Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen[#]	NDS 126, 1 (2015)	31-Mar-2015

$Q(\beta^-)$=18420 *SY*; S(n)=1530 *SY*; S(p)=25030 *SY*; $Q(\alpha)$=−21600 *SY*   2012Wa38

Estimated uncertainties: $\Delta Q(\beta^-)$=700, ΔS(n)=780, ΔS(p)=840, $\Delta Q(\alpha)$=790 (2012Wa38).

S(2n)=5160 *700*, $Q(\beta^- n)$=14020 *630* (syst,2012Wa38).

S(2p)=50140 (calculated,1997Mo25).

First identification of ^{43}Si nuclide by 2002No11.

2007Ta15: E=142 MeV/nucleon ^{48}Ca beam from the coupled cyclotron facility at the NSCL. Targets of 724 mg/cm^2 ^{9}Be or 1111 mg/cm^2 ^{nat}W. Reaction products separated by the A1900 fragment separator and detected in a plastic scintillator at the focal plane. Measured production cross section, 5 pb *2*.

2002No11: ^{43}Si seen in reaction: Ta(^{48}Ca,X) E=64 MeV/nucleon. Reaction fragments analyzed by RIPS recoil fragment separator at RIKEN facility. Identification by measurements of energy loss, total kinetic energy, time-of-flight and magnetic rigidity for each fragment. Four events were observed.

2008Ad08: calculated production cross section for ^{nat}W(^{48}Ca,X): 4.4 pb.

Additional information 1.

^{43}Si Levels

E(level)	$T_{1/2}$	Comments
0	>60 ns	%β^-=?; %β^-n=?; %β^-2n=?
		Four events were assigned to ^{43}Si by 2002No11. Production σ=5 pb *2* (2007Ta15).
		E(level): the observed ^{43}Si fragments are assumed to correspond to the g.s.
		$T_{1/2}$: limiting value from time-of-flight in 2002No11. Actual half-life is expected to be much longer as suggested by systematics value of 15 ms (2012Au07) and calculated value of 13.5 ms (1997Mo25).
		J^π: systematics: 3/2$^-$ (2012Au07,1997Mo25).