^{195}Pt IT decay (4.010 d) 1972PoZU

History

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

Parent: ^{195}Pt: E=259.29 *20*; $J^{\pi}=13/2^{+}$; $T_{1/2}$=4.010 d *5*; %IT decay=100.0

Eγ and Iγ measurements with semi from 1972PoZU, except as noted. Similar results obtained by 1967Sc18. Measured I(ce): 1952De34, 1954Co29. $\gamma\gamma$-coin: 1952De34, 1954Co29, 1956Po05, 1967Sc18.

Sources produced by ^{194}Pt(n,γ) (1952Hu54) and ^{194}Pt(d,p) (1976Ya07).

^{195}Pt Levels

All data are shown in the drawing.

E(level)†	J^{π}‡	$T_{1/2}$‡	Comments
0.0	$1/2^{-}$	stable	
98.900 *20*	$3/2^{-}$		
129.790 *20*	$5/2^{-}$		
211.35 *25*	$3/2^{-}$		
239.5 *3*	$5/2^{-}$		
259.29 *20*	$13/2^{+}$	4.010 d *5*	%IT=100 E(level): syst with i13/2 isomeric levels of ^{193}Pt,^{197}Pt,^{199}Pt.

† From decay scheme and Eγ using least-squares fit to data.

‡ From Adopted Levels.

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$\gamma(^{195}Pt)$

Iγ normalization: From %IT=100.

E_γ	I_γ[†][@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ	α[&]	$I_{(\gamma+ce)}$[@]	Comments
(19.8 *CA*)		259.29	$13/2^+$	239.5	$5/2^-$	[M4][#]		6.68×10^8	2.08 *7*	ce(L)/(γ+ce)=0.566 *8*; ce(M)/(γ+ce)=0.331 *6*; ce(N+)/(γ+ce)=0.1033 *20* B(M4)(W.u.)=0.13 *6* $I_{(\gamma+ce)}$: required for intensity balance at 239 level.
28.1 *CA*	0.0118 *4*	239.5	$5/2^-$	211.35	$3/2^-$	[M1][#]		49.1	0.59 *2*	ce(L)/(γ+ce)=0.754 *8*; ce(M)/(γ+ce)=0.175 *4*; ce(N+)/(γ+ce)=0.0515 *10* $I_{(\gamma+ce)}$: required for intensity balance at 211 level. I_γ: from I(γ+ce), and α.
30.89 *9*	20.3 *13*	129.790	$5/2^-$	98.900	$3/2^-$	M1+E2	−0.021 *4*	37.6 *7*	784 *46*	ce(L)/(γ+ce)=0.749 *9*; ce(M)/(γ+ce)=0.174 *4*; ce(N+)/(γ+ce)=0.0512 *13* $I_{(\gamma+ce)}$: required for intensity balance at 98.9 level. I_γ: from I(γ+ce)/(1+α). Measured Iγ: 17.1 *9* (1972PoZU), 20 (1972De67). δ: from L-subshell ratios, sign from ceγ(θ): ^{195}Au ε decay. α(L1)exp≈807 (1954Co29).
98.90 *2*	100 *5*	98.900	$3/2^-$	0.0	$1/2^-$	M1+E2	−0.130 *4*	6.85		α(K)=5.57 *8*; α(L)=0.981 *14*; α(M)=0.228 *4*; α(N+..)=0.0672 *10* δ: from L-subshell ratios (^{195}Au decay); other δ=−0.16 *2* (1972Ba22) γ-anisotropy. (L1+L2)/L3=12.7 *18* (1967Ba39). Other: 11.9 (1954Co29), 30.6 (^{195}Au ε decay). α(exp)=9 *5* (1952De34).
129.5 *2*	0.75 *4*	259.29	$13/2^+$	129.790	$5/2^-$	M4		1135 *19*	852 *35*	ce(K)/(γ+ce)=0.134 *3*; ce(L)/(γ+ce)=0.613 *9*; ce(M)/(γ+ce)=0.194 *5*; ce(N+)/(γ+ce)=0.0576 *14* B(M4)(W.u.)=1.38 *9* E_γ: from 1961Kr02. Others: 129.9 (1954Co29), 130.05 *32* (1967Ba39). I_γ: from I(γ+ce) and α. $I_{(\gamma+ce)}$: from intensity balance.
129.79 *2*	24.8 *13*	129.790	$5/2^-$	0.0	$1/2^-$	E2		1.727		α(K)=0.467 *7*; α(L)=0.947 *14*; α(M)=0.244 *4*; α(N+..)=0.0690 *10* I_γ: from doublet Iγ=25.6 *13* − Iγ(M4,129.5γ)=0.74 *4*; other doublet Iγ: 25.6 *13* (1972PoZU), 25.5 *27* (1967Sc18). Mult.: consistent with K/L=0.44 *6*, L1,2/L3=1.45 *21* (1967Ba39).
140.6	0.263 *13*	239.5	$5/2^-$	98.900	$3/2^-$	M1+E2	−0.17 *4*	2.48		α(K)=2.03 *4*; α(L)=0.352 *7*; α(M)=0.0818 *18*;

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

E_γ	I_γ[†][@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ	α[&]	Comments
									α(N+..)=0.0241 *5* Other: Iγ=0.207 *27* (1967Sc18). Mult.: from α(L1)exp/α(L2)exp/α(L3)exp=100/10.4 *14*/1.7 *2* (1967Ba39). δ: from Coul. ex. (1959Mc69,1966As02).
211.35 *25*	0.341 *17*	211.35	3/2$^-$	0.0	1/2$^-$	M1+E2	+0.38 *3*	0.737 *14*	α(K)=0.595 *13*; α(L)=0.1090 *16*; α(M)=0.0255 *4*; α(N+..)=0.00749 *11* E_γ: av of 211.1 *3* (1967Sc18) and 211.6 (1972PoZU). α(K)exp: 0.48 *7* (1967Ba39), 0.73 *15* (1973Ja10, ^{195}Ir β^- decay). δ: from Coul. ex. (1969Ku06). Other: Iγ=0.315 *36* (1967Sc18).
239.5 *3*	0.477 *24*	239.5	5/2$^-$	0.0	1/2$^-$	E2		0.198	α(K)=0.1077 *16*; α(L)=0.0680 *11*; α(M)=0.0172 *3*; α(N+..)=0.00490 *8* E_γ: from 1967Sc18. Other: 239.6 (1972PoZU). Mult.: from α(K)exp/α(L)exp=1.0 *2* (1973Ja10, 3.8-h ^{195}Ir decay). Other: Iγ=0.56 *6* (1967Sc18).

[†] Relative intensity normalized to Iγ(Eγ=98.9)=100 *5*. I(K x ray)=786 *72* (1967Sc18).
[‡] From α(K)exp and α(L)exp, except as noted.
[#] From ΔJ and $\Delta\pi$.
[@] For absolute intensity per 100 decays, multiply by 0.117 *6*.
[&] 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.

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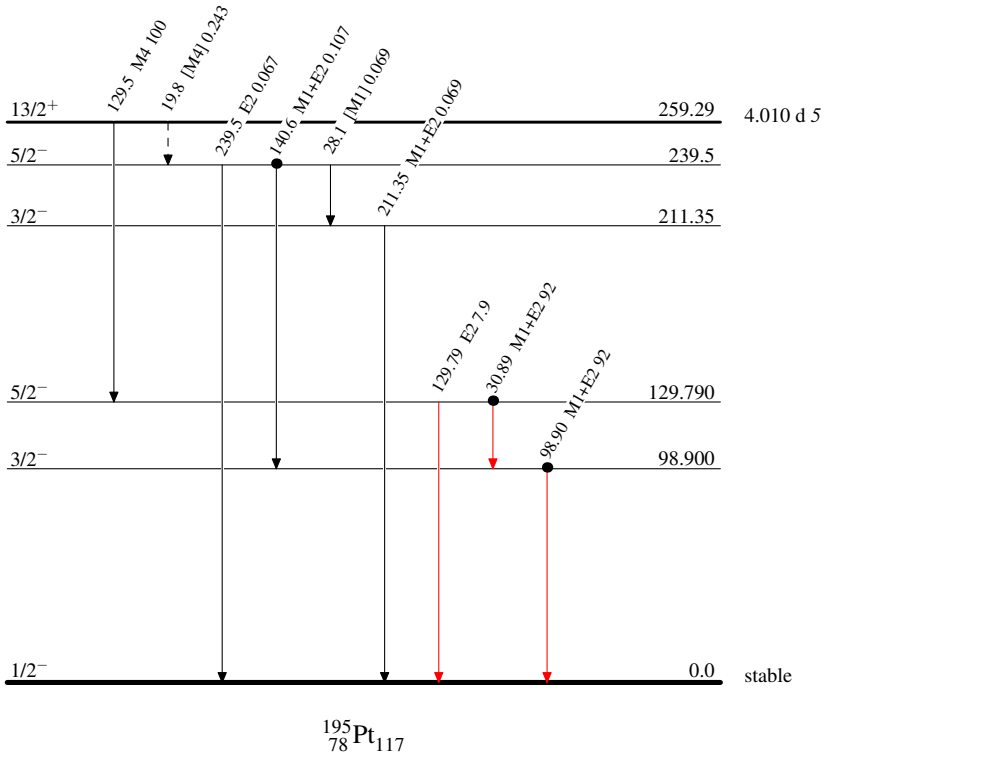
Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

%IT=100.0



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