

⁶⁸Zn(³He,d) 1974Ri08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 115, 1 (2014)	31-Jul-2013

1974Ri08: E=15 MeV, resolution (FWHM)=15-20 keV; measured $\sigma(\theta)$, $\theta=5^\circ-35^\circ$; DWBA analysis.

1974Ze01: E=18 MeV, resolution (FWHM) \approx 120 keV; measured $\sigma(\theta)$, $\theta=15^\circ-80^\circ$; DWBA analysis.

All data are from 1974Ri08, except those noted otherwise. See 1974Ze01 for comparable data on levels below 2 MeV.

⁶⁹Ga Levels

E(level)	J ^π †	L‡	C ² S'‡#	Comments
0	3/2 ⁻	1	1.6 4	
319 15	1/2 ⁻	1	1.3 3	
574 15	5/2 ⁻	3	4.5 11	
872 15	3/2 ⁻	1	0.34 8	
1027 15	1/2 ⁻	1	0.14 4	C ² S': 0.12 for J=3/2 ⁻ .
1336 15	7/2 ⁻	(3)	≤0.65	
1525 15				
1723 15	5/2 ⁻	3	0.70 18	
1891 15				
1971 15		4+1		E(level): Unresolved doublet.
				C ² S': 3.58 for J ^π =9/2 ⁺ . 0.18 for J ^π =1/2 ⁻ , 0.16 for J ^π =3/2 ⁻ .
2002 30		(1)	≤0.05	
2021 30	5/2 ⁻	3	1.36 34	C ² S': 0.89 for J ^π =7/2 ⁻ .
2051? 30				
2220 30	1/2 ⁺	0	0.029 7	
2476 30	5/2 ⁺	2	0.14 4	
2521 30	1/2 ⁻	1	0.04 1	C ² S': 0.035 for J ^π =3/2 ⁻ .
2564 30	9/2 ⁺	4	1.32 33	E(level): Possible unresolved components present (1974Ri08).
2651 30	1/2 ⁻	1	0.13 3	C ² S': 0.11 for J ^π =3/2 ⁻ .
2740 30	1/2 ⁻	1	0.035 9	C ² S': 0.03 for J ^π =3/2 ⁻ .
2789 30	1/2 ⁻	1	0.042 11	C ² S': 0.036 for J ^π =3/2 ⁻ .
2916 30	5/2 ⁺	2	0.15 4	E(level): possible multiplet.
3089 30	5/2 ⁺	2	0.21 5	E(level): Unresolved multiplet.
3218 30				
3314 30	5/2 ⁺	2	0.068 17	
3358 30	5/2 ⁺	2	0.11 3	
3760 30	1/2 ⁻	1	0.037 9	C ² S': 0.033 for J ^π =3/2 ⁻ .
3803 30	1/2 ⁺	0		C ² S': 0.009 to 0.015.
4021 30	1/2 ⁻	1	0.072 18	C ² S': 0.063 for J ^π =3/2 ⁻ .
4115 30	1/2 ⁺	0	0.023 6	
4152 30	1/2 ⁺	0	0.027 7	
4190 30	1/2 ⁺	0	0.016 4	
4253 30	(1/2 ⁺)	(0)	0.016 4	
4321 30	(1/2 ⁺)	(0)	0.042 11	
4430 30				
4533 30	(1/2 ⁺)	(0)	0.016 4	
4830 30	1/2 ⁺	0	0.028 7	

† Assumed to extract spectroscopic factors.

‡ From DWBA analysis of $\sigma(\theta)$.

Uncertainty estimated to be 25% by authors.