

¹²⁵Cs IT decay (0.90 ms) 1998Su16

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

Parent: ¹²⁵Cs: E=266.0 11; J^π=(11/2⁻); T_{1/2}=0.90 ms 3; %IT decay=?
 1998Su16: ¹¹⁰Pd(²⁰Ne,p4n) E=120 MeV, transistor reset preamplifier Ge, measured T_{1/2}.

¹²⁵Cs Levels

E(level)	J ^π †	T _{1/2}
0.0	1/2 ⁽⁺⁾	
77.1 3	3/2 ⁽⁺⁾	
84.7 3	5/2 ⁽⁺⁾	
253.0 3	(7/2 ⁺)	
266.0 11	(11/2 ⁻)	0.90 ms 3

† From Adopted Levels.

γ(¹²⁵Cs)

E _γ †	I _γ ‡	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.#	δ#	α@	Comments
(13)		266.0	(11/2 ⁻)	253.0	(7/2 ⁺)				
77.1 3	26.5 14	77.1	3/2 ⁽⁺⁾	0.0	1/2 ⁽⁺⁾	M1+E2	0.22 6	2.03 9	α(K)=1.67 4; α(L)=0.28 4; α(M)=0.059 9; α(N+..)=0.0141 20 α(N)=0.0124 18; α(O)=0.00164 20; α(P)=6.42×10 ⁻⁵ 12
84.6 3	23.3 12	84.7	5/2 ⁽⁺⁾	0.0	1/2 ⁽⁺⁾	E2		3.39 7	α(K)=2.00 4; α(L)=1.099 24; α(M)=0.239 6; α(N+..)=0.0539 12 α(N)=0.0482 11; α(O)=0.00561 12; α(P)=5.38×10 ⁻⁵ 10
168.3 3	75 4	253.0	(7/2 ⁺)	84.7	5/2 ⁽⁺⁾	E2(+M1)	>1.11	0.280 21	α(K)=0.218 12; α(L)=0.049 8; α(M)=0.0105 17; α(N+..)=0.0024 4 α(N)=0.0022 4; α(O)=0.00027 4; α(P)=7.05×10 ⁻⁶ 11 Mult.,δ: From intensity balance, α=0.36 10.
176.0 3	56 3	253.0	(7/2 ⁺)	77.1	3/2 ⁽⁺⁾	E2		0.258	α(K)=0.198 3; α(L)=0.0475 8; α(M)=0.01009 16; α(N+..)=0.00233 4 α(N)=0.00207 4; α(O)=0.000256 4; α(P)=6.14×10 ⁻⁶ 10 Mult.: From intensity balance, α=0.43 11.

† From adopted gammas.

‡ The authors measured I_γ but quote only total intensities. The I_γ values given here were deduced by the evaluators with mults as assumed by the authors, mult=M1 for the 78 and 169 γ's and E2 for 86 176 γ's, where these energies are those of the authors. The evaluators also assumes that the authors would have used α values from Hager-Seltzer.

From adopted gammas, unless otherwise noted.

@ 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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Decay Scheme

Intensities: Relative I_γ
%IT=?

Legend

- ▶ $I_\gamma < 2\% \times I_\gamma^{max}$
- ▶ $I_\gamma < 10\% \times I_\gamma^{max}$
- ▶ $I_\gamma > 10\% \times I_\gamma^{max}$
- - - -▶ γ Decay (Uncertain)

