^{157}Ta α decay (4.3 ms)   1996Pa01,1979Ho10,1997Ir01

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

Parent: ^{157}Ta: E=22 *5*; J$^{\pi}$=11/2$^-$; T$_{1/2}$=4.3 ms *1*; Q(α)=6355 *6*; %α decay=100.0

^{157}Ta-%α decay: From ^{157}Ta Adopted Levels and based on measurements of 95% *12* (1996Pa01) and 100 *23* (1979Ho10) and the lack of any observed proton emission.

Experimental methods:

1979Ho10: ^{107}Ag(^{58}Ni,xnyp) with E(^{58}Ni)= 263, 275 MeV with products separated with velocity selector and ions implanted in position-sensitive detector. Also 1981HoZM.

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

1997Ir01: Discusses configurations and deduces parent excitation energy.

^{153}Lu Levels

E(level)	J$^{\pi}$	Comments
0.0	11/2$^-$	E(level): Level populated by α decay is deduced (1997Ir01) to be h$_{11/2}$ ground state.

α radiations

Eα	E(level)	I$\alpha^{\ddagger}$	HF†	Comments
6214 *4*	0.0	100	1.33 *6*	Eα: Weighted average of 6219 *10* (1979Ho10) and 6213 *4* (1996Pa01). Iα: Value assumes that all of the α decay is via this branch.

† The nuclear radius parameter r$_0$(^{153}Lu)=1.5551 *66* is deduced from interpolation (or unweighted average) of radius parameters of the adjacent even-even nuclides.

‡ Absolute intensity per 100 decays.