

# Intro to Quantum Physics F3241

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Week 5

# Radiation Energy

$$E_\gamma = hf_\gamma = \frac{hc_\gamma}{\lambda_\gamma}$$

$$E_\gamma^2 = m_\gamma^2 c_\gamma^4 + p_\gamma^2 c_\gamma^2$$

$$\frac{hc_\gamma}{\lambda_\gamma} = p_\gamma c_\gamma$$

$$\text{Momentum } p_\gamma = \frac{h}{\lambda_\gamma}:$$

# Diffraction & x-rays