

$^{25}\text{Mg}(\text{d},\text{d}')$  1961BI05

| Type            | Author                                     | History | Citation         | Literature Cutoff Date |
|-----------------|--------------------------------------------|---------|------------------|------------------------|
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$E_d \approx 14.8$  MeV; reaction particles from the target were analyzed by a magnetic spectrometer, detected by CsI(Tl) crystal or a nuclear emulsion system. Measured  $\sigma(\theta)$ .

 $^{25}\text{Mg}$  Levels

| E(level) <sup>†</sup> | J $\pi$ <sup>‡</sup> | Comments                                                                                                                                                                                      |
|-----------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0                     | 5/2 <sup>+</sup>     |                                                                                                                                                                                               |
| 580                   | 1/2 <sup>+</sup>     | $\sigma < 0.22$ mb/sr at $\theta_{\text{lab}}=13.5^\circ$ , 0.14 mb/sr 2 at $\theta_{\text{lab}}=29.7^\circ$ , and 0.05 mb/sr 2 at $\theta_{\text{lab}}=63.9^\circ$ .                         |
| 980                   | 3/2 <sup>+</sup>     | $\sigma < 0.18$ mb/sr at $\theta_{\text{lab}}=13.5^\circ$ , 0.13 mb/sr 2 at $\theta_{\text{lab}}=29.7^\circ$ , and 0.04 mb/sr 2 at $\theta_{\text{lab}}=63.9^\circ$ .                         |
| 1610                  | 7/2 <sup>+</sup>     | $\sigma = 0.92$ mb/sr 18 at $\theta_{\text{lab}}=11.2^\circ$ , 3.75 mb/sr 9 at $\theta_{\text{lab}}=29.7^\circ$ , and 0.80 mb/sr 4 at $\theta_{\text{lab}}=63.9^\circ$ .                      |
| 1960                  | 5/2 <sup>+</sup>     | $\sigma < 0.15$ mb/sr at $\theta_{\text{lab}}=11.2^\circ$ , 0.23 mb/sr 3 at $\theta_{\text{lab}}=29.7^\circ$ , and 0.06 mb/sr 2 at $\theta_{\text{lab}}=63.9^\circ$ .                         |
| 2560                  | 1/2 <sup>+</sup>     | $\sigma < 0.13$ mb/sr at $\theta_{\text{lab}}=13.5^\circ$ , 0.22 mb/sr 3 at $\theta_{\text{lab}}=29.7^\circ$ , and $< 0.02$ mb/sr at $\theta_{\text{lab}}=63.9^\circ$ .                       |
| 2740                  | 7/2 <sup>+</sup>     | $\sigma < 0.13$ mb/sr at $\theta_{\text{lab}}=13.5^\circ$ , 0.11 mb/sr 3 at $\theta_{\text{lab}}=29.7^\circ$ , and $< 0.02$ mb/sr at $\theta_{\text{lab}}=63.9^\circ$ .                       |
| 2800                  | 3/2 <sup>+</sup>     | $\sigma = 0.64$ mb/sr 13 at $\theta_{\text{lab}}=13.5^\circ$ , 0.33 mb/sr 7 at $\theta_{\text{lab}}=29.7^\circ$ , and $< 0.02$ mb/sr at $\theta_{\text{lab}}=63.9^\circ$ .                    |
| 3400                  |                      | $\sigma = 1.02$ mb/sr 5 at $\theta_{\text{lab}}=13.5^\circ$ , 1.52 mb/sr 6 at $\theta_{\text{lab}}=29.7^\circ$ , and 0.43 mb/sr 3 at $\theta_{\text{lab}}=63.9^\circ$ – may be for a doublet. |
| 3900                  | 5/2 <sup>+</sup>     | $\sigma = 0.47$ mb/sr 12 at $\theta_{\text{lab}}=13.5^\circ$ , and 0.25 mb/sr 3 at $\theta_{\text{lab}}=29.7^\circ$ .                                                                         |
| 3970                  | 7/2 <sup>-</sup>     | $\sigma < 0.09$ mb/sr at $\theta_{\text{lab}}=13.5^\circ$ , and $< 0.06$ mb/sr 3 at $\theta_{\text{lab}}=29.7^\circ$ .                                                                        |
| 4050                  |                      | $\sigma = 0.61$ mb/sr 12 at $\theta_{\text{lab}}=13.5^\circ$ , and 0.62 mb/sr 5 at $\theta_{\text{lab}}=29.7^\circ$ .                                                                         |

<sup>†</sup> From 1961BI05 (most likely from the literature and listed in MeV to two decimal places).

<sup>‡</sup> From Adopted Levels.