^{25}Mg(^{3}He,d),(d,n)   1968We04,1988Pe14,1996Il01

J^π(^{25}Mg)=5/2$^+$.

Other references: 1994Ve04,1989Ya13,1986Ch09,1978Be28,1972No04.

1968We04: ^{25}Mg(^{3}He,d) − Target: ^{25}Mg (thickness 250 μg/cm^2) with impurity<1%; E(^{3}He)=12 MeV; Broad-range magnetic spectrograph; Measured deuteron spectra from 5° to 35° in 5° steps; FWHM 20 keV; Deduced L values, spectroscopic factors.

1988Pe14: ^{25}Mg(^{3}He,d) − 97.9% enriched ^{25}Mg target; Projectile: ^{3}He, E=55.20 and 55.34 MeV; Reaction products were analyzed by a magnetic spectrometer; FWHM 38 keV and 55 keV at lower and higher excitations energies; Deduced excited level energies, J^π, spectroscopic factors.

1968Fu03: ^{25}Mg(d,n) − 99.2% enriched ^{25}Mg target; Projectile: Deuteron beam, E=6 MeV; neutrons were detected by NE213 liquid scintillators; Measured neutron Time-of-Flight (tof) spectrum; Deduced excited levels, spin and parity, L values, spectroscopic factors, DWBA analyses.

1996Il01: ^{25}Mg(^{3}He,d) − reanalyzed the experimental data of the literature. Deduced excited level energies, spin, parity, spectroscopic factors, etc.

^{26}Al Levels

E(level)[†]	J^π[#]	L[&]	(2J+1)S[&]	Comments
0.0	5$^+$	2	8.7	T=0
				(2J+1)S: Other: 6.2 ((d,n) − 1968Fu03).
228	0$^+$	2	2.2	T=1
				(2J+1)S: Other: 0.82 ((d,n) − 1968Fu03).
416	3$^+$	0+2	3.4,0.0	(2J+1)S: Other: 2.2, 2.4 ((d,n) − 1968Fu03).
1057	1$^+$	2	3.6	T=0
				(2J+1)S: Other: 2.8 ((d,n) − 1968Fu03).
1759	2$^+$	0+2	1.1, 2.6	(2J+1)S: Other: 0.67, 1.4 ((d,n) − 1968Fu03).
1850	1$^+$	2	0.58	(2J+1)S: 0.68 ((d,n) − 1968Fu03).
2068				
2069				
2071				
2365	3$^+$	0+2	0.16,1.8	(2J+1)S: Other: 0.12, 0.98 ((d,n) − 1968Fu03).
2545	(2,3)$^{+ @}$	0+2	0.20,1.7	(2J+1)S: Other: 0.24, 1.6 ((d,n) − 1968Fu03).
2660	2$^+$	0+2	0.43,0.4 7	(2J+1)S: From 1968Fu03.
2913	(2,3)$^{+ @}$	0+2	0.38,0.5	(2J+1)S: Other: 0.24, 1.1 ((d,n) − 1968Fu03).
3073				
3159	2$^+$	0+2	1.3,2.4	(2J+1)S: Other: 1.2, 1.1 ((d,n) − 1968Fu03).
3596	(2,3)$^{+ @}$	0+2	0.21,0.6	(2J+1)S: Other: 0.20, 0.63 ((d,n) − 1968Fu03).
3674				
3680	(2,3)$^{+ @}$	0+2	0.35,2.5	(2J+1)S: For doublet. Other: 0.35, 2.3 ((d,n) − 1968Fu03).
3723.81				E(level): From Adopted Levels.
3750	(2,3)$^{+ @}$	0+2	0.96,1.7	(2J+1)S: For doublet. Other: 0.67, 1.6 ((d,n) − 1968Fu03 − for triplet).
3753.63 *13*				E(level): From Adopted Levels.
4191	3$^+$	0+2	1.3,2.9	(2J+1)S: For doublet. 1.2, 2.4 − ((d,n) − 1968Fu03 − for doublet).
4205				
4599.17[b]	(2,3)$^+$	0+2[b]	1.4,0.78[b]	(2J+1)S: Other: 0.47 for L=0 ((d,n) − 1968Fu03) − for doublet.
4622.38				E(level): From Adopted Levels.
4705.37[b]	4$^+$	2[b]	1.2[b]	(2J+1)S: Other: 0.55 ((d,n) − 1968Fu03).
4773.35[b]	4$^+$	2[b]	1.7[b]	(2J+1)S: Other: 0.75 ((d,n) − 1968Fu03).
5141.68[b]	2$^+$	0+2[b]	0.60,1.5[b]	(2J+1)S: Other: 0.24, 0.94 ((d,n) − 1968Fu03).
5245.28[b]	4$^+$	2[b]	2.7[b]	(2J+1)S: Other: 1.4 ((d,n) − 1968Fu03).
5395.53[b]	4$^-$	1,3[b]	0.72,1.4[b]	(2J+1)S: Other: 0.39 ((d,n) − 1968Fu03).

^{25}Mg(^{3}He,d),(d,n)   **1968We04,1988Pe14,1996Il01 (continued)**

^{26}Al Levels (continued)

E(level)[†]	J$^\pi$[#]	L[&]	(2J+1)S[&]	Comments
5431.23[‡]				
5456.71[b]	3$^-$	1[b]	0.42[b]	L,(2J+1)S: Listed for 5442 keV level in 1978Be28. Probably for a doublet. (2J+1)S: Other: 0.31 ((d,n) − 1968Fu03).
5461.87[b]	0$^+$,(1,2)	0+2[b]	0.06,0.06[b]	L,(2J+1)S: Listed for 5469 keV level in 1978Be28. Probably for a doublet.
5487.93[‡]				
5494.51 *5*	2$^+$	0+2	0.08,0.78[c]	E(level): From Adopted Levels.
5513.48[b]	4$^+$	2[b]	4.3[b]	E(level): 5525 in 1987Be28.
5544.56	2$^+$	2	3.1	
5682[a]	1$^+$	0+2	1.3,2.2	L,(2J+1)S: L=0 − presumably erroneous.
5692.15[b]	3$^-$	1[b]	1.0[b]	
5726.38[b]	4$^+$	1+3[b]	0.42,1.2[b]	L,(2J+1)S: L=3 − presumably erroneous.
5916.10[b]	2$^-$	1+3[b]	0.78,1.2[b]	L,(2J+1)S: Listed for 5932 keV level in 1978Be28. Probably for a doublet. (2J+1)S: Other: 0.24 ((d,n) − 1968Fu03).
5924.19[‡]				
6084.07[a]	(5$^-$)	2	3.4	L: For doublet. L=3 − probably erroneous − in 1986Pe01, 1988Pe14, 1989Ya13.
6086.47[‡]	(1$^-$,2$^+$)			
6254.06[b]	3$^-$	(1)[b]	0.12[b]	
6270.19[‡]	1$^+$			
6280.33[b]	3$^+$	0+2[b]	0.30,0.36[b]	L,(2J+1)S: Listed for 6290 keV level in 1978Be28. Probably for a doublet.
6360[d]	(1 to 4)$^-$[d]	1[d]		
6565[d]	(0 to 5)$^+$[d]	2[d]		
6613[d]	(1 to 4)$^-$[d]	1[d]		
6689[d]	(2,3)$^+$[d]	0[d]		
6734[d]	(1 to 4)$^-$[d]	1[d]		
6797[d]	(1 to 4)$^-$[d]	1[d]		
6828[d]	(1 to 4)$^-$[d]	1[d]		
6899[d]	(1 to 6)$^-$[d]	3[d]		E(level),(2J+1)S: From 1988Pe14. Other value: 6899 keV (1978Be28). J$^\pi$,L: From 1978Be28. L=3 also in 1988Pe14.
6964[a] *5*		3	1.7[a]	
7168[a] *5*		3	0.41[a]	
7524[a] *5*		3	1.4[a]	
8007[a] *10*		3	1.1[a]	
8064[a] *10*		3	2.0[a]	
9264[a] *15*		3	2.2[a]	
11966[a] *15*		3	0.60[a]	
12405[a] *15*		3	0.38[a]	
12554[a] *15*		3	0.22[a]	
13250[a] *20*				
14050[a] *20*		3	0.16[a]	
14744[a] *20*		3	0.23[a]	
15371[a] *20*		3	0.12[a]	
16550[a] *20*		3	0.16[a]	

[†] Levels up to 4205 are reported in 1968We04.
[‡] From Adopted Levels.
[#] From Adopted Levels, except otherwise noted.

^{25}Mg(^{3}He,d),(d,n)   **1968We04,1988Pe14,1996Il01 (continued)**

^{26}Al Levels (continued)

@ Assigned in 1968We04 from L value.
& From 1968We04, except otherwise noted. Evaluated spectroscopic factors (1990En08, 1977En02) are listed here. N=4.0 changed into 4.42.
[a] From 1988Pe14.
[b] From 1978Be28. Level energies in 1978Be28 were taken from 1972Be51, evaluators quote those from Adopted Levels.
[c] From (d,n) − 1968Fu03. Evaluated spectroscopic factors (1990En08, 1977En02) from 1968Fu03 are listed here. N=1.0 changed to 1.53.
[d] From 1978Be28.