

$^{70}\text{Ge}(\text{p,t})$  1977Gu02

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

**1977Gu02:** Ep=26 MeV. Measured  $\sigma(\theta)$ ,  $\theta=5^\circ-60^\circ$  in  $5^\circ$  steps using split pole spectrometer and 6 position sensitive Si detectors (FWHM=10 keV); DWBA analysis.

**1972Sh27:** Ep=27.2 MeV. Measured  $\sigma(\theta)$ ,  $\theta=10^\circ-110^\circ$  in  $5^\circ$  steps using  $\Delta E-E$  Si telescope (FWHM = 90 keV); DWBA analysis.

**1972IsZV:** Ep=51.9 MeV. Experimental details not given; DWBA analysis.

**1972Hs01:** Ep=20 MeV. Measured  $\sigma(\theta)$  using 3 Si detectors (FWHM=30 keV); DWBA analysis.

 $^{68}\text{Ge}$  Levels

| E(level) <sup>†</sup> | L <sup>‡</sup> | $d\sigma/d\Omega$ (peak) ( $\mu\text{b/sr}$ ) <sup>#</sup> | Comments  |
|-----------------------|----------------|--|---|
| 0.0                   | 0              | $3.25 \times 10^3$ 65                                      |   |
| 1017 3                | 2              | 250 50   |   |
| 1753 3                | 0              | 19 4   |   |
| 1779 10               |                |  | L: assigned L=2 and (2) by <a href="#">1972Sh27</a> and <a href="#">1972IsZV</a> , respectively. <a href="#">1977Gu02</a> claim at least two contaminant peaks at this energy and as such, no L value can be extracted. |
| 2269 3                | 4              | 8.4 17   |   |
| 2417?                 |                |  | E(level): observed only by <a href="#">1972Sh27</a> .   |
| 2493?                 |                |  | E(level): observed only by <a href="#">1972IsZV</a> .   |
| 2617 3                | 0              | 61 12  |   |
| 2651 3                | 3              | 52 10  |   |
| 2811?                 | 0              |  | E(level): observed only by <a href="#">1972IsZV</a> .<br>L: from DWBA analysis in <a href="#">1972IsZV</a> .  |
| 2834 3                | 4              | 40 8   |   |
| 2942 3                | 2              | 20 4   |   |
| 3025 3                | 2              | 50 10  |   |
| 3065 3                | (3)            | 6 1  |   |
| 3186 3                | 4              | 13.5 27  |   |
| 3204 3                | 0              | 20 4   |   |
| 3396 10               |                |  |   |
| 3461? 10              |                |  |   |
| 3476 3                | 0              | 71 14  | L: 5 in <a href="#">1972IsZV</a> for 3477.  |
| 3525 3                | 2              | 22 4   |   |
| 3588 3                | (5),(1)        |  | E(level): possible doublet in <a href="#">1977Gu02</a> .<br>L: 4 in <a href="#">1972IsZV</a> for 3588.  |
| 3604 3                | 4              | 22.5 45  |   |
| 3636 10               |                |  |   |
| 3647 3                | (4)            | 5.5 11   |   |
| 3735 3                | (2)            | 5.3 11   |   |
| 3811 3                | 2              | 52 10  | L: 3 in <a href="#">1972IsZV</a> for 3812.  |
| 4021 3                | 4              | 6.3 13   |   |
| 4037 3                | (2)            | 8 2  |   |
| 4058 10               |                |  | L: (7) in <a href="#">1972IsZV</a> for 4065.  |
| 4078 3                | 0              | 16 3   |   |
| 4146 10               |                |  |   |
| 4236 3                | (2)            | 8.5 17   |   |
| 4322 3                | 2              | 5.0 10   |   |
| 4358 3                | 0              | 25 5   |   |
| 4456 3                | (6)            | 10 2   | L: 5 in <a href="#">1972IsZV</a> for 4478.  |
| 4564 3                | (2)            | 6.1 12   |   |
| 4614 3                | (3)            | 4.1 8  |   |
| 4658 10               |                |  |   |
| 4736 3                | 0              | 4.5 9  |   |
| 4789 3                | 0              | 4.1 8  |   |
| 4857 10               |                |  |   |

Continued on next page (footnotes at end of table)

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 ${}^{70}\text{Ge}(\text{p,t})$  [1977Gu02](#) (continued) ${}^{68}\text{Ge}$  Levels (continued)E(level)<sup>†</sup>

4878 10

5074 10

5217 10

<sup>†</sup> From [1977Gu02](#), except where noted. Authors state an uncertainty of 3 keV, except for states with very low cross sections where  $\Delta E$  can reach 10 keV.

<sup>‡</sup> From DWBA analysis ([1977Gu02](#)), except where noted. Discrepancies with other works are indicated in the comments.

<sup>#</sup> Uncertainty calculated by evaluator based on author's estimate of 20%.