^{125}Xe IT decay 1968WiZY,1968Sc14

Type	Author	History Citation	Literature Cutoff Date
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Parent: ^{125}Xe: E=252.61 *14*; $J^{\pi}=9/2^{(-)}$; $T_{1/2}$=56.9 s *9*; %IT decay=100.0
1968WiZY: semi γ, ce.
1968Sc14: ^{122}Te(α,n) chem, γ, K x ray-γ coin; semi, scin.

^{125}Xe Levels

E(level)†	J$^{\pi}$‡	$T_{1/2}$	Comments
0.0	$1/2^{(+)}$	16.9 h *2*	
111.3 *8*	$3/2^{(+)}$		
252.7 *13*	$9/2^{(-)}$	57 s *1*	$T_{1/2}$: From 1968WiZY. 1968Sc14 report 56 s *3*; Others: 55 s (1954Ma54), 60 s (1960Mo09).

† From a least-squares fit to Eγ's by evaluator.
‡ Spin and parity values are those given under Adopted Levels.

γ(^{125}Xe)

Iγ normalization: From intensity balance at 111-keV level and α.
The α(K)exp were obtained from semi ce(K)/γ and normalized to α(K)exp(188.43γ)=0.116 from ^{125}Xe ε decay (17.0 h) (1968WiZY), and from scin K x ray/γ in coin with cascading γ (1968Sc14).

E$_{\gamma}$‡	I$_{\gamma}$#	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.	δ	α†	Comments
111.3 *8*	100.0	111.3	$3/2^{(+)}$	0.0	$1/2^{(+)}$	M1+E2	0.27 *+10−13*	0.65 *4*	α(K)=0.543 *23*; α(L)=0.084 *13*; α(M)=0.017 *3*; α(N+..)=0.0040 *6* α(N)=0.0036 *6*; α(O)=0.00042 *5* Mult.,δ: From ^{125}Cs decay. Others: δ<0.32 from α(K)exp=0.47 *7* (1968WiZY), δ<0.52 from α(K)exp=0.51 *7* (1968Sc14).
141.4 *10*	33.1 *8*	252.7	$9/2^{(-)}$	111.3	$3/2^{(+)}$	E3		3.99 *15*	α(K)=1.90 *6*; α(L)=1.65 *7*; α(M)=0.364 *16*; α(N+..)=0.079 *4* α(N)=0.072 *3*; α(O)=0.0070 *3* I$_{\gamma}$: From the decay scheme. An unweighted average of values from 1968WiZY and 1968Sc14 gives Iγ(141γ)/Iγ(111γ)=0.318 *9*. Mult.: From α(K)exp=1.96 *25*, α(exp)=4.4 *4* (1968Sc14), α(L+...)exp=1.83 *22* (1968WiZY). Additional information 1.

† Additional information 2.
‡ Weighted av from 1968WiZY and 1968Sc14.
# For absolute intensity per 100 decays, multiply by 0.602.

^{125}Xe IT decay 1968WiZY,1968Sc14

Decay Scheme

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

%IT=100.0

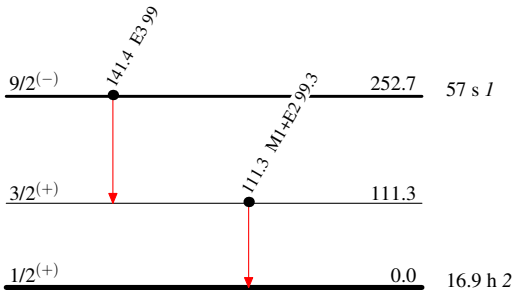
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

Coincidence



$^{125}_{54}Xe_{71}$