

$^{169}\text{Tm}(n,n'\gamma)$, (pol n,n) 2000Ko61

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|-----------------|----------------------|------------------------|
| Full Evaluation | Coral M. Baglin | NDS 109, 2033 (2008) | 15-Jun-2008 |

Others: 1969Ro13, 1989Sc07 ((n,n'), E(n)=7.75 MeV; measured $\sigma(\theta)$, $A_y(\theta)$ analyzing power; levels below 600 unresolved).

2000Ko61: (n,n' γ), E(n)=0.2-1.0 MeV from pulsed p bombardment of Li; tof; Compton-suppressed Ge detector, plastic scin (n monitor); measured E_γ , I_γ , $\gamma(\theta)$ (E(n)=750 keV, $\theta(\text{lab})=25^\circ$ to 135° (10° steps), excit (125° , 50 keV steps), $d\sigma/d\Omega$).

 ^{169}Tm Levels

| <u>E(level)[†]</u> | <u>E(level)[†]</u> | <u>E(level)[†]</u> | <u>E(level)[†]</u> |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 0.0 | 332.2 6 | 474.6 5 | 781.7 5 |
| 8.5 5 | 341.8 5 | 570.7 5 | 832.0 7 |
| 118.3 5 | 344.9 6 | 633.2 6 | 878.4 7 |
| 139.0 5 | 367.4 8 | 646.5 6 | |
| 316.2 6 | 429.8 8 | 718.7 6 | |

[†] From least-squares fit to E_γ , assuming 0.6 keV uncertainty in all E_γ data.

 $\gamma(^{169}\text{Tm})$

| <u>$E_i(\text{level})$</u> | <u>E_γ[†]</u> | <u>I_γ[‡]</u> | <u>E_f</u> | <u>$E_i(\text{level})$</u> | <u>E_γ[†]</u> | <u>I_γ[‡]</u> | <u>E_f</u> | <u>$E_i(\text{level})$</u> | <u>E_γ[†]</u> | <u>I_γ[‡]</u> | <u>E_f</u> |
|---------------------------------------|--|--|-------------------------|---------------------------------------|--|--|-------------------------|---------------------------------------|--|--|-------------------------|
| 118.3 | 109.9 | 100 | 8.5 | 474.6 | 356.5 | 67.2 | 118.3 | 718.7 | 579.9 | 100.0 | 139.0 |
| 139.0 | 130.4 | 100 | 8.5 | | 465.8 | 14.9 | 8.5 | | 600.5 | 57.4 | 118.3 |
| 316.2 | 177.0 | 60 | 139.0 | | 474.6 | 100.0 | 0.0 | 781.7 | 210.8 | 47.4 | 570.7 |
| | 198.0 | 100 | 118.3 | 570.7 | 452.2 | 14.4 | 118.3 | | 465.0 | 86.0 | 316.2 |
| | 307.3 | 23.4 | 8.5 | | 562.3 | 83.3 | 8.5 | | 643.0 | 31.0 | 139.0 |
| 332.2 | 193.2 | 100 | 139.0 | | 570.7 | 100.0 | 0.0 | | 663.6 | 90.0 | 118.3 |
| | 213.7 | 39.2 | 118.3 | 633.2 | 494.1 | 28.3 | 139.0 | | 773.6 | 100.0 | 8.5 |
| 341.8 | 333.3 | 100 | 8.5 | | 515.0 | 78.1 | 118.3 | 832.0 | 499.9 | 100.0 | 332.2 |
| | 341.8 | 57.5 | 0.0 | | 624.7 | 100.0 | 8.5 | | 692.9 | 92.9 | 139.0 |
| 344.9 | 205.7 | 29.8 | 139.0 | 646.5 | 301.4 | 8.5 | 344.9 | 878.4 | 739.5 | 100.0 | 139.0 |
| | 336.3 | 100 | 8.5 | | 314.3 | 20.7 | 332.2 | | 760.1 | 66.4 | 118.3 |
| 367.4 | 228.4 | | 139.0 | | 528.5 | 100.0 | 118.3 | | | | |
| 429.8 | 290.8 | 100 | 139.0 | 718.7 | 386.2 | 15.0 | 332.2 | | | | |

[†] Uncertainties range from 0.3 keV to 0.6 keV.

[‡] Relative photon branching from level. Uncertainties vary from 1% to 10% for strong lines but may be as high as 45% for weak transitions.

$^{169}\text{Tm}(n,\gamma)$, (pol n,n) 2000K061

Level Scheme

Intensities: Relative photon branching from each level

