^{199}Pb IT decay (12.2 min) 1957An53,1956St05,1962Ju05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 108, 79 (2007)	15-Oct-2006

Parent: ^{199}Pb: E=424.1+x; J^π=(13/2$^+$); $T_{1/2}$=12.2 min *3*; %IT decay<100.0

^{199}Pb-%IT decay: The IT branch seems much stronger than the $\varepsilon+\beta^+$ branch, but the branching ratio is unknown.

1957An53, 1955An01, 1962Ju05: source produced by Tl(p,xn) followed by chem separation. Measured $T_{1/2}$, γ, ce.

1956St05: source produced by Pb(d,xn) followed by chem separation. Measured γ, x rays, ce.

Others:

1973JoZF, 1974JoZX: measured γ spectrum.

Additional information 1.

^{199}Pb Levels

E(level)	J^π †	$T_{1/2}$ †	Comments
0.0	3/2$^-$	90 min *10*	
0+x	(5/2$^-$)		
424.1+x	(13/2$^+$)	12.2 min *3*	%IT<100; %ε+%β^+>0 $T_{1/2}$: from 1957An53; other: 13 min *1* (1956St05).

† From 'Adopted Levels'.

γ(^{199}Pb)

E_γ	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α #	$I_{(\gamma+ce)}$ ‡	Comments
(x)		0+x	(5/2$^-$)	0.0	3/2$^-$				E_γ: x<9.3 (1962Ju05). Unobserved γ in cascade with 424γ has E<30 (1957An53); 9.3>E>46.4 (1962Ju05).
424.1 *8*	100	424.1+x	(13/2$^+$)	0+x	(5/2$^-$)	M4	4.0	<100	α(K)= 2.42; α(L)=1.24; α(M)=0.334; α(N+..)= 0.112 Mult.: from exp. K/L=1.9, (L1+L2)/L3=3.2 (1957An53), α(K)exp=2.4 *10* (K x ray/γ 1956St05). Theory: K/L=1.95, (L1+L2)/L3=2.80, α(K)=2.42.

† For absolute intensity per 100 decays, multiply by <0.196.

‡ For absolute intensity per 100 decays, multiply by <1.

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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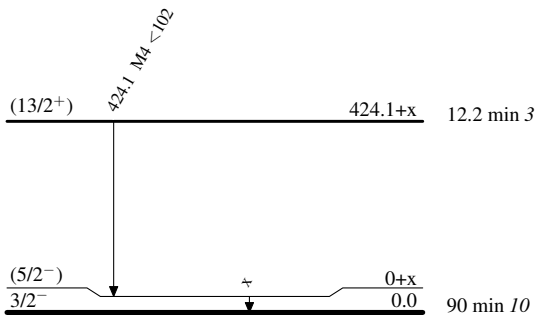
Legend

Decay Scheme

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

%IT<100.0

γ Decay (Uncertain)



$^{199}_{82}Pb_{117}$