

^{248}Cm α decay [1977Ba69](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 146, 387 (2017)	31-Aug-2017

Parent: ^{248}Cm : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=3.48\times 10^5$ y 6; $Q(\alpha)=5161.81$ 25; $\% \alpha$ decay=91.61 16

^{248}Cm - $T_{1/2}$: From Adopted Levels of ^{248}Cm ([2014Ma86](#)).

^{248}Cm - $Q(\alpha)$: From [2017Wa10](#).

^{248}Cm - $\% \alpha$ decay: From Adopted Levels of ^{248}Cm ([2014Ma86](#)).

[1977Ba69](#): Enriched ^{248}Cm isotope was prepared by evaporation on glass substrate. The alpha decay were observed using the magnetic α spectrograph with FWHM= 5.0 keV. ^{240}Pu was used as the energy standard.

[1967Sc32](#): Measured α spectrum from decay of ^{248}Cm .

 ^{244}Pu Levels

E(level) [†]	J^π [‡]
0.0	0^+
44.2 4	2^+
149.9 6	4^+
307.6 15	6^+

[†] Level energies are calculated from $Q\alpha(^{248}\text{Cm})=5161.81$ 25 ([2017Wa10](#)) and measured $E\alpha$'s.

[‡] From Adopted Levels.

 α radiations

$E\alpha$ [†]	E(level)	$I\alpha$ ^{‡@}	HF [#]	Comments
4775.8 15	307.6	≤ 0.01	≥ 63	
4930.97 50	149.9	0.076 12	107 17	
5034.89 25	44.2	18.03 19	2.32 5	$E\alpha, I\alpha$: Other: 1967Sc32 $E\alpha=5029$ keV; $I\alpha=19$ %. 1991Ry01 has recommended an energy increase of 6.0 keV to account for changes in the calibration energy.
5078.41 25	0.0	81.89 41	1.0	$E\alpha, I\alpha$: Other: 1967Sc32 $E\alpha=5071$ keV; $I\alpha=81$ %. 1991Ry01 has recommended an energy increase of 6.0 keV to account for changes in the calibration energy.

[†] Measured by [1977Ba69](#). The original energies are decreased by 0.17 keV, as recommended by [1991Ry01](#) to account for changes in the calibration energy.

[‡] α intensity per 100 α decays, measured by [1977Ba69](#).

[#] $r_0(^{244}\text{Pu})=1.4963$ 8 ([1998Ak04](#)) is used in the calculation.

[@] For absolute intensity per 100 decays, multiply by 0.9161 16.