

^{126}Ag IT decay (27 μs) [2013La11,2012Ka36](#)

| Type | Author | History | Citation | Literature Cutoff Date |
|-----------------|---------------------------------|---------|-------------------|------------------------|
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Parent: ^{126}Ag : $E=254.8+x$ 5; $J^\pi=(1^-)$; $T_{1/2}=27$ μs 6; %IT decay=100.0

^{126}Ag -%IT decay: Assumed 100% IT decay.

[2013La11](#): $^9\text{Be}(^{136}\text{Xe},X),(^{238}\text{U},F),E=750$ MeV/nucleon beams of ^{136}Xe from GSI, SIS-18 synchrotron. Targets=1 and 4 g/cm² ^9Be . Detectors: FRS, ionization chambers, multiwire chambers, scintillation detectors, RISING multidetector array comprising 105 HPGe detectors, mounted in 15 composite Cluster detectors without antiCompton shields. Measured tof, ΔE , $B\rho$, E_γ , I_γ , $\gamma\gamma$ -coin, $\gamma(t)$, isomer half-life.

[2012Ka36](#): $^9\text{Be}(^{238}\text{U},F)$, $E(^{238}\text{U})=345$ MeV/nucleon beam provided by the RIBF-RIKEN accelerator facility. Fission fragments were separated and analyzed by BigRIPS separator, transported to focal plane of ZeroDegree spectrometer and finally implanted in an aluminum stopper. Particle identification was achieved by ΔE -tof- $B\rho$ method. Delayed gamma rays were detected by three clover-type HPGe detectors. Measured E_γ , I_γ , $\gamma\gamma$ -coin, $\gamma(t)$, isomer half-life.

 ^{126}Ag Levels

| E(level) | J^π | $T_{1/2}$ | Comments |
|-----------|-------------------|--------------------|---|
| 0+x | (3 ⁺) | | J^π : as proposed in 2013La11 based on systematics of odd-odd Ag isotopes as well as N=79 isotope ^{128}In . However, shell-model calculations by 2013La11 suggest 1 ⁻ ground state and 3 ⁺ at 231 keV. |
| 254.8+x 5 | (1 ⁻) | 27 μs 6 | %IT=100 Number of implanted fragments= 1.3×10^5 (2012Ka36). J^π : based on systematics and observed decay pattern. However, shell-model calculations by 2013La11 suggest 1 ⁻ ground state and 3 ⁺ at 231 keV. $T_{1/2}$: from $\gamma(t)$ (2013La11). Other: >20 μs (2012Ka36 , $\gamma(t)$, estimated value because γ -ray events were equally distributed in the 20- μs range of the time spectrum). |

 $\gamma(^{126}\text{Ag})$

| E_γ | $E_i(\text{level})$ | J^π_i | E_f | J^π_f | Mult. | α^\dagger | Comments |
|------------|---------------------|-------------------|-------|-------------------|-------|------------------|---|
| 254.8 5 | 254.8+x | (1 ⁻) | 0+x | (3 ⁺) | (M2) | 0.1645 | E_γ : from 2012Ka36 . Other: 254 (2013La11). |

[†] Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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Decay Scheme

%IT=100.0

