^{155}Ta p decay 2007Pa27

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 200,2 (2025)	22-Aug-2022

Parent: ^{155}Ta: E=0+x; $J^{\pi}=11/2^{-}$; $T_{1/2}$=2.9 ms *+15−11*; Q(p)=1453 *15*; %p decay=100

^{155}Ta-Q(p): Additional information 1.

^{155}Ta-J^{π}: Additional information 2.

^{155}Ta-%p decay: The calculated (1997Mo25) half-life for β emission is ≈0.33 s, which suggests that this branch does not compete to any significant extent with proton emission.

Additional information 3.

Data are primarily those from 2007Pa27. The ^{155}Ta p decay was studied earlier by 1999Uu01, who reported E(p) and $T_{1/2}$ values. However, the subsequent study by 2007Pa27 does not confirm these values.

Produced as the α-decay product of ^{159}Re, which was produced in the ^{106}Cd(^{58}Ni,P4N) reaction, with E(^{58}Ni)=300 MeV, on α 1.1 mg/cm^2 thick self-supporting ^{106}Cd target (enrichment=96.5%). reaction products were separated using the gas-filled separator RITU and implanted into a DSSD device in the GREAT spectrometer. Measured α, protons, and temporal correlations between the implanted recoil nuclides and their subsequent decays.

^{154}Hf Levels

E(level)	J^{π}	$T_{1/2}$	Comments
0	0^+	2 s *1*	$T_{1/2}$: from Adopted Levels.

Protons (^{154}Hf)

E(p)	E(^{154}Hf)	I(p)	L	Comments
1444 *15*	0	100	5	From comparison of the experimental and calculated $T_{1/2}$ value for the ^{155}Ta g.s.