^{111}Cd IT decay (48.54 min)

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

Parent: ^{111}Cd: E=396.22; $J^\pi=11/2^-$; $T_{1/2}$=48.54 min *5*; %IT decay=100.0
Others: 1948Ho37, 1951Mc11, 1951Su73.

^{111}Cd Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0.0	$1/2^+$	stable	
245.40	$5/2^+$	84.5 ns *4*	$T_{1/2}$: see Adopted Levels.
396.22	$11/2^-$	48.54 min *5*	$T_{1/2}$: 48.6 min *3* (1949He06), 48.7 min *3* (1945Wi11). Others: 49.6 min *7* (1968Bo28), 50 min *2* (1948Ho37). J^π: consistent with A_2=+0.175 *14* (1953Kr48) via (151γ)(245γ)(θ).

[†] From Adopted Levels.

$\gamma(^{111}Cd)$

Iγ normalization: for I(γ+ce)=100 to g.s..
α(K)exp=ce(K)/Iγ normalized to α(K)(245γ)=0.0536 (E2 theory).

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[‡]	Comments
150.825 *15*	31.0 *10*	396.22	$11/2^-$	245.40	$5/2^+$	E3	2.30	α(K)= 1.458; α(L)= 0.679; α(M)= 0.1377; α(N+..)= 0.0259 α(K)exp=1.8 *2* (1975Sh29); α(K)exp=1.5 *3* (1951Su73); α(K)exp=1.3 *3* (1951Mc11) α(exp)=2.286 *9* (1960Lu05) E_γ: from 1974HeYW. Others: 150.81 *3* (1975Sh29), 150.6 *2* (1970Hn04). I_γ: from 1974HeYW. Others: 32.2 from Ti(151γ)=Ti(245γ), 24 *2* (1975Sh29), 33 (1968Da24), 34 *6* (1951Mc11), 31 *5* (1951Su73). Mult.: ce(K)(151γ)/ce(K)(245γ)=8.55 *20* (1975Sh29) s from K:L1:L2:L3:M=100:10.4 *9*:22.0 *18*:20.0 *18*:11.0 *16* (1975Sh29).
245.395 *20*	100 *5*	245.40	$5/2^+$	0.0	$1/2^+$	E2	0.064	α(K)= 0.0535; α(L)=0.00835; α(M)=0.00161; α(N+..)=0.00032 E_γ: from 1974HeYW. Other: 245.40 *2* (1975Sh29). Mult.: from ce-ratio data (1975Sh29), ^{111}Ag g.s. decay.

[†] For absolute intensity per 100 decays, multiply by 0.94 *5*.
[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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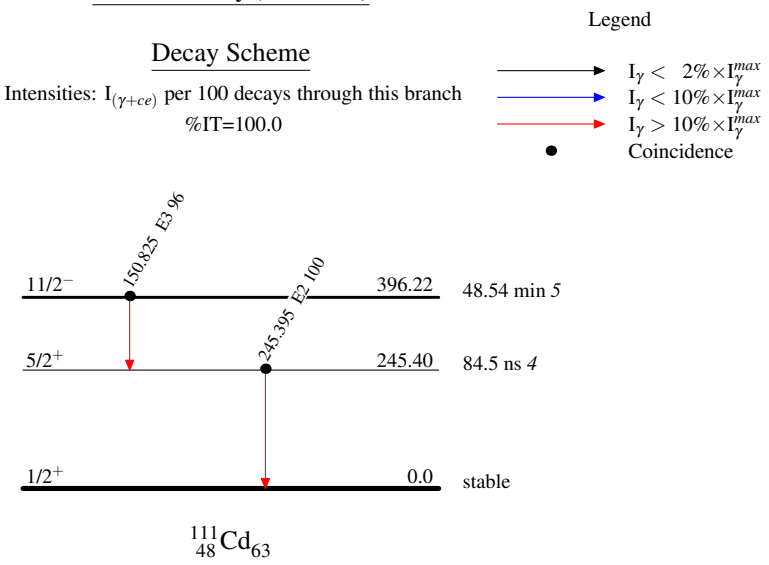
Decay Scheme

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

%IT=100.0



$^{111}_{48}Cd_{63}$