^{194}Pt(^{12}C,6nγ) 1985We05

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

E(^{12}C)=102 and 106 MeV; Target: ^{194}Pt, 10 mg/cm^2 thick; Detectors: Ge(Li) and two liquid scin neutron detectors; Measured: γ singles (at 102 and 106 MeV) $\gamma\gamma$(t), γ(t), $\gamma(\theta)$, γn coin, $\gamma\gamma$n coin, Eγ, Iγ; Deduced: $T_{1/2}$, level scheme.

^{200}Po Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$[‡]	Comments
0	0^+	11.54 min *9*	$T_{1/2}$: From Adopted Levels.
666.0 *5*	2^+		
1277.2 *7*	4^+		
1762.0 *9*	6^+		
1774.3[#] *10*	8^+	90 ns *15*	$T_{1/2}$: From 484.8γ(t) in 1985We05 and by taking into account contributions from $T_{1/2}$=120 ns *20* (J^π=11$^-$) and 267 ns *4* (J^π=12$^+$) isomers.
1812.1 *9*	5^-		
2136.3[a] *10*	7^-		
2237.0 *14*	8^-		
2262.3[a] *11*	9^-	<2 ns	
2597.2[@] *11*	11^-	120 ns *20*	$T_{1/2}$: From 335.2γ(t) in 1985We05 and by taking into account the contribution from the 267 ns *4* (J^π=12$^+$) isomer.
2805.6[&] *12*	12^+	267 ns *4*	$T_{1/2}$: From 208.4γ(t) in 1985We05.
2808.1 *15*	10		
2963.5 *12*	11^-		
3231.0 *18*	11		
3372.8 *13*	14^+		
3504.2 *13*	13^-		
3627.8 *15*	(14^-)	<2 ns	
3691.3 *15*	(15^-)	<2 ns	
3945.7 *14*	16^+		
4126.8 *16*	16		
4173.6 *18*	(16)		
4447.6 *17*	17		
4670.5 *17*	17		
4703.0 *20*	18		
5227.1 *20*			

[†] From a least squares fit to Eγ.
[‡] From 1985We05, unless otherwise stated.
[#] Configuration=$\pi(h^{+2}_{9/2})_{8+}$.
[@] Admixture between configuration= $\pi(h^{+1}_{9/2},i^{+1}_{13/2})_{11-}$ and configuration=$\pi(h^{+2}_{9/2})_{8+}\otimes 3^-$.
[&] Configuration=$\nu(i^{-2}_{13/2})_{12+}$.
[a] Configuration=$\nu(f^{-1}_{5/2},i^{-1}_{13/2})$.

γ(^{200}Po)

Eγ[†]	Iγ[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	α[#]	Comments
(12.3 *3*)		1774.3	8^+	1762.0	6^+			Eγ: From adopted gammas.
(63.5)		3691.3	(15^-)	3627.8	(14^-)			
100.7 *10*	≈1.5	2237.0	8^-	2136.3	7^-	M1	10.87 *34*	α(K)=8.80 *28*; α(L)=1.58 *5*; α(M)=0.372 *12* α(N)=0.0959 *31*; α(O)=0.0201 *7*; α(P)=0.00259 *8* Mult.: E1 multipolarity is excluded based on the relative intensity of 100.7γ.

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^{194}Pt(^{12}C,6nγ) 1985We05 (continued)

$\gamma(^{200}Po)$ (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[#]	Comments
123.6 *10*	3 *1*	3627.8	(14$^-$)	3504.2	13$^-$	D		Mult.: A_2=−0.31 *7*, A_4=0.03 *9*.
187.1 *10*	4 *1*	3691.3	(15$^-$)	3504.2	13$^-$	(E2)	0.598 *14*	α(K)=0.1926 *35*; α(L)=0.301 *8*; α(M)=0.0797 *22* α(N)=0.0204 *6*; α(O)=0.00392 *11*; α(P)=0.000367 *10* Mult.: A_2=0.2 *3*, A_4=−0.2 *4*.
208.4 *5*	36 *1*	2805.6	12$^+$	2597.2	11$^-$	E1	0.0742 *11*	α(K)=0.0600 *9*; α(L)=0.01087 *17*; α(M)=0.00256 *4* α(N)=0.000653 *10*; α(O)=0.0001324 *20*; α(P)=1.561×10^{-5} *24* Mult.: A_2=0.05 *4*, A_4=−0.02 *6*.
255.4 *10*	3 *1*	4703.0	18	4447.6	17	D		Mult.: A_2=−0.2 *3*, A_4=−0.2 *4*.
324.3 *10*	3 *1*	2136.3	7$^-$	1812.1	5$^-$	E2	0.1002 *17*	α(K)=0.0562 *9*; α(L)=0.0328 *6*; α(M)=0.00849 *16* α(N)=0.00218 *4*; α(O)=0.000427 *8*; α(P)=4.32×10^{-5} *8* Mult.: A_2=0.9 *3*, A_4=0.2 *3*.
335.2 *5*	12 *1*	2597.2	11$^-$	2262.3	9$^-$	E2	0.0911 *13*	α(K)=0.0522 *8*; α(L)=0.0291 *4*; α(M)=0.00750 *11* α(N)=0.001926 *29*; α(O)=0.000377 *6*; α(P)=3.84×10^{-5} *6* Mult.: A_2=0.19 *10*, A_4=0.04 *13*.
374.3 *5*	20 *1*	2136.3	7$^-$	1762.0	6$^+$	E1	0.01905 *27*	α(K)=0.01560 *22*; α(L)=0.00264 *4*; α(M)=0.000619 *9* α(N)=0.0001581 *23*; α(O)=3.25×10^{-5} *5*; α(P)=3.97×10^{-6} *6* Mult.: A_2=−0.01 *5*, A_4=0.01 *6*.
422.9 *10*	4 *1*	3231.0	11	2808.1	10	D		Mult.: A_2=−0.4 *2*, A_4=−0.1 *3*.
482.3 *10*	10 *2*	4173.6	(16)	3691.3	(15$^-$)	D		Mult.: A_2=−0.07 *10*, A_4=−0.01 *14*.
484.8 *5*	75 *1*	1762.0	6$^+$	1277.2	4$^+$	E2	0.0346 *5*	α(K)=0.02361 *33*; α(L)=0.00824 *12*; α(M)=0.002076 *30* α(N)=0.000533 *8*; α(O)=0.0001062 *15*; α(P)=1.159×10^{-5} *17* Mult.: A_2=0.225 *15*, A_4=−0.01 *2*.
488.2 *5*	16 *1*	2262.3	9$^-$	1774.3	8$^+$	E1	0.01079 *15*	α(K)=0.00888 *13*; α(L)=0.001462 *21*; α(M)=0.000342 *5* α(N)=8.74×10^{-5} *12*; α(O)=1.803×10^{-5} *26*; α(P)=2.238×10^{-6} *32* Mult.: A_2=−0.05 *3*, A_4=−0.05 *4*.
501.9 *10*	6 *1*	4447.6	17	3945.7	16$^+$	D		α(K)=0.06 *4*; α(L)=0.013 *6*; α(M)=0.0030 *12*; α(N+..)=0.0010 *4* α(N)=0.0008 *3*; α(O)=0.00016 *7*; α(P)=2.0×10^{-5} *10* Mult.: A_2=−0.60 *14*, A_4=−0.19 *19*.
534.9 *5*	10 *1*	1812.1	5$^-$	1277.2	4$^+$	E1	0.00894 *13*	α(K)=0.00737 *10*; α(L)=0.001203 *17*; α(M)=0.000281 *4* α(N)=7.19×10^{-5} *10*; α(O)=1.485×10^{-5} *21*; α(P)=1.851×10^{-6} *26* Mult.: A_2=−0.07 *3*, A_4=−0.11 *4*.
540.7 *5*	14 *1*	3504.2	13$^-$	2963.5	11$^-$	E2	0.0267 *4*	α(K)=0.01888 *27*; α(L)=0.00589 *8*; α(M)=0.001472 *21* α(N)=0.000378 *5*; α(O)=7.57×10^{-5} *11*; α(P)=8.43×10^{-6} *12* Mult.: A_2=0.12 *3*, A_4=−0.11 *4*.
545.8 *10*	6 *1*	2808.1	10	2262.3	9$^-$	D		Mult.: A_2=−0.2 *3*, A_4=−0.2 *4*.
556.6 *10*	4 *1*	5227.1		4670.5	17			
567.2 *5*	31 *1*	3372.8	14$^+$	2805.6	12$^+$	E2	0.02393 *34*	α(K)=0.01715 *24*; α(L)=0.00511 *7*;

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^{194}Pt(^{12}C,6nγ) 1985We05 (continued)

$\gamma(^{200}Po)$ (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	α [#]	Comments
								α(M)=0.001273 *18* α(N)=0.000327 *5*; α(O)=6.56×10^{-5} *9*; α(P)=7.37×10^{-6} *10*
572.9 *5*	17 *1*	3945.7	16$^+$	3372.8	14$^+$	E2	0.02340 *33*	Mult.: A_2=0.40 *2*, A_4=−0.09 *3*. α(K)=0.01681 *24*; α(L)=0.00496 *7*; α(M)=0.001235 *18* α(N)=0.000317 *5*; α(O)=6.37×10^{-5} *9*; α(P)=7.17×10^{-6} *10*
611.2 *5*	100	1277.2	4$^+$	666.0	2$^+$	E2	0.02024 *29*	Mult.: A_2=0.31 *15*, A_4=−0.3 *2*. α(K)=0.01478 *21*; α(L)=0.00412 *6*; α(M)=0.001021 *14* α(N)=0.000262 *4*; α(O)=5.28×10^{-5} *7*; α(P)=6.01×10^{-6} *9*
666.0 *5*	≈100	666.0	2$^+$	0	0$^+$	E2	0.01679 *24*	Mult.: A_2=0.173 *9*, A_4=−0.042 *12*. α(K)=0.01249 *18*; α(L)=0.00325 *5*; α(M)=0.000799 *11* α(N)=0.0002053 *29*; α(O)=4.15×10^{-5} *6*; α(P)=4.79×10^{-6} *7*
701.2 *5*	15 *1*	2963.5	11$^-$	2262.3	9$^-$	(E2)	0.01505 *21*	Mult.: A_2=0.221 *10*, A_4=−0.010 *13*. α(K)=0.01131 *16*; α(L)=0.00283 *4*; α(M)=0.000693 *10* α(N)=0.0001781 *25*; α(O)=3.61×10^{-5} *5*; α(P)=4.20×10^{-6} *6*
724.8 *10*	9 *1*	4670.5	17	3945.7	16$^+$	D		Mult.: A_2=−0.06 *14*, A_4=−0.18 *18*.
754.0 *10*	3 *1*	4126.8	16	3372.8	14$^+$	(Q)		Mult.: A_2=0.22 *16*, A_4=−0.3 *2*.
822.6 *5*	34 *1*	2597.2	11$^-$	1774.3	8$^+$	E3	0.0275 *4*	α(K)=0.01880 *26*; α(L)=0.00653 *9*; α(M)=0.001650 *23* α(N)=0.000425 *6*; α(O)=8.57×10^{-5} *12*; α(P)=9.70×10^{-6} *14* Mult.: A_2=0.28 *8*, A_4=0.1 *1*.

[†] From 1985We05 using E(^{12}C)=106 MeV data, unless otherwise stated. $\Delta E\gamma$ were estimated by the evaluator.
[‡] From 1985We05 based on $\gamma(\theta)$ and intensity balances.
[#] Additional information 1.

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Level Scheme

Intensities: Relative I_γ

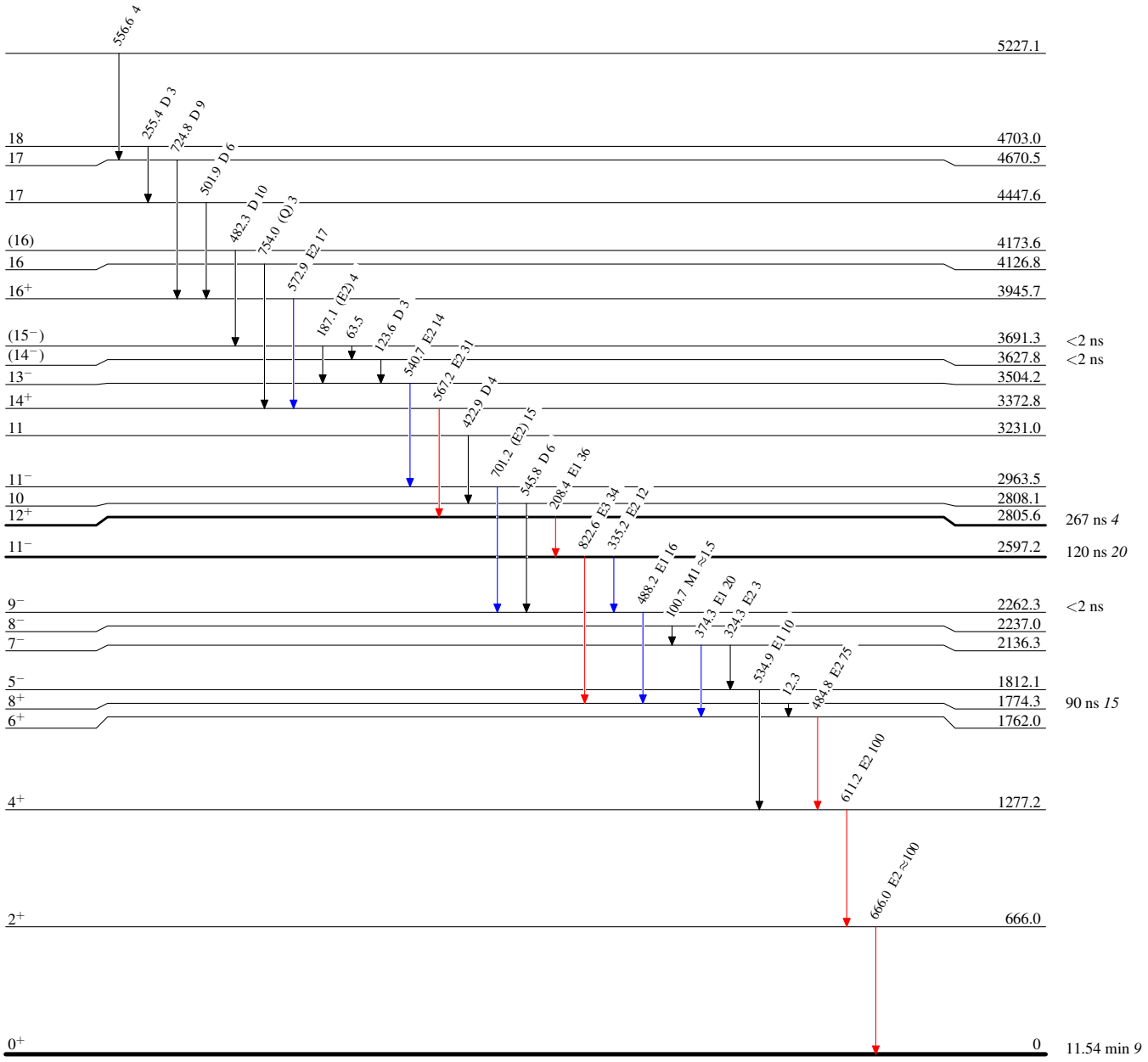
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

γ Decay (Uncertain)



$^{200}_{84}Po_{116}$