104 Pd(α ,2n γ) 1977Da08

History									
Туре	Author	Citation	Literature Cutoff Date						
Full Evaluation	D. De Frenne and A. Negret	NDS 109, 943 (2008)	1-May-2007						

E(α)=31 MeV. Measured: E γ , I γ , $\gamma\gamma$, $\gamma(\theta)$, T_{1/2}; deduced: ¹⁰⁶Cd levels, J, π . Other: 1969HaZU.

106Cd Levels

E(level)	$J^{\pi \dagger}$	T _{1/2}	Comments
0.0 [‡]	0+	stable	
632.61 [‡] 18	2^{+}		
1493.7 [‡] <i>3</i>	4+		
1716.62 23	2+		
2104.5 3	4+		
2330.6 <i>3</i>	5+		
2371.4 5	(3-)		
2491.6 [‡] 3	6+		
2503.1 3	6+		
2629.2 3	5-		
3044.2 3	8+		
3084.4 <i>3</i>	7+		
3320.1 4	6-		
3367.1 [‡] 3	8+		
3409.5 <i>3</i>	$7^{(-)}$		
3507.7 <i>3</i>	8(-)		
3678.8 4	9(-)		
4106.3 4	$10^{(-)}$		
4183.0 4			
4324.5 4	$11^{(-)}$		
4435.8 [‡] 4	10^{+}		
4659.7 4	12 ⁽⁺⁾	62 ns 6	$T_{1/2}$: $\alpha\gamma(t)$ pulsed beam (1977Da08): average of 65 ns 8, 73 ns 16, 55 ns 10, 53 ns 16 for (335,646,1069,875 γ)(t), respectively.

[†] From Adopted Levels.
[‡] Band(A): ground-state band up to (10⁺).

 $\gamma(^{106}\text{Cd})$

For A₂,A₄ coef extracted from $\gamma(\theta)$ spectra, see 1977Da08.

Eγ	Ι _γ &	E _i (level)	\mathbf{J}_i^{π}	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Eγ	Ι _γ &	E _i (level)	\mathbf{J}_i^{π}	\mathbf{E}_{f}	\mathbf{J}_{f}^{π}
^x 53.8 3	1.7 3					187.6 [#] 3	8.2 10	3507.7	8(-)	3320.1	6-
^x 64.4 3	1.9 <i>3</i>					218.3 <i>3</i>	0.6 2	4324.5	$11^{(-)}$	4106.3	$10^{(-)}$
^x 67.3 3	1.1 2					223.6 [#] 2	2.1 4	4659.7	$12^{(+)}$	4435.8	10^{+}
^x 95.3 2	1.7 3					226.1 [†] 2	7.7 10	2330.6	5+	2104.5	4+
110.9 2	4.0 4	4435.8	10^{+}	4324.5	$11^{(-)}$	^x 239.1 3	1.1 2				
140.5 2	0.2 1	3507.7	$8^{(-)}$	3367.1	8+	^x 243.1 2	6.2 10				
161.1 2	0.3 1	2491.6	6+	2330.6	5+	269.3 [#] 2	3.3 4	3678.8	9(-)	3409.5	$7^{(-)}$
^x 169.7 3	4.1 5					282.6 [†] 2	1.1 2	3367.1	8+	3084.4	7+
171.1 [‡] 3	6.2 10	3678.8	9(-)	3507.7	8(-)	^x 293.1 3	0.6 1				

Continued on next page (footnotes at end of table)

	104 Pd(α ,2n γ) 1977Da08 (continued)										
	γ ⁽¹⁰⁶ Cd) (continued)										
Eγ	Ι _γ &	E_i (level)	\mathbf{J}_i^{π}	$E_f J_f^{\pi}$	Eγ	$I_{\gamma}^{\&}$	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_f^{π}	
298.5 4	0.4 1	2629.2	5-	2330.6 5+	780.5 3	0.9 3	3409.5	7(-)	2629.2	5-	
311.8 <i>3</i>	0.8 2	3678.8	9(-)	3367.1 8+	828.6 [@] 2	2.1 3	3320.1	6-	2491.6	6+	
323.0 3	0.9 2	3367.1	8+	3044.2 8+	836.8 2	3.6 12	2330.6	5+	1493.7	4+	
335.4 [‡] 2	2.9 5	4659.7	$12^{(+)}$	4324.5 11 ⁽⁻⁾	^x 844.3 3	1.6 3					
^x 343.6 2	0.9 2				861.1 [@] 2	85 4	1493.7	4+	632.61	2^{+}	
^x 353.1 2	1.3 3				875.5 [@] 3	7.0 8	3367.1	8+	2491.6	6+	
^x 377.0 2	2.2 3				^x 889.9 3	2.5 5					
^x 388.3 3	0.7 2				906.5 [†] 3	3.4 7	3409.5	$7^{(-)}$	2503.1	6+	
423.3 [†] 3	4.8 5	3507.7	$8^{(-)}$	3084.4 7+	917.8 [†] 3	3.2 7	3409.5	$7^{(-)}$	2491.6	6+	
427.8 <i>3</i>	0.9 3	4106.3	$10^{(-)}$	3678.8 9 ⁽⁻⁾	997.9 [@] 3	30 2	2491.6	6+	1493.7	4+	
^x 433.1 <i>3</i>	1.2 2				1009.3 [#] 3	21 2	2503.1	6+	1493.7	4^{+}	
463.2 4	0.9 3	3507.7	8(-)	3044.2 8+	^x 1014.0 3	2.0 5					
476.8 3	1.3 3	4659.7	$12^{(+)}$	4183.0	^x 1028.9 4	1.1 4					
×487.2 3	0.9 2				^x 1040.5 3 x1052 0 3	1.2 4					
$5247^{\ddagger}2$	1.5 5	2620.2	5-	2104 5 4+	1052.05	1.5 4	1125 0	10+	2267 1	o+	
524.772	12.0 <i>I</i> 0	2029.2	3 0+	$2104.3 4^{+}$	1008.7 - 3	0.5 15	4455.8	10	5507.1	0	
$541.2^{m}2$	5.80	3044.2 2044.2	8 0+	$2505.1 0^{+}$	10/0.0 3	2.5 0	1716 60	2+	(22)(1	2+	
552.6" Z	8.99	3044.2	8	2491.6 6	1084.2 3	1.0 4	1/16.62	2.	032.01	2 ·	
556.0 2	10.4 15	20044	-	2502 1 (1135.5# 3	5.8 10	2629.2	5	1493.7	4' 0+	
581.2 2	1.7 4	3084.4		2503.1 6	1138.8" 3	2.1.5	4183.0		3044.2	8'	
592.9 [†] 2	8.2.9	3084.4	7 ⁺	2491.6 6+	*1284.4 3	1.2 4					
598.5" 3	4.5 8	4106.3	10(-)	3507.7 8(-)	*1426.4 3	3.9 10				- 1	
610.8 ^e 3	12.0 12	2104.5	4+	1493.7 4+	1471.9 ^{••} 3	7.2 10	2104.5	4+	632.61	2+	
632.7 ^w 2	100	632.61	2+	0.0 0+	^x 1525.4 3	1.6 3					
645.6 [#] 2	7.7 8	4324.5	11(-)	3678.8 9(-)	^x 1531.0 3	1.5 3					
675.5 [#] 3	3.2 4	4183.0		3507.7 8 ⁽⁻⁾	^x 1620.4 3	1.7 4					
690.9 [‡] 3	5.5 6	3320.1	6-	2629.2 5-	^x 1637.9 3	1.1 3				o./	
^695.5 3	1.8 4				1716.4 3	1.4 4	1716.62	2^+	0.0	0^+	
75372	1.02 274	3084.4	7+	2330.6 5+	1/30.84 x174554	0.5 2 113	23/1.4	(3)	032.01	Ζ.	
155.12	2.17	5001.1	,	2000.0 0	1113.3 7	1.1 5					

[†] Transition proceeds between $\Delta J=1$ states deduced from angular distribution coef.

 ‡ Transition proceeds between $\Delta J{=}0{,}1$ states deduced from angular distribution coef.

[#] Transition proceeds between $\Delta J=0,-2$ states deduced from angular distribution coef.

[@] Transition proceeds between $\Delta J=0,1,2$ states deduced from angular distribution coef.

& Taken with $E(\alpha)=31$ MeV. No angle specified.

 $x \gamma$ ray not placed in level scheme.





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 $\boldsymbol{\omega}$





