Debroglie relation

- Light waves behave like particles in the photoelectric effect.
- Particles can also behave like waves. For example, electrons can diffract (a property of light waves).
- Debroglie proposed a relationship between particle momentum and wavelength:

$$p = h/\lambda$$

- A light particle is called a photon. The momentum is p = E/c. Since $c = \lambda\nu$ and $E = h\nu$ this also gives $p = h/\lambda$. A photon has zero rest mass so one cannot interpret the momentum of a photon in the same way one does for other particles.