^{194}Pt(^{12}C,4nγ) 1976Ha56

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

1976Ha56: E(^{12}C)=80 MeV; Pulsed beam (3.2 μs between bursts); Pb target backing; Detectors: two Ge(Li); Measured: $\gamma(\theta$,H,t), g-factor with a 0.591T field. Others: 1971Ha01, 1972Na02.

^{202}Po Levels

E(level)†	J$^\pi$‡	T$_{1/2}$‡	Comments
0	0$^+$		
677.4 *5*	2$^+$		
1249.0 *7*	4$^+$		
1691.9 *9*	6$^+$		
1691.9+x	8$^+$	110 ns *15*	Additional information 1. T$_{1/2}$: From time difference between transitions above isomer (912.6γ and 526.6γ) and below isomer (442.9γ, 571.6γ and 677.4γ) in 1976Ha56. Others: 165 ns *20* (1971Ha01) and 185 ns *30* (1972Na02), but values probably do not account for the feeding from the 11$^-$ isomer. g=0.927 *9* (1976Ha56,time dependent perturbed angular distribution). Configuration=$\pi(h^{+2}_{9/2})$.
2218.5+x *4*	9$^-$		T$_{1/2}$: 25 ns *10* was reported in 1971Ha01 using 526.6γ(t), but this value is associated with the decay of the 11$^-$ isomer (not observed in 1971Ha01).
2604.5+x *4*	11$^-$	85 ns *10*	T$_{1/2}$: From 912.6γ(t) and 386.0γ(t) (1976Ha56). g=1.09 *3* corrected for diamagnetism and Knight shift by 1.0053 *4* (1976Ha56,time dependent perturbed angular distribution). Configuration=$\pi(h^{+1}_{9/2},i^{+1}_{13/2})$.

† From a least-square fit to Eγ by assuming ΔEγ=0.5 keV.
‡ From 1976Ha56.

$\gamma(^{202}$Po)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.†
386.0	12	2604.5+x	11$^-$	2218.5+x	9$^-$	
442.9	90	1691.9	6$^+$	1249.0	4$^+$	
526.6	30	2218.5+x	9$^-$	1691.9+x	8$^+$	E1
571.6	98	1249.0	4$^+$	677.4	2$^+$	
677.4	100	677.4	2$^+$	0	0$^+$	
912.6	24	2604.5+x	11$^-$	1691.9+x	8$^+$	

† From 1976Ha56. The authors stated that ΔEγ is typically less than 0.5 keV.

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Level Scheme

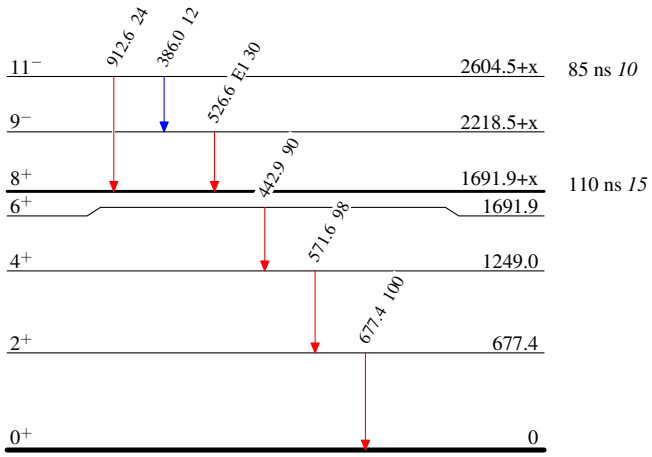
Intensities: Relative I_γ

Legend

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

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

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



$^{202}_{84}Po_{118}$