^{129}Sb IT decay (2.2 μs) 2003Ge04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Janos Timar and Zoltan Elekes, Balraj Singh	NDS 121, 143 (2014)	31-May-2014

Parent: ^{129}Sb: E=1860.8 *3*; J^π=(15/2$^-$); $T_{1/2}$=2.2 μs *2*; %IT decay=100.0

2003Ge04 (also 1998GeZX): E(n)=thermal. Measured Eγ, Iγ, $\gamma\gamma$, γ(t) using two large-volume Ge detectors and two cooled Si(Li) detectors after separation by the LOHENGRIN spectrometer.

^{129}Sb Levels

E(level)†	J^π†	$T_{1/2}$†	Comments
0.0	7/2$^+$	4.366 h *26*	
1128.63 *4*	(11/2$^+$)		
1161.39 *4*	(9/2$^+$)		
1851.31 *6*	(19/2$^-$)	17.7 min *1*	%β^-=85; %IT=15
1861.06 *5*	(15/2$^-$)	2.2 μs *2*	%IT=100 $T_{1/2}$: measured by 2003Ge04, 1998GeZX.

† From Adopted Levels, unless otherwise stated.

γ(^{129}Sb)

E_γ†	E_i(level)	J_i^π	E_f	J_f^π	Mult.†	α‡	Comments
(9.76 *8*)	1861.06	(15/2$^-$)	1851.31	(19/2$^-$)	[E2]	3.39×10^4	α(L)=2.72×10^4 *4*; α(M)=5.59×10^3 *8*; α(N)=989 *14*; α(O)=63.6 *9*
699.64 *6*	1861.06	(15/2$^-$)	1161.39	(9/2$^+$)	[E3]	0.0076	
722.69 *5*	1851.31	(19/2$^-$)	1128.63	(11/2$^+$)	(M4)	0.0547	α(K)=0.0457 *7*; α(L)=0.00721 *11*; α(M)=0.001462 *21* α(N)=0.000281 *4*; α(O)=2.68×10^{-5} *4*
732.48 *5*	1861.06	(15/2$^-$)	1128.63	(11/2$^+$)	[M2]	0.0095	α(K)=0.00820 *12*; α(L)=0.001059 *15*; α(M)=0.000210 *3* α(N)=4.06×10^{-5} *6*; α(O)=4.02×10^{-6} *6*
1128.60 *5*	1128.63	(11/2$^+$)	0.0	7/2$^+$			
1161.42 *5*	1161.39	(9/2$^+$)	0.0	7/2$^+$			

† From Adopted Gammas.

‡ 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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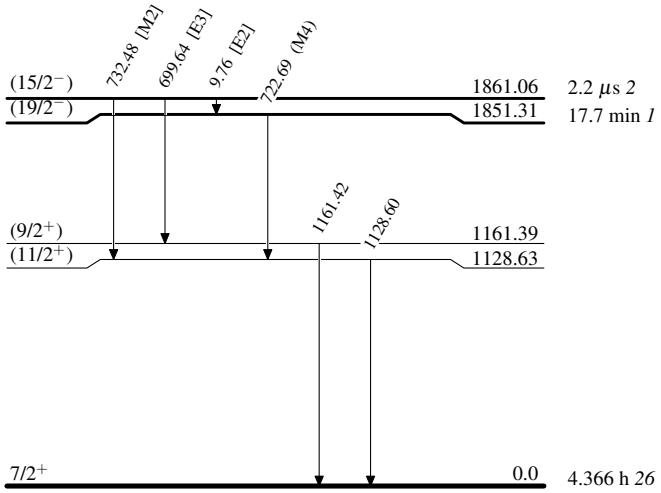
Legend

Decay Scheme

%IT=100.0

γ Decay (Uncertain)



$^{129}_{51}Sb_{78}$