

^{249}Es α decay

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 189,1 (2023)	14-Feb-2023

Parent: ^{249}Es : $E=0.0$; $J^\pi=7/2^+$; $T_{1/2}=102.2$ min 6; $Q(\alpha)=6940$ syst; $\% \alpha$ decay=0.57 9

^{249}Es - $Q(\alpha)$: 6940 30 (2021Wa16).

^{249}Es - $\% \alpha$ decay: From (1976Ah07) deduced from $I\alpha/K$ x ray=0.007 1 (1970Ah01) and $I(K$ x ray)=82 % 5 per ^{249}Es ε decay (1976Ah07).

1989Ha27: ^{249}Es was produced by $^{249}\text{Cf}(p,n)$, $E_p=23$ MeV. The α decay was studied with 12 Si(Au) surface barrier detector.

The α -energy resolution (FWHM) of the sum of α -spectra observed by twelve detectors was about 35 keV for the 8.784 MeV α -group of ^{212}Po . Determined $E\alpha$, $I\alpha$.

1970Ah01: ^{249}Es was produced by $^{249}\text{Bk}(\alpha,4n)$. The α decay was studied with a Si(Au) surface barrier detector. Determined $E\alpha$, $I\alpha$.

 ^{245}Bk Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	(3/2 ⁻)	4.96 d 3	$J^\pi, T_{1/2}$: From Adopted Levels.
0.0+x	7/2 ⁺		
61+x			

 α radiations

$E\alpha^\dagger$	E(level)	$I\alpha^{\ddagger\#}$	HF ‡	Comments
6716 12	61+x	7 5	20 15	$E\alpha$: 6770 keV 5 (1970Ah01).
6776 2	0.0+x	93 14	2.8 6	

† From 1989Ha27.

‡ The nuclear radius parameter $r_0(^{245}\text{Bk})=1.4820$ 36 is deduced from interpolation (or unweighted average) of radius parameters of the adjacent even-even nuclides.

$^\#$ For absolute intensity per 100 decays, multiply by 0.0057 9.