

According to Planck, the spectral energy density  $u(f, T)$  is:

$$u(f, T) df = \bar{E} \underbrace{N(f) df}_{\substack{\# \text{ of oscillators} \\ \text{having freq.} \\ \text{between } f \text{ and} \\ f + df}} \quad \text{--- (1)}$$

$\uparrow$   
 average energy emitted per oscillator

He also showed that

$$N(f) df = \frac{8\pi f^2}{c^3} df \quad \text{--- (2)}$$

