

$^{69}\text{Ga}(\text{d}, ^3\text{He})$ 1977Ro22

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|-----------------|----------------------|------------------------|
| Full Evaluation | E. A. Mccutchan | NDS 113, 1735 (2012) | 1-Mar-2012 |

Target $J^\pi=3/2^-$.

E(d)=26 MeV. Measured $\sigma(\theta)$, $\theta=15^\circ-35^\circ$ (5° steps) using split-pole magnetic spectrometer and four position-sensitive Si detectors (FWHM=18-20 keV); DWBA calculations.

 ^{68}Zn Levels

| E(level) | L^\dagger | C^2S^\ddagger | Comments |
|----------------|-------------|--------------------------|--|
| 0 | 1 | 0.42 | |
| 1080 <i>IO</i> | 1 | 0.65 | |
| 1661 <i>IO</i> | 1 | 0.011 | |
| 1883 <i>IO</i> | 1+3 | 0.10+0.066 [#] | $C^2S=0.085+0.13$ for maximum L=3 admixture. |
| 2338 <i>IO</i> | 1 | 0.64 | |
| 2415 <i>IO</i> | 3 | 0.20 | |
| 2822 <i>IO</i> | 1 | 0.11 | |
| 2957 <i>IO</i> | (3) | (0.19) | |
| 3007 <i>IO</i> | 1(+3) | 0.075+(0.0) [#] | $C^2S=0.058+0.09$ for maximum L=3 admixture. |
| 3179 <i>IO</i> | 1(+3) | 0.29+(0.0) [#] | $C^2S=0.26+0.10$ for maximum L=3 admixture. |
| 3280 <i>IO</i> | 1+3 | 0.019+0.067 [#] | $C^2S=0.010+0.14$ for maximum L=3 admixture. |
| 3336 <i>IO</i> | 1(+3) | 0.11+(0.0) [#] | $C^2S=0.10+0.065$ for maximum L=3 admixture. |
| 3415 <i>IO</i> | (1+3) | (0.05+0.08) | |
| 3430 <i>IO</i> | (1+3) | (0.01+0.024) | |
| 3486 <i>IO</i> | 1+3 | 0.014+0.05 | |
| 3650 <i>IO</i> | 1(+3) | 0.043+(0.0) [#] | $C^2S=0.022+0.08$ for maximum L=3 admixture. |

[†] From DWBA fits to $\sigma(\theta)$.

[‡] Calculated for $p_{3/2}$ and $f_{5/2}$ transfer.

[#] For minimum acceptable L=3 admixture which is the solution favored by the authors. C^2S values for maximum L=3 admixture are given in the comments.