Adopted Levels

	History		
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	20-Jul-2015

Q(β^-)=10400 *SY*; S(n)=5210 *SY*; S(p)=13390 *SY*; Q(α)=−9460 *SY*　　2012Wa38
ΔQ(β^-)=210, ΔS(n)=220, ΔS(p)=360, ΔQ(α)=360 (2012Wa38).
Q(β^-n)=6240 *200*, S(2n)=9240 *200*, S(2p)=29980 *450* (syst,2012Wa38).
1994Be24, 1998Do08: Produced from ^{208}Pb(U,f) E=750 MeV/nucleon. Identified with on-line fragment separator at GSI; time of
　　flight and energy loss measurements, no half-life measurement.
2006Mo07: ^{9}Be(^{136}Xe,X),E=121.8 MeV/nucleon. The A1900 fragment separator at NSCL-MSU facility was used to separate
　　nuclei of interest. The secondary beam was implanted into β-decay arrangement consisting of Si(PIN) detectors and Si strip
　　detectors (DSSD) and single-sided Si strip detectors (SSSD). Implantation and decay events were time stamped and correlated.
　　Measured half-life from ion-β correlated spectrum.
2008Be33: ^{115}Tc produced in ^{9}Be(^{136}Xe,X),E=1 GeV/nucleon, measured production σ at GSI 2011Ni01: ^{115}Tc produced in
　　Be(^{238}U,F),E=345 MeV/nucleon, the beam produced by the cascade operation of the RBIF complex of accelerators at RIKEN.
　　Target=550 mg/cm^2. Identification of ^{115}Tc 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 ^{115}Tc 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: ^{115}Tc 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}Tc 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}Tc
　　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: theoretical calculation of T$_{1/2}$ and %β^-n.

^{115}Tc Levels

E(level)	T$_{1/2}$	Comments
0	78 ms *2*	%β^-=100; %β^-n=?
		Theoretical T$_{1/2}$=34.5 ms, %β^-n=25.6 (2003Mo09).
		E(level): measured half-life is assumed to correspond to the ground state of ^{115}Tc.
		J$^\pi$: 3/2$^-$ (syst,2012Au07), 5/2$^+$ from theoretical considerations (1997Mo25).
		T$_{1/2}$: measured by 2015Lo04 from (implanted ions)β correlated curves in time and position using maximum
		likelihood method. Others: 83 ms +*20−13* (2011Ni01, from the analysis of (ion)β-correlated decay curve);
		73 ms +*32−22* (2006Mo07, from ion-β correlated decay curve). See 2015Lo04 for comparison of their
		experimental value with theoretical values.