

$^{110}\text{Pd}(n,\gamma)$ E=th 2008Kr05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 110,1239 (2009)	1-Feb-2008

E=thermal neutrons produced in 10-MW Budapest Reactor. Measured E_γ , I_γ , cross sections using n-type HPGe detector with BGO Compton- suppression. Absolute cross sections measured in this study.
Preliminary E_γ, I_γ (semi); enriched ^{110}Pd target(1976BaYK).

 ^{111}Pd Levels

E(level) [†]	J^π
0	$5/2^+$
71.6 5	$1/2^+$ [‡]
191.27 22	$+$
194.4 4	$+$
231.0 4	$7/2^+, 9/2^+$ [‡]
275.6 4	$(3/2^+, 5/2^+)$ [‡]
412.0 3	$7/2^+, 9/2^+$
450.17 22	$3/2^-, 5/2^-$

[†] From least-squares fit to E_γ 's (by compilers).

[‡] From "Adopted Levels" dataset for ^{111}Pd in ENSDF.

 $\gamma(^{111}\text{Pd})$

E_γ	I_γ ^{†@}	$E_i(\text{level})$	J_i^π	E_f	J_f^π
122.8 3	0.021 13	194.4	$+$	71.6	$1/2^+$
136.4 [‡] 3	0.0035 [#]	412.0	$7/2^+, 9/2^+$	275.6	$(3/2^+, 5/2^+)$
181.0 [‡] 3	0.0043 [#]	412.0	$7/2^+, 9/2^+$	231.0	$7/2^+, 9/2^+$
191.12 24	0.033 9	191.27	$+$	0	$5/2^+$
195.0	0.019 10	194.4	$+$	0	$5/2^+$
220.5 [‡] 3	0.0059 [#]	412.0	$7/2^+, 9/2^+$	191.27	$+$
255.8 3	0.016 12	450.17	$3/2^-, 5/2^-$	194.4	$+$
258.89 3	0.0015 7	450.17	$3/2^-, 5/2^-$	191.27	$+$
412.3 4	0.039 14	412.0	$7/2^+, 9/2^+$	0	$5/2^+$

[†] Absolute σ_γ (barns).

[‡] From 'Adopted Levels, gammas' dataset for ^{111}Pd in ENSDF database.

[#] Deduced by 2008Kr05 from branching ratios in 'Adopted Levels, gammas' dataset for ^{111}Pd in ENSDF database.

[@] Intensity per 100 neutron captures.

$^{110}\text{Pd}(n,\gamma) \text{E=th}$ 2008Kr05

Level Scheme

Intensities: Absolute cross section

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

