^{141}Gd IT decay (24.5 s)   **1989Gi06**

	Type	Author	History Citation	Literature Cutoff Date
	Full Evaluation	N. Nica	NDS 187,1 (2023)	12-Oct-2022

Parent: ^{141}Gd: E=377.76 *9*; J$^\pi$=11/2$^-$; T$_{1/2}$=24.5 s *5*; %IT decay=11 *2*

Measured: γ, $\gamma\gamma$, ce, Xγ.

^{141}Gd Levels

E(level)†	J$^{\pi\dagger}$	T$_{1/2}$†
0.0	1/2$^+$	14 s *4*
113.16 *7*	(3/2$^+$)	
198.32 *7*	(3/2$^+$)	
258.17 *6*	5/2$^+$	
377.76 *9*	11/2$^-$	24.5 s *5*

† Adopted values.

γ(^{141}Gd)

Iγ normalization: 1.20 *2*, mean value of 1.18 from 100 decay of the isomer and 1.22 from ΣI$_{(\gamma+ce)g.s.}$=100, with unc covering both values.

For absolute intensity per 100 decays 0.132 *24* = 1.20 *2* × 11.0% *20*.

E$_\gamma$	I$_\gamma$$^{\#}$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.†	α‡	Comments
59.8 *1*	5 *2*	258.17	5/2$^+$	198.32	(3/2$^+$)	M1	8.88	α(K)=7.48 *11*; α(L)=1.094 *17*; α(M)=0.238 *4* α(N)=0.0547 *9*; α(O)=0.00847 *13*; α(P)=0.000563 *9*
85.2 *1*	3 *1*	198.32	(3/2$^+$)	113.16	(3/2$^+$)	M1	3.19	α(K)=2.69 *4*; α(L)=0.390 *6*; α(M)=0.0847 *13* α(N)=0.0195 *3*; α(O)=0.00302 *5*; α(P)=0.000201 *3*
113.2 *1*	9 *2*	113.16	(3/2$^+$)	0.0	1/2$^+$	M1	1.412	α(K)=1.193 *17*; α(L)=0.1720 *25*; α(M)=0.0374 *6* α(N)=0.00860 *13*; α(O)=0.001334 *19*; α(P)=8.89×10^{-5} *13*
119.6 *1*	5 *2*	377.76	11/2$^-$	258.17	5/2$^+$	E3	15.93	α(K)=2.74 *4*; α(L)=10.08 *15*; α(M)=2.49 *4* α(N)=0.557 *9*; α(O)=0.0718 *11*; α(P)=0.0001662 *24*
145.0 *1*	6 *2*	258.17	5/2$^+$	113.16	(3/2$^+$)	M1	0.700	α(K)=0.592 *9*; α(L)=0.0850 *12*; α(M)=0.0185 *3* α(N)=0.00425 *6*; α(O)=0.000660 *10*; α(P)=4.41×10^{-5} *7*
198.4 *1*	27 *3*	198.32	(3/2$^+$)	0.0	1/2$^+$	M1	0.293	α(K)=0.248 *4*; α(L)=0.0354 *5*; α(M)=0.00768 *11* α(N)=0.001767 *25*; α(O)=0.000274 *4*; α(P)=1.84×10^{-5} *3*
258.2 *1*	23 *2*	258.17	5/2$^+$	0.0	1/2$^+$	E2	0.0964	α(K)=0.0717 *10*; α(L)=0.0192 *3*; α(M)=0.00439 *7* α(N)=0.000989 *14*; α(O)=0.0001388 *20*; α(P)=4.35×10^{-6} *7*

† From I(γ+ce) intensity balances (1989Gi06). Same values are adopted in Adopted Levels, Gammas dataset.
‡ Additional information 1.
$^{\#}$ For absolute intensity per 100 decays, multiply by 0.132 *24*.

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Decay Scheme

Intensities: I$_{(\gamma+ce)}$ per 100 parent decays

%IT=11 2

Legend

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

119.6 E3 11

11/2⁻   377.76   24.5 s 5

258.2 E2 3.3
145.0 M1 1.4
59.8 M1 6.5

5/2⁺   258.17

198.4 M1 4.6
85.2 M1 1.7

(3/2⁺)   198.32

113.2 M1 2.9

(3/2⁺)   113.16

1/2⁺   0.0   14 s 4

$^{141}_{64}$Gd$_{77}$