

$^{24}\text{Mg}(^3\text{He}, ^3\text{He}')$  1978Pe03

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty		NDS 186, 2 (2022)	31-Mar-2022

Other reference: 1967Gr20.

1978Pe03:  $^3\text{He}$  beam,  $E=41.2$  MeV; measured  $\sigma(E_{^3\text{He}'}, \theta)$ ; Deduced levels, spin, parity, L, and deformation parameter  $\beta_L$ .  
FWHM=30 keV.

 $^{24}\text{Mg}$  Levels

E(level) <sup>†</sup>	$J\pi^{\ddagger}$	L <sup>@</sup>	Comments
0 <sup>a</sup>	0 <sup>+</sup>		
1368 <sup>a</sup>	2 <sup>+</sup>	2	
4123 <sup>a</sup>	4 <sup>+</sup> #		
4238	2 <sup>+</sup>	2	
5236	3 <sup>+</sup> #		
6010	4 <sup>+</sup>	4	
6432	0 <sup>+</sup>	0	
7348	2 <sup>+</sup>	2	
7553	1 <sup>-</sup>	1	
7616	3 <sup>-</sup>	3	
7747	1 <sup>+</sup>	(2)	
7812		(6)	
8120	(6 <sup>+</sup> )	(6)	
8358	3 <sup>-</sup>	3	
8438 <sup>&amp;</sup>	1 <sup>-</sup>	1 <sup>&amp;</sup>	T=0
8654	2 <sup>+</sup>	2	
8864	2 <sup>-</sup>	1	
9002	2 <sup>+</sup>	2	
9148	1 <sup>-</sup>	1	
9282	2 <sup>+</sup>	2	L: Fit appears to be for two data points.
9456	3 <sup>+</sup>	2	
9520 <sup>&amp;</sup>	(6 <sup>+</sup> )	(6) <sup>&amp;</sup>	
9827		(2)	
10027 <sup>&amp;</sup>	5 <sup>-</sup>	5 <sup>&amp;</sup>	
10100	0 <sup>+</sup>	0	
10355 <sup>&amp;</sup>	2 <sup>+</sup>	2 <sup>&amp;</sup>	
10682	0 <sup>+</sup>	0	
10822		(5)	
10922	2 <sup>+</sup>	2	
11017	2 <sup>+</sup>	2	
11163 <sup>&amp;</sup>	3 <sup>-</sup>	3 <sup>&amp;</sup>	
11220 <sup>&amp;</sup>	4 <sup>+</sup>	4 <sup>&amp;</sup>	
11313			
11390	1 <sup>-</sup>	1	
11457	2 <sup>+</sup>	2	
11521	(2 <sup>+</sup> )	(2)	
11568	(2 <sup>+</sup> )	(2)	

<sup>†</sup> From 1978Pe03.

<sup>‡</sup> From L values, except where otherwise noted. In a few cases, listed in comments, when inconsistent with the adopted spin.

# From Adopted Levels.

@ From 1978Pe03, based on comparison of measured  $\sigma(\theta)$  and DWBA.

Continued on next page (footnotes at end of table)

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 $^{24}\text{Mg}(^3\text{He}, ^3\text{He}')$     [1978Pe03](#) (continued) $^{24}\text{Mg}$  Levels (continued)

<sup>&</sup> Possible doublet as of the literature, although in several cases one angular momentum transfer dominated, without a clear mention in [1978Pe03](#).

<sup>a</sup> Band(A):  $K^\pi=0^+$  band.

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Band(A):  $K^\pi=0^+$  band

4<sup>+</sup>                      4123

2<sup>+</sup>                      1368

0<sup>+</sup>                      0

$^{24}_{12}\text{Mg}_{12}$