

# The Structure of Black Holes and the Expansion of Space

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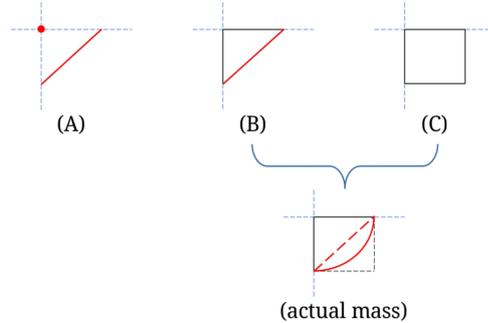
## Abstract

The interior of a black hole cannot be directly observed, however, the structure of it is predictable through the order of the array of fields based on the boson-field theory. The array refers to the circulation system of matters of the previous paper. (The Mechanism of Matter and Anti-Matter, Dark Matter and Graviton) Huge celestial bodies are formed by the bending of such fields, according to the way they are bent, there are a total of five celestial objects. Matter black holes, antimatter black holes, neutron stars, anti-neutron stars, and dark matter stars. Of course, because the round celestial bodies are formed by the bending of their fields, most of the lighter spherical objects than them in the universe are also made that way. Matter black holes and neutron stars are currently observed in our universe in the five huge celestial bodies. It is supposed that the issue has to do with the direction an electron moves between the fields and has to do with the stable maintaining of space. An electron around a proton is in its negatively field and the field is curved toward the proton. So the electron gets closer to the proton and moves away like waves. This concept can also be applied to antimatter black holes. It is supposed that negatively charged particles around the black hole move like waves and make the ring of light in such a shape.

The actual mass of charm or top quarks in 5d or 6d are quite consistent with the average values of the mass associated with the superposition and the mass associated with the entanglement according to the boson-field theory. It is a very important clue to understand the relationship between fields and space. In the minimum state of length which is no longer reduced, the average value of any two lengths means either of the two should be stretched. At this time, the one that stretches will be in a state of superposition in part or in its entirety. A particle in a state of superposition is capable of retaining its information regardless of its length. It is in its superposition field and the field curves toward the mean value. The one which does not bend remains a boundary, it makes the system a closed space. That is, a closed space and the curved superposition field in it are not separable, the curved superposition field makes its space. Black holes or neutron stars are examples where such a bending occurs to the extreme. A series of fields connected with the superposition fields are also strongly curved because the curvature of superposition fields is very large under the influence of enormous gravity of them. It is supposed that the bending of fields creates space continuously.

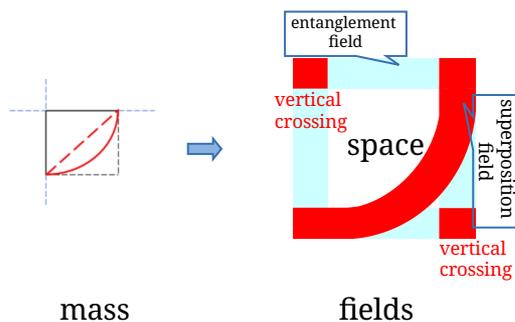
# 1. Introduction

With the exception of up quarks being affected by dark matter, the actual mass of charm quarks or top quarks is shown as the average value of the calculated value based on the half-superposition system and the calculated value based on the entanglement system.

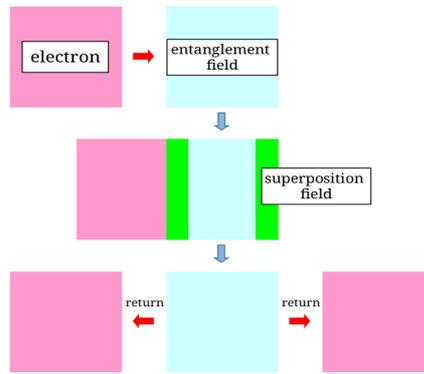


	mass type
(A)	superposition
(B)	half-S. or half-E.
(C)	entanglement

The theoretical mass of a charm quark, which is calculated based on (B), is 1,177 MeV. And that of a charm quark, which is calculated based on (C), is 1,385 MeV. The actual mass of a charm quark is almost identical to the mean of the two. In addition, the theoretical mass of a top quark, which is calculated based on (B), is 158,630 MeV. And that of a top quark, which is calculated based on (C), is 186,624 MeV. The actual mass of a top quark is almost identical to the mean of the two as well. Each of these two means is able to be represented by a curve as can be seen from the picture above. It means that a mass line in a state of superposition is curved when it meets an entanglement area. From this concept, it is possible to predict what is space and what is a curvature of field.



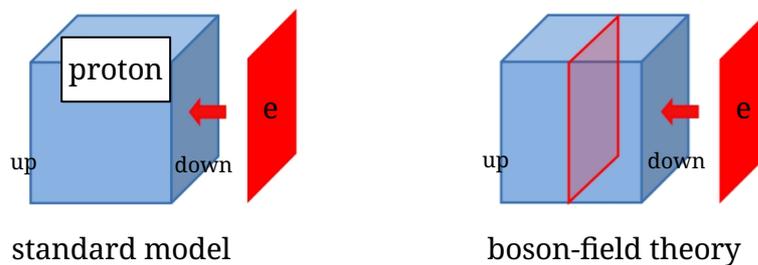
It was an open system when there was one vertical crossing, however, it became a closed system when there were two vertical crossings in a state of entanglement. The closed system at this time is defined as "space". In accordance with this principle, the space consists of two vertical crossings(a vertical crossing boson) and a closed space is created by the bending of the superposition field.



concept of electron tunneling

When an electron hits an entanglement field, they become in a state of superposition in the part where they touch each other. The other part in a state of entanglement will fall into the same state at the same time. As a result, two parts in a state of superposition will be able to return two electrons in opposite directions. Such an electron tunneling shows what can happen between superposition fields.

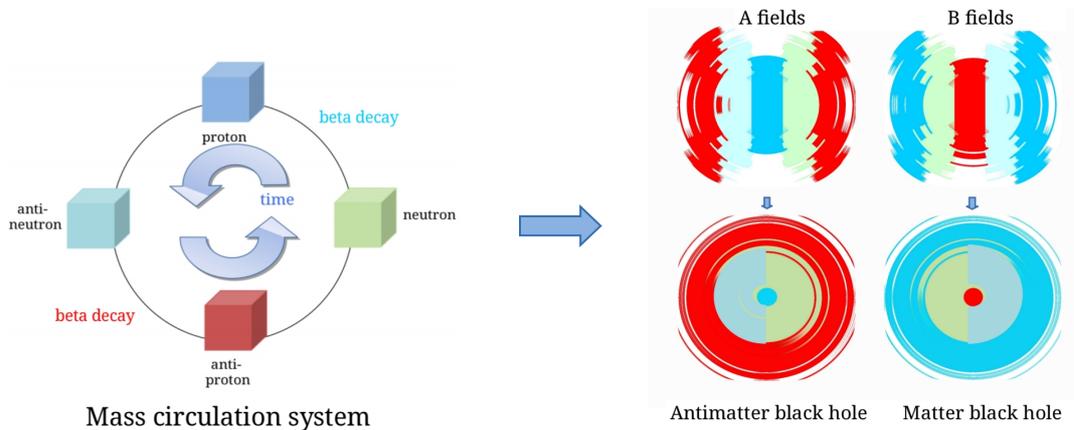
According to the standard model, the mass of an electron is similar to the mass of a down quark. Meanwhile, it is expressed for the mass of an electron to be the average of up and down quarks according to the boson-field theory.



An electron from the standard model is not able to get into the proton. In other words, it stays on the surface of the proton. On the other hand, an electron from the boson-field theory is able to get into the proton through the electron tunneling. At the moment, the positively charged field of the proton is neutralized to meet the electron and it becomes a neutron.

It is supposed that such a tunneling occurs frequently in black holes because matters going into a black hole have to go against the flow of time. That is, matters going into a black hole travel back through the circulation system of matter to reach the singularity.

## 2. The structure of black holes and the expansion of space



charge	A fields	(-) : (n) : (+) : (n) : (-)
	B fields	(+) : (n) : (-) : (n) : (+)

n: neutral

According to the order of the fields based on the mass circulation system, there are two main types of black holes. (A fields and B fields in the picture on the right above)

As shown in the picture above, the shape of a black hole depends on the way the fields bend. It is considered that both types of black holes could have existed in the beginning. In such a situation, deciding which one will remain depends on the direction in which time flows. Each field of the black holes has the superposition field at the boundary. It means that the superposition fields bend to create space. The black holes in the picture above are simple models. Actually, the more superposition fields a black hole has, the more greater the space is. According to this concepts, it is considered that dark energy is the force black holes bend their superposition fields.

### References

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