

$^{24}\text{Mg}(^{12}\text{C},\alpha)$ [1982Da10](#),[1984Me12](#)

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
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Also include $^{12}\text{C}(^{24}\text{Mg},^{16}\text{O}^{16}\text{O})$ from [1996Cu02](#).

[1982Da10](#): E=24 to 36 MeV ^{12}C beams were produced from the accelerator at the University of Pennsylvania. Target was 50 $\mu\text{g}/\text{cm}^2$ 99.4% enriched ^{24}Mg on a Au backing. Reaction products were detected with a surface-barrier silicon detector. Measured energy spectra, $\sigma(\theta)$. Deduced levels.

[1984Me12](#): E=13.9, 14.2 and 14.5 MeV (center of mass) ^{12}C beams were produced from the Yale-MP1 tandem Van de Graaff accelerator. Target was 45 $\mu\text{g}/\text{cm}^2$ ^{24}Mg on a bismuth backing. Reaction products were detected with two position-sensitive semiconductor detectors. Measured $\sigma(\alpha,\theta)$, $\theta_{\text{cm}}=0^\circ$ to 180° . Deduced levels.

[1985Po16](#): E=11.9 to 19.4 MeV (center of mass) from the Tandem Van de Graaff accelerator of NRC Demokritos. Measured $\sigma(\theta)$. Tandem Van de Graaff of Saclay. Measured energy spectra, $\sigma(\theta)$.

[1982Ta21](#): E=12.4, 13.1 and 14.3 MeV (center of mass) from the Kyoto University tandem Van de Graaff. Measured $\sigma(\theta)$.

[1996Cu02](#): E=170 MeV ^{24}Mg beam from 14UD tandem at Australian National University. Measured $\sigma(E(^{16}\text{O}),\theta)$. Deduced levels.

Other $\sigma(\theta)$ measurements: [1981Ab07](#), [1981Ca16](#), [1979Ci02](#).

 ^{32}S Levels

<u>E(level)[†]</u>	<u>J^π</u>
0	
2230	
3780	
4280	
5010	
$33.03 \times 10^3 \text{ }^\ddagger$ 12	(10,12) [‡]
$34.69 \times 10^3 \text{ }^\ddagger$ 8	(12,14) [‡]
$35.64 \times 10^3 \text{ }^\ddagger$ 6	(12,14) [‡]
$37.55 \times 10^3 \text{ }^\ddagger$ 11	(14,16) [‡]
$38.32 \times 10^3 \text{ }^\ddagger$ 12	(14,16) [‡]

[†] From [1982Da10](#), unless otherwise noted.

[‡] From [1996Cu02](#).