ , 3/2 ⁻)	E1	0.00393 6	$\alpha(\text{K})=0.00329$ 5; $\alpha(\text{L})=0.000493$ 7; $\alpha(\text{M})=0.0001126$ 16; $\alpha(\text{N+..})=3.30 \times 10^{-5}$ 5 $\alpha(\text{N})=2.77 \times 10^{-5}$ 4; $\alpha(\text{O})=4.94 \times 10^{-6}$ 7; $\alpha(\text{P})=3.19 \times 10^{-7}$ 5
		768.2 4	2.1 4	572.80	(1/2 ⁻ , 3/2 ⁻)			
		830.6 4	1.0 3	510.42				
		833.4 3	19.9 12	507.92	1/2 ⁻	E1	0.00297 5	$\alpha(\text{K})=0.00249$ 4; $\alpha(\text{L})=0.000370$ 6; $\alpha(\text{M})=8.44 \times 10^{-5}$ 12; $\alpha(\text{N+..})=2.47 \times 10^{-5}$ 4 $\alpha(\text{N})=2.08 \times 10^{-5}$ 3; $\alpha(\text{O})=3.71 \times 10^{-6}$ 6; $\alpha(\text{P})=2.43 \times 10^{-7}$ 4
		914.6 3	43.2 17	426.34	(3/2 ⁻)	E1	0.00250 4	$\alpha(\text{K})=0.00210$ 3; $\alpha(\text{L})=0.000309$ 5; $\alpha(\text{M})=7.05 \times 10^{-5}$ 10; $\alpha(\text{N+..})=2.07 \times 10^{-5}$ 3 $\alpha(\text{N})=1.737 \times 10^{-5}$ 25; $\alpha(\text{O})=3.11 \times 10^{-6}$ 5; $\alpha(\text{P})=2.05 \times 10^{-7}$ 3
		1080.4 4	4.3 4	260.50	3/2 ⁻			
		1151.0 5	1.0 3	190.43	3/2 ⁻			
		1266.5 3	34.4 21	74.57	3/2 ⁻	E1	0.001433 20	$\alpha(\text{K})=0.001171$ 17; $\alpha(\text{L})=0.0001699$ 24; $\alpha(\text{M})=3.86 \times 10^{-5}$ 6; $\alpha(\text{N+..})=5.35 \times 10^{-5}$ $\alpha(\text{N})=9.52 \times 10^{-6}$ 14; $\alpha(\text{O})=1.709 \times 10^{-6}$ 24; $\alpha(\text{P})=1.156 \times 10^{-7}$ 17; $\alpha(\text{IPF})=4.21 \times 10^{-5}$ 6
		1289.7 4	1.9 3	51.25	(1/2, 3/2) ⁻			
		1331.9 3	100 5	9.27	3/2 ⁻	E1	0.001346 19	$\alpha(\text{K})=0.001073$ 15; $\alpha(\text{L})=0.0001554$ 22; $\alpha(\text{M})=3.53 \times 10^{-5}$ 5; $\alpha(\text{N+..})=8.26 \times 10^{-5}$ $\alpha(\text{N})=8.71 \times 10^{-6}$ 13; $\alpha(\text{O})=1.563 \times 10^{-6}$ 22; $\alpha(\text{P})=1.061 \times 10^{-7}$ 15; $\alpha(\text{IPF})=7.22 \times 10^{-5}$ 11
1349.8	(19/2 ⁻)	1341.0 4 463.0 ^{c#} 2	2.0 4 100 [#]	0.0 886.8	3/2 ⁻ (15/2 ⁻)	(E2) ^a	0.0300	$\alpha(\text{K})=0.0217$ 3; $\alpha(\text{L})=0.00628$ 9; $\alpha(\text{M})=0.001532$ 22; $\alpha(\text{N+..})=0.000442$ 7 $\alpha(\text{N})=0.000376$ 6; $\alpha(\text{O})=6.32 \times 10^{-5}$ 9; $\alpha(\text{P})=2.28 \times 10^{-6}$ 4
1364.90		1290.6 5	37 7	74.57	3/2 ⁻			
		1313.9 4	80 12	51.25	(1/2, 3/2) ⁻			
		1355.4 4	100 15	9.27	3/2 ⁻			
		1364.7 4	41 5	0.0	3/2 ⁻			
1388.07		913.6 4	29 6	474.42				
		1379.2 4	100 10	9.27	3/2 ⁻			
		1387.7 4	35 6	0.0	3/2 ⁻			
1398.8		924.4 4	100	474.42				
1400.2		472 [‡]	100	928.2	(17/2 ⁺)			
1409.1	(17/2 ⁻)	904.0 [#] 5	100 [#] 31	505.09	(17/2 ⁺)			
		944.0 [#] 5	46 [#] 13	465.18	(15/2 ⁺)			
1418.1	(21/2)	489.9 [#] 5	60 [#] 18	928.2	(17/2 ⁺)			

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]	α^b	Comments
1418.1	(21/2)	515.2 [#] 5	100 [#] 30	902.8	(19/2 ⁺)	D ^a		
1430.0	(19/2 ⁻)	276.7 [#] 5	25 [#] 8	1153.3	(17/2 ⁻)	D ^a		
1433.76	(3/2 ⁺)	535.5 [#] 5	100 [#] 30	894.5	(15/2 ⁻)	Q ^a		
		798.9 4	5.7 7	635.02	(3/2 ⁻)			
		801.0 4	2.3 7	632.88	(5/2 ⁺ , 7/2 ⁺)			
		861.0 4	4.5 9	572.80	(1/2 ⁻ , 3/2 ⁻)			
		959.2 4	3.4 7	474.42				
		1007.5 4	4.5 5	426.34	(3/2 ⁻)			
		1359.0 4	23.2 14	74.57	3/2 ⁻			
		1408.1 4	100 7	25.53	(5/2 ⁻)	E1	0.001275 18	$\alpha(\text{K})=0.000976$ 14; $\alpha(\text{L})=0.0001409$ 20; $\alpha(\text{M})=3.20\times 10^{-5}$ 5; $\alpha(\text{N}+\dots)=0.000126$ $\alpha(\text{N})=7.89\times 10^{-6}$ 11; $\alpha(\text{O})=1.418\times 10^{-6}$ 20; $\alpha(\text{P})=9.65\times 10^{-8}$ 14; $\alpha(\text{IPF})=0.0001172$ 17
		1424.5 5	6.8 7	9.27	3/2 ⁻			
		1433.8 3	26.6 16	0.0	3/2 ⁻			
1442.6	(21/2 ⁻)	281.6 [#] 5	100 [#]	1161.0	(17/2 ⁻)	Q ^a		
1453.0	(23/2 ⁺)	510.0 [#] 5	30 [#] 9	942.9	(21/2 ⁺)	D ^a		
		550.1 [#] 2	100 [#] 30	902.8	(19/2 ⁺)	Q ^a		
1478.02	(3/2 ⁺)	697.1 4	9.8 20	781.28	(3/2 ⁻)			
		843.0 4	10.2 15	635.02	(3/2 ⁻)			
		845.4 4	5.9 15	632.88	(5/2 ⁺ , 7/2 ⁺)			
		890.4 4	4.9 10	588.06	(7/2 ⁺)			
		997.4 4	4.9 15	480.65	(1/2 ⁻ , 3/2 ⁻)			
		1189.4 3	64 3	288.33	5/2 ⁻			
		1403.3 5	11.2 20	74.57	3/2 ⁻			
		1426.6 4	35 3	51.25	(1/2, 3/2) ⁻			
		1452.3 4	100 6	25.53	(5/2 ⁻)			
		1477.9 4	13.7 15	0.0	3/2 ⁻			
1496.2	(25/2 ⁺)	553.4 [‡] 5	100	942.9	(21/2 ⁺)	Q ^a		
1570.7		937.8 3	100	632.88	(5/2 ⁺ , 7/2 ⁺)			
1598.0		1171.6 3	100 6	426.34	(3/2 ⁻)			
		1598.1 5	22 6	0.0	3/2 ⁻			
1616.2		207.0 [#] 5	100 [#]	1409.1	(17/2 ⁻)			
1657.9	(21/2 ⁻)	248.8 [#] 5	34 [#] 10	1409.1	(17/2 ⁻)	Q ^a		
		445.3 [#] 5	21 [#] 6	1212.5	(19/2 ⁺)			
		504.7 [#] 5	29 [#] 9	1153.3	(17/2 ⁻)			
		715.0 [#] 2	100 [#] 30	942.9	(21/2 ⁺)			
		755.2 [#] 5	20 [#] 6	902.8	(19/2 ⁺)	D ^a		

Adopted Levels, Gammas (continued)

γ(¹⁸⁷Pt) (continued)

<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ[†]</u>	<u>I_γ[†]</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult. †</u>
1691.6	(21/2 ⁻)	530.6 [#] 5	100 [#]	1161.0	(17/2 ⁻)	Q ^a
1717.1	(21/2 ⁻)	287.0 [#] 5	23 [#] 7	1430.0	(19/2 ⁻)	
		563.8 [#] 5	100 [#] 30	1153.3	(17/2 ⁻)	Q ^a
1777.86		1726.8 3	96	51.25	(1/2,3/2) ⁻	
		1768.4 3	100	9.27	3/2 ⁻	
1789.8	(23/2 ⁺)	577.4 [#] 5	36 [#] 10	1212.5	(19/2 ⁺)	
		847.0 [#] 5	100 [#] 30	942.9	(21/2 ⁺)	D ^a
1839.9	(23/2 ⁻)	182.0 [#] 2	100 [#] 30	1657.9	(21/2 ⁻)	
		223.7 [#] 5	22 [#] 6	1616.2		
		490.0 [#] 5	47 [#] 14	1349.8	(19/2 ⁻)	Q ^a
1869.6	(23/2 ⁻)	519.8 [#] 5	100 [#]	1349.8	(19/2 ⁻)	Q ^a
1886.0		1834.6 4	70 13	51.25	(1/2,3/2) ⁻	
		1876.8 4	100 13	9.27	3/2 ⁻	
1891.3		1882.2 5	57 9	9.27	3/2 ⁻	
		1891.2 4	100 9	0.0	3/2 ⁻	
1896.4	(25/2 ⁻)	238.6 [#] 5	100 [#] 30	1657.9	(21/2 ⁻)	Q ^a
		400.0 [#] 5	15 [#] 5	1496.2	(25/2 ⁺)	
1970.4		1961.1 4	100 10	9.27	3/2 ⁻	
		1970.4 4	42 6	0.0	3/2 ⁻	
1987.8	(25/2)	569.7 [#] 5	100 [#]	1418.1	(21/2)	Q ^a
2006.7	(23/2 ⁻)	289.6 [#] 5	14 [#] 4	1717.1	(21/2 ⁻)	
		576.7 [#] 5	100 [#] 30	1430.0	(19/2 ⁻)	Q ^a
2016.77	(3/2 ⁺ ,5/2 ⁺)	1328.0 4	9 3	688.68	(3/2 ⁻)	
		1383.6 4	28.4 24	632.88	(5/2 ⁺ ,7/2 ⁺)	
		1417.6 4	37 4	599.11	(5/2 ⁻)	
		1491.9 4	33 3	525.06	(3/2 ⁻)	
		1509.0 4	11.2 18	507.92	1/2 ⁻	
		1535.8 4	10.1 12	480.65	(1/2 ⁻ ,3/2 ⁻)	
		1728.2 4	21.9 24	288.33	5/2 ⁻	
		1756.4 4	61 4	260.50	3/2 ⁻	
		1826.1 4	17.8 18	190.43	3/2 ⁻	
		1991.4 4	100 6	25.53	(5/2 ⁻)	
		2007.8 4	49 3	9.27	3/2 ⁻	
		2017.0 4	66 4	0.0	3/2 ⁻	
2027.98		926.3 4	28 6	1101.65		
		1339.3 4	38 6	688.68	(3/2 ⁻)	
		1502.9 4	58 6	525.06	(3/2 ⁻)	
		1519.6 4	36 6	507.92	1/2 ⁻	

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]
2027.98		1547.1 5	23 6	480.65	(1/2 ⁻ ,3/2 ⁻)	
		1601.8 4	45 6	426.34	(3/2 ⁻)	
		1767.6 5	100 8	260.50	3/2 ⁻	
		1837.8 5	43 8	190.43	3/2 ⁻	
		2002.5 4	40 4	25.53	(5/2 ⁻)	
		2028.1 4	38 6	0.0	3/2 ⁻	
2038.62		1439.4 4	8.8 14	599.11	(5/2 ⁻)	
		1612.3 4	16.2 20	426.34	(3/2 ⁻)	
		1750.2 4	14.2 14	288.33	5/2 ⁻	
		1778.2 4	41 3	260.50	3/2 ⁻	
		1848.0 4	24 3	190.43	3/2 ⁻	
		1964.3 3	88 5	74.57	3/2 ⁻	
		1987.3 3	100 6	51.25	(1/2,3/2) ⁻	
		2038.5 5	9.5 14	0.0	3/2 ⁻	
	2070.7	(25/2 ⁻)	379.1 [#] 5	100 [#] 30	1691.6	(21/2 ⁻)
628.1 [#] 5			29 [#] 9	1442.6	(21/2 ⁻)	Q ^a
2082.06		1449.0 4	10.6 21	632.88	(5/2 ⁺ ,7/2 ⁺)	
		1483.0 4	10.6 21	599.11	(5/2 ⁻)	
		1573.9 4	12.7 21	507.92	1/2 ⁻	
		1821.8 4	17.6 21	260.50	3/2 ⁻	
		2030.7 3	100 6	51.25	(1/2,3/2) ⁻	
		2056.6 4	98 6	25.53	(5/2 ⁻)	
		2073.0 5	9.2 14	9.27	3/2 ⁻	
		2082.2 5	10.6 21	0.0	3/2 ⁻	
2091.6	(27/2 ⁺)	596.3 [@] 7	24 7	1496.2	(25/2 ⁺)	D ^a
		638.6 [#] 2	100 [#] 30	1453.0	(23/2 ⁺)	Q ^a
2094.65		992.8 5	16 4	1101.65		
		1211.3 4	13.2 18	883.17	(5/2 ⁺)	
		1461.8 5	18 4	632.88	(5/2 ⁺ ,7/2 ⁺)	
		1584.2 4	20 3	510.42		
		1586.4 5	12 3	507.92	1/2 ⁻	
		1806.2 4	56 4	288.33	5/2 ⁻	
		1904.3 4	31 4	190.43	3/2 ⁻	
		2020.2 4	28 3	74.57	3/2 ⁻	
		2069.2 4	38 3	25.53	(5/2 ⁻)	
		2085.7 4	100 6	9.27	3/2 ⁻	
	2120.4		224.0 [#] 5	100 [#]	1896.4	(25/2 ⁻)
2142.8	(29/2 ⁺)	646.5 [#] 2	100 [#]	1496.2	(25/2 ⁺)	Q ^a
2158.0		2106.7 4	100	51.25	(1/2,3/2) ⁻	
2170.46		1910.1 3	100 7	260.50	3/2 ⁻	

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. ‡	$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. ‡
2170.46		2095.8 4	33 4	74.57	3/2 ⁻		2792.9	(31/2 ⁻)	359.4 [#] 5	58 [#] 18	2433.6	(29/2 ⁻)	D ^a
		2161.0 4	14 4	9.27	3/2 ⁻				562.1 [#] 5	100 [#] 29	2230.8	(27/2 ⁻)	
2174.9	(27/2 ⁻)	335 [‡]	100	1839.9	(23/2 ⁻)		2852.2		359.1 [#] 5	100 [#]	2493.1	(27/2 ⁻)	
2230.8	(27/2 ⁻)	334.4 [#] 1	100 [#]	1896.4	(25/2 ⁻)	D ^a	2852.4	(33/2 ⁺)	709.6 [#] 2	100 [#]	2142.8	(29/2 ⁺)	Q ^a
2263.8	(25/2 ⁻)	257.0 [#] 5	25 [#] 8	2006.7	(23/2 ⁻)	D ^a	2871.2	(31/2 ⁺)	779.7 [#] 5	100 [#]	2091.6	(27/2 ⁺)	Q ^a
		546.6 [#] 5	100 [#] 31	1717.1	(21/2 ⁻)	Q ^a	2900.6	(31/2)	274.0 [#] 5	100 [#] 30	2626.5	(29/2)	
2322.6	(25/2 ⁻)	631.0 [#] 5	100 [#]	1691.6	(21/2 ⁻)	Q ^a			475.8 [#] 5	43 [#] 13	2424.8	(27/2)	
2393.4	(27/2 ⁻)	523.8 [#] 5	100 [#]	1869.6	(23/2 ⁻)	Q ^a	2915.0	(31/2 ⁻)	521.6 [#] 5	100 [#]	2393.4	(27/2 ⁻)	Q ^a
2424.8	(27/2)	635.0 [#] 2	100 [#] 30	1789.8	(23/2 ⁺)		2942.7	(33/2 ⁻)	509.1 [#] 5	100 [#]	2433.6	(29/2 ⁻)	Q ^a
		928.5 [#] 5	60 [#] 18	1496.2	(25/2 ⁺)	D ^a	2996.1	(33/2 ⁻)	513.8 [#] 5	100 [#]	2482.3	(29/2 ⁻)	Q ^a
2433.6	(29/2 ⁻)	202.6 [#] 5	13 [#] 4	2230.8	(27/2 ⁻)		3013.2	(31/2 ⁻)	267.9 [#] 5	37 [#] 12	2745.2	(29/2 ⁻)	
		313.1 [#] 5	16 [#] 5	2120.4					520.1 [#] 5	100 [#] 25	2493.1	(27/2 ⁻)	
		537.3 [#] 2	100 [#] 30	1896.4	(25/2 ⁻)	Q ^a	3017.4	(31/2)	390.9 [#] 5	100 [#]	2626.5	(29/2)	
2482.3	(29/2 ⁻)	411.6 [#] 5	100 [#]	2070.7	(25/2 ⁻)	Q ^a	3038.4	(33/2)	519.6 [#] 5	100 [#]	2518.8	(29/2)	Q ^a
2493.1	(27/2 ⁻)	229.2 [#] 5	37 [#] 12	2263.8	(25/2 ⁻)		3039.2	(33/2)	294.6 [#] 5	100 [#]	2744.6	(31/2 ⁺)	D ^a
		486.6 [#] 5	100 [#] 25	2006.7	(23/2 ⁻)		3068.5	(35/2 ⁻)	436.0 [#] 5	92 [#] 29	2632.5	(31/2 ⁻)	
2518.6	(29/2)	530.8 [#] 5	100 [#]	1987.8	(25/2)	Q ^a			460.0 [#] 5	100 [#] 29	2608.6	(31/2 ⁻)	
2518.8	(29/2)	427.2 [#] 5	100 [#]	2091.6	(27/2 ⁺)	D ^a	3075.7	(33/2)	294.1 [#] 5	100 [#]	2781.6	(31/2 ⁻)	D ^a
2570.9		2519.6 4	44 8	51.25	(1/2,3/2) ⁻		3116.4		264.0 [#] 5	100 [#] 29	2852.4	(33/2 ⁺)	
		2561.3 5	28 8	9.27	3/2 ⁻				973.6 [#] 5	76 [#] 23	2142.8	(29/2 ⁺)	
		2571.2 5	100 16	0.0	3/2 ⁻		3211.3	(33/2)	310.5 [#] 5	100 [#] 29	2900.6	(31/2)	D ^a
2608.6	(31/2 ⁻)	377.8 [#] 5	100 [#]	2230.8	(27/2 ⁻)				585.0 [#] 5	77 [#] 23	2626.5	(29/2)	
2626.5	(29/2)	201.6 [#] 5	100 [#] 29	2424.8	(27/2)		3287.2	(33/2 ⁻)	542.0 [#] 5	100 [#]	2745.2	(29/2 ⁻)	
		1130.2 [#] 5	18 [#] 5	1496.2	(25/2 ⁺)	Q ^a	3297.4	(35/2 ⁻)	504.5 [#] 5	100 [#]	2792.9	(31/2 ⁻)	Q ^a
2632.5	(31/2 ⁻)	401.7 [#] 5	100 [#]	2230.8	(27/2 ⁻)		3332.5	(35/2 ⁺)	480.1 [#] 5	18 [#] 5	2852.4	(33/2 ⁺)	
2654.1	(29/2)	666.3 [#] 5	100 [#]	1987.8	(25/2)	Q ^a			587.9 [#] 5	100 [#] 29	2744.6	(31/2 ⁺)	Q ^a
2744.6	(31/2 ⁺)	225.8 [#] 5	9 [#] 3	2518.8	(29/2)		3414.7	(35/2)	339.0 [#] 5	100 [#]	3075.7	(33/2)	D ^a
		601.5 [#] 5	20 [#] 6	2142.8	(29/2 ⁺)		3488.5	(37/2 ⁺)	372.2 [#] 5	17 [#] 7	3116.4		
		653.0 [#] 5	100 [#] 30	2091.6	(27/2 ⁺)	Q ^a			636.2 [#] 5	100 [#] 30	2852.4	(33/2 ⁺)	Q ^a
2745.2	(29/2 ⁻)	252.2 [#] 5	100 [#] 25	2493.1	(27/2 ⁻)		3506.5		390.1 [#] 5	100 [#]	3116.4		
		481.4 [#] 5	100 [#] 25	2263.8	(25/2 ⁻)		3532.1	(35/2)	320.6 [#] 5	52 [#] 14	3211.3	(33/2)	
2781.6	(31/2 ⁻)	348.2 [#] 5	33 [#] 13	2433.6	(29/2 ⁻)				631.7 [#] 5	100 [#] 29	2900.6	(31/2)	
		550.7 [#] 5	100 [#] 27	2230.8	(27/2 ⁻)		3552.3	(37/2 ⁻)	609.6 [#] 5	100 [#]	2942.7	(33/2 ⁻)	

Adopted Levels, Gammas (continued)

$\gamma(^{187}\text{Pt})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]	$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult. [†]
3574.0		534.8 [#] 5	100 [#]	3039.2	(33/2)		3889.0	(39/2 ⁻)	591.6 [#] 5	100 [#]	3297.4	(35/2 ⁻)	
3575.1	(35/2 ⁺)	535.8 [#] 5	42 [#] 12	3039.2	(33/2)	D ^a	3976.5		644.0 [#] 5	100 [#]	3332.5	(35/2 ⁺)	
		704.0 [#] 5	92 [#] 29	2871.2	(31/2 ⁺)	Q ^a	3992.2	37/2	379.0 [#] 5	100 [#] 30	3613.2	(35/2)	D ^a
		830.5 5	100 29	2744.6	(31/2 ⁺)				781.0 [#] 5	28 [#] 9	3211.3	(33/2)	
3598.4	(37/2 ⁺)	746.0 [#] 5	100 [#]	2852.4	(33/2 ⁺)	Q ^a	4045.3	(41/2 ⁺)	556.8 [#] 5	100 [#]	3488.5	(37/2 ⁺)	Q ^a
3606.6	(37/2 ⁻)	610.5 [#] 5	100 [#]	2996.1	(33/2 ⁻)		4075.9	(39/2)	355.2 [#] 5	100 [#]	3720.7	(37/2)	D ^a
3613.2	(35/2)	402.0 [#] 5	44 [#] 12	3211.3	(33/2)		4249.8	(41/2 ⁻)	697.5 [#] 5	100 [#]	3552.3	(37/2 ⁻)	
		595.7 [#] 5	100 [#] 29	3017.4	(31/2)		4256.0		263.8 [#] 5	100 [#]	3992.2	37/2	
		712.5 [#] 5	38 [#] 12	2900.6	(31/2)	Q ^a	4307.2	(41/2 ⁻)	700.6 [#] 5	100 [#]	3606.6	(37/2 ⁻)	
3617.2	(39/2 ⁻)	548.7 [#] 5	100 [#]	3068.5	(35/2 ⁻)		4318.2		719.8 [#] 5	100 [#]	3598.4	(37/2 ⁺)	
3720.7	(37/2)	306.0 [#] 5	89 [#] 22	3414.7	(35/2)	D ^a	4554.5	(43/2 ⁻)	665.5 [#] 5	100 [#]	3889.0	(39/2 ⁻)	
		645.0 [#] 5	100 [#] 33	3075.7	(33/2)		4723.3	(45/2 ⁺)	678.0 [#] 5	100 [#]	4045.3	(41/2 ⁺)	
3784.5	(37/2)	369.8 [#] 5	100 [#]	3414.7	(35/2)		4986.3	(45/2 ⁻)	736.5 [#] 5	100 [#]	4249.8	(41/2 ⁻)	
3839.2		264.1 [#] 5	100 [#]	3575.1	(35/2 ⁺)		5274.0	(47/2 ⁻)	719.5 [#] 5	100 [#]	4554.5	(43/2 ⁻)	
3847.7	(39/2 ⁺)	359.3 [#] 5	33 [#] 10	3488.5	(37/2 ⁺)		5510.3	(49/2 ⁺)	787.0 [#] 5	100 [#]	4723.3	(45/2 ⁺)	
		515.1 [#] 5	100 [#] 30	3332.5	(35/2 ⁺)								

[†] From ¹⁸⁷Au ϵ decay, except otherwise noted.

[‡] From ($\alpha, 3n\gamma$).

[#] From (¹⁸O, 4n γ).

[@] Weighted average of data from (¹⁶O, 5n γ) and (¹⁸O, 4n γ).

[&] From (¹⁸O, 4n γ).

^a From (¹⁸O, 4n γ), assigned by the evaluator based on the DCO ratio and R_{ADO} value.

^b 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.

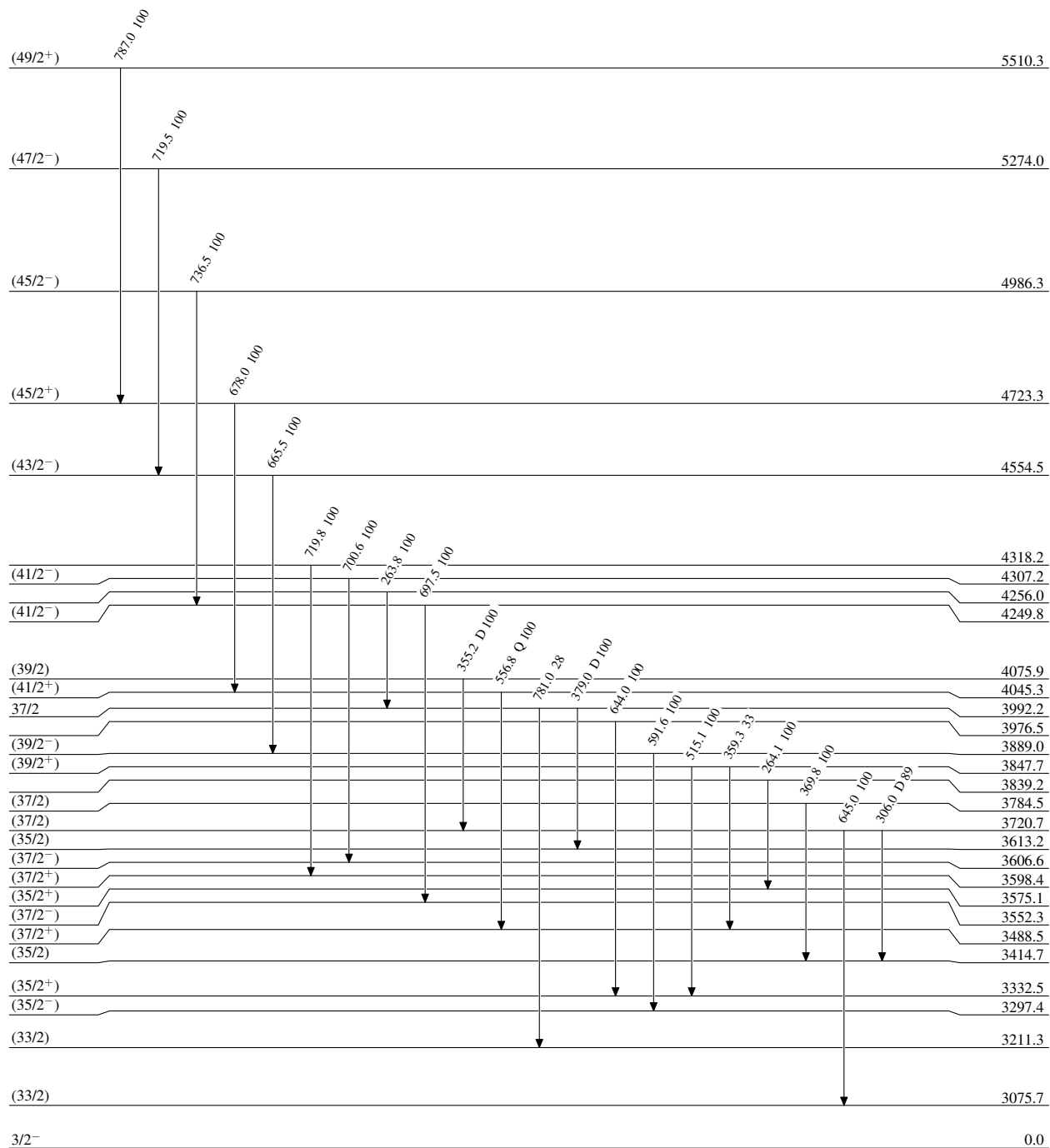
^c Multiply placed.

^d Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

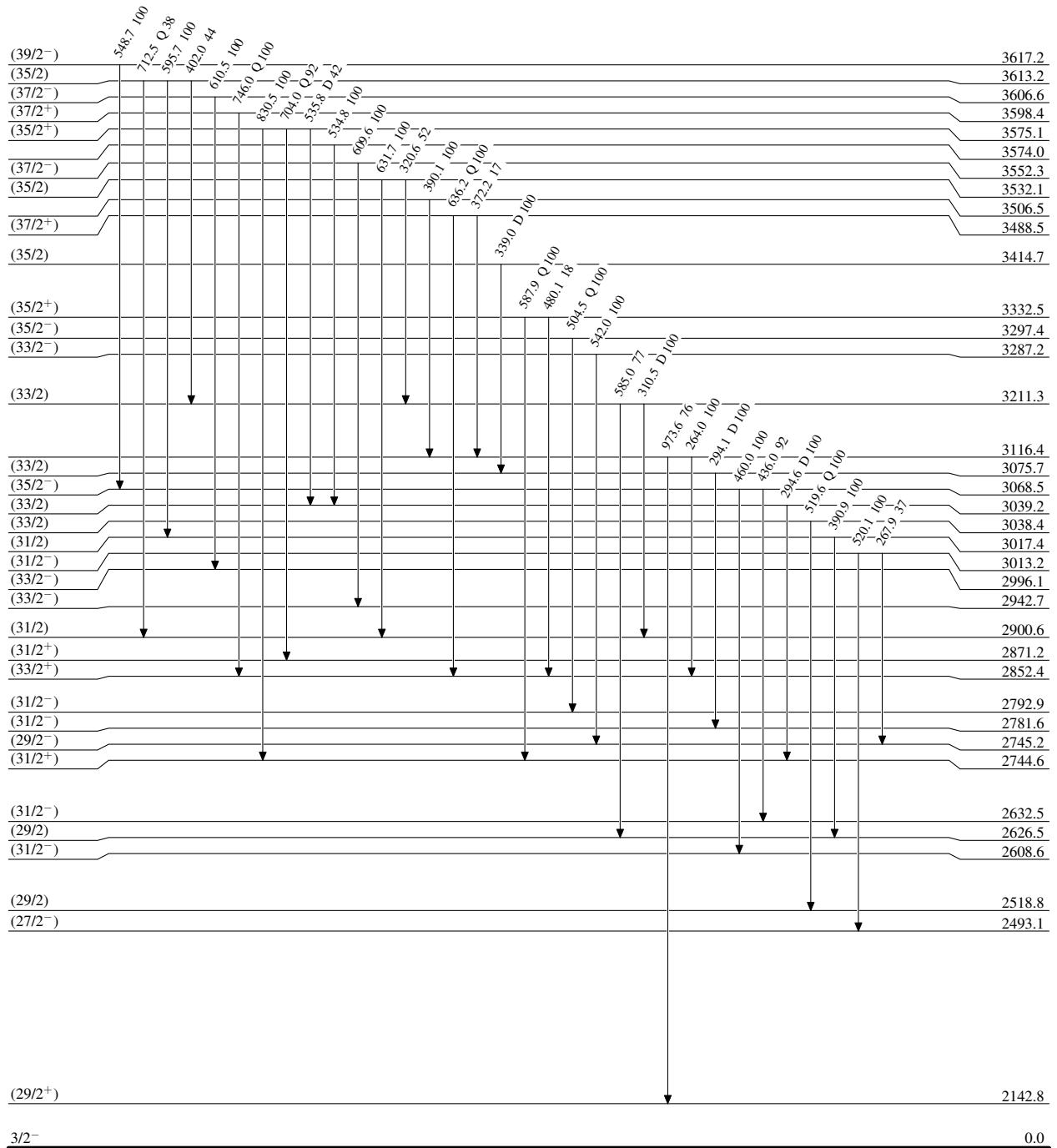


2.35 h.3

Adopted Levels, Gammas

Level Scheme (continued)

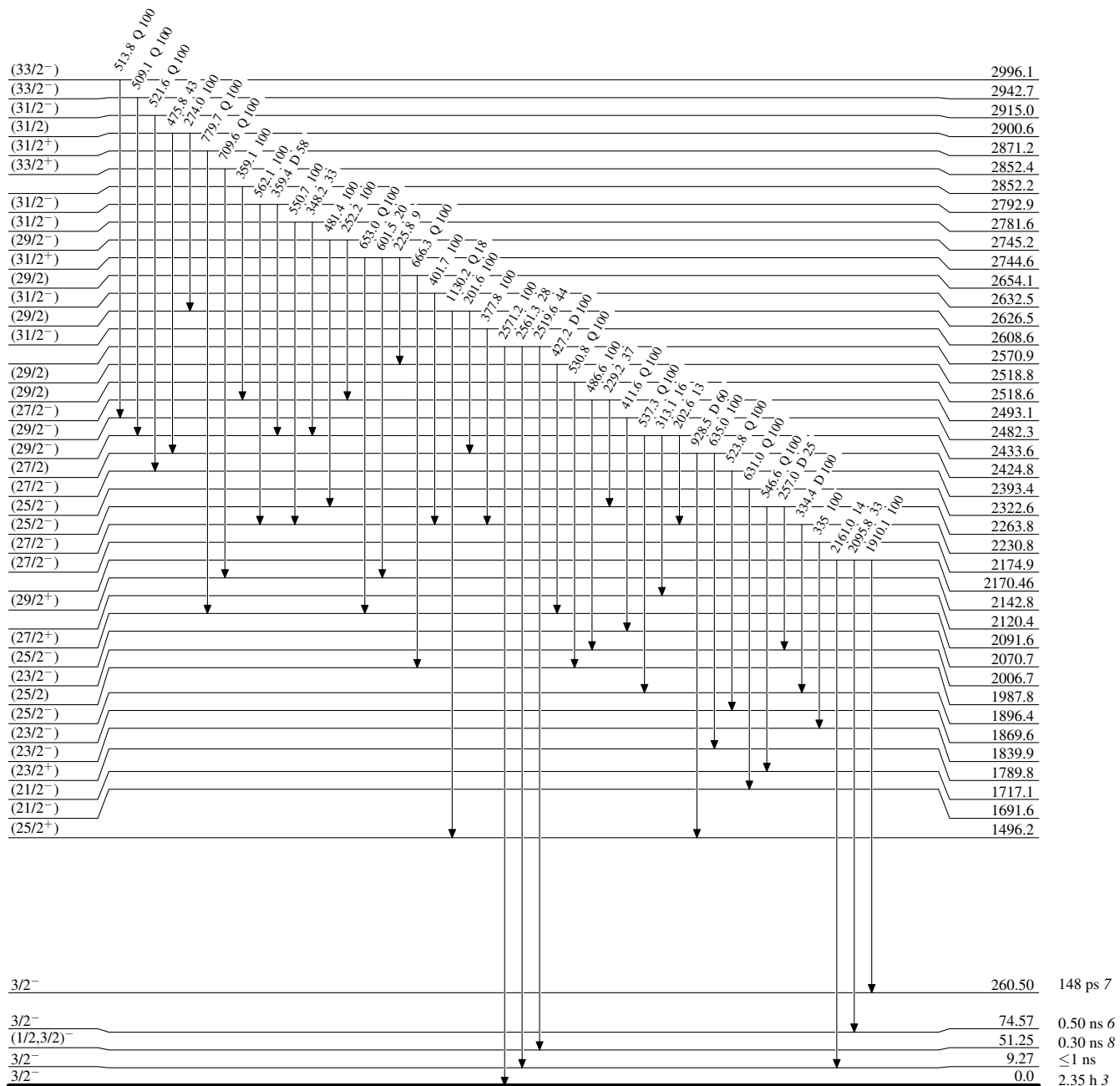
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

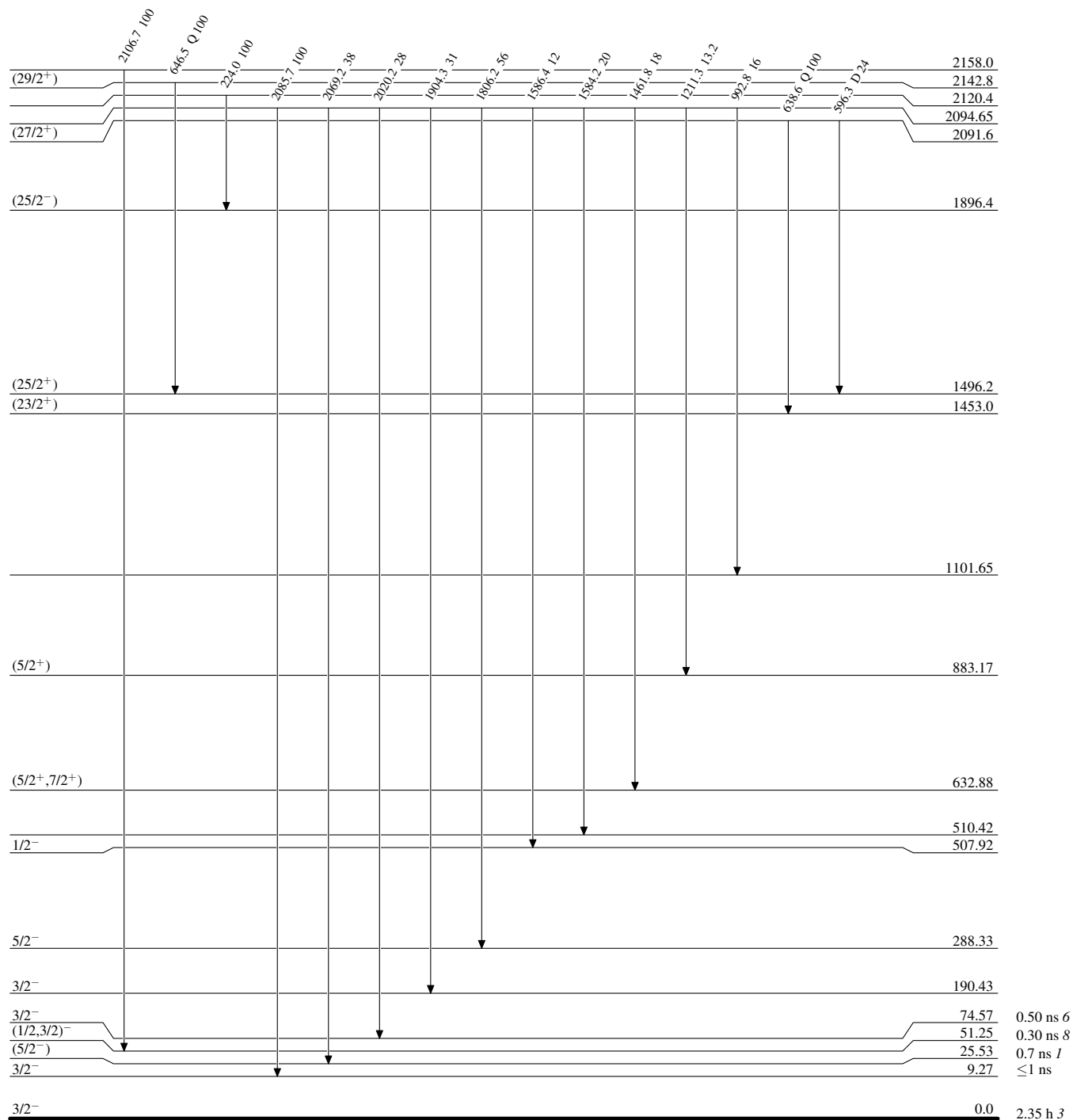


¹⁸⁷Pt₁₀₉

Adopted Levels, Gammas

Level Scheme (continued)

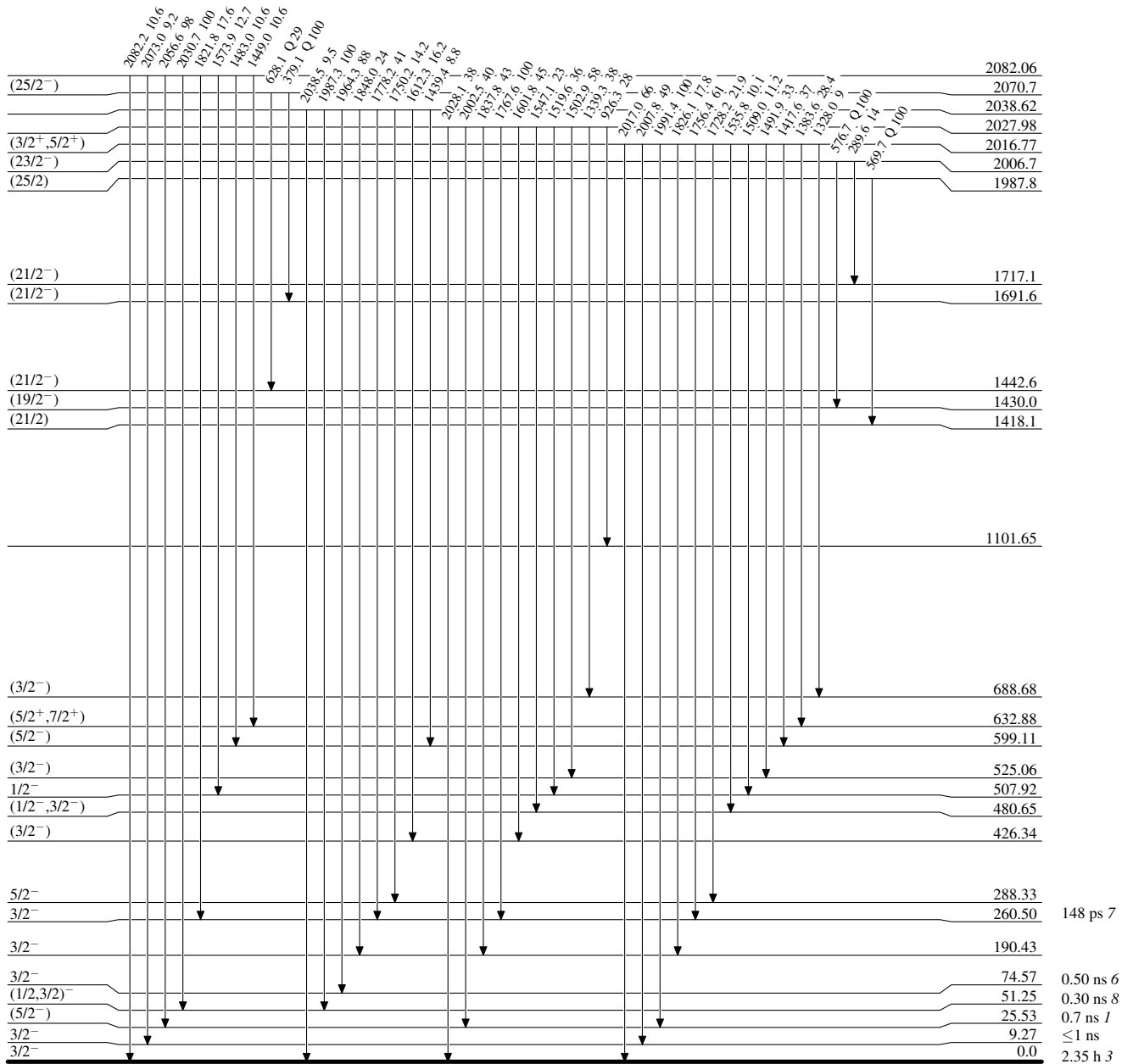
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

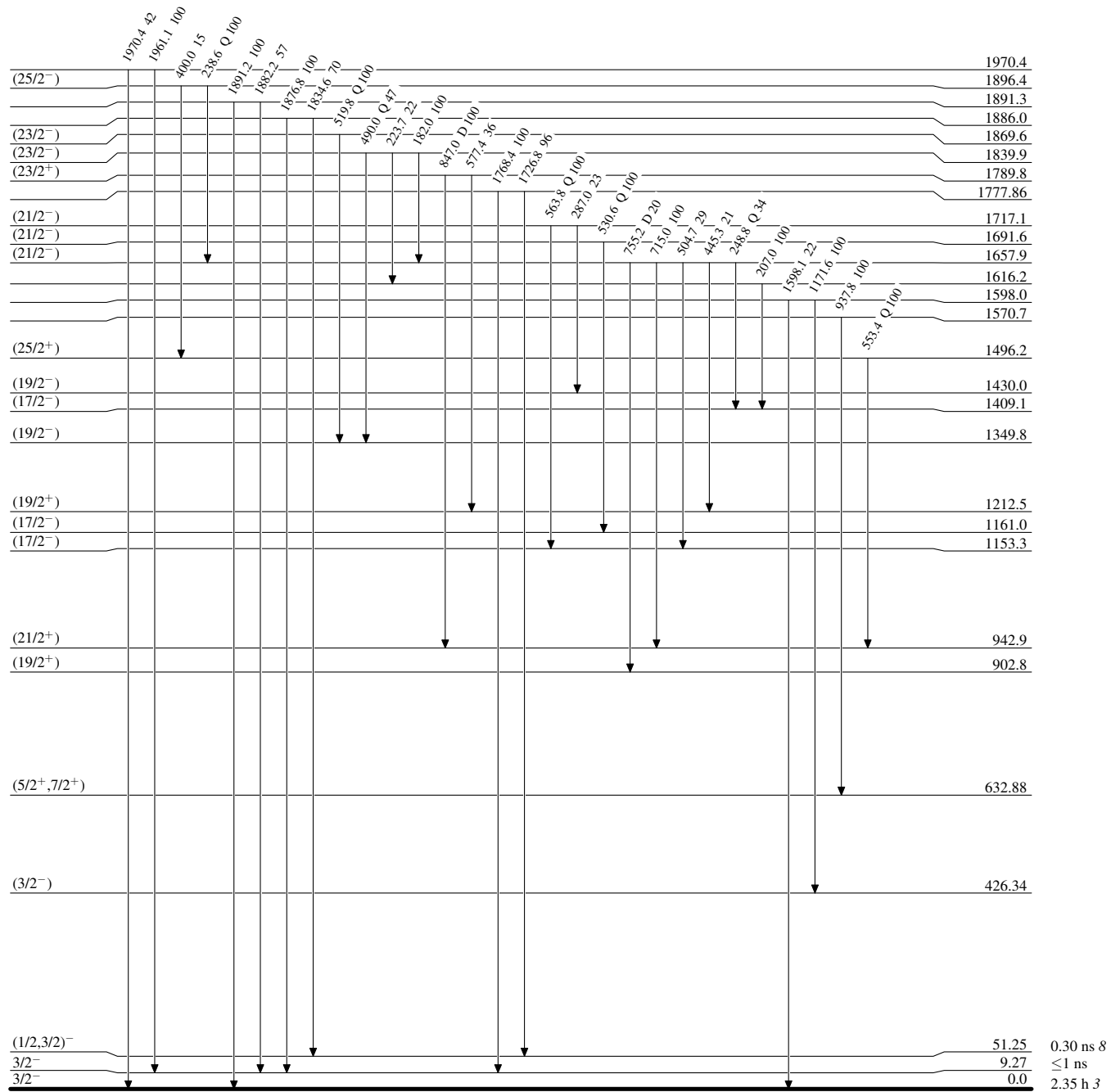


$^{187}_{78}\text{Pt}_{109}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

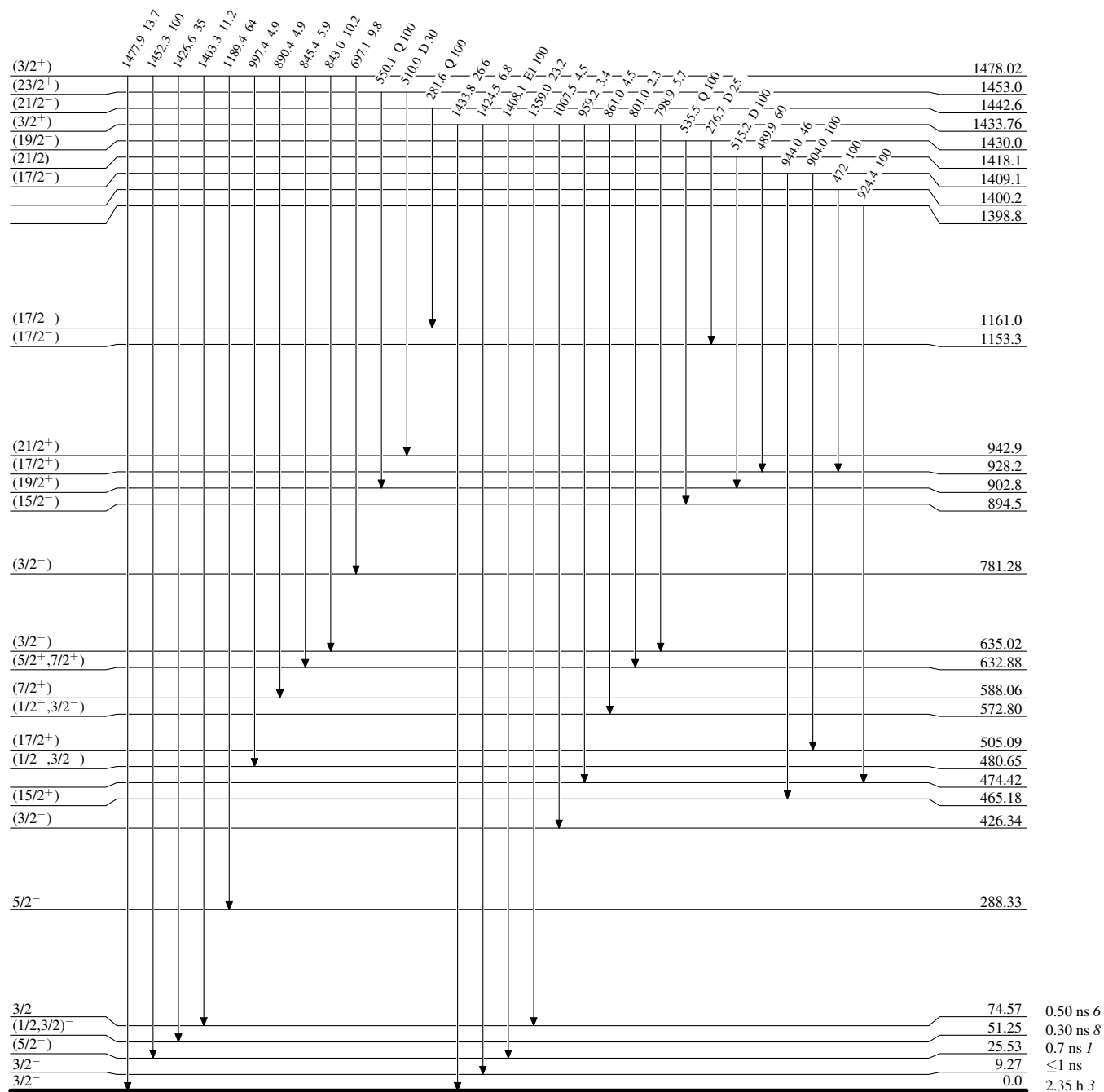


$^{187}_{78}\text{Pt}_{109}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

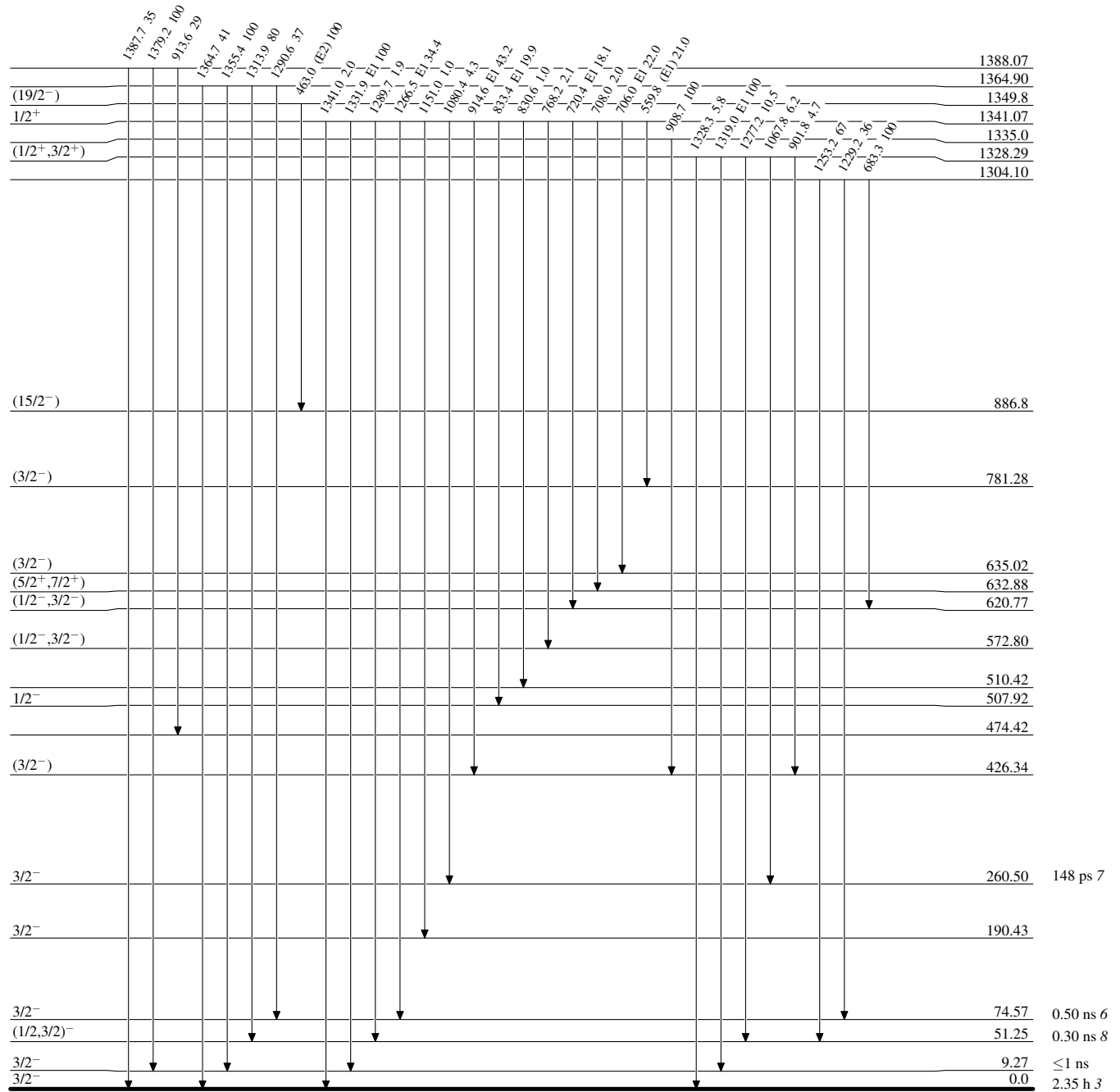


$^{187}_{78}\text{Pt}_{109}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

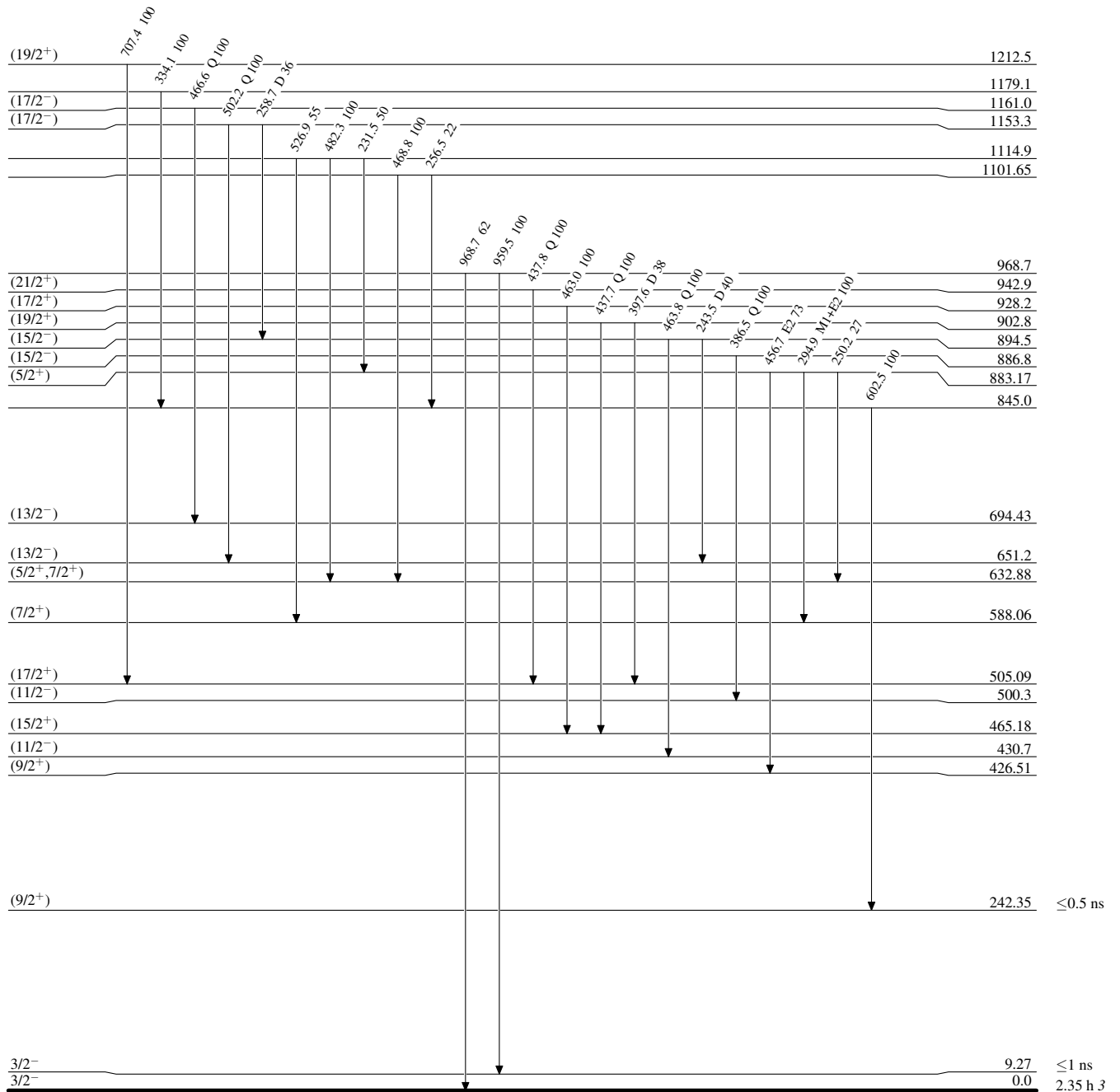


$^{187}_{78}\text{Pt}_{109}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

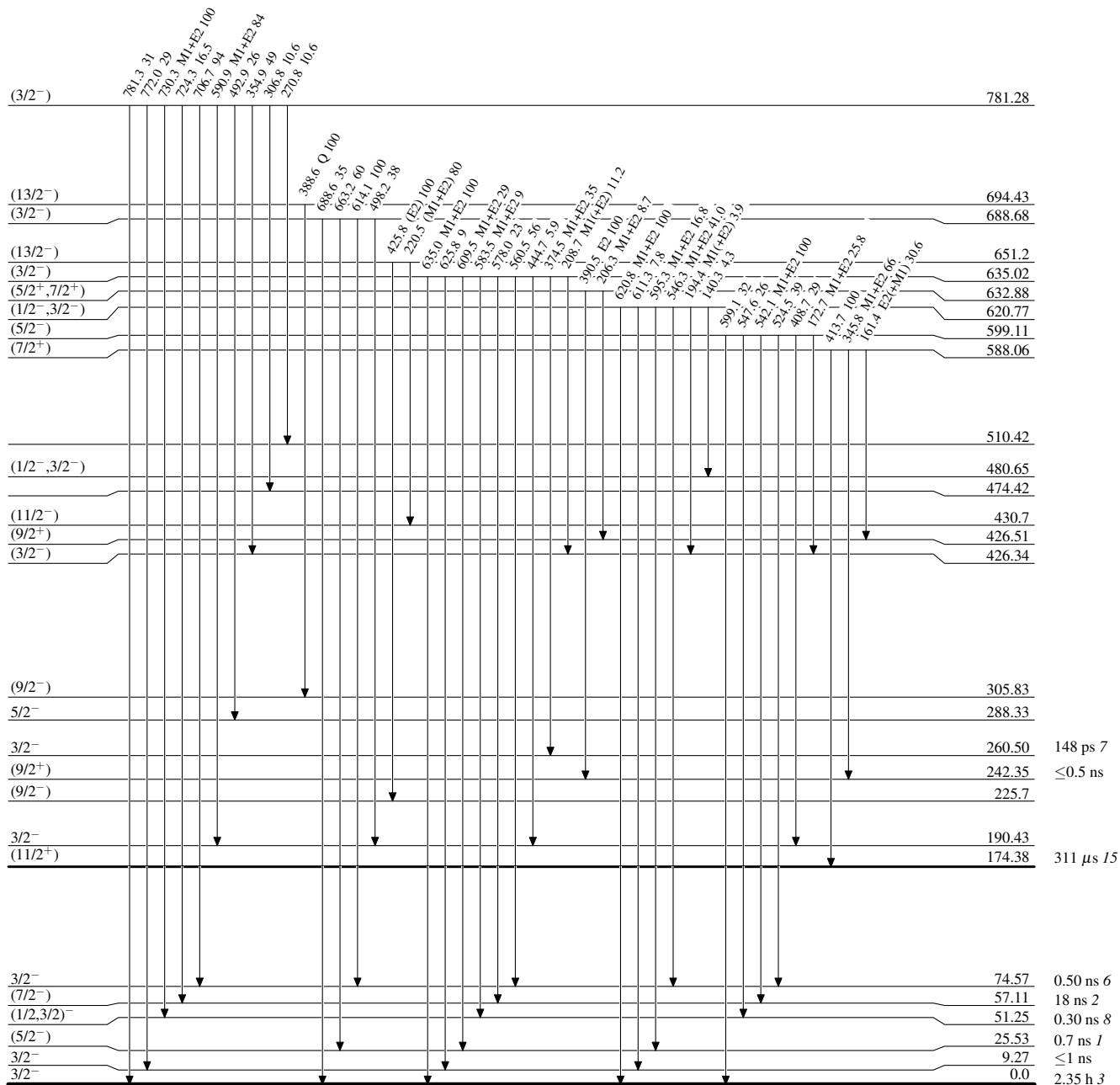


$^{187}_{78}\text{Pt}_{109}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



¹⁸⁷Pt₁₀₉

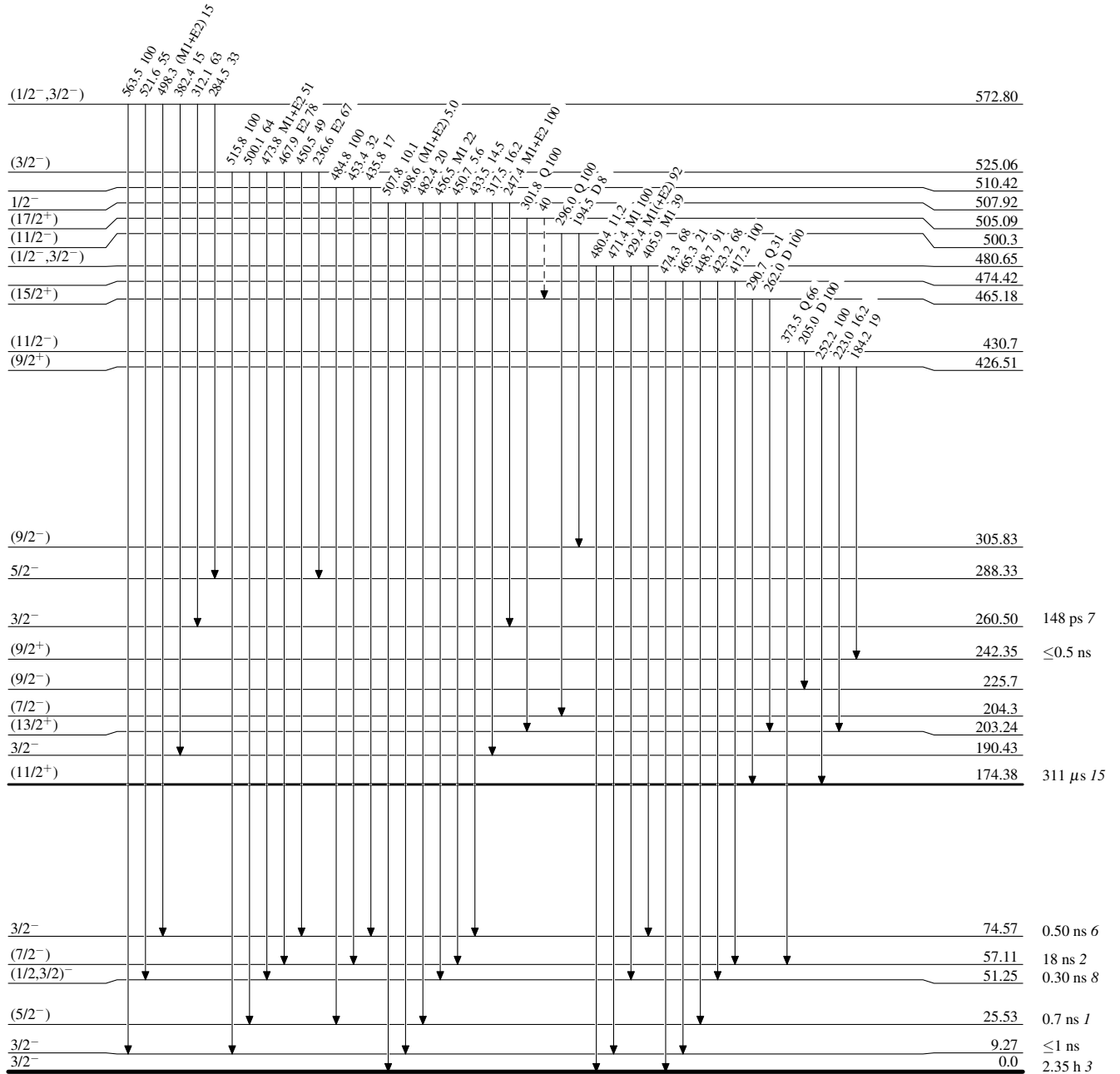
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)

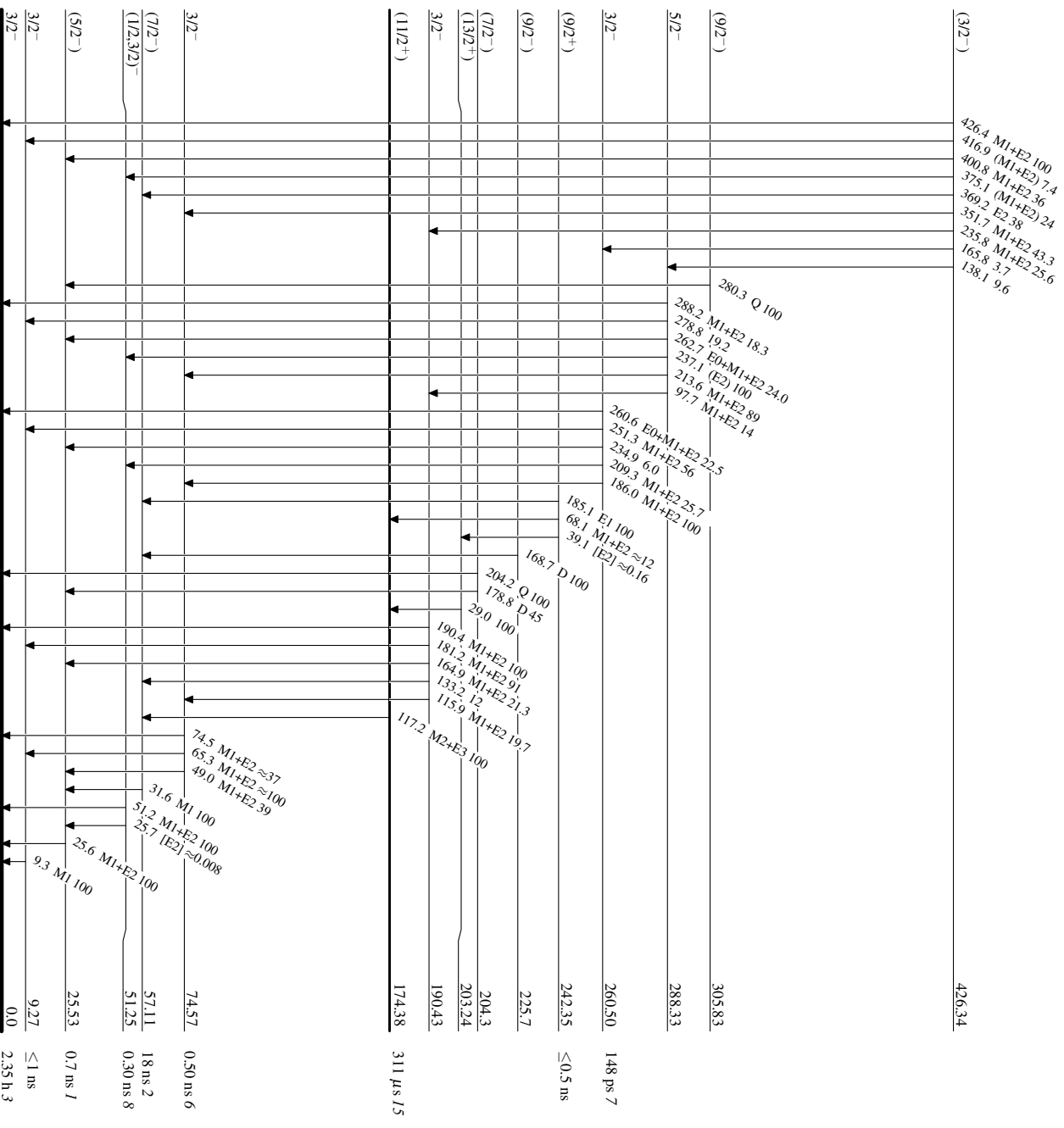


¹⁸⁷Pt₁₀₉

Adopted Levels, Gammas

Level Scheme (continued)

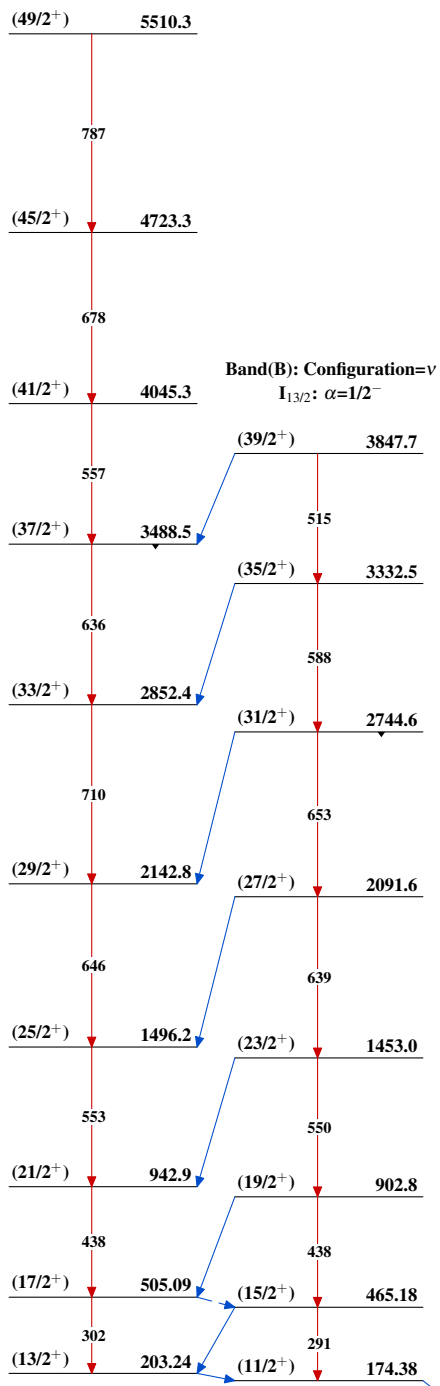
Intensities: Relative photon branching from each level



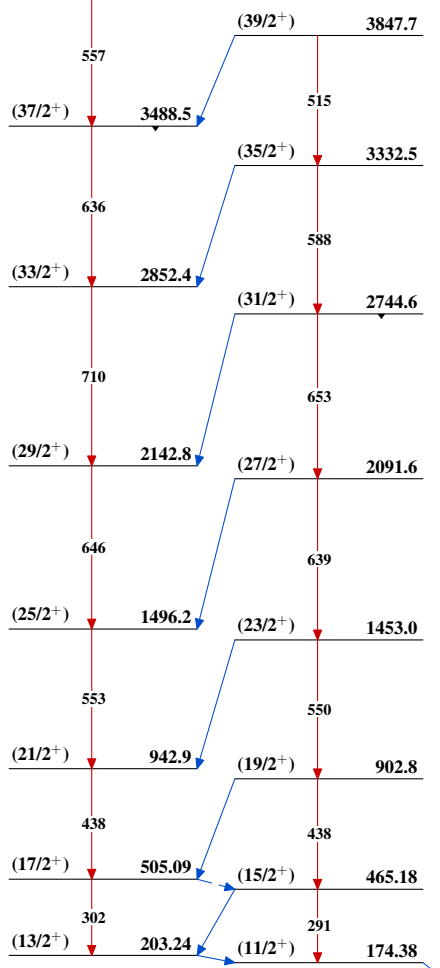
¹⁸⁷Pt
⁷⁸Pt₁₀₉

Adopted Levels, Gammas

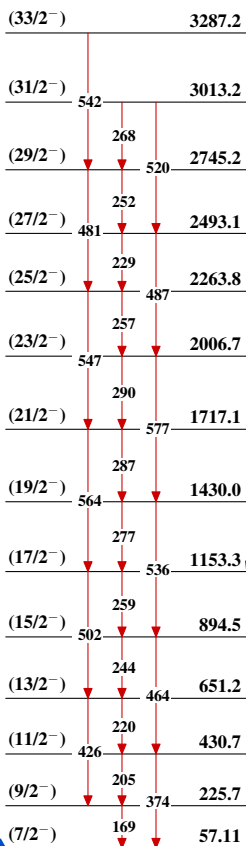
Band(A): Configuration= ν
 $I_{13/2}: \alpha=1/2^+$



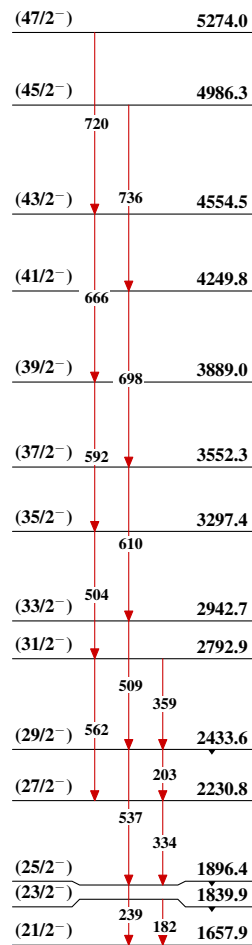
Band(B): Configuration= ν
 $I_{13/2}: \alpha=1/2^-$



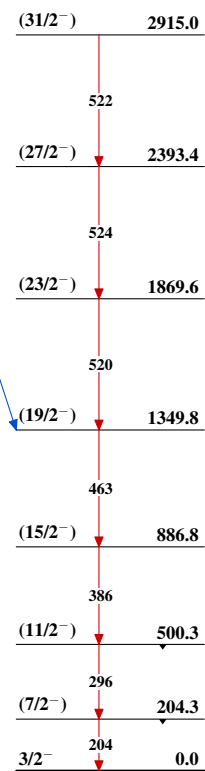
Band(C): Configuration= ν
 $7/2^- [503]$



Band(D): Configuration= $\nu i_{13/2}^2$
 $\nu J(p_{3/2} \text{ or } f_{5/2})$



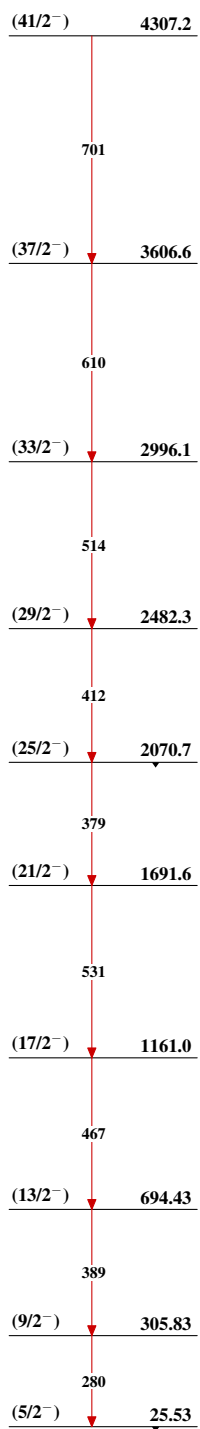
Band(E): Configuration= ν
 $3/2^- [512]$



$^{187}_{78}\text{Pt}_{109}$

Adopted Levels, Gammas (continued)

Band(F): Configuration= ν
 $1/2^- [521]$

 $^{187}_{78}\text{Pt}_{109}$