

^{227}Np α decay [1990Ni05](#),[1990An19](#),[1994Ye08](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. Browne	NDS 93, 846 (2001)	1-May-2001

Parent: ^{227}Np : $E=0.0$; $T_{1/2}=0.51$ s 6; $Q(\alpha)=7816$ 14; $\% \alpha$ decay=100.0

^{227}Np - $\% \alpha$ decay: ε not observed (<25%) ([1994Ye08](#)).

Additional information 1.

[1990Ni05](#): ^{227}Np activity was produced by $^{209}\text{Bi}(^{22}\text{Ne},4n)$, $E=121$ MeV, and identified by mass separation and by detection of α particles with $E\alpha=8010$ keV from ^{223}Pa , the daughter nucleus. No spontaneous fission activity was observed. Measured $E\alpha$.
Detector: semi.

[1990An19](#), [1994Ye08](#): ^{227}Np activity was produced by $^{209}\text{Bi}(^{22}\text{Ne},4n)$, $E=106$ -115 MeV, separated using the recoil separator VASSILISSA, and identified by detection of α particles with $E\alpha=8.00$ 15 MeV and $E\alpha=8.20$ 15 MeV from ^{223}Pa , its daughter nucleus. Measured $E\alpha$. Detector: semi.

The 1-min spontaneous fission activity ($T_{1/2}=60$ s 5 ([1966Ku13](#)), $T_{1/2}=51$ s 15 ([1976SoZT](#))), previously assigned to ^{228}Np or ^{227}Np , probably belongs to ^{228}Np .

 ^{223}Pa Levels

E(level)	$T_{1/2}$	Comments
0.0 27	5.1 ms 6	$T_{1/2}$: from Adopted Levels.

 α radiations

$E\alpha^\dagger$	E(level)	Comments
7650 20	27	
7677 20	0.0	$E\alpha$: other values: 7680 10 (1990An19), 7680 20 (1994Ye08).

† From [1990Ni05](#).