

$^{60}\text{Ni}(\text{n,d})$ 1995Ma24,1961Co08

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 151, 1 (2018)	1-Apr-2018

1995Ma24: E(n)=18.5 MeV, 93% enriched ^{60}Ni target, eight detector telescopes, $\theta(\text{lab})=0^\circ-70^\circ$, beam energy spread ± 150 keV, FWHM ≈ 700 keV; measured $\sigma(\theta)$ in 10° steps for deuteron groups to g.s., 1.0-2.3 MeV levels, and 2.3-3.5 MeV levels; DWBA calculations.

1961Co08: E(n)=14 MeV, FWHM=0.5-1 MeV, $\theta(\text{lab})\approx 14^\circ$; measured $\sigma(E(\text{d}))$; observed levels at 0 and ≈ 3 MeV; deduced relative S for g.s. population.

 ^{59}Co Levels

E(level) [†]	L [‡]	C ² S [‡]	Comments
0.0	(3)	5.8 19	C ² S: after allowance for small L=1 contribution from the tail of the $3/2^-$ 1099 level. Other C ² S: 5.15 (1961Co08).
≈ 1200	(1) [#]	0.7 [#] 5	E(level): 1099 and 1292 levels not resolved.
≈ 1800	(3) [#]	3.4 [#] 12	E(level): 1744 and 2062 levels not resolved.
2713	(0) [@]	0.9 [@] 7	
3160	(2) [@]	7 [@] 4	

[†] Rounded values from Adopted Levels for states which 1995Ma24 consider to be the dominant contributors to their unresolved level groups.

[‡] From 1995Ma24. DWBA analysis of $\sigma(\theta)$.

[#] $\sigma(\theta)$ for unresolved group of 1.0-2.3 MeV levels was fitted assuming L=1+3. 1995Ma24 consider the 1099 and 1292 levels to be the dominant L=1 contributors, and the 1744 and 2062 levels the dominant L=3 contributors to this group.

[@] $\sigma(\theta)$ for unresolved group of 2.3-3.5 MeV levels was fitted assuming L=0+2. 1995Ma24 consider the 2713 and 3160 levels to be the dominant contributors to this group.