

## Discovery of Planck particle

Baba Banda Singh Engineering Bahadur College, India

Azadvinder Singh

A black Hole whose (Compton wavelength is equal to its Schwarzschild *radius* )<sup>1</sup>. It's mass called the "Planck mass". The Planck particle would be extremely small in compared to (proton *radius* <sup>2</sup>) and much massive in compared to (proton *mass* <sup>3</sup>).

$$1) \lambda = \frac{h}{mc} = \frac{2Gm}{c^2},$$

Where  $\lambda$  is the Compton wavelength. G is the Gravitational constant. m is the object mass. c is the speed of light. h is the Planck constant.

Standard "Planck mass" formula,  $m_p = \sqrt{\frac{hc}{G}}$ ,

$$2) \text{ proton radius} = 0.84 \times 10^{-18} \text{m},$$

$$3) \text{ proton mass} = 1.6726219 \times 10^{-27} \text{kg},$$

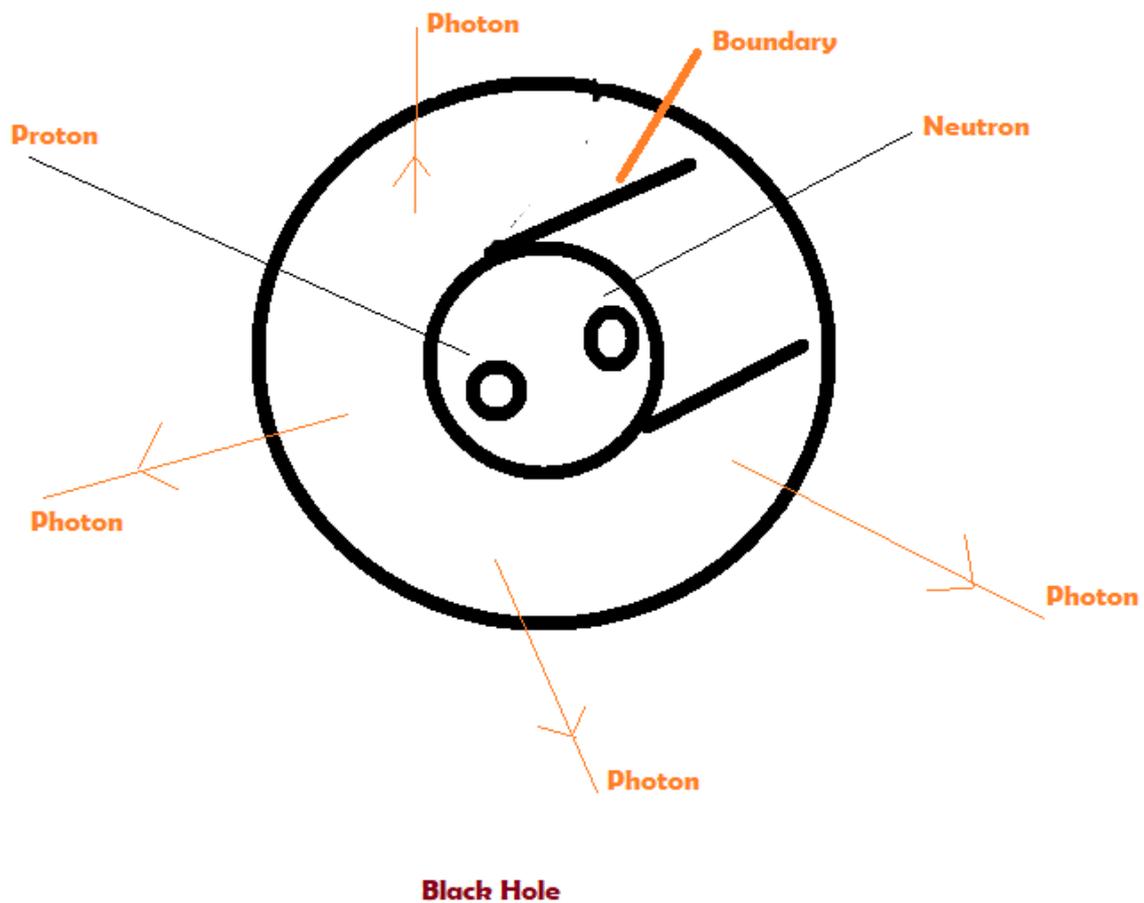
## cyclotron brother

cyclotron brother has an analogous properties to an original cyclotron invented by an Ernest Lawrence. This model is designed for black hole understanding.

Working and Principle, a cyclotron accelerates a positive charged particle called “Proton” using a high frequency alternating voltage which is applied between two D – shaped metal electrodes.

But in case of cyclotron brother, there is no need of alternating voltage.

Because neutron by own gravity tries to attract a proton and this causes acceleration in a proton. During that process, proton may hits the boundary and proton mass is reduced.



**Figure 1**

Protons are made up from quarks, unless quarks size is reduced proton can't reduce its own mass. This hit releases "Photons" through boundary (as binding force between quarks (*Gluon*<sup>4</sup>) is analogous to an exchange of "Photons" in the electromagnetic force between two charged particles). And "Photons" have an energy equal to the kinetic energy of the proton and that's why electromagnetic radiation seems to come out near the event horizon.

Here boundary term is purely hypothetical.

4) "Gluon", is an elementary particle that acts as the exchange particle for strong force between quarks.

By Figure 1 mass of nucleus, is the product of masses of neutron and proton .i.e.,  $1.6726219 \times 10^{-27} \text{ kg} \times 1.674927471 \times 10^{-27} \text{ kg}$

$$= 2.8015203689 \times 10^{-54} \text{ kg}$$

Now, breakdown the ( $10^{-54}$ ) into ( $10^{-11} \times 10^{-34} \times 10^{-9}$ )

Where  $10^{-34}$  recalled about Planck constant ( $h$ ).  $10^{-11}$  recalled about Gravitational constant.  $10^{-8}$  recalled about Planck particle mass in comparison with proton mass and assume remaining  $10^{-1}$  loses by Planck particle. And by figure 1 only quarks present which loses size during proton hits boundary and that's why we have only option by which means quark is a real Planck

particle. And second reason is that “Photons” released during hitting of proton having energy ( $E = hf$ ) which is directly proportional to Planck constant.

If we don't have the both (proton and neutron) initially then some practical knowledge is needed such as any object passes through black hole first turns into two smaller pieces, one of these acts as a proton and rest one as a neutron. Just moments after conversion neutron stayed at some distance along the straight line from proton and we have black hole phenomenon. Black hole has an elasticity by which he can easily handles the bulky masses.

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