

$^{203}\text{Tl}(p,2n\gamma)$ 1986Ka07

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

1986Ka07: E(p)=14.5 MeV; Target: ^{203}Tl 87% enriched, metallic, 1-6 mg/cm²; ce measured with up to 5 mm thick Si(Li) detector in a lens spectrometer. Ratios between ce(K)'s of E0 transitions to g.s. and E2 transitions to the 960.7 keV, 2⁺ state were measured.

Others: [1990Tr01](#), [1983LuZY](#).

 ^{202}Pb Levels

E(level) [†]	J ^π [†]	T _{1/2} [‡]	Comments
0	0 ⁺		
960.7	2 ⁺		J ^π : From Adopted Levels.
1658.0	0 ⁺	<30 ps	
1862.0	0 ⁺	<30 ps	
2159.0	0 ⁺	<30 ps	

[†] From [1986Ka07](#), unless otherwise stated.

[‡] Measured using centroid-shift technique in [1986Ka07](#).

 $\gamma(^{202}\text{Pb})$

E _i (level)	J _i ^π	E _γ [†]	I _γ	E _f	J _f ^π	Mult. [†]	α [#]	Comments
1658.0	0 ⁺	697.3 [‡]	100	960.7	2 ⁺	E2	0.01387	Mult.: ce(K)(E0)/ce(K)(E2)=15 6 (1986Ka07).
		1658		0	0 ⁺	E0		
1862.0	0 ⁺	901.3 [‡]	100	960.7	2 ⁺	E2	0.00819	Mult.: ce(K)(E0)/ce(K)(E2)=6 2 (1986Ka07), and K/L=3.9 6 (1990Tr01), possibly affected by a nearby transition. The calculated K/L(E0)=6.03 (1990Tr01).
		1862		0	0 ⁺	E0		
2159.0	0 ⁺	1198.3 [‡]	100	960.7	2 ⁺	E2	0.00472	Mult.: ce(K)(E0)/ce(K)(E2)=24 10 (1986Ka07) and K/L=5.7 4 (1990Tr01).
		2159		0	0 ⁺	E0		

[†] From ce data in [1986Ka07](#).

[‡] γ -ray was observed in [1986Ka07](#), but the energy was not given. E_γ was deduced from the level scheme given in [1986Ka07](#).

[#] Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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Level Scheme

Intensities: Relative photon branching from each level

