^{49}Ti(p,d) 1964Ka19

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 179, 1 (2022)	30-Nov-2021

$J^{\pi}(^{49}Ti)=7/2^{-}$.

1964Ka19: E=17.5 MeV proton beam was produced from the Princeton FM cyclotron. Target was 1 mg/cm^2 self-supporting enriched ^{49}Ti foil. Reaction products were momentum-analyzed with a magnetic spectrometer (FWHM=80 keV) and detected with ΔE-E Si telescopes. Measured $\sigma(\theta\approx15^{\circ}$ to $90^{\circ})$. Deduced levels, J, π, L-transfers, spectroscopic factors from DWBA analysis.

Other: 1971Ma58.

^{48}Ti Levels

Spectroscopic factor S in this dataset is defined by $C^2S=\sigma(exp)/\sigma(DWBA)$.

E(level)[†]	L[‡]	S[‡]	Comments
0.0	3	0.2	$\sigma(\theta)_{max}$=0.30 mb/sr.
996 *15*	3	0.7	$\sigma(\theta)_{max}$=0.75 mb/sr.
2313 *15*	1+3	0.04+0.5	$\sigma(\theta)_{max}$=0.10 mb/sr for L=1, 0.40 mb/sr for L=3.
2431 *15*			$\sigma(\theta)$ is approximately isotropic (1964Ka19), 0.1 mb/sr.
3239 *15*	1+3	0.06+0.7	$\sigma(\theta)_{max}$=0.10 mb/sr for L=1, 0.41 mb/sr for L=3.
3332 *15*	3	1.8	$\sigma(\theta)_{max}$=0.90 mb/sr.
3508 *15*	3	0.7	$\sigma(\theta)_{max}$=0.35 mb/sr.
4060 *15*			
4380 *15*	1	0.3	$\sigma(\theta)_{max}$=0.21 mb/sr.
4530 *15*	0		$\sigma(\theta)_{max}$=0.14 mb/sr, at secondary maximum of L=0.
4750 *15*	0		$\sigma(\theta)_{max}$=0.12 mb/sr, at secondary maximum of L=0.
4795	0	0.15	
4890 *15*			$\sigma(\theta)_{max}$=0.25 mb/sr.

[†] From 1964Ka19.
[‡] From DWBA analysis of measured $\sigma(\theta)$ (1964Ka19).