

Adopted Levels, Gammas

<u>Type</u>	<u>History</u>		<u>Literature Cutoff Date</u>
	<u>Author</u>	<u>Citation</u>	
Full Evaluation	Balraj Singh	ENSDF	15-Oct-2007

S(n)=1.11×10⁴ 5; S(p)=3.3×10³ 4; Q(α)=-2.3×10³ syst [2012Wa38](#)

Note: Current evaluation has used the following Q record 10850 SY2680 syst-1380 syst [2003Au03](#).

ΔS(n)=770, ΔS(p)=390, ΔQ(α)=500 ([2003Au03](#)).

Q(εp)=7400 310 (syst,[2003Au03](#)).

[1995Ja16](#): Activity of ¹⁰¹Sn identified in ⁵⁰Cr(⁵⁸Ni,2p5n) reaction E=240 MeV. On-line mass separator with FEBIAD ion source at GSI; 40 particle nA of ⁵⁸Ni 14⁺ beam. Measured beta-delayed protons.

[2007Se04](#): ¹⁰¹Sn identified in ⁴⁶Ti(⁵⁸Ni,3nγ) reaction at 192 MeV, fragment mass analysis, recoil-decay tagging method.

Others (production of ¹⁰¹Sn): [2005Ka47](#), [2000La09](#), [1995Sc09](#) (also [1996Ki23](#)).

Structure calculations and analysis: [2002Gr16](#), [2002Hu12](#).

¹⁰¹Sn Levels

Cross Reference (XREF) Flags

- A ¹⁰⁵Te α decay (0.62 μs)
- B ⁴⁶Ti(⁵⁸Ni,3nγ)

<u>E(level)</u>	<u>J^π†</u>	<u>T_{1/2}</u>	<u>XREF</u>	<u>Comments</u>
0.0	(5/2 ⁺)	1.7 s 3	AB	%ε+%β ⁺ =100; %εp=26 %εp from comparison of experimental proton spectrum with calculations, assuming J ^π =5/2 ⁺ for g.s. of ¹⁰¹ Sn. T _{1/2} : weighted average of 1.9 s 3 (2007Ka15 , timing of delayed protons) and 1.3 s 5 (2007Se04 , recoil-decay tagging method). Other: 3 s 1 (1995Ja16 , timing of delayed proton spectra).
171.7 6	(7/2 ⁺)		B	d _{5/2} orbital. g _{7/2} orbital.

† From shell-model interpretation.

γ(¹⁰¹Sn)

<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_γ</u>	<u>E_f</u>	<u>J_f^π</u>
171.7	(7/2 ⁺)	171.7 6	0.0	(5/2 ⁺)

Adopted Levels, GammasLevel Scheme