

$^{203}\text{Tl}(\mu^-, \gamma)$ [1972Ba53](#), [1974Ba77](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 105,1 (2005)	1-Mar-2005

[1972Ba53](#): Target: natural Tl; Detectors: Ge(Li); Measured: $E\gamma$, $I\gamma$; Deduced: δ , muonic isomer shift.

[1974Ba77](#): Target: enriched to 95% in ^{203}Tl ; Detectors: Ge(Li); Measured: $E\gamma$, $I\gamma$; Deduced: δ , hyperfine splitting and isomer shift.

 ^{203}Tl Levels

$E(\text{level})^\dagger$	$J^\pi^\ddagger$	Comments
0	$1/2^+$	E(level): Hyperfine splitting of 2.34 keV 9 (1974Ba77).
279.1954 10	$3/2^+$	E(level): Isomer shift of -0.39 keV $+0.34-0.15$ (1974Ba77).

† From a least-squares fit to $E\gamma$.

‡ From Adopted Levels.

 $\gamma(^{203}\text{Tl})$

$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	δ	Comments
279.1952 10	4.2 3	279.1954	$3/2^+$	0	$1/2^+$	M1+E2	+1.05 10	E_γ: Two hyperfine components measured: 277.95 keV 5 and 280.26 keV 9; $I(277.9\gamma)/I(280.2\gamma)=2.1$ 3 (1974Ba77); Other: 278.13 9 and 280.71 16; $I(278.1\gamma)/I(280.7\gamma)=1.8$ 4 (1972Ba53). I_γ: From 1974Ba77. Other: 4.1 10 in 1972Ba53. δ: Value corresponds to δ_μ, which differs from the normal δ by the presence of $1s_{1/2}$ muon. It was deduced from the intensity ratio of hyperfine components and $E\gamma$ of 1974Ba77. Other: $\delta_\mu=0.94$ 14 (1972Ba53).

† From adopted gammas.

‡ Intensity per stopped muons ([1972Ba53](#)).

$^{203}\text{Tl}(\mu^-, \gamma)$ **1972Ba53,1974Ba77**

Level Scheme

Intensities: Type not specified

