

Answer on Question #53490-Physics-Electromagnetism

The electromagnetic waves are made of photons, why don't we hear the effect of each distinct packet of energy when we listen to a radio?

Answer

We know that all electromagnetic waves are made up of photons (discrete quanta). But we don't hear the effect of each distinct packet of energy when we listen to a radio (which is being affected by a radio wave).

It is because radio waves have very small energy and very big wavelength (more than wavelength of gamma photons, which is described by the corpuscular theory of light). Thus, the behavior of radio waves is described by the wave theory of light, not the corpuscular theory of light.

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