

# Incorrectness of the Mainstream Cosmology of the Early Universe

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**Abstract:** Here we show that the mainstream cosmology incorrectly describes evolution of the early Universe. Using the NASA/ESA Hubble Space Telescope, astronomers discovered galaxy GN-z11 that is placed close to the more distant edge of the region of reionization i.e. is placed in time distance about 13.4 Gyr. It is assumed that the reionization had begun due to the grouping of the first stars in quasars. On the other hand, we know that transformation of quasars into galaxies lasts a few gigayears (Gyr). It leads to conclusion that the mainstream-cosmology description of the early Universe is incorrect because in the field composed of the “free” first stars cannot appear galaxies during about 200 million years. The Scale-Symmetric Theory (SST) provides the correct description of evolution of the early Universe and the observed most distant Universe (they are not the same thing) and shows that the period called dark ages is an illusion. SST shows that in the most distant observed Universe there should dominate galaxies, not quasars and/or free first stars.

The mainstream cosmology leads to conclusion that the CMB was produced about 380,000 years after the Big Bang (due to the recombination) whereas first stars about 200 million years after the Big Bang. It is assumed also that about 400 million years from the Big Bang, due to formation of the quasars from the first stars, there started the reionization.

**The period between the recombination and the beginning of reionization is referred to as the dark ages.**

On the other hand, to transform the quasars into galaxies is needed a period of a few Gyr.

Using the NASA/ESA Hubble Space Telescope, astronomers discovered galaxy GN-z11 that is placed close to the more distant edge of the region of reionization i.e. is placed in the time distance about 13.4 Gyr [1].

Recapitulation

We can see that the mainstream-cosmology description of the early Universe is incorrect because formation of galaxies (not quasars) in the field composed of the “free” first stars during about 200 million years is impossible. Impossible is also immediate transformation of quasars into galaxies.

The Scale-Symmetric Theory (SST) provides the correct scenario:

1.

The “soft” big bang of the Universe was separated in time from the cosmological big bang that produced the two-component spacetime (i.e. the Higgs field plus the Einstein spacetime) [1A], [1B]. After the cosmological inflation (the big bang), due to a fluctuation in the Einstein spacetime, there appeared a cosmic structure (the Protoworld) that produced the dark energy, dark matter and the expanding Universe [1B].

2.

Due to the duality of relativity, we cannot see the initial period 7.75 Gyr of evolution of quasars i.e. we cannot see the initial field composed of quasars only, [3], [4], but we can see the CMB produced by such field [5].

3.

The correct age of the Universe (since the “soft” big bang) is about 21.6 Gyr but we can see only the last period 13.8 Gyr [4].

4.

In the most distant observed Universe there should dominate galaxies, not quasars and free first stars. Notice as well that the unseen period 7.75 Gyr in SST and the dark ages in the mainstream cosmology are not the same thing. Just SST shows that in the observed most distant Universe we should see numerous galaxies and much less numerous quasars i.e. the mainstream more distant edge/surface of the region of reionization is an illusion. We should not see a field composed of free first stars.

## References

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