^{129}La IT decay (0.56 s) 1969Al05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Janos Timar and Zoltan Elekes, Balraj Singh	NDS 121, 143 (2014)	31-May-2014

Parent: ^{129}La: E=172.33 *20*; J^{π}=(11/2$^-$); $T_{1/2}$=0.56 s *5*; %IT decay=100.0

1969Al05: source from ^{121}Sb(^{12}C,4n), ^{118,119,120}Sn(^{14}N,xn), ^{115}In(^{18}O,4n), E=50-110 MeV; excitation function, semi γ, scin γ, semi ce, HI-γ(t), HI-ce(t).

Others: 1970Co05, 1973Le09, 1992He03.

^{129}La Levels

E(level)†	J^{π}†	$T_{1/2}$†	Comments
0.0	(3/2$^+$)	11.6 min *2*	
68.18 *5*	(5/2$^+$)		
172.33 *20*	(11/2$^-$)	0.56 s *5*	%IT=100 $T_{1/2}$: from 1969Al05. Other: 0.56 s *6* (1973Le09).

† From Adopted Levels.

γ(^{129}La)

E_{γ}†	I_{γ}‡	E_i(level)	J_i^{π}	E_f	J_f^{π}	Mult.	α#	Comments
68.20 *6*	100	68.18	(5/2$^+$)	0.0	(3/2$^+$)	M1	3.25	α(K)=2.78 *4*; α(L)=0.378 *6*; α(M)=0.0786 *12* α(N)=0.01728 *25*; α(O)=0.00281 *4*; α(P)=0.000217 *3* Mult.: from α(L)exp=0.44 *20* (1969Al05).
104.0 *3*	18 *5*	172.33	(11/2$^-$)	68.18	(5/2$^+$)	E3	20.8 *5*	α(K)=5.24 *9*; α(L)=12.1 *3*; α(M)=2.79 *6* α(N)=0.591 *13*; α(O)=0.0817 *18*; α(P)=0.000262 *5* Mult.: from α(K)exp=5.7 *19*, K:L:M+N=51 *11*:100:26 *8* (1969Al05).

† From Adopted Gammas; 54.4-keV γ reported by 1970Co05 belongs to the ^{73}Ge IT decay ($T_{1/2}$=0.54 s) (1973Le09).

‡ For absolute intensity per 100 decays, multiply by 0.238 *6*.

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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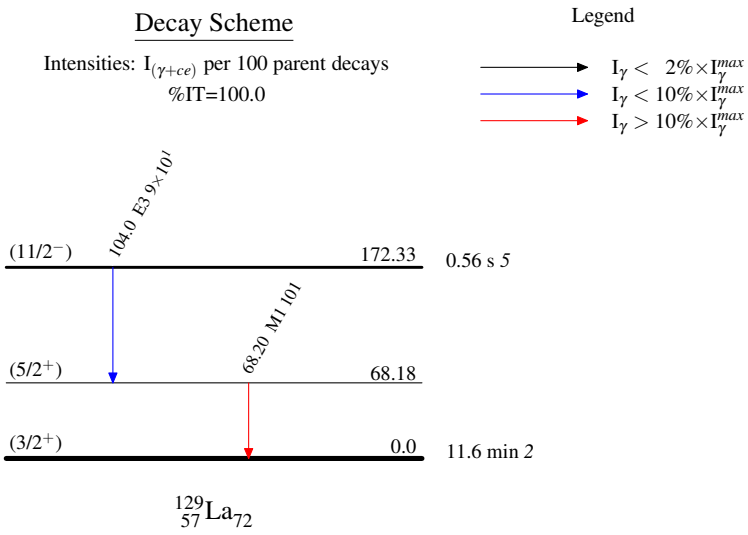
Decay Scheme

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

%IT=100.0



$^{129}_{57}La_{72}$