

${}^{76}\text{Se}(\mu^{-}, 5n\gamma)$  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  $\mu\text{E4}$  and  $\mu\text{E1}$  beam lines at the Paul Scherrer Institute accelerator facility. Target was 800 mg/cm<sup>2</sup> Se granules (92.4% enriched in  ${}^{76}\text{Se}$ ). The  $\mu$  x-rays and  $\gamma$  rays were detected using HPGe detectors. Measured  $E\gamma$ ,  $I\gamma$ ,  $E(\mu$  x-ray),  $I(\mu$  x-ray). Deduced muon lifetime, partial capture rates to excited states.

 ${}^{71}\text{As}$  Levels

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

E(level)	$J^{\pi}$	Comments
0	$5/2^{-}$	$J^{\pi}$ : from the Adopted Levels. Capture rate to excited states (feeding g.s.)= $0.061\times 10^6$ s <sup>-1</sup> $1\sigma$ , corresponding to a percentage is 0.96% $2\sigma$ per muon capture (2019Zi01).