

$^{149}\text{Sm}(n,\alpha)$ 1967Oa01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. Rodionov and G. Shulyak		NDS 136, 163 (2016)	14-Jul-2016

[1967Oa01](#): $^{149}\text{Sm}(n,\alpha)^{150}\text{Sm}^* \rightarrow \alpha \rightarrow ^{146}\text{Nd}$, $E(n)=\text{thermal}$; measured $E\alpha$. ^{146}Nd ; deduced levels. Thermal column of reactor, electrostatic α particle guide, FWHM $\approx$ 30 keV (estimated by evaluators) from spectra in fig. 1 of [1967Oa01](#).

[1970Ok01](#): $^{149}\text{Sm}(n,\alpha)^{150}\text{Sm}^* \rightarrow \alpha \rightarrow ^{146}\text{Nd}$, $E(n)=0.0253$ eV, thermal; measured $E\alpha$ vs $E(\text{Sm resonances})$.

[1974Wi11](#): $^{149}\text{Sm}(n,\alpha)^{150}\text{Sm}^* \rightarrow \alpha \rightarrow ^{146}\text{Nd}$, $E(n)=0.025\text{-}20$ eV; measured $E\alpha$ vs $E(\text{Sm resonances})$.

 ^{146}Nd Levels

Energy of α branch and partial σ from [1967Oa01](#).

$E(\text{level})^\dagger$	Comments
0.0	fed by $E=9178$ keV 4 α , $\sigma=5.36$ mb 24.
456	fed by $E=8734$ keV 4 α , $\sigma=38.7$ mb 12.
1044	fed by $E=8162$ keV 6 α , $\sigma=0.67$ mb 4.
1191	fed by $E=8019$ keV 6 α , $\sigma=0.81$ mb 5.
1380	fed by $E=7835$ keV 8 α , $\sigma=0.22$ mb 2.
1473	fed by $E=7745$ keV 8 α , $\sigma=0.18$ mb 3.
1536	fed by $E=7683$ keV 20 α , $\sigma=0.10$ mb 2.
1751	fed by $E=7474$ keV 10 α , $\sigma=0.40$ mb 3.
1834	fed by $E=7393$ keV 10 α , $\sigma=0.04$ mb 1.
1913	fed by $E=7316$ keV 10 α , $\sigma=0.24$ mb 3.

† From [1967Oa01](#).