^{124}Sn(p,2nγ) 1969PrZY

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 174, 1 (2021)	15-Apr-2021

1969PrZY (also 1969PrZT): E=8 and 13 MeV proton beams were produced from the tandem accelerator at the Niels Bohr Institute at Riso. γ rays were detected with a Ge(Li) detector and conversion electrons were detected with a six-gap β-ray spectrometer. Measured Eγ, Iγ, E(x ray), I(x ray), E(ce), I(ce). Deduced levels, J, π, conversion coefficients, γ-ray multipolarities.

^{123}Sb Levels

E(level)[†]	J$^{\pi}$[‡]
0.0	7/2$^+$
160	5/2$^+$
540	(3/2)$^+$
710	1/2$^+$

[†] From Eγ.
[‡] From Adopted Levels.

γ(^{123}Sb)

E$_\gamma$	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.	δ	α[‡]	Comments
160	160	5/2$^+$	0.0	7/2$^+$	M1(+E2)	0.2 *+4−2*	0.1665	Mult.,δ: from α(K)exp=0.15 *2* (from comparison of x- and γ-ray intensities) (1969PrZY), with δ obtained using BrIccMixing by the evaluator.
380	540	(3/2)$^+$	160	5/2$^+$	M1(+E2)			Mult.: mainly M1 from K/L≈9.5 (1969PrZY).
540[†]	540	(3/2)$^+$	0.0	7/2$^+$				
550[†]	710	1/2$^+$	160	5/2$^+$				

[†] Iγ and I(ce K) of the 540γ and 550γ are observed equal, indicating their α(K)exp to be equal and suggesting the two γ rays have the same multipolarity.
[‡] 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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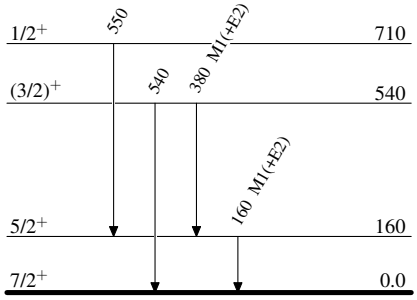
Level Scheme



$^{123}_{51}Sb_{72}$