

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 130, 21 (2015)	15-Jul-2015

$Q(\beta^-)=4170$  SY;  $S(n)=5150$  SY;  $S(p)=8080$  SY;  $Q(\alpha)=-190$  SY [2012Wa38](#)

Estimated uncertainties ([2012Wa38](#)): 200 for  $Q(\beta^-)$ , 250 for  $S(n)$ , 360 for  $S(p)$ , 450 for  $Q(\alpha)$ .

$S(2n)=11340$  210 (syst,[2012Wa38](#)),  $S(2p)=18170$  (theoretical,[1997Mo25](#)).

$^{182}\text{Lu}$  isotope produced and identified by [1982Ki04](#) at GSI facility using reactions:  $W(^{136}\text{Xe},X)$  and  $Ta(^{136}\text{Xe},X)$   $E=9$  MeV/nucleon, followed by mass separation. Measured  $T_{1/2}$ ,  $\gamma$  and  $\beta$  radiations from  $^{182}\text{Lu}$  decay to  $^{182}\text{Hf}$ .

 $^{182}\text{Lu}$  Levels

E(level)	$T_{1/2}$	Comments
0	2.0 min 2	$\% \beta^- = 100$ E(level): the 2.0-min activity is assumed to belong to the g.s. $T_{1/2}$ : from timing of $\beta$ rays, K x ray, and two $\gamma$ rays ( <a href="#">1982Ki04</a> ). $J^\pi$ : $\leq 4$ from possible $\beta$ feeding of $2^+$ state in $^{182}\text{Hf}$ . Shell model configuration (for spherical case): $\pi h_{11/2} \nu i_{13/2}$ suggests negative parity; $1^-$ suggested from systematics ( <a href="#">2012Au07</a> ).