Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 127, 191 (2015)	1-Jun-2014

Q(β^-)=−1022 *52*; S(n)=6219 *SY*; S(p)=3959 *51*; Q(α)=6042 *50* 2012Wa38
ΔS(n)=78 syst (2012Wa38).
Cluster Decay:
^{238}Am(^{29}Mg), ^{238}Am(^{33}Si) (2012Ba35).
^{238}Am(^{32}Si) (2011Sh13).
Fission: 2009Mo18, 2005Re16.
Calculated t, Q(α): 2008Do12.
Superdeformed states: 2001Ma74.

^{238}Am Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	1^+	98 min *2*	%α=1.0×10^{-4} *4* (1972Ah04); %ε+%β^+=100 From log ft values of ε decays to 0^+...3- levels, J^π(^{238}Am)=1^+ or 2^-. J^π=2^- is ruled out from ratios of ft values for ε feeding to band members. Configuration=((π 5/2(523))-(ν 7/2(743))), in analogy to ^{241}Am for the proton state, and to ^{235}U for the neutron state (see 1972El21 for systematics of odd-nucleon states). $T_{1/2}$: rounded-off value from 97.8 min (1972PoZS). Others: 98 min *3* (1972Ah04), 112 min *5* (1960Gl01), earlier measurement (1950St61).
≈2500		35 μs	%SF≤100 %SF: only SF decay observed. $T_{1/2}$(SF) and $T_{1/2}$(γ) were calculated by 1972We09 as 93 μs and 510 s, respectively. $T_{1/2}$: from 1969JoZU. This value supersedes that of 60 μs *15* from 1967Bo23. Assignment: ^{239}Pu(p,2n) excit (1967Bo23,1972Br35), ^{237}Np(α,3n) excit (1973Fl03). E(level): SF isomeric level energy was calculated: E=2.29 MeV (1972We09), E=2.7 *2* MeV (1971Br39). Other calculations: 1970Ja16, 1972Ma11. See 1971Br39 and 1972We09 for calculations of double-humped barrier parameters.