^{51}V(p,d) 1978Oh01

History

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

Target J^π(g.s.)=7/2$^-$.

1978Oh01: E(p)=51.9 MeV beam from the INS synchrocyclotron. Measured $\sigma(\theta)$ at θ(c.m.)≈5°−60° using a magnetic spectrograph (FWHM=90 keV) with deuterons detected by a ΔE-E telescope. Deduced levels, J, π, L-transfers from DWBA analysis. Observed states up to 12.6 MeV; primarily concentrated on isobaric analog states above 4 MeV.

1965Ba29, 1965Ba02: E=22 MeV beam from the ORNL 86-inch cyclotron. Measured proton spectrum at θ=30° with a magnetic spectrograph (FWHM=30 keV). Deduced levels.

1964Le10: E=17.0 and 18.5 MeV beams from the Princeton variable-energy cyclotron. Measured $\sigma(\theta)$ at θ(c.m.)≈5°−60° using a ΔE-E telescope (FWHM=45 keV). Deduced levels, L-transfers from DW analysis.

Others: 1964Wh02.

^{50}V Levels

E(level)[†]	J^π	L[†]	Comments
0		3	L: also from 1964Le10.
225[#] *20*			
320[#] *20*			
355[#] *20*			
385[#] *20*		3	E(level): 370 *20* for an unresolved broad peak in 1978Oh01 and 340 for a broad peak in 1964Le10 could correspond to the 320+355+385 in 1965Ba29. L: other: L=3 for a peak at 340 (1964Le10).
835[#] *20*			
905[#] *20*		3	E(level): 920 *20* for an unresolved broad peak in 1978Oh01 and 870 for a broad peak in 1964Le10 could correspond to the 835+905 in 1965Ba29. L: other: L=3 for a peak at 870 (1964Le10).
1290[#] *20*			
1320[#] *20*		3	E(level): 1330 *20* from 1978Oh01 and 1350 from 1964Le10 could correspond to the 1290+1320 in 1965Ba29. L: other: L=3 for a peak at 1350 (1964Le10).
1770 *20*			
1970 *20*		3	
2130 *20*			
2340 *20*			
2530 *20*		0	
2690		3	E(level),L: from 1964Le10 for a broad peak at 2690.
3090[‡]		3[‡]	
3210 *20*		0	
3400[‡]		3[‡]	
3480 *20*			
3700 *20*			
4800 *20*	(0)$^+$	3	J^π: IAS of g.s., 0$^+$ in ^{50}Ti, and L=3.
6380 *20*	(2)$^+$	3	J^π: IAS of 1554, 2$^+$ level in ^{50}Ti, and L=3.
7520 *20*	(4)$^+$	3	J^π: IAS of 2675, 4$^+$ level in ^{50}Ti, and L=3.
8050 *20*	(6)$^+$	3	J^π: IAS of 3198, 6$^+$ level in ^{50}Ti, and L=3.
9270 *20*	(3)$^-$	0	J^π: IAS of 4410, 3$^-$ level in ^{50}Ti, and L=0.
10240 *20*		(2)	IAS of 5336, π=− level in ^{50}Ti.
10640 *20*		(2)	Possible IAS of 5880, π=+ level in ^{50}Ti, but L=(2) suggests π=−.
10900 *20*	(3,4)$^-$	0	J^π: IAS of 6044, 3$^-$,4$^-$ level in ^{50}Ti, and L=0.
11270 *20*	(3)$^-$	(2)	J^π: IAS of 6400, (3)$^-$ level in ^{50}Ti, and L=(2).
11440 *20*		(2)	
12570 *20*	(2$^+$)		J^π: IAS of 7667, 2$^+$ level in ^{50}Ti.

Continued on next page (footnotes at end of table)

^{51}V(p,d) 1978Oh01 (continued)

^{50}V Levels (continued)

† From 1978Oh01, unless otherwise noted.
‡ From 1964Le10, with the estimated ΔE(Level)=50 keV (by evaluators) based on measured proton spectrum in Fig.2.
# From 1965Ba29.