Adopted Levels

History

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

Q(β^-)=24840 *SY*; S(n)=960 *SY*; S(p)=23340 *CA*; Q(α)=−21730 *CA* 2012Wa38,1997Mo25
Estimated uncertainties: $\Delta Q(\beta^-)=\Delta S(n)=920$ (2012Wa38).
S(2n)=2090 *920*, Q(β^-n)=23310 *860* (syst,2012Wa38). S(2p)=53620 (calculated,1997Mo25).
Q(β^-) and S(n) from 2012Wa38; S(p) and Q(α) from 1997Mo25.
First possible identification of ^{43}Al nuclide by 2007Ba71.
2007Ba71: W(^{48}Ca,Xγ) E=141 MeV/nucleon beam from the National Superconducting Cyclotron Laboratory (NSCL). The fragments were separated with the A1900 fragment separator. Isotopic identification by multiple ΔE signals, magnetic rigidity, total energy and time-of-flight analysis. Detectors: plastic scintillators, parallel-plate avalanche counters (PPACs) and silicon PIN diodes.
2008Ad08: calculated production cross section for ^{181}Ta(^{48}Ca,X): 40 fb.

^{43}Al Levels

E(level)	$T_{1/2}$	Comments
0?	>170 ns	%β^-=?; %β^-n=?; %β^-2n=? One event was assigned to ^{43}Al with a probability of 0.0024 that this event was due to possible contribution from the neighboring ^{42}Al. E(level): the observed event is assumed to correspond to the g.s. of ^{43}Al. $T_{1/2}$: limiting value estimated from time-of-flight of ≈170 ns (Fig. 3 in 2007Ba71) at NSCL facility. Actual half-life is expected to be much longer as suggested by 1.2 ms from calculations by 1997Mo25. J^π: $5/2^+$ (syst,1997Mo25).