^{128}Sn IT decay (6.5 s) 1979Fo10

History

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

Parent: ^{128}Sn: E=2091.50 *11*; J^π=(7^-); $T_{1/2}$=6.5 s *5*; %IT decay=100.0

1979Fo10: ^{235}U(n,F) E=th, on-line mass separation; semi γ, $\gamma\gamma$; scintillator-scintillator $\beta\gamma$, $\beta\gamma$(t).

^{128}Sn Levels

E(level)†	J^π	$T_{1/2}$	Comments
0.0	0^+	59.07 min *14*	$T_{1/2}$: from Adopted Levels.
1168.81 *5*	$(2)^+$		
2000.35 *7*	(4^+)		
2091.50 *12*	(7^-)	6.5 s *5*	$T_{1/2}$: from time distribution of 92γ.

† From ^{128}In β^- decay (0.72 s).

γ(^{128}Sn)

I(γ+ce) normalization: no β transition depopulating (7^-) isomer was assumed. 1979Fo10 did not find any evidence for possible β^- particle decay of the 6.5 s isomer. However, 1981Di01 suggest some contribution of short-lived precursor to ^{128}Sb g.s. (8^-) in the chain decay of fission products of ^{245}Cm. The precursor may be this isomeric state.

E_γ†	I_γ‡	E_i(level)	J^π_i	E_f	J^π_f	Mult.	α#	$I_{(\gamma+ce)}$‡	Comments
91.15 *10*	3.6 *1*	2091.50	(7^-)	2000.35	(4^+)	E3	26.3	100	α(K)exp=8.1 *24*; ce(K)/(γ+ce)=0.353 *6*; ce(L)/(γ+ce)=0.488 *8*; ce(M)/(γ+ce)=0.1041 *21*; ce(N)/(γ+ce)=0.0181 *4* ce(O)/(γ+ce)=0.000517 *11* α(K)=9.62 *14*; α(L)=13.31 *21*; α(M)=2.84 *8*; α(O)=0.01410 *22* I_γ: from α and intensity balance. Mult.: from α(K)exp.
831.54 *5*	100	2000.35	(4^+)	1168.81	$(2)^+$				
1168.80 *5*	100	1168.81	$(2)^+$	0.0	0^+				

† From ^{128}In β^- decay (0.72 s).
‡ Absolute intensity per 100 decays.
\# 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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