^{130}Cs IT decay (3.46 min) 1983We07

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 93,33 (2001)	11-May-2001

Parent: ^{130}Cs: E=163.25 *11*; $J^\pi=5^-$; $T_{1/2}$=3.46 min *6*; %IT decay=99.8
^{130}Cs-%IT decay: %IT=99.84.
1983We07: measured Eγ, Iγ, ce, $\gamma\gamma$.

^{130}Cs Levels

E(level)	J^π[†]	$T_{1/2}$
0.0	1^+	
80.37 *7*	2^+	
131.54 *6*	2^+	
148.35 *7*	2^-	
163.25 *11*	5^-	3.46 min *6*

[†] From Adopted Levels.

$\gamma(^{130}Cs)$

Iγ normalization: Σ(I(γ+ce) of γ's to g.s.)=100.
α(exp)=Ice/Iγ normalized to α(K)(148.35)=0.0631 (E1 1968Ha53).

E$_\gamma$	I$_\gamma$[&]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.[†]	α[a]	I$_{(\gamma+ce)}$[&]	Comments
14.9[‡] *3*	0.000049[#] *7*	163.25	5^-	148.35	2^-	[M3]	2.2×10^6 *3*	107[#] *3*	α(L)=1.635×10^6; α(M)=4.26×10^5 ce(M)<150.
31.5[‡] *3*	0.070[#] *7*	163.25	5^-	131.54	2^+	[E3]	1.50×10^4 *9*	1050[#] *80*	α(L)=1.141×10^4; α(M)=2.73×10^3 ce(L)≈1030, ce(M)≈340.
51.18 *5*	138 *6*	131.54	2^+	80.37	2^+	M1	6.34		α(K)exp≈3; α(L)exp=0.50 *13*; α(M)exp=0.164 *15* α(K)= 5.43; α(L)= 0.726; α(M)= 0.1481; α(N+..)= 0.0387 ce(K)≈570, ce(L)=95 *24*, ce(M)=31 *2*. α(exp)=6.6 *6* from intensity balance.
80.45 *10*	680 *30*	80.37	2^+	0.0	1^+	M1	1.703		α(K)exp=1.37 *10*; α(L)exp<0.27; α(M)exp=0.041 *10* α(K)= 1.459; α(L)= 0.1941; α(M)= 0.0395; α(N+..)=0.01036 ce(K)=1270 *40*, ce(L)<250, ce(M)=38 *9*.
82.9 *1*	13.0 *7*	163.25	5^-	80.37	2^+	E3[@]	59.4		α(K)exp=11.7 *11*; α(L)exp=41 *4*; α(M)exp=10.7 *11* α(K)= 11.43; α(L)= 37.4; α(M)= 8.45; α(N+..)= 2.136 ce(K)=208 *12*, ce(L)=722 *13*, ce(M)=190 *5*.

Continued on next page (footnotes at end of table)

^{130}Cs IT decay (3.46 min) 1983We07 (continued)

$\gamma(^{130}Cs)$ (continued)

E_γ	I_γ[&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[a]	Comments
131.50 *7*	25.4 *20*	131.54	2^+	0.0	1^+	M1	0.420	α(K)exp=0.37 *3*; α(L)exp<0.11; α(M)exp<0.03 α(K)= 0.360; α(L)= 0.0477; α(M)=0.00971; α(N+..)=0.00255 ce(K)=13.0 *1*, ce(L)<4.0, ce(M)<1.1.
148.35 *7*	100 *3*	148.35	2^-	0.0	1^+	E1[@]	0.0734	α(K)exp=0.064; α(L)exp=0.0076 *10*; α(M)exp=0.0029 *5* α(K)= 0.0631; α(L)=0.00822; α(M)=0.00166; α(N+..)=0.00042 ce(K)=8.70 *14*, ce(L)=1.04 *13*, ce(M)=0.40 *6*.

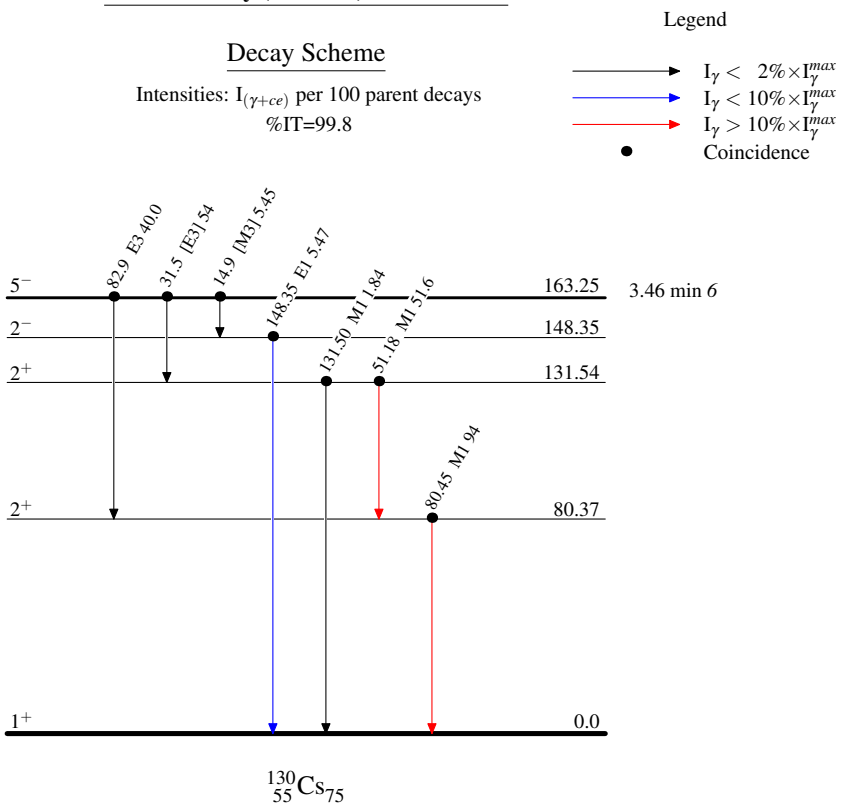
† From ce data, except as noted.
‡ From conversion electron data only.
# From I(γ+ce) and α; I(γ+ce) is from intensity balance.
@ From K/L.
& For absolute intensity per 100 decays, multiply by 0.051 *2*.
a Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

^{130}Cs IT decay (3.46 min) 1983We07

Decay Scheme

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

%IT=99.8



$^{130}_{55}Cs_{75}$