

Theory of Worlds

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Summary

Adding the results of the latest physical theories to my theory of the minus world and imaginary numbers, I developed my theory. Using my theory, I explain 11 dimensions of M-theory, the history of our space, the nature of antigravity matter. Here I show the cosmos is n-dimension space. By this letter, I think that the overview of general structure of our cosmos is made clear.

Introduction

I would tell that I showed followings at "Road to Star Ocean¹". Matter is a basis for real numbers and antigravity matter (antigravitational matter) is a basis for imaginary numbers. Antigravity matter formed another world which I call "minus world (negative world)". If giving matter of mass M the impulse² of $\pi Mc/2$, the matter rushes into the minus world. These are my theory about the minus world and imaginary numbers. Then, I support M-theory, superstring theory, supersymmetry theory, and big bang theory. I add the results of these theories to my theory and would make a general image of the cosmos.

Nature of antigravity matter

First, I make clear the nature of antigravity matter. If antigravity matter which exerts repulsive force on matter is described by present physical theories, what will it correspond to? Two are in for antigravity matter. One is antiparticle such as positive electron (antimatter). The other is supersymmetry particles predicted by supersymmetry theory. First, I review antimatter. Antimatter makes pair annihilation with matter. This doesn't conform with the theory that antigravity matter and matter exert repulsive force each other and antigravity matter and matter are incompatible. Also, antimatter is comparatively studied well but it seems that there is not a report that matter and antimatter exert repulsive force each other. On the other hand, a supersymmetry particle isn't found out in the natural world and the nature of supersymmetry particles isn't made clear. And, antigravity matter which I think of has symmetrical relation to matter and the relation is deeper than antimatter. Antigravity matter is in a symmetrical relation to matter of fundamental nature of mass and the relation is to exert repulsive force on the mass of the matter. I think that supersymmetry particles are probably antigravity matter. Then, if supposing these supersymmetry particles are antigravity matter, my theory of antigravity matter and the minus world conforms with M-theory and so on.

Next, the nature of repulsive force is described. I think that repulsive force between matter and antigravity matter is probably proportional to the inverse-square of

distance between matter and antigravity matter like universal gravity. And, attractive force is to act between antigravity matter and antigravity matter. By this, the creation of the minus world of antigravity matter becomes possible.

History of our space

Presupposing that antigravity matter of above nature exists, I would describe the history of our space. By the big bang, matter and antigravity matter which are mutually symmetrical were born probably with same quantity. I think that it is not antimatter but antigravity matter that was symmetrically created against matter. According to this, anxious for the disappearance of our world by pair annihilation becomes not needed. Matter and antigravity matter were in minimal space when they were born. Since the distance between matter and antigravity matter was very small, I think that repulsive force to act on them was very strong. With this very strong repulsive force, the inflation broke out. Then, antigravity matter which exerts repulsive force on matter and is incompatible with matter formed the minus world and the antigravity matter was included in the minus world. Therefore, in our world, antigravity matter (supersymmetry particles) cannot be discovered. Supersymmetry particles are in the minus world.

However, I think that repulsive force, too, leaks out beyond a wall between worlds like attractive force(gravity). Antigravity matter in the minus world and matter in our plus world(positive world) still exert repulsive force each other. I think that our world receives this repulsive force, accelerates and is expanding. Then, at present, as the cause of this space expansion, the antigravity of dark matter is thought of. In my situation, the dark matter is antigravity matter in the minus world and exerts repulsive force, i.e. antigravity in our plus world from the minus world.

When distance increases, this repulsive force becomes weak. At present, it is observed that our world accelerates and is expanding. I think that repulsive force becomes weak according to this expansion. Therefore, acceleration should have a tendency of decline. However, I think that the symmetrical minus world, too, is expanding. Therefore, it is thought of that the distance of accelerating matter and antigravity matter that are moving to a same direction does not change and that repulsive force between them, too, doesn't change. By this, it is thought of that the tendency of decline is denied partly.

I cannot correctly tell after this whether or not our space will expand forever, whether or not the expansion will stop or whether or not it will transfer to shrinking. However, even if it transfers to shrinking, I think that the big crunch does not take place probably. Because, even if shrinking, repulsive force becomes strong as distance becomes small.

Structure of 11-dimension space

As above-mentioned, there are our plus world and the minus world in our space. Will this plus world and the minus world be all? I conform to M-theory and superstring theory and attempt to think of that. Superstring theory requires 10-dimension world. Then, M-theory which gives superstring theory a basis requires 11-dimension world which includes 10-dimension world. M-theory doesn't require the compactization of dimensions. Since I support M-theory and superstring theory, I think that our cosmos has 11 dimensions. Then, according to M-theory, our world is regarded as a membrane which is floating in a bigger space ".

Dr. Michio Kaku suggests in "Parallel World³ " that our world is a membrane of three dimensions which is floating in a world of 5 dimensions. I agree to this idea. I call this world of 5 dimensions "mother world". Taking this situation, I try to think of 11 dimensions of our cosmos.

In my idea, it is as follows.

1. World dimension
2. Time dimension
3. Space dimension (X dimension of mother world)
4. Space dimension (Y dimension of mother world)
5. Space dimension (Z dimension of mother world)
6. Space dimension (X dimension of plus world)
7. Space dimension (Y dimension of plus world)
8. Space dimension (Z dimension of plus world)
9. Space dimension (X dimension of minus world)
10. Space dimension (Y dimension of minus world)
11. Space dimension (Z dimension of minus world)

There are our plus world and the minus world in our cosmos. The membrane of the plus world of three dimensions and the membrane of the minus world of three dimensions float in the mother world. It is space dimensions from number 3 to 5 that show spatial coordinates in the mother world. It is spatial dimensions from number 6 to 11 that show spatial coordinates in the plus world and the minus world. As for time, the plus world and the minus world share the time of the mother world. And one time dimension number 2 shows the time. World dimension number 1 specifies which spatial coordinates of the mother world and the plus world and the minus world to take. It becomes 11 dimensions exactly when adding up all dimensions. I think that this is the whole of our cosmos.

N-dimension space

However, in the mother world, the possibility that other membranes are also floating in addition to the plus world and the minus world cannot be denied. There is no basis to deny the possibility for the mother world to have other spaces in addition to our space, too. As long as there is no basis to deny, it would be proper to guess that other spaces exist. As long as the mother world exist, it would be proper to guess that the other child worlds exist. But, I think that the cosmos is not quantum spaces. I think that one possibility is realized by our choices and our space heads for the one direction. I think that a wave function shows a probability of existence in our space. But, I think that the imaginary number clause of the wave function shows a probability of existence in the minus world.

Therefore, when thinking of the cosmos, the world dimension number 1 shows the existence of many spaces and the cosmos has the possibility of much more dimensions than 11 dimensions. I think that the cosmos is n-dimension space.

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References and notes

1. Hidefumi Kubota: Road to Star Ocean, <http://se-engine.org/res/p5t1r1.html>
2. "c" is velocity of light.
3. Michio Kaku: PARALLEL WORLDS: A journey through Creation, Higher Dimensions, and the Future of the Cosmos, 2005.
4. "our world" means the plus world.
"our space" means the plus world and the minus world.
"our cosmos" means the plus world and the minus world and the mother world.
"the cosmos" means the plus world and the minus world and the mother world and the other child worlds.