

⁵¹V(p,t) E=40.2 MeV 1983Sa29

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows ^a	NDS 109, 1879 (2008)	14-Jul-2008

Target $J^\pi=7/2^-$. Measured $\sigma(\theta(\text{C.M.})\approx 5^\circ$ to 55°); magnetic spectrograph, position-sensitive proportional counter, scintillator, tof. FWHM=17 keV. DWBA.
Other: see [1995Bu23](#).

⁴⁹V Levels

L(D),S(E) 6+2, 1.18 for doublet.

E(level)	J^π [†]	L	$\sigma(\theta)/\sigma((f_{7/2})^n)$ [‡]
0.0	7/2 ⁻	0	1.00 [#]
91 3	5/2 ⁻	2	1.11
153 3	3/2 ⁻	2	1.10
1020 3	11/2 ⁻	2	0.94
1154 3	9/2 ⁻	2	2.00
1516 3	5/2 ⁻	2	1.17
1662 3	3/2 ⁻	2	0.80
2183 3	7/2 ⁻	0+2	1.25
2235 3	5/2 ⁻	2	(1.67)
2263 3	15/2 ⁻ ,13/2 ⁻	4	0.70
2306 3	@	2	
2350 3	9/2 ⁻	2	0.50
2404 3	7/2 ⁻	0	0.56
2666 3	11/2 ⁻	2	1.67
2727 3	15/2 ⁻ ,9/2 ⁻	2+4	0.80
2786 3	9/2 ⁻	2	0.23
2811 3	5/2 ⁻	2	0.33
2861 3	13/2 ⁻	4	1.43
3020 3	3/2 ⁻	2	1.11
3136 3		(0+2)	
3241 3		0	
3305 3	13/2 ⁻	4	(0.60)
3332 3			
3347 3			
3398 3		2	
3479 3		0	
3534 3			
3609 3		(0+2)	
3624 3		4	
3649 3		4	
3685 3		(0+2)	
3728 3		2	
3757 3	19/2 ⁻	6	1.28
3795 3		4	
3825 3		2	
3886 3			
3910 3			
3975 3		2	
4048 3			
4098 3			
4165 3			
4209 3			

Continued on next page (footnotes at end of table)

 ${}^{51}\text{V}(\text{p,t}) \text{E}=40.2 \text{ MeV}$ [1983Sa29](#) (continued) ${}^{49}\text{V}$ Levels (continued)E(level)

4277 3

4305 3

† Theoretical J^π 's from $(f_{7/2})^n$ model which provide the best agreement between experimental and calculated $\sigma(\theta)$.

‡ Parentheses indicate the observe $\sigma(\theta)$ differ In shape from those predicted by the model.

See [1985Mi06](#) for systematic study of g.s. L=0 transition strengths and comparison to interacting-boson approximation and DWBA (E=52 MeV. S, α (P). σ (first maximum)).

@ There is No $(f_{7/2})^{4n}$ analog of the 2306 state; this May Be an intruder state.