

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 146, 1 (2017)	30-Sep-2017

$Q(\beta^-) = -8740$ SY; $S(n) = 10770$ SY; $S(p) = -260$ SY; $Q(\alpha) = 3840$ SY [2017Wa10](#)

$\Delta Q(\beta^-) = 590$, $\Delta S(n) = 500$, $\Delta S(p) = \Delta Q(\alpha) = 420$ (syst, [2017Wa10](#)).

$S(2n) = 23680$ 580, $S(2p) = 2000$ 360, $Q(\epsilon p) = 9190$ 300, $Q(\beta^+) = 12130$ 360 (syst, [2017Wa10](#)).

First identification of ^{138}Tb nuclide by [2000So11](#) via $^{90}\text{Zr}(^{197}\text{Au}, X)$.

[2000So11](#): $^{90}\text{Zr}(^{197}\text{Au}, X)$, $E = 30$ MeV/nucleon. Identification using A1200 mass separator at Michigan State University.

[1993Li40](#): $^{102}\text{Pd}(^{40}\text{Ca}, p3n)$, $E = 185\text{-}204$ MeV, proton radioactivity was searched for but not found.

[1983La27](#): $^{92}\text{Mo}(^{58}\text{Ni}, X)$, $E = 5$ MeV/nucleon. Measured E_p , I_p , β^+ p-coin. Deduced no evidence for direct proton decay.

Theoretical calculations:

[2014Ag01](#): calculated position of proton drip line, $S(p)$, β and γ deformation parameters.

 ^{138}Tb Levels

E(level)	$T_{1/2}$	Comments
x	≥ 200 ns	$\% \epsilon + \% \beta^+ = 100$ $T_{1/2}$: estimated from the flight time through the spectrograph (2000So11). No evidence for direct proton radioactivity was observed (1993Li40 and 1983La27).