Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	10-Jun-2015

$Q(\beta^-)$=12860 *SY*; S(n)=3300 *SY*; S(p)=14730 *SY*; $Q(\alpha)$=−10770 *SY*   2012Wa38
Estimated uncertainties (2012Wa38): 540 for $Q(\beta^-)$, 710 for S(n); 710 for S(p), 590 for $Q(\alpha)$.
S(2n)=8130 *640*, $Q(\beta^-n)$=7350 *500* (syst,2012Wa38). S(2p)=32180 (theory,1997Mo25).
1997Be70, 1995CzZZ: ^{106}Y produced and identified in Pb(^{238}U,F), E=750 MeV/nucleon reaction, followed by separation of
  reaction products and time-of-flight measurements.
2011Ni01: ^{106}Y nuclide produced in Be(^{238}U,F) reactions at E=345 MeV/nucleon produced by the cascade operation of the RBIF
  complex of accelerators at RIKEN. Target=550 mg/cm^2. Identification of ^{105}Y made on the basis of magnetic rigidity,
  time-of-flight and energy loss. The separated nuclei were implanted in a nine-layer double-sided silicon-strip detector (DSSSD).
  Correlations were recorded between the heavy ions and β rays. The half-life of ^{106}Y isotope was measured from the correlated
  ion-β decay curves and maximum likelihood analysis technique. In the analysis of the decay curve, β-detection efficiency,
  background rate, daughter and granddaughter (including those populated in delayed neutron decays) half-lives, and β-delayed
  neutron emission probabilities were considered. Comparison of measured half-lives with FRDM+QRPA and KTUY+GT2
  calculations.
2015Lo04: ^{106}Y 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 ^{106}Y 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 ^{106}Y
  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.

^{106}Y Levels

E(level)	$T_{1/2}$	Comments
0	79 ms *+10−5*	%β^-=100; %β^-n=?; %β^-2n=?
		Theoretical %β^-n=16.9, %β^-2n=0.55 (2003Mo09).
		E(level): measured half-life is assumed to correspond to the ground state of ^{106}Y.
		J^π: 5/2$^+$ proton and 1/2$^+$ neutron orbital from theoretical considerations (1997Mo25). J^π=2$^+$,3$^+$
		proposed in 2011Su11 based on comparison with J^π of ^{108}Nb g.s.
		$T_{1/2}$: weighted average of 82 ms *+10−5* (2015Lo04, ion-β correlated curve), and 62 ms *+25−14*
		(2011Ni01, ion-β-correlated curve).