

Adopted Levels:unobserved

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 116, 1 (2014)	31-Dec-2013

S(n)=15020 CA; S(p)=-1180 SY; Q(α)=-1230 SY [2012Wa38](#),[1997Mo25](#)

S(n) from [1997Mo25](#); S(p) and Q(α) from [2012Wa38](#). Other: S(p)=-960 640 ([1999Ja02](#)).

Estimated uncertainties ([2012Wa38](#)): $\Delta S(p)=\Delta Q(\alpha)=570$.

Q(ϵp)=7700 500, S(2p)=2200 500 (syst,[2012Wa38](#)). S(2n)=29390 (theory,[1997Mo25](#)).

[1999Ja02](#): Search for ^{85}Tc nuclide in fragmentation of $^{92}\text{Mo}^{37+}$ beam at 60 MeV/nucleon with a Nickel target, LISE-3 spectrometer at GANIL, E- ΔE detector system, time-of-flight method.

Independent work at GSI by Wefers et al., GSI annual report 2001-1, page 10, also [2007WeZX](#) preprint: fragmentation of ^{112}Sn beam at 1 GeV/nucleon with a beryllium target, FRS spectrometer at GSI facility.

No events were detected by [1999Ja02](#) or in the work at GSI which could be assigned to ^{85}Tc , which implies that ^{85}Tc is proton unbound.

[Additional information 1.](#)

^{85}Tc , most likely, is unbound towards proton emission.

 ^{85}Tc Levels

E(level)	$T_{1/2}$	Comments
0?	<100 ns	$\%p=?$ $T_{1/2}$: ^{85}Tc not detected, only a limiting half-life is estimated by 1999Ja02 from measured upper limits on cross sections. Other: <110 ns (Wefers et al., GSI 2001-1, 2000 annual report, page 10). Theoretical β decay $T_{1/2}=70$ ms (1997Mo25) suggests negligible decay through this mode. From structure calculations, 1999Ja02 predict ground state as $\pi 5/2[422]$ oblate state. Others: $3/2^+$ (predicted, 1997Mo25), $1/2^-$ (systematics, 2012Au07).