^{153}Gd IT decay (3.5 μs) 1979Ka16

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

Parent: ^{153}Gd: E=95.1737 *8*; $J^{\pi}=9/2^{+}$; $T_{1/2}=3.5$ μs *4*; %IT decay=100.0
Produced by ^{154}Sm(^{3}He,4n) with E(^{3}He)=27 MeV; measured $T_{1/2}$.

^{153}Gd Levels

E(level)†	Jπ‡	$T_{1/2}$	Comments
0.0	$3/2^{-}$		
41.56	$5/2^{-}$		
93.34	$7/2^{-}$		
95.17	$(9/2)^{+}$	3.5 μs *4*	$T_{1/2}$: From 1979Ka16, γ(t).

† Nominal values from ^{153}Gd Adopted Levels.
‡ From ^{153}Gd Adopted Levels.

γ(^{153}Gd)

Iγ normalization: Calculated to give 100% feeding to the ground state.

E_γ†	I_γ&	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	δ‡@	α‡#	$I_{(\gamma+ce)}$&	Comments
(1.83)		95.17	$(9/2)^{+}$	93.34	$7/2^{-}$	[E1]			106.7	$I_{(\gamma+ce)}$: Value assigned to give 100% decays of the isomer.
41.56	10.0 *5*	41.56	$5/2^{-}$	0.0	$3/2^{-}$	M1+E2	0.255 *8*	9.2 *4*		α(L)=7.2 *3*; α(M)=1.64 *6* α(N)=0.369 *14*; α(O)=0.0512 *18*; α(P)=0.001557 *23*
51.78	5 *2*	93.34	$7/2^{-}$	41.56	$5/2^{-}$	M1+E2	0.160 *10*	13.83 *21*		α(K)=11.00 *16*; α(L)=2.21 *8*; α(M)=0.492 *18* α(N)=0.112 *4*; α(O)=0.0165 *6*; α(P)=0.000842 *12*
93.34	1.1 *1*	93.34	$7/2^{-}$	0.0	$3/2^{-}$	E2		3.24		α(K)=1.385 *20*; α(L)=1.434 *20*; α(M)=0.338 *5* α(N)=0.0755 *11*; α(O)=0.00986 *14*; α(P)=6.80×10^{-5} *10*

† Nominal values from ^{153}Gd Adopted γ radiations.
‡ From ^{153}Gd Adopted Gammas.
# Additional information 1.
@ Additional information 2.
& For absolute intensity per 100 decays, multiply by 0.94 *6*.

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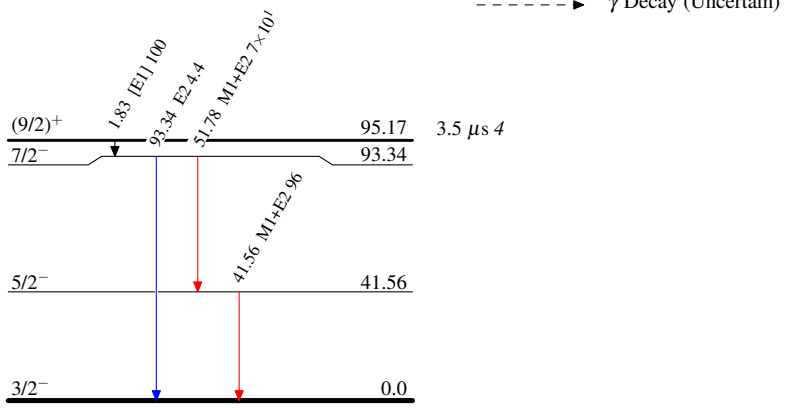
Decay Scheme

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

%IT=100.0



$^{153}_{64}Gd_{89}$