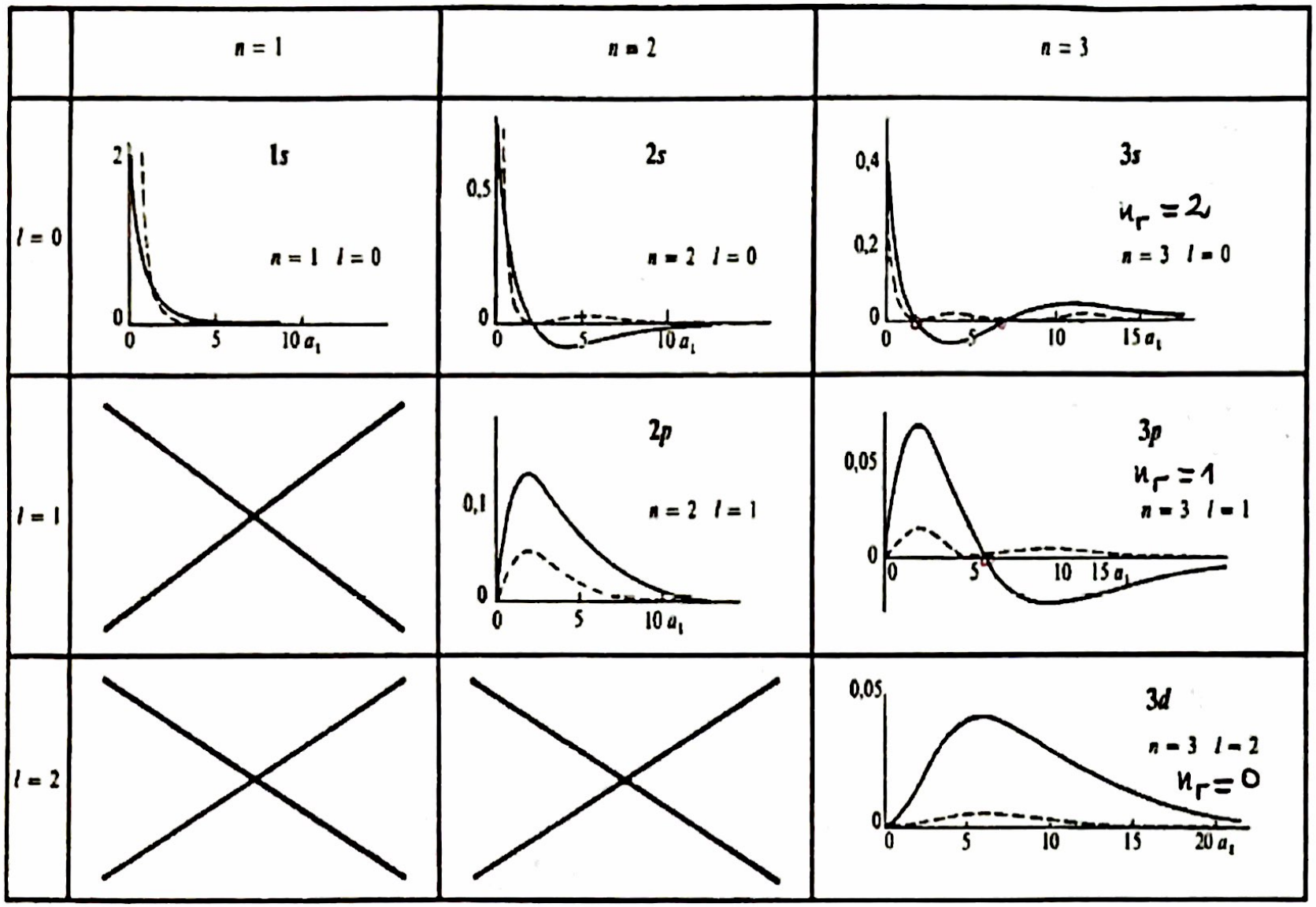
$$R_{nl}(r) = -\frac{2}{n^2} a_0^{-3/2} \left\{ \frac{(n-l-1)!}{[(n+l)!]^3} \right\}^{1/2} \exp(-r/na_0) \left(\frac{2r}{na_0}\right)^l L_{n+l}^{2l+1}\left(\frac{2r}{na_0}\right)$$

En ordonnée $R_{nl}(r)/a_0^{-3/2}$ et $a_1 = a_0$ avec $a_0 = \dfrac{4\pi\epsilon_0\hbar^2}{m_e e^2}$

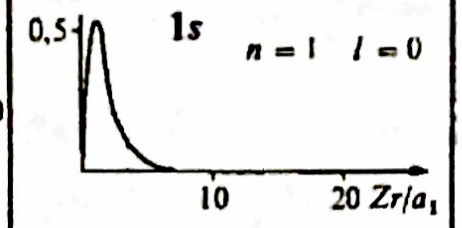
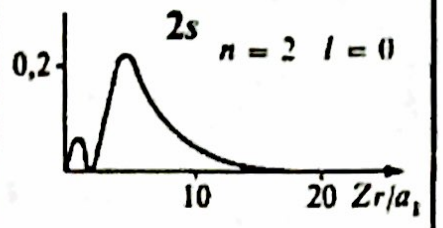
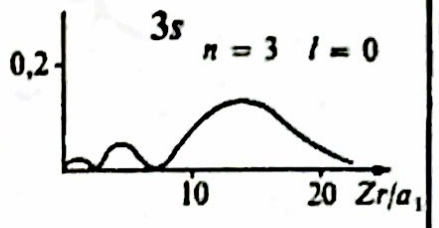
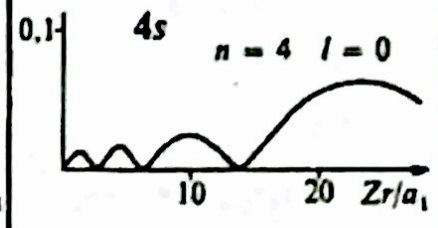
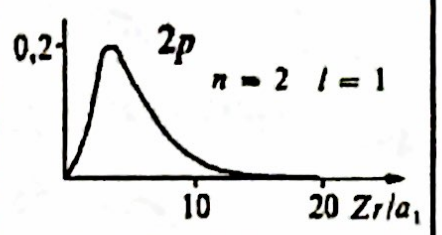
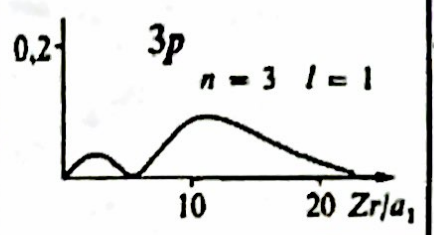
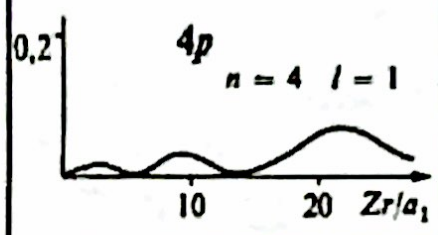
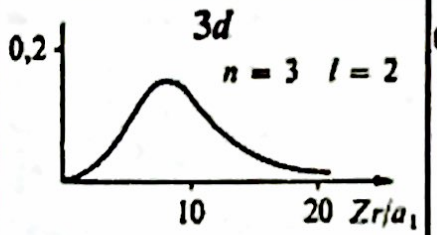
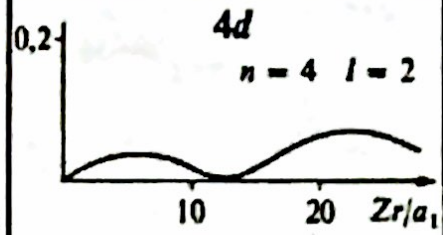
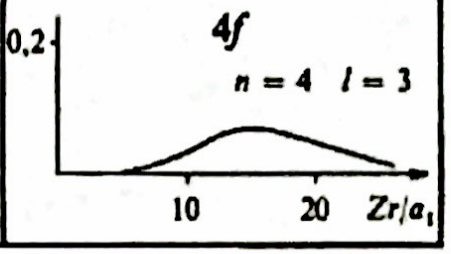


Probabilité de présence entre r et $r+dr$

En ordonnée $\mathcal{P}_{nl}(r)/a_0^{-3}$

(prendre $Z = 1$)

$$\mathcal{P}_{nl}(r) = r^2 \left[R_{nl}(r)\right]^2$$

	$n = 1$	$n = 2$	$n = 3$	$n = 4$
$l = 0$				
$l = 1$				
$l = 2$				
$l = 3$				

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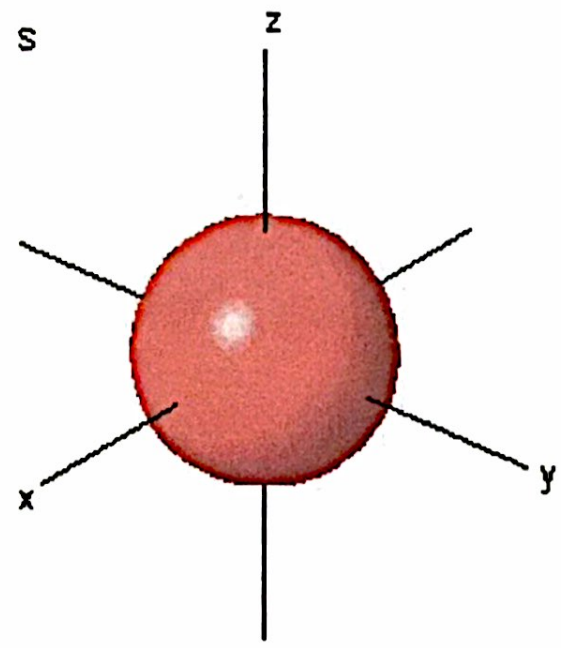
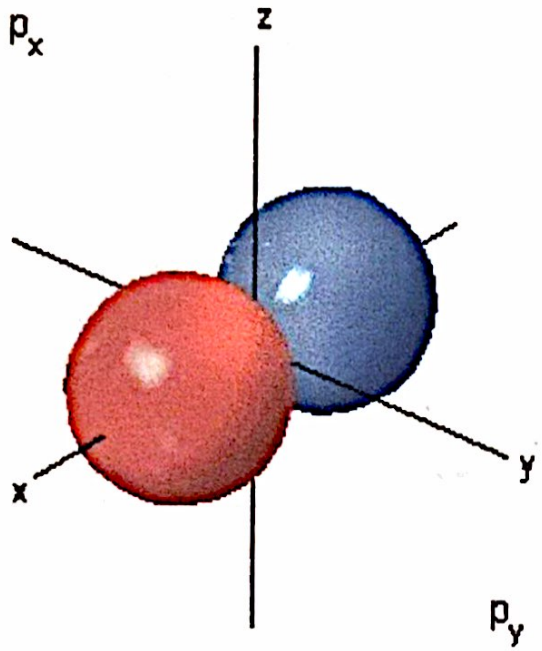
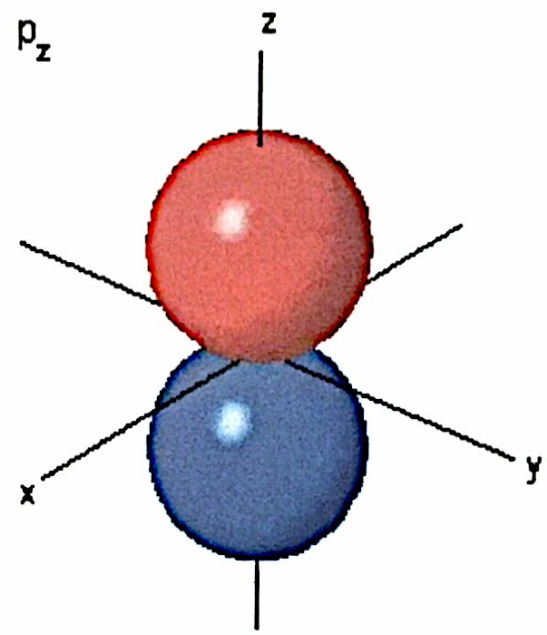
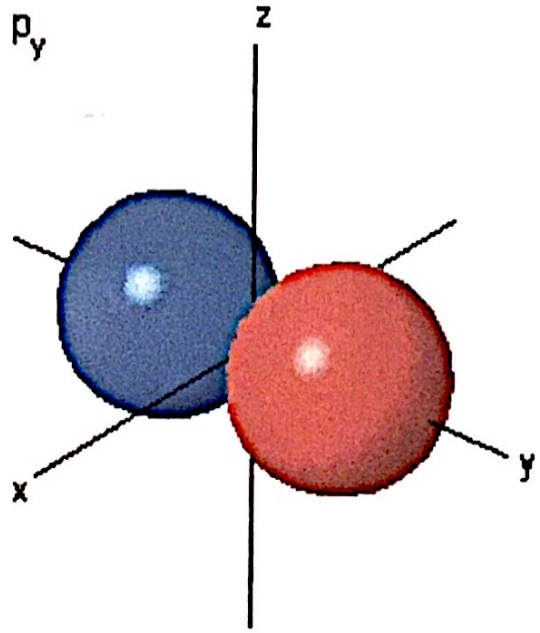


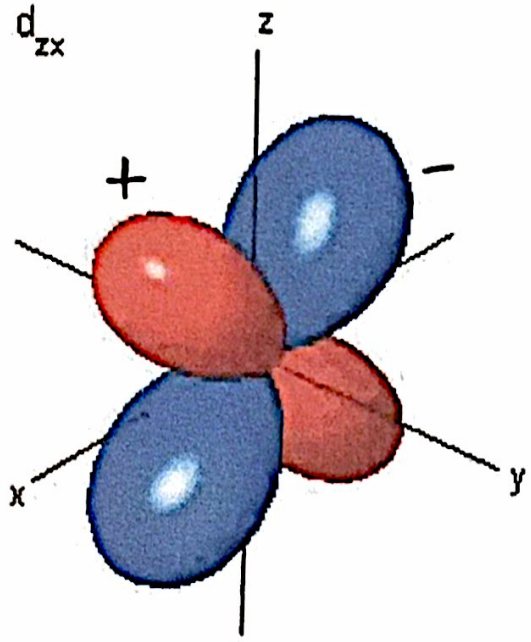


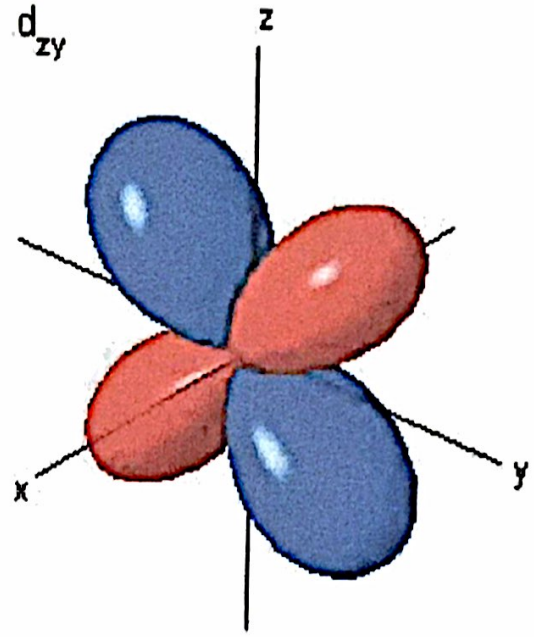


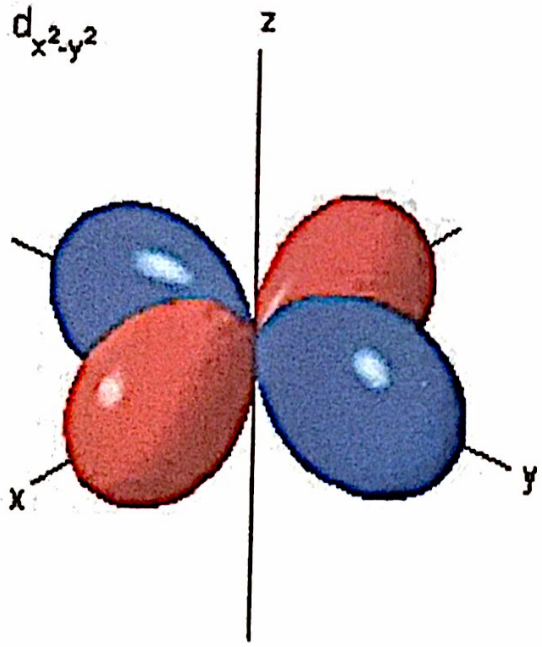


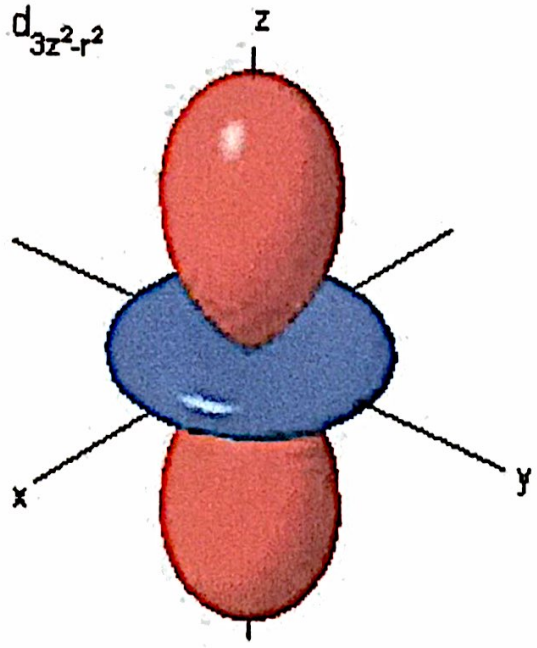
l = 1

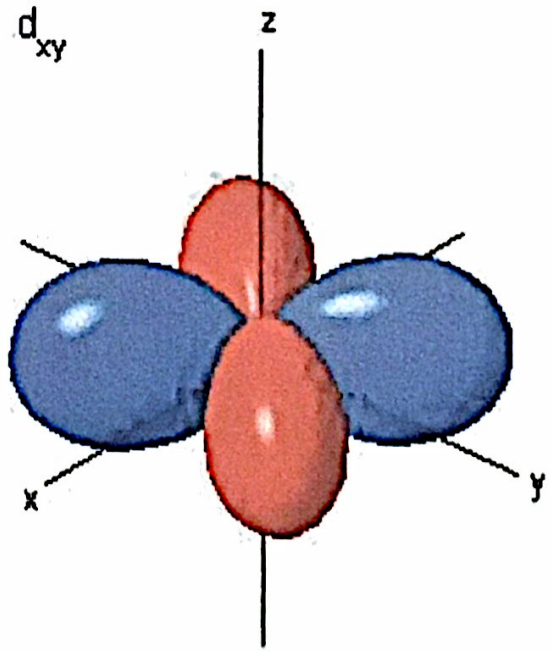
$l = 2$











$l = 3$

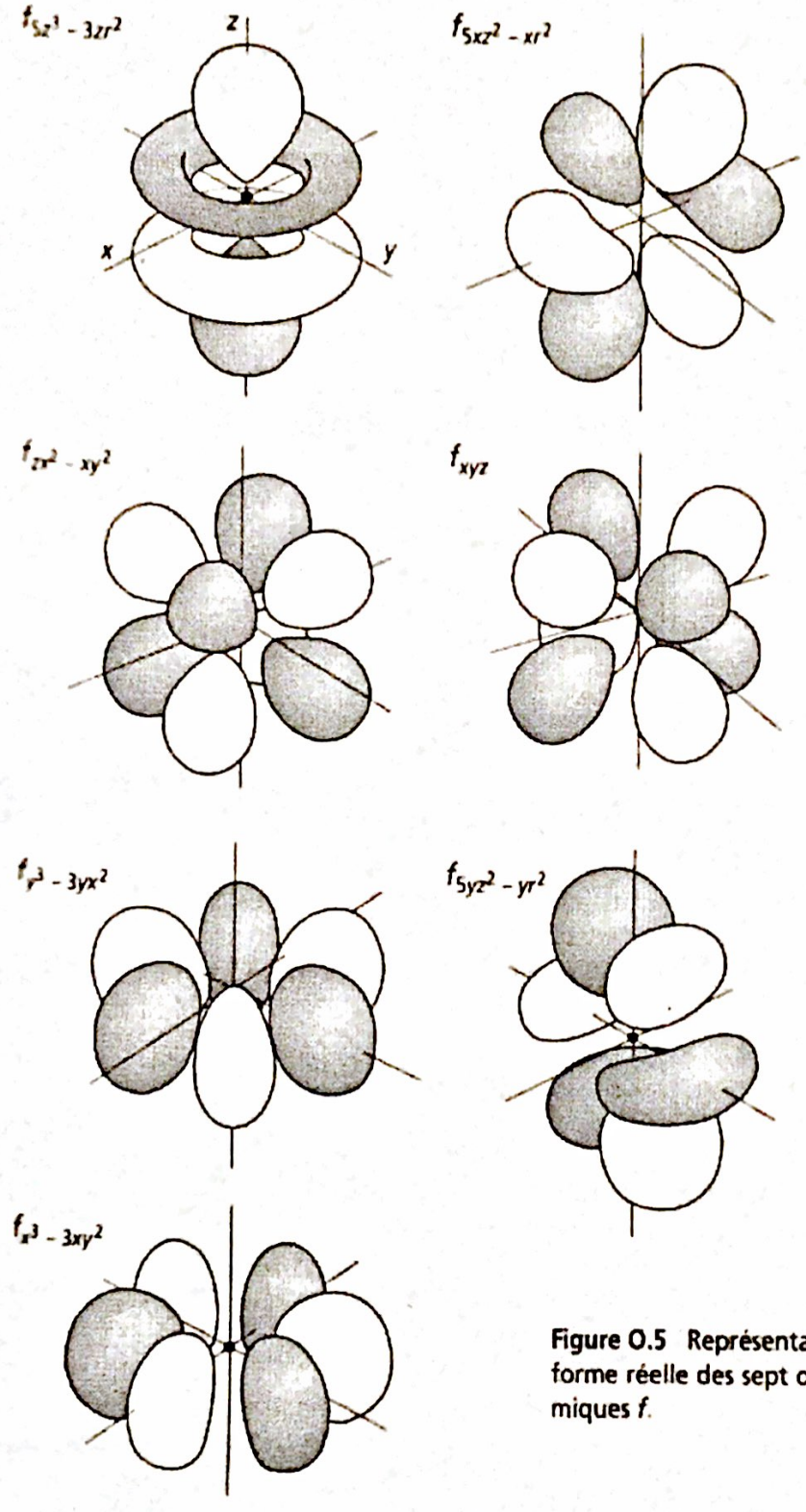


Figure O.5 Représentation d'une forme réelle des sept orbitales atomiques *f*.