Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 121, 395 (2014)	1-Mar-2014

Q(β^-)=−226.8 *10*; S(n)=6105.06 *12*; S(p)=7551.5 *21*; Q(α)=1175.6 *18* 2012Wa38

^{195}Pt Levels

For multi-J supersymmetry scheme of interacting boson-fermion model, see 1986Ma57, 1983Ve02, and 1987Ve09.
For Nilsson model configuration, see 1978Be09 and 1976Ya07.

Cross Reference (XREF) Flags

A	^{195}Ir β^- decay (2.29 h)	F	^{194}Pt(d,p)	K	^{196}Pt(p,d)
B	^{195}Ir β^- decay (3.67 h)	G	^{195}Pt(n,n′γ)	L	^{196}Pt(d,t)
C	^{195}Pt IT decay (4.010 d)	H	^{195}Pt(γ,γ′)	M	^{196}Pt(^{3}He,α)
D	^{195}Au ε decay (186.01 d)	I	Coulomb excitation	N	^{197}Au(p,^{3}He)
E	^{194}Pt(n,γ) E=thermal	J	^{195}Pt(d,d′)	O	^{192}Os(^{7}Li,p3nγ)

E(level)[d]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[†]	1/2$^-$[f]	stable	ABCDEFGHIJKLMNO	μ=+0.60952 *6* (1951Pr02,2011StZZ) J$^\pi$: from nuclear magnetic resonance (1976Fu06) and L=1 in ^{194}Pt(d,p). μ: Nuclear magnetic resonance and ^{23}Na standard (1951Pr02). Change of the mean-square charge radius (rel to ^{198}Pt) Δ<r^2>≈−0.1 (fm)^2 (1988Ro20).
98.880[‡] *2*	3/2$^-$[f]	0.170 ns *19*	ABCDEFGHIJKL NO	μ=−0.62 *6* (1967Ag01,2011StZZ) J$^\pi$: L=1 in ^{194}Pt(d,p), γ to 1/2$^-$ is M1+E2. T$_{1/2}$: from Mossbauer (1965Ha36). Others: 0.165 ns *10* (1968GeZX), 0.152 ns *14* (1966Bu04), 0.83 ns *14* (1972Sh38), ≥0.15 ns (1966At03), 0.163 ns *2* (1974Ru03). μ: Mossbauer effect and ^{195}Pt standard (1967Ag01). Others: −0.60 *15* (1967Bu20), −0.65 *15* (1966At03).
129.772[#] *3*	5/2$^-$[f]	0.67 ns *3*	ABCDEFGHI KLMNO	μ=+0.90 *6* (1974Ru03,2011StZZ) J$^\pi$: γ to 1/2$^-$ is E2 and L=3 in ^{194}Pt(d,p). T$_{1/2}$: weighted av of 0.62 ns *7* (1966Bl08), 0.69 ns *3* (1966Gr20,1966Gr20). Other: 0.61 ns *7* (Coul. ex. B(E2)↑=0.19 *2*). μ: Mossbauer effect and ^{195}Pt standard (1974Ru03). Others: 0.89 *11* (1972Wo06), +0.81 *+15−21* (1971Wa17).
199.532[@] *2*	3/2$^-$[f]	0.66 ns *14*	B DEFG I KL NO	J$^\pi$: γ to 1/2$^-$ is M1+E2. T$_{1/2}$: from B(E2)↑=0.058 *9* (Coul. ex.).
211.406[†] *2*	3/2$^-$[f]	49 ps *8*	ABCDEFG IJKL NO	μ=+0.16 *3* (1972Va16,2011StZZ) J$^\pi$: γ to 1/2$^-$ is M1+E2. T$_{1/2}$: from B(E2)↑=0.39 *2* (Coul. ex.). Others: 53 ps *9* (recoil-distance Doppler,1971NoZT), 67 ps *8* (pulsed beam, 1965Bl10). μ: From g=+0.104 *21*, CEAD method (1972Va16).
222.230 *4*	1/2$^-$[f]		E G IJ	XREF: J(220). J$^\pi$: γ to 1/2$^-$ is M1, $\gamma(\theta)$ to 1/2$^-$ in ^{195}Pt(n,n′γ).
239.264[†] *4*	5/2$^-$[f]	70 ps *9*	BC EFG I KL NO	J$^\pi$: γ to 3/2$^-$ is M1+E2 and $\gamma(\theta)$ to 1/2$^-$ (Coul. ex. 1959Mc69,1970Br26). T$_{1/2}$: from B(E2)↑=0.70 *3* (Coul. ex.). Other: 80 ps *4* in recoil-distance Doppler (1971NoZT).

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Adopted Levels, Gammas (continued)

^{195}Pt Levels (continued)

E(level)[d]	Jπ	$T_{1/2}$	XREF	Comments
				μ=+0.52 *5* (1973Ga31,2011STZZ), +0.64 *9* (1994La02,2011STZZ). μ: Others: +0.56 *7* (1972Va16), 0.74 *13* (1972Sp03).
259.077[a] *23*	13/2$^+$	4.010 d *5*	BC E G KLM O	%IT=100 μ=−0.606 *15* (1972Ba22,2011StZZ) Q=+1.4 *6* (1985Ed05,2011StZZ) Jπ: L=6 in ^{196}Pt(d,t),(^{3}He,α), γ(θ,H,t) analysis consistent only with J=13/2 (^{195}Pt IT decay,1972Ba22). $T_{1/2}$: from γ(t) measurements (^{195}Pt IT decay,2000Mo05). Others: 4.02 d *1* (γ(t) measurements in 1972PoZU), 4.1 d *1* (1967Ab07), 4.5 d *1* (1963Ka34), 3.5 d *2* (1963Ve13), 4.08 d *12* (1960Br11), 3.75 d *25* (1978LeZA). μ=− from 1991Sc28. μ: From NMR on oriented ^{195}Pt (1972Ba22). Q: Static nuclear orientation with gamma detection (1985Ed05). 1Other: +1.4 *7* (1985Ed03).
389.132[‡] *4*	5/2$^-$[f]	9 ps *4*	B E G I	Jπ: γ(θ)'s to 5/2$^-$ and 3/2$^-$ (^{195}Pt(n,n′γ),1983Gh01), and level is Coulomb-excited. $T_{1/2}$: from B(E2)↑=0.025 *2* in Coul. ex. μ=+0.39 *10* (1994La02,2011STZZ). μ: Transient field integral perturbed angular correlation (1994La02).
419.702 *3*	3/2$^-$[f]	54 ps *8*	E G I	Jπ: J from γ(θ) to 1/2$^-$ (^{195}Pt(n,n′γ),1983Gh01) and π from M1(+E2) γ to 3/2$^-$ (Coul. ex.,1985Br31). $T_{1/2}$: from B(E2)↑=0.030 *2* in Coul. ex.
431.98 *2*	9/2$^+$		B EFG I KL	Jπ: γ to 13/2$^+$ is E2 and L=4 in ^{194}Pt(p,d), ^{196}Pt(d,p).
432	(17/2$^+$)		M	Jπ: 1985Th02 suggest that the level is different from the 432.2 level with L(d,p)=4 and probably has Jπ=17/2$^+$ based on σ(θ).
449.65[#] *5*	(7/2)$^-$		B I L	Jπ: γ to 5/2$^-$ is M1+E2 and L=(3) in ^{196}Pt(p,d). Tentatively assigned to Kπ=5/2$^-$[532] band.
455.272 *7*	5/2$^-$[f]	>10.5 ps	B E G I KL	XREF: K(450)L(453). Jπ: J=5/2 from γ(θ)'s to 5/2$^-$ and 3/2$^-$ (^{194}Pt(n,n′γ),1983Gh01) and π from M1 γ to 3/2$^-$. $T_{1/2}$: from Doppler-broadened line-shape measurements (1994La02). μ=+1.6 *6* (1994La02,2011STZZ). μ: Transient field integral perturbed angular correlation (1994La02).
507.917[@] *6*	5/2$^-$,7/2$^-$	9.5 ps *22*	B E G I KLM	Jπ: L=3 in ^{194}Pt(d,p) and ^{196}Pt(d,t),(^{3}He,α). γ(θ) in (n,n′γ) (1983Gh01) favor 7/2. But Jπ=5/2$^-$ from tentatively-assigned 3/2$^-$[541] band member (1976Ya07). But Jπ=7/2$^-$ from U(6/12) supersymmetry analysis with configuration=<6,1,0>-(2, 0) (1986Ma57). If their assignments are correct, this level could be a doublet. $T_{1/2}$: from B(E2) in Coul. ex. if branching (409γ)=0.46 *5*. μ=+0.55 *8* (1994La02,2011STZZ). μ: Transient field integral perturbed angular correlation (1994La02).
524.846 *3*	3/2$^-$[f]		EFG IJ	XREF: J(524). Jπ: L=1 in ^{194}Pt(p,d) and γ to 5/2$^-$ is M1+E2.
539? *3*			F	
544.1 *5*	(5/2$^-$)[f]	>2.8 ps	G I	Jπ: γ(θ) to 3/2$^-$ and γ to 1/2$^-$ in ^{195}Pt(n,n′γ). $T_{1/2}$: from Doppler-broadened line-shape measurements (1994La02). μ=+1.5 *4* (1994La02,2011STZZ). μ: Transient field integral perturbed angular correlation (1994La02).
547.16 *10*	(11/2$^+$)		B FG K m	XREF: m(558). Jπ: γ to 13/2$^+$ is (M1+E2) and L=(6) in ^{196}Pt(p,d), and γ from

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Adopted Levels, Gammas (continued)

^{195}Pt Levels (continued)

E(level)[d]	J^{π}	$T_{1/2}$	XREF	Comments
				$9/2^-$ is (E1). L(^{3}He,α)=5,6 for E=558.
562.80[#] *5*	$9/2^-$	14 ps *3*	B G I K m	XREF: m(558). $T_{1/2}$: from B(E2) in Coul. ex. J^{π}: L(^{3}He,α)=5,6 for E=558, E2 γ to $5/2^-$. μ=+1.55 *12* (1994La02,2011STZZ). μ: Transient field integral perturbed angular correlation (1994La02).
590.902 *4*	$3/2^-$[f]		E G	J^{π}: J=3/2 from $\gamma(\theta)$ to $1/2^-$ in ^{195}Pt(n,n′γ) and π=− from M1(+E2) γ to $1/2^-$.
612.72[‡] *8*	$(7/2)^-$	6 ps *3*	B FG I KLM	XREF: K(620). $T_{1/2}$: from B(E2) in Coul. ex. J^{π}: γ to $5/2^-$ is M1(+E2), and L=3 in ^{194}Pt(d,p) and ^{196}Pt(p,d); no γ to $1/2^-$ (g.s.). μ=+1.4 *4* (1994La02,2011StZZ). μ: Transient field integral perturbed angular correlation (1994La02).
627.8[a] *5*	$17/2^+$		O	
630.147 *6*	$1/2^-,3/2^-$[eg]		E G	
632.1 *5*	$1/2^-,3/2^-$		I	J^{π}: from $\gamma(\theta)$ to $5/2^-$ (Coul. ex.).
664.205 *6*	$(5/2^-,7/2^-)$		E G L	J^{π}: γ's to $1/2^-$, $3/2^-$. Not seen in average resonance capture.
667.0 *7*	$(9/2^-)$	16 ps *4*	I	J^{π}: γ to $5/2^-$ is (E2) and U(6/12) multi-J supersymmetry scheme of interacting boson-fermion model (Coul. ex., 1986Ma57). $T_{1/2}$: from 1994La02. μ=+1.52 *16* (1994La02,2011StZZ). μ: Transient field integral perturbed angular correlation (1994La02).
678.3 *10*	$5/2^-,7/2^-$	>72.8 ps	I K	J^{π}: L=3 in ^{196}Pt(p,d). $T_{1/2}$: from Doppler-broadened line-shape measurements (1994La02). μ=+1.23 *28* (1994La02,2011StZZ). μ: Transient field integral perturbed angular correlation (1994La02). E(level): from Coul. ex., uncertainty assigned by evaluator.
695.30[†] *6*	$(7/2)^-$		B G KL	J^{π}: J=(7/2) from $\gamma(\theta)$ to $(5/2)^-$ in ^{195}Pt(n,n′γ) and π=− from L=3 in ^{196}Pt(p,d).
739.545 *5*	$1/2^-,3/2^-$		E G L	J^{π}: L=1 in ^{196}Pt(d,t).
758.3[b] *5*	$15/2^+$		O	
765.8[@] *9*	$(7/2)^-$		KL	J^{π}: L=3 in ^{196}Pt(p,d) and ^{196}Pt(d,t). May be be $3/2^-$[541] band member $(7/2^-)$ in ^{194}Pt(d,p) (1976Ya07).
793 *2*	$11/2^+,13/2^+$		KLM	J^{π}: L=6 in ^{196}Pt(^{3}He,α) and ^{196}Pt(p,d).
793.0 *10*	$3/2^-$		I	J^{π}: γ to $1/2^-$ is M1+E2. $T_{1/2}$: from B(E2)↑=0.0149 *24* in Coul. ex. $T_{1/2}$: 12 ps *+4−6* if δ=+1.0 *4*, 22 ps *4* if δ=3.6 *14*.
814.50[†] *4*	$9/2^-$		B G KL	XREF: K(817)L(816). J^{π}: γ to $5/2^-$ is E2 and L=5 in ^{196}Pt(p,d),(d,t).
821.79 *2*	$5/2^+$		E G	J^{π}: J^{π}=$5/2^+$,$(5/2^-,1/2^-,3/2^-)$ from average resonance neutron capture measurements. γ to $9/2^+$ is E2.
875 *1*	$5/2^-,7/2^-$		KL	XREF: K(883). J^{π}: L=3 in ^{196}Pt(p,d).
895.41 *6*	$9/2^-$		B G M	J^{π}: J=9/2 from $\gamma(\theta)$ to $5/2^-$ in ^{195}Pt(n,n′γ), γ to $5/2^-$ makes $9/2^+$ impracticable.
915? *1*			L	
925? *5*	$(5/2^-,7/2^-)$		K	J^{π}: L=(3) in ^{196}Pt(p,d).
926.89 *5*	$1/2^-,3/2^-$[eg]		EF J L	XREF: F(930). J^{π}: L=1 in ^{194}Pt(d,p).
930.70[‡] *6*	$(9/2)^-$		B	J^{π}: γ to $(7/2)^-$ is E2(+M1) and log *ft*=5.59 from $11/2^-$ in ^{195}Ir β^- decay.
971.3 *8*	$5/2^-,7/2^-$		KLM	XREF: K(980). J^{π}: L=3 in ^{196}Pt(d,t) and ^{196}Pt(p,d).

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Adopted Levels, Gammas (continued)

^{195}Pt Levels (continued)

E(level)[d]	Jπ	$T_{1/2}$	XREF	Comments
1016 *5*	(5/2⁻,7/2⁻)		J	Jπ: L=(3) in ^{196}Pt(p,d).
1049.3 *7*			LM	XREF: M(1043). Jπ: J=9/2⁻,11/2,13/2⁺ from J=5,6 in ^{196}Pt(^{3}He,α).
1058 *5*	5/2⁻,7/2⁻		K	Jπ: L=3 in ^{196}Pt(p,d).
1092.4 *5*	(5/2 to 13/2)		I	Jπ: based on ^{32}S,γ(θ) measurements and U(6/12) supersymmetry analysis (1986Ma57).
1096.2 *10*	1/2⁻,3/2⁻[e]		EFG J LM	XREF: F(1100)J(1106)L(1098)M(1107). Jπ: L=1 in ^{194}Pt(d,p),(p,p) and ^{196}Pt(p,d).
1122.60 *2*	3/2⁺,5/2⁺		E G J	Jπ: Jπ=5/2⁺,(5/2⁻,1/2⁺,3/2⁺) from average resonance neutron capture measurements. J=3/2,5/2 from γ(θ) to 5/2⁺ in ^{195}Pt(n,n′γ). π=+ from E2(+M1) γ to 5/2⁺ in ^{194}Pt(n,γ).
1132.40 *2*	1/2⁻,3/2⁻[e]		E I	
1151 *6*	1/2⁻,3/2⁻		K	Jπ: L=1 in ^{196}Pt(p,d).
1155.8 *5*			I L	XREF: L(1156).
1160.38 *3*	1/2⁻,3/2⁻		EF K	XREF: K(1151). Jπ: L=1 in ^{194}Pt(d,p) and ^{196}Pt(p,d).
1166.4 *6*	1/2⁺,3/2⁺[e]		E	
1187.3[b] *5*	19/2⁺		O	
1189 *6*	5/2⁻,7/2⁻	≥2.4×10⁻⁶ eV	H KL	XREF: H(1180). Jπ: L=3 in ^{196}Pt(p,d) and ^{196}Pt(d,t). $T_{1/2}$: from $g\Gamma_0\Gamma\gamma/\Gamma=2.4\times10^{-6}$ eV.
1206.0[a] *6*	21/2⁺		O	
1271.0 *3*	1/2⁻,3/2⁻[e]		E	
1287.7 *4*	1/2⁻,3/2⁻[e]		E K	Jπ: L=1 in ^{196}Pt(p,d).
1294 *1*	1/2⁻,3/2⁻		F	Jπ: L=1 in ^{194}Pt(d,p).
1306 *10*			M	Jπ: L=J=9/2⁻,11/2,13/2⁺ from L=5,6 in ^{196}Pt(^{3}He,α).
1312.7 *7*	1/2⁺,3/2⁺[e]		E J	XREF: J(1300).
1320.8 *4*	1/2⁻,3/2⁻[e]		E	
1334.7 *4*	1/2⁻,3/2⁻[e]		EF K	
1346.9 *6*	1/2,3/2[e]		E	
1372.7 *4*	1/2⁻,3/2⁻[e]		E	
1378 *10*	11/2⁺,13/2⁺		K M	Jπ: L=6 in ^{196}Pt(^{3}He,α).
1391.8[c] *6*	21/2⁻		O	
1411.1 *5*	1/2⁻,3/2⁻[e]		E	
1425.0 *5*	1/2⁻,3/2⁻[e]		EF	
1438.3 *4*	1/2,3/2[e]		E	
1445.3 *5*	1/2⁻,3/2⁻[e]		EF K	
1505 *10*			M	
1535.7[c] *8*	25/2⁻		O	
1577 *2*	1/2⁻,3/2⁻		F	Jπ: L=1 in ^{194}Pt(d,p).
1590? *12*			K	
1681 *3*	11/2⁺,13/2⁺		F M	Jπ: L=6 in ^{196}Pt(^{3}He,α).
1766 *2*	(1/2⁻,3/2⁻)		F	Jπ: L=(1) in ^{194}Pt(d,p).
1785 *10*			J M	
1840 *2*	1/2⁻,3/2⁻		F	Jπ: L=1 in ^{194}Pt(d,p).
1872 *2*	(5/2⁻,7/2⁻)		F	Jπ: L=(3) in ^{194}Pt(d,p).
1899[&] *1*	(9/2⁺)		F	Jπ: may be 9/2⁺[615] bandhead in ^{194}Pt(d,p) (1976Ya07).
1911 *10*			M	
1915.6[a] *8*	(25/2⁺)		O	
1947.3[c] *10*	29/2⁻		O	
1972 *3*	1/2⁻,3/2⁻		M	Jπ: L=1 in ^{194}Pt(d,p).
2128 *10*	11/2⁺,13/2⁺		M	Jπ: L=6 in ^{196}Pt(^{3}He,α).
2291 *10*			M	
2330 *20*			J	

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Adopted Levels, Gammas (continued)

^{195}Pt Levels (continued)

E(level)[d]	J^π	XREF
2390 *20*		J
2437 *10*		M
2592.6[c] *11*	33/2−	O

† Band(A): K^π=1/2− band. configuration=1/2−[530]. Band members: 1/2− to 9/2−.
‡ Band(B): K^π=3/2− band. configuration=3/2−[532]. Band members: 3/2− to 9/2−.
# Band(C): K^π=5/2− band. configuration=5/2−[532]. Band members: 5/2− to 9/2−.
@ Band(D): K^π=3/2− band. configuration=3/2−[541]. Band members: 3/2− to (7/2)−.
& Band(E): K^π=9/2+ band. configuration=9/2+[615]. Band members: 9/2+.
a Band(a): $\nu i^{-1}_{13/2}$ sequence based on 259 level,α=+1/2.
b Band(e): $\nu i^{-1}_{13/2}$ sequence based on 759 level,α=−1/2.
c Band(F): Sequence on 21/2−. 2011Fa08 propose it is associated with the $\nu i^{-2}_{13/2}\otimes\nu j^{-1}$, where j=$p_{3/2}$ or $f_{5/2}$ configuration.
d For the states connected by γ's, E(level) are from Eγ using least-squares fit.
e From average resonance neutron capture measurements: ratios of reduced primary γ-ray intensities observed in 2- and 24-keV average neutron energy in ^{194}Pt(n,γ).
f Analysis for multi-J supersymmetry scheme of interacting boson-fermion model (1987Ve09) supports given values.
g Analysis for multi-J supersymmetry scheme of interacting boson-fermion model (1987Ve09) favors J^π=1/2−.

$\gamma(^{195}Pt)$

All data are from ^{195}Ir β^- decay (3.67 h), except as noted.

E_i(level)	J^π_i	E_γ	I_γ[b]	E_f	J^π_f	Mult.	δ	α[c]	Comments
98.880	3/2⁻	98.857 *10*	100	0.0	1/2⁻	M1+E2	−0.130 *4*	6.86	B(M1)(W.u.)=0.0168 *19*; B(E2)(W.u.)=11.1 *15* E_γ: from 1972HsZX in ^{195}Au ε decay (186.01 d).
129.772	5/2⁻	30.876 *6*	92 *4*	98.880	3/2⁻	M1+E2	−0.021 *4*	37.6	B(M1)(W.u.)=0.0269 *21*; B(E2)(W.u.)=4.8 *19* E_γ: from 1972HsZX in ^{195}Au ε decay (186.01 d). I_γ: from ^{195}Au ε decay (186.01 d).
		129.735 *10*	100 *3*	0.0	1/2⁻	E2		1.732	B(E2)(W.u.)=8.9 *7* E_γ: from 1972HsZX in ^{195}Au ε decay (186.01 d). I_γ: from ^{195}Au ε decay (186.01 d).
199.532	3/2⁻	100.652[#] *3*	49[#] *5*	98.880	3/2⁻	M1(+E2)[#]	+0.02[&] *23*	6.54 *14*	B(M1)(W.u.)=(0.0030 *8*); B(E2)(W.u.)=(0.05 +*106*−*5*)
		199.533[#] *2*	100[#] *10*	0.0	1/2⁻	M1+E2	+1.2 *2*	0.60 *6*	B(M1)(W.u.)=0.00033 *11*; B(E2)(W.u.)=4.5 *13* δ: +1.2 *2*. Others: +0.10 *5* (1985Br31), +0.55 +*31*−*20* (1970Br26), +1.1 *2* (1982Ku22) from $\gamma(\theta)$ in Coul. ex.
211.406	3/2⁻	211.407[#] *2*	100	0.0	1/2⁻	M1+E2	+0.38 *3*	0.737 *14*	B(M1)(W.u.)=0.024 *4*; B(E2)(W.u.)=30 *7*
222.230	1/2⁻	123.337[#] *10*	100[#] *10*	98.880	3/2⁻	M1(+E2)[#]	<0.32[#]	3.59 *9*	
		222.230[#] *5*	49[#] *6*	0.0	1/2⁻	M1		0.696	α(K)=0.594; α(L)=0.098; α(M)=0.0225; α(N)=0.0074 Mult=M1(+E2), δ<0.54 in ^{194}Pt(n,γ). γ to 1/2⁻ rules out E2 component.
239.264	5/2⁻	(28[&])	2.5[‡] *1*	211.406	3/2⁻				
		140.385[#] *9*	55[‡] *3*	98.880	3/2⁻	M1+E2[‡]	−0.17[‡] *4*	2.49	B(M1)(W.u.)=0.019 *3*; B(E2)(W.u.)=11 *6*
		239.261[#] *5*	100[‡] *5*	0.0	1/2⁻	E2[&]		0.198	B(E2)(W.u.)=49 *7*
259.077	13/2⁺	(19.8)	0.24[‡] *1*	239.264	5/2⁻	[M4][†]		6.10×10⁸ *21*	B(M4)(W.u.)=6.E+1 *3*
		129.5[‡] *2*	100[‡] *5*	129.772	5/2⁻	M4[‡]		1135 *19*	B(M4)(W.u.)=0.00107 *9* E_γ: from E(level) difference.
389.132	5/2⁻	150.11 *15*	9 *2*	239.264	5/2⁻	[M1][†]		2.09	B(M1)(W.u.)=0.030 *15*
		259.351[#] *6*	40 *5*	129.772	5/2⁻	M1(+E2)	+0.01[&] *3*	0.455	B(M1)(W.u.)=(0.026 *12*); B(E2)(W.u.)=(0.015 +*88*−*15*)
		290.254[#] *3*	100 *5*	98.880	3/2⁻	M1(+E2)	−0.47[&] *7*	0.293 *11*	B(M1)(W.u.)=(0.038 *17*); B(E2)(W.u.)=(38 *20*)
		389[&] *1*	2.7 *12*	0.0	1/2⁻	E2[&]		0.0471 *8*	B(E2)(W.u.)=1.3 *9* I_γ: from Iγ(389γ)/Iγ(290γ)=0.027 *12* in Coul. ex.
419.702	3/2⁻	197.479[#] *14*	10.3[#] *19*	222.230	1/2⁻	M1(+E2)[#]	<1.9[#]	0.74 *24*	B(M1)(W.u.)>0.00054?; B(E2)(W.u.)<37?
		320.819[#] *3*	16.3[#] *19*	98.880	3/2⁻	M1(+E2)[#]	−0.12[&] *5*	0.252 *5*	B(M1)(W.u.)=(0.0013 *3*); B(E2)(W.u.)=(0.07 *6*)
		419.705[#] *4*	100[#] *10*	0.0	1/2⁻	M1(+E2)[#]	+0.17[&] *2*	0.1214 *18*	B(M1)(W.u.)=(0.0036 *7*); B(E2)(W.u.)=(0.22 *7*)

$^{195}_{78}Pt_{117}$-6

Adopted Levels, Gammas (continued)

$\gamma(^{195}\mathrm{Pt})$ (continued)

E_i(level)	J_i^π	E_γ	I_γ[b]	E_f	J_f^π	Mult.	δ	α[c]	Comments
431.98	9/2+	172.906[#] *3*	100[#]	259.077	13/2+	E2[#]		0.596	Mult=E2 is discrepant with the conversion data from β^- decay (3.8 h), which leads to mult=M1+E2 with δ=+1.7 *+6−4*. The level scheme requires ΔJ=2.
449.65	(7/2)−	60.4	<15	389.132	5/2−				E_γ: from E(level) difference.
		211.3	2.7	239.264	5/2−	[M1,E2][†]		0.5 *3*	
		239.21	1.3	211.406	3/2−	[E2][†]		0.199	
		319.90 *7*	100 *5*	129.772	5/2−	M1+E2	1.5 *3*	0.135 *18*	
		350.90 *10*	10.6 *15*	98.880	3/2−	[E2][†]		0.0626	
455.272	5/2−	216.012[#] *9*	47 *5*	239.264	5/2−	M1(+E2)	<0.6[#]	0.69 *7*	B(E2)(W.u.)<60?
		243.855[#] *14*	42 *3*	211.406	3/2−	M1		0.539	B(M1)(W.u.)<0.017 Mult=M1(+E2), δ=0.37 *+54−37* in ^{194}Pt(n,γ).
		255.741[#] *30*	47 *5*	199.532	3/2−	(M1+E2)		0.32 *16*	
		325.18[e] *10*	42 *5*	129.772	5/2−				E_γ: seen in (n,γ), but energy is not consistent with placement from 455 level; no 325γ seen in (n,n′γ). Placement in β^- decay may be wrong.
		356.395[#] *14*	100 *10*	98.880	3/2−	M1		0.192	B(M1)(W.u.)<0.013
507.917	5/2−,7/2−	119.12[d] *10*	≤27[d]	389.132	5/2−	[M1,E2]		3.2 *9*	B(M1)(W.u.)<0.14; B(E2)(W.u.)<3.9×10^3
		296.5	4.6 *10*	211.406	3/2−	[E2]		0.102	B(E2)(W.u.)=7 *3* E_γ: from E(level) difference. I_γ: from Coul. ex.
		378.129[#] *9*	87[#] *11*	129.772	5/2−	M1		0.1635	B(M1)(W.u.)=0.014 *5*
		409.049[#] *11*	100[#] *11*	98.880	3/2−	E2		0.0412	B(E2)(W.u.)=29 *10*
524.846	3/2−	285.578[#] *4*	33[#] *4*	239.264	5/2−	M1+E2[&]	+0.14[&] *14*	0.345 *14*	
		313.449[#] *6*	18[#] *2*	211.406	3/2−				
		395.071[#] *3*	72[#] *8*	129.772	5/2−	M1(+E2)[#]	0.49[#] *+60−49*	0.13 *4*	
		425.978[#] *7*	39[#] *4*	98.880	3/2−	M1+E2[&]	−3.27[&] *283*	0.04 *7*	
		524.846[#] *4*	100[#] *10*	0.0	1/2−	M1+E2[&]	+2.25[&] *115*	0.030 *14*	
544.1	(5/2−)	305[&e]		239.264	5/2−				E_γ: a 305γ deexcites the 695 level in β^- decay and (n,n′γ).
		333[&]		211.406	3/2−				
		414[&]		129.772	5/2−				
		445.2[@]	56.25[@]	98.880	3/2−				
		544.2[@]	100[@]	0.0	1/2−				
547.16	(11/2+)	115.0 *5*	10 *3*	431.98	9/2+				
		287.80 *15*	100 *30*	259.077	13/2+	(M1+E2)		0.23 *12*	
562.80	9/2−	130.3 *5*	0.8 *5*	431.98	9/2+	[E1][†]		0.208 *4*	B(E1)(W.u.)=5.E−5 *3*
		324[&]	8.9 *11*	239.264	5/2−				I_γ: from $I\gamma$(324γ)/$I\gamma$(432γ)=0.089 *11* in Coul. ex.

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Adopted Levels, Gammas (continued)

$\gamma(^{195}Pt)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ[b]	E_f	J^π_f	Mult.	δ	α[c]	Comments
562.80	9/2⁻	432.86 *7*	100	129.772	5/2⁻	E2		0.0356	B(E2)(W.u.)=35 *8*
590.902	3/2⁻	368.671[#] *3*	92[#] *9*	222.230	1/2⁻	M1(+E2)[#]	<0.14[#]	0.174 *3*	
		379.503[#] *8*	29[#] *4*	211.406	3/2⁻				
		391.377[#] *10*	16[#] *3*	199.532	3/2⁻	M1(+E2)	<0.14	0.1481 *23*	
		590.895[#] *7*	100[#] *10*	0.0	1/2⁻	M1(+E2)[#]	<0.32[#]	0.0488 *17*	
612.72	(7/2)⁻	223.7 *3*	≈0.91	389.132	5/2⁻				
		373.39 *15*	100 *27*	239.264	5/2⁻	M1(+E2)		0.11 *6*	B(M1)(W.u.)<0.077; B(E2)(W.u.)<210
		401.30 *15*	27 *9*	211.406	3/2⁻	[E2]		0.0434	B(E2)(W.u.)=26 *17*
		513.6 *3*	2.7 *9*	98.880	3/2⁻				
627.8	17/2⁺	368.8 *5*	100	259.077	13/2⁺				
630.147	1/2⁻,3/2⁻	407.910[#] *12*	91[#] *11*	222.230	1/2⁻				
		418.741[#] *8*	100[#] *15*	211.406	3/2⁻				
		430.620[#] *10*	95[#] *11*	199.532	3/2⁻				
		531.263[#] *23*	61[#] *18*	98.880	3/2⁻				
		629.86[#] *25*	17[#] *5*	0.0	1/2⁻				
632.1	1/2⁻,3/2⁻	392.8[&] *5*		239.264	5/2⁻				
664.205	(5/2⁻,7/2⁻)	424.944[#] *18*	30[#] *8*	239.264	5/2⁻				I_γ: Iγ(425γ):Iγ(453γ):Iγ(465γ):Iγ(534γ)=26:17:24:33 reported in (n,n′γ).
		452.799[#] *16*	67[#] *12*	211.406	3/2⁻				
		464.674[#] *7*	100[#] *12*	199.532	3/2⁻				
		534.418[#] *15*	77[#] *15*	129.772	5/2⁻				
667.0	(9/2⁻)	428[&]	100	239.264	5/2⁻	(E2)[&]		0.0366	B(E2)(W.u.)=30 *8*
		537[&]	19 *3*	129.772	5/2⁻				I_γ: from Iγ(537γ)/Iγ(428γ)=0.19 *3* (Coul. ex.).
678.3	5/2⁻,7/2⁻	439[&]		239.264	5/2⁻				
695.30	(7/2)⁻	306.0	100	389.132	5/2⁻	[M1][†]		0.289	I_γ: Iγ(306γ):Iγ(456γ):Iγ(496γ):Iγ(565γ)=100:73:32:65 in (n,n′γ) suggest that perhaps too much of the 306γ intensity in β^- decay is assigned to this level.
		455.94 *10*	92 *6*	239.264	5/2⁻	M1(+E2)		0.07 *4*	
		495.8 *2*	60 *6*	199.532	3/2⁻	[E2][†]		0.0253	
		565.48 *15*	26 *6*	129.772	5/2⁻	[M1][†]		0.0565	
		596.48 *20*	25 *6*	98.880	3/2⁻	[E2][†]		0.01632	
739.545	1/2⁻,3/2⁻	319.843[#] *4*	100[#] *12*	419.702	3/2⁻	E2(+M1)[#]	≥1.23[#]	0.12 *4*	
		640.33[#] *16*	27[#] *4*	98.880	3/2⁻				
		739.74[#] *16*	56[#] *8*	0.0	1/2⁻				
758.3	15/2⁺	499.2[a] *5*	100[a]	259.077	13/2⁺				
793.0	3/2⁻	793[&]	100	0.0	1/2⁻	M1+E2[&]		0.016 *8*	B(M1)(W.u.)=0.0036 *6*; B(E2)(W.u.)=1.1 *2* δ: +1.0 *4* or 3.6 *14* (Coul. ex.).

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$\gamma(^{195}Pt)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ[b]	E_f	J^π_f	Mult.	δ	α[c]	Comments
814.50	9/2⁻	119.12[d] *10*	≤4[d]	695.30	(7/2)⁻	(M1)		4.04	
		201.65 *15*	15 *1*	612.72	(7/2)⁻	M1		0.912	
		251.61 *5*	19 *2*	562.80	9/2⁻	M1(+E2)		0.33 *17*	
		267.10 *15*	6 *1*	547.16	(11/2⁺)	(E1)		0.0344	
		306.48 *10*	14.2	507.917	5/2⁻,7/2⁻				
		359.31 *15*	48 *3*	455.272	5/2⁻	E2		0.0586	
		364.94 *7*	99 *3*	449.65	(7/2)⁻	M1+E2	1.5 *+5−3*	0.094 *14*	
		383.3[d] *3*	≤2.5[d]	431.98	9/2⁺				
		425.41 *20*	7 *2*	389.132	5/2⁻				
		575.35 *10*	16 *3*	239.264	5/2⁻	(E2)		0.01773	
		684.88 *7*	100 *5*	129.772	5/2⁻	E2		0.01198	
821.79	5/2⁺	389.803[#] *4*	100[#] *10*	431.98	9/2⁺	E2[#]		0.0469	Mult.,δ: M=E2(+M1), δ=1.9 *+11−4* in ^{194}Pt(n,γ), but γ to 9/2⁺ rules out (M1) component (evaluator).
		432.647[#] *22*	15.3[#] *42*	389.132	5/2⁻				
895.41	9/2⁻	283.0 *5*	9 *3*	612.72	(7/2)⁻				
		333.2 *5*	12 *5*	562.80	9/2⁻				
		387.1 *2*	49 *5*	507.917	5/2⁻,7/2⁻				
		440.40 *10*	33 *8*	455.272	5/2⁻				
		445.55 *15*	73 *9*	449.65	(7/2)⁻				
		506.16 *10*	100.0 *75*	389.132	5/2⁻				
926.89	1/2⁻,3/2⁻	687.686[#] *56*	100[#] *18*	239.264	5/2⁻				
		715.11[#] *14*	59[#] *9*	211.406	3/2⁻				
		926.85[#] *23*	57[#] *16*	0.0	1/2⁻				
930.70	(9/2)⁻	235.4 *3*	9.6 *18*	695.30	(7/2)⁻				
		383.3[d] *3*	≤8.93[d]	547.16	(11/2⁺)				
		422.4 *3*	5.0 *7*	507.917	5/2⁻,7/2⁻				
		475.38 *15*	5.7 *11*	455.272	5/2⁻				
		481.17 *10*	100 *7*	449.65	(7/2)⁻	E2(+M1)		0.06 *3*	
		498.6 *2*	4.3 *7*	431.98	9/2⁺				
		691.6 *3*	1.8 *4*	239.264	5/2⁻				
		800.90 *10*	39 *4*	129.772	5/2⁻				
1092.4	(5/2 to 13/2)	529.6[&] *5*		562.80	9/2⁻				
1096.2	1/2⁻,3/2⁻	1096.2[@]		0.0	1/2⁻				
1122.60	3/2⁺,5/2⁺	300.811[#] *2*	100[#]	821.79	5/2⁺	E2(+M1)[#]	2.1[#] *+17−4*	0.136 *25*	
1132.40	1/2⁻,3/2⁻	392.860[#] *19*	62[#] *14*	739.545	1/2⁻,3/2⁻				
		892.57[#] *26*	66[#] *17*	239.264	5/2⁻				
		1033.13[#] *22*	100[#] *21*	98.880	3/2⁻				
1160.38	1/2⁻,3/2⁻	420.711[#] *60*	16[#] *7*	739.545	1/2⁻,3/2⁻				

Adopted Levels, Gammas (continued)

γ(^{195}Pt) (continued)

E_i(level)	J^π_i	E_γ	I_γ[b]	E_f	J^π_f	E_i(level)	J^π_i	E_γ	I_γ[b]	E_f	J^π_f
1160.38	$1/2^-,3/2^-$	635.589[#] *31*	45[#] *6*	524.846	$3/2^-$	1206.0	$21/2^+$	578.1[a] *5*	100[a]	627.8	$17/2^+$
		705.07[#] *13*	36[#] *6*	455.272	$5/2^-$	1391.8	$21/2^-$	185.7[a] *5*	62[a] *6*	1206.0	$21/2^+$
		948.70[#] *15*	44[#] *7*	211.406	$3/2^-$			204.5[a] *5*	100[a] *13*	1187.3	$19/2^+$
		1030.60[#] *22*	31[#] *7*	129.772	$5/2^-$	1535.7	$25/2^-$	143.9[a] *5*	100[a]	1391.8	$21/2^-$
		1061.45[#] *10*	100[#] *12*	98.880	$3/2^-$	1915.6	$(25/2^+)$	709.6[a] *5*	100[a]	1206.0	$21/2^+$
1187.3	$19/2^+$	429.0[a] *5*	64[a] *8*	758.3	$15/2^+$	1947.3	$29/2^-$	411.6[a] *5*	100[a]	1535.7	$25/2^-$
		559.6[a] *5*	100[a] *8*	627.8	$17/2^+$	2592.6	$33/2^-$	645.3[a] *5*	100[a]	1947.3	$29/2^-$

† From ΔJ and Δπ between γ-ray transition levels.

‡ From ^{195}Pt IT decay (4.010 d).

From ^{194}Pt(n,γ).

@ From ^{195}Pt(n,n′γ).

& From Coulomb excitation.

a From ^{192}Os(^{7}Li,p3nγ).

b Relative photon branching ratios renormalized to Iγ=100 for the strongest branching from each level.

c 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.

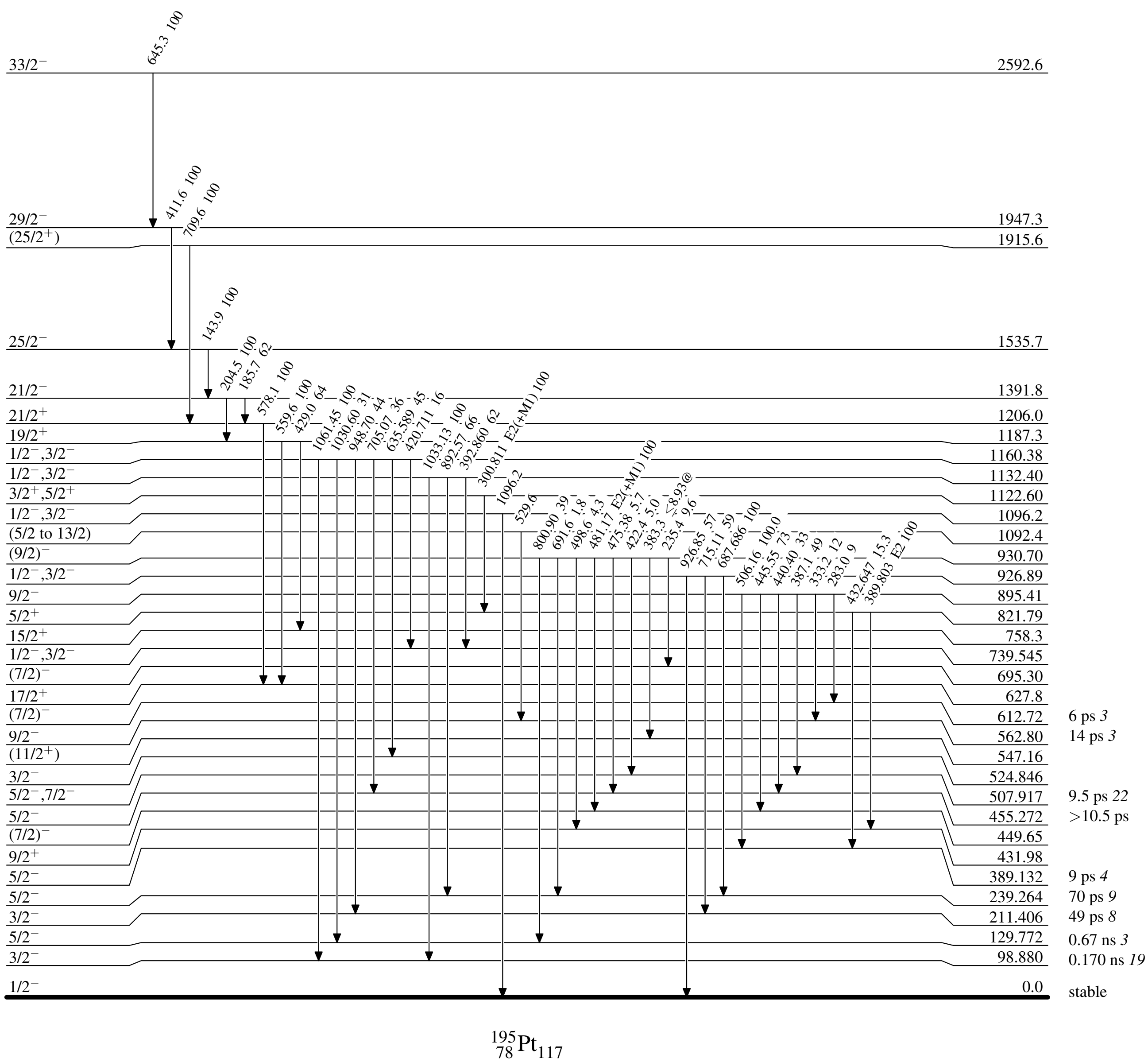
d Multiply placed with intensity suitably divided.

e Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

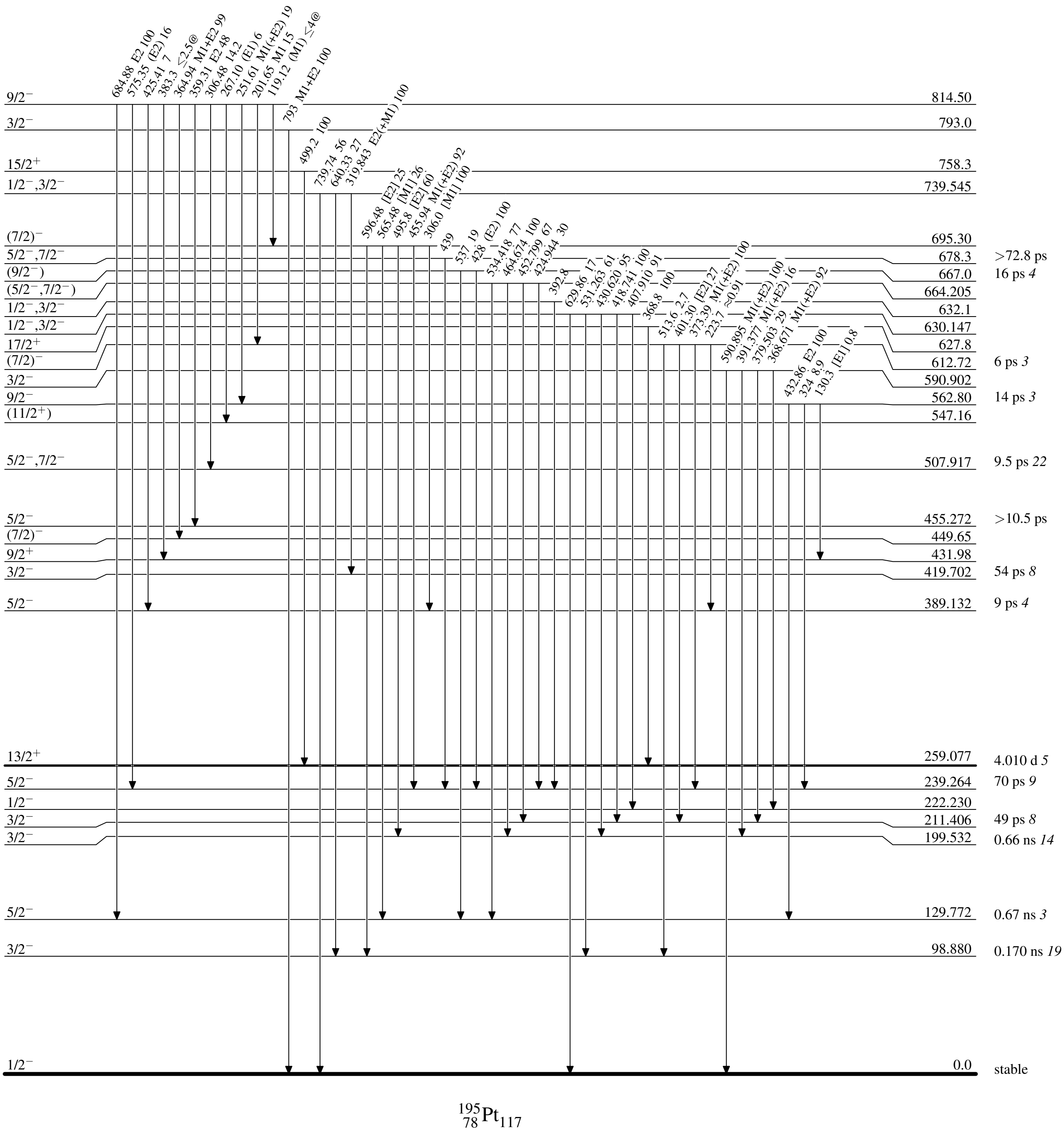
Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



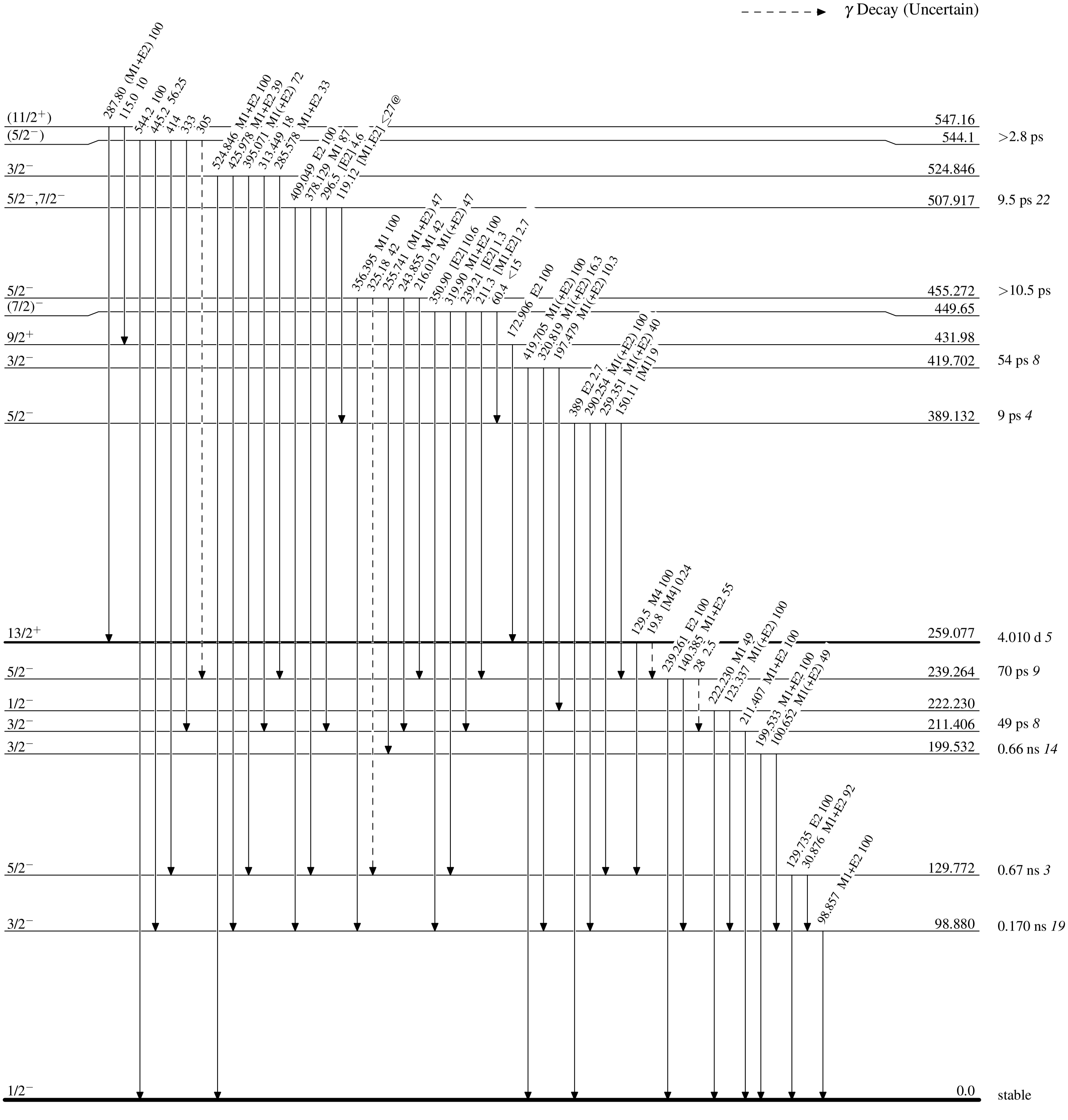
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

- - - - - ► γ Decay (Uncertain)



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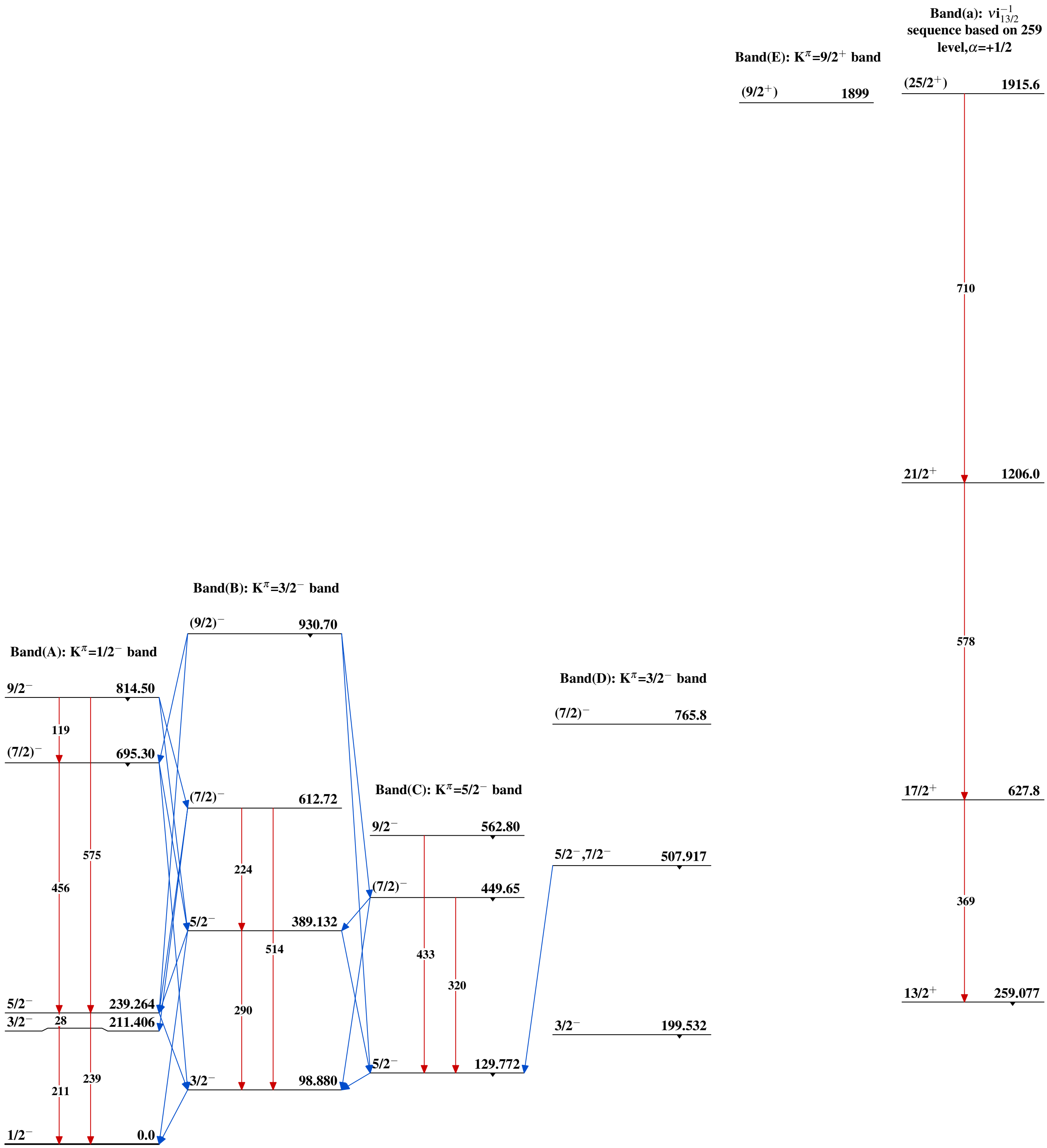
Adopted Levels, Gammas



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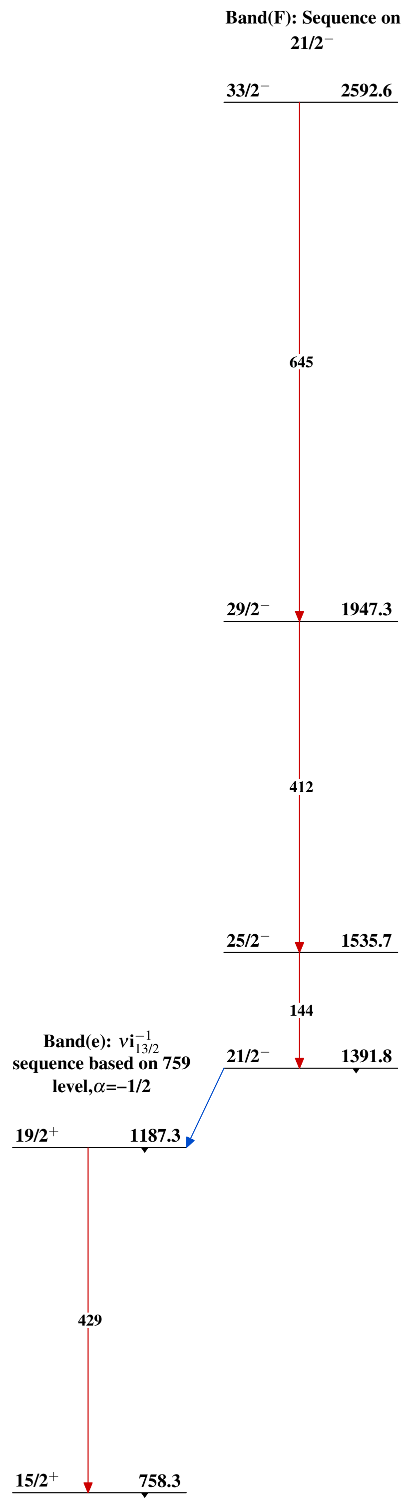
Adopted Levels, Gammas (continued)



$^{195}_{78}Pt_{117}$