$^{210}_{82}\mathrm{Pb}_{128}$

1 Decay Scheme

Pb-210 disintegrates by beta minus emission to the excited level and to the ground state level of Bi-210. A weak alpha transition to the Hg-206 ground state has been observed.
Le plomb 210 se désintègre par émission bêta moins vers le niveau excité et le niveau fondamental du bismuth 210. Une transition alpha de très faible intensité (1,9(4) E-6 %) vers le niveau fondamental du mercure 206 a été mise en évidence.

2 Nuclear Data

$T_{1/2}(^{210}\mathrm{Pb})$	:	22,23	(12)	a
$T_{1/2}(^{210}\mathrm{Bi})$	:	5,012	(5)	d
$T_{1/2}(^{206}\mathrm{Hg})$	:	8,32	(7)	min
$Q^-(^{210}\mathrm{Pb})$	:	63,5	(5)	keV
$Q^\alpha(^{210}\mathrm{Pb})$	:	3792	(20)	keV

2.1 α Transitions

	Energy keV	Probability × 100	F
$\alpha_{0,0}$	3792 (20)	0,0000019 (4)	1

2.2 β^- Transitions

	Energy keV	Probability × 100	Nature	lg ft
$\beta^-_{0,1}$	17,0 (5)	80,2 (13)	1st Forbidden	5,5
$\beta^-_{0,0}$	63,5 (5)	19,8 (13)	1st Forbidden	7,8

2.3 Gamma Transitions and Internal Conversion Coefficients

	Energy keV	$P_{\gamma+ce} \times 100$	Multipolarity	α_L	α_M	α_T
$\gamma_{1,0}$(Bi)	46,539 (1)	80,2 (13)	M1	13,64 (19)	3,21 (5)	17,86 (25)

3 Atomic Data

3.1 Bi

ω_K : 0,964 (4)
$\bar{\omega}_L$: 0,391 (16)
$\bar{\omega}_M$: 0,0365 (20)
n_{KL} : 0,809 (5)
$\bar{n}_{LM}$: 1,29 (4)

3.1.1 X Radiations

		Energy keV		Relative probability
X_K				
	$K\alpha_2$	74,8157		59,77
	$K\alpha_1$	77,1088		100
	$K\beta_3$	86,835	}	
	$K\beta_1$	87,344	}	
	$K\beta_5''$	87,862	}	34,25
	$K\beta_2$	89,732	}	
	$K\beta_4$	90,074	}	10,48
	$KO_{2,3}$	90,421	}	
X_L				
	$L\ell$	9,4207		
	$L\alpha$	10,7308 – 10,8387		
	$L\eta$	11,7127		
	$L\beta$	12,4814 – 13,8066		
	$L\gamma$	14,7735 – 15,7084		

3.1.2 Auger Electrons

	Energy keV	Relative probability
Auger L	5,3 – 10,7	

4 α Emissions

	Energy keV	Probability × 100
$\alpha_{0,0}$	3720 (20)	0,0000019 (4)

5 Electron Emissions

		Energy keV	Electrons per 100 disint.
e_{AL}	(Bi)	5,3 - 10,7	36,0 (9)
e_{AK}	(Bi)		
$ec_{1,0\ L}$	(Bi)	30,152 - 33,120	58 (1)
$ec_{1,0\ M}$	(Bi)	42,540 - 43,959	13,65 (25)
$ec_{1,0\ N}$	(Bi)	45,601 - 46,382	3,50 (6)
$\beta^-_{0,1}$	max:	17,0 (5)	80,2 (13)
$\beta^-_{0,1}$	avg:	4,3 (1)	
$\beta^-_{0,0}$	max:	63,5 (5)	19,8 (13)
$\beta^-_{0,0}$	avg:	16,3 (1)	

6 Photon Emissions

6.1 X-Ray Emissions

		Energy keV	Photons per 100 disint.
XL	(Bi)	9,4207 — 15,7084	22,0 (5)

6.2 Gamma Emissions

	Energy keV	Photons per 100 disint.
$\gamma_{1,0}$(Bi)	46,539 (1)	4,252 (40)

7 Main Production Modes

Ra – 226 decay chain

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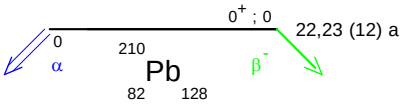

γ Emission intensities
per 100 disintegrations