

## **New Hypothesis of the Universal Model Based on Einstein's Formula**

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Notable among the publicly announced research work: “The Big Bang theory” is the research project by a scientist: G. Gamow, which has been widely considered as trustworthy and well grounded. The theory assumes that the universe was derived from a tremendous explosion about 13.7 billion years ago.

However, after researching Newton's formula for the gravitational force and Einstein's formula for the energy of the moving frame with changing its Space, time and mass:  $E_r = m_o \cdot \gamma \cdot c'^2$ , (of which  $\gamma$  is a dilation coefficient), I find that the universe was not derived from a tremendous explosion and if we accept Einstein's formula for the energy of the moving frame with extreme velocity:  $E_r = m_o \cdot \gamma \cdot c^2$  we see that it has to be revised by  $E_r = m_r \cdot c_r^2 = m_o \cdot \gamma \cdot c_o^2 \cdot \gamma^2$ . The universal model will be illustrated as follows:

Firstly, we have to understand the following postulates:

- Inertial acceleration is equivalent to gravitational acceleration. This means the change of energy in an accelerated object is equivalent to that when attracted by a gravitational field. (According to General Relativity).
- Physical laws are the same in fixed and uniformly moving frames. (In both Relativity theory and Newton's first law)
- Space is contained by the electromagnetic field which makes the light velocity constant and equal to 300,000km/s.
- light velocity is constant and equal to 300,000km/s in all of the inertial frames of reference in the universe. This means that the light

- velocity is constant and equal to 300,000km/s in the space and time of each inertial frame of reference.
- Einstein's formula for the energy of the moving frame with changing its space, time and mass is  $E_r = m_r \cdot c_r^2 = m_o \cdot \gamma \cdot (300,000 \text{ km} \cdot \gamma / \text{s} \cdot \gamma)^2 \rightarrow E_r = m_o \cdot \gamma \cdot (300,000 \cdot \gamma \cdot \text{km/s})^2 = m_o \cdot \gamma \cdot c_o^2 \cdot \gamma^2$ . ( please read a paper: "Light velocity changes with the gravitational potential of reference frame").
  - Newton's formula for an gravitational force:  $F = G \frac{M \cdot m}{R^2}$ , (where F is gravitational force; G is a gravitational constant; M and m are the mass of the objects; R is a distance between the mass of the objects: M and m), and it has be revised by  $F = G \frac{M \cdot m \cdot 1/\gamma}{R^2 \cdot \left(\frac{1+1/\gamma}{2}\right)^2}$ , (of which  $\gamma$  is a dilation coefficient with  $1 < \gamma < \infty$  . Please read a paper: "Why does the motion of the Pioneer satellite differ from theory ?").

There are many Galaxies in the universe and each galaxy has a black hole at its centre. It is easy to illustrate. For the mass or the energy of a galaxy, we assume that the energy of each galaxy is a black hole with the energy which is expressed by a formula:  $E_r = m_r \cdot c_r^2$ . ( Of which  $m_r = m_o \cdot 1/\gamma$ ,  $c_r = c_o \cdot 1/\gamma$ , with  $1 \leq \gamma \leq 300,000$ . ). Please see **Figure 1**.

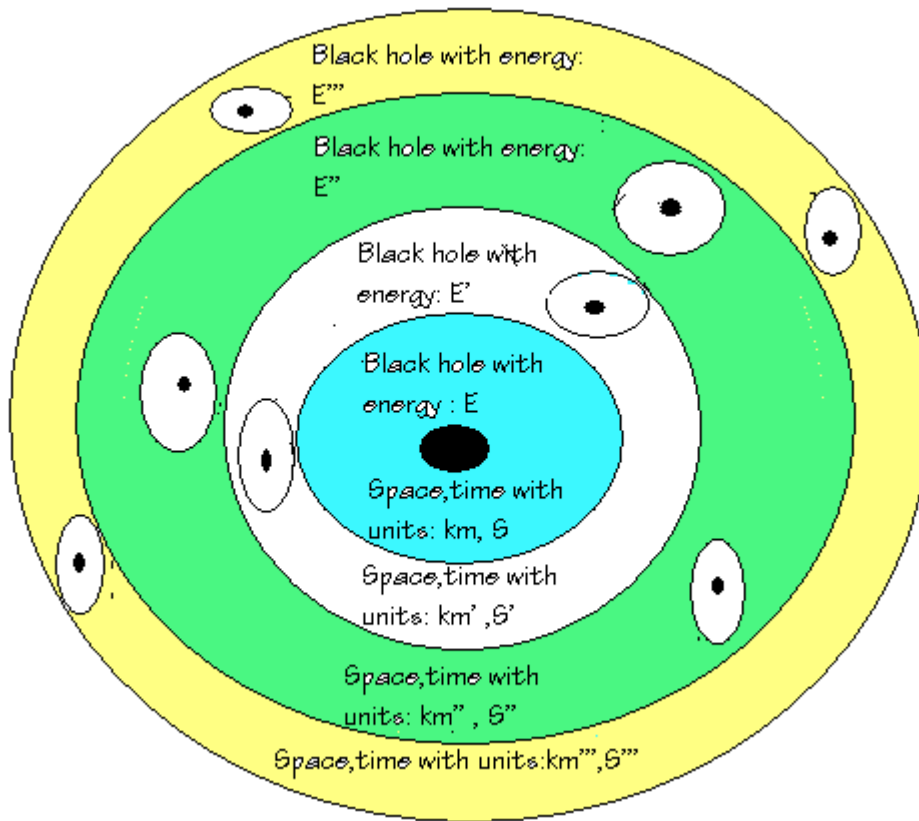
We find that a black hole with energy:  $E' = m_o \cdot 1/\gamma \cdot c_o^2 \cdot (1/\gamma)^2$  is only moved in space and time with the units:  $\text{km} \cdot 1/\gamma$  ;  $\text{s} \cdot 1/\gamma$  and it can't move into the space and time with the units:  $\text{km}$  ;  $\text{s}$  or  $\text{km} \cdot 1/\gamma'$  ;  $\text{s} \cdot 1/\gamma'$ . This is because the space and time with the units:  $\text{km} \cdot 1/\gamma$  ;  $\text{s} \cdot 1/\gamma$  are a level of an electromagnetic field which makes the light velocity constant and equal to  $300,000 \text{ km} \cdot 1/\gamma / \text{s} \cdot 1/\gamma$ , and a level of an electromagnetic field with light velocity:  $\text{km} \cdot 1/\gamma / \text{s} \cdot 1/\gamma$  is different from a level of an electromagnetic field with the light velocity:  $\text{km/s}$  or  $\text{km} \cdot 1/\gamma' / \text{s} \cdot 1/\gamma'$ .

If a black hole with the energy:  $E' = m_o \cdot 1/\gamma \cdot c_o^2 \cdot (1/\gamma)^2$  wants to move into space and time with the units:  $\text{km}$  ;  $\text{s}$ , it has to increase its energy to :  $E = m_o \cdot c_o^2$ . This is because the energy:  $E' = m_o \cdot 1/\gamma \cdot c_o^2 \cdot (1/\gamma)^2 < E = m_o^2 \cdot c_o^2$ . Although the energy:  $E' = m_o \cdot 1/\gamma \cdot c_o^2 \cdot (1/\gamma)^2 > E'' = m_o \cdot 1/\gamma' \cdot c_o^2 \cdot (1/\gamma')^2$ , a black hole with the energy:  $E'$  can't also move to space and time with the

units:  $\text{km} \cdot 1/\gamma'$  and  $\text{s} \cdot 1/\gamma'$ . This is because Newton's gravitational force:

$$F = G \frac{M \cdot m \cdot 1/\gamma}{R^2 \left( \frac{1+1/\gamma}{2} \right)^2} \text{ keeps it.}$$

Figure 1:



In a **Figure 1**:  $E, E', E'', E'''$  are the energy of the black holes (the Galaxies) with the formula:  $E_r = m_r \cdot c_r^2 = m_o \cdot 1/\gamma \cdot c_o^2 \cdot (1/\gamma)^2$  in the levels of electromagnetic field which makes space, time with the units:  $\text{km} \cdot 1/\gamma, \text{s} \cdot 1/\gamma$  and the light velocity being constant and equal to  $300,000 \text{ km}'/\text{s}'$ , (of which  $1 < \gamma < \infty$  and  $1/\gamma > 1/\gamma' > 1/\gamma'' > 1/\gamma'''$ ).

A energy of a black hole:  $E > E' > E'' > E''' \dots$

A unit of a space:  $\text{km} > \text{km}' = \text{km} \cdot 1/\gamma > \text{km}'' = \text{km} \cdot 1/\gamma' > \text{km}''' = \text{km} \cdot 1/\gamma'' \dots$

A unit of a time:  $s > s' = s \cdot 1/\gamma > s'' = s \cdot 1/\gamma' > s''' = s \cdot 1/\gamma'' \dots$

A unit of a light velocity:  $\text{km/s} > \text{km}'/\text{s}' = \text{km} \cdot 1/\gamma / \text{s} \cdot 1/\gamma > \text{km}''/\text{s}'' = \text{km} \cdot 1/\gamma' / \text{s} \cdot 1/\gamma' > \text{km}'''/\text{s}''' = \text{km} \cdot 1/\gamma'' / \text{s} \cdot 1/\gamma'' \dots$

$\rightarrow c > c' = c \cdot 1/\gamma > c'' = c \cdot 1/\gamma' > c''' = c \cdot 1/\gamma'' \dots$  ( of which:  $c = c_0$  )

Seeing **Figure 1**, we find that the motion of a black hole in its orbit in the universe is similar to the motion of an electron in its orbit in an atom. An orbit of a black hole in the universe is a level of an electromagnetic field and an orbit of an electron in an atom is a level of an electric field.

### Conclusion:

Since Newton's formula for gravitational force:  $F = G \frac{M \cdot m \cdot 1/\gamma}{R^2 \left( \frac{1+1/\gamma}{2} \right)^2}$  and

Einstein's formula for energy of the moving frame with changing its space, time and mass:  $E_r = m_r \cdot c_r^2 = m_0 \cdot 1/\gamma \cdot c_0^2 \cdot (1/\gamma)^2$ , we find that the universe can't be shrunk or expanded as we thought.

In the universe, we don't know where our Galaxy (our black hole) or our level of an electromagnetic field is, so the universe can't be derived from a tremendous explosion, ( The Big Bang theory). It is only able to occur in the explosions of each black hole ( each Galaxy) in the universe, thus we can only confirm that our Galaxy (our black hole) was derived from an explosion about 13.7 billion years ago.

The motion of the black holes ( the Galaxies) on its orbit or in its level of an electromagnetic field in the universe are similar with the motion of the electrons in its orbit or in its level of an electric field in an atom in quantum physics.

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