^{152}Er α decay

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 117, 1 (2014)	1-Oct-2013

Parent: ^{152}Er: E=0.0; $J^{\pi}=0^+$; $T_{1/2}$=10.3 s *1*; Q(α)=4934.4 *16*; %α decay=91 *4*
^{152}Er-Q(α): From 2012Wa38.
$T_{1/2}(^{152}Er)$=10.3 s *1*, measured by 1982Bo04 and adopted by 1996Ar09, is used in calculations here.

%α=91 *4* is used in calculations. This branching is an unweighted average of %α=93 *4* (1979Ho10), %α=94 *4* (1987To02) and %α=86 *4* (1987To02), determined by counting different γ's and the 4804α. %α=90 *4* is adopted by 1996Ar09 from the α branchings obtained by 1987To02.

^{148}Dy Levels

E(level)	J^{π}
0.0	0^+

α radiations

Eα	E(level)	Iα[†#]	HF[‡]	Comments
4804.3 *16*	0.0	100	1.000	Eα: recommended by 1991Ry01 from the measured energies of 4800 *10* (1970To16), 4806 *10* (1977Ha48), 4804 *2* (1981De22), 4805 *3* (1982Bo04), 4809 *10* (1983Ml01). The original energies are adjusted for changes in calibration energies, as recommended by 1991Ry01. Iα: only one α group was observed. An upper limit of 6.8×10^{-10} per 100 α decays is calculated for an unobserved 3171-keV α to the 1677.3-keV, 2^+ state in ^{148}Dy by requiring Hf(3171α)>1.

† α intensity per 100 α decays.
‡ $r_0(^{148}Dy)$=1.567 *3* is calculated from Hf(4804α)=1.0.
# For absolute intensity per 100 decays, multiply by 0.91 *4*.