

$^{24}\text{Mg}(^{28}\text{Si,p2n}\gamma) E=87 \text{ MeV}$ 1997OI03

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|----------------------------|----------------------|------------------------|
| Full Evaluation | T. W. Burrows ^a | NDS 109, 1879 (2008) | 14-Jul-2008 |

Measured E_γ , $\gamma\gamma$, particle- $\gamma\gamma$ coin using PEX array of four EUROBALL cluster detectors. Particles detected using a 31-silicon wafer array for protons and α 's, and a 15-element array of liquid scintillator detectors for neutrons. See also 1998Be69 and 1999Be23.

States and γ -transitions through 6058 keV previously assigned by 1990Ca06 In $^{12}\text{C}(^{40}\text{Ca},2\text{np}\gamma)$.

 ^{49}Mn Levels

| E(level) [†] | J^π [‡] | E(level) [†] | J^π [‡] | E(level) [†] | J^π [‡] | E(level) [†] | J^π [‡] |
|-----------------------|----------------------|------------------------|----------------------|------------------------|----------------------|-------------------------|----------------------|
| 0 [#] | 5/2 ⁻ | 1542.0 [@] 10 | 11/2 ⁻ | 4250.1 [#] 13 | 17/2 ⁻ | 8082.1 [@] 20 | 27/2 ⁻ |
| 262.0 [@] 8 | 7/2 ⁻ | 2483.0 [#] 11 | 13/2 ⁻ | 4447.1 [@] 14 | 19/2 ⁻ | 10726.2 [@] 22 | 31/2 ⁻ |
| 1059.0 [#] 8 | 9/2 ⁻ | 3190.0 [@] 12 | 15/2 ⁻ | 6058.1 [@] 17 | 23/2 ⁻ | | |

[†] From least-squares fit to E_γ 's assuming $\Delta E(\gamma)=1$ keV (evaluator).

[‡] Assignments based on ^{49}Cr mirror symmetry arguments only, except for the g.s. which is from the Adopted Levels. ^{49}Cr J^π 's based on analysis of 1997OI03 In $^{24}\text{Mg}(^{28}\text{Si},2\text{pn}\gamma)$.

[#] Band(A): $K^\pi=5/2^-$ band, $\alpha=+1/2$.

[@] Band(B): $K^\pi=5/2^-$ band, $\alpha=-1/2$.

 $\gamma(^{49}\text{Mn})$

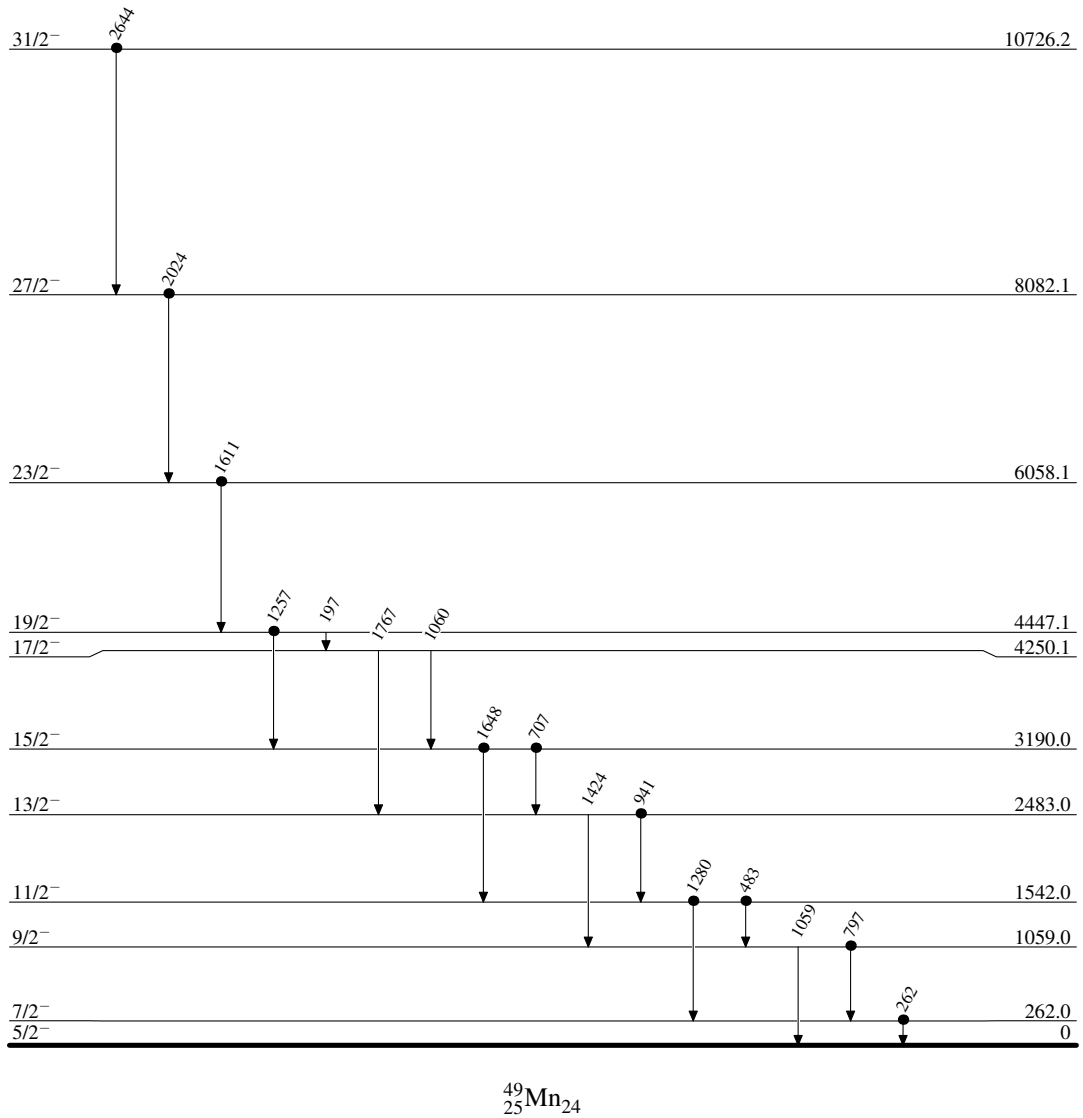
| E_γ | $E_i(\text{level})$ | J_i^π | E_f | J_f^π | E_γ | $E_i(\text{level})$ | J_i^π | E_f | J_f^π |
|------------|---------------------|-------------------|--------|-------------------|------------|---------------------|-------------------|--------|-------------------|
| 197 | 4447.1 | 19/2 ⁻ | 4250.1 | 17/2 ⁻ | 1257 | 4447.1 | 19/2 ⁻ | 3190.0 | 15/2 ⁻ |
| 262 | 262.0 | 7/2 ⁻ | 0 | 5/2 ⁻ | 1280 | 1542.0 | 11/2 ⁻ | 262.0 | 7/2 ⁻ |
| 483 | 1542.0 | 11/2 ⁻ | 1059.0 | 9/2 ⁻ | 1424 | 2483.0 | 13/2 ⁻ | 1059.0 | 9/2 ⁻ |
| 707 | 3190.0 | 15/2 ⁻ | 2483.0 | 13/2 ⁻ | 1611 | 6058.1 | 23/2 ⁻ | 4447.1 | 19/2 ⁻ |
| 797 | 1059.0 | 9/2 ⁻ | 262.0 | 7/2 ⁻ | 1648 | 3190.0 | 15/2 ⁻ | 1542.0 | 11/2 ⁻ |
| 941 | 2483.0 | 13/2 ⁻ | 1542.0 | 11/2 ⁻ | 1767 | 4250.1 | 17/2 ⁻ | 2483.0 | 13/2 ⁻ |
| 1059 | 1059.0 | 9/2 ⁻ | 0 | 5/2 ⁻ | 2024 | 8082.1 | 27/2 ⁻ | 6058.1 | 23/2 ⁻ |
| 1060 | 4250.1 | 17/2 ⁻ | 3190.0 | 15/2 ⁻ | 2644 | 10726.2 | 31/2 ⁻ | 8082.1 | 27/2 ⁻ |

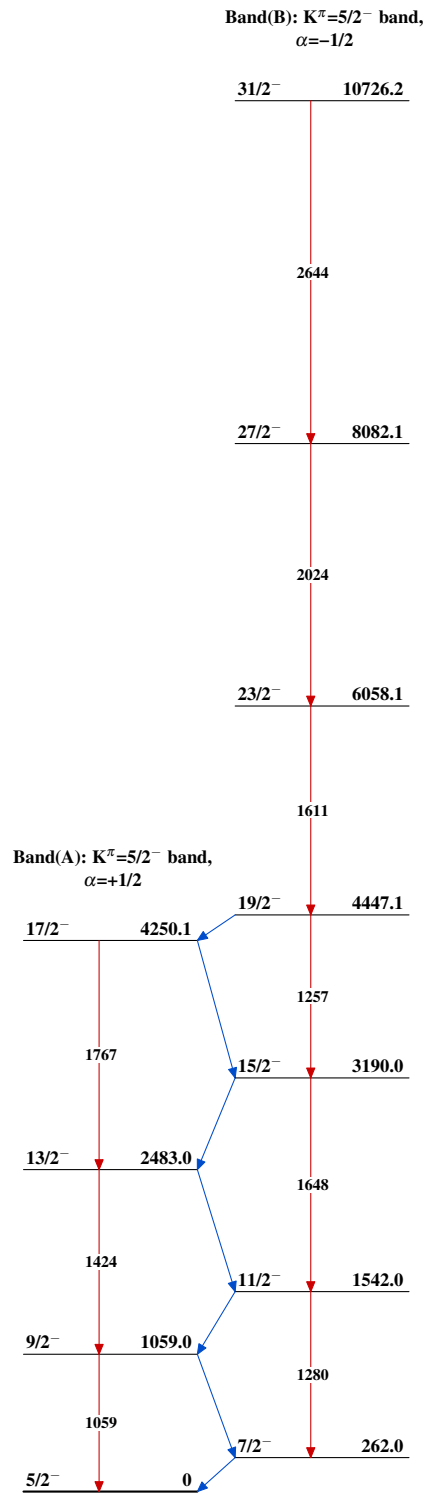
$^{24}\text{Mg}(^{28}\text{Si},\text{p}2\text{n}\gamma) \text{E}=87 \text{ MeV}$ 1997O103

Legend

Level Scheme

● Coincidence



$^{24}\text{Mg}(^{28}\text{Si},\text{p}2\text{n}\gamma) \text{E}=87 \text{ MeV} \quad 1997\text{O}103$  $^{49}_{25}\text{Mn}_{24}$