The CMB and the Last-Scattering Cosmological Spheres

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Abstract: According to the Scale-Symmetric Theory (SST), the very early Universe was the double loop composed of protogalaxies built of the neutron black holes. Due to the succeeding inflows of the dark matter and dark energy, there was the exit of the double loop from the black-hole state and the loop transformed into the expanding sphere. The correct interpretation of the Michelson-Morley experiment leads to conclusion that we cannot see directly the first stage of evolution of the early Universe. But due to some phenomena, the early binary systems and clusters of protogalaxies are imprinted on the CMB. Due to the mergers of the protogalaxies during the unseen period of evolution, the number of observed today clusters of galaxies should be smaller than it follows from the CMB and such conclusion is consistent with the observational facts. Here, we answered following question: Why we cannot see directly the evolution of the early Universe whereas we can see the CMB with coded initial number of clusters of protogalaxies?

Introduction and motivation

Here we answered following question: Why we cannot see directly the evolution of the early Universe whereas we can see the CMB with coded initial number of clusters of protogalaxies?

According to the Scale-Symmetric Theory (SST) the very early Universe was the double cosmic loop composed of protogalaxies built of the neutron black holes [1B]. Due to the succeeding inflows of the dark matter and dark energy (it appeared due to evolution of the cosmic-structure/Protoworld that appeared after the inflation but before the expansion of the Universe [1A], [1B]), there was the exit of the loop from its black-hole state and next the loop transformed into the expanding sphere. To conserve stability of the protogalaxies, there was the radial polarization of their rotational axes, especially of protogalaxies with higher radial speeds i.e. of protogalaxies placed closer to the surface of the expanding Universe. The loops in the double loop were left-handed.

Due to the very high initial temperature, the electrons were separated from protons whereas due to the rotations of the protogalaxies, there appeared vortices of electrons. There as well was the radial polarization of rotational and magnetic axes of the electron vortices. Generally, the maximum mean radial speed of the baryonic matter was and is $0.6415c$ [1B]. But inertia of the electrons is much lower than protons so maximum radial speed of the electron vortices

was very close to the speed of light c. Of course, it was possible only at the beginning of expansion of the Universe when temperature was very high and distances between the proton and electron vortices were not big (in the cosmic scale). We can see that above the expanding baryonic front there were concentric spheres composed of the electron vortices with radial speeds of the expanding spheres from $0.6415c$ to c. Of course, there were such spheres as well inside the baryonic sphere and their radial speeds changed from zero to $0.6415c$. The concentric spheres composed of the electron vortices were the last-scattering spheres for photons emitted by the protogalaxies. In such a way there appeared the different CMBs.

The duality of relativity follows from the quantum entanglement [2]. The big mistake in the mainstream cosmology follows from the wrong interpretation of the Michelson-Morley experiment. In reality, due to the quantum entanglement, the speed of light c is the speed of photons in relation to their source or in relation to a last-interaction object. Detectors are always the last-interaction objects so measured speed of photons is the c always. But it is untrue that a photon has simultaneously the speed c in relation to all reference systems.

The last-scattering spheres were the last-interaction objects for the photons so speed of photons was the c in relation to such expanding spheres. The observed motions of the large-scale Universe suggest that the Milky-Way Galaxy is close to the centre of the expanding Universe. This leads to conclusion that the radial speeds of photons scattered on the spheres composed of the electron vortices (the radial speeds of the different CMBs), that are moving towards the Milky Way, change from c to zero. The CMBs were produced when the last-scattering spheres were very close to the early Milky Way. Today we observe one of the different CMBs moving with different radial speeds towards Earth. The initial radius of the double-loop/very-early-Universe was about 0.2 Gyr [1B] whereas the correct age of the Universe is about 21.6 Gyr (we can see the last 13.866 ± 0.096 Gyr only [3]), [1], [2], so we can see today the CMB composed of photons with radial speeds towards Earth close to zero – of course, speed of such photons measured by our detectors should be the c because the detectors are the last-interaction objects.

Notice that on the observed CMB should be ‘imprinted’ almost all protogalaxies. During the invisible initial period 7.75 Gyr, due to the mergers of protogalaxies, number of clusters of galaxies decreased about 1.8 times [4] and this theoretical result is consistent with observational facts [5].

The electron vortices and proton vortices produced the E-modes in the CMB whereas the expanding weak condensates composed of the Einstein-spacetime components, produced the B-modes [6]. SST shows that gravitational waves are not in existence.

References

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