

^{242}Es ϵ decay [2010An08](#)

| Type | Author | History | Citation | Literature Cutoff Date |
|-----------------|------------------------------|---------|---------------------|------------------------|
| Full Evaluation | M. J. Martin, C. D. Nesaraja | | NDS 186, 261 (2022) | 31-Dec-2021 |

Parent: ^{242}Es : $E=0$; $T_{1/2}=17.8$ s 16; $Q(\epsilon)=5410$ SY; $\% \epsilon + \% \beta^+$ decay = 57.3

^{242}Es - $T_{1/2}$: Measured in [2010An08](#).

^{242}Es - $Q(\epsilon)$: 5410 260 ([2021Wa16](#)).

Note: Clarification about the branching ratio received in e-mail reply of July 10, 2014 by XUNDL compiler B. Singh from S. Antalic. $\% \epsilon = 43.3$ stated in figure and table of [2010An08](#) is a misprint.

^{242}Es source was from ^{246}Md α decay. ^{246}Md was produced via $^{209}\text{Bi}(^{40}\text{Ar}, 3n)$. at UNILAC, GSI. Measured half-life by tof method α branching ratio with tof detectors, and the array of position-sensitive Si detectors and a Ge clover.

 ^{242}Cf Levels

| E(level) | $T_{1/2}$ | Comments |
|----------|-----------|--|
| 0 | 3.5 min 2 | |
| 0+x | | $\% \text{SF} = 1.3 \pm 12^{-7}$ (2010An08) Excited state decays by ϵ -delayed SF mode. E(level): Assumed based on observations of three α events during the beam pauses. ϵ decay-delayed fission was observed by 1994La25 and by 2000Sh10 . Based on the ratio of the number of fission events and the number of α decays from ^{242}Cf g.s., 2000Sh10 determined the probability of delayed fission to be 0.006 2. |