^{58}Ni(^{3}He,α) E=130-217 MeV 1980Dj01,1978Va05,1975Ge16

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. R. Bhat	NDS 85, 415 (1998)	24-Sep-1998

1975Ge16 (E=216 MeV), 1978Va05 (E=205 and 217 MeV): solid-state telescope. Energy resolution=500 to 800 keV. θ=6.25°−27°. Studied neutron pickup in the deeper shells. DWBA.

Additional information 1.

1980Dj01: E= 130 MeV. Telescopes. θ=8°−40°. Studied dσ/dΩ for g.s., 0.77-, 2.58-, and 5.23-MeV states. DWBA; normalization from 1977Sh02.

^{57}Ni Levels

T: from 1978Va05.

E(level)†	J$^{\pi}$‡	L	C^{2}S#	Comments
0.0@	3/2$^-$	1	0.96,0.7 *2*	
7.6×10^2@	5/2$^-$	3	0.9,0.8 *3*	
2.56×10^3&	7/2$^-$	3	3.0,2.3 *8*	T=1/2
3.25×10^3				(1f7/2), T=1/2, C^{2}S=(1.6) for 3.25- to 4.5-MeV triplet.
4.2×10^3				
4.5×10^3				
5.23×10^3&	7/2$^-$	3	2.1,2.4 *8*	T=3/2
6.02×10^3	(3/2$^+$)	(2)	(1.)	T=1/2
7.13×10^3*a*	7/2$^-$	3	0.27	T=3/2
8.4×10^3?				
8.84×10^3*a*	3/2$^+$	(2)	(1.7)	T=(3/2)
≈30.×10^3*a*				10.8 MeV≤E≤ 50 MeV. Predominately 1d5/2, but 1p (1975Ge16) and 1d3/2 (1978Va05) may contribute.

† Observed by 1978Va05 only, except as noted.
‡ Assumed for C^{2}s calculation.
# First value from 1978Va05 (normalization factor=14). Second value and ΔS from 1980Dj01 (normalization factor from 1977Sh02).
@ Also observed by 1980Dj01.
& Also observed by 1975Ge16 and 1980Dj01.
a Also observed by 1975Ge16.