

¹⁴²Dy ε decay (2.3 s) 1991Fi03

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson, D. Symochko(a), M. Fadil(b), and J. K. Tuli		NDS 112, 1949 (2011)	1-Jun-2010

Parent: ¹⁴²Dy: E=0.0; J^π=0⁺; T_{1/2}=2.3 s 3; Q(ε)=6700 SY; %ε+%β⁺ decay=100.0

1991Fi03: measured γ, γγ, Xγ, Xp, T_{1/2}.

Delayed proton emission probability 0.06 3 (1991Fi03). E(p)(av)=3.9 MeV (1988NiZX), see also 1986Wi15.

¹⁴²Tb Levels

E(level)	J ^π †
0.0	1 ⁺
181.9 10	

† Adopted values.

ε,β⁺ radiations

ε/β⁺=0.111 5.

E(decay)	E(level)	Iε†	I(ε+β ⁺)†
(6700 SY)	0.0	4.1	94 2

† Absolute intensity per 100 decays.

γ(¹⁴²Tb)

I_γ normalization: from Ti(181.8γ)=6% 2. Since 1⁺, 181.9 level is not expected to be significantly fed directly by 0⁺ ¹⁴²Dy, 1991Fi03 assume it to be populated by γ's from higher unknown ¹⁴²Tb levels which are fed by 0⁺ ¹⁴²Dy.

E _γ	I _γ ‡	E _i (level)	E _f	J _f ^π	Mult.	α†	Comments
181.9	100	181.9	0.0	1 ⁺	[M1]	0.405	α(K)=0.342 5; α(L)=0.0494 7; α(M)=0.01079 16; α(N+..)=0.00291 4 α(N)=0.00250 4; α(O)=0.000385 6; α(P)=2.54×10 ⁻⁵ 4 I _γ : I _γ =4.3% 12.

† Additional information 1.

‡ For absolute intensity per 100 decays, multiply by 0.043 12.

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Decay Scheme

Intensities: I_γ per 100 parent decays