

^{228}Np α decay (61.4 s) 2003Ni10,1994Kr13

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Sukhjeet Singh	ENSDF	08-Mar-2022

Parent: ^{228}Np : $E=0$; $T_{1/2}=61.4$ s 14; $Q(\alpha)=7540$ SY; $\% \alpha$ decay=40 7

^{228}Np - $T_{1/2}$: From ^{228}Np Adopted Levels in ENSDF database (Dec 2012 update, value taken from 1994Kr13, no new references after this evaluation).

^{228}Np - $Q(\alpha)$: 7540 100 (syst, 2021Wa16).

^{228}Np - $\% \alpha$ decay: $\% \alpha=40$ 7 from $\varepsilon/\alpha=1.5$ 4 (1994Kr13), based on the measured ratio of $^{212}\text{Po}/^{216}\text{Fr}$ activities. Note that 2003Ni10 measure $\% \alpha=83$ +17-36. Weighted average of $\% \alpha$ values from 1994Kr13 and 2003Ni10 is 43% 10.

2003Ni10: ^{228}Np produced in $^{198}\text{Pt}(^{34}\text{S},\text{p}3\text{n})$, $E=170,172$ MeV; measured $E\alpha$, $T_{1/2}$. Five α decay chains reported in this study.

1994Kr13: ^{228}Np from $^{233}\text{U}(\text{p},6\text{n})$, $E(\text{p})=50$ MeV; ion chem; measured half-life.

Others: 1978SoZZ, 1966Ku13 (SF decay of ^{228}Np decay, half-life).

 ^{224}Pa Levels

E(level)	J^π	$T_{1/2}$	Comments
0	(5 ⁻)	0.846 s 20	$J^\pi, T_{1/2}$: from the Adopted Levels.

 α radiations

$E\alpha^\dagger$	E(level)	Comments
7063		$E\alpha$: average of 7062 and 7065.
7126		
7180 ‡	0	$E\alpha$: average of 7177 and 7183.

† From 2003Ni10.

‡ Existence of this branch is questionable.