Adopted Levels

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

Q(β^-)=8960 *SY*; S(n)=5110 *SY*; S(p)=16590 *SY*; Q(α)=−9350 *SY* 2012Wa38
Estimated uncertainties (2012Wa38): ΔQ(β^-)=320, ΔS(n)=420, ΔS(p)=500, ΔQ(α)=670.
Q(β^-n)=4930 *300*, S(2n)=8490 *360*, S(2p)=30570 *760* (syst, 2012Wa38).
1997Be70: ^{114}Mo produced in Pb(^{238}U,F),E=750 MeV/nucleon reaction and identified by time-of-flight at GSI.
2011Ni01: ^{114}Mo 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 ^{114}Mo 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 ^{114}Mo 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: ^{114}Mo 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 ^{114}Mo 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 ^{114}Mo 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.
Structure calculations: 2010Bo12, 2010Ou01, 1997Sk01.
Additional information 1.

^{114}Mo Levels

E(level)	J$^\pi$	T$_{1/2}$	Comments
0.0	0$^+$	58 ms *2*	%β^-=100; %β^-n=? Theoretical T$_{1/2}$=103 ms, %β^-n=4.4 (2003Mo09). T$_{1/2}$: measured by 2015Lo04 from (implanted ions)β correlated curves in time and position using maximum likelihood method. Other: 60 ms *+13−9* from ion-β correlations (2011Ni01). See 2015Lo04 for comparison of their experimental value with theoretical values.