New interpretation of the Schwarzschild radius

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(This new document was taken from an old 2006 work)

The Schwarzschild radius describes the radius of the event horizon within which no object can exit and which sees a singularity at its center.

The mathematical expression of this ray without resorting to the complex mathematical formalism of general relativity can be summarized as follows by simply using the kinetic energy and the gravitational potential energy of the body in question.

$$\frac{1}{2}mc^2 = G\frac{mM}{d}$$

$$Rs = \frac{2G\,M}{c^2}$$

At this point, however, nothing in the mathematical expression tells us if that "2" is linked to Newton's mass or gravitational constant so that we can also freely interpret "2" as twice the mass, or two masses.

This new interpretation completely reverses the information we have for the Schwarzschild radius which, using Planck's units, will become:

$$Rs = \frac{G\,2Mp}{c^2} = 2Lp$$

Let's now try to create a figure that allows us to see what an event horizon (large black circle) could look like with two equal masses of the value of Mp inside, through this new interpretation.
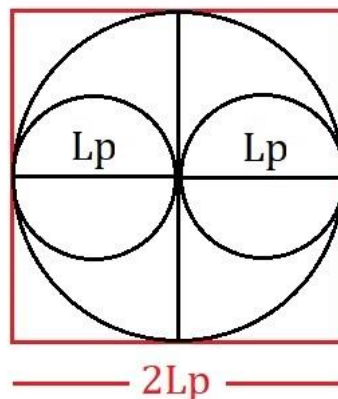
If this graphic representation was correct, it is clear that if there were two Planck masses forming a black hole, the event horizon defined as the Schwarzschild radius, would clearly represent the physical boundary of the masses, in fact correcting the same interpretation of radius unthinkably refuting it in a diameter.

This could mean that the Planck mass (Mp) could have a radius of ½ Lp or half the Planck length (Lp)

For this to be true, the value of the gravitational force that must manifest between the two Planck masses must be equal to that of Planck, that is, it must equal the value of the Planck force.

$$Fp = \frac{Ep}{Lp} = \frac{c^4}{G} = 1,211 \times 10^{44} \text{ N}$$

$$Fg = G\frac{Mp^2}{Lp^2} = 1,211 \times 10^{44} \text{ N}$$

The accuracy of our hypothesis is confirmed, since the distance between the two centers of mass (Mp) placed next to each other (maximum gravitational interaction) have a measure equal to the Planck length (Lp) for which the mass radius (Mp) is equal to ½ Lp.

Taking into consideration our theory of Strong Gravity (HQT) previously described in several publications, we note that the mathematical formulation referred to the particle radius (R) responds to the radius hypothesized by the above scheme.

$$R = \frac{G\, Mp}{2c^2} = \frac{1}{2}\, Lp$$

(We refer the related explanation to another document to justify this argument.)

The Schwarzschild formulation, seen through Planck's units, can also suggest that the real Universe could be divided in half, that is, there could be two separate parallel universes (semi-spherical) enclosed in a single horizon of Schwarzschild events.

This hypothesis therefore proposes the existence of two separate parallel universes that could justify the clear division between matter and antimatter in equal quantities without actually violating the CP symmetry.

The radius of this hypothetical bi-Universal sphere is describable and quantifiable through our theory (HQT) which sees the universal topology in two semi-spheres.

The values can be obtained through the mathematics of the HQT which estimate the values of the bi-Universal diameter (Ds) and the total mass (Mu) in:

$D(U_0) = 3,244 \times 10^{29}$ m $= D(U1) + D(U2)$

$M(U_0) = 4,368 \times 10^{56}$ kg $= M(U1) + M(U2)$

Using the Schwarzschild formulation to define this dimension, we can understand how it shows to be linked to the measurement of a diameter and not to that of a radius.

However risky this hypothesis may seem, it takes us back to an even more distant question, that is, Newton's gravitational constant represented through Planck's units clearly tells us that Planck's length (Lp) is a diameter.

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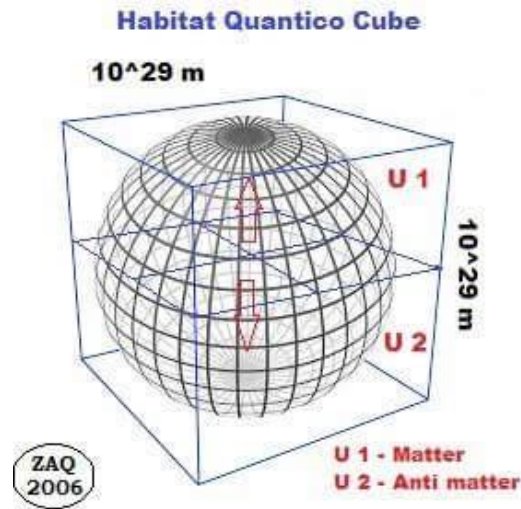
$$D(U_0) = G\frac{2Mu}{c^2} = 3{,}244 \times 10^{29}\,\text{m}$$

According to our hypothesis, in the center of the sphere represented above, the phenomenon of the Big Bang would have occurred, which would subsequently have generated the two universes U1 and U2 in the opposite directions.

(in this case we also refer the mathematical explanation and demonstration of what has just been said to another document.)

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