^{145}Gd IT decay (85 s) 1975Fi02,1970Ep02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 110, 507 (2009)	1-Oct-2008

Parent: ^{145}Gd: E=749.1 *2*; $J^\pi=11/2^-$; $T_{1/2}$=85 s *3*; %IT decay=94.3 *8*
^{145}Gd-%IT decay: From Iγ(721γ) + [Iγ(387γ) + Iγ(716γ), with ε decay]=100%.
%IT decay=94.3.
Measured: γ, $\gamma\gamma$, Xγ, $\gamma\gamma$(t).
Other measurements: 1970SeZP, 1969Ja02.

^{145}Gd Levels

E(level)	J^π[†]	$T_{1/2}$
0.0	$1/2^+$	
27.3 *1*	$3/2^+$	11.5 ns *3*
748.7 *4*	$11/2^-$	85 s *3*

[†] Adopted values.

γ(^{145}Gd)

Iγ normalization: From Iγ(721γ) + [Iγ(387γ) + Iγ(716γ), with ε decay]=100%.

E_γ	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α[†]	Comments
27.3 *1*	5.5 *5*	27.3	$3/2^+$	0.0	$1/2^+$	M1+E2	0.090 *22*	20 *3*	ce(L)/(γ+ce)=0.74 *8*; ce(M)/(γ+ce)=0.17 *4*; ce(N+)/(γ+ce)=0.043 *9* ce(N)/(γ+ce)=0.038 *8*; ce(O)/(γ+ce)=0.0055 *11*; ce(P)/(γ+ce)=0.00027 *4* B(M1)(W.u.)=0.0044 *7*; B(E2)(W.u.)=27 *14* Mult.,δ: from α(L)exp=16.9 *14*. I_γ: from I(γ+ce) balance.
721.4 *4*	100 *10*	748.7	$11/2^-$	27.3	$3/2^+$	M4		0.1454	ce(K)/(γ+ce)=0.1003 *13*; ce(L)/(γ+ce)=0.0207 *3*; ce(M)/(γ+ce)=0.00470 *7*; ce(N+)/(γ+ce)=0.001257 *18* ce(N)/(γ+ce)=0.001084 *16*; ce(O)/(γ+ce)=0.0001636 *24*; ce(P)/(γ+ce)=9.41×10^{-6} *14* B(M4)(W.u.)=1.84 *7* I_γ: $\Delta I\gamma$ assumed by evaluators. Mult.: α(K)exp=0.12 *2*, K/L=5.4 *7* (1970Ep02). E_γ: from 1970Ep02.

[†] Additional information 1.
[‡] For absolute intensity per 100 decays, multiply by 0.820 *7*.

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Decay Scheme

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

%IT=94.3 *8*