^{156}Er α decay

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

Parent: ^{156}Er: E=0; $J^\pi=0^+$; $T_{1/2}$=19.5 min *10*; Q(α)=3541 *10*; %α decay=1.2×10^{-5} *3*

^{156}Er-Q is from Eα=3450 *10* (2002KaZR). 2012Wa38 give 3487 *25* based on an input of Eα=3030 *70* (1995KaZS). Other values of Eα are 3300 *70* (1992KaZP) and 3450 *15* (1996ByZY). The value of 1998KaZS appears to be discrepant. Note that an α branch to the 614 *2+* level would have Eα=2852 and from systematics of hindrance factors would have an intensity approximately 10×10^{-6} that of the branch to the g.s.

^{156}Er-%α decay: The literature values are inconsistent. Values in increasing order are 5×10^{-8} *2* (1995KaZS), 1.2×10^{-7} *3* (1996ByZY), 5×10^{-7} *2* (1992KaZP), and 1.0×10^{-6} (2002KaZR). The radius parameters calculated with these intensities are 1.480 *25*, 1.527 *17*, 1.603 *26*, and 1.641 *11*, respectively. r_0 values for 148 Dy and 150 Dy are 1.527 *4* and 1.551 *24*, respectively. From systematics of r_0 values in adjacent nuclides, the evaluator judges that the most likely value for ^{152}Dy is the one resulting from the α branching of 1996ByZY.

^{152}Dy Levels

E(level)	J^π
0	0^+

α radiations

Eα	E(level)	Iα[‡]	HF[†]	Comments
3450 *10*	0	100	1.000	Eα: 2002KaZR.

[†] r_0=1.527 *17*.

[‡] For absolute intensity per 100 decays, multiply by 1.2×10^{-7} *3*.