^{48}Ti(^{3}He,n) 1975Bo14

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 157, 1 (2019)	15-Apr-2019

1975Bo14: E=13 MeV beam from the 7-MV Van de Graaff of the Hahn Meitner Institut Berlin. Enriched target. Measured $\sigma(\theta)$=0-55°, 5° intervals) with 12 neutron detectors (FWHM≈200 keV). Deduced levels, J, π, L-transfers from DWBA analysis.
Others:
1975Al05: E=15 MeV. Measured $\sigma(\theta)$ for five levels.
1974Ev02: E=18 MeV. Measured $\sigma(\theta)$ for eight levels.
See 1980Dr02 for a comparison of experimental $\sigma(^{3}He,p)/\sigma(^{3}He,n)$ with theory.

^{50}Cr Levels

E(level)‡	L	dσ/dΩ μb/sr†	Comments
0	0	620 *50*	L=0, dσ/dΩ(0°)=1.23 mb/sr *5*; dσ/dσ(DW)=2.12 (1975Al05). L=0, dσ/dΩ(0°)=1.4 mb/sr (1974Ev02).
780 *30*	2	108 *20*	E=0.80 MeV *3*, L=2, dσ/dΩ(20°)=0.07 mb/sr (1974Ev02).
3850 *20*	0	160 *20*	E=4.00 MeV *5*, L=0, dσ/dΩ(0°)=0.26 mb/sr *5*; S=0.30 (1975Al05). E=3.95 MeV *6*, L=0+2, dσ/dΩ(0°)=0.13 mb/sr (1974Ev02).
4740 *20*	0	85 *10*	
5710 *20*	0	530 *40*	E=5.84 MeV *5*, L=0, dσ/dΩ(0°)=0.71 mb/sr *6*; S=0.71 (1975Al05). E=5.76 MeV *3*, L=0, dσ/dΩ(0°)=0.35 mb/sr (1974Ev02).
6450? *30*	2		E(level),L: level from 1974Ev02 only, but not confirmed by 1975Bo14 at E(^{3}He)=13 MeV. This level is not included in the Adopted Levels. dσ/dΩ(20°)=0.17 mb/sr (1974Ev02).
8360 *50*			
8680 *50*			
9900 *50*	2	85 *14*	
10500 *50*			
10750 *30*	2	220 *30*	
11060 *50*			
11.4×10^{3} *1*			
11530 *50*	0	400 *50*	E=11.5 and 11.9 MeV, L=0, dσ/dΩ(0°)=0.7 mb/sr *2*; S=0.6 (1975Al05). E=11.57 MeV *3*, L=0, dσ/dΩ(0°)=0.27 mb/sr (1974Ev02).
11680 *20*	0	190 *50*	IAS(^{50}V 3.22 MeV).
11870 *20*	0	440 *70*	IAS(^{50}V 3.43 MeV). E=11.95 MeV *3*, L=0, dσ/dΩ(0°)=0.35 mb/sr (1974Ev02).
12680 *50*			
12790 *50*			
12950 *50*			
13220 *20*	0	140 *30*	IAS(^{50}V 4815).
13900 *20*	0	300 *50*	
14500 *30*			
14570 *30*			
14900 *20*	0	390 *70*	

† Values are from 1975Bo14 in the c.m. system.
‡ From 1975Bo14. L from shape of $\sigma(\theta)$ and comparison to DWBA; proton pair assumed to be in relative s state.