^{150}La β^- decay   **1995Ok02**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, A. A. Sonzogni	NDS 114, 435 (2013)	1-Apr-2013

Parent: ^{150}La: E=0.0; J$^\pi$=(3$^+$); T$_{1/2}$=0.59 s *11*; Q(β^-)=8464 *SY*; %β^- decay=100.0

1995Ok02: Source from ^{235}U(n,f) thermal. Two Ge detectors and two plastic scintillators, β^- γ coincidences.

α: Additional information 1.

^{150}Ce Levels

E(level)	J$^{\pi\dagger}$	T$_{1/2}$†	Comments
0.0	0$^+$	4.0 s *6*	%β^-=100
97.00 *10*	2$^+$	3.3 ns *8*	
305.70 *22*	4$^+$	0.26 ns *10*	

† From Adopted Levels.

β^- radiations

E(decay)	E(level)	I$\beta^{-\dagger\ddagger}$	Log ft	Comments
(8158 *SY*)	305.70	28.5 *10*	5.66 *3*	av Eβ=3317.1
(8367 *SY*)	97.00	68.8 *14*	5.33 *3*	av Eβ=3414.3

† From γ + ce intensity balance.
‡ Absolute intensity per 100 decays.

γ(^{150}Ce)

Iγ normalization: assuming a) No β^- feeding to g.s.; b) absolute intensity of 97 keV γ equal to 97.3 *3* as a result of 2.7% probability of β^- delayed neutrons.

E$_\gamma$	I$_\gamma$$^{\dagger\#}$	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.‡	α	Comments
97.0 *1*	29.57 *9*	97.00	2$^+$	0.0	0$^+$	E2	2.29	α(K)=1.328 *19*; α(L)=0.751 *11*; α(M)=0.1678 *25*; α(N)=0.0359 *6*; α(O)=0.00506 *8* α(P)=7.01×10^{-5} *10*; α(N+..)=0.0411 *6*
208.7 *2*	24.6 *9*	305.70	4$^+$	97.00	2$^+$	E2	0.1593	α(K)=0.1218 *18*; α(L)=0.0295 *5*; α(M)=0.00642 *10*; α(N)=0.001392 *21*; α(O)=0.000206 *3* α(P)=7.54×10^{-6} *11*; α(N+..)=0.001605 *24*

† From 1995Ok02.
‡ From adopted gammas.
$^\#$ Absolute intensity per 100 decays.

^{150}**La** β^- **decay**   **1995Ok02**

Decay Scheme

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

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

(3$^+$)   0.0   0.59 s 11

Q_{β^-}=8464 SY %β^-=100.0

$^{150}_{57}$La$_{93}$

$\underline{I\beta^-}$ $\underline{Log\,ft}$

28.5   5.66   4$^+$ 208.7 E2 28.5   305.70   0.26 ns 10

68.8   5.33   2$^+$ 97.0 E2 97.3   97.00   3.3 ns 8

0$^+$ 0.0   4.0 s 6

$^{150}_{58}$Ce$_{92}$