^{110}Pd(t,pγ) 1987Es01,1986HeZT

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, F. G. Kondev	NDS 124, 157 (2015)	1-Aug-2014

1987Es01, 1986HeZT: Facility: Van de Graaff accelerator at Los Alamos; Beam: E(t)= 16 MeV; Target: self-supporting 0.5 mg/cm^2 enriched to 97.7% in ^{110}Pd; Detectors: solenoid spectrometer, plastic scintillators, HPGe detector, aluminium absorbers; Measured: ce, P-γ, and ce-γ coinc. Eγ, Iγ; Deduced: ^{112}Pd level scheme, E0 transitions, J^π, intensity branching ratios, E0/E2 branching.

^{112}Pd Levels

E(level)[†]	J$^\pi$[‡]	Comments
0.0	0$^+$	
349.0 *6*	2$^+$	
737.4 *7*	2$^+$	
883.4 *10*	4$^+$	
923.9 *8*	1,2$^+$	
1096.7 *9*	3$^+$	
1125.0 *7*	0$^+$	B(E0; 1123γ)/B(E2; 774γ)=0.016 *9* (1987Es01). B(E0; 1123γ)/B(E2; 386γ)>0.0005 (1987Es01).
1362.9 *9*	(4$^+$)	
1550.8 *14*	6$^+$	
2003.3 *13*	(6$^+$)	
2318.5?	8$^+$	

[†] From a least-squares fit to Eγ. ΔEγ = 1 keV assumed by the evaluators.
[‡] From the Adopted Levels.

γ(^{112}Pd)

E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	I$_\gamma$[‡]	E$_f$	J$_f^\pi$	Mult.	I$_{(\gamma+ce)}$	Comments
349.0	2$^+$	348.7	100	0.0	0$^+$			
737.4	2$^+$	388.0	82	349.0	2$^+$			
		736.8	18	0.0	0$^+$			
883.4	4$^+$	534.2	100	349.0	2$^+$			
923.9	1,2$^+$	574.4	84	349.0	2$^+$			
		924.4	16	0.0	0$^+$			
1096.7	3$^+$	359.6	57	737.4	2$^+$			
		747.5	43	349.0	2$^+$			
1125.0	0$^+$	386.2		737.4	2$^+$			Iγ/Iγ(777γ)<1.04 from the two ratios relative to I(ce(K) 1125).
		777.0	100	349.0	2$^+$			
		1125.3		0.0	0$^+$	E0	0.014	Mult.: Based on ce measurements (1987Es01,1986HeZT). I(E0,K)/I(tot)>58×10^6 (1987Es01). I(ce(K) 1125)/Iγ(777γ)=1.26×10^{-4}.
1362.9	(4$^+$)	479.2	19	883.4	4$^+$			
		625.5	77	737.4	2$^+$			
		1014.2	4	349.0	2$^+$			
1550.8	6$^+$	667.4	100	883.4	4$^+$			
2003.3	(6$^+$)	453.8[#]	31	1550.8	6$^+$			
		640.4	69	1362.9	(4$^+$)			
2318.5?	8$^+$	768.2[#]	100	1550.8	6$^+$			

Continued on next page (footnotes at end of table)

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$\gamma(^{112}Pd)$ (continued)

† From 1986HeZT.
‡ Branching ratios from 1986HeZT.
# Placement of transition in the level scheme is uncertain.

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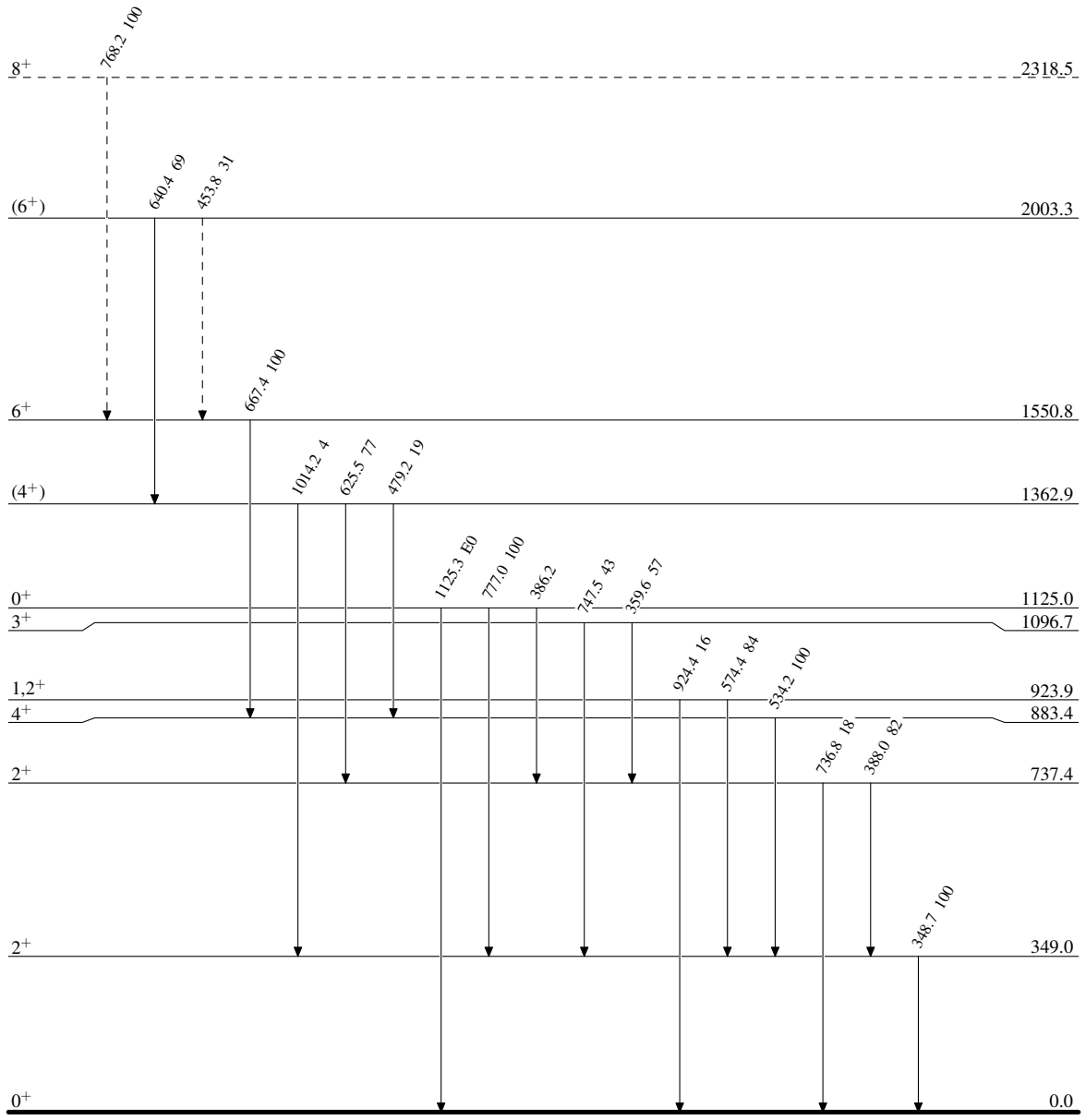
Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{112}_{46}Pd_{66}$