

$^{51}\text{V}(\alpha, \alpha')$ 1968Pe08

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong		NDS 144, 1 (2017)	1-Mar-2016

1968Pe08: E=42 MeV; FWHM=120-140 keV, measured $\sigma(E\alpha', \theta)$ and $\sigma(E\alpha', \theta=39^\circ)$.

1990Ba23: E=25 MeV; measure $\sigma(\theta)$, $\sigma(E\gamma)$; weak-coupling model calculation. Deduced deformation lengths.

For optical potential parameters see 1984Gi03 and 1982En04.

For nuclear density distributions see 1984Gi03.

 ^{51}V Levels

β_L comparison between quadrupole vibrational excitation

Ex, keV	J^π	Fitted	Calculated	Reference
320	5/2 ⁻	0.056	0.051	1990Ba23
930	3/2 ⁻	0.034	0.042	1990Ba23
1610	1/2 ⁻	0.061	0.072	1990Ba23
1810	9/2 ⁻	0.045	0.033	1990Ba23

E(level) [†]	J^π [‡]	L [@]	β_R	E(level) [†]	J^π [‡]	L [@]	β_R	E(level) [†]
0	7/2 ⁻ [#]			2410	3/2 ⁻	2	0.31	3840
320	5/2 ⁻	2	0.49	2700				4030
930	3/2 ⁻	2	0.32	3320 30		2	0.47	5040
1610	11/2 ⁻	2	0.55	3470 40		2	0.44	5260
1810	9/2 ⁻	2	0.44	3610				5690

[†] ΔE uncertainty not given, except where noted.

[‡] Based on $\sigma(\theta)$ measurements and comparison with predictions of shell model and weak coupling collective model, except as noted.

[#] From Adopted Levels.

[@] From DWBA analysis of measured $\sigma(\theta)$.