

$^{87}\text{Rb}(\alpha, n\gamma)$ 1974Ba06

| Type | Author | History | Citation | Literature Cutoff Date |
|-----------------|-----------------------------|---------|-------------------|------------------------|
| Full Evaluation | S. K. Basu, E. A. Mccutchan | | NDS 165, 1 (2020) | 1-Mar-2020 |

1974Ba06: E=11.8-13.0 MeV. Measured $E\gamma$, $I\gamma$. Ge(Li) detector; enriched (99.20%) target.

 ^{90}Y Levels

For use of excitation function in J^π assignment see also 1972Li05.

| <u>E(level)[†]</u> | <u>J^π[‡]</u> | <u>E(level)[†]</u> | <u>J^π[‡]</u> | <u>E(level)[†]</u> | <u>J^π[‡]</u> | <u>E(level)[†]</u> | <u>J^π[‡]</u> |
|-----------------------------|---------------------------------------|-----------------------------|---------------------------------------|-----------------------------|---------------------------------------|-----------------------------|---------------------------------------|
| 0 | 2 ⁻ | 776.7 4 | 2 ⁺ | 1189.4 6 | (4 ⁺) | 1370.5 10 | 1 ⁻ |
| 202.6 4 | 3 ⁻ | 953.6 4 | (3 ⁺) | 1214.7 6 | 0 ⁻ | 1416.9 10 | |
| 682.0 5 | 7 ⁺ | 1047.3 6 | (5 ⁺) | 1298.1 6 | (6 ⁺) | | |

[†] From a least-squares fit to $E\gamma$, by evaluators.

[‡] As proposed in 1974Ba06.

 $\gamma(^{90}\text{Y})$

| <u>E_γ</u> | <u>I_γ[†]</u> | <u>$E_i(\text{level})$</u> | <u>J_i^π</u> | <u>E_f</u> | <u>J_f^π</u> | <u>E_γ</u> | <u>I_γ[†]</u> | <u>$E_i(\text{level})$</u> | <u>J_i^π</u> | <u>E_f</u> | <u>J_f^π</u> |
|------------------------------|--|---------------------------------------|-----------------------------|-------------------------|-----------------------------|------------------------------|--|---------------------------------------|-----------------------------|-------------------------|-----------------------------|
| 142.1 4 | 2.2 5 | 1189.4 | (4 ⁺) | 1047.3 | (5 ⁺) | 616.1 5 | 22 1 | 1298.1 | (6 ⁺) | 682.0 | 7 ⁺ |
| 176.7 4 | 25 1 | 953.6 | (3 ⁺) | 776.7 | 2 ⁺ | 776.7 5 | 20 1 | 776.7 | 2 ⁺ | 0 | 2 ⁻ |
| 202.4 4 | | 202.6 | 3 ⁻ | 0 | 2 ⁻ | 954.0 6 | 18 1 | 953.6 | (3 ⁺) | 0 | 2 ⁻ |
| 235.9 5 | 17 1 | 1189.4 | (4 ⁺) | 953.6 | (3 ⁺) | 1214.7 6 | 8 1 | 1214.7 | 0 ⁻ | 0 | 2 ⁻ |
| 250.8 5 | 1.1 5 | 1298.1 | (6 ⁺) | 1047.3 | (5 ⁺) | ^x 1360.1 10 | 11 1 | | | | |
| 365.2 5 | 26 1 | 1047.3 | (5 ⁺) | 682.0 | 7 ⁺ | 1370.5 10 | 8 1 | 1370.5 | 1 ⁻ | 0 | 2 ⁻ |
| ^x 439.8 5 | 9 1 | | | | | 1416.9 10 | 7 1 | 1416.9 | | 0 | 2 ⁻ |
| 479.4 5 | | 682.0 | 7 ⁺ | 202.6 | 3 ⁻ | ^x 1816.9 10 | 3.5 10 | | | | |
| 574.0 5 | 5.5 10 | 776.7 | 2 ⁺ | 202.6 | 3 ⁻ | | | | | | |

[†] Relative photon intensity for $E(\alpha)=13$ MeV. Authors also report values for $E(\alpha)=11.8$ MeV. See also 1972Li05, where $(\alpha, n\gamma)$ data for $E(\text{level}) < 1300$ are given.

^x γ ray not placed in level scheme.

${}^{87}\text{Rb}(\alpha, n\gamma)$ 1974Ba06

Level Scheme

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{\max}$
- $I_\gamma < 10\% \times I_\gamma^{\max}$
- $I_\gamma > 10\% \times I_\gamma^{\max}$

