^{192}Pt(^{14}N,5nγ) 1983Dy02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 187,355 (2023)	20-Sep-2022

^{192}Pt(^{14}N,5nγ), E(^{14}N)=85-100 MeV; Target: 3 mg/cm^2 thick, enriched to 57 % in ^{192}Pt; Detectors: Ge(Li) with a typical energy resolution (FWHM) of 2 keV at 1.33 MeV; Measured: excitation functions, γ(t), $\gamma(\theta)$, $\gamma\gamma$ coin (two Ge(Li) detectors); Deduced: level scheme, J^π, $T_{1/2}$.

^{201}At Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0.0[#]	9/2$^-$	87.6 s *13*	J$^\pi$,$T_{1/2}$: From Adopted Levels.
634.90[@] *20*	(13/2$^-$)		
749.0[&] *3*	(13/2$^+$)	15.9 ns *14*	$T_{1/2}$: From 749.0γ(t) in 1983Dy02.
1228.9[a] *4*	(17/2$^-$)		
1494.6[b] *5*	(17/2$^+$)		
1705.5[c] *5*	(21/2$^-$)		
1790.1 *6*			
1921.3 *6*			
2077.4[d] *7*	(23/2$^-$)		J$^\pi$: Systematics in neighboring nuclei suggests negative parity.

[†] From a least-squares fit to Eγ.
[‡] From deduced transition multipolarities, unless otherwise stated.
[#] Configuration=π $h^{+1}_{9/2}$.
[@] Configuration=π $(h^{+1}_{9/2})\otimes 2^+$.
[&] Configuration=π $i^{+1}_{13/2}$.
[a] Configuration=π $(h^{+1}_{9/2})\otimes 4^+$.
[b] Configuration=π $(i^{+1}_{13/2})\otimes 2^+$.
[c] Configuration=π $(h^{+3}_{9/2})_{21/2-}$.
[d] Configuration=π $(h^{+2}_{9/2})_{8-}$,$f^{+1}_{7/2}$).

γ(^{201}At)

E$_\gamma$[†]	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[†]	α[#]	Comments
(114.1)	≈15	749.0	(13/2$^+$)	634.90	(13/2$^-$)	[E1]	0.332 *5*	α(K)=0.262 *4*; α(L)=0.0538 *8*; α(M)=0.01283 *18* α(N)=0.00327 *5*; α(O)=0.000668 *9*; α(P)=8.08×10^{-5} *11* E$_\gamma$: Not observed directly, but required by the out-of-beam coincidence relationship. Eγ is from level energy differences. I$_\gamma$: Estimated from the reported 20% out-of-beam intensity for the 634.9γ.
295.5 *3*	15[‡] *15*	1790.1		1494.6	(17/2$^+$)			
371.9 *4*	25 *8*	2077.4	(23/2$^-$)	1705.5	(21/2$^-$)	D		Mult.: A$_2$=−0.1 *1*.
426.7 *3*	26[‡] *8*	1921.3		1494.6	(17/2$^+$)			
476.6 *3*	38 *5*	1705.5	(21/2$^-$)	1228.9	(17/2$^-$)	(E2)	0.0377 *5*	α(K)=0.02523 *35*; α(L)=0.00935 *13*; α(M)=0.002372 *34* α(N)=0.000613 *9*; α(O)=0.0001253 *18*; α(P)=1.488×10^{-5} *21* Mult.: A$_2$=0.22 *7*.

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^{192}Pt(^{14}N,5nγ) 1983Dy02 (continued)

$\gamma(^{201}At)$ (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [†]	α [#]	Comments
594.0 *3*	59 *2*	1228.9	(17/2$^-$)	634.90	(13/2$^-$)	(E2)	0.02260 *32*	α(K)=0.01622 *23*; α(L)=0.00480 *7*; α(M)=0.001197 *17* α(N)=0.000310 *4*; α(O)=6.39×10^{-5} *9*; α(P)=7.85×10^{-6} *11* Mult.: A_2=0.16 *5*.
634.9 *2*	85 *10*	634.90	(13/2$^-$)	0.0	9/2$^-$	(E2)	0.01952 *27*	α(K)=0.01425 *20*; α(L)=0.00397 *6*; α(M)=0.000986 *14* α(N)=0.000255 *4*; α(O)=5.28×10^{-5} *7*; α(P)=6.55×10^{-6} *9* I_γ: Estimated from the pulsed beam data. Mult.: A_2=0.11 *3*.
745.6 *3*	57 *4*	1494.6	(17/2$^+$)	749.0	(13/2$^+$)	(E2)	0.01389 *19*	α(K)=0.01047 *15*; α(L)=0.00258 *4*; α(M)=0.000633 *9* α(N)=0.0001636 *23*; α(O)=3.41×10^{-5} *5*; α(P)=4.32×10^{-6} *6* Mult.: A_2=0.24 *9*.
749.0 *3*	100 *2*	749.0	(13/2$^+$)	0.0	9/2$^-$	(M2)	0.1206 *17*	α(K)=0.0950 *13*; α(L)=0.01937 *27*; α(M)=0.00468 *7* α(N)=0.001217 *17*; α(O)=0.000260 *4*; α(P)=3.56×10^{-5} *5* Mult.: A_2=0.05 *3*. E3 admixtures are possible.

[†] From 1983Dy02.
[‡] Estimated by the authors from the $\gamma\gamma$ coin data.
[#] Additional information 1.

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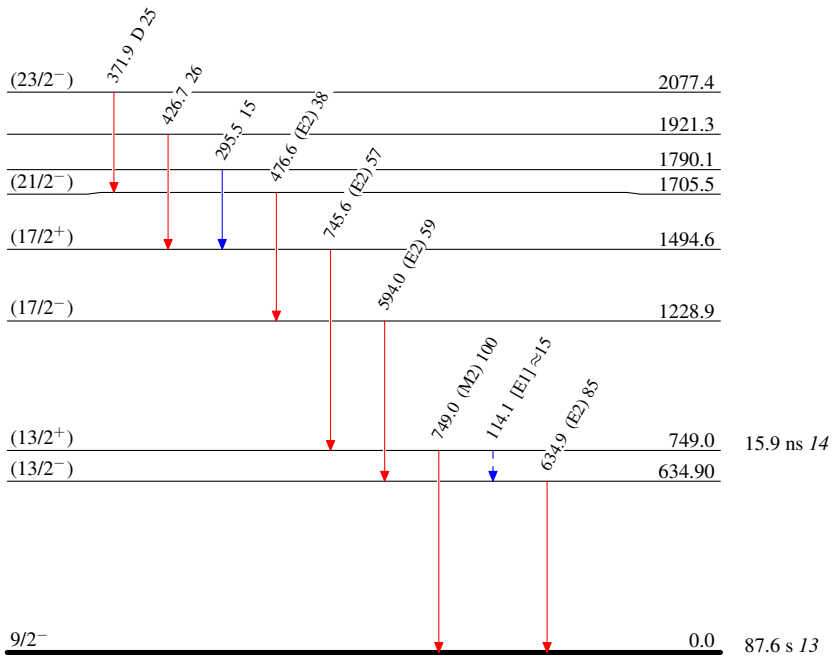
Level Scheme

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)



$^{201}_{85}At_{116}$