

$^{45}\text{Sc}(p,\alpha),(\text{pol } p,\alpha)$ 1966Ri11,2005GuZW

| Type | Author | History | Citation | Literature Cutoff Date |
|-----------------|--|---------|-------------------|------------------------|
| Full Evaluation | Jun Chen [#] and Balraj Singh | | NDS 135, 1 (2016) | 31-May-2016 |

1966Ri11: (p, α): E=8.5-9.4 MeV. Measured excitation functions and $\sigma(\theta)$. Lowest six excited states identified in the α spectrum. Estimated (by evaluators) FWHM \approx 60 keV.

2005GuZW: (pol p, α),E=24.6 MeV; measured $\sigma(\theta)$, $A_y(\theta)$. Deduced configurations. Negative-parity 3^- , 4^- and 5^- states (homologous to $3/2^+$ g.s. in ^{41}K) identified. No 2^- state seen.

Others:

1977Sc24: E=2.5-3.8 MeV. Measured $\sigma(\theta)$.

Additional information 1.

1962Sh29: E=17-18 MeV. Measured $\sigma(\theta)$.

 ^{42}Ca Levels

| <u>E(level)[†]</u> | <u>J^π[†]</u> |
|-----------------------------|----------------------------------|
| 0 [‡] | 0 ⁺ |
| 1525 [‡] | 2 ⁺ |
| 1837 [‡] | 0 ⁺ |
| 2424 [‡] | 2 ⁺ |
| 2752 [‡] | 4 ⁺ |
| 3190 [‡] | 6 ⁺ |
| 3254 [‡] | 4 ⁺ |
| 3954 [#] | 4 ⁻ [#] |
| 4100 [#] | 5 ⁻ [#] |
| 4117 [#] | 3 ⁻ [#] |

[†] From Adopted Levels, energies are rounded values.

[‡] Level population from **1966Ri11**.

[#] Level population from **2005GuZW**; J^π value consistent with $\sigma(\theta)$ and analyzing powers.