

Adopted Levels

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	F. G. Kondev	ENSDF	20-Feb-2017

$Q(\beta^-)=6748$  (syst) 361;  $S(n)=5111$  (syst) 424;  $S(p)=14178$  (syst) 500;  $Q(\alpha)=-5534$  (syst) 500    2017Wa10  
 $S(2n)=8743$  (syst) 424;  $S(2p)=26577$  (syst) 500;  $Q(\beta^-n)=2524$  (syst) 300    2017Wa10

Additional information 1.

2017Wu04: The  $^{156}\text{Ce}$  nuclide was produced at the RIBF-RIKEN facility using the  $^9\text{Be}(^{238}\text{U},\text{F})$  reaction at  $E=345$  MeV/nucleon.

Two experiments, optimized for the transmission of  $^{158}\text{Nd}$  and  $^{170}\text{Dy}$  ions, were carried out with average beam intensities of 7 pnA and 12 pnA, respectively. The identification of the nuclide of interest was made in the BigRIPS separator by determining the atomic number and the mass-to-charge ratio of the ion using the TOF-B $\rho$ - $\Delta E$  method. The reaction products were transported through the ZeroDegree Spectrometer and implanted into the beta-counting system WAS3ABi that was surrounded by the EURICA array comprising of 84 HPGe detectors. The typical implantation rate was 100 ions/s. Measured: implanted ion- $\beta^-$ -t, implanted ion- $\beta^-$ - $\gamma$ -t and implanted ions- $\gamma$ -t correlations. Deduced:  $T_{1/2}$ .

 $^{156}\text{Ce}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0.0	$0^+$	0.233 s 9	$\% \beta^- = 100$ ; $\% \beta^- n = ?$ $\% \beta^-$ : Only $\beta^-$ decay mode is expected. $T_{1/2}$ : From 2017Wu04, using a fit to the implanted ion- $\beta^-$ -t spectrum using the least-squares and maximum-likelihood methods. The data analysis included contributions from the parent, daughter and ground-daughter decays, as well as a constant background.