

- The matter waves representing a particle are called **wave function** and labelled

$$\Psi(x, y, z, t).$$

According to Born, the probability of observing a particle in a volume element  $dv$  is

$$|\Psi^* \Psi| dv = |\Psi|^2 dv$$

Note: The wavefunction  $\Psi$  has no physical interpretation but  $|\Psi|^2$  has.

We will see in chapter 5 how information is extracted from the wavefunction  $\Psi$  for some simple systems.