

$^{76}\text{Se}(\mu^-, 4\text{np}\gamma)$ 2019Zi01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 188,1 (2023)	17-Jan-2023

2019Zi01: negative muon beams were produced from the μE4 and μE1 beam lines at the Paul Scherrer Institute accelerator facility. Target was 800 mg/cm² Se granules (92.4% enriched in ^{76}Se). The μ x-rays and γ rays were detected using HPGe detectors. Measured $E\gamma$, $I\gamma$, $E(\mu$ x-ray), $I(\mu$ x-ray). Deduced muon lifetime, partial capture rate to the 198-keV isomeric state.

 ^{71}Ge Levels

Muon disappearance lifetime=148.48 ns 10 (capture+decay), from which the total muon capture rate is deduced as $\lambda_{cap}=6.300\times 10^6$ s⁻¹ 4 (2019Zi01).

E(level) [†]	J π [†]	T _{1/2} [†]	Comments
0.0	1/2 ⁻		
198.4	9/2 ⁺	20.22 ms 12	Capture rate to this isomer= 0.020×10^6 s ⁻¹ 3 , corresponding to a percentage is 0.32% 5 per muon capture (2019Zi01).

[†] From the Adopted Levels of ^{71}Ge .