^{184}Tl ε decay 1976HaZH,1976Co24

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 111,275 (2010)	1-Oct-2009

Parent: ^{184}Tl: E=0.0; $T_{1/2}$=10.1 s *5*; Q(ε)=9460 *50*; %ε+%$β^+$ decay=97.9 *7*

^{184}Hg Levels

E(level)[†]	Jπ[#]	$T_{1/2}$[‡]
0.0	0^+	
366.52 *24*	2^+	
375.1 *3*	0^+	0.62 ns *21*
534.39 *24*	2^+	
653.3 *3*	4^+	
983.4 *4*	$(1,2^+)$	
993.2 *5*	6^+	
1088.6 *3*	4^+	
1412.0 *6*	8^+	

† From least-squares fit to Eγ.
‡ From 375ce(K)-γ(primarily 511γ and 608γ) delayed coin (centroid shift) (1976Co24).
# From Adopted Levels.

γ(^{184}Hg)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[&]	$I_{(\gamma+ce)}$[#]	Comments
118.8 *3*	@	653.3	4^+	534.39	2^+	[E2]	2.73 *5*		α(K)=0.510 *8*; α(L)=1.66 *3*; α(M)=0.433 *8*; α(N+..)=0.1255 *23* α(N)=0.1075 *20*; α(O)=0.0179 *4*; α(P)=7.53×10^{-5} *12*
159.3 *3*	<3	534.39	2^+	375.1	0^+	[E2]	0.880 *14*		α(K)=0.288 *5*; α(L)=0.443 *8*; α(M)=0.1151 *19*; α(N+..)=0.0334 *6* α(N)=0.0286 *5*; α(O)=0.00479 *8*; α(P)=3.66×10^{-5} *6*
168 *1*	@	534.39	2^+	366.52	2^+	E0+M1+E2	>1.80		Mult.: E0 component inferred from α(K)exp>α(K)(M1)=1.478 (1976Co24).
286.8 *3*	39 *4*	653.3	4^+	366.52	2^+	E2	0.1218		α(K)=0.0703 *10*; α(L)=0.0388 *6*; α(M)=0.00986 *15*; α(N+..)=0.00288 *5* α(N)=0.00245 *4*; α(O)=0.000422 *7*; α(P)=9.02×10^{-6} *13*
339.9 *3*	25 *3*	993.2	6^+	653.3	4^+	E2	0.0741		α(K)=0.0468 *7*; α(L)=0.0206 *3*; α(M)=0.00519 *8*; α(N+..)=0.001522 *22* α(N)=0.001292 *19*; α(O)=0.000224 *4*; α(P)=6.09×10^{-6} *9*
366.7 *3*	100	366.52	2^+	0.0	0^+	E2	0.0599		α(K)=0.0391 *6*; α(L)=0.01571 *23*; α(M)=0.00394 *6*; α(N+..)=0.001158 *17* α(N)=0.000981 *14*; α(O)=0.0001714 *25*; α(P)=5.12×10^{-6} *8*
375.2		375.1	0^+	0.0	0^+	E0		<17	Mult.: from observation of ce but no photons (1976Co24).
418.8 *3*	9 *1*	1412.0	8^+	993.2	6^+	E2	0.0420		α(K)=0.0288 *4*; α(L)=0.00998 *15*;

Continued on next page (footnotes at end of table)

^{184}Tl ε decay 1976HaZH,1976Co24 (continued)

γ(^{184}Hg) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	α&	Comments
								α(M)=0.00248 *4*; α(N+..)=0.000731 *11* α(N)=0.000618 *9*; α(O)=0.0001089 *16*; α(P)=3.80×10^{-6} *6*
534.2 *3*	16.8 *20*	534.39	2$^+$	0.0	0$^+$	(E2)	0.0230	α(K)=0.01690 *24*; α(L)=0.00463 *7*; α(M)=0.001132 *16*; α(N+..)=0.000335 *5* α(N)=0.000283 *4*; α(O)=5.06×10^{-5} *8*; α(P)=2.24×10^{-6} *4*
554.1 *3*	5.4 *8*	1088.6	4$^+$	534.39	2$^+$			
608.3 *3*	<11	983.4	(1,2$^+$)	375.1	0$^+$			I(608γ)/(I617G)≈1.3 (1976Co24); presence of impurity γ prevents a more precise determination.
616.8 *3*	<8	983.4	(1,2$^+$)	366.52	2$^+$			
722.2 *3*	3.3 *5*	1088.6	4$^+$	366.52	2$^+$			

† From 1976HaZH.
‡ From Adopted Gammas, except where noted.
# From intensity balance at the 375 level.
@ Transition was observed, but intensity is very low.
& 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