

$^{108}\text{Pd}(^{78}\text{Kr},\text{p}2\text{n}\gamma)$ **2000Re04**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 134, 149 (2016)	15-Apr-2015

2000Re04: E=340 MeV; >98% enriched ^{108}Pd target (0.83 mg/cm²); fragment mass analyzer, parallel-grid avalanche counter, double-sided Si strip detector, GAMMASPHERE detector array (97 Compton-suppressed Ge and 4 planar Ge detectors); measured recoil α decay tagged γ spectra, $E\gamma$, $I\gamma$, $\gamma\gamma$ coin ($\Delta t \leq 30$ ns), recoil- γ coin.

 ^{183}Tl Levels

E(level) [†]	$J^{\pi\ddagger}$	Comments
0.0+x ^{#@}	(13/2 ⁺)	
159.9+x [@]	(17/2 ⁺)	
419.6+x [@]	(21/2 ⁺)	
774.5+x [@]	(25/2 ⁺)	
1213.3+x [@]	(29/2 ⁺)	
1727.7+x [@]	(33/2 ⁺)	
2310.1+x [@]	(37/2 ⁺)	
2937.1+x? [@]	(41/2 ⁺)	E(level): differs from value In Adopted Levels because $E\gamma$ for deexciting γ differs there.

[†] Based on measured $E\gamma$. From Adopted Levels, x=628.7.

[‡] Authors' values; assigned by analogy with yrast sequences in heavier odd-A Tl isotopes.

[#] Presumably deexcites to the (9/2⁻) level adopted at E=625 7, but connecting transition not seen by **2000Re04**. That transition was seen, however, in a separate (HI,xn γ) study (**2001Mu26**; see ($^{42}\text{Ca},\text{p}2\text{n}\gamma$): E=209 MeV dataset).

[@] Band(A): (π i_{13/2}) prolate band.

 $\gamma(^{183}\text{Tl})$

E_{γ} [†]	E_i (level)	J_i^{π}	E_f	J_f^{π}	Comments
159.9	159.9+x	(17/2 ⁺)	0.0+x	(13/2 ⁺)	
259.7	419.6+x	(21/2 ⁺)	159.9+x	(17/2 ⁺)	
354.9	774.5+x	(25/2 ⁺)	419.6+x	(21/2 ⁺)	
^x 418					Assignment to ^{183}Tl is uncertain.
438.8	1213.3+x	(29/2 ⁺)	774.5+x	(25/2 ⁺)	
514.4	1727.7+x	(33/2 ⁺)	1213.3+x	(29/2 ⁺)	
582.4	2310.1+x	(37/2 ⁺)	1727.7+x	(33/2 ⁺)	
627 [‡]	2937.1+x?	(41/2 ⁺)	2310.1+x	(37/2 ⁺)	uncertain transition, not confirmed In subsequent more extensive studies, so omitted from Adopted Gammas.

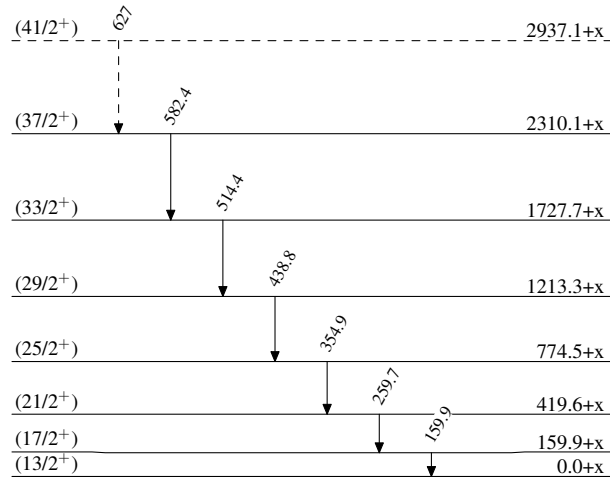
[†] From **2000Re04**; ΔE_{γ} and intensity data unstated by authors.

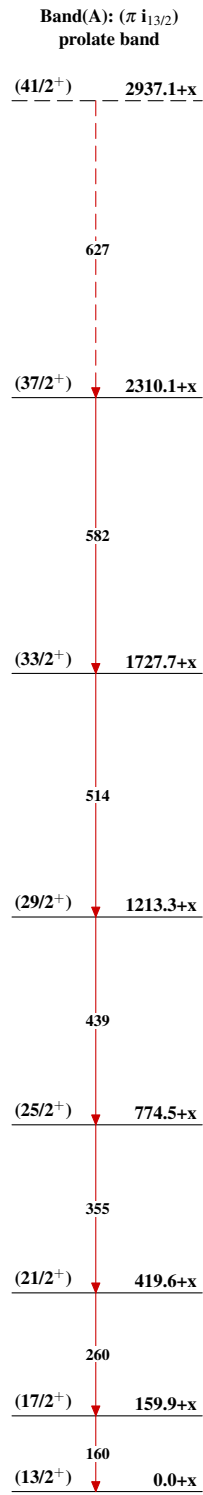
[‡] Placement of transition in the level scheme is uncertain.

^x γ ray not placed in level scheme.

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Legend

Level Scheme-----▶ γ Decay (Uncertain) $^{183}_{81}\text{Tl}_{102}$

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