Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 143, 1 (2017)	31-Mar-2017

Q(β^-)=−1075 *9*; S(n)=6262.5 *23*; S(p)=6933.0 *4*; Q(α)=2082.2 *12* 2017Wa10

Effect of chemical composition of source on half-life: 1977Do07, theory; 1968Ma51 observed 4 *2* % variation from Au to $AuCl_3$ matrix in 1.64 keV level half-life (effect surprisingly large according to 1972Ra38).

Other reactions:

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

^{194}Pt(^{12}C,^{13}C) (2001Sh20): E=55-73 MeV. Measured fusion and transfer cross-sections.

^{193}Pt Levels

Cross Reference (XREF) Flags

A	^{193}Pt IT decay (4.33 d)	E	^{192}Pt(n,γ) E=res
B	^{193}Au ε decay (17.65 h)	F	^{194}Pt(p,d), (d,t)
C	^{193}Au ε decay (3.9 s)	G	^{194}Pt(^{3}He,α)
D	^{192}Os(α,3nγ)	H	^{195}Pt(p,t)

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0	1/2$^-$	50@ y *6*	ABCDEF H	%ε=100 μ=+0.603 *8* J$^\pi$: L=0 in ^{195}Pt(p,t). $T_{1/2}$: weighted average of 49 y *6* (1971Ra18) and 64 y *20* (1971Ho17) others: 1953Sw20 (no value reported), 1969Ho14 − partial half-life for L capture: 620 y *250*, μ: Resonance ionization mass spectroscopy (1992Hi07). Isotope shift: $\Delta<r^2>=-0.047$ fm^2 7 (relative to ^{194}Pt) (1992Hi07). $\sqrt{<r^2>}$=5.420 fm *3* (2004An14).
1.642 *2*	3/2$^-$	9.7 ns *3*	ABCD F H	J$^\pi$: M1+E2 γ from 5/2$^-$ 14.3 level, M1 γ to 1/2$^-$. $T_{1/2}$: from ^{193}Au ε decay (17.65 h).
14.276 *8*	5/2$^-$	2.52 ns *5*	ABCD FGH	J$^\pi$: M1+E2 γ from 3/2$^-$; L=3,4 in ^{194}Pt(^{3}He,α). $T_{1/2}$: from ^{193}Au ε decay (17.65 h) (1968Ma51).
114.158 *8*	3/2$^-$		B F h	J$^\pi$: M1+E2 γ to 1/2$^-$.
121.29 *3*	1/2$^-$,3/2$^-$,5/2$^-$		B F h	J$^\pi$: M1 γ to 3/2$^-$ 1.64 level.
149.78& *4*	13/2$^+$	4.33 d *3*	A CD FGH	%IT=100 μ=(−)0.753 *15* (2014StZZ,1986Sc04) μ: x-ray detection of nuclear magnetic resonance (1985Sc15,1986Sc04); negative sign suggested by systematics. J$^\pi$: M4 γ to 5/2$^-$ 14.3 level. $T_{1/2}$: from IT decay (1949Wi08).
187.81 *2*	3/2$^-$		B EF H	J$^\pi$: primary E1 γ from 1/2$^+$ in ^{192}Pt(n,γ) E=res; L=2 in ^{195}Pt(p,t).
199.0a *2*	(11/2$^+$)		D	J$^\pi$: 49.2γ to 13/2$^+$ level, 320 Q from (15/2$^+$).
232.16 *2*	(5/2)$^-$		B F H	J$^\pi$: M1 γ's to 3/2$^-$ 114.2 and 187.8 levels; L=(3) in ^{194}Pt(p,d), (d,t); L=2 from ^{195}Pt(p,t).
269.83 *2*	3/2$^-$		B F H	J$^\pi$: M1+E2 γ to 5/2$^-$ 14.3 level; L=1 in (p,d).
308 *3*			F	J$^\pi$: L=(4,5) in ^{194}Pt(p,d), (d,t).
331 *10*			G	J$^\pi$: L=5,6 in ^{194}Pt(^{3}He,α).
340 *3*			F H	J$^\pi$: L=(4,5) in ^{194}Pt(p,d), (d,t).
415 *3*	5/2$^-$,7/2$^-$		Fg	XREF: g(420). J$^\pi$: L=3 in ^{194}Pt(p,d), (d,t).

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Adopted Levels, Gammas (continued)

^{193}Pt Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
425 *3*	5/2⁻,7/2⁻	FgH	XREF: g(420). Jπ: L=3 in ^{194}Pt(p,d), (d,t).
434 *3*	(5/2⁻,7/2⁻)	F	Jπ: L=3 in ^{194}Pt(p,d), (d,t).
439.05 *3*	(3/2)⁻	B F	Jπ: M1 γ to 1/2⁻ g.s., (M1) γ to 5/2⁻ 14.3 level.
459 *3*	(5/2⁻,7/2⁻)	F H	XREF: H(462). Jπ: L=(3) in ^{194}Pt(p,d), (d,t).
491.0[&] *2*	(17/2⁺)	D g	XREF: g(484). Jπ: Q γ to 13/2⁺ level; band structure.
491.24 *2*	(5/2)⁻	B FgH	XREF: g(484). Jπ: M1+E2 γ to 3/2⁻ 114.2 levels; L=(3) in ^{194}Pt(p,d), (d,t).
519.6[a] *1*	(15/2⁺)	D	Jπ: Q γ to (11/2⁺) level, D+Q γ to 13/2⁺ level; band structure.
522.53 *8*	(3/2⁻,5/2⁻)	B	Jπ: (M1) γ to (5/2)⁻ level; (E2) γ to g.s..
530 *3*	1/2⁻,3/2⁻	EF H	XREF: E(544). Jπ: L=1 in ^{194}Pt(p,d), (d,t). Possibly same as the 522.5 level seen in ^{193}Au ε decay (17.65 h).
544 *3*	(5/2⁻,7/2⁻)	F	L=(3) in ^{194}Pt(p,d), (d,t).
563 *3*	1/2⁻,3/2⁻	F	Jπ: L=1 in ^{194}Pt(p,d), (d,t).
599 *3*	5/2⁻,7/2⁻	FGH	Jπ: L=3 in ^{194}Pt(p,d), (d,t) and ^{194}Pt(^{3}He,α).
603.3 *1*	(15/2⁺)	D	Jπ: D+Q γ γ to 13/2⁺ level.
622 *4*		H	
630 *5*	5/2⁻,7/2⁻	F	Jπ: L=3 in ^{194}Pt(p,d), (d,t).
642 *4*		H	
665 *3*	11/2⁺,13/2⁺	FG	XREF: F(675). Jπ: L=6 in ^{194}Pt(p,d), (d,t).
692 *3*	(11/2⁺,13/2⁺)	F	Jπ: L=(6) in ^{194}Pt(p,d), (d,t).
700	1/2⁻,3/2⁻	E h	Jπ: primary E1 γ from 1/2⁺ in ^{192}Pt(n,γ) E=res.
701 *5*	(5/2⁻,7/2⁻)	F h	Jπ: L=(3) in ^{194}Pt(p,d), (d,t).
718 *4*	(1/2⁺)	F	Jπ: L=(0) in ^{194}Pt(p,d), (d,t).
728 *5*	5/2⁻,7/2⁻	FGH	Jπ: L=3 in ^{194}Pt(p,d), (d,t).
755 *5*	5/2⁻,7/2⁻	F H	Jπ: L=3 in ^{194}Pt(p,d), (d,t).
828 *4*	(5/2⁻,7/2⁻)	FGH	XREF: F(830)G(819). Jπ: L=(3) in ^{194}Pt(p,d), (d,t).
846 *5*	3/2⁻	F H	Jπ: L=1 in ^{194}Pt(p,d), (d,t); L=2 in ^{195}Pt(p,t).
907.4 *2*	(17/2⁺)[#]	D	Jπ: D+Q γ′s to (15/2⁺) levels, γ to (17/2⁺) level.
923 *5*	3/2⁻	F H	Jπ: L=1 in ^{194}Pt(p,d), (d,t); L=2 in ^{195}Pt(p,t).
969 *10*		F	
980.5[a] *2*	(19/2⁺)	D	Jπ: Q γ to (15/2⁺) level; band structure.
984 *4*		H	
1003.4[&] *4*	(21/2⁺)	D	Jπ: cascading γ to (17/2⁺) level; band structure.
1014 *5*		F	Jπ: L=(4,5) in ^{194}Pt(p,d), (d,t).
1021 *10*		G	Jπ: L=5,6 in ^{194}Pt(^{3}He,α).
1042 *5*	11/2⁺,13/2⁺	F	Jπ: L=6 in ^{194}Pt(p,d), (d,t).
1053 *8*		H	
1069 *10*	(5/2⁻,7/2⁻)	F	Jπ: L=(3) in ^{194}Pt(p,d), (d,t).
1099 *5*	(5/2⁻,7/2⁻)	FGH	Jπ: L=(3) in ^{194}Pt(p,d), (d,t).
1103.5 *4*	(⁺)	D	Jπ: D+Q γ to (15/2⁺) level.
1130 *10*	(5/2⁻,7/2⁻)	F	Jπ: L=(3) in ^{194}Pt(p,d), (d,t).
1159.9 *2*	(19/2⁺)[#]	D	Jπ: (Q) γ′s to (15/2⁺) levels, D+Q γ to (17/2⁺) level.
1168 *10*	(1/2⁻,3/2⁻)	F	Jπ: L=(1) in ^{194}Pt(p,d), (d,t).
1182 *8*	(3/2)⁻	f h	E(level): from ^{195}Pt(p,t). Jπ: L=2 in ^{195}Pt(p,t); the level at 1188 seen in ^{194}Pt(p,d) is a doublet with L=1 for at least one member of doublet.
1188 *5*		f h	E(level): from ^{195}Pt(p,t). Member of unresolved doublet.
1219 *10*		Gh	Jπ: L=3,4 in ^{194}Pt(^{3}He,α).

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Adopted Levels, Gammas (continued)

^{193}Pt Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
1222 *5*	$1/2^-,3/2^-$		F h	Jπ: unresolved doublet; L=1 for one member of doublet in ^{194}Pt(p,d).
1245 *5*	$(5/2^-,7/2^-)$		F H	Jπ: L=(3) in ^{194}Pt(p,d), (d,t).
1259 *10*			F H	XREF: H(1265).
1320 *5*	$5/2^-,7/2^-$		F	Jπ: unresolved doublet; L=3 for one member of doublet in ^{194}Pt(p,d).
1320 *5*	$1/2^-,3/2^-$		F	Jπ: unresolved doublet; L=1 for one member of doublet in ^{194}Pt(p,d).
1320.9[b] *2*	$(21/2^-)$		D	Jπ: γ's to $(19/2^+)$ levels; band structure.
1333 *8*			H	
1359 *4*	$11/2^+,13/2^+$		FG	XREF: G(1337). E(level): From (p,d). Jπ: L=6 in ^{194}Pt(p,d) and ^{194}Pt(^{3}He,α).
1364 *8*			H	
1425 *8*			H	
1442 *10*			G	
1454.8[b] *3*	$(25/2^-)$	3.2 ns *3*	D	Jπ: (E2) γ to $(21/2^-)$ level; band structure. $T_{1/2}$: from ^{192}Os(α,3nγ).
1457 *8*	$1/2^-$		H	Jπ: L=0 in ^{195}Pt(p,t).
1510.4 *3*			D	Jπ: γ to $(21/2^-)$ level.
1534 *8*	$1/2^-$		H	Jπ: L=0 in ^{195}Pt(p,t).
1557 *8*	$1/2^-$		H	Jπ: L=0 in ^{195}Pt(p,t).
1561 *10*			G	Jπ: L=3,4 in ^{194}Pt(^{3}He,α).
1585 *8*	$1/2^-,3/2^-$		E H	XREF: E(1591). Jπ: primary E1 γ from $1/2^+$ in ^{192}Pt(n,γ) E=res.
1610 *8*			H	
1631.8[&] *4*	$(25/2^+)$		D	Jπ: Q γ to $(21/2^+)$ level; band structure.
1668 *10*			G	Jπ: L=4,5 in ^{194}Pt(^{3}He,α).
1689.9[b] *3*	$(27/2^-)$		D	Jπ: D γ to $(25/2^-)$ level; band structure.
1744 *10*	$5/2^-,7/2^-$		G	Jπ: L=3 in ^{194}Pt(p,d).
1776.9 *4*			D	
1913 *10*			G	
1986.7? *4*			D	
1992.2[b] *3*	$(29/2^-)$		D	Jπ: Q γ to $(25/2^-)$, γ to $(27/2^-)$; band structure.
2335.2[&] *5*	$(29/2^+)$		D	Jπ: Q γ to $(25/2^+)$ level; band structure.
2337 *10*			G	
2696.2[&] *6*	$(33/2^+)$		D	Jπ: Q γ to $(29/2^+)$ level: band structure.
3129.2[&] *6*	$(37/2^+)$		D	Jπ: γ to $(33/2^+)$ level; band structure.

[†] From least-squares fit to Eγ for levels seen in ^{193}Au ε decays, ^{193}Pt IT decay or ^{193}Os(α,3nγ) reaction. From ^{194}Pt(p,d), (d,t) for levels seen in particle reaction, unless otherwise noted, or where XREF clearly indicates other source.

[‡] Band assignments and descriptions are from 1977Sa01.

[#] Monotonically-increasing Jπ sequence is suggested by cascades of coincident E2 and M1+E2 γ's in ^{192}Os(α,3nγ), decaying to the $13/2^+$ 149.8 level.

[@] Both measurements are specific activity measurements and are based on $T_{1/2}(\varepsilon L)$ deduced from I(L x ray). $T_{1/2}(\varepsilon L)$=73 y *9* (1971Ra18) and 94 y *30* (1971Ho17), remeasurement by authors of 1969Ho14. The evaluator has calculated $T_{1/2}$ using $\varepsilon L/\varepsilon$=0.6761, the value for adopted Q+=56.6 keV.

[&] Band(A): i13/2 favored decoupled band. Configuration=$(\nu\ i_{13/2})^{-1}$.

[a] Band(B): (J-1) unfavored decoupled band. Configuration=$(\nu\ i_{13/2})^{-1}$.

[b] Band(C): $21/2^-$ semidecoupled band. Position and spacing are similar to corresponding band structure in other odd-mass Pt and Hg nuclei. These bands are related to the 5^- bands in neighboring even-mass nuclei.

Adopted Levels, Gammas (continued)

$\gamma(^{193}Pt)$

All γ data are from ^{193}Au ε decay (17.65 h), unless otherwise noted.
1990Pi08: measured relative K x ray intensities.

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[#]	Comments
1.642	3/2$^-$	1.642 *2*	100	0.0	1/2$^-$	M1		3116	B(M1)(W.u.)=0.165 *6* α: From Bricc. Note 1.642 keV *2* γ energy is within 1 keV to the N1-shell binding energy of 0.723 keV. Others: 12000 (1991Ba63), 4010 (1978Ro21).
14.276	5/2$^-$	12.634 *8*	100	1.642	3/2$^-$	M1+E2	0.015 *+3–4*	142 *8*	α(L)=14 *5*; α(M)=99 *3* α(N)=24.4 *6*; α(O)=4.35 *10*; α(P)=0.281 *4* B(M1)(W.u.)=0.0303 *18*; B(E2)(W.u.)=17 *7*
114.158	3/2$^-$	99.88 *4*	6.9 *5*	14.276	5/2$^-$	M1+E2	0.87 *3*	5.93	α(K)=3.44 *10*; α(L)=1.88 *5*; α(M)=0.473 *13* α(N)=0.116 *3*; α(O)=0.0187 *5*; α(P)=0.000399 *11*
		112.515 *10*	100 *4*	1.642	3/2$^-$	M1+E2	0.36 *2*	4.56	α(K)=3.53 *7*; α(L)=0.784 *18*; α(M)=0.187 *5* α(N)=0.0461 *11*; α(O)=0.00797 *17*; α(P)=0.000406 *8*
		114.155 *13*	32 *6*	0.0	1/2$^-$	M1+E2	0.48 *4*	4.24 *8*	α(K)=3.16 *10*; α(L)=0.82 *3*; α(M)=0.199 *8* α(N)=0.0491 *20*; α(O)=0.0083 *3*; α(P)=0.000363 *11*
121.29	1/2$^-$,3/2$^-$,5/2$^-$	119.64 *3*	100	1.642	3/2$^-$	M1		3.99	α(K)=3.28 *5*; α(L)=0.544 *8*; α(M)=0.1259 *18* α(N)=0.0312 *5*; α(O)=0.00560 *8*; α(P)=0.000377 *6*
149.78	13/2$^+$	135.50 *3*	100	14.276	5/2$^-$	M4		872	α(K)=135.3 *19*; α(L)=524 *8*; α(M)=164.0 *23* α(N)=41.9 *6*; α(O)=6.68 *10*; α(P)=0.1623 *23* B(M4)(W.u.)=1.130 *18* E_γ,Mult.: From ^{193}Pt IT decay.
187.81	3/2$^-$	73.62 *3*	1.1 *2*	114.158	3/2$^-$	(M1)		2.88	α(L)=2.22 *4*; α(M)=0.513 *8* α(N)=0.1271 *18*; α(O)=0.0228 *4*; α(P)=0.001538 *22*
		173.52 *5*	29	14.276	5/2$^-$	M1+E2	0.355 *21*	1.300 *21*	α(K)=1.043 *19*; α(L)=0.197 *3*; α(M)=0.0462 *7* α(N)=0.01142 *18*; α(O)=0.00201 *3*; α(P)=0.0001188 *21*
		186.17 *3*	100 *6*	1.642	3/2$^-$	M1+E2	0.32 *4*	1.078 *22*	α(K)=0.871 *21*; α(L)=0.1584 *24*; α(M)=0.0370 *6* α(N)=0.00915 *15*; α(O)=0.001623 *24*; α(P)=9.92×10^{-5} *24*
		187.83 *4*	9 *4*	0.0	1/2$^-$	(M1+E2)		0.8 *4*	α(K)=0.6 *4*; α(L)=0.168 *18*; α(M)=0.041 *7* α(N)=0.0101 *15*; α(O)=0.00170 *15*; α(P)=6.E−5 *5*
199.0	(11/2$^+$)	49.2[‡]	100	149.78	13/2$^+$				
232.16	(5/2)$^-$	44.33 *3*	11.6 *9*	187.81	3/2$^-$	M1		12.76	α(L)=9.82 *14*; α(M)=2.27 *4* α(N)=0.562 *8*; α(O)=0.1011 *15*; α(P)=0.00680 *10*
		117.99 *2*	100 *16*	114.158	3/2$^-$	M1		4.15	α(K)=3.41 *5*; α(L)=0.567 *8*; α(M)=0.1310 *19* α(N)=0.0324 *5*; α(O)=0.00583 *9*; α(P)=0.000393 *6*
		230.50 *7*	96 *10*	1.642	3/2$^-$	(E2)		0.224	α(K)=0.1187 *17*; α(L)=0.0793 *12*; α(M)=0.0201 *3* α(N)=0.00492 *7*; α(O)=0.000790 *11*; α(P)=1.153×10^{-5} *17*
		232.18 *6*	96 *10*	0.0	1/2$^-$	E2		0.219	α(K)=0.1165 *17*; α(L)=0.0770 *11*; α(M)=0.0195 *3*

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Adopted Levels, Gammas (continued)

γ(^{193}Pt) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[#]	Comments
									α(N)=0.00478 *7*; α(O)=0.000767 *11*; α(P)=1.133×10^{-5} *16*
269.83	3/2$^-$	37.65 *3*	0.33 *2*	232.16	(5/2)$^-$	M1+E2	0.042 *+12−13*	21.4 *6*	α(L)=16.5 *5*; α(M)=3.83 *12* α(N)=0.95 *3*; α(O)=0.169 *5*; α(P)=0.01100 *16*
		155.68 *4*	5.2 *13*	114.158	3/2$^-$	M1		1.89	α(K)=1.553 *22*; α(L)=0.257 *4*; α(M)=0.0593 *9* α(N)=0.01468 *21*; α(O)=0.00264 *4*; α(P)=0.0001780 *25*
		255.57 *4*	100 *9*	14.276	5/2$^-$	M1+E2	0.41 *7*	0.428 *15*	α(K)=0.347 *14*; α(L)=0.0623 *10*; α(M)=0.01454 *22* α(N)=0.00359 *6*; α(O)=0.000638 *11*; α(P)=3.93×10^{-5} *17* Measured prompt production in ^{196}Pt reaction with 1-250 MeV spallation neutrons (2001Ta31).
		268.22 *5*	58 *5*	1.642	3/2$^-$	M1+E2	1.3 *3*	0.24 *4*	α(K)=0.18 *4*; α(L)=0.0481 *18*; α(M)=0.0117 *3* α(N)=0.00287 *8*; α(O)=0.000486 *20*; α(P)=1.9×10^{-5} *4*
		269.84 *5*	13 *3*	0.0	1/2$^-$	E2		0.1358	α(K)=0.0796 *12*; α(L)=0.0424 *6*; α(M)=0.01068 *15* α(N)=0.00262 *4*; α(O)=0.000423 *6*; α(P)=7.91×10^{-6} *11*
439.05	(3/2)$^-$	206.85 *6*	4.7 *11*	232.16	(5/2)$^-$	(M1)		0.850	α(K)=0.700 *10*; α(L)=0.1152 *17*; α(M)=0.0266 *4* α(N)=0.00659 *10*; α(O)=0.001185 *17*; α(P)=7.99×10^{-5} *12*
		251.4 *5*	14 *6*	187.81	3/2$^-$				
		317.73 *7*	12 *3*	121.29	1/2$^-$,3/2$^-$,5/2$^-$	(M1)		0.261	α(K)=0.216 *3*; α(L)=0.0351 *5*; α(M)=0.00811 *12* α(N)=0.00201 *3*; α(O)=0.000361 *5*; α(P)=2.44×10^{-5} *4*
		324.89 *5*	18 *3*	114.158	3/2$^-$	M1		0.246	α(K)=0.203 *3*; α(L)=0.0331 *5*; α(M)=0.00763 *11* α(N)=0.00189 *3*; α(O)=0.000340 *5*; α(P)=2.30×10^{-5} *4*
		424.76 *12*	7.9 *15*	14.276	5/2$^-$	(M1)		0.1199	α(K)=0.0991 *14*; α(L)=0.01602 *23*; α(M)=0.00369 *6* α(N)=0.000914 *13*; α(O)=0.0001646 *23*; α(P)=1.117×10^{-5} *16*
		437.41 *8*	26 *5*	1.642	3/2$^-$	M1		0.1109	α(K)=0.0917 *13*; α(L)=0.01481 *21*; α(M)=0.00342 *5* α(N)=0.000845 *12*; α(O)=0.0001522 *22*; α(P)=1.033×10^{-5} *15*
		439.04 *8*	100 *8*	0.0	1/2$^-$	M1		0.1099	α(K)=0.0908 *13*; α(L)=0.01467 *21*; α(M)=0.00338 *5* α(N)=0.000837 *12*; α(O)=0.0001507 *22*; α(P)=1.023×10^{-5} *15*
491.0	(17/2$^+$)	341.2[‡] *2*	100	149.78	13/2$^+$	Q[‡]			
491.24	(5/2)$^-$	52.18 *2*	2.3 *4*	439.05	(3/2)$^-$	M1		7.90	α(L)=6.08 *9*; α(M)=1.406 *20* α(N)=0.348 *5*; α(O)=0.0626 *9*; α(P)=0.00421 *6*
		221.40 *6*	11 *3*	269.83	3/2$^-$	M1+E2	1.7 *+12−5*	0.37 *7*	α(K)=0.25 *7*; α(L)=0.0940 *14*; α(M)=0.0233 *5* α(N)=0.00572 *10*; α(O)=0.000943 *16*; α(P)=2.6×10^{-5} *9*

$^{193}_{78}Pt_{115}$-5

Adopted Levels, Gammas (continued)

γ(^{193}Pt) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.	δ[@]	α[#]	Comments
491.24	(5/2)$^-$	259.05 *6*	29 *13*	232.16	(5/2)$^-$	M1		0.456	α(K)=0.376 *6*; α(L)=0.0616 *9*; α(M)=0.01422 *20* α(N)=0.00352 *5*; α(O)=0.000633 *9*; α(P)=4.28×10^{-5} *6*
		303.41 *7*	39 *11*	187.81	3/2$^-$	(M1+E2)		0.20 *10*	α(K)=0.15 *10*; α(L)=0.033 *7*; α(M)=0.0080 *13* α(N)=0.0020 *3*; α(O)=0.00034 *7*; α(P)=1.7×10^{-5} *11*
		377.10 *3*	73 *10*	114.158	3/2$^-$	M1+E2	1.2 *3*	0.098 *17*	α(K)=0.076 *15*; α(L)=0.0164 *14*; α(M)=0.0039 *3* α(N)=0.00096 *8*; α(O)=0.000166 *15*; α(P)=8.4×10^{-6} *17*
		476.98 *9*	67 *13*	14.276	5/2$^-$	(E2)		0.0278	α(K)=0.0203 *3*; α(L)=0.00572 *8*; α(M)=0.001393 *20* α(N)=0.000342 *5*; α(O)=5.76×10^{-5} *8*; α(P)=2.13×10^{-6} *3*
		489.61 *12*	33 *7*	1.642	3/2$^-$	(M1)		0.0824	α(K)=0.0681 *10*; α(L)=0.01097 *16*; α(M)=0.00253 *4* α(N)=0.000625 *9*; α(O)=0.0001126 *16*; α(P)=7.66×10^{-6} *11*
		491.28 *12*	100 *17*	0.0	1/2$^-$				
519.6	(15/2$^+$)	320.6[‡] *1*	100[‡] *7*	199.0	(11/2$^+$)	Q[‡]			
		369.8[‡] *1*	27.7[‡] *19*	149.78	13/2$^+$	D+Q[‡]			
522.53	(3/2$^-$,5/2$^-$)	290.33 *10*	67 *27*	232.16	(5/2)$^-$	(M1)		0.334	α(K)=0.275 *4*; α(L)=0.0450 *7*; α(M)=0.01038 *15* α(N)=0.00257 *4*; α(O)=0.000463 *7*; α(P)=3.13×10^{-5} *5*
		334.7 *3*	49 *29*	187.81	3/2$^-$				
		408.4 *2*	100 *20*	114.158	3/2$^-$	(M1,E2)		0.09 *5*	α(K)=0.07 *4*; α(L)=0.014 *5*; α(M)=0.0032 *9* α(N)=0.00079 *23*; α(O)=0.00014 *5*; α(P)=8.E−6 *5*
		508.26 *20*	42 *11*	14.276	5/2$^-$	(M1+E2)		0.05 *3*	α(K)=0.040 *22*; α(L)=0.007 *3*; α(M)=0.0017 *6* α(N)=0.00042 *15*; α(O)=7.E−5 *3*; α(P)=4.E−6 *3*
		520.97 *25*	60 *13*	1.642	3/2$^-$	(E2)		0.0224	α(K)=0.01669 *24*; α(L)=0.00436 *7*; α(M)=0.001057 *15* α(N)=0.000260 *4*; α(O)=4.40×10^{-5} *7*; α(P)=1.760×10^{-6} *25*
		522.66 *25*	56 *11*	0.0	1/2$^-$	(E2)		0.0222	α(K)=0.01657 *24*; α(L)=0.00432 *6*; α(M)=0.001046 *15* α(N)=0.000257 *4*; α(O)=4.36×10^{-5} *7*; α(P)=1.747×10^{-6} *25*
603.3	(15/2$^+$)	453.5[‡] *1*	100	149.78	13/2$^+$	D+Q[‡]			
907.4	(17/2$^+$)	304.0[‡] *2*	74[‡] *10*	603.3	(15/2$^+$)	D+Q[‡]			
		387.9[‡] *2*	84[‡] *12*	519.6	(15/2$^+$)	D+Q[‡]			
		416.5[‡] *2*	100[‡] *14*	491.0	(17/2$^+$)				
980.5	(19/2$^+$)	377.3[‡] *2*	11.6[‡] *14*	603.3	(15/2$^+$)	Q[‡]			
		461.0[‡] *1*	100[‡] *7*	519.6	(15/2$^+$)	Q[‡]			
		489.5[‡] *1*	69[‡] *6*	491.0	(17/2$^+$)	D+Q[‡]			
1003.4	(21/2$^+$)	512.4[‡] *3*	100	491.0	(17/2$^+$)				
1103.5	($^+$)	500.2[‡] *3*	100	603.3	(15/2$^+$)	D+Q[‡]			
1159.9	(19/2$^+$)	556.5[‡] *3*	66[‡] *9*	603.3	(15/2$^+$)	(Q)[‡]			
		640.2[‡] *4*	29[‡] *6*	519.6	(15/2$^+$)	(Q)[‡]			
		669.1[‡] *3*	100[‡] *15*	491.0	(17/2$^+$)	D+Q[‡]			
1320.9	(21/2$^-$)	161.0[‡] *2*	12.8[‡] *12*	1159.9	(19/2$^+$)				
		340.3[‡] *2*	100[‡] *10*	980.5	(19/2$^+$)				
1454.8	(25/2$^-$)	133.9[‡] *2*	100	1320.9	(21/2$^-$)	(E2)		1.532	α(K)=0.438 *7*; α(L)=0.822 *13*; α(M)=0.212 *4*

$^{193}_{78}Pt_{115}$-6

Adopted Levels, Gammas (continued)

γ(^{193}Pt) (continued)

E_i(level)	J_i^π	E_γ	I_γ †	E_f	J_f^π	Mult.	Comments
							α(N)=0.0518 *8*; α(O)=0.00811 *13*; α(P)=4.27×10^{-5} *7* B(E2)(W.u.)=24.5 *24* Mult.: From (HI,xnγ) and RUL.
1510.4		189.5‡ *2*	100	1320.9	(21/2$^-$)		
1631.8	(25/2$^+$)	628.4‡ *2*	100	1003.4	(21/2$^+$)	Q‡	
1689.9	(27/2$^-$)	235.2‡ *1*	100	1454.8	(25/2$^-$)	D‡	
1776.9		266.5‡ *3*	100	1510.4		(Q)‡	
1986.7?		296.8‡& *3*	100	1689.9	(27/2$^-$)		
1992.2	(29/2$^-$)	302.3‡ *2*	16‡ *3*	1689.9	(27/2$^-$)		
		537.4‡ *2*	100‡ *12*	1454.8	(25/2$^-$)	Q‡	
2335.2	(29/2$^+$)	703.4‡ *3*	100	1631.8	(25/2$^+$)	Q‡	
2696.2	(33/2$^+$)	361.0‡ *3*	100	2335.2	(29/2$^+$)	Q‡	
3129.2	(37/2$^+$)	433.0‡ *3*	100	2696.2	(33/2$^+$)		

† Relative photon branching from level.
‡ From ^{192}Os(α,3nγ).
# Additional information 1.
@ If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
& Placement of transition in the level scheme is uncertain.

$^{193}_{78}Pt_{115}$-7

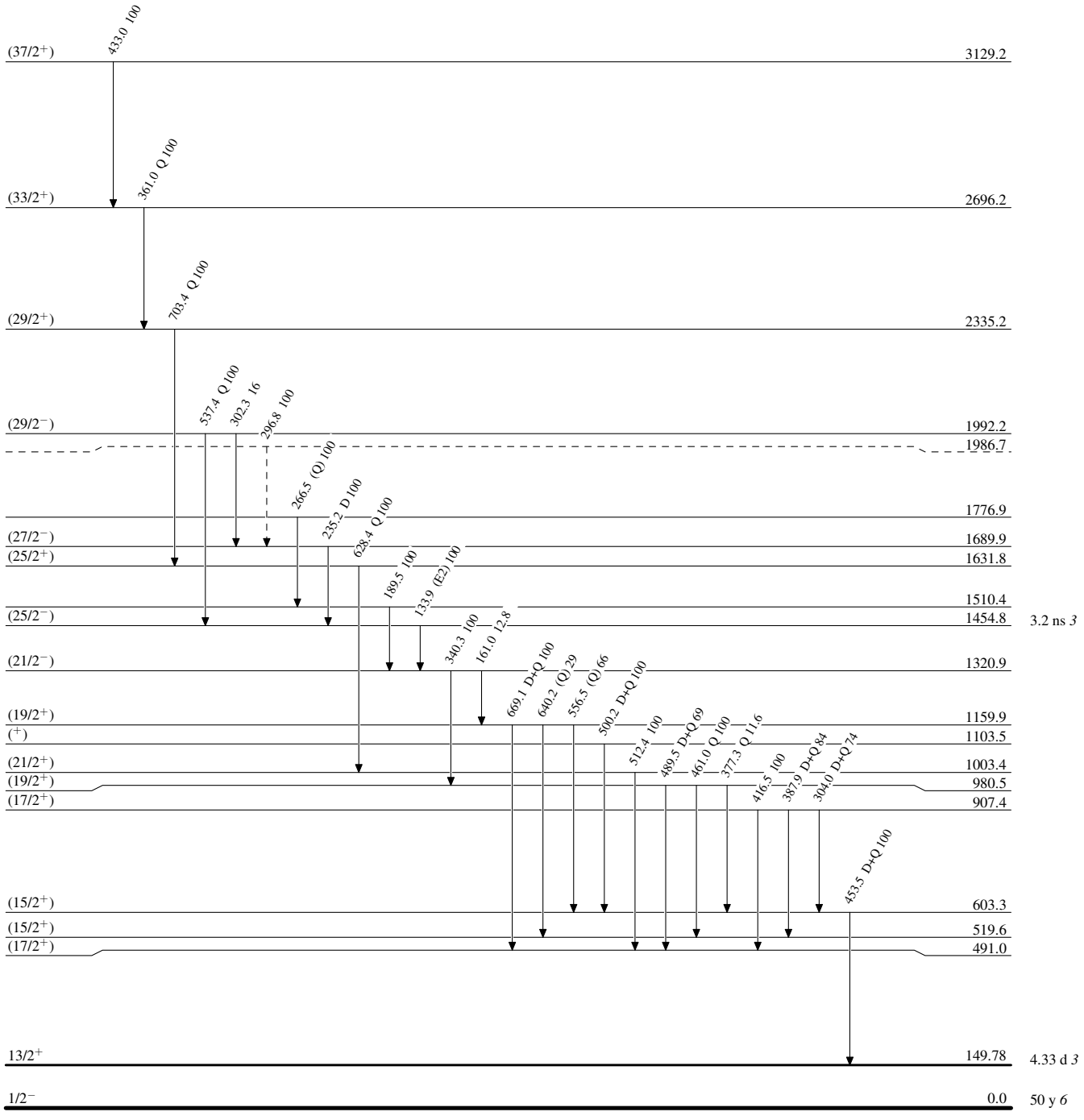
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

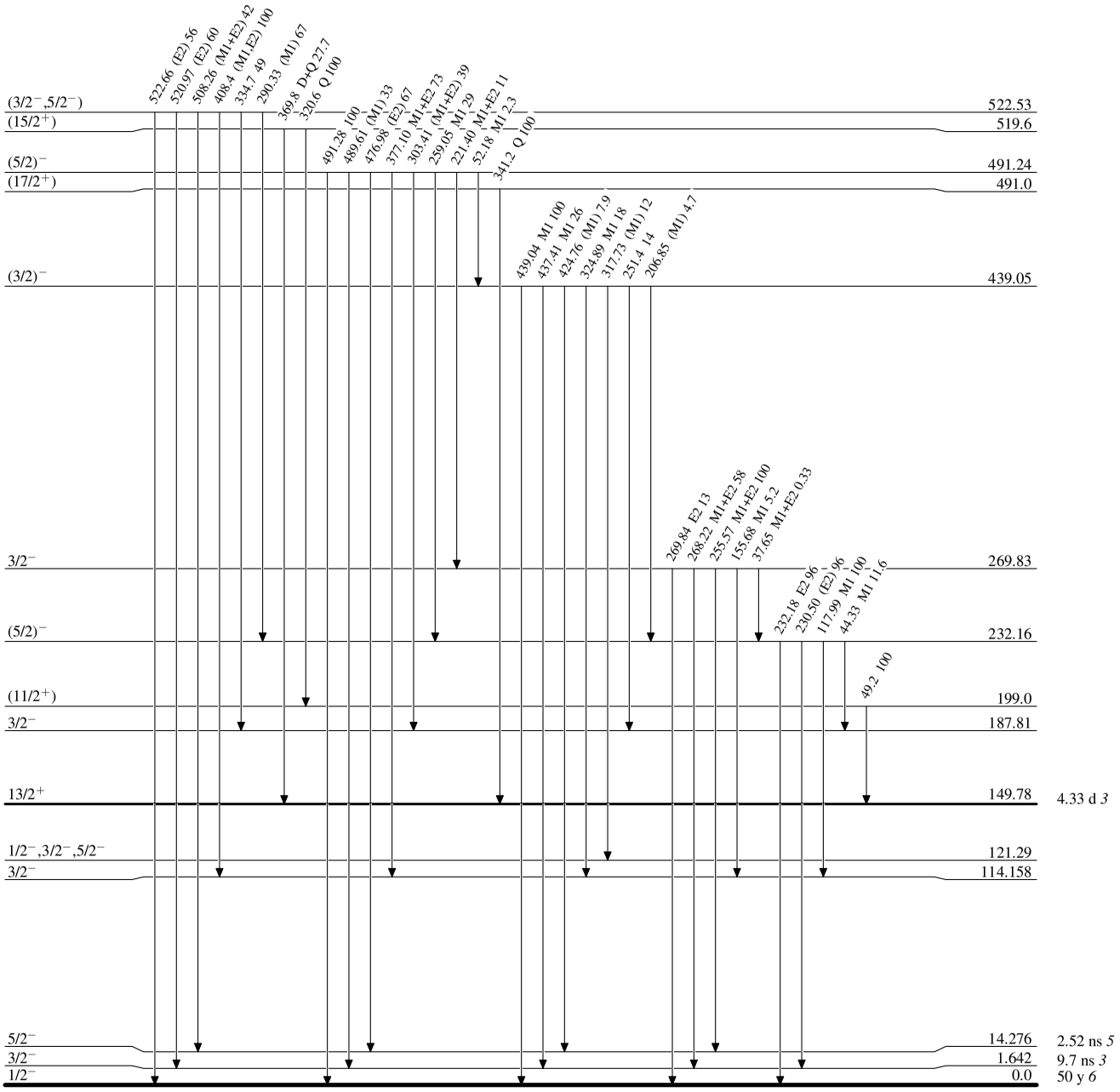


$^{193}_{78}Pt_{115}$

Adopted Levels, Gammas

Level Scheme (continued)

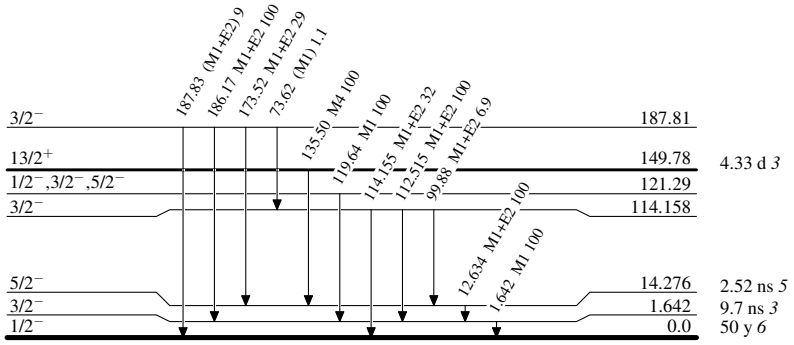
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

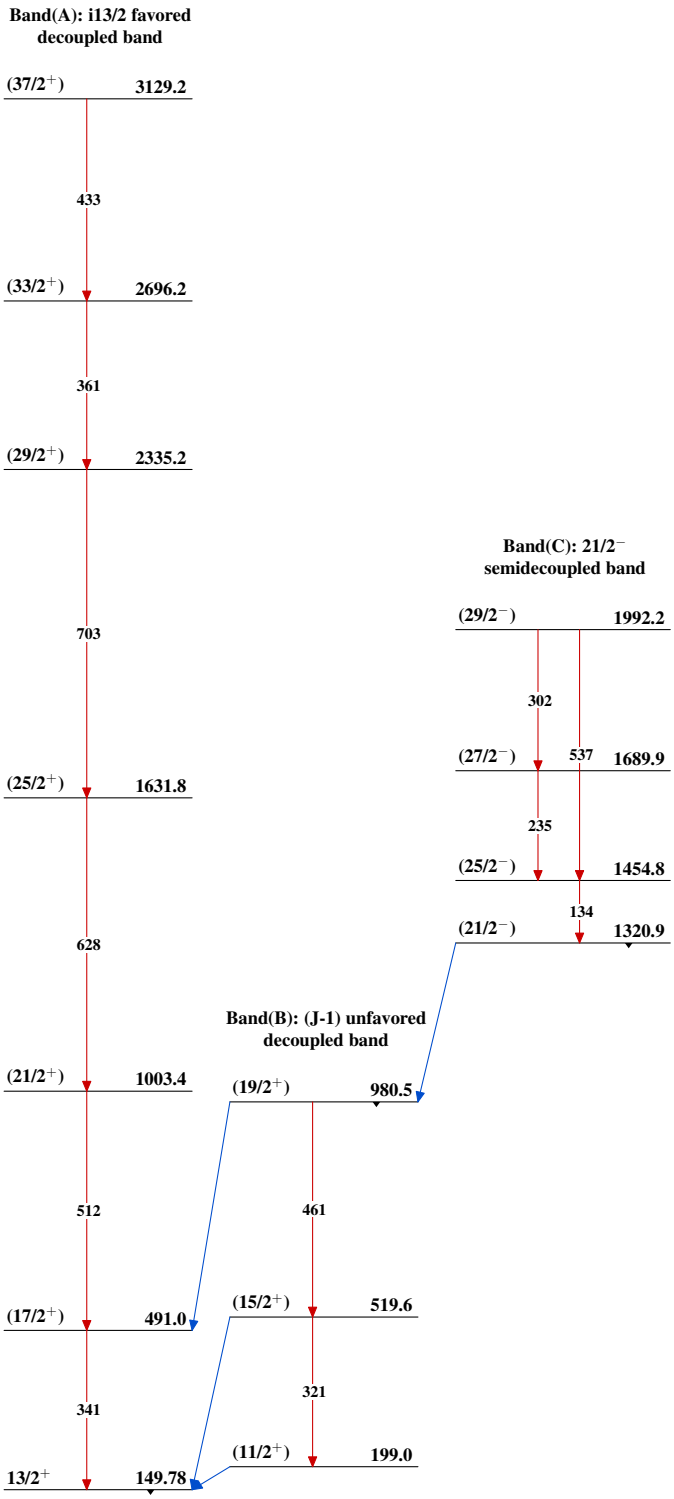
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{193}_{78}Pt_{115}$

Adopted Levels, Gammas



$^{193}_{78}Pt_{115}$