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^-)=1.29×10^4 *syst*; S(n)=4.3×10^3 *syst*; S(p)=2.08×10^4 *syst*; Q(α)=−1.31×10^4 *syst*   2012Wa38

Note: Current evaluation has used the following Q record 12892   syst 4280   syst 20600 syst −13901 syst   2011AuZZ.

ΔQ(β^-)=805, ΔS(n)=988, ΔS(p)=1142, ΔQ(α)=1217 (2011AuZZ).

Q(β^-n)=9702 *760*, S(2n)=6353 *918* (syst,2011AuZZ). S(2p)=39730 (1997Mo25, calculated).

Values in 2003Au03: Q(β^-)=12770 *1030*, S(n)=4080 *1280*, S(2n)=6150 *1210*, Q(β^-n)=9640 *990*, all from syst.

2009Ta24, 2009Ta05: ^{62}Ti identified by fragmentation of ^{76}Ge beam at 132 MeV/nucleon with Be and W targets 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 terms of momentum and particle identification. The nuclei of interest were stopped in eight Si PIN diodes (50x50 mm^2) 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, magnetic rigidity, total kinetic energy and time-of-flight (ToF) provided unambiguous identification of the atomic number, charge state and mass number.

Theoretical calculations: 2010Le20 (levels, J, B(E2), Q, intruder levels), 2009Ga41 (levels, potential energy curves, quadrupole moments, reduced transition probabilities) and 2008Gu03 (potential-energy surface), 2008Ob01 (n-p pairing gap, deformation parameters), 1998La02 (binding energy, nuclear radius, quadrupole deformation), 1995Ri05 (binding energy, mass defect).

^{62}Ti Levels

E(level)	J$^\pi$	T$_{1/2}$	Comments
0	0$^+$	>620 ns	%β^-=?; %β^-n=? Measured cross section=0.54 pb *11* using Be target, as per the e-mail of Nov 11, 2009 from O. Tarasov (first author of 2009Ta24, 2009Ta05). E(level): fragment observed by 2009Ta24 is assumed to be in the ground state of ^{62}Ti. T$_{1/2}$: lower limit from time-of-flight=620-650 ns, as communicated to the evaluators in an e-mail of Sept 23, 2009 from the first author of 2009Ta24, 2009Ta05. Actual half-life is expected to be much longer as suggested by a systematic value of 10 ms (2011AuZY) and calculated value of 18 ms (1997Mo25). Calculated (1997Mo25) %β^-n=4, β^-2n=0.13.