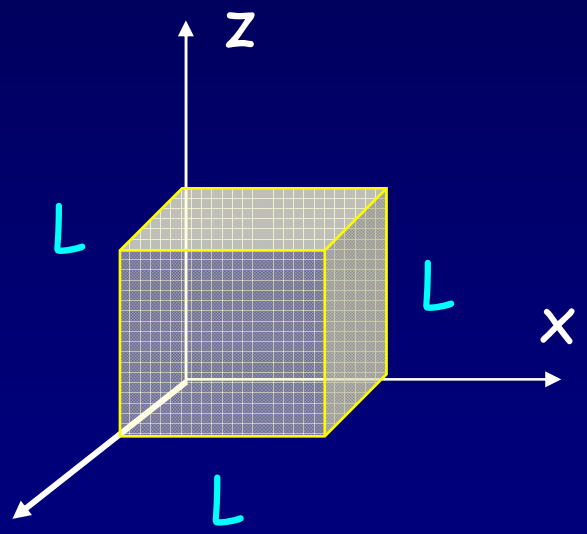
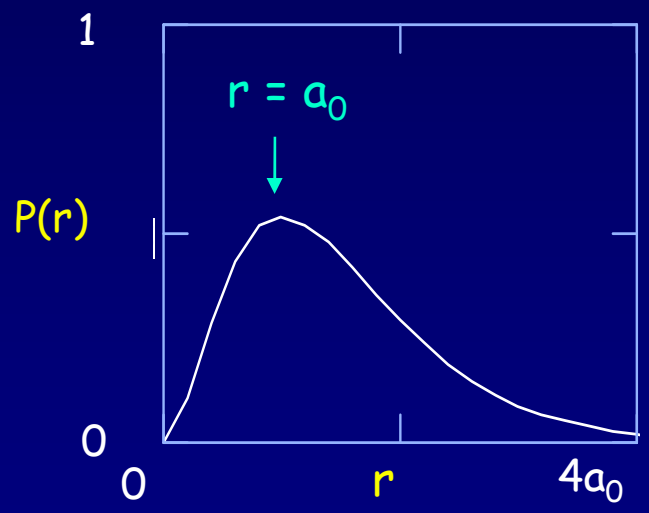
Lecture 16:
3D Potentials and the Hydrogen Atom

$$\psi(x,y,z) = \varphi(x)\varphi(y)\varphi(z)$$



$$E_{n_x n_y n_z} = \frac{h^2}{8mL^2}\cdot\left(n_x^{\,2} + n_y^{\,2} + n_z^{\,2}\right)$$

$$\psi(r) = \sqrt{\frac{1}{\pi a_o^3}}\, e^{-r/a_o}$$



$$E_n = \frac{-13.6\,eV}{n^2}$$