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*Corresponding Author

Ruyun Ma, Department of Mathematics, Northwest Normal University, Lanzhou 730070, P R China, E-mail: mary@nwnu.edu.cn

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An Illuminating View of the Antigravity Between Antimatter

Ruyun Ma*

Department of Mathematics, Northwest Normal University, Lanzhou 730070, P R China

Abstract

We put forward the two assumptions: 1. Antimatter repels each other, and the repulsive force is proportional to the product of their masses and inversely proportional to the square of the distance between them. 2. There is no gravitational or anti-gravitational interaction between antimatter and matter. As applications of these assumptions, we explain the Big Bang process in a new light.

Keywords: Universe; Big bang; antimatter; antigravity; vanish; isotope; half-life period

Introduction

Newton's law of gravitation, formulated in 1687, states that the force of attraction between two particles is proportional to the product of their masses and inversely proportional to the distance between them,

$$F = G\frac{Mm}{r^2}.$$

This law applies to the matter world, including black holes.

Today antimatter does not exist normally, at least on earth, a vanishing act that is one of the unexplained mysteries of the universe. But we know that antimatter is real because scientists have made small pieces of it. See Frank Close [1].

To illustrate our viewpoint: Define a concept first:

Cosmic Egg

A steady state environment in which matter ions and antimatter ions appear in pairs and are evenly distributed. It can be visually interpreted as a quantum soup composed of matter ions and antimatter ions.

On the eve of the Big Bang, as an objective existence, the gravitational force between the matter source, and the repulsive force between the antimatter source inside the cosmic egg should be balanced. From this, we have reason to put forward the following two principles:

Principle 1. *Antimatter repels each other, and the repulsive force is proportional to the product of their masses and inversely proportional to the square of the distance between them.*

Principle 2. *There is no gravitational or anti-gravitational interaction between antimatter and matter.*

Under these two principles, the description of the Big Bang process will get a fairly simple, direct and clear explanation.

1. Due to some asymmetric mechanism, (it is likely that the cosmic egg encountered a supermassive black hole, and its extremely large gravity can eat the matter around the black hole), the repulsion between the antimatter source becomes absolutely dominant in a very small space, and then the cosmic egg explodes. Since there is no gravitational effect between the antimatter and the black hole, the supermassive black hole will unilaterally attract the matter in the cosmic egg, so that the gravity between the matter source cannot control the repulsive force between the antimatter source, and then induce the big Bang. In this way, anti-matter unsymmetrically wrapped matter and flew away at different speeds, forming the current universe. Asymmetry can be demonstrated by the supergiant structure of matter in the universe.

2. The cosmic egg is the balance entity between the gravitational force between the matter source and the repulsive force between the antimatter source. It can withstand small interference from electromagnetic, strong and other unknown forces. For example, the presence or proximity of a small black hole causes only small fluctuations. But when the black hole grows beyond a certain threshold, the cosmic egg is torn apart. Then, antimatter spreads out, matter contracts and re-forms black holes, which gradually grow in size and prepare for the next Big Bang.

3. The gravitational attraction between matter and the repulsion between the source of antimatter makes the distribution of matter and antimatter more and more asymmetrical in space. The effect of gravity between matter gradually forms huge celestial bodies, such as stars and black holes. The repulsive force between antimatter causes antimatter to fly rapidly away to the edge of the universe. It is not that galaxies recede faster the farther away they are, but rather that systems made mostly of antimatter acquired more velocity in the first times, and are now farther away from us, and thus appear to recede faster.

4. The cosmic background radiation phenomenon is essentially the mutual production of matter and antimatter in the universe, and is not only produced by the early Big Bang. The

half-life of chemical radioactive elements is caused by the normal interaction of matter and antimatter throughout the universe, rather than by the random spontaneous decay of atomic nuclei. What happens when an antihydrogen atom meets an iron atom? We think

$$matter\ A\ +\ antimatter\ B\ =\ matter\ C\ +\ radiation\ D.$$

Right now, our universe is basically made up of matter (4.9 %), dark matter (26.8 %), and dark energy (68.3 %). In fact, dark matter is the whole of radiation. Dark energy is antimatter. Over time, the percentage of antimatter will decrease, and the percentage of matter with gravitational properties (the combination of matter and antimatter that produces radiation when destroyed) will increase. The status quo of antimatter (68.3 %) and matter (4.9 %) indicates that on the eve of the tipping point of the Big Bang, more than 35% of the matter was eaten by the supermassive black hole. This strongly supports our repulsive force theory of antimatter.

5. Because of the repulsive force, there are no massive celestial bodies in the antimatter galaxy, and the evolution of the antimatter system is like fireworks, and the density of the antimatter system will be lower and lower. The antimatter system may have "beings similar in size to Earth people made of antimatter"; but there would be no antimatter Earth, because the antimatter Earth would have been shredded and blown up by repulsion long ago.

6. In general, the interaction between matter and antimatter when they meet is not as radical and violent as science fiction suggests. At macroscopic room temperature, the interaction of antimatter A and matter B will produce matter elements. According to the classical cosmology, the elements were created at the beginning of the Big Bang, or at extremely high temperatures, which is difficult to understand in time and space. We believe that the matter body itself also contains a small amount of antimatter, and the universe is also filled with a certain amount of antimatter ions. The interaction of matter and antimatter plays a crucial role in the composition of the atoms of elements.

References

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