

^{150}Er ε decay (18.5 s) [1987To05](#)

Type	Author	History	Citation	Literature Cutoff Date
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Parent: ^{150}Er : $E=0$; $J^\pi=0^+$; $T_{1/2}=18.5$ s 7; $Q(\varepsilon)=4115$ 14; $\% \varepsilon + \% \beta^+$ decay=100.0

Others: [1982ElZT](#), [1982Mo19](#).

[2011Es03](#): measured $\varepsilon + \beta^+$ total intensities using TAGS spectrometer. Results agree well with those from [1987To05](#). The intensity to weakly populated levels above the 1160 one is given as 4.3 7 in [2011Es03](#).

α : [Additional information 1](#).

 ^{150}Ho Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}$	Comments
0	(2) ⁻	72 s 4	E(level), $T_{1/2}$: from Adopted Levels.
130.0 7	(1) ⁺		
476.0 7	1 ⁺		
1152.0 8	1 ⁺		
1450.7 8	(1) ⁺		
1490.2 8	1 ⁺		

[†] From Adopted Levels.

 ε, β^+ radiations

E(decay)	E(level)	$I\beta^+^\ddagger$	$I\varepsilon^\ddagger$	$\text{Log } ft^\dagger$	$I(\varepsilon + \beta^+)^\ddagger$	Comments
(2625 14)	1490.2	0.16 3	1.08 18	5.11 8	1.24 21	av $E\beta=725.9$ 63; $\varepsilon K=0.727$ 3; $\varepsilon L=0.1113$ 5; $\varepsilon M+=0.03290$ 13 $I(\varepsilon + \beta^+)$: 0.9 6 (2011Es03).
(2664 14)	1450.7	0.066 18	0.41 11	5.54 12	0.48 13	av $E\beta=743.5$ 63; $\varepsilon K=0.720$ 3; $\varepsilon L=0.1101$ 5; $\varepsilon M+=0.03254$ 13 $I(\varepsilon + \beta^+)$: 0.2 5 (2011Es03).
(2963 14)	1152.0	0.29 5	1.05 17	5.23 7	1.34 21	av $E\beta=877.0$ 63; $\varepsilon K=0.657$ 4; $\varepsilon L=0.1001$ 5; $\varepsilon M+=0.02958$ 15 $I(\varepsilon + \beta^+)$: 1.6 2 (2011Es03).
(3639 14)	476.0	38.7 4	56.9 4	3.676 18	95.60 10	av $E\beta=1182.6$ 64; $\varepsilon K=0.497$ 4; $\varepsilon L=0.0753$ 5; $\varepsilon M+=0.02225$ 15 $I(\varepsilon + \beta^+)$: 94.2 7 (2011Es03).
(3985 14)	130.0	0.65 20	0.65 20	5.70 14	1.3 4	av $E\beta=1340.7$ 65; $\varepsilon K=0.421$ 3; $\varepsilon L=0.0636$ 5; $\varepsilon M+=0.01876$ 14 $I(\varepsilon + \beta^+)$: No direct feeding reported by 2011Es03 .

[†] Calculated under the assumptions that the 2^- level is the ground state and that conversion is not significant.

[‡] Absolute intensity per 100 decays.

 $\gamma(^{150}\text{Ho})$

I_γ normalization: Assumed that $I(\varepsilon + \beta^+)$ (g.s.) is negligible ($\leq 0.1\%$ expected from $\log f^u t > 8.5$).

^{150}Er ε decay (18.5 s) **1987To05** (continued) $\gamma(^{150}\text{Ho})$ (continued)

E_γ	$I_\gamma^\ddagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	α	Comments
130.0 1	2.6 3	130.0	(1 ⁺)	0	(2) ⁻	E1 [†]	0.1574	$\alpha(\text{K})=0.1318$ 19; $\alpha(\text{L})=0.0201$ 3; $\alpha(\text{M})=0.00442$ 7; $\alpha(\text{N})=0.001010$ 15; $\alpha(\text{O})=0.0001384$ 20 $\alpha(\text{P})=6.24\times 10^{-6}$ 9; $\alpha(\text{N}+..)=0.001155$ 17
346.1 2	0.5 1	476.0	1 ⁺	130.0	(1 ⁺)	E2 [†]	0.0436	$\alpha(\text{K})=0.0332$ 5; $\alpha(\text{L})=0.00805$ 12; $\alpha(\text{M})=0.00185$ 3; $\alpha(\text{N})=0.000424$ 6; $\alpha(\text{O})=5.59\times 10^{-5}$ 8 $\alpha(\text{P})=1.761\times 10^{-6}$ 25; $\alpha(\text{N}+..)=0.000482$ 7
476.0 2	100 1	476.0	1 ⁺	0	(2) ⁻	E1 [†]	0.00598 9	$\alpha(\text{K})=0.00508$ 8; $\alpha(\text{L})=0.000706$ 10; $\alpha(\text{M})=0.0001546$ 22; $\alpha(\text{N})=3.57\times 10^{-5}$ 5; $\alpha(\text{O})=5.12\times 10^{-6}$ 8 $\alpha(\text{P})=2.74\times 10^{-7}$ 4; $\alpha(\text{N}+..)=4.11\times 10^{-5}$ 6
^x 663.3 3	0.2 1							
1014.0 3	0.9 2	1490.2	1 ⁺	476.0	1 ⁺			
1022.1 3	0.9 2	1152.0	1 ⁺	130.0	(1 ⁺)			
1151.9 3	0.5 1	1152.0	1 ⁺	0	(2) ⁻			
^x 1177.1 3	0.3 1							
1320.5 4	0.2 1	1450.7	(1) ⁺	130.0	(1 ⁺)			
1450.9 3	0.3 1	1450.7	(1) ⁺	0	(2) ⁻			
1490.4 3	0.4 1	1490.2	1 ⁺	0	(2) ⁻			

[†] From $\alpha(\text{K})\text{exp}$ (1989KIZX). No details are given.

[‡] For absolute intensity per 100 decays, multiply by 0.9541 5.

^x γ ray not placed in level scheme.

^{150}Er ε decay (18.5 s) 1987To05**Decay Scheme**

Legend

Intensities: I_γ per 100 parent decays

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

