^{29}Si(d,^{3}He)   1994Ve02,1974Ma34

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 114, 1189 (2013)	1-Apr-2013

J^π(^{29}Si)=1/2$^+$.

1994Ve02: ^{29}Si(d,^{3}He) E=29 MeV. Measured $\sigma(\theta)$. ^{3}He particles were momentum analyzed with an Enge split-pole magnetic spectrograph. The angular distribution measurements were done by taking spectra at 6° and at nine other angles in the range from 9° to 41° in steps of 4° in the laboratory system.

1974Ma34: ^{30}Si(d,^{3}He), E=52 MeV; 4 sets of ΔE+E Si telescope; Measured angular distribution of ^{3}He; deduced level energy, L values, spectroscopic factors, J^π.

^{28}Al Levels

E(level)[†]	J^π	L[@]	C^{2}S[&]	Comments
0[#]		2	2.39	
32[#] 5		2	1.26	C^{2}S: Other: 3.58 (for doublet) (1974Ma34).
971[#] 5		0	0.13	C^{2}S: Other: 0.04 and 0.20 (for doublet) (1974Ma34).
1012 5		2	0.10	
1375[#] 5		0	0.39	C^{2}S: Other: 0.47 (1974Ma34).
1624[#] 5		2	0.15	C^{2}S: Other: 0.25 (1974Ma34).
2138[#] 5		2	0.42	C^{2}S: Other: 0.60 (for doublet) (1974Ma34).
2201[#] 5		2	0.11	
2272 5				E(level): Mixed with the ^{27}Al levels at 2981 keV (J^π=3/2$^+$) and 3004 keV (J^π=9/2$^+$).
2484[#] 5		2	0.26	C^{2}S: Other: 0.27 (1974Ma34).
2578 5				
2655[#] 5				C^{2}S: Other: < 0.1 (1974Ma34).
2986[#] 5	3$^+$	2	0.13	J^π: From shell model calculations, J^π=3$^+$ is proposed between 1$^+$ or 3$^+$ in 1994Ve02. C^{2}S: Other: 0.36 (1974Ma34).
3009 5		0	(0.004)	
3105 5	1$^+$	0+2	0.001,0.03	J^π: From the weak L=0 component, J^π=1$^+$ is proposed in 1994Ve02.
3348[#] 5		2	0.23	C^{2}S: deduced with the assumption of a 1d$_{3/2}$ transition (1994Ve02). Other: 0.19 (1974Ma34).
3464 5				
3542[#] 5		0+2	0.016,0.01	C^{2}S: Other: 0.09 (1974Ma34).
3601 5				
3706		2	0.073	
3758 5	0$^+$	0	0.031	J^π: From Adopted Levels.
3900 5				
3936 5				
4114 5		0+2	0.012,0.03	
4244 5		2	0.072	
4316 5				
4459 5				
4514 5				
4597 5	3$^+$	2	0.044	J^π: From Adopted Levels.
4688 5				
4768 5				
4845 5		0+2	0.009,0.07	
4929 5				
4998[#] 5	(0 to 2)$^{-‡}$	1	0.77	C^{2}S: Other: 1.10 (for doublet) (1974Ma34).
5335 5				
5377 5				

Continued on next page (footnotes at end of table)

$^{29}\text{Si}(d,^{3}\text{He})$ **1994Ve02,1974Ma34 (continued)**

^{28}Al Levels (continued)

E(level)[†]	J^{π}	L[@]	C^2S[&]	E(level)[†]	J^{π}	L[@]	C^2S[&]
5406 *5*	(0 to 2)$^{-}$[‡]	1	0.32	6335 *5*			
5443 *5*				6422 *5*			
5736 *5*				6451 *5*			
5760 *5*				6469 *5*			
5800 *5*				6489 *5*			
5857 *5*				6584 *5*			
6021 *5*	(0 to 2)$^{-}$[‡]	1	0.20	6652 *5*	(0 to 2)$^{-}$[‡]	1	0.20
6066 *5*				6716 *5*			
6317 *5*							

[†] From 1994Ve02. Level energies reported in 1974Ma34 are indicated as footnotes.
[‡] From L=1 in 1994Ve02.
[#] Level also reported in 1974Ma34.
[@] From 1994Ve02 based on angular distribution measurements and DWBA calculations.
[&] For two values, 1st one is for L=0 and 2nd value (rounded off last digit) is for L=2. Values from 1974Ma34 are listed as comment.

$^{29}\text{Si}(d,^{3}\text{He})$ **1994Ve02,1974Ma34 (continued)**