^{125}I ε decay 1976Mi18,1990Iw04

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112,495 (2011)	1-Jan-2010

Parent: ^{125}I: E=0.0; $J^\pi=5/2^+$; $T_{1/2}$=59.400 d *10*; Q(ε)=185.77 *6*; %ε decay=100

1996Ka48: HPGe, K-electron capture probability.
1990Iw04: Ge γ; NaI scin XX-coin, Xγ-coin.
1976Mi18: Bent-crystal spectrometer γ.
1953De26, 1964Le05, 1966Sm05: 4π scin capture ratio, L+M+/K.
1969Ka08: scin βγ(t).
1968Go25: semi, internal bremsstrahlung endpoint.
1969Ca01: mag spect K/L, L-subshell ratio.
1965Ge04: mag spect L-subshell ratio.
1982Br16: mag spect L-subshell ratio, M-subshell ratio, L/M, M/n.
1986Bo46: Ge, internal bremsstrahlung endpoint.
1990Li14: NaI scin, internal bremsstrahlung endpoint.
1994Hi04: Ge, internal bremsstrahlung endpoint.
Others: Activity measurements; 1992Ma15, 1995De69, 1995Di07, 1995Ra32, 1996Pa23;
Intensity of internal bremsstrahlung; 1995Hi19;
Double K-shell vacancy production probability; 1992Hi03;
Shapefactor coefficient; 1995Gr04; calculation of fractional ε; 1998Sc28.

^{125}Te Levels

E(level)†	J^π	$T_{1/2}$	Comments
0.0	$1/2^+$		
35.4925 *5*	$3/2^+$	1.48 ns *1*	$T_{1/2}$: From Adopted Levels.

† From a least-squares fit to Eγ's.

ε radiations

E(decay)	E(level)	Iε†	Log *ft*	Comments
150.27 *6*	35.4925	100	5.4171 *5*	εK=0.8012; εL=0.15563 *3*; εM+=0.043184 *8* E(decay): Deduced from internal bremsstrahlung endpoint (1994Hi04). Other: 150.6 keV *3* (1986Bo46), 143.8 keV *20* (1990Li14), 141.7 keV *20* (1968Go25). εK(exp)=0.83 *4* (1996Ka48).

† Absolute intensity per 100 decays.

γ(^{125}Te)

Iγ normalization: From Iγ(35γ)=6.68 *13* per decay, no ε feeding to g.s.

E_γ	I_γ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α†	Comments
35.4925 *5*	6.68 *13*	35.4925	$3/2^+$	0.0	$1/2^+$	M1+E2	0.029 *+3−2*	13.68	α(K)=11.69 *17*; α(L)=1.596 *25*; α(M)=0.319 *5*; α(N+..)=0.0697 *11* α(N)=0.0630 *10*; α(O)=0.00674 *10* E_γ: From wavelength of 349.328 *5* mÅ (1976Mi18) and conversion factor of 12398.520 keV mÅ from 2000He14.

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^{125}I ε decay 1976Mi18,1990Iw04 (continued)

$\gamma(^{125}Te)$ (continued)

E_γ	E_i(level)	Comments
		I_γ: From 1990Iw04. Others: 6.8 *3* (1969Ka08), 6.51 *13* (1983De11). δ: Recommended values from 1977Kr13; δ=0.029 *3* (1982Br16). Mult.: From α(K)exp=12.0 *4*, α(exp)=13.7 *6* (1969Ka08); L1:L2:L3=100 *1*:9.54 *18*:2.3 *5* (1982Br16); see also 1982Br16 for other subshell α.

† Additional information 1.
‡ Absolute intensity per 100 decays.

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Decay Scheme

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