

^{127}Xe IT decay (69.2 s) [1968Sc14,1967Ge15](#)

Type	Author	History Citation	Literature Cutoff Date
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Parent: ^{127}Xe : E=297.10 8; $J^\pi=9/2^-$; $T_{1/2}=69.2$ s 9; %IT decay=100.0

[1968Sc14](#): $^{127}\text{I}(\text{d},2\text{n})$, no chem; scin γ , $\gamma\gamma$ coin and $\gamma(\text{t})$.

[1967Ge15](#): $^{127}\text{I}(\text{p},\text{n})$ E=12 MeV, no chem; semi γ ce, scin $\gamma\gamma(\theta)$ and (ce)(ce)(t).

The decay scheme is that proposed by [1968Sc14](#).

 ^{127}Xe Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}$	Comments
0.0	$1/2^+$	36.346 d 3	
124.6 3	$3/2^+$	0.28 ns 1	$T_{1/2}$: from (ce 172.5 γ)(ce 124.6 γ)(t) (1967Ge15).
297.1 5	$9/2^-$	69.2 s 9	$T_{1/2}$: from (ce)(t) and (ce)(t) (1967Ge15).

† From Adopted Levels.

 $\gamma(^{127}\text{Xe})$

$E_\gamma^\dagger$	$I_\gamma^{\ddagger\&}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. @	δ	$\alpha^\#$	Comments
124.6 3	100	124.6	$3/2^+$	0.0	$1/2^+$	M1+E2	+0.12 2	0.446 8	$\alpha(\text{K})_{\text{exp}}=0.39$ 4 (1968Sc14); K/L=7.1 8 (1967Ge15) $\alpha(\text{K})=0.382$ 6; $\alpha(\text{L})=0.0517$ 11; $\alpha(\text{M})=0.01053$ 22; $\alpha(\text{N}+..)=0.00244$ 5 $\alpha(\text{N})=0.00217$ 5; $\alpha(\text{O})=0.000269$ 5 L/M+N+O=3.3 (1967Ge15), K/L+M=5.0 5 (1969Ha03). δ : from (172.5 γ)(124.6 γ)(θ) (1967Ge15). $\alpha(\text{K})_{\text{exp}}=0.83$ 10 (1968Sc14); K/L=1.6 1 (1967Ge15) $\alpha(\text{K})=0.910$ 14; $\alpha(\text{L})=0.563$ 10; $\alpha(\text{M})=0.1234$ 21; $\alpha(\text{N}+..)=0.0268$ 5 $\alpha(\text{N})=0.0244$ 5; $\alpha(\text{O})=0.00243$ 4 Additional information 1. L/M+N+O=3.3 (1967Ge15), K/L+M=1.3 1 (1969Ha03).
172.5 3	55 3	297.1	$9/2^-$	124.6	$3/2^+$	E3		1.62 3	

† From [1968Sc14](#).

‡ Relative to I(124.6 γ)=100.

Theoretical conversion coefficients are calculated using BrIcc code for the multipolarity indicated.

@ From $\alpha(\text{K})_{\text{exp}}$.

& For absolute intensity per 100 decays, multiply by 0.69 3.

^{127}Xe IT decay (69.2 s) 1968Sc14,1967Ge15**Decay Scheme**

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0

Legend

- $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{max}$
- Coincidence

