^{64}Ni(t,α)   1966Bl15

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

1966Bl15: E=15 MeV triton beam was produced from the Los Alamos three-state Van de Graaff accelerator. Targets were self-supported ^{64}Ni with thickness of 150 to 600 μg/cm^2. Reaction products were detected with a 500$-\mu$m gold surface-barrier detector (FWHM=40-55 keV). Measured $\sigma(\theta)$, $\theta_{c.m.}$=10° to 42°. Deduced levels, J, π, L-transfers, spectroscopic factors from DWBA analysis.

^{63}Co Levels

E(level)[†]	J$^\pi$[‡]	L[#]	S[#]	E(level)[†]	J$^\pi$[‡]	L[#]	S[#]	E(level)[†]	J$^\pi$[‡]	L[#]	S[#]
0	7/2$^-$	3	6.93	1879 *15*	(3/2$^-$)	(1)	0.06	3040 *25*	7/2$^-$	3	0.20
987 *15*	3/2$^-$	1	0.41	2121 *20*	7/2$^-$	3	1.36	3137 *25*			
1373 *15*				2186 *20*	1/2$^+$	0	1.19	3189 *25*	7/2$^-$	3	0.42
1425 *15*				2329 *20*	7/2$^-$	3	1.12	3421 *30*			
1492 *15*	(3/2$^-$)	(1)	0.03	2690 *25*	3/2$^+$	2	1.42				
1666 *15*				2932 *25*	7/2$^-$	3	0.25				

[†] From 1966Bl15.

[‡] Assumed by 1966Bl15 for the purpose of extracting the quoted spectroscopic factors. L=0, 1, 2, and 3 are assumed to be s1/2, p3/2, d3/2, and f7/2, respectively.

[#] From DWBA analysis of measured $\sigma(\theta)$ (1966Bl15). Spectroscopic factor S is defined by dσ/dΩ(exp)=1/2×N×S×dσ/dΩ(DWBA) with N=38. Note that L-values are not explicitly listed in 1966Bl15, but are inferred from measured $\sigma(\theta)$ as compared to those with known L-values and also from author′s assumed J^π values for extracting S values from DWBA analysis of measured $\sigma(\theta)$.