# $^{47}$Ti($\gamma,\gamma$),($\gamma,\gamma'$) 1976Ra03

| Type | Author | History Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | T. W. Burrows | NDS 108, 923 (2007) | 20-Feb-2007 |

Bremsstrahlung. Measured $\sigma(96°,126°)$ and linear polarization (Compton polarimeter).

## $^{47}$Ti Levels

| E(level) | $J^\pi$[†] | $T_{1/2}$[‡] | $g\Gamma^2_{\gamma0}/\Gamma$ (MeV) | Comments |
|---|---|---|---|---|
| 0.0 | $5/2^-$ | | | |
| 160 | $7/2^-$ | | | |
| 2162 | $3/2^-$ | 26 fs *7* | 11.4 *32* | |
| 2297 | $5/2^-,7/2^-$ | ≈4 fs | 78.0 *75* | $J^\pi$: $\sigma(96°)/\sigma(126°)$ (2297$\gamma$) excludes 9/2. RUL(2137) excludes 3/2. $\pi$=+ excluded since $\delta^2$<0.001 from RUL(M2) not consistent with $\sigma(96°)/\sigma(126°)$ (2297$\gamma$). $T_{1/2}$: $T_{1/2}$=3.3 fs *4* if $J^\pi=5/2^-$; $T_{1/2}$=4.4 fs *5* if $J^\pi=7/2^-$. $\Gamma_{\gamma0}/\Gamma$=0.75 used in calculations instead of measured 0.77 *3* (1976Ra03). |
| 2548 | $3/2^-$ | 6.2 fs *7* | 48.0 *54* | |
| 3917? | $3/2^-$ | | | |

[†] From the Adopted Levels. Contributing arguments from this dataset given In comments.
[‡] From $g\Gamma^2_{\gamma0}/\Gamma$ with $J^\pi$ and $\Gamma_{\gamma0}/\Gamma$ as given.

## $\gamma(^{47}Ti)$

| $E_\gamma$ | $\Gamma_\gamma/\Gamma$ | $E_i$(level) | $J^\pi_i$ | $E_f$ | $J^\pi_f$ | Mult. | $\delta$[†] | Comments |
|---|---|---|---|---|---|---|---|---|
| (2002) | 0.05[#] *2* | 2162 | $3/2^-$ | 160 | $7/2^-$ | | | |
| 2137 | 0.23[@] *3* | 2297 | $5/2^-,7/2^-$ | 160 | $7/2^-$ | (M1+E2)[&] | | $\delta$: see table in 1976Ra03. |
| 2162 | 0.95[#] *2* | 2162 | $3/2^-$ | 0.0 | $5/2^-$ | | | $\delta$: $\sigma(96°)/\sigma(126°)$ consistent with isotropy. |
| 2297 | 0.77[@] *3* | 2297 | $5/2^-,7/2^-$ | 0.0 | $5/2^-$ | (M1,E2) | | Mult.: D,Q from $\sigma(96°)/\sigma(126°)$. $\delta^2$<0.001 from RUL(M2) not consistent with $\sigma(96°)/\sigma(126°)$. $\delta$: see table in 1976Ra03. |
| 2548 | | 2548 | $3/2^-$ | 0.0 | $5/2^-$ | M1(+E2)[&] | <0.5 | $\delta$: $\delta$>4 improbable from comparison to RUL. |
| [x]2810[‡a] | | | | | | | | |
| 3917[‡a] | | 3917? | $3/2^-$ | 0.0 | $5/2^-$ | | | |

[†] From analysis of $\sigma(96°)/\sigma(126°)$.
[‡] Possible assignment to either $^{47}$Ti or $^{49}$Ti.
[#] From $\beta^+$ decay (1973Fi02).
[@] Assuming no other decays (1976Ra03).
[&] D+Q from $\sigma(96°)/\sigma(126°)$. $\Delta\pi$=no from $J^\pi$.
[a] Placement of transition in the level scheme is uncertain.
[x] $\gamma$ ray not placed in level scheme.

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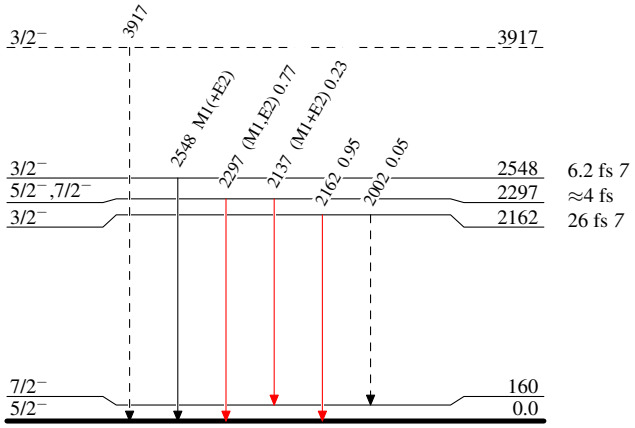
Level Scheme

Intensities: $\Gamma_\gamma/\Gamma$

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)




$^{47}_{22}Ti_{25}$