

Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	31-Dec-2016

$Q(\beta^-)=14100$ SY; $S(n)=2940$ SY; $S(p)=14200$ CA; $Q(\alpha)=-7560$ CA [2012Wa38,1997Mo25](#)

Estimated $\Delta Q(\beta^-)=400$, $\Delta S(n)=500$ (syst,[2012Wa38](#)).

$Q(\beta^-)$ and $S(n)$ from [2012Wa38](#); $S(p)$ and $Q(\alpha)$ from theory ([1997Mo25](#)).

$S(2n)=5210$ 450, $Q(\beta^-n)=11830$ 400 (syst,[2012Wa38](#)). $S(2p)=31850$ (theory,[1997Mo25](#)).

[2002Di12](#): ^{135}In nuclide produced in $^{238}\text{U}(n,f)$ reaction, where neutrons were obtained from spallation of a tantalum target by 1.4 GeV protons at CERN/ISOLDE facility. The ^{135}In ions were identified by using isobaric selectivity of a resonance-ionization LASER ion-source. Measured $T_{1/2}$ and β -delayed neutrons.

[2015Lo04](#): ^{135}In nuclide produced at RIBF-RIKEN facility in $^9\text{Be}(^{238}\text{U},f)$ reaction at $E=345$ MeV/nucleon with an average intensity of 6×10^{10} ions/s. Identification of ^{135}In was made by determining atomic Z and mass-to-charge ratio A/Q, where Q=charge state of the ions. The selectivity of ions was based on magnetic rigidity, time-of-flight and energy loss. The separated nuclei were implanted at a rate of 50 ions/s in a stack of eight double-sided silicon-strip detector (WAS3ABi), surrounded by EURICA array of 84 HPGe detectors. Correlations were recorded between the implanted ions and β rays. The half-life of ^{135}In isotope was measured from the correlated ion- β decay curves and maximum likelihood analysis technique as described in [2014Xu07](#). Comparison of measured half-lives with FRDM+QRPA, KTUY+GT2 and DF3+CQRPA theoretical calculations.

[Additional information 1](#).

 ^{135}In Levels

E(level)	$T_{1/2}$	Comments
0	101 ms 5	$\% \beta^- = 100$; $\% \beta^- n > 0$; $\% \beta^- 2n = ?$ Theoretical $T_{1/2} = 69.8$ ms, $\% \beta^- n = 23.5$, $\% \beta^- 2n = 64.3$ (2003Mo09). Theoretical $\% \beta^- n = 95$ (2002Di12 , QRPA calculations). E(level): 101-ms activity assumed as belonging to the ground state of ^{135}In . J^π : $9/2^+$ from systematics of $Z=49$ nuclides (1997Mo25,2012Au07). $T_{1/2}$: weighted average of 103 ms 5 (2015Lo04 from (implanted ions) β correlated decay curve) and 92 ms 10 (2002Di12 , from β -delayed neutron curve).