Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 122, 293 (2014)	30-Jun-2013

Q(β^-)=−3103 *SY*; S(n)=6368 *55*; S(p)=4564 *74*; Q(α)=6540 *50* 2012Wa38
ΔQ(β^-)=214 syst (2012Wa38).

^{239}Cm Levels

Cross Reference (XREF) Flags

A ^{243}Cf α decay

E(level)	J^π	$T_{1/2}$	XREF	Comments
0	(7/2$^-$)	2.7 h *8*	A	%ε= 100; %α<0.001 (2008Qi03) $T_{1/2}$: Estimated by 2008Qi03 from 188.2γ(t). $T_{1/2}$=2.5 h *4* from 188γ(t), Am K x ray(t) (2002ShZS). Others: 3 h (1952Ca42) unpublished results, 2.9 h (1958Va37) unpublished results. J^π: Nilsson orbital syst (1972El21) suggest 7/2[743]; The close lying 1/2[631] orbital is an unlikely assignment given the intense 188γ (deexciting the 5/2$^+$ level in ^{239}Am), which suggests that ^{239}Cm populates the 188-keV (5/2$^+$,5/2[642]) level. No α observed; %α<0.001 (2008Qi03). In a private communication to 2008Qi03, 2002ShZS report three alpha events with an energy of 6.43 MeV *14* assigned to ^{239}Cm decay. Other %α<0.1 (1958Va37) $T_{1/2}(\alpha)$≈11 d (theory, 1997Mo25) gives %α≈1. Assignment: ^{239}Pu(α,4n) (1952Ca42), parent of ^{239}Am (1958Va37).
≈242	(1/2$^+$)		A	E(level): from Eα and syst value for Q(α)(^{243}Cf)=7420 (2012Wa38) (in ^{237}Pu the analogous level lies at 145 keV above the 7/2$^-$,7/2[743] state). J^π: favored α from 1/2[631] ^{243}Cf.