

${}^{36}\text{Ar}(\alpha, \text{d})$ 1976De24

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|----------|-------------------|------------------------|
| Full Evaluation | Jun Chen | NDS 152, 1 (2018) | 30-Sep-2017 |

1976De24: E=34 MeV alpha beam was produced from the Princeton azimuthally varying field cyclotron. Target was 99.5% enriched ${}^{36}\text{Ar}$ gas. Reaction products were detected with a freon-cooled ΔE -E silicon detector telescope (FWHM=110 keV). Measured $\sigma(\theta)$. Deduced levels, J, π , L-transfers from DWBA analysis. Comparisons with available data.

 ${}^{38}\text{K}$ Levels

| E(level) | L | $d\sigma/d\Omega$ ($\mu\text{b}/\text{sr}$) [#] | Comments |
|----------------------|------------|--|--|
| 0 | (2) | 40 | |
| 456 50 | \ddagger | 40 | |
| 1695 50 | 0 | 25 | |
| 2621 50 | 3+2 | 50 | E(level): unresolved doublet: 2613+2646. |
| 2855 50 | 3 | 35 | |
| 3445 50 | 6 | 700 | |
| 3665 [†] 50 | 4 | 400 | |
| 3737 [†] 50 | \ddagger | 320 | |
| 3965 50 | \ddagger | 30 | |
| 4345 50 | \ddagger | 70 | |
| 5127 50 | 6 | 110 | |
| 5313 50 | \ddagger | 60 | |

[†] Unresolved doublet.

[‡] $\sigma(\theta)$ shown by 1976De24, but no L value deduced.

[#] At 20° (c.m.).