Adopted Levels

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	31-May-2015

Q(β^-)=13400 *SY*; S(n)=4040 *SY*; S(p)=15080 *CA*; Q(α)=−10440 *CA* 2012Wa38,1997Mo25

Estimated uncertainties (2012Wa38): 640 for Q(β^-), 710 for S(n). Q(β^-) and S(n) from 2012Wa38. S(p) and Q(α) from 1997Mo25.

S(2n)=6990 *640*, Q(β^-n)=10380 *590*, Q(β^-2n)=5280 *590* (syst,2012Wa38). S(2p)=34040 (theory,1997Mo25).

2010Oh02: ^{115}Nb nuclide identified in Be(^{238}U,F) and Pb(^{238}U,F) reactions with a $^{238}U^{86+}$ 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 ^{115}Nb 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, 4 counts were assigned to ^{115}Nb isotope. (Q=charge state).

2015Lo04: ^{115}Nb nuclide produced at RIBF-RIKEN facility in ^{9}Be(^{238}U,F) reaction at E=345 MeV/nucleon with an average intensity of 6×10^{10} ions/s. Identification of ^{115}Nb 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 ^{115}Nb 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.

2013Fa05: calculated half-life, delayed neutron emission probability.

^{115}Nb Levels

E(level)	$T_{1/2}$	Comments
0	23 ms *8*	%β^-=100; %β^-n=?; %β^-2n=? Theoretical %β^-n=63.3, %β^-2n=0.88 (1997Mo25). E(level): measured half-life is assumed to correspond to the ground state of ^{115}Nb. J^π: $5/2^+$ from systematics (2012Au07), $7/2^+$ from theoretical considerations (1997Mo25). $T_{1/2}$: measured by 2015Lo04 from (implanted ions)β correlated curves in time and position using maximum likelihood method. See 2015Lo04 for comparison of their experimental value with theoretical values. Measured σ=3 pb (2010Oh02), systematic uncertainty≈40%. Probability of misidentification of ^{115}Nb isotope<0.001% (2010Oh02).