



1 Decay Scheme

At-218 disintegrates by alpha emission to Bi-214 mainly . Gamma transitions between the Bi-214 levels have not been observed. The disintegration by beta minus emission to Rn-218 was measured.

L'astate 218 se désintègre principalement par émission alpha vers des niveaux excités et le niveau fondamental de bismuth 214. Des transitions gamma entre les niveaux de bismuth 214 n'ont pas été mises en évidence. Une désintégration par émission bêta moins d'intensité 0,1% vers le radon 218 a été mesurée.

2 Nuclear Data

$T_{1/2}(^{218}\text{At})$:	1,4	(2)	s
$T_{1/2}(^{218}\text{Rn})$:	36,0	(19)	10^{-3} s
$T_{1/2}(^{214}\text{Bi})$:	19,9	(4)	min
$Q^{-}(^{218}\text{At})$:	2881	(12)	keV
$Q^{\alpha}(^{218}\text{At})$:	6874	(3)	keV

2.1 α Transitions

	Energy keV	Probability $\times 100$	F
$\alpha_{0,2}$	6771 (7)	6,4 (1)	38
$\alpha_{0,1}$	6811 (3)	90,0 (1)	3,9
$\alpha_{0,0}$	6874 (3)	3,6 (1)	150

2.2 β^{-} Transitions

	Energy keV	Probability $\times 100$
$\beta_{0,0}^{-}$	2881 (12)	0,1 (1)

3 α Emissions

	Energy keV	Probability $\times 100$
$\alpha_{0,2}$	6653 (5)	6,4 (1)
$\alpha_{0,1}$	6694 (3)	90,0 (1)
$\alpha_{0,0}$	6756 (5)	3,6 (1)

4 Electron Emissions

	Energy keV	Electrons per 100 disint.
$\beta_{0,0}^-$	max: 2881 (12)	0,1 (1)
$\beta_{0,0}^-$	avg: 1095 (12)	

5 Main Production Modes

Ra – 226 decay chain

6 References

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