

The Mass of a Photon and the Quantum Gravitation Theory

$$E = h\nu$$

$$E = mc^2$$

$$E = a\nu \text{ (amplitude, frequency)}$$

$$m = h\nu/c^2 \text{ Mass = movement of electromagnetic fields}$$

Planck's constant = electromagnetic amplitude!

$$a = E/\nu \Leftrightarrow h = E/\nu$$

Basic Formula's for Circular Movement with Speed C

$$\nu = 1/T$$

$$v(\text{speed}) = c = 2\pi r/T \text{ (1)} = 2\pi r\nu$$

$$\text{amplitude} = a = \omega = 2\pi/T = 2\pi\nu$$

$$T = 2\pi/a \text{ (2)}$$

From 1 and 2

$$c = 2\pi r/2\pi/a$$

$$\Rightarrow c = ra$$

Calculation r

$$\text{Because } a = h$$

$$r = c/h$$

$$r = 3 \times 10^8 / 6.62 \times 10^{-34}$$

$$= 0.45 \times 10^{42}$$

Calculation T

$$T = 2\pi/h$$

$$= 6.28 / 6.62 \times 10^{-34}$$

$$= 0.9486 \times 10^{34}$$

Calculation Mass Photon

2 formula's

$$m = hv/c^2$$

$$v = c/2\pi r$$

$$m = h/2\pi rc \text{ (1 formula)}$$

$$= 6.62 \times 10^{-34} / 6.28 \times 0.45 \times 10^{42} \times 3 \times 10^8$$

$$= 0.775 \times 10^{-84} = \text{Mass Photon}$$

$$m = hv/c^2$$

$$v = h/2\pi$$

$$\Rightarrow m = h^2/2\pi c^2 \text{ (2 formula)}$$

$$= 6.62^2 \times 10^{-68} / 2 \times 3.14 \times 3^2 \times 10^{16}$$

$$= 0.775 \times 10^{-84} = \text{Mass Photon}$$

Proof 3 theorem Bohr + dualistic character for photons

$$2\pi r = n\lambda \text{ (1)}$$

$$2\pi = hT \text{ (2)}$$

$$v \text{ (speed)} = c = hr = 2\pi vr = \lambda/T \text{ (3)}$$

$$h = mc^2/v \text{ (} c/v = \lambda \text{)}$$

$$\Rightarrow h = m\lambda c$$

$$\Rightarrow \lambda = h/mc$$

Conclusion:

$$2\pi r = nh/mc$$

Conclusions:

1. Photons have a mass
2. A photon is the most elementary particle that exists
3. The mass of a photon is the most elementary in nature
4. The influence of gravitation and electromagnetic fields is finite
5. A photon proves the third theorem of Bohr
6. Because a photon is an elementary field and mass is nothing else than this, we get the proof of the dualistic character (the Broglie!)
7. Energy = vibration width mass
8. Mass = frequency of movement