

<sup>129</sup>Sb IT decay (1.1 μs) 2003Ge04

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

Parent: <sup>129</sup>Sb: E=2139.4 3; J<sup>π</sup>=(23/2<sup>+</sup>); T<sub>1/2</sub>=1.1 μs I; %IT decay=100.0

2003Ge04 (also 1998GeZX): E(n)=thermal. Measured E<sub>γ</sub>, I<sub>γ</sub>, γγ, γ(t) using two large-volume Ge detectors and two cooled Si(Li) detectors after separation by the LOHENGRIN spectrometer.

<sup>129</sup>Sb Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>†</sup>	T <sub>1/2</sub> <sup>†</sup>	Comments
0.0	7/2 <sup>+</sup>	4.366 h 26	
1128.63 4	(11/2 <sup>+</sup> )		
1851.31 6	(19/2 <sup>-</sup> )	17.7 min I	%β <sup>-</sup> =85; %IT=15
2040.81 2I	(19/2 <sup>+</sup> )		
2139.4 3	(23/2 <sup>+</sup> )	1.1 μs I	%IT=100 T <sub>1/2</sub> : γ(t) in (n,Fγ) (2003Ge04).

<sup>†</sup> From Adopted Levels, unless otherwise stated.

γ(<sup>129</sup>Sb)

E <sub>γ</sub> <sup>†</sup>	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult. <sup>†</sup>	α <sup>‡</sup>	Comments
98.6 2	2139.4	(23/2 <sup>+</sup> )	2040.81	(19/2 <sup>+</sup> )	E2	1.73 3	α(K)=1.226 19; α(L)=0.406 7; α(M)=0.0838 14 α(N)=0.0153 3; α(O)=0.001138 19 Mult.: α(K) <sub>exp</sub> is compatible only with E2 character (2003Ge04).
189.5 2	2040.81	(19/2 <sup>+</sup> )	1851.31	(19/2 <sup>-</sup> )			
722.69 5	1851.31	(19/2 <sup>-</sup> )	1128.63	(11/2 <sup>+</sup> )	(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 <sup>-5</sup> 4
1128.60 5	1128.63	(11/2 <sup>+</sup> )	0.0	7/2 <sup>+</sup>			

<sup>†</sup> From Adopted Gammas.

<sup>‡</sup> Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

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## Decay Scheme

%IT=100.0

