# $^{152}$Er ε decay 1982To14,1982Ba75

| History | | | |
|---|---|---|---|
| Type | Author | Citation | Literature Cutoff Date |
| Full Evaluation | M. J. Martin | NDS 114, 1497 (2013) | 31-Aug-2013 |

Parent: $^{152}$Er: E=0.0; $J^\pi=0^+$; $T_{1/2}$=10.3 s *1*; Q(ε)=3105 *10*; %ε+%$β^+$ decay=10 *4*

$^{152}$Er-%ε+%$β^+$ decay: %ε+%$β^+$=10 *4*. Average from I(179.4γ)/I(4790α) and I(620.2γ $^{148}$Dy decay)/I(613.8γ $^{152}$Ho decay) assuming 4790α and 179.4γ represent 100% α decay and ε+$β^+$ decay, respectively (1987To02).

Measured: γ (1982To14,1982Ba75,1987To02), branching (1987To02).

## $^{152}$Ho Levels

| E(level) | $J^\pi$[†] |
|---|---|
| 0.0 | $2^-$ |
| 179.3 *1* | $1^+$ |

[†] From Adopted Levels.

## ε,$β^+$ radiations

| E(decay) | E(level) | Iβ+ [†] | Iε[†] | Log *ft* | I(ε+β+)[†] | Comments |
|---|---|---|---|---|---|---|
| (2926 *10*) | 179.3 | 20.3 *4* | 79.7 *4* | 4.08 *18* | 100 | av Eβ=860.3 *45*; εK=0.6653 *23*; εL=0.1014 *4*; εM+=0.02997 *11* |

[†] For absolute intensity per 100 decays, multiply by 0.10 *4*.

## γ($^{152}$Ho)

| $E_\gamma$ | $I_\gamma$[†] | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | Mult. | α[‡] | Comments |
|---|---|---|---|---|---|---|---|---|
| 179.3 *1* | 100 | 179.3 | $1^+$ | 0.0 | $2^-$ | E1 | 0.0670 | α(K)=0.0564 *8*; α(L)=0.00833 *12*; α(M)=0.00183 *3*; α(N+..)=0.000481 *7*<br>α(N)=0.000420 *6*; α(O)=5.84×10$^{-5}$ *9*; α(P)=2.78×10$^{-6}$ *4*<br>$E_\gamma$: From 1982To14.<br>Mult.: α(K)exp=0.067 (1982Ba75), 0.10 *5* (1982To14). |

[†] For absolute intensity per 100 decays, multiply by 0.09 *4*.

[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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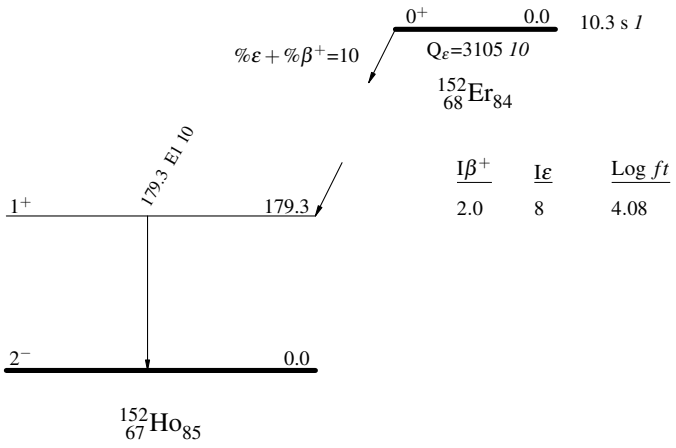
### Decay Scheme

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




| Iβ+ | Iε | Log ft |
|---|---|---|
| 2.0 | 8 | 4.08 |