Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 149, 1 (2018)	1-Jan-2018

S(n)=16740 *SY*; S(p)=840 *SY*; Q(α)=−5010 *SY* 2017Wa10
Δ(S(n))=360, Δ(S(p))=280, Δ(Q(α))=280 (syst, 2017Wa10).
Q(β^+)=16370 *210*, Q(εp)=16970 *210* (syst, 2017Wa10).
First identification of ^{39}Ti nuclide by 1990De43.
1990De43: ^{39}Ti produced In ^{58}Ni(^{58}Ni,X) reaction At 65 MeV/nucleon; measured β-delayed protons, $T_{1/2}$. No evidence found for delayed two-proton decay.
1992Mo15: ^{39}Ti produced In Ca(^{3}He,X) reaction At 110 MeV. Measured β-delayed two-proton sum spectra. Deduced IAS for ^{39}Sc.
1994Bl10: ^{39}Ti produced In fragmentation of ^{58}Ni beam At 650 MeV/nucleon with a ^{9}Be target.
2001Gi01 (also 2001Gi02,2002Ch28): ^{39}Ti produced In fragmentation of ^{58}Ni beam At 74.5 MeV/nucleon with natural Ni target; GANIL. Measured delayed protons, $T_{1/2}$, yields.
2007Do17: ^{39}Ti was produced in Ni(^{58}Ni,X) reaction at 74.5 MeV/nucleon at GANIL. Measured decay-time distribution, β-delayed proton and γ spectra. Deduced ^{39}Ti half-life, decay branching ratios.
2016Bl05: ^{9}Be(^{78}Kr,X) E=345 MeV/nucleon. Measured σ.
Theoretical calculations: 2013Ti01 (atomic mass).
Additional information 1.
2001Gi01 report following delayed proton groups from ^{39}Ti decay: 2440 *25* (8% 5), 3575 *30* (6.5% 45), 3990 *30* (7.3% 45), 4880 *40* (12.5% 65), with energy in lab system. The first three groups are interpreted by 2001Gi01 As εp decay to ^{38}Ca, the fourth group As ε2p decay to ^{37}K; corresponding proton (sum) line In 1992Mo15 is 4750 *40*.
2007Do17 report two proton groups of 3270 *20* (7% *2*) and 5170 *30* (10% *3*) (energy in c.m. system) from ^{39}Ti εp decay but do not place them in the decay scheme due to low statistics and lack of detailed analysis.

^{39}Ti Levels

E(level)	J^π	$T_{1/2}$	Comments
0	$(3/2^+)$	28.5 ms *9*	%ε+%β^+=100 %εp+%ε2p=100 T=5/2 $T_{1/2}$: from 2007Do17. Others: 31 ms *+6−4* (2001Gi01), 26 ms *+8−7* (1990De43). J^π: from systematics (1992Mo15,2017Au03). delayed-2 proton decay observed by 1992Mo15; %εp=93.7 *28* reported in 2007Do17. From systematics, %εp=85 *15*; %ε2p=15 (2017Au03).