^{64}Ni(d,t),(pol d,t) 1981Bi04,1965Fu06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 196,17 (2024)	30-Sep-2023

(d,t) measurement:

1965Fu06,1964Fu06: E=15 MeV deuteron beam was produced from University of Pittsburgh cyclotron. Target was about 1 mg/cm^2 thick foil of ^{64}Ni. Reaction products were detected with ΔE-E telescopes of surface barrier detectors (FWHM=70 keV). Measured $\sigma(E_t,\theta)$. Deduced levels, J, π, L-transfers, spectroscopic factors from DWBA analysis.

(pol d,t) measurements:

1981Bi04: E=12 MeV polarized deuteron beam was produced from the University of Wisconsin Lamb-shift polarized ion source and tandem accelerator. Target was 0.93 mg/cm^2 self-supporting foil of 99.9% enriched ^{64}Ni. Reaction products were detected with four solid-state counter telescopes (FWHM≈50 keV). Measured $\sigma(E_t,\alpha)$, analyzing powers. Deduced levels, J, π, L-transfers from DWBA analysis.

1991Al14: E=15,16 and 18 MeV polarized beams were from the FN tandem Van de Graaff accelerator at the Tandem Accelerator Laboratory of McMaster University. Reaction products were analyzed using an Enge split-pole magnetic spectrograph (FWHM≈25 keV). Measured $\sigma(\theta)$, analyzing powers. No structure properties are deduced.

^{63}Ni Levels

E(level)[†]	Jπ[‡]	L[#]	C^{2}S[#]	Comments
0.0	1/2$^-$	1	0.47	C^{2}S: other: 0.40 (1981Bi04).
87	5/2$^-$	3	3.43	C^{2}S: other: 2.88 (1981Bi04).
156	3/2$^-$	1	2.42	C^{2}S: other: 1.80 (1981Bi04).
518	3/2$^-$	1	0.82	C^{2}S: other: 0.58 (1981Bi04).
1002	1/2$^-$	1	0.52	C^{2}S: other: 0.40 (1981Bi04).
1294		(4)	≈0.82	
1324		(1)	≈0.09	
1770[@]		3	≈0.23	
1910		3	0.45	
2149	3/2$^-$	1	0.36	C^{2}S: other: 0.39 (1981Bi04).
2297	5/2$^+$	2	0.12	L,C^{2}S: from 1981Bi04.
2520[@]		(4)	≈0.21	
2980[@]				
3580[@]		(3)	2.32	

[†] From 1981Bi04, unless otherwise noted.
[‡] From vector-analyzing power (1981Bi04).
[#] From DWBA analysis of $\sigma(\theta)$ in 1965Fu06, unless otherwise noted.
[@] From 1965Fu06.