

Adopted Levels

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	15-Aug-2010

$Q(\beta^-)=1.06\times 10^4$  syst;  $S(n)=3.7\times 10^3$  syst    [2012Wa38](#)

Note: Current evaluation has used the following Q record \$ 10200    calc 4250    calc 12330    calc -4730    calc    [1997Mo25](#).

$S(2n)=6930$ ,  $S(2p)=28260$  ([1997Mo25](#),calculated).

[2010Oh02](#):  $^{145}\text{I}$  nuclide identified in  $\text{Be}(^{238}\text{U},\text{F})$  and  $\text{Pb}(^{238}\text{U},\text{F})$  reactions with a  $^{238}\text{U}^{86+}$  beam energy of 345 MeV/nucleon produced by the cascade operation of the RBIF accelerator complex of the linear accelerator RILAC and four cyclotrons RRC, fRC, IRC and SRC. Identification of  $^{145}\text{I}$  nuclei was made on the basis of magnetic rigidity, time-of-flight and energy loss of the fragments using BigRIPS fragment separator. Experiments performed at RIKEN facility.

Based on A/Q spectrum and Z versus A/Q plot, 57 counts were assigned to  $^{145}\text{I}$  isotope. (Q=charge state).

 $^{145}\text{I}$  Levels

E(level)	$T_{1/2}$	Comments
0	>407 ns	$\% \beta^- = ?$ ; $\% \beta^- n = ?$ Measured $\sigma = 3.10$ nb ( <a href="#">2010Oh02</a> ), systematic uncertainty $\approx 30\%$ . $T_{1/2}$ : lower limit from time-of-flight in <a href="#">2010Oh02</a> , as communicated to the evaluator by T. Kubo in an e-mail reply of July 14, 2010. Actual half-life is expected to be much longer as suggested by the calculated values of 53 ms ( <a href="#">1997Mo25</a> ), 57 ms ( <a href="#">2002Pf04</a> ). $J^\pi$ : $1/2^-$ predicted in calculations of <a href="#">1997Mo25</a> . Probability of misidentification of $^{145}\text{I}$ isotope $< 0.001\%$ ( <a href="#">2010Oh02</a> ). Calculated $\% \beta^- n = 42.80$ , $\% \beta^- 2n = 0.26$ ( <a href="#">1997Mo25</a> ). Calculated $\% \beta^- n = 46.4$ ( <a href="#">2002Pf04</a> ).