The Great Melt Instead of the Big Bang.

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There are many hypotheses explaining the origin of our universe [1]. Such big number of hypotheses suggests that no one of them is reliable. The Big Bang hypothesis is generally accepted. But there are many ambiguities in this hypothesis. Recent observational data cast doubt on some of its provisions. The article considers another hypothesis of the origin of our universe under the influence of the chronofield.

1. Introduction.

Articles [2,3] present a hypothesis about three phase states of our universe. Our space-time phase exists within two boundaries - absolute zero temperatures and the speed of light. Any kind of matter and space itself cannot exist beyond these boundaries. The phase of the universe that is below absolute zero is subspace. And the phase that is above the speed of light is superspace. We do not know what these phases are. One can only speculate how they are related to our space-time phase.

Our phase of the universe is under the influence of the chronofield. Any kind of matter and space of our phase of the universe exists due to the chronofield. It was the chronofield that initiated the birth of our phase. This hypothesis allows us to take a new approach to solving the problem of the origin of our phase of the universe.

2. Great melt.

The three phases of the universe are similar to the three phase states of water - solid (ice), liquid and gaseous (steam). These states depend on the ambient temperature. Perhaps this is a hint to us that we do not see. Nothing can live in ice. Everything is frozen. In a couple, nothing can exist either. This refers to living organisms and plants that live in liquid water.

Under the influence of heat, the ice melts and turns into liquid water. If there are any inclusions in the ice, they melt and turn into liquid water. This requires a higher temperature or longer exposure to temperature. When water turns into steam, everything that lives in the water usually dies.

So in our universe, under the influence of the chronofield, the “melting” of subspace occurs. What it consists of turns into the space of our phase of the universe and due to this, it continuously expands. Unfortunately, we do not know what a subspace is. It is not available to us.

It can be assumed that there are areas in the subspace, which, under the influence of the chronofield, form matter in our phase of the universe. Such a "melting" would require more chronofield energy. Accordingly, less energy is

spent on the formation of space in such an area, and it will expand more slowly. Due to this, gravity arises in this area, that is, the effect of dark matter appears.

Article [4] describes the conditions under which black holes are formed from the point of view of the existence of a chronofield. At the beginning of the "melting" of matter, a lot was formed. Under the influence of gravity, it concentrated and when its internal energy reached the value of the chronofield energy, it turned into a black hole.

In black holes there is no matter, no space, no time itself. These are gaps from our phase of the universe into superspace. Superspace is beyond the speed of light. As you know, matter that has mass cannot move at the speed of light. In this case, its mass would increase to infinity, that is, a black hole would form. Only massless particles can move at the speed of light. It can be assumed that black holes connect superspace and our phase of the universe.

The transformation of subspace into space occurs at any point in our phase of the universe. Therefore, the expansion of our phase occurs evenly. In those areas where there are galaxies and the effect of dark matter is manifested, the expansion of space is slower. Part of the energy of the chronofield is spent on the matter of galaxies and the "melting" of dark matter.

Stephen Hawking suggested [6] that there could be a large number of gravitationally collapsing objects with a mass of 10^{-5} g. These micro black holes may appear during the “melting” of a subspace with inclusions that give the effect of dark matter. From these micro black holes, massive black holes were formed, which became the centers of galaxies.

It is believed that the cosmic microwave background [5] confirms the Big Bang hypothesis. This radiation originated at the time of the Big Bang and, in almost 14 billion years, only cooled down to a temperature of 2.7K and still continues to travel evenly across our universe.

If we assume that the microwave background occurs when space is born from subspace under the influence of the chronofield, then its homogeneity becomes clear. Some of the anisotropy that is sometimes observed can be explained by the slowing down of the expansion of space in regions with dark matter.

3. A little about the chronofield and Planck units.

All physical fields in our phase of the universe are made up of quanta. It can be assumed that the chronofield also consists of them, namely, of chronons. In this case, the meaning of the Planck units becomes clear [7].

Planck time $t_p = \sqrt(hG/c\text{^}5)$ means the duration of the chronon. In our phase of the universe, there cannot be a duration of time less than this value.

Planck length $l_p = \sqrt(hG/c\text{^}3)$ means the minimum size of the space that is formed under the influence of one chronon. Of course, here it is more correct to speak not about length, but about volume, since space expands volumetrically, and not linearly. It can be assumed that the space is quantized and the volume of one

space quantum is equal to $v_p = l_p\text{^}3 = \sqrt{((hG)\text{^}3/c\text{^}9)}$. That is, under the influence of one chronon, a “melting” of one quantum of space occurs.

Planck mass $m_p = \sqrt{(hc/G)}$ is the limiting value of the mass of matter that can be in one quantum of space. This value is the boundary value for the formation of a black hole.

The Planck energy $E_p = h/t_p = \sqrt{((hc\text{^}5)/G)}$ is the energy of one chronon. Similar to the Planck mass, this value is the boundary value of the energy that can arise in one quantum of space.

When the chronofield acts on the subspace area with inclusions, the energy of the chronofield for the “melting” of space decreases by the amount of energy of the formed matter. In this case, the energy of one chronon may not be enough for the birth of one quantum of space.

Since the chronofield quantum is not divisible, the energy of two or more chronofield quants is spent on the "melting" of matter for one space quantum. Accordingly, the time for "melting" of one quantum of space decreases and the space expands more slowly. The same phenomenon leads to a slowdown in the speed of the clock. That is, the effect of gravity is manifested.

If the chronofield and space are quantized, then less energy may be required for the "melting" of matter and a quantum of space than the total energy of two or more chronons. In this case, excess chronon energy forms microwave background radiation.

4. Conclusion.

The presented hypothesis will allow us to take a fresh look at some problems of cosmology. Of course, there are still many questions that require further solutions. Where did the chronofield come from and what is its source? If our phase of the universe is infinite, then maybe the chronofield has always existed? Why does the chronofield exist only between subspace and superspace? In other respects, with regard to the Big Bang, it is also not clear where the singularity came from and why it exploded?

If gravity is a slow expansion of space near gravitational masses and energy processes, then maybe we should try to detect not gravitational waves, but chronowaves? If the speed of the clock changes with any period, then this will indicate the presence of chronowaves. Unfortunately, no such studies have been carried out.

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