

$^{133}\text{I}$  IT decay (9 s) [1970BeZT](#),[1970OsZZ](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov and A. Rodionov, F. G. Kondev		NDS 112, 855 (2011)	31-Oct-2010

Parent:  $^{133}\text{I}$ : E=1634.148 10;  $J^\pi=(19/2^-)$ ;  $T_{1/2}=9$  s 2; %IT decay=100.0

[1970BeZT](#),[1970OsZZ](#):  $^{133}\text{I}$  IT decay ( $T_{1/2}=9$  s) [from  $^{235}\text{U}(n,F)$ ]; measured  $T_{1/2}$ ,  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin, E(ce); deduced levels,  $J^\pi$ . OSIRIS facility, Ge(Li) detectors.

 $^{133}\text{I}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>†</sup>	$T_{1/2}$	Comments
0.0	$7/2^+$	20.83 h 8	$T_{1/2}$ : from Adopted Levels.
912.671 4	$11/2^+$		
1560.103 10	$15/2^+$		
1634.148 10	$(19/2^-)$	9 s 2	$T_{1/2}$ : from $I_\gamma(t)$ , $I_\beta(t)$ ( <a href="#">1970OsZZ</a> ).

<sup>†</sup> From Adopted Levels.

 $\gamma(^{133}\text{I})$ 

$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>‡#</sup>	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>†</sup>	$\alpha$ <sup>@</sup>	Comments
74.05 1	4.07 6	1634.148	$(19/2^-)$	1560.103	$15/2^+$	(M2)	23.6	$\alpha(\text{K})=18.4$ 3; $\alpha(\text{L})=4.12$ 6; $\alpha(\text{M})=0.874$ 13; $\alpha(\text{N}+..)=0.196$ 3 $\alpha(\text{N})=0.1763$ 25; $\alpha(\text{O})=0.0197$ 3 $\alpha=0.00428$ 6; $\alpha(\text{K})=0.00367$ 6; $\alpha(\text{L})=0.000495$ 7; $\alpha(\text{M})=9.99\times 10^{-5}$ 14; $\alpha(\text{N}+..)=2.24\times 10^{-5}$ 4
647.51 2	99.57 13	1560.103	$15/2^+$	912.671	$11/2^+$	E2	0.00428 6	$\alpha(\text{N})=2.01\times 10^{-5}$ 3; $\alpha(\text{O})=2.29\times 10^{-6}$ 4 $\alpha=0.00188$ 3; $\alpha(\text{K})=0.001619$ 23; $\alpha(\text{L})=0.000207$ 3; $\alpha(\text{M})=4.17\times 10^{-5}$ 6; $\alpha(\text{N}+..)=9.39\times 10^{-6}$ 14 $\alpha(\text{N})=8.41\times 10^{-6}$ 12; $\alpha(\text{O})=9.75\times 10^{-7}$ 14
1559 1		1560.103	$15/2^+$	0.0	$7/2^+$			

<sup>†</sup> From adopted gammas.

<sup>‡</sup> From intensity balance and  $\alpha$  by assuming  $I(\gamma+\text{ce})=100$ .

# Absolute intensity per 100 decays.

@ Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on  $\gamma$ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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## Decay Scheme

Intensities: Relative  $I_\gamma$   
 %IT=100.0

## Legend

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

