

<sup>24</sup>Mg(d,<sup>3</sup>He) 1971Kr04,1971Ar08,1972Ne18

Type	Author	History	Citation	Literature Cutoff Date
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$J^\pi(^{24}\text{Mg})=0^+$ .

Other reference: 1978Co13.

Other reactions:

<sup>24</sup>Mg( $\alpha$ ,<sup>3</sup>Li): 1978Sa26 (65 MeV) – measured relative energy distribution of correlated decay products.

<sup>24</sup>Mg(<sup>9</sup>Be,<sup>10</sup>B): 1985Wi18 (E=43 MeV) – deduced spectroscopic factors for g.s. and 1st excited state.

1971Kr04: <sup>24</sup>Mg(d,<sup>3</sup>He) E=52 MeV, 99% enriched <sup>24</sup>Mg target. Measured  $\sigma(\theta)$ , deduced excited levels, L, spectroscopic factors. FWHM 80 keV.

1971Ar08: <sup>24</sup>Mg(d,<sup>3</sup>He) E=80 MeV. Measured  $\sigma(E(^3\text{He}),\theta)$ . Deduced spectroscopic factors. FWHM 120 to 180 keV.

1972Ne18: <sup>24</sup>Mg(d,<sup>3</sup>He) E=21.1 MeV. Measured  $\sigma(E(^3\text{He}),\theta)$ . FWHM 80 to 100 keV.

1978Co13: <sup>24</sup>Mg(pol d,<sup>3</sup>He) E=29 MeV, 99% enriched <sup>24</sup>Mg target. Measured  $\sigma(\theta)$ , vector analyzing power. DWBA calculations. Deduced spectroscopic factors. FWHM better than 350 keV.

<sup>23</sup>Na Levels

E(level) <sup>†</sup>	L&	S@&	Comments
0	2	0.47	S: Other values: 0.08 and 0.09 (1978Co13), 0.26 (1972Ne18), 0.24 (1971Kr04).
442 10	2	2.90	S: Other values: 0.47 and 0.70 (1978Co13), 2.1 (1972Ne18), 3.78 (1971Kr04).
2093 <sup>‡</sup> 18			
2397 10	0	0.25	S: Other: 0.19 (1972Ne18), 0.30 (1971Kr04).
2644 11	1	1.9 <sup>a</sup> 3	S: Other: 1.6 (1972Ne18), 2.64 (1971Kr04).
2710 <sup>‡</sup>			
2983 10		0.15 <sup>‡</sup>	S: Other: 0.17 (1971Kr04).
3678 10	1	0.98 <sup>a</sup> 14	S: Other: 0.43 (1972Ne18), 0.93 (1971Kr04).
3850 <sup>‡</sup>			
3914 25		0.014 <sup>‡</sup>	S: Other: 0.02 (1971Kr04).
4440 12	0	0.08	S: Other: 0.064 (1972Ne18), 0.12 (1971Kr04).
4780 <sup>‡</sup>			
5380 7	2	0.52 <sup>a</sup> 10	S: Other: 0.49 (1971Kr04).
5530 <sup>‡</sup>			
5778 26	2	≈0.04	L,S: From 1971Kr04.
5965 11	1	0.9 <sup>a</sup> 2	S: Other: 0.60 (1971Kr04).
6263 14	0 <sup>b</sup>	0.04 <sup>b</sup>	
6917 28	1 <sup>b</sup>	0.37 <sup>b</sup>	
7092 22	1 <sup>b</sup>	0.08 <sup>b</sup>	
9223 10	1 <sup>b</sup>	0.18 <sup>b</sup>	
9433 32	1 <sup>b</sup>	<0.1 <sup>b</sup>	
9728 10	1 <sup>b</sup>	0.44 <sup>b</sup>	
10490 12	1 <sup>b</sup>	<0.22 <sup>b</sup>	
11050 <sup>#</sup> 36	1 <sup>b</sup>	<0.29 <sup>b</sup>	

<sup>†</sup> From 1971Kr04, except otherwise noted.

<sup>‡</sup> From 1972Ne18.

<sup>#</sup> Overlaps three or more Adopted Levels energies, not referenced.

@ C<sup>2</sup>S.

& From 1971Ar08, except where noted.

<sup>a</sup> Values given as a range in 1971Ar08.

<sup>b</sup> From 1971Kr04.