

Universe at zero second and the creation process of the first particle from the absolute void

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Abstract

In this study, we discuss the properties of absolute void space or the universe at zero seconds, and how these properties play a vital role in creating a mechanism in which the very first particle gets created and we find the limit in which when the absolute void volume reaches will lead to the collapse that leads to the creation of the first particle. This discussion is made following to the elementary dimensions theory study that was peer-reviewed at the end of 2020, everything in the universe is made from four elementary dimensions, these dimensions are the three spatial dimensions (X, Y, and Z) and the force equivalent.

I. Introduction

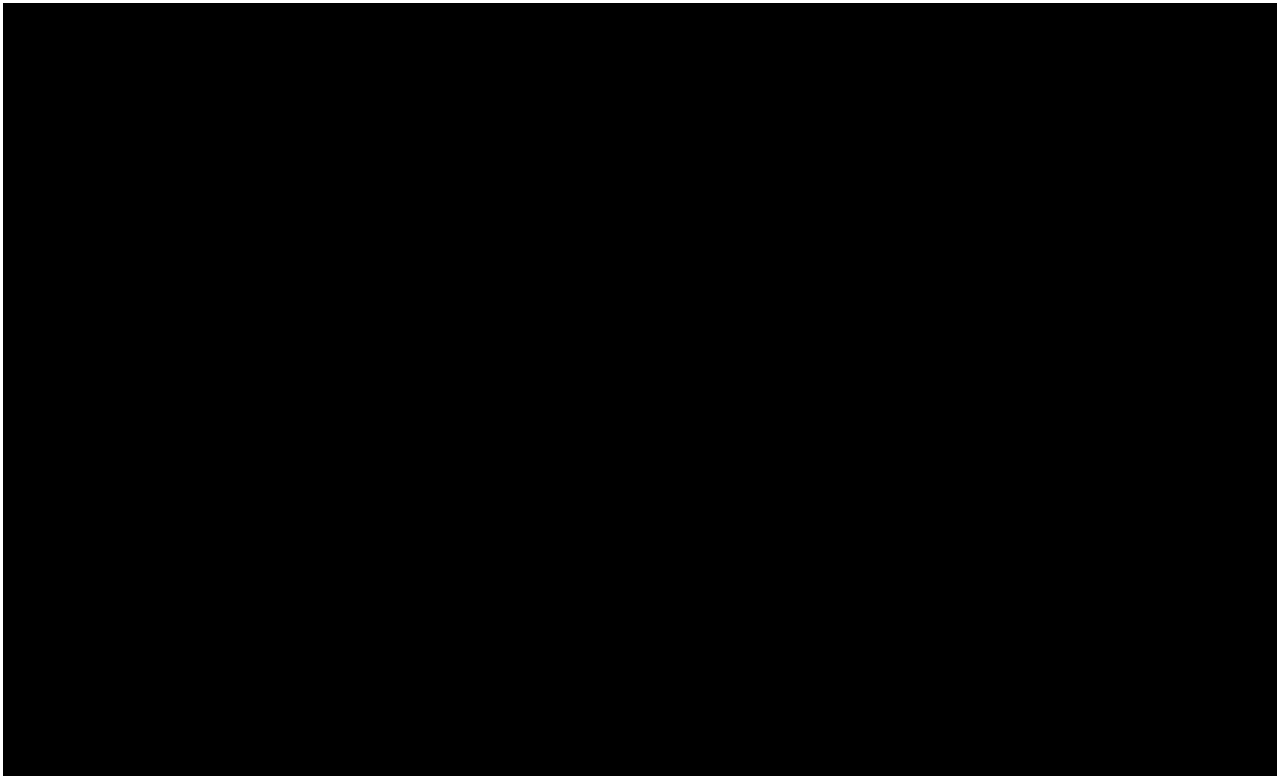


Figure 1(universe at time=0 sec)

Universe at zero second (as shown in figure 1), the space was completely devoid of all sorts of particles and radiations, the absolute zero temperature was reached naturally, due to the absence of all sources of heat. This space is called absolute void (Sirdy, 2020).

Creating absolute void in the laboratory is quite challenging as the removal of all sorts of matter and radiation for the creation of absolute zero temperature is extremely difficult.

Absolute void is four-dimensional (space dimensions in the x, y, and z axis and the force equivalent). The force equivalent is the factor of change among the four dimensions (Sirdy, 2020) which plays a vital factor in creating the first particle. Those four are the elementary dimensions.

Time is a hypothetical concept (Craig, William Lane, 2010), that corresponds to changes during certain events compared to a constant change rate event (Sirdy, 2020). Therefore, time itself wasn't considered as the fourth dimension.

Therefore, every function that will be used in the EDs (the elementary dimensions) theory, are time invariant function (Oppenheim, Alan; Willsky, Alan (1997)).

II. Force equivalent patterns

The figure 3 and 4 shows the force pattern direction of an absolute void in a confined and an open system, respectively.

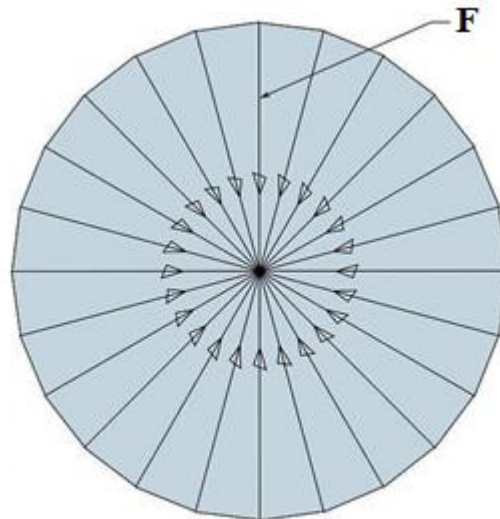


Figure 3

In Figure 3 the force acts to prevent the formation of the void by trying to crush the parameter of the surroundings toward the centre; the direction of F is point toward the centre of the void.

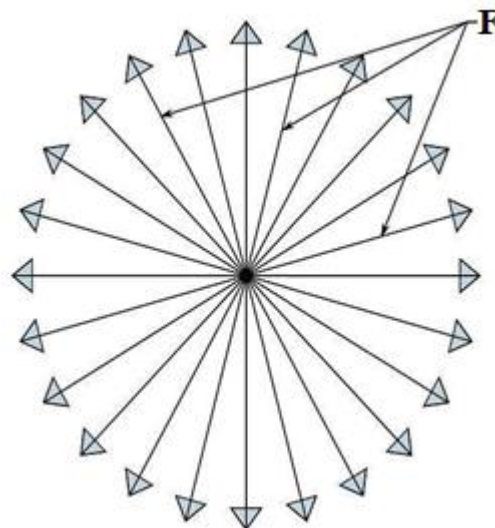


Figure 4

However, absolute void is considered an open system, if it exists in a free form. At any point of it the force is pointing outward, as depicted in Figure 4. Any point of absolute in a confined system acts as absolute void in an open system, which means that force is pointing outwards (see Figure 5).

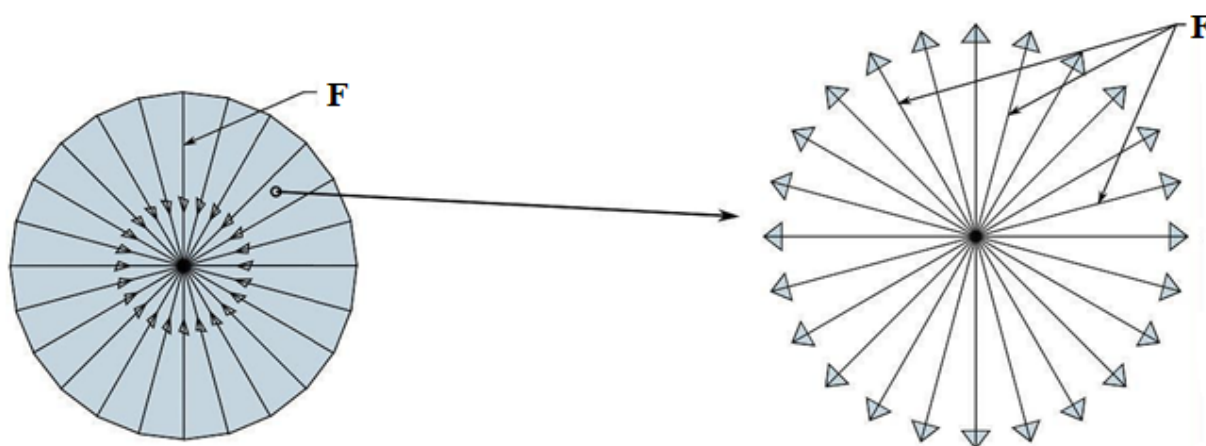


Figure 5

The force equivalent (F_q) has a positive relation with the spatial dimensions (X, Y and Z), meaning the force equivalent increases with the increase of the absolute void's volume V_v .

$$F_q \propto V_v \dots (1)$$

$$F_q = C_v \cdot V_v \dots (2)$$

Where C_v is the void constant that was assumed, here we will again assume that it's equal to 1 with SI base units of $\text{Kg} \cdot \text{m}^{-2} \cdot \text{sec}^{-2}$

$$V_v = \frac{4}{3} \pi (R^3) \dots (3), \quad \text{the volume of sphere}$$

$$F_q = \frac{4}{3} \pi (R^3) C_v \dots (4)$$

F_q will have the units of force N (Newton), excluding the time effect completely, as this will be as well a time invariant function.

III. Creation of the first particle through the elementary dimensions

According to the elementary dimensions EDs theory, the absolute void and its four elementary dimensions are the predecessor of particles (Sirdy, 2020), and the elementary dimensions makes up everything in the universe. **Contrarily to the current theories, according to the EDs theory a dot particle (or a one dimensional particle) is impossible to exist due to the mathematical impossibility and the absence of an existing actual physical limit**

determining the smallest mathematical and physical size. Therefore, every particle no matter how tiny it's, it must be having the three spatial dimensions (X, Y, and Z) and according to the EDs theory it also has the fourth dimension (the factor of change or the force equivalent).

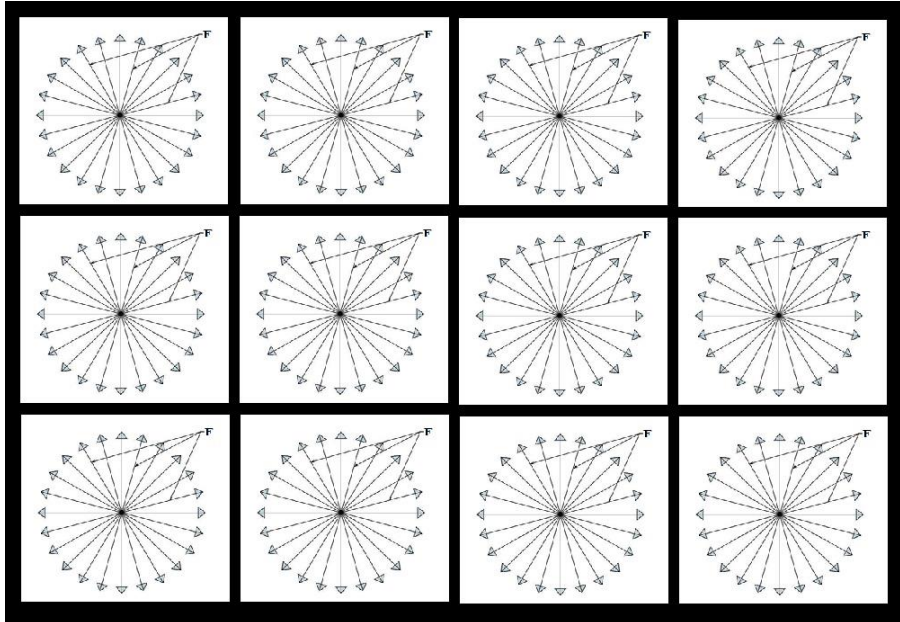


Figure 6 Universe at zero second with radius of X

With the increase of the absolute void's volume, the outward force increases, and the space losses equilibrium more and more due to the presence of only one directional force. When the outward force reaches a certain limit, the system reaches the highest level of instability. The outward force has to collapse inward to restore equilibrium in the space (see Figure 7).

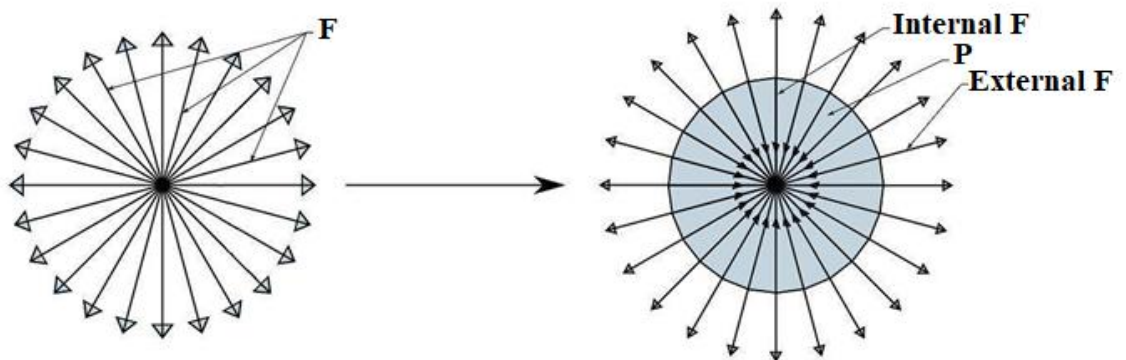


Figure 7

The absolute void has turned from an open to a confined system, with the collapse energy was created from the force equivalent pointed toward the centre, **the energy stays conserved** at all phases. However, due to the collapse the energy density increases with the decrease of the spatial dimensions (see figure 8).

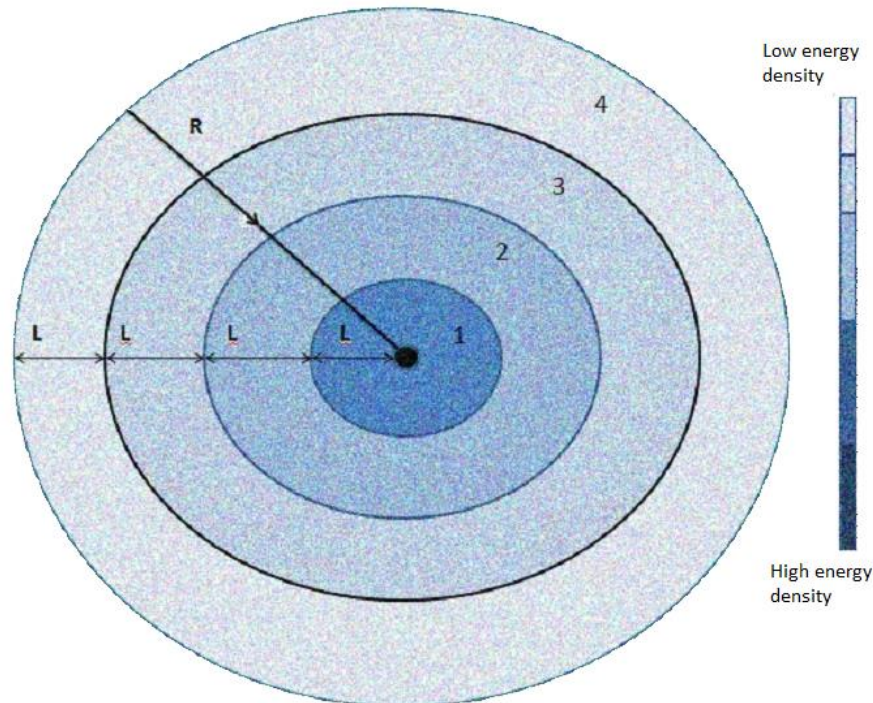


Figure 8

At the final stage the energy is concentrated forming a solid shape of energy. In which, this shape of energy is a first particle that was ever created from the elementary dimensions. This particle was created to decrease the instability in the space to achieve equilibrium that the universe at time zero second was lacking.

This particle is managed by two forces:

- a. Internal force F_i , which originates from the absolute void inside the particle, just like void in a confined system, and is directed toward the centre.
- b. External force F_e , originates from the absolute void outside the created particle.

The force F_i causes the source to collapse, while the force F_e is the counter force. The particle collapses until equilibrium is achieved between the internal and external force. In case, more than one source-like entity are existents near each other relatively, the equilibrium process is among all of them.

At time zero second, infinite spatial dimensions of absolute void existed. Therefore, unlimited numbers of particles were created (see figure 10).

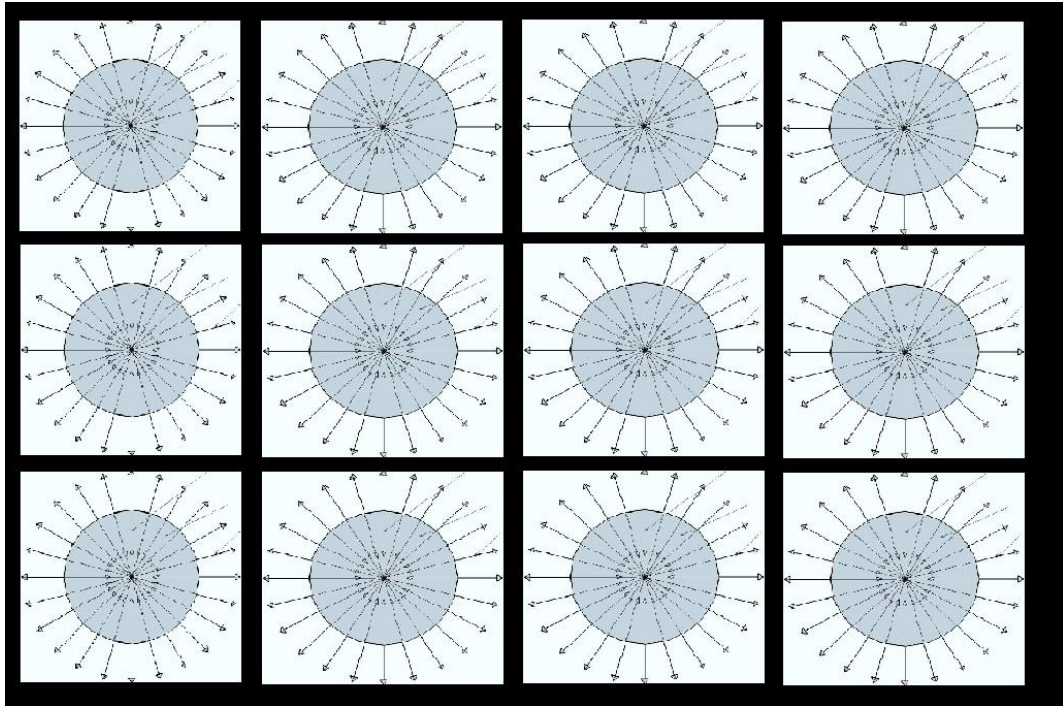


Figure 9 (infinity numbers of particles created from the elementary dimensions)

The limit in which the system collapses might be the same limit that leads to the creation of the black holes, where it's already known that for large stars above the Landau/Tolman-Oppenheimer-Volkoff limit (Wheeler, J. C.; Grossan, B; Pooley, D.; Kumar, P.; (2018-05-31)) (around two solar masses), when the star dies the forms of particles cannot provide the force needed to balance gravitational field. There is nothing to stop the collapse forming a black hole.

A black hole is similar to the origin particle or the source (Sirdy, 2020).

The limit could be a radius of 1.392×10^9 meters of absolute void in a sphere shape, 3.98×10^{30} Kg (two solar masses) with density of 1408 (kg/m³), the same density of our sun.

Since, the sun mass is 1.99×10^{30} Kg, the sun's radius is 6.96×10^8 meters, using usual relation equation:

$$\frac{\text{Sun's mass}}{\text{sun's radius}} = \frac{\text{two solar masses}}{\text{radius of a star with twice sun's mass}} \dots (5)$$

As we will be using the density equation.

We get the value of a radius 1.392×10^9 meters of absolute void,

Using the force equivalent equation:

$$F_q = \frac{4}{3} \pi (R^3) C_v$$

$$F_q = 1.129812343... \times 10^{28} \quad \text{N}$$

Meaning when the absolute void's force equivalent reaches this value, the space inside the sphere will be at its highest level of instability, the only way for it to achieve equilibrium is to collapse inward.

The spatial dimensions of the two solar masses its radius equivalent to its schorzcchild radius,

Meaning the open system radius is equivalent to its closed system radius

Radius of two solar masses=Its schorzcchild radius* equivalent

$$1.392 \times 10^9 = 5.9 \times 10^3 * \text{equivalent}$$

$$\text{Radius Equivalent} = 235932$$

Meaning:

Open system radius=235932*closed system radius

Open system is the external void

Closed system is the internal void

Meaning:

$$\text{Volume equivalent} = 1.3133 \times 10^{16}$$

Open system volume=1.3133*10¹⁶*closed system volume

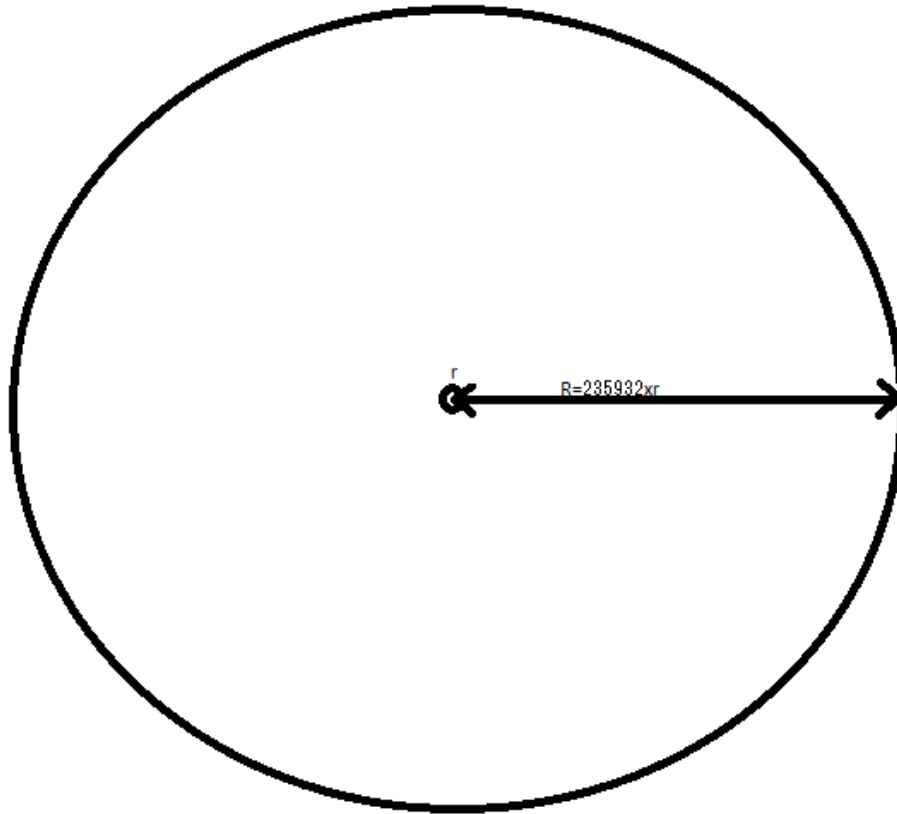
Open system is the external void

Closed system is the internal void

Hydrogen radius

Atom radius=235932*Proton radius

$$= 235932 * 0.85 \times 10^{-15} = 200.5422 \times 10^{-12} \text{meter} = 200.5422 \text{picometer}$$



IV. Conclusion

In the universe at zero second only absolute void existed, absolute void is made from elementary dimension. When the sphere volume of absolute void reaches a radius of 1.392×10^9 meters, the space inside the sphere will be at its highest level of instability, the only way for it to achieve equilibrium is to collapse inward, creating the first particle or the source of particles as it was named in the elementary dimensions theory.

Acknowledgments

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References

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