^{50}Ti(^{3}He,n) 1975Bo14

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 128, 185 (2015)	10-Jul-2015

1974Ev02: E=15, 18, 21 MeV, measured σ(E(n),θ), detectors consisting of a 1 m* 8 cm (diameter) ≠ 213 liquid scintillator viewed from both ends by XP 1041 photomultipliers.

1975Bo14: E=13.0 MeV, measures σ(E(n),θ), tof, 12 detectors placed between 0° and 55° at intervals of 5.0°, flight path of 17.5 min, energy resolution of 200 keV for the transition to the ground state of ^{56}Ni.

1975Al05: E=15 MeV, measured σ(E(n),θ), 10.2 cm (diameter) ≠ 213 liquid scintillators of thickness 2.5 cm or 3.8 cm mounted on 12.7 cm photomultipliers, flight path of 4 m.

All data are from 1975Bo14, except as noted.

^{52}Cr Levels

E(level)	L‡	σ†	Comments
0.0	0	410 *30*	
1400 *30*	2	54 *7*	
3700 *50*	(2)	30 *7*	
4710 *30*	2	70 *10*	
5650 *20*	0	133 *15*	E: Doublet. σ consistent with composite of 5600 and 5755 0^+ levels.
6100 *30*	0	38 *4*	
6670 *20*	0	47 *7*	
7450# *50*	0+2		
7930 *50*	0		E: Seen only by 1975Al05. Probably 7450+8710. L: from 1975Al05, θ=0°.
8710# *50*	0+2	96 *5*	
9580 *20*	0	67 *7*	
9870 *50*			
11280 *20*		86 *7*	T=3 σ: θ at 35°. E: Identified as unresolved triplet of IAS of the three states in ^{52}V at 0.0, 17 and 23 keV with spins 2^+, 3^+ and 4^+. Angular distribution can be well fit by L=2+4 (can also be fit with L=3, but existence of an additional state with $J^\pi=3^-$ seems unlikely).
13420 *10*	0	230 *20*	T=3 Identified as IAS (^{52}V 2170 keV)?
13630 *10*	0	220 *20*	T=3 Identified as IAS (^{52}V 2390 keV)?
13950 *50*			
14110 *20*	2	102 *15*	T=3 Identified as IAS (^{52}V 2880 keV)?

† Cross section (μb/sr c.m.) at θ=0° for L=0, at θ=20° for L=2. From 1975Bo14.

‡ From DWBA analysis, 1975Bo14, except as noted.

Pair of close-lying levels, unresolved in energy spectra but contributions separated in DWBA fits due to different angular distributions.