

$^{26}\text{Mg}(\gamma,n):\text{res}$ [2014De13](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia and A. M. Hurst		NDS 134,1 (2016)	1-Feb-2016

Target: MgO (16.4185 g) with 99.41% 6 enrichment of ^{26}Mg . Projectile: Polarized γ -rays, E=10.80 to 12.05 MeV, from HI γ S-TUNL facility. The γ beam was produced by Compton back scattering of laser photons from 498-548 MeV electrons. Measured neutron energies by time-of-flight spectra (at $\theta_{\text{lab}}=90^\circ$) for a single liquid scintillator. Neutrons detected by nine liquid scintillator detectors. Gamma rays detected by an HPGe detector. Deduced neutron resonances and resonance strengths. R-matrix analysis.

 ^{26}Mg Levels

Statistical weight factor $g=(2J+1)/2$, where J is spin of the excited state.

$S(n)(^{26}\text{Mg})=11093.09$ keV 4 ([2012Wa38](#)).

E(level)	J^π [‡]	Comments
11150 8	1 ⁺	E(n)=55 keV. Resonance strength $g\Gamma_{\gamma 0}\Gamma_n/\Gamma=1.7$ eV 1(stat) 5(syst).
11289 [†] 25	1 ⁻	E(n)=188 keV. Resonance strength $g\Gamma_{\gamma 0}\Gamma_n/\Gamma=1.01$ eV 3(stat) 20(syst).
11329 [†] 31	(1 ⁻)	E(n)=227 keV. Resonance strength $g\Gamma_{\gamma 0}\Gamma_n/\Gamma=1.59$ eV 5(stat) 31(syst).
11506 [†] 55		E(n)=397 keV. Resonance strength $g\Gamma_{\gamma 0}\Gamma_n/\Gamma=5.70$ eV 15(stat) 110(syst).
11749 [†] 87		E(n)=637 keV. Resonance strength $g\Gamma_{\gamma 0}\Gamma_n/\Gamma=38.9$ eV 12(stat) 76(syst).

[†] Three or more levels within uncertainty range in Adopted data set – not referenced.

[‡] [2014De13](#) identify from comparison of data in [2012Ma14](#) (n, γ)(n,n).