



## 1 Decay Scheme

Po-218 disintegrates mainly (99,978 (3) %) by alpha emission to the Pb-214 ground state. A weak beta minus emission (0,022 (3) %) to At-218 has been pointed out.

*Le polonium 218 se désintègre par émission alpha principalement (99,978 (3) %) vers le niveau fondamental de plomb 214. Une désintégration bêta moins vers l'astate 218 de probabilité 0,022 (3) % a été mise en évidence.*

## 2 Nuclear Data

$T_{1/2}(^{218}\text{Po})$	:	3,071	(22)	min
$T_{1/2}(^{218}\text{At})$	:	1,4	(2)	s
$T_{1/2}(^{214}\text{Pb})$	:	26,916	(44)	min
$Q^{-}(^{218}\text{Po})$	:	260	(12)	keV
$Q^{\alpha}(^{218}\text{Po})$	:	6114,68	(9)	keV

### 2.1 $\alpha$ Transitions

	Energy keV	Probability $\times 100$	F
$\alpha_{0,1}$	5277,68 (9)	0,0011 (11)	7,5
$\alpha_{0,0}$	6114,68 (9)	99,9769 (32)	1

### 2.2 $\beta^{-}$ Transitions

	Energy keV	Probability $\times 100$
$\beta_{0,0}^{-}$	260 (12)	0,022 (3)

## 2.3 Gamma Transitions and Internal Conversion Coefficients

	Energy keV	$P_{\gamma+ce}$ $\times 100$	Multipolarity
$\gamma_{1,0}(\text{Pb})$	837 (2)	0,0011 (11)	(E2)

## 3 $\alpha$ Emissions

	Energy keV	Probability $\times 100$
$\alpha_{0,1}$	5181 (2)	0,0011 (11)
$\alpha_{0,0}$	6002,35 (9)	99,9769 (32)

## 4 Electron Emissions

	Energy keV	Electrons per 100 disint.
$\beta_{0,0}^-$	max: 260 (12)	0,022 (3)
$\beta_{0,0}^-$	avg: 73 (4)	

## 5 Photon Emissions

### 5.1 Gamma Emissions

	Energy keV	Photons per 100 disint.
$\gamma_{1,0}(\text{Pb})$	836 (2)	0,0011 (11)

## 6 Main Production Modes

$\left\{ \begin{array}{l} \text{Ra} - 226 \text{ decay chain} \\ \text{Possible impurities : Po} - 214, \text{ Po} - 210. \end{array} \right.$

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