

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	N. Nica and B. Singh		NDS 181, 1 (2022)	9-Mar-2022

$Q(\beta^-)=9520$ SY; $S(n)=2520$ SY; $S(p)=14150$ SY; $Q(\alpha)=-4290$ SY [2021Wa16](#)

$\Delta Q(\beta^-)=200$, $\Delta S(n)=200$, $\Delta S(p)=360$, $\Delta Q(\alpha)=540$ (syst,[2021Wa16](#)).

$S(2n)=7050$ 200, $S(2p)=26970$ 360, $Q(\beta^-n)=4840$ 200 (syst,[2021Wa16](#)).

[2020Wu04](#) was compiled for the XUNDL database by B. Singh (McMaster).

[1994Be24](#): isotope first produced by $\text{Pb}(^{238}\text{U},\text{F})$ $E=750$ MeV; used fragment separator (FRS) and MUSIC ionization chamber (GSI). Found 4 counts, $\sigma=4$ μb .

[2003Be05](#): isotope produced by 1-1.4 GeV protons on uranium-carbide/graphite target at PSB-ISOLDE (CERN); used 4π β detector and cylindrical 4π neutron counter. Isotope was identified by $T_{1/2}$.

[2020Wu04](#): ^{147}Xe produced by $^9\text{Be}(^{238}\text{U},\text{F})$ reaction, at $E(^9\text{Be})=345$ MeV/nucleon and 5pnA of intensity at RIBF-RIKEN. Fission fragments identified by determining Z vs. mass-to-charge (of ions) ratio A/Q using BigRIPS spectrometer (time-of-flight (tof), magnetic rigidity ($B\rho$), energy loss (ΔE) measurements). Separated ions implanted at 100 ions/s rate in WAS3ABi beta counting system including DSSSDs (stack of five Double Sided Si Strip Detectors) surrounded by EURICA γ detection array (84 HPGe detectors). Measured $T_{1/2}$ from implanted ions β and $\beta\gamma$ decay curves.

 ^{147}Xe Levels

E(level)	$T_{1/2}$	Comments
0.0	88 ms 14	$\% \beta^- = 100$; $\% \beta^- n < 8$ (2003Be05) J^π : $(3/2^-, -5/2^-)$. $(3/2^-)$ proposed by 2019Mo01 (calc) and 2021Ko07 (syst); $(5/2^-)$ for ^{147}Ba (2013Bz01), $(5/2^-)$ but not excluding $(3/2^-)$ for ^{147}Ba (2017Li06). $T_{1/2}$: from 2020Wu04 (β and $\beta\gamma$ decay curves); other: 100 ms +100–50 (2003Be05 , from β and n decay spectra).