^{153}Pr β^- decay   **1996Ya12,1987Gr12**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 170, 1 (2020)	16-Aug-2020

Parent: ^{153}Pr: E=0.0; $T_{1/2}$=4.29 s *11*; $Q(\beta^-)$=5762 *12*; %β^- decay=100.0
Produced by ^{252}Cf SF (1988GrZY) and ^{235}U(n,f) (1996Ya12). Data are from 1996Ya12, with confirmation of three placed γ's by 1987Gr12.
Level scheme is highly incomplete.

^{153}Nd Levels

E(level)	$J^{\pi\dagger}$	$T_{1/2}{}^{\dagger}$	Comments
0.0	$(3/2)^-$	31.6 s *10*	
50.0	$(5/2)^-$		J^{π}: Assigned as $5/2^+$ from 5/2[642] in 1996Ya12, but as $(5/2)^-$ from $3/2^-$[521] ground-state band in ^{252}Cf SF; the latter is assigned in the ^{153}Nd Adopted Levels.
191.7	$(5/2)^+$	1.10 μs *5*	$T_{1/2}$: adopted value, weighted average of 1.06 μs *5* (1996Ya12, ^{153}Pr β^- decay, from $\beta\gamma$(t)) and 1.17 μs *7* (2010Si03, ^{252}Cf SF decay, γ(t)).

$\dagger$ Values adopted in Adopted Levels, Gammas dataset.

$\gamma(^{153}$Nd$)$

Iγ normalization: Additional information 2.

$E_\gamma{}^{\dagger}$	$I_\gamma{}^{\dagger}$	E_i(level)	J_i^{π}	E_f	J_f^{π}	Mult.‡	$\alpha^{\#}$	Comments
50.0	28	50.0	$(5/2)^-$	0.0	$(3/2)^-$			M1,E2 based on $\Delta(J^{\pi})$.
^{x}70.2								
141.7	55	191.7	$(5/2)^+$	50.0	$(5/2)^-$	E1	0.0999	α(K)=0.0850 *12*; α(L)=0.01178 *17*; α(M)=0.00249 *4* α(N)=0.000549 *8*; α(O)=8.04×10^{-5} *12*; α(P)=4.43×10^{-6} *7*
^{x}185.0								
191.7	100	191.7	$(5/2)^+$	0.0	$(3/2)^-$	E1	0.0440	α(K)=0.0375 *6*; α(L)=0.00510 *8*; α(M)=0.001076 *15* α(N)=0.000239 *4*; α(O)=3.52×10^{-5} *5*; α(P)=2.03×10^{-6} *3*
^{x}263.7								
^{x}485.3								
^{x}609.6								
^{x}695.1								
^{x}836.8								
^{x}887.0								
^{x}896.6								
^{x}915.9								
^{x}930.6								
^{x}957.9								
^{x}965.4								
^{x}966.9								
^{x}1013.9								
^{x}1099.4								
^{x}1150.0								
^{x}1399.2								
^{x}1449.1								
^{x}1496.9								

$\dagger$ Values are from 1996Ya12 and the energies for the three placed γ's were also reported by 1987Gr12.
$\ddagger$ From Adopted Levels, Gammas dataset.

^{153}Pr β^- decay   1996Ya12,1987Gr12 (continued)

$\gamma(^{153}$Nd) (continued)

$^{\#}$ Additional information 1.
^{x} γ ray not placed in level scheme.

^{153}**Pr** β^- **decay**   **1996Ya12,1987Gr12**

Decay Scheme

Intensities: Relative I$_\gamma$

Legend

I$_\gamma <$ 2%×I$_\gamma^{max}$
I$_\gamma <$ 10%×I$_\gamma^{max}$
I$_\gamma >$ 10%×I$_\gamma^{max}$

0.0   4.29 s *11*

Q$_{\beta^-}$=5762 *12*   %β^-=100

$^{153}_{59}$Pr$_{94}$

191.7 E1 100
141.7 E1 55

(5/2)$^+$ 191.7   1.10 μs *5*

50.0 28

(5/2)$^-$ 50.0

(3/2)$^-$ 0.0   31.6 s *10*

$^{153}_{60}$Nd$_{93}$