

^{143}Dy ε decay (3.0 s) [2003Xu04](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 113, 715 (2012)		31-May-2011

Parent: ^{143}Dy : $E=310.7$ 6; $J^\pi=(11/2^-)$; $T_{1/2}=3.0$ s 3; $Q(\varepsilon)=8250$ 50; $\% \varepsilon + \% \beta^+$ decay=100.0

^{143}Dy -E: From $^{92}\text{Mo}(^{54}\text{Fe}, 2p\text{n}\gamma)$ ([2000OI10](#)).

^{143}Dy - $\% \varepsilon + \% \beta^+$ decay: Decays by delayed protons to ^{142}Gd also, but $\% \varepsilon p$ is unknown.

^{143}Dy isotope produced by $^{106}\text{Cd}(^{40}\text{Ca}, 2p\text{n})$ at $E=182$ MeV at target center. Measured E_γ , I_γ , $\gamma\gamma$, X_γ , delayed protons, (proton) γ coincidence, half-life using a tape-transport system, two coaxial HPGe detectors and an HPGe planar detector. For protons two Si detectors were used. Other: [2006Xu03](#).

 ^{143}Tb Levels

E(level)	J^π
0.0	(11/2 ⁻)
142.8 3	
287.8 5	
521.1 4	15/2 ⁻
541.5 4	13/2 ⁻

 $\gamma(^{143}\text{Tb})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
142.8 3	46 7	142.8		0.0	(11/2 ⁻)
145.0 3	21 5	287.8		142.8	
521.1 4	58 11	521.1	15/2 ⁻	0.0	(11/2 ⁻)
541.5 4	100	541.5	13/2 ⁻	0.0	(11/2 ⁻)

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Decay Scheme

 Intensities: Relative I_γ

Legend

$\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 • Coincidence

