

^{109}Cd IT decay (11.8 μs)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Kumar(a), J. Chen(b) and F. G. Kondev		NDS 137, 1 (2016)	31-May-2016

Parent: ^{109}Cd : E=59.9 5; $J^\pi=1/2^+$; $T_{1/2}=11.8 \mu\text{s}$ 16; %IT decay=100.0

[1968Iv02](#): (p, γ) E=9-11 MeV. Measured E_γ , $\gamma(t)$. Deduced $T_{1/2}$.

[1956Pe56](#): isomeric state was populated in ^{109}In ec decay. Measured E_γ , $\gamma(t)$. Deduced $T_{1/2}$.

 ^{109}Cd Levels

E(level)	J^π [†]	$T_{1/2}$ [†]	Comments
0.0	$5/2^+$	461.9 d 4	
59.9 5	$1/2^+$	11.8 μs 16	$T_{1/2}$: weighted average of 11.7 μs 18 (1968Iv02) and 12 μs 3 (1956Pe56).

[†] From Adopted Levels.

 $\gamma(^{109}\text{Cd})$

E_γ	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	α [†]	$I_{(\gamma+ce)}$ [‡]	Comments
59.9 5	9.7 4	59.9	$1/2^+$	0.0	$5/2^+$	E2	9.3 4	100	ce(K)/($\gamma+ce$)=0.548 16; ce(L)/($\gamma+ce$)=0.287 12; ce(M)/($\gamma+ce$)=0.058 3 ce(N)/($\gamma+ce$)=0.0094 5; ce(O)/($\gamma+ce$)= 9.4×10^{-5} 4 $\alpha(K)=5.64$ 16; $\alpha(L)=2.95$ 13; $\alpha(M)=0.593$ 25; $\alpha(N)=0.097$ 4; $\alpha(O)=0.00096$ 3 $E_\gamma, \text{Mult.}$: from Adopted Gammas. I_γ : from $I(\gamma+ce)=100$ and conversion coefficient calculated by the BrICC program based on adopted multipolarity. Uncertainty is from $\Delta\alpha(\text{th})=0.4$ by BrICC.

[†] [Additional information 1.](#)

[‡] Absolute intensity per 100 decays.

 $^{109}\text{Cd IT decay (11.8 } \mu\text{s)}$ **Decay Scheme**

Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch
%IT=100.0

