

$^{60}\text{Ni}(\text{d}, ^3\text{He}), (\text{pol d}, ^3\text{He})$ 1992Ma28

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

Others: 1961Yn01, 1966B115, 1969Ma26.

1992Ma28: E(pol d)=52 MeV; 99% ^{60}Ni target, $\Delta\text{E-E}$ telescope employing 10 segment strip detector for ΔE , $\theta(\text{lab})=16^\circ-28^\circ$, FWHM=140 keV; measured $\sigma(\theta)$ and analyzing power ($iT_{11}(\theta)$); DWBA analysis.

1969Ma26: E=51.7 MeV; $\Delta\text{E-E}$ telescope, 99.8% ^{60}Ni targets, FWHM=250-350 keV; measured $\sigma(\theta)$, $\theta(\text{lab})=8^\circ-60^\circ$; DWBA analysis.

1966B115: E=22 MeV; $\Delta\text{E-E}$ telescope and mass identification system, 99.8% ^{60}Ni targets, $\theta=10^\circ-42^\circ$; measured $\sigma(\theta)$ (data not shown); DWBA analysis.

1992Ma28 resolve only the 0, 1099, 1291, 1745, 2063 levels. For the purpose of DWBA analysis at other energies, the authors divided their spectra into energy bins; variable bin width (depending on observed structure) was used for E=3-6 MeV, the bin width was 1 MeV for E=6-16 MeV, and distributions were corrected for background (as determined in the 16-19 MeV continuum region). For E>6 MeV, only $1\text{d}_{5/2}$ strength was observed (summed $\text{C}^2\text{S}=7.30$).

 ^{59}Co Levels

E(level) [#]	J^π [†]	L [‡]	C^2S [‡]	Comments
0.0	$7/2^-$	3	3.81	
1087	$3/2^-$	1	0.15	
1291	$3/2^-$	1	0.07	
≈1493	$1/2^- \& (5/2^-)$	1+(3)	0.03,0.22	E(level): centroid of 1.4-1.6 MeV energy window incorporating 1434 and 1482 levels.
1749	$7/2^-$	3	0.60	
2048	$7/2^-$	3	0.48	E(level): 2057 in 1966B115.
≈2209	$7/2^-$	3	0.20	E(level): centroid of 2.15-2.30 energy window.
2581.71	$7/2^-$	3 [@]	0.41 [@]	E(level): From Adopted Levels.
≈2734	$1/2^+$	0 [@]	1.29 [@]	E(level): centroid of 2.4-3.0 MeV energy window set on 2584+2713+2820 level multiplet.
≈2820	$3/2^-$	1 [@]	0.13 [@]	E(level): Listed by 1992Ma28 from literature -it is not clear to which adopted level this corresponds.
≈3157	$3/2^+$	2	2.27	E(level): 3160 level of 1969Ma26.
≈3374	$7/2^-$	3	0.18	E(level): centroid of 3.30-3.45 MeV energy bin.
≈3517	$7/2^-$	3	0.20	E(level): centroid of 3.45-3.60 MeV energy bin.
≈3848	$5/2^+$	2	0.46	E(level): centroid of 3.60-4.05 MeV energy bin.
≈4146	$5/2^-, 7/2^-$	3	0.35,0.18	E(level): centroid of 4.05-4.25 MeV energy bin.
≈4461	$5/2^-, 7/2^-$	3	0.94,0.48	E(level): centroid of 4.25-4.70 MeV energy bin.
≈4807	$5/2^-, 7/2^-$	3	0.39,0.20	E(level): centroid of 4.70-4.90 MeV energy bin.
≈5055	$3/2^+$	2	0.80	E(level): centroid of 4.90-5.20 MeV energy bin.
≈5298	$3/2^+$	2	0.35	E(level): centroid of 5.20-5.40 MeV energy bin.
≈5705	$3/2^+, 5/2^+$	2	0.45,0.26	E(level): centroid of 5.40-6.00 MeV energy bin.

[†] From (pol d, ^3He) (1992Ma28).

[‡] From 1992Ma28. L values and spectroscopic factors (C^2S) are based on comparison of $\sigma(\theta)$ with DWBA calculations; see 1992Ma28 for discussion of normalization. C^2S values from 1969Ma26 and 1966B115 are much higher than those from 1992Ma28.

[#] From 1992Ma28, except as noted. ΔE not stated by authors. Note that, except for 0, 1099, 1291, 1745, 2063 levels, the median energy for the energy bin indicated (which includes several levels) is quoted. The evaluator list median level energies with approximate sign. These levels are not referenced by evaluator.

[@] From decomposition of 2584+2713+2820 triplet (1992Ma28).