

$^{76}\text{Se}(\text{n,p})$ 1997He06

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan		NDS 194,3 (2024)	8-Jan-2024

1997He06: E=198 MeV neutrons from $^7\text{Li}(\text{p,n})$ reaction at 200 MeV at TRIUMF facility. Measured proton spectra and angular distributions using a medium resolution quadrupole spectrometer (MRS). Cross sections were measured up to 35 MeV excitation energy with $\sigma(\theta)$ data at 5 lab angles from 0° to 15° . Deduced Gamow-Teller strengths for excitation energy below 10 MeV. DWIA analysis. Comparison with quasiparticle RPA calculations. Estimated matrix element and lifetime of $\beta\beta$ decay of ^{76}Ge by combining (p,n) and (n,p) results.

For $E_x \leq 6$ MeV, $\sigma = 4.0$ mb 2 for 0° , 1.6 mb 2 for 6° . B(GT)=0.86 3 for 0° , 0.35 6 for 6° .

For $E_x \leq 10$ MEV, $\sigma = 6.7$ mb 3, B(GT)=1.45 7 for 0° .

[Additional information 1.](#)