



1 Decay Scheme

F-18 disintegrates 96.86 (19) % by beta plus, and 3.14 (19) % by electron capture to the ground state of the stable nuclide O-18.

Le fluor 18 se désintègre à 96,86(19) % par émission bêta plus, et 3,14(19) % par capture électronique vers le niveau fondamental de l'oxygène 18.

2 Nuclear Data

$$T_{1/2}({}^{18}\text{F}) : 1,8288 \quad (3) \quad \text{h}$$

$$Q^+({}^{18}\text{F}) : 1655,5 \quad (6) \quad \text{keV}$$

2.1 Electron Capture Transitions

	Energy keV	Probability × 100	Nature	lg <i>ft</i>	P _K	P _L
ε _{0,0}	1655,5 (6)	3,14 (19)	Allowed	3,57	0,9267 (48)	0,0733 (48)

2.2 β⁺ Transitions

	Energy keV	Probability × 100	Nature	lg <i>ft</i>
β _{0,0} ⁺	633,5 (6)	96,86 (19)	Allowed	3,57

3 Atomic Data

3.1 O

$$\omega_K : 0,0069 \quad (5)$$

4 Electron Emissions

		Energy keV		Electrons per 100 disint.
e_{AK}	(O)			2,91 (15)
	KLL	0,456 - 0,502	}	
$\beta_{0,0}^+$	max:	633,5	(6)	96,86 (19)
$\beta_{0,0}^+$	avg:	249,3	(3)	

5 Photon Emissions

5.1 X-Ray Emissions

		Energy keV		Photons per 100 disint.
$XK\alpha_2$	(O)	0,53	0,017 (3)	}
				$K\alpha$

5.2 Gamma Emissions

	Energy keV	Photons per 100 disint.
γ^\pm	511	193,72 (27)

6 Main Production Modes

$\left\{ \begin{array}{l} \text{O} - 18(\text{p,n})\text{F} - 18 \\ \text{Possible impurities : none} \end{array} \right.$

$\text{O} - 16(\text{t,n})\text{F} - 18$
 $\text{F} - 19(\text{p,d})\text{F} - 18$
 $\text{O} - 17(\text{He} - 3,\text{d})\text{F} - 18$

7 References

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