

${}^{60}\text{Ni}({}^3\text{He},n)$ 1972Gr39,1974Ev02,1975Al05

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alan L. Nichols, Balraj Singh, Jagdish K. Tuli		NDS 113, 973 (2012)	15-Apr-2012

1972Gr39 (also 1971GrYL thesis): E=25.8 MeV. Measured neutron spectra by TOF at 0° – 30° .

1974Ev02: E=15, 18, 21 MeV. Measured neutron spectra by TOF at 0° – 45° using NE-213 liquid scintillators.

1975Al05: E=15 MeV. Measured neutron spectra by TOF at 0° , 5° , and 10° using NE-213 liquid scintillators. DWBA analysis of $\sigma(\theta)$ data for L=0 transitions. Pairing vibrational model.

1975FiZL (thesis): E=25.4 MeV. Measured $\sigma(\theta)$, DWBA analysis.

[Additional information 1.](#)

1972Gr08: E=10.5, 15 MeV. Measured neutron spectra at 3° .

 ${}^{62}\text{Zn}$ Levels

E(level) [†]	L [#]	S [@]	Comments
0	0	2.0	E(level),L: from all studies. $d\sigma/d\Omega=0.93$ mb/sr (E=15 MeV), 1.44 mb/sr (E=18 MeV), 0.90 mb/sr (E=21 MeV), all at 0° (1974Ev02). Calculated (DWBA) cross sections: 2.74 $\mu\text{b/sr}$, 3.8 $\mu\text{b/sr}$, 3.6 $\mu\text{b/sr}$ at the respective energies above. Additional information 2.
964 10	2		E(level),L: 1974Ev02 reported an L=2 level at 970 30.
2390 [‡] 30	(0)		$d\sigma/d\Omega=0.10$ mb/sr at 3° (1972Gr08).
3170 30	2+(3)		E(level),L: 3210 30, L=2 in 1974Ev02.
3870 30	1		E(level),L: 3870 30, L=1 in 1974Ev02.
4020 [‡] 30	≥ 3		
5340 30	0	0.59	E(level),L: 1975Al05 reported an L=0 level at 5390 50. $d\sigma/d\Omega=0.38$ $\mu\text{b/sr}$ 5 (1975Al05); may contain contribution from ${}^{12}\text{C}$ contamination on target.
5700 30			E(level): 5620 30 in 1974Ev02.
6400			E(level): from 1972Gr08. $d\sigma/d\Omega=0.35$ mb/sr at 3° (1972Gr08).

[†] From 1972Gr39, except as noted.

[‡] Level reported by 1974Ev02 only.

[#] From 1974Ev02, except as noted.

[@] Values are $d\sigma/d\Omega(\text{expt})/d\sigma/d\Omega(\text{DWBA})$ (1975Al05).