The mechanism of universe beginning

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1 Overview

When we consider the beginning of the universe, the Big Bang theory is currently the mainstream. And it is said that the universe was born out of nothing. Inflation started immediately after the start of the universe, the universe expanded at a speed exceeding the speed of light, the universe became huge.

However, some questions remain in this model.

1. Why was the universe born out of nothing?
2. Why did the universe expand (inflation) beyond the speed of light?

In order to solve this problem, it is necessary to build a theory to explain from before the start of the universe.
In earlier Physics in the Classical Limit than Einstein's theory of general relativity, it is impossible to explain the radiation from the Black hole.
I think that it may be possible to explain by using the quantum mechanics the radiation from the Black hole.

2 The before of universe beginning

By Poincaré prediction (Poincaré = Perelman's theorem), the structure of our entire universe is suggested as a closed world of more than 4 dimensions except for the dimension of time.
If more than one than allow the universe (multiverse), of course the outside of the space of the universe will be 5 or more dimensions with the exception of the time dimension.
Consider the quantum mechanical effect in this 5 dimensional or more space.
In so-called quantum fluctuations, in the space of the vacuum it is believed that the universe and the anti-universe is always pair production.
From the pair creation of the universe to the pair annihilation is expressed as follows.

Nothing -> universe + anti-universe -> Nothing

I think the universe and the anti-universe are separated at a low probability and grow separately. In this case, if the universe and anti-universe are 4 dimensional, if the 5th coordinate is misaligned, they do not touch each other.

At this time, in order to exploit the effect of general relativity theories think that the universe and anti-universe will spin. However, in the universe and anti-universe, spin can be offset in the opposite direction.

Nothing -> universe (spin) + anti-universe (revers spin) -> Nothing

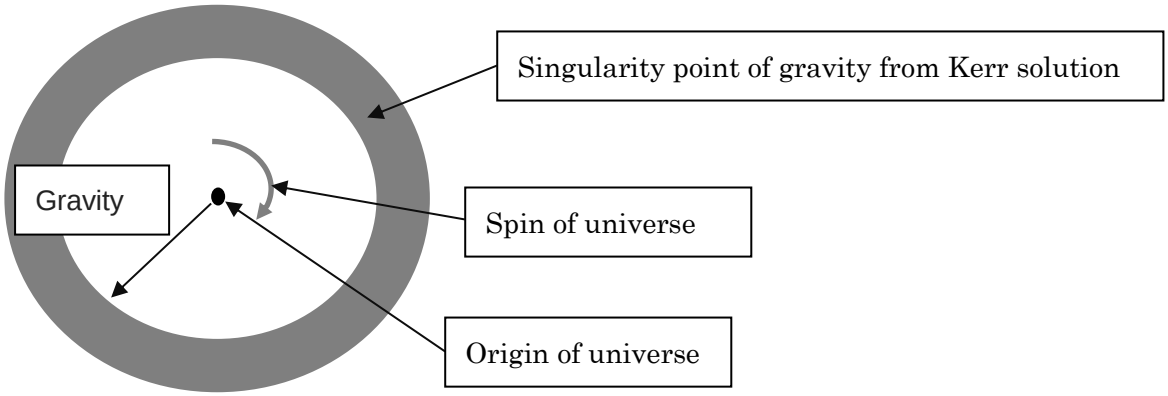
This made the primitive universe. After that Big Bang - Inflation will start.

3 New, inflation theory of the universe

In the Big Bang - Inflationary theory so far, the universe has exploded and expanded itself, but I will dispute it.

For very heavy object to be rotated, it is possible to use the Kerr solution of General theory of relativity.

In the primitive universe that rotates very small, singularity point of gravity, by the Kerr solution of General theory of relativity, appearing in the form of a ring.



What is important here is that the quantum mechanical effect of the small primitive universe is separated from the effect of general relativity.

Every attempt to utilize quantum mechanics and general relativity together in small primitive universes has failed to date.

When using the Karr solution of General theory of relativity this time, the singularity point of gravity appears in a ring shape outside the primitive universe, it becomes possible to consider separately.

The primitive universe does not explode and expands on its own but expands rapidly toward the singular point of gravity caused by Karr solution.

This appears as a phenomenon of Big Bang inflation theory.
As the universe expands, the singular point of the Karr solution is taken into the universe and it ends its role. At this point the inflation is over, and then the universe expands with inertia.
Gravity, as it is outside of the universe, is strong as well as electromagnetic force because it can use all five or more dimensions, but weakened by using only three dimensions when inside the universe.

Today, an explosion of the black hole is observed in the observation of the universe.
This explosion occurs when the ring-shaped singular point of the rotating black hole expands outside the black hole object due to the change in the state of the black hole, it expands rapidly with the same principle as the inflation mentioned earlier, It seems to be observed by explosion.
As you can see, studying the nature of the black hole is useful for the theory of the beginning of the universe. From now on, I would like to work on researching the nature of the black hole and trying to elucidate the mystery of the beginning of the universe.