^{198}Pt(t,pγ) 1988Ya03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 192,1 (2023)	1-Aug-2023

Target: 95.8% enriched in ^{198}Pt; Beam: triton at E(t)=16 MeV; Detectors: two HPGE, plastic scintillator, superconducting solenoidal spectrometer; Measured: pγ coin, pγγ coin and conversion electrons.

^{200}Pt Levels

E(level)†	Jπ‡	$T_{1/2}$	Comments
0.0	0+	12.6 h *3*	$T_{1/2}$: From Adopted Levels.
470.10 *20*	2+		
867.59 *25*	2+		
1103.3 *3*	4+		
1118.0?	(0+)		
1181.29 *25*	3+		
1268.5 *3*	4+		
1566.9 *3*	5−		
1566.9+x?	(7−)	14.3 ns *6*	Additional information 1. $T_{1/2}$: From 299.0γ(t) and 463.4γ(t) in 1988Ya03.
1583.1 *6*	0+		
1692.5 *4*			
1884.2 *4*			
1908.1 *5*			
1919.4 *4*			
1970.3 *4*			
1990.7 *4*			
2098.5 *5*			
2120.1 *5*			
2258.3 *5*			

† From a least-squares fit to Eγ.

‡ From 1988Ya03, based on deduced transition multipolarities.

γ(^{200}Pt)

Eγ†	Iγ†	E_i(level)	J^π_i	E_f	J^π_f	Mult.‡	α@	Comments
(<50)		1566.9+x?	(7−)	1566.9	5−			Eγ: Not observed, but a 50 keV upper limit was suggested by the authors (1988Ya03).
165.3 *4*	13 *4*	1268.5	4+	1103.3	4+			
299.0 *3*	41 *5*	1566.9	5−	1268.5	4+	E1	0.0263 *4*	α(K)=0.02174 *31*; α(L)=0.00350 *5*; α(M)=0.000806 *11* α(N)=0.0001978 *28*; α(O)=3.46×10^{-5} *5*; α(P)=1.987×10^{-6} *28* Mult.: α(K)exp=0.018 *8*.
313.8 *2*	108 *10*	1181.29	3+	867.59	2+	M1+E2	0.18 *9*	α(K)=0.14 *8*; α(L)=0.030 *6*; α(M)=0.0072 *12* α(N)=0.00177 *31*; α(O)=0.00031 *7*; α(P)=1.5×10^{-5} *10* Mult.: α(K)exp=0.070 *12*.
317.4 *4*	29# *9*	1884.2		1566.9	5−			
341.2 *4*	22# *7*	1908.1		1566.9	5−	M1+E2	0.14 *7*	α(K)=0.11 *7*; α(L)=0.023 *6*; α(M)=0.0055 *12* α(N)=0.00136 *29*; α(O)=2.4×10^{-4} *6*; α(P)=1.2×10^{-5} *8* Mult.: α(K)exp=0.061 *14*.
397.3 *2*	264 *19*	867.59	2+	470.10	2+	M1+E2	0.09 *5*	α(K)=0.07 *4*; α(L)=0.015 *4*; α(M)=0.0035 *9*

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^{198}Pt(t,pγ) 1988Ya03 (continued)

γ(^{200}Pt) (continued)

Eγ[†]	Iγ[†]	Ei(level)	J_i^π	Ef	J_f^π	Mult.[‡]	α[@]	Comments
								α(N)=8.6×10^{-4} *23*; α(O)=1.5×10^{-4} *5*; α(P)=8.E−6 *5* Mult.: α(K)exp=0.055 *9*.
400.6 *2*	97 *7*	1268.5	4$^+$	867.59	2$^+$	E2	0.0436 *6*	α(K)=0.0303 *4*; α(L)=0.01008 *14*; α(M)=0.002482 *35* α(N)=0.000609 *9*; α(O)=0.0001013 *14*; α(P)=3.15×10^{-6} *4* Mult.: α(K)exp=0.034 *7*.
403.4 *2*	38 *4*	1970.3		1566.9	5$^-$	M1+E2	0.09 *5*	α(K)=0.07 *4*; α(L)=0.014 *4*; α(M)=0.0033 *9* α(N)=8.2×10^{-4} *23*; α(O)=1.4×10^{-4} *5*; α(P)=8.E−6 *5* Mult.: α(K)exp=0.054 *17*.
424.1 *3*	27 *3*	1692.5		1268.5	4$^+$	E2	0.0375 *5*	α(K)=0.0265 *4*; α(L)=0.00833 *12*; α(M)=0.002046 *29* α(N)=0.000502 *7*; α(O)=8.38×10^{-5} *12*; α(P)=2.77×10^{-6} *4* Mult.: α(K)exp=0.031 *8*.
463.4 *2*	289 *12*	1566.9	5$^-$	1103.3	4$^+$	E1	0.00973 *14*	α(K)=0.00810 *11*; α(L)=0.001256 *18*; α(M)=0.000288 *4* α(N)=7.08×10^{-5} *10*; α(O)=1.251×10^{-5} *18*; α(P)=7.68×10^{-7} *11* Mult.: α(K)exp=0.0066 *20*.
470.1 *2*	1000	470.10	2$^+$	0.0	0$^+$	E2	0.0288 *4*	α(K)=0.02097 *29*; α(L)=0.00598 *8*; α(M)=0.001459 *21* α(N)=0.000358 *5*; α(O)=6.03×10^{-5} *8*; α(P)=2.202×10^{-6} *31* Mult.: α(K)exp=0.021 *4*.
511.1 *4*	18[#] *6*	1692.5		1181.29	3$^+$			
531.6 *3*	15 *3*	2098.5		1566.9	5$^-$			
553.2 *3*	18 *3*	2120.1		1566.9	5$^-$	M1	0.0598 *8*	α(K)=0.0495 *7*; α(L)=0.00794 *11*; α(M)=0.001829 *26* α(N)=0.000452 *6*; α(O)=8.15×10^{-5} *11*; α(P)=5.55×10^{-6} *8* Mult.: α(K)exp=0.046 *20*.
633.0 *2*	437 *23*	1103.3	4$^+$	470.10	2$^+$	E2	0.01426 *20*	α(K)=0.01100 *15*; α(L)=0.002493 *35*; α(M)=0.000597 *8* α(N)=0.0001468 *21*; α(O)=2.522×10^{-5} *35*; α(P)=1.165×10^{-6} *16* Mult.: α(K)exp=0.010 *3*.
691.4 *3*	16 *2*	2258.3		1566.9	5$^-$	M1	0.0336 *5*	α(K)=0.0278 *4*; α(L)=0.00443 *6*; α(M)=0.001019 *14* α(N)=0.0002521 *35*; α(O)=4.54×10^{-5} *6*; α(P)=3.10×10^{-6} *4* Mult.: α(K)exp=0.026 *10*.
711.1 *2*	34 *4*	1181.29	3$^+$	470.10	2$^+$	M1	0.0312 *4*	α(K)=0.0259 *4*; α(L)=0.00412 *6*; α(M)=0.000947 *13* α(N)=0.0002343 *33*; α(O)=4.22×10^{-5} *6*; α(P)=2.88×10^{-6} *4* Mult.: α(K)exp=0.021 *6*.
780.8 *2*	36 *5*	1884.2		1103.3	4$^+$			
799.5 *3*	18 *5*	1268.5	4$^+$	470.10	2$^+$			
809.5 *3*	23 *3*	1990.7		1181.29	3$^+$			
816.1 *3*	11 *3*	1919.4		1103.3	4$^+$			

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^{198}Pt(t,pγ) 1988Ya03 (continued)

γ(^{200}Pt) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [‡]	Comments
867.9[&] *4*	5 *5*	867.59	2$^+$	0.0	0$^+$		I_γ: Coincidence summing contribution was subtracted (1988Ya03).
887.2 *4*	17 *4*	1990.7		1103.3	4$^+$		
1113.0 *5*	24[#] *11*	1583.1	0$^+$	470.10	2$^+$		
(1118)		1118.0?	(0$^+$)	0.0	0$^+$	(E0)	E_γ,Mult.: γ-ray not observed, but (E0) mult suggested from the observed weak ce line (1988Ya03). The placement is tentative.
(1583)		1583.1	0$^+$	0.0	0$^+$	(E0)	γ-ray not observed, but (E0) mult suggested from the observed ce line (1988Ya03).

† From 1988Ya03. Iγ was determined from singles spectra, unless otherwise stated.
‡ From 1988Ya03 based on α(K)exp, determined from ce(K)/Iγ by assuming that 470.1γ is pure E2.
# Value determined from $\gamma\gamma$-coincidence spectra.
@ Additional information 2.
& Placement of transition in the level scheme is uncertain.

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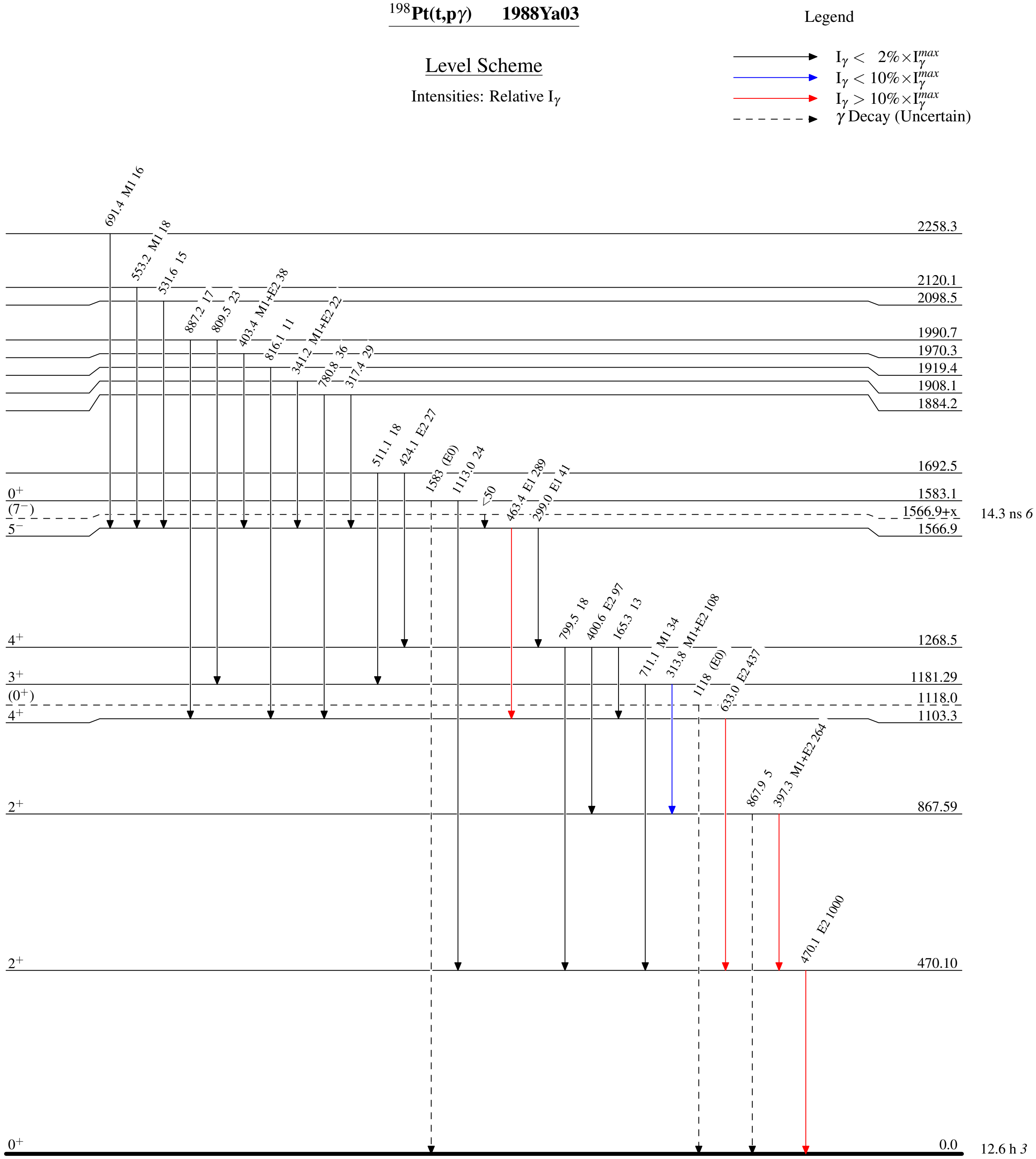
Level Scheme

Intensities: Relative I_γ



$^{200}_{78}Pt_{122}$