^{149}Er εp decay (9.6 s)   1989Fi01

	Type	Author	History Citation	Literature Cutoff Date
	Full Evaluation	N. Nica	NDS 208,1 (2026)	17-Jan-2026

Parent: ^{149}Er: E=741.8 *4*; J$^\pi$=(11/2$^-$); T$_{1/2}$=9.6 s *6*; Q(εp)=6829 *29*; %εp decay=0.18 *7*

^{149}Er-Q(εp): From 2021Wa16.

Measured p, γ, x, β^+ in singles and coin. FWHM for protons $\approx$35 keV.

^{148}Dy Levels

E(level)	J$^{\pi\dagger}$	T$_{1/2}^\dagger$
0.0	0$^+$	3.3 min *2*
1677.9	2$^+$	
1688.4	3$^-$	
2349.4	5$^-$	
2427.6	4$^+$	
2732.3	6$^+$	
2739.3	7$^-$	

† From Adopted Levels.

$\gamma(^{148}$Dy$)$

Iγ normalization: according to 1989Fi01, 24% of ^{149m}Er εp decay goes to ^{148}Dy g.s., whence %ΣI(γ+ce)(g.s.)=100−24=76; to get the absolute intensity per 100 decays normalization factor, multiply %ΣI(γ+ce)=76 by %εp decay=0.18 *7*, which gives 0.0014 *5*.

E$_\gamma$	I$_\gamma$$^\#$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.†	$\alpha^\ddagger$	I$_{(\gamma+ce)}$$^\#$	Comments
10.5	0.2	1688.4	3$^-$	1677.9	2$^+$	[E1]	26.1 *4*	5	ce(L)/(γ+ce)=0.747 *7*; ce(M)/(γ+ce)=0.1757 *31* ce(N)/(γ+ce)=0.0370 *7*; ce(O)/(γ+ce)=0.00348 *7*; ce(P)/(γ+ce)=6.89×10^{-5} *13* α(L)=20.24 *28*; α(M)=4.76 *7* α(N)=1.003 *14*; α(O)=0.0943 *13*; α(P)=0.001867 *26*
304.6	2	2732.3	6$^+$	2427.6	4$^+$	E2	0.0616 *9*		α(K)=0.0463 *6*; α(L)=0.01187 *17*; α(M)=0.00273 *4* α(N)=0.000621 *9*; α(O)=8.17×10^{-5} *11*; α(P)=2.418×10^{-6} *34*
382.9	3	2732.3	6$^+$	2349.4	5$^-$	E1	0.00950 *13*		α(K)=0.00806 *11*; α(L)=0.001124 *16*; α(M)=0.0002451 *34* α(N)=5.63×10^{-5} *8*; α(O)=8.09×10^{-6} *11*; α(P)=4.33×10^{-7} *6*
389.9	3	2739.3	7$^-$	2349.4	5$^-$	E2	0.0298 *4*		α(K)=0.02331 *33*; α(L)=0.00504 *7*; α(M)=0.001147 *16* α(N)=0.000262 *4*; α(O)=3.53×10^{-5} *5*; α(P)=1.267×10^{-6} *18*
661.0	14	2349.4	5$^-$	1688.4	3$^-$	E2	0.00759 *11*		α(K)=0.00625 *9*; α(L)=0.001046 *15*; α(M)=0.0002329 *33* α(N)=5.35×10^{-5} *7*; α(O)=7.53×10^{-6} *11*; α(P)=3.56×10^{-7} *5*
739.2	6	2427.6	4$^+$	1688.4	3$^-$				

^{149}**Er εp decay (9.6 s)**   **1989Fi01 (continued)**

$\gamma(^{148}$Dy) (continued)

E_γ	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[‡]	Comments
749.7	4	2427.6	4^+	1677.9	2^+	E2	0.00567 8	α(K)=0.00471 7; α(L)=0.000755 11; α(M)=0.0001674 23 α(N)=3.85×10^{-5} 5; α(O)=5.46×10^{-6} 8; α(P)=2.70×10^{-7} 4
1677.9	13	1677.9	2^+	0.0	0^+	E2	1.24×10^{-3} 2	α(K)=0.000938 13; α(L)=0.0001290 18; α(M)=2.81×10^{-5} 4 α(N)=6.49×10^{-6} 9; α(O)=9.49×10^{-7} 13; α(P)=5.42×10^{-8} 8; α(IPF)=0.0001400 20
1688.4	24	1688.4	3^-	0.0	0^+	E3	2.12×10^{-3} 3	α(K)=0.001724 24; α(L)=0.000257 4; α(M)=5.67×10^{-5} 8 α(N)=1.308×10^{-5} 18; α(O)=1.897×10^{-6} 27; α(P)=1.034×10^{-7} 14; α(IPF)=7.11×10^{-5} 10

[†] From adopted gammas.
[‡] Additional information 1.
[#] For absolute intensity per 100 decays, multiply by 0.0014.

Delayed Protons (^{148}Dy)

Particle normalization: %ε+%β^+=96.5 7; %εp=0.18 7 (1989Fi01).

E(^{148}Dy)	I(p)[†]
0.0	72
1677.9	3
1688.4	7
2349.4	5
2427.6	6
2732.3	4
2739.3	3

[†] For absolute intensity per 100 decays, multiply by 0.0018 7.

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<u>Decay Scheme</u>

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

Legend

→ I$_\gamma <$ 2%×I$_\gamma^{max}$
→ I$_\gamma <$ 10%×I$_\gamma^{max}$
→ I$_\gamma >$ 10%×I$_\gamma^{max}$

$^{149}_{68}$Er$_{81}$

$^{148}_{66}$Dy$_{82}$