^{147}Dy IT decay (55.2 s) 1976Ra07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	N. Nica and B. Singh	NDS 181, 1 (2022)	9-Mar-2022

Parent: ^{147}Dy: E=750.5 *4*; J^π=(11/2$^-$); $T_{1/2}$=55.2 s *5*; %IT decay=31.1 *23*
^{147}Dy-E,J^π,$T_{1/2}$: from Adopted Levels; other: E(isomer)=750.5 (2005Ge10).
Others: 1982No08, 1985Br07, 1975To04.

^{147}Dy Levels

E(level)	J^π†	$T_{1/2}$†	Comments
0.0	(1/2$^+$)	67 s *7*	%ε+%β^+=100 (1983AlZN); %β^+p=5×10^{-2} (1984To07) %ε+%β^+,%β^+p: from Adopted Levels.
72.0 *3*	(3/2$^+$)		
750.5 *4*	(11/2$^-$)	55.2 s *5*	%IT=31.1 *23* (1997Co21); %ε+%β^+=68.9 *23* %IT,%ε+%β^+: from Adopted Levels.

† From Adopted Levels.

γ(^{147}Dy)

E_γ‡	I_γ#&	E_i(level)	J_i^π	E_f	J_f^π	Mult.@	δ	α†	$I_{(\gamma+ce)}$&	Comments
72.0 *3*	13.5 *6*	72.0	(3/2$^+$)	0.0	(1/2$^+$)	M1(+E2)	<0.4	6.4 *3*	100	ce(K)/(γ+ce)=0.673 *17*; ce(L)/(γ+ce)=0.149 *39*; ce(M)/(γ+ce)=0.034 *11* ce(N)/(γ+ce)=0.0078 *25*; ce(O)/(γ+ce)=0.00105 *29*; ce(P)/(γ+ce)=4.2×10^{-5} *3* α(K)=4.98 *23*; α(L)=1.11 *34*; α(M)=0.251 *83* α(N)=0.057 *19*; α(O)=0.0078 *21*; α(P)=0.000309 *17* Mult.: α(K)exp=5.2 *5* from (K x ray)γ/$\gamma\gamma$ (1982To01).
678.4 *3*	82.6	750.5	(11/2$^-$)	72.0	(3/2$^+$)	(M4)		0.211	100	ce(K)/(γ+ce)=0.1352 *17*; ce(L)/(γ+ce)=0.0300 *5*; ce(M)/(γ+ce)=0.00696 *10* ce(N)/(γ+ce)=0.001613 *23*; ce(O)/(γ+ce)=0.000228 *4*; ce(P)/(γ+ce)=1.100×10^{-5} *16* α(K)=0.1636 *23*; α(L)=0.0364 *6*; α(M)=0.00843 *12* α(N)=0.00195 *3*; α(O)=0.000276 *4*; α(P)=1.332×10^{-5} *19*

† Additional information 1.
‡ From Adopted Gammas.
# From the assumption that I(γ+ce)(72.0)=I(γ+ce)(678.4)=100 per 100 decays. These transitions follow the 55-s isomer in ^{147}Dy, and their intensities are significant only in relation to each other.
@ From Adopted Gammas.
& For absolute intensity per 100 decays, multiply by 0.311 *23*.

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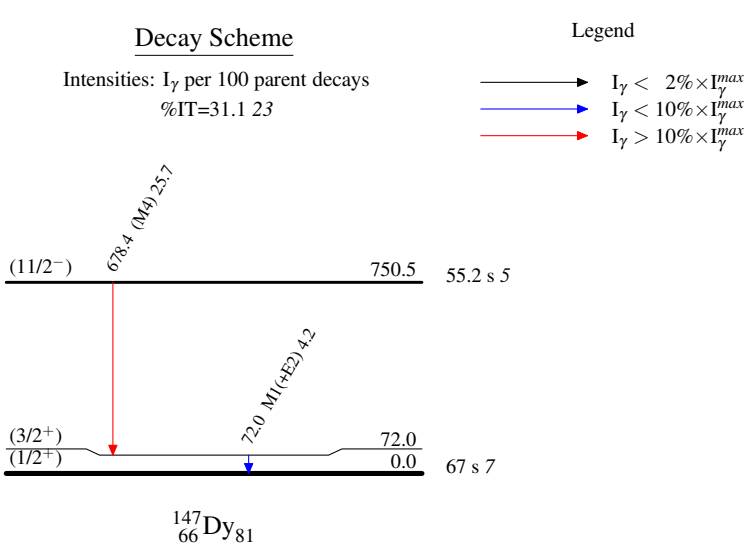
Decay Scheme

Intensities: I_γ per 100 parent decays

%IT=31.1 *23*



$^{147}_{66}Dy_{81}$