$^{216}_{84}\mathrm{Po}_{132}$

1 Decay Scheme

Po-216 decays (100%) by alpha emission to the Pb-212 fundamental level.
Le polonium 216 se désintègre (100%) par émission alpha vers le niveau fondamental de plomb 212.

2 Nuclear Data

$T_{1/2}(^{216}\mathrm{Po})$	:	0,150	(5)	s
$T_{1/2}(^{212}\mathrm{Pb})$	:	10,64	(1)	h
$Q^{\alpha}(^{216}\mathrm{Po})$	:	6906,52	(51)	keV

2.1 α Transitions

	Energy keV	Probability × 100	F
$\alpha_{0,1}$	6101,6 (10)	0,0019 (3)	34,7
$\alpha_{0,0}$	6906,52 (50)	99,9981 (3)	1

2.2 Gamma Transitions and Internal Conversion Coefficients

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_K	α_L	α_M+	α_T
$\gamma_{1,0}$(Pb)	804,9 (5)	0,0019 (3)	[E2]	0,0081 (2)	0,00180 (4)	0,00050 (1)	0,0104 (2)

3 Atomic Data

3.1 Pb

ω_K	:	0,963	(4)
$\bar{\omega}_L$	:	0,379	(15)
n_{KL}	:	0,811	(5)

3.1.1 X Radiations

		Energy keV		Relative probability
X_K				
	$K\alpha_2$	72,8049		59
	$K\alpha_1$	74,97		100
	$K\beta_3$	84,451	}	
	$K\beta_1$	84,937	}	
	$K\beta_5''$	85,47	}	34
	$K\beta_2$	87,238	}	
	$K\beta_4$	87,58	}	10,3
	$KO_{2,3}$	87,911	}	
X_L				
	$L\ell$	9,184		
	$L\alpha$	10,45 – 10,551		
	$L\eta$	11,349		
	$L\beta$	12,142 – 13,015		
	$L\gamma$	14,765 – 15,216		

3.1.2 Auger Electrons

	Energy keV	Relative probability
Auger K		
KLL	56,03 – 61,67	100
KLX	68,18 – 74,97	54
KXY	80,3 – 88,0	7,7
Auger L	5,26 – 10,40	3060

4 α Emissions

	Energy keV	Probability × 100
$\alpha_{0,1}$	5988,6 (10)	0,0019 (3)
$\alpha_{0,0}$	6778,6 (5)	99,9981 (3)

5 Electron Emissions

		Energy keV	Electrons per 100 disint.
e_{AL}	(Pb)	5,26 - 10,40	0,0000107 (10)
e_{AK}	(Pb)		0,00000057 (11)
	KLL	56,03 - 61,67	}
	KLX	68,18 - 74,97	}
	KXY	80,3 - 88,0	}

6 Photon Emissions

6.1 X-Ray Emissions

		Energy keV	Photons per 100 disint.	
XL	(Pb)	9,184 — 15,216	0,0000060 (6)	
$XK\alpha_2$	(Pb)	72,8049	0,0000043 (7)	} $K\alpha$
$XK\alpha_1$	(Pb)	74,97	0,0000073 (12)	}
$XK\beta_3$	(Pb)	84,451	}	
$XK\beta_1$	(Pb)	84,937	} 0,0000025 (4)	$K'\beta_1$
$XK\beta_5''$	(Pb)	85,47	}	
$XK\beta_2$	(Pb)	87,238	}	
$XK\beta_4$	(Pb)	87,58	} 0,00000075 (13)	$K'\beta_2$
$XKO_{2,3}$	(Pb)	87,911	}	

6.2 Gamma Emissions

	Energy keV	Photons per 100 disint.
$\gamma_{1,0}$(Pb)	804,9 (5)	0,0019 (3)

7 Main Production Modes

$\mathrm{Bi}-216(\beta^-)\mathrm{Po}-216$
$\mathrm{Th}-228$ α decays

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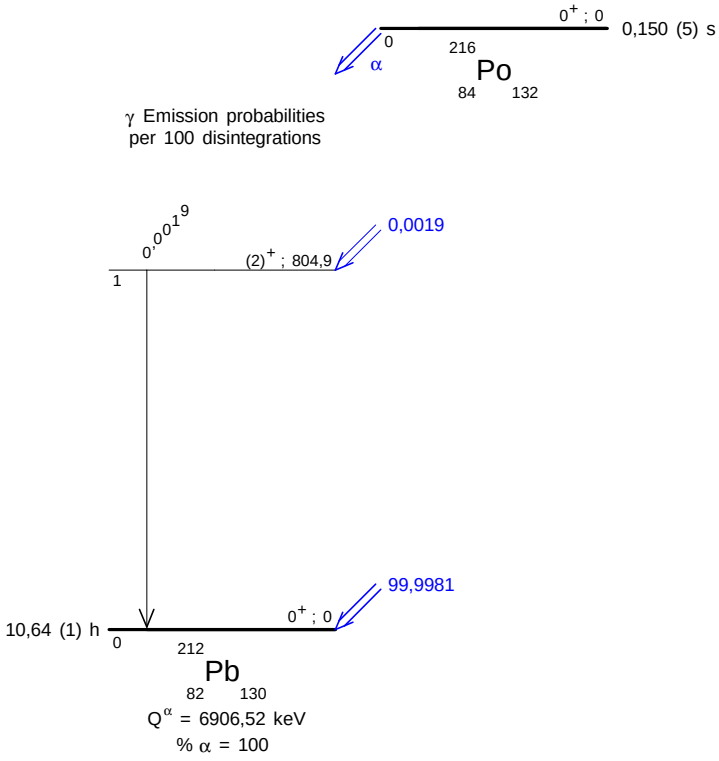
0+ ; 0
0,150 (5) s
0
216
α
Po
84
132
γ Emission probabilities
per 100 disintegrations
0,0019
(2)+ ; 804,9
1
99,9981
0+ ; 0
10,64 (1) h
0
212
Pb
82
130
Q α = 6906,52 keV
% α = 100