

$^{157}\text{Ta}$   $\alpha$  decay (1.7 ms) 1996Pa01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 170, 1 (2020)	16-Aug-2020

Parent:  $^{157}\text{Ta}$ : E=1589 10;  $J^\pi=(25/2^-)$ ;  $T_{1/2}=1.7$  ms 1;  $Q(\alpha)=6355$  6; % $\alpha$  decay=100.0

$^{157}\text{Ta}$ -% $\alpha$  decay: From lack of other observed decay modes.

Experimental methods:

1996Pa01: produced by heavy-ion fusion-evaporation reaction with products separated in recoil mass spectrometer. Measured  $\alpha$ 's with Si strip detector.

 $^{153}\text{Lu}$  Levels

E(level)	$J^\pi$	Comments
0.0	11/2 <sup>-</sup>	E(level): The parent level energy is based on the assumption that the observed $\alpha$ feed the ground state as noted in the $^{157}\text{Ta}$ Adopted Levels.

 $\alpha$  radiations

$E_\alpha$	E(level)	$I_\alpha^\ddagger$	HF <sup>†</sup>	Comments
7744 8	0.0	100	$2.05 \times 10^4$ 14	$E_\alpha$ : From 1996Pa01. $I_\alpha$ : Value assumes that all of the $\alpha$ decay is via this branch.

<sup>†</sup> The nuclear radius parameter  $r_0(^{153}\text{Lu})=1.5551$  66 is deduced from interpolation (or unweighted average) of radius parameters of the adjacent even-even nuclides.

<sup>‡</sup> Absolute intensity per 100 decays.