^{69}Ga(^{3}He,d) 1975Ar29

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal, E. A. Mccutchan	NDS 136, 1 (2016)	1-Jul-2016

Target $J^{\pi}=3/2^{-}$.

1975Ar29: E=25 MeV by Orsay MP tandem accelerator, 99.75% enriched ^{69}Ga. Split-pole spectrometer with a resolution FWHM=18-21 keV was used. Measured $\sigma(\theta)$, θ(lab)=5°−41°; DWBA analysis.

1975La05: E=22.5 MeV, FWHM=15 keV; measured $\sigma(\theta)$, θ(lab)= 8°−55°; DWBA analysis.

^{70}Ge Levels

E(level)[†]	L[†]	(2J+1)C^{2}S[†]	Comments
0.0	1	2.0	
1040 *3*	1+3	0.96+0.96	
1216 *3*	1	0.87	
1709 *3*	1+3	0.39+0.48	
2157 *3*	1+3	0.81+0.66	
2307 *3*	1(+3)	0.13	(2J+1)C^{2}S: <0.03 for L=3.
2452 *3*	3(+1)	2.27	(2J+1)C^{2}S: <0.07 for L=1.
2535 *3*	1+3	0.16+0.62	
2563 *3*	4(+2)	1.31	(2J+1)C^{2}S: <0.09 for L=2.
2808 *3*	3	1.14	
2888 *3*	1(+3)	0.22	(2J+1)C^{2}S: <0.05 for L=3.
2941 *3*	1+3	0.37+2.71	
3053 *3*	3(+1)	11.7	(2J+1)C^{2}S: <0.25 for L=1.
3066?[#] *6*			
3102?[#] *6*			
3182 *3*	1+3	0.84+1.55	
3243 *3*	1+3	1.22+1.0	
3314 *3*	2(+4)	0.07	(2J+1)C^{2}S: <0.02 for L=4.
3335 *3*	1(+3)	0.59	(2J+1)C^{2}S: <0.14 for L=3.
3422 *3*	1+3	0.36+0.45	
3452 *3*			
3466?[#] *6*			
3481 *3*	1+3	0.05+0.12	
3517?[#] *6*			
3563?[#] *6*			
3567 *3*	4(+2)	0.21	(2J+1)C^{2}S: <0.02 for L=2.
3592?[#] *6*			
3628 *3*	1(+3)	0.49	(2J+1)C^{2}S: <0.12 for L=3.
3660?[#] *6*			
3672?[#] *6*			
3687 *3*	1+3	0.51+0.63	
3716?[#] *6*			
3733 *3*	1+3	0.05+0.03	
3775 *3*	1+3	0.03+0.18	
3854 *3*	4+2(+0)	0.41+0.02	(2J+1)C^{2}S: <0.02 for L=0.
3888 *3*	1+3	0.82+1.52	
3903 *3*	1+3	0.31+0.26	
3964 *3*	4+2(+0)	0.74+0.04	(2J+1)C^{2}S: <0.02 for L=0.
3995 *3*			
4024 *3*			
4060 *3*	1+3	0.27+0.15	
4080 *3*	1+3	0.20+0.31	

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^{69}Ga(^{3}He,d) 1975Ar29 (continued)

^{70}Ge Levels (continued)

E(level)[†]	L[†]	(2J+1)C^{2}S[†]	Comments
4116?[#] *6*			
4129 *3*	4+2+0	1.03+0.02[‡]	(2J+1)C^{2}S: 0.02 for L=0.
4157 *3*	1+3	0.26+0.22	
4194?[#] *6*			
4212 *3*			
4238 *3*	1+3	0.09+0.27	
4287 *3*	1+3	0.22+0.26	
4330 *3*	4+2(+0)	1.37+0.07	(2J+1)C^{2}S: <0.03 for L=0.
4352 *3*	4+2(+0)	0.80+0.04	(2J+1)C^{2}S: <0.03 for L=0.
4391 *3*	1+3	0.20+0.37	
4419 *3*	4+2	0.08+0.09	
4446 *3*			
4473 *3*	1+3	0.12+0.48	
4520 *3*	4+2	0.53+0.05	
4555 *3*			
4574 *3*			
4613 *3*	1+3	0.12+0.48	
4642 *3*	4+2(+0)	0.40+0.04	(2J+1)C^{2}S: <0.02 for L=0.
4687 *3*	4+2(+0)	2.09+0.13	(2J+1)C^{2}S: <0.04 for L=0.
4736 *3*	(4+2+0)	(1.14)	(2J+1)C^{2}S: S=(0.13) for L=2 and S=(0.04) for L=0.
4768 *3*	4+2(+0)	0.56+0.06	(2J+1)C^{2}S: <0.03 for L=0.
4847 *3*	4+2(+0)	0.74+0.08	(2J+1)C^{2}S: <0.03 for L=0.
4877 *3*	4+2+0	1.03+0.03[‡]	(2J+1)C^{2}S: S=0.02 for L=0.
4905 *3*	(4+2+0)	(1.01)	(2J+1)C^{2}S: S=(0.11) for L=2 and S=(0.05) for L=0.
4943 *3*	4+2(+0)	0.47+0.05	(2J+1)C^{2}S: <0.03 for L=0.
4979 *3*	4+2(+0)	0.23+0.03	(2J+1)C^{2}S: <0.01 for L=0.
5008 *3*	4+2+0	1.43+0.04[‡]	(2J+1)C^{2}S: S=0.03 for L=0.
5048 *3*	4+2+0	1.79+0.02[‡]	(2J+1)C^{2}S: S=0.01 for L=0.
5078 *3*	1+3	0.08+0.02	
5102 *3*	1+3	0.12+0.02	
5145 *3*	(4+2+0)	(0.79)	(2J+1)C^{2}S: S=(0.09) for L=2 and S=(0.04) for L=0.

[†] From DWBA analysis of 1975Ar29, except where indicated otherwise.
[‡] Spectroscopic factor calculated assuming g7/2 transfer.
[#] Weakly excited level (1975La05).