Adopted Levels

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

Q(β^-)=11040 *SY*; S(n)=3140 *SY*; S(p)=17000 *SY*; Q(α)=−11090 *SY* 2012Wa38
Estimated uncertainties (2012Wa38): 200 for Q(β^-), 210 for S(n), 360 for S(p), 540 for Q(α).
S(2n)=8000 *210*, S(2p)=32870 *540*, Q(β^-n)=5680 *200* (syst,2012Wa38).
1997Be70, 1995CzZZ: ^{103}Sr produced by Pb(^{238}U,F), E=750 MeV/nucleon, identification by time-of-flight.
2011Ni01: ^{103}Sr nuclide produced in Be(^{238}U,F) reactions at E=345 MeV/nucleon produced by the cascade operation of the RBIF-RIKEN accelerator complex. Target=550 mg/cm^2. Identification of ^{105}Sr 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 ^{103}Sr 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: ^{103}Sr 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 ^{103}Sr 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 ^{103}Sr 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.
Theoretical calculations:
2013Fa05: calculated half-lives, delayed neutron emission probabilities.
2010Ro27: calculated one-quasineutron levels, J, π.
Additional information 1.

^{103}Sr Levels

E(level)	$T_{1/2}$	Comments
0	53 ms *10*	%β^-=100; %β^-n=?; %β^-2n=? Theoretical %β^-n=2.2, %β^-2n=0.01 (1997Mo25). E(level): measured half-life is assumed to correspond to the ground state of ^{103}Sr. J$^\pi$: 5/2$^+$ from systematics (2012Au07) and theoretical considerations (1997Mo25). $T_{1/2}$: measured by 2015Lo04 from (implanted ions)β correlated curves in time and position using maximum likelihood method. Other: 68 ms *+48−20* (2011Ni01, from the same lab as 2015Lo04). See 2015Lo04 for comparison of their experimental value with several theoretical calculations.