^{233}Am α decay 2004Sa05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, J. K. Tuli and E. Browne	NDS 208,397 (2026)	23-Oct-2025

Parent: ^{233}Am: E=0.0; J^π=(5/2$^-$); $T_{1/2}$=3.2 min *8*; Q(α)=7060 *50*; %α decay=4.5 *9*

^{233}Am-Q(α): From 2021Wa16, ΔQ(α)=50 syst (2021Wa16).

^{233}Am-$T_{1/2}$: From α(t) in 2004Sa05, 2000Sa52, and 2002As08.

^{233}Am-J^π: From systematics in the even-N Am (Z=95) isotopes (2021Ko07).

^{233}Am-Probable configuration=π5/2[523].

^{233}Am-%α decay: From 2021Ko07, based on >3% in 2004Sa05, 2000Sa52, 2002As08 and <6% in 2010Kh06.

2004Sa05 (also 2000Sa52, 2002As08, 2002AsZX, 2003Na10 and 2000TsZX): ^{233}Am was produced in ^{233}U(^{6}Li,6n), E= 63 MeV reaction; online isotope separator; Si detectors for α counting. Measured α, and $\alpha\alpha$(t).

^{229}Np Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	(5/2$^+$)	3.91 min *14*	J^π,$T_{1/2}$: From Adopted Levels. Probable configuration=π5/2[642].
160? *50*	(5/2$^-$)		E(level),J^π: From 2021Ko07, based on systematics of Q(α) and J^π systematics in the even-N Np (Z=93) isotopes. Probable configuration=π5/2[523].

α radiations

Eα	E(level)	Iα[†]	Comments
6780 *17*	160?	100	Eα: From 2004Sa05, 2000Sa52 and 2002As08.

[†] For absolute intensity per 100 decays, multiply by 0.045 *9*.