^{126}Cd β^- decay 1978Ga18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	H. Iimura, J. Katakura, S. Ohya	NDS 180, 1 (2022)	1-Oct-2021

Parent: ^{126}Cd: E=0.0; $J^\pi=0^+$; $T_{1/2}$=0.514 s *8*; Q(β^-)=5554 *5*; %β^- decay=100.0

1975Al11: on-line mass separation, measured total absorption γ spectra, deduced β strength functions.

1978Ga18: U(n,F) on-line mass separation, semi γ, $\gamma\gamma$.

1987Sp09: on-line mass separation. Observed $\beta\gamma$. β observed with hyperpure Ge.

1986Go10: U(n,F) on-line mass separation, semi γ, β.

The decay scheme is that proposed by 1978Ga18 and is based on Eγ sums and $\gamma\gamma$-coin.

^{126}In Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	$3^{(+)}$	1.53 s *1*	J^π: from Adopted Levels. $T_{1/2}$: from Adopted Levels.
260.09 *7*			
308.1? *6*			May be a beta decaying level.
555.40 *9*			
585.45 *23*			
625.61 *16*			
688.23 *8*	1^+		J^π: log *ft*=4.0 *1* from 0^+.

β^- radiations

E(decay)	E(level)	Iβ^- [†]	Log *ft*	Comments
4798 *36*	688.23	85 *6*	4.0 *1*	av Eβ=2128.4 *24* E(decay): from (β)(428γ) coincidence (1987Sp09). Uncertainty contains systematic error of 30 keV (1987Sp09). Iβ^-: from I(γ+*ce*) balance. Log *ft*: much smaller than log *ft* value in this mass region.

[†] Absolute intensity per 100 decays.

$\gamma(^{126}In)$

Iγ normalization: No β feeding to g.s. and the conversion coefficient of E1, M1 or E2 for the 260 keV γ are assumed by the evaluators. Other: I(260γ per 100 decays)=79 *20* (1986Go10).

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
62.93 *20*	1.6 *3*	688.23	1^+	625.61		
102.8 *3*	1.2 *4*	688.23	1^+	585.45		
260.09 *9*	100 *4*	260.09		0.0	$3^{(+)}$	
277.4 *5*	0.6 *2*	585.45		308.1?		Coincidence data.
325.3 *4*	0.6 *3*	585.45		260.09		Coincidence data.
365.82 *20*	2.3 *6*	625.61		260.09		
428.11 *6*	83.7 *28*	688.23	1^+	260.09		
555.40 *9*	4.8 *6*	555.40		0.0	$3^{(+)}$	
585.6 *5*	0.9 *3*	585.45		0.0	$3^{(+)}$	
[x]653.08 *19*	1.2 *4*					
688.23 *10*	5.9 *4*	688.23	1^+	0.0	$3^{(+)}$	

Continued on next page (footnotes at end of table)

^{126}Cd β^- decay 1978Ga18 (continued)

$\gamma(^{126}In)$ (continued)

† From 1978Ga18.
‡ For absolute intensity per 100 decays, multiply by 0.87 *4*.
^{x} γ ray not placed in level scheme.

^{126}Cd β^- decay 1978Ga18

Decay Scheme

Intensities: Relative I_γ