^{195}Au IT decay (30.5 s) 1967Fr05,1955Jo22

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 121, 395 (2014)	1-Mar-2014

Parent: ^{195}Au: E=318.58 *4*; $J^{\pi}=11/2^{-}$; $T_{1/2}$=30.5 s *2*; %IT decay=100.0

1967Fr05: measured Eγ, Iγ, and $T_{1/2}$.

1955Jo22: measured E(ce), I(ce), and $T_{1/2}$.

^{195}Au Levels

E(level)†	J^{π}‡	$T_{1/2}$‡	Comments
0.0	$3/2^{+}$	186.01 d *6*	
61.44 *3*	$1/2^{+}$		
261.79 *3*	$5/2^{+}$		
318.58 *4*	$11/2^{-}$	30.5 s *2*	%IT=100 g=+1.123 *17* (1981Ha27,1983Li21)

† From scheme and Eγ using least-squares fit to data.

‡ From Adopted Levels.

^{195}Au IT decay (30.5 s) 1967Fr05,1955Jo22 (continued)

γ(^{195}Au)

Iγ normalization: from I(γ+ce)(200γ+261γ+318γ)=100.

E_γ †	I_γ ‡#@	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	δ †	α &	$I_{(\gamma+ce)}$ @	Comments
56.80 *3*	0.0440 *7*	318.58	11/2$^-$	261.79	5/2$^+$	E3		3.29×10^3	144.8 *7*	ce(L)/(γ+ce)=0.722 *8*; ce(M)/(γ+ce)=0.215 *4*; ce(N+)/(γ+ce)=0.0625 *13* I_γ: from I(γ+ce) and α. $I_{(\gamma+ce)}$: from intensity balance at the 262 level.
61.46 *3*	0.251 *11*	61.44	1/2$^+$	0.0	3/2$^+$	M1+E2	0.45 *1*	12.2 *3*	3.31 *12*	ce(L)/(γ+ce)=0.699 *12*; ce(M)/(γ+ce)=0.174 *6*; ce(N+)/(γ+ce)=0.0505 *17* I_γ: from I(γ+ce) and α. $I_{(\gamma+ce)}$: from intensity balance at the 61 level.
200.38 *4*	2.41 *9*	261.79	5/2$^+$	61.44	1/2$^+$	E2		0.372	3.31 *12*	ce(K)/(γ+ce)=0.1231 *16*; ce(L)/(γ+ce)=0.1112 *15*; ce(M)/(γ+ce)=0.0286 *4*; ce(N+)/(γ+ce)=0.00820 *12* I_γ: from Iγ data of 1971Er03, 1974Fa06, 1973Vi09, and I(ce) data of 1973Vi09 and adopted conversion coefficients. $T_{1/2}$(200γ)>1 ms, <1 s (1974PoZQ).
261.75 *4*	100	261.79	5/2$^+$	0.0	3/2$^+$	M1+E2	0.51 *1*	0.415 *7*	141.5 *7*	ce(K)/(γ+ce)=0.235 *3*; ce(L)/(γ+ce)=0.0443 *7*; ce(M)/(γ+ce)=0.01044 *16*; ce(N+)/(γ+ce)=0.00309 *5* $I_{(\gamma+ce)}$: from Iγ and α. α(K)exp: 0.35 *5* (1967Fr05), 0.27 *3* (1955Jo22). Other: ^{195}Hg ε decay. δ: −0.39 *3* (1978DeZE).
318.60 *10*	0.064 *3*	318.58	11/2$^-$	0.0	3/2$^+$	M4		11.67	0.81 *3*	ce(K)/(γ+ce)=0.490 *7*; ce(L)/(γ+ce)=0.318 *5*; ce(M)/(γ+ce)=0.0872 *16*; ce(N+)/(γ+ce)=0.0261 *5* I_γ: from I(γ+ce) and α. $I_{(\gamma+ce)}$: from weighted average from I(ce) data for 318γ relative to the 261γ and 56γ from 1973Vi09 and Iγ/Iγ(261γ) data of 1973Vi09 1971Fr03, 1966Ha47, and 1974Fa06.

† Mainly from ^{195}Hg ε decay studies.
‡ From Iγ(200γ)/Iγ(261γ), Iγ(318γ)/Iγ(56γ). The requirement of an intensity balance at each level in the known decay scheme, and adopted conversion data. Setting Iγ(261γ)=100.
# I(K x ray)/Iγ(261.7γ)=0.334 *50* (1967Fr05).
@ For absolute intensity per 100 decays, multiply by 0.687 *3*.
& 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.

$^{195}_{79}Au_{116}$-2

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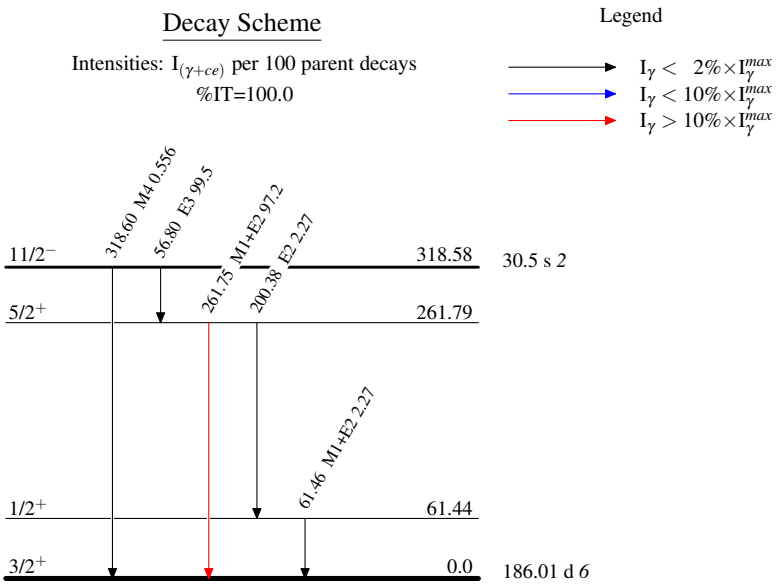
Decay Scheme

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

%IT=100.0



$^{195}_{79}Au_{116}$