

$^{104}\text{Pd}(\text{n},\gamma) \text{E=th}$ **1970Bo29,1975BaZR**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes		NDS 161, 1 (2019)	1-Apr-2019

2008Kr05: Facility: Budapest Reactor; Target: natural Pd; Detectors: one Compton-suppressed n-type HPGe detector; Measured E_γ , I_γ .

1970Bo29: Facility: Argonne National Lab. Reactor; Target: nat. Pd; Detectors: one Ge(Li), one annular NaI(Tl), split into four optically independent quadrants; Measured: E_γ , I_γ .

1975BaZR: Facility: Ukrainian ssr reactor; Flux: $6.5 \times 10^7 \text{ n}/(\text{cm}^2 \cdot \text{s})$; Target: 7.6% ^{104}Pd ; Measured: E_γ , I_γ .

Others: **1982StZQ**, **1979Ma34**, **1971Sh21**, **1965Gr30**.

 ^{105}Pd Levels

$E(\text{level})^\dagger$	$J^\pi^\ddagger$	$T_{1/2}$	Comments
0	$5/2^+$		
280.65 6	$3/2^+$		
306.3 2	$7/2^+$		
319.3 10	$5/2^+$	48 ps 7	$T_{1/2}$: from 1971Sh21 .
344.12 11	$1/2^+$		
442.13 21	$(7/2)^+$		
489.4 10	$11/2^-$		
560.61 20	$3/2^+$		
644.76 13	$7/2^-$		
1175 3	$(1/2^+, 3/2^+)$		
1568?			
1909?			
(7093.6 4)		5.1 fs 8	$T_{1/2}$: from 1970Bo29 .

† From a least squares fit to E_γ ; $\Delta E_\gamma = 1 \text{ keV}$ assumed by the evaluators for the least-squares fit procedure, where no uncertainties are given by the authors.

‡ From the Adopted Levels.

 $\gamma(^{105}\text{Pd})$

$E_\gamma^\dagger$	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
64.072 ‡		344.12	$1/2^+$	280.65	$3/2^+$
155.38 ‡		644.76	$7/2^-$	489.4	$11/2^-$
182.92 ‡		489.4	$11/2^-$	306.3	$7/2^+$
202.21 ‡		644.76	$7/2^-$	442.13	$(7/2)^+$
216.1 ‡		560.61	$3/2^+$	344.12	$1/2^+$
280.65 6		280.65	$3/2^+$	0	$5/2^+$
306.26 1	8	306.3	$7/2^+$	0	$5/2^+$
325.43		644.76	$7/2^-$	319.3	$5/2^+$
344.11 11		344.12	$1/2^+$	0	$5/2^+$
442.11 21		442.13	$(7/2)^+$	0	$5/2^+$
560.67 20		560.61	$3/2^+$	0	$5/2^+$
644.76 13		644.76	$7/2^-$	0	$5/2^+$
5184.7@& 15	89@ 11	(7093.6)		1909?	
5918@ 3	45@ 9	(7093.6)		1175	$(1/2^+, 3/2^+)$
6534.0# 10		(7093.6)		560.61	$3/2^+$
6615@& 5	100@ 25	(7093.6)		489.4	$11/2^-$
6652@ 8	77@ 20	(7093.6)		442.13	$(7/2)^+$

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$^{104}\text{Pd}(\text{n},\gamma)$ E=th [1970Bo29](#),[1975BaZR](#) (continued) $\gamma(^{105}\text{Pd})$ (continued)

E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
6749.4 [#] 10	(7093.6)		344.12	1/2 ⁺	
6812.5 4	(7093.6)		280.65	3/2 ⁺	E_γ : Others: 6812.9 14 (1970Bo29).

[†] From [2008Kr05](#), unless otherwise noted.

[‡] From the adopted gammas.

[#] From [1970Bo29](#).

[@] From [1975BaZR](#); I_γ normalised with respect to $I_\gamma(6615)=100$. Note that the 6615 γ final level is not within 2σ .

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

