Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Zoltan Elekes and Janos Timar	NDS 129, 191 (2015)	28-Feb-2015

Q(β^-)=922×10^1 *15*; S(n)=532×10^1 *15*; S(p)=1294×10^1 *15*; Q(α)=−1037×10^1 *29* 2012Wa38
E,Iγ,M,α(exp): from ^{128}Cd β^- decay.

^{128}In Levels

Cross Reference (XREF) Flags

A ^{128}Cd β^- decay
B ^{241}Pu(n,F) E=thermal

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	(3)$^+$	0.84 s *6*	AB	%β^-=100; %β^-n<0.046 %β^-n given for mixture of g.s. and 340-keV, 8$^-$ state. Value is weighted average of 0.059 *8* from n and β counting (1980Lu04), 0.030 *7* from βn coincidence (1986ReZU), and 0.040 *3* from n- and β^-counting (1993Ru01). 1993Ru01 suggest %β^-n=0.06 if all neutrons originate from the decay of the g.s. Other:<0.2 from n and β counting (1981En05). J$^\pi$: γ from 1$^+$, no β^- feeding from 0$^+$, and systematics for the g.s. in lighter In isotopes (1988FoZX). T$_{1/2}$: from γ-multiscaling (1986Go10). Other reported values of 0.80 s *3* (1974Gr29), 0.94 s *5* (1976Lu02), 0.9 s *1* (1977FoZR), 0.83 s *2* (1981En05), and 0.776 s *24* (1993Ru01) were given for the mixture of g.s. and (8)$^-$ state.
247.87 *10*	(1$^-$)	23 μs *2*	AB	T$_{1/2}$: from time distribution of 248 keV γ (2004Sc42). Other: 10 μs<T$_{1/2}$<20 ms (1988FoZX). J$^\pi$: comparison to shell-model.
315.86 *13*	(1$^-$)		A	J$^\pi$: M1 γ to (1$^-$), γ from 1$^+$.
3.4×10^2 *6*	(8$^-$)	0.72 s *10*	A	%β^-=100; %β^-n<0.046 No IT decay is expected, since the multipolarity of the isomeric transition is expected to be high. %β^-n given for mixture of g.s. and 340-keV (8$^-$) state. 1993Ru01 suggest %β^-n=0.121 if all neutrons originate from the decay of this (8$^-$) level. See the comment on %β^-n for g.s.. E(level): from $\beta\gamma$ (1990St13). J$^\pi$: log *ft*≈5.8 to (7$^-$), systematics of the 8$^-$ states in lighter In isotopes. T$_{1/2}$: from γ-multiscaling (1986Go10). Others: see the comment given under the g.s..
710.37 *24*			A	
1172.88 *14*	1$^+$		AB	J$^\pi$: log *ft*=4.17 from 0$^+$.

γ(^{128}In)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	I$_\gamma$	E$_f$	J$_f^\pi$	Mult.	α	Comments
247.87	(1$^-$)	247.92 *10*	100	0.0	(3)$^+$	M2,E3	0.25 *4*	α(exp)=0.25 *4* α(K)=0.196 *15*; α(L)=0.042 *16*; α(M)=0.009 *4*; α(N)=0.0015 *6*; α(O)=7.7×10^{-5} *10*
315.86	(1$^-$)	68.02 *10*	100	247.87	(1$^-$)	(M1)	1.536	α(exp)=1.55 α(K)=1.328 *20*; α(L)=0.1689 *25*; α(M)=0.0328 *5*; α(N)=0.00601 *9*; α(O)=0.000442 *7*
710.37		462.7† *3*	100†	247.87	(1$^-$)			

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Adopted Levels, Gammas (continued)

γ(^{128}In) (continued)

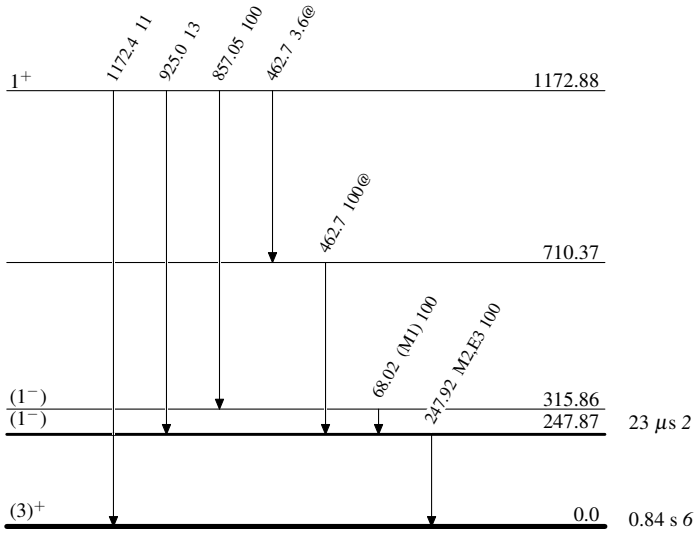
E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
1172.88	1^+	462.7† *3*	3.6†	710.37	
		857.05 *10*	100	315.86	(1^-)
		925.0 *3*	13	247.87	(1^-)
		1172.4 *3*	11	0.0	$(3)^+$

† Multiply placed with intensity suitably divided.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



$^{128}_{49}In_{79}$