Adopted Levels

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alan L. Nichols, Balraj Singh, Jagdish K. Tuli	NDS 113,973 (2012)	15-Apr-2012

Q(β^-)=1.54×10^4 *syst*; S(n)=3.0×10^3 *syst*; S(p)=1.64×10^4 *syst*; Q(α)=−1.30×10^4 *syst* 2012Wa38

Note: Current evaluation has used the following Q record 15767 syst 3190 syst 16390 syst-12709 syst 2011AuZZ.

ΔQ(β^-)=523, ΔS(n)=499, ΔS(p)=805, ΔQ(α)=896 (syst,2011AuZZ).

Q(β^-n)=9462 *475*, S(2n)=8213 *621*, S(2p)=35788 *988* (syst,2011AuZZ).

Values in 2003Au03: Q(β^-)=15990 *610*, S(n)=3130 *640*, S(p)=16060 *1030*, Q(β^-n)=9690 *560*, S(2n)=7990 *690*, S(2p)=35010 *1030*, all from syst.

1997Be70: ^{62}V first identified in ^{9}Be(^{238}U,F), E=750 MeV/nucleon, U beam of 2x10^7 ion/s at GSI facility, identification by energy loss and time-of-flight.

1999So20 (also 1999Le67): ^{62}V produced in ^{58}Ni(^{86}Kr,X), E=60.4 MeV/nucleon at GANIL facility using LISE3 doubly achromatic spectrometer. Measured isotopic half-life from β decay timing.

2003So02 (also 2005Ga01,2002MaZN thesis): ^{62}V produced in ^{58}Ni(^{76}Ge,X), E=61.8 MeV/nucleon at GANIL facility using LISE3 doubly achromatic spectrometer. Measured β, γ, isotopic half-life from β decay timing.

2011Da08: ^{62}V produced in the fragmentation of 57.8 MeV/nucleon ^{86}Kr beam impinged on 50 mg/cm^2 thick tantalum target using LISE-2000 spectrometer at GANIL facility. Detector system included a three-element Si-detector telescope containing a double-sided silicon-strip detector (DSSSD) backed by a Si(Li) detector and surrounded by four clover type EXOGAM Ge detectors. Product identified by mass, atomic number, charge, energy loss and time of flight. Measured half-life.

Structure calculations: 1999So20 (potential energy surface), 1995Ri05 (binding energy, mass defect).

^{62}V Levels

E(level)	$T_{1/2}$	Comments
0	33.6 ms *23*	%β^-=100; %β^-n=? $T_{1/2}$: from time correlation between implantation and β-ray events in the DSSSD. Fitting procedure included five parameters: β-detection efficiency, background rate, mother, daughter and granddaughter half-lives (2011Da08). Others from the same group: 33.5 ms *20* (2003So02), 33.6 ms *23* (2002MaZN), 65 ms *31* (1999So20). J^π: 3^+ proposed by 2011AuZY (NUBASE) from systematics. 1997Mo25 predict $5/2^-$ proton and $1/2^-$ neutron valence orbitals which is consistent with 3^+ from 2011AuZY. Measured production cross section=21 nb in ^{9}Be(^{238}U,F), E=750 MeV/nucleon (1997Be70). Calculated (1997Mo25) %β^-n=22, β^-2n=0.5.