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

1 Decay Scheme

Au-195 disintegrates by electron capture transition to the ground state level and excited levels in Pt-195.
L'or 195 se désintègre par capture électronique vers l'état fondamental et des niveaux excités du platine 195.

2 Nuclear Data

$T_{1/2}(^{195}$Au$)$	:	184,7	(14)	d
$Q^{+}(^{195}$Au$)$	:	226,8	(10)	keV

2.1 Electron Capture Transitions

	Energy keV	Probability × 100	Nature	lg ft	P_K	P_L	P_{M+}
$\epsilon_{0,4}$	15,4 (10)	0,0210 (18)	Unique 1st Forbidden	7,1		0,05 (5)	0,95 (5)
$\epsilon_{0,3}$	27,3 (10)	0,0149 (14)	Unique 1st Forbidden	8,1		0,50 (2)	0,50 (2)
$\epsilon_{0,2}$	97 (1)	32,8 (30)	1st Forbidden	6,3	0,178 (12)	0,587 (9)	0,235 (4)
$\epsilon_{0,1}$	127,9 (10)	57,6 (35)	Unique 1st Forbidden	6,5	0,452 (6)	0,398 (4)	0,1499 (18)
$\epsilon_{0,0}$	226,8 (10)	9,5 (4)	1st Forbidden	8,1	0,6851 (10)	0,2336 (7)	0,0813 (3)

2.2 Gamma Transitions and Internal Conversion Coefficients

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_K	α_L	α_M	α_T
$\gamma_{2,1}$(Pt)	30,895 (6)	30,5 (30)	M1+0,02%E2		28,7 (5)	6,65 (11)	37,3 (6)
$\gamma_{1,0}$(Pt)	98,882 (4)	88,1 (16)	M1+1,5%E2	5,59 (8)	0,977 (16)	0,227 (4)	6,86 (10)
$\gamma_{2,0}$(Pt)	129,777 (5)	2,33 (8)	E2	0,467 (7)	0,948 (14)	0,245 (4)	1,729 (25)
$\gamma_{3,0}$(Pt)	199,526 (12)	0,0149 (14)	M1+59%E2	0,42 (6)	0,1374 (25)	0,0338 (9)	0,60 (6)
$\gamma_{4,0}$(Pt)	211,398 (6)	0,0210 (18)	M1+12,6%E2	0,595 (13)	0,1090 (16)	0,0255 (4)	0,737 (14)

3 Atomic Data

3.1 Pt

ω_K	:	0,959	(4)
$\bar{\omega}_L$	:	0,331	(13)
n_{KL}	:	0,818	(4)

3.1.1 X Radiations

		Energy keV		Relative probability
X_K				
	$K\alpha_2$	65,123		58,5
	$K\alpha_1$	66,833		100
	$K\beta_3$	75,369	}	
	$K\beta_1$	75,749	}	
	$K\beta_5''$	76,234	}	33,6
	$K\beta_2$	77,786	}	
	$K\beta_4$	78,07	}	9,6
	$KO_{2,3}$	78,337	}	
X_L				
	$L\ell$	8,2683		
	$L\alpha$	9,362 – 9,4423		
	$L\eta$	9,9768		
	$L\beta$	10,8411 – 11,2344		
	$L\gamma$	12,5496 – 13,3617		

3.1.2 Auger Electrons

	Energy keV	Relative probability
Auger K		
KLL	50,399 – 55,021	100
KLX	61,116 – 66,829	54,6
KXY	71,80 – 78,39	7,45
Auger L	5,07 – 14,25	

4 Electron Emissions

		Energy keV		Electrons per 100 disint.
e_{AL}	(Pt)	5,07 - 14,25		129 (8)
e_{AK}	(Pt)			4,0 (5)
	KLL	50,399 - 55,021	}	
	KLX	61,116 - 66,829	}	
	KXY	71,80 - 78,39	}	
$ec_{2,1\ L}$	(Pt)	17,014 - 19,331		23,0 (23)
$ec_{1,0\ K}$	(Pt)	20,487 (4)		62,7 (12)
$ec_{2,1\ M}$	(Pt)	27,597 - 28,774		5,3 (5)
$ec_{2,1\ N}$	(Pt)	30,171 - 30,824		1,32 (13)
$ec_{2,0\ K}$	(Pt)	51,382 (5)		0,399 (15)
$ec_{1,0\ L}$	(Pt)	85,002 - 87,318		10,95 (23)
$ec_{1,0\ M}$	(Pt)	95,584 - 96,761		2,54 (6)
$ec_{1,0\ N}$	(Pt)	98,158 - 98,811		0,630 (14)
$ec_{2,0\ L}$	(Pt)	115,896 - 118,213		0,81 (3)
$ec_{2,0\ M}$	(Pt)	126,479 - 127,656		0,209 (8)
$ec_{2,0\ N}$	(Pt)	129,053 - 129,706		0,0510 (19)

5 Photon Emissions

5.1 X-Ray Emissions

		Energy keV		Photons per 100 disint.	
XL	(Pt)	8,2683 — 13,3617		53,1 (24)	
$XK\alpha_2$	(Pt)	65,123		27,4 (17)	} $K\alpha$
$XK\alpha_1$	(Pt)	66,833		46,9 (29)	}
$XK\beta_3$	(Pt)	75,369	}		
$XK\beta_1$	(Pt)	75,749	}	15,8 (10)	$K'\beta_1$
$XK\beta_5''$	(Pt)	76,234	}		
$XK\beta_2$	(Pt)	77,786	}		
$XK\beta_4$	(Pt)	78,07	}	4,51 (30)	$K'\beta_2$
$XKO_{2,3}$	(Pt)	78,337	}		

5.2 Gamma Emissions

	Energy keV	Photons per 100 disint.
$\gamma_{2,1}$(Pt)	30,895 (7)	0,80 (8)
$\gamma_{1,0}$(Pt)	98,882 (4)	11,21 (15)
$\gamma_{2,0}$(Pt)	129,777 (5)	0,854 (29)
$\gamma_{3,0}$(Pt)	199,526 (12)	0,0093 (8)
$\gamma_{4,0}$(Pt)	211,398 (6)	0,0121 (10)

6 References

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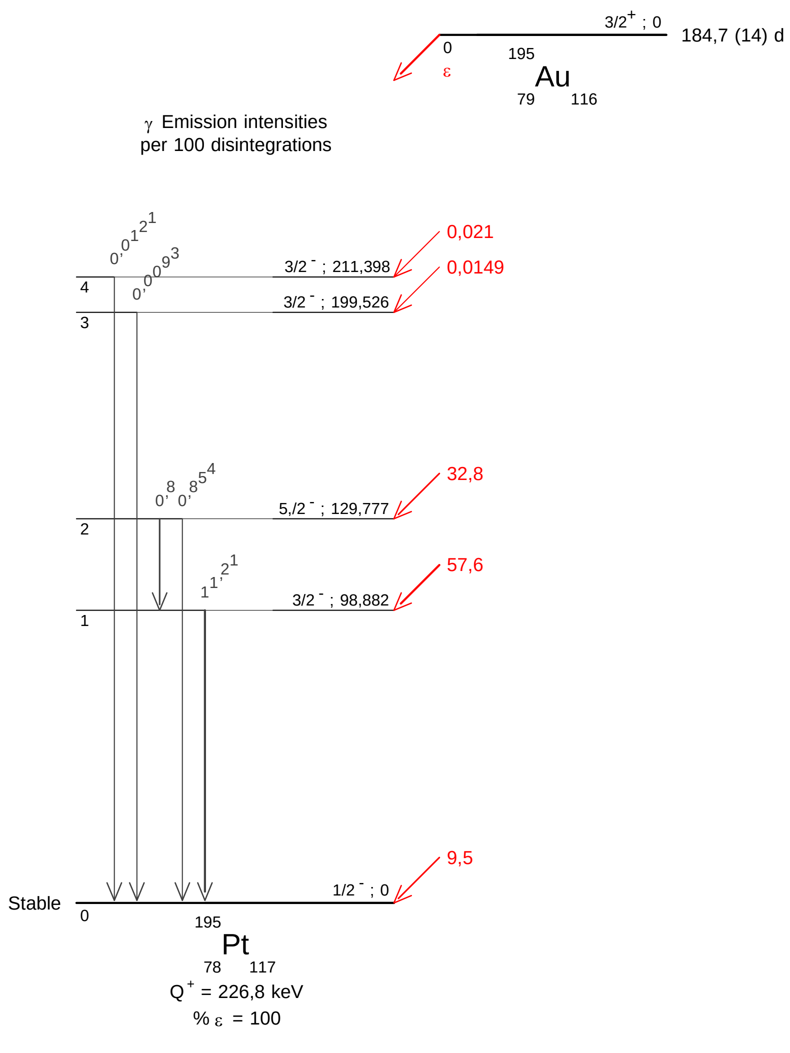
3/2+ ; 0
184,7 (14) d
0
ε
195
Au
79
116
γ Emission intensities
per 100 disintegrations
0,0121
0,0093
3/2 - ; 211,398
0,021
3/2 - ; 199,526
0,0149
4
3
0,8
0,854
5/2 - ; 129,777
32,8
2
11,21
3/2 - ; 98,882
57,6
1
9,5
1/2 - ; 0
Stable
0
195
Pt
78
117
Q+ = 226,8 keV
% ε = 100