^{134}Te β^- decay 1976Me07

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni	NDS 103, 1 (2004)	31-Jul-2004

Parent: ^{134}Te: E=0.0; $J^\pi=0^+$; $T_{1/2}$=41.8 min *8*; Q(β^-)=1513 *7*; %β^- decay=100.0

^{134}I Levels

The decay scheme is based on $\beta\gamma$-, $\gamma\gamma$-coincidence measurements.

E(level)†	J^π‡	$T_{1/2}$#	Comments
0.0	$(4)^+$	52.5 min *2*	$T_{1/2}$: from Adopted Levels.
44.40? *20*	$(5)^+$		
79.461 *11*	$(3)^+$	1.62 ns *10*	
180.871 *12*	$(2,3)^+$	<0.1 ns	
210.457 *15*	$(2,3)^+$	<0.15 ns	
645.471 *13*	$(2,3)^+$		
846.688 *16*	1^+		
923.431 *14*	1^+		
1106.466 *23*	1^+		

† From least-squares fit to Eγ.
‡ From Adopted Levels.
# From 1971Be54, unless otherwise noted.

β^- radiations

E(decay)†	E(level)	Iβ^-‡	Log *ft*	Comments
(407 *7*)	1106.466	14 *1*	4.40 *4*	av Eβ=120.9 *24*
6.1×10^2 *16*	923.431	44 *2*	4.45 *3*	av Eβ=185.7 *26*
7.3×10^2 *11*	846.688	42 *2*	4.65 *3*	av Eβ=214.2 *27*

† From $\beta\gamma$-coincidence (1977Lu06).
‡ Absolute intensity per 100 decays.

$\gamma(^{134}I)$

Iγ normalization: From Σ I(γ+ce)=100 to g.s..

Eγ	Iγ†@	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.#	δ	α&	Comments
(29.6)	<0.1	210.457	$(2,3)^+$	180.871	$(2,3)^+$	[M1]		3.79	
(44.4 *2*)		44.40?	$(5)^+$	0.0	$(4)^+$	M1		7.97	α(K)=6.83 *21*; α(L)=0.90 *3*; α(M)=0.180 *6*
76.83 *6*	0.93 *8*	923.431	1^+	846.688	1^+	[M1]		1.61	Eγ: from ^{134}I IT decay. α(K)=1.38 *5*; α(L)=0.181 *6*; α(M)=0.0363 *11*; α(N+..)=0.0089 *3*
79.445 *12*	71 *2*	79.461	$(3)^+$	0.0	$(4)^+$	M1+E2	0.12 *5*	1.50 *4*	α(K)=1.27 *2*; α(L)=0.180 *16*; α(M)=0.036 *4*; α(N+..)=0.0089 *8* Mult.: K/L=6.5 *8*, L2/L1<0.14, L3/L1<0.16 (1968Be63).

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^{134}Te β^- decay 1976Me07 (continued)

$\gamma(^{134}I)$ (continued)

E_γ	I_γ[†][@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
101.42 *3*	1.3 *3*	180.871	$(2,3)^+$	79.461	$(3)^+$	[M1+E2]	1.2 *5*	α(K)=0.9 *3*; α(L)=0.25 *17*; α(M)=0.05 *4*; α(N+..)=0.012 *9* Mult.: α(K)exp<4.3 (1968Be63).
131.05 *20*	0.6 *2*	210.457	$(2,3)^+$	79.461	$(3)^+$	[M1+E2]	0.52 *17*	α(K)=0.40 *10*; α(L)=0.09 *5*; α(M)=0.019 *11*; α(N+..)=0.0044 *25*
137.0[‡][a] *4*	0.3 *2*	180.871	$(2,3)^+$	44.40?	$(5)^+$	[E2]	0.582	α(K)=0.436 *13*; α(L)=0.116 *4*; α(M)=0.0242 *8*; α(N+..)=0.00564 *17*
180.891 *15*	62 *2*	180.871	$(2,3)^+$	0.0	$(4)^+$	M1,E2	0.18 *4*	α(K)exp=0.180 *25*; K/L=6.1 *21* α(K)=0.149 *25*; α(L)=0.027 *11*; α(M)=0.0055 *23*; α(N+..)=0.0013 *6*
183.05 *12*	2 *1*	1106.466	1^+	923.431	1^+	[M1+E2]	0.18 *4*	α(K)=0.144 *24*; α(L)=0.026 *10*; α(M)=0.0052 *22*; α(N+..)=0.0012 *5*
201.235 *15*	30 *1*	846.688	1^+	645.471	$(2,3)^+$	M1,E2	0.130 *23*	α(K)exp=0.115 *25* α(K)=0.108 *15*; α(L)=0.018 *7*; α(M)=0.0037 *14*; α(N+..)=0.0009 *3*
210.465 *16*	77 *4*	210.457	$(2,3)^+$	0.0	$(4)^+$	M1,E2	0.114 *18*	α(K)exp=0.093 *20* α(K)=0.094 *12*; α(L)=0.016 *5*; α(M)=0.0032 *11*; α(N+..)=0.00076 *24*
259.8 *3*	1.5 *3*	1106.466	1^+	846.688	1^+	[M1+E2]	0.060 *5*	α(K)=0.050 *3*; α(L)=0.0077 *17*; α(M)=0.0016 *4*; α(N+..)=0.00037 *8*
277.951 *8*	72 *3*	923.431	1^+	645.471	$(2,3)^+$	M1,E2	0.049 *3*	α(K)exp=0.037 *14* α(K)=0.0411 *15*; α(L)=0.0062 *12*; α(M)=0.00125 *24*; α(N+..)=0.00030 *6*
435.06 *4*	64 *3*	645.471	$(2,3)^+$	210.457	$(2,3)^+$	M1,E2	0.0137 *9*	α(K)exp=0.011 *2* α(K)=0.0117 *9*; α(L)=0.00159; α(M)=0.00032
460.997 *22*	33 *2*	1106.466	1^+	645.471	$(2,3)^+$			
464.64 *5*	16 *1*	645.471	$(2,3)^+$	180.871	$(2,3)^+$			
565.992 *13*	63 *3*	645.471	$(2,3)^+$	79.461	$(3)^+$			
636.26[‡] *10*	5.7 *7*	846.688	1^+	210.457	$(2,3)^+$			
645.4[‡] *1*	3.0 *3*	645.471	$(2,3)^+$	0.0	$(4)^+$			
665.85[‡] *10*	4.0 *6*	846.688	1^+	180.871	$(2,3)^+$			
712.97 *5*	16 *2*	923.431	1^+	210.457	$(2,3)^+$			
742.586 *18*	52 *2*	923.431	1^+	180.871	$(2,3)^+$			
767.20 *2*	100 *4*	846.688	1^+	79.461	$(3)^+$	(E2)		α(K)exp=0.0023 *5*
844.06 *5*	4 *1*	923.431	1^+	79.461	$(3)^+$			
896.02[‡] *10*	1.5 *4*	1106.466	1^+	210.457	$(2,3)^+$			
925.55 *7*	5.0 *5*	1106.466	1^+	180.871	$(2,3)^+$			
1027.0 *1*	1.5 *4*	1106.466	1^+	79.461	$(3)^+$			

† Average from 1976Me07, 1972Ke21, and 1968Be63.
‡ Observed in coincidence only.
# From α(exp) (1972Ke21) based on relative Iγ and I(ce(K)) normalized so that α(K)exp(527γ) in ^{135}Xe has the theoretical M4 value.
@ For absolute intensity per 100 decays, multiply by 0.295 *8*.
& 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.
a Placement of transition in the level scheme is uncertain.

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Decay Scheme

Intensities: I_γ per 100 parent decays