Adopted Levels

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 202,59 (2025)	25-Feb-2025

Q(β^-)=16200 *syst*; S(n)=3860 *syst*; S(p)=17920 *syst*; Q(α)=−15040 *syst* 2021Wa16
ΔQ(β^-)=540, ΔS(n)=640, ΔS(p)=780, ΔQ(α)=780 (syst,2021Wa16).
S(2n)=6510 *610*, S(2p)=39760 *860*, Q(β^-n)=13460 *580* (syst,2021Wa16).
2009Ta05,2009Ta24: ^{65}V was identified by fragmentation of ^{76}Ge beam at 132 MeV/nucleon at NSCL facility using A1900 fragment separator combined with S800 analysis beam line to form a two-stage separator system. The transmitted fragments were analyzed event-by-event in momentum and particle identification. The nuclei of interest were stopped in eight Si diodes which provided measurement of energy loss, nuclear charge and total kinetic energy. The time-of-flight of each particle that reached the detector stack was measured in four different ways using plastic scintillators, Si detectors, and parallel-plate avalanche counters. The simultaneous measurement of ΔE signals, the magnetic rigidity, total kinetic energy and the time-of-flight (tof) provided unambiguous identification of the atomic number, charge state and mass number.

^{65}V Levels

E(level)	Comments
0	%β^-=100; %β^-n=? Measured cross section=2.0×10^{-10} mb *3* (read by the evaluator from figure 2 of 2009Ta05). E(level): fragment observed by 2009Ta05 is assumed to be in the ground state of ^{65}V. J$^\pi$: 5/2$^-$ (syst,2021Ko07), 3/2$^-$ (predicted,2019Mo01). T$_{1/2}$: >360 ns estimated from time-of-flight of ≈360 ns as in 2005St29 (from the same lab as 2009Ta05). Others: >620 ns (syst,2021Ko07); calculated value of 8 ms (2019Mo01), 15.3 ms (2021Mi17). Calculated %β^-0n=61, %β^-1n=38, %β^-2n=1.0 (2019Mo01). Calculated %β^-0n=9.1, %β^-1n=89.8, %β^-2n=1.0, %β^-3n=0.03 (2021Mi17).