

$^{187}\text{Au IT decay (2.3 s)}$ **1983Br26,1978Bo05**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

Parent: ^{187}Au : E=120.6 2; $J^\pi=9/2^{(-)}$; $T_{1/2}=2.3$ s I ; %IT decay=100.0

1983Br26: On-line mass-separated sources of ^{187m}Au from $^{178}\text{Hf}(^{14}\text{N},5\text{n})$ reaction, E=103 MeV, on natural Hf foils at Oak Ridge Isochronous Cyclotron UNISOR facility.

1978Bo05: On-line mass separated ^{187}Hg from Au(p,xn)Hg; Detector: Ge(Li), Si(Li); Measured $E\gamma$, $I\gamma$, α , $\gamma\gamma$ coin, ceG-coin, Gce (t), deduced levels, J , π , mult.

 $^{187}\text{Au Levels}$

E(level)	J^π	$T_{1/2}$	Comments
0.0	$1/2^{(+)}$		
19.5 2	$3/2^{(+)}\dagger\ddagger$	6 ns I	$T_{1/2}$: From Ce(19.5L)(t) (1978Bo05).
120.6 2	$9/2^{-}\ddagger$	2.3 s I	$T_{1/2}$: From Ce(t)– 1983Br26 . The uncertainty is at 95% confidence level.

\dagger For (prolate) configuration: $3/2^+[402]$ (19.5 keV level) and configuration: $1/2^+[400]$ (g.s.) $B(M1)=0.0018$; and for (oblate) configuration: $3/2^+[431]$ (19.5 keV) and configuration: $1/2^+[431]$ (g.s.) $B(M1)=0.59$, calculated by [1978Bo05](#).

\ddagger The hindrance of 101.1γ E3 isomeric transition is consistent with the analogous h9/2 to d3/2 E3 transitions in ^{191}Tl to ^{201}Tl .

 $\gamma(^{187}\text{Au})$

E_γ^\dagger	$I_\gamma^{\dagger\#}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	$\alpha @$	$I_{(\gamma+ce)}^{\#}$	Comments
19.5 4		19.5	$3/2^{(+)}$	0.0	$1/2^{(+)}$	(M1+E2)	7×10^3 6		$\alpha(L)=5.E3$ 5; $\alpha(M)=1.3 \times 10^3$ 13; $\alpha(N+..)=4.E2$ 4 $\alpha(N)=3.E2$ 3; $\alpha(O)=5.E1$ 5; $\alpha(P)=0.083$ 6
101.1 2	0.83 2	120.6	$9/2^-$	19.5	$3/2^{(+)}$	E3	119.7 22	100	$\alpha(K)=0.927$ 14; $\alpha(L)=87.3$ 16; $\alpha(M)=24.5$ 5; $\alpha(N+..)=7.07$ 13 $\alpha(N)=6.10$ 11; $\alpha(O)=0.970$ 18; $\alpha(P)=0.00184$ 3
									Mult.: $\alpha(L)\exp=75$ 20, $L1/L2 < 0.1$, $L2/L3 \approx 1.3$ (1978Bo05).

\dagger From [1978Bo05](#).

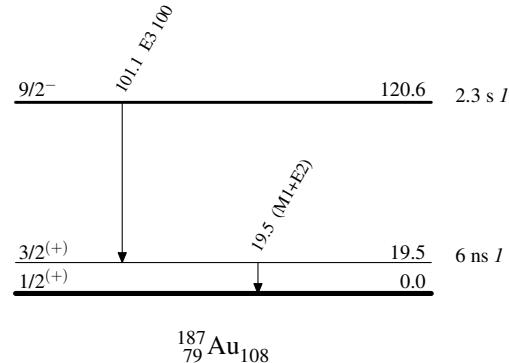
\ddagger Deduced from TI/(1+CC).

Absolute intensity per 100 decays.

@ 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.

$^{187}\text{Au IT decay (2.3 s)}$ **1983Br26,1978Bo05**Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0

 $^{187}_{79}\text{Au}_{108}$