^{237}Am α decay (73.6 min) 1975Ah05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	B. Singh, J. K. Tuli, E. Browne	NDS 170, 499 (2020)	8-Oct-2020

Parent: ^{237}Am: E=0.0; $J^{\pi}=5/2^{(-)}$; $T_{1/2}$=73.6 min *10*; Q(α)=6200 *SY*; %α decay=0.025 *3*

^{237}Am-J^{π}: Assignment in ^{237}Am Adopted Levels in the ENSDF database (March 2006 update) is still valid.

^{237}Am-$T_{1/2}$: Weighted average of 73.0 min *10* (1975Ah05) and 74.4 min *12* (1972PoZS). Uncertainty is 0.8 min in ^{237}Am Adopted Levels in the ENSDF database.

^{237}Am-Q(α): 6200 *30* (Syst,2017Wa10).

^{237}Am-%α decay: %α=0.025 *3* for the decay of ^{237}Am.

1975Ah05: ^{237}Am [from ^{237}Np(n,4n) and ^{237}Np(He,3n)]; measured Eα, Iα, Eγ, Iγ, ce, $\gamma\gamma$-coin, half-life of ^{237}Am decay using Ge(Li) detectors for γ detection and a magnetic β-ray spectrometer with a cooled Si(Li) detector for conversion electrons.

Others: 2006As03 (also 2002As08), 1972PoZS and 1952Hi63.

^{233}Np Levels

E(level)	J^{π}[†]	$T_{1/2}$[†]	Comments
0.0	$(5/2^{+})$	36.2 min *1*	
≈50	$5/2^{(-)}$		E(level): from Eα=6042 and Q(α)=6200 (systematics).

[†] From the Adopted Levels.

α radiations

Eα	E(level)	Iα[‡]	HF[†]	Comments
6042 *5*	≈50	100	0.85 *11*	Eα: measurement of 1975Ah05 (semi). Other measurements: 6043 (2006As03, 6047 in 2002As08), 1952Hi63.

[†] The nuclear radius parameter $r_0(^{233}Np)$=1.4954 *46* is deduced from interpolation (or unweighted average) of radius parameters of the adjacent even-even nuclides (2020Si16).

[‡] For absolute intensity per 100 decays, multiply by 0.00025 *3*.