Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. M. Mattera, S. Zhu, A. B. Hayes, E. A. Mccutchan	NDS 172, 543 (2021)	1-Jan-2021

Q(β^-)=−2360 *SY*; S(n)=6530 *SY*; S(p)=2730 *SY*; Q(α)=7790 *SY* 2017Wa10
ΔQ(β^-)=130, ΔS(n)=130, ΔS(p)=130, ΔQ(α)=140 (2017Wa10).
S(2n)=14260 (syst) *330*; S(2p)=7290 (syst) *160* (2017Wa10).
Assignment: ^{243}Am(^{13}C,4n) reaction (1973Es01), ^{238}U(^{19}F,5n) reaction (1965Do09), parent of ^{252}Fm (7039-keV α from ^{252}Fm) (1965Do09,1973Es01).
Measured mass excess = 80467 keV *89* (stat) *22* (syst) using multi-reflection TOF (2018It04).

^{252}Md Levels

Cross Reference (XREF) Flags

A ^{256}Lr α decay

E(level)[†]	$T_{1/2}$	XREF	Comments
0.0	2.3 min *8*		%$\varepsilon\leq$100 $T_{1/2}$: measured by 1973Es01; other measurement: $T_{1/2}$=8 min (1965Do09). No α decay from ^{252}Md was observed by 1973Es01 and 1965Do09. The α decay of ^{252}Fm was observed by 1965Do09 and 1973Es01 following ε decay of ^{252}Md. No upper limit was given for detection of any α from ^{252}Md g.s. was given. The theoretical calculations of 2019Mo01 yield $T_{1/2}(\alpha)=1\times10^{4.38}$ s which corresponds to %α=0.58. Authors of 2019Mo01 calculate $T_{1/2}(\beta)>100$ s for the partial-β half-life for Gamow-Teller β decay. J^π: possibly ν 9/2[734] + π 7/2[514] orbitals coupled to 1^+.
≈49		A	
≈158		A	
≈204		A	
≈246		A	
≈287		A	
≈359		A	

[†] Excited level energies are calculated from the α energies measured in ^{256}Lr decay and Q(α)(^{256}Lr)≈8810, obtained by 2017Wa10 from Q(α) systematics. 2017Wa10 estimate ΔQ(α)=140.