

## RED SHIFT OF LIGHT FROM THE GALAXIES YES, EXPANDING UNIVERSE NO!

In the history of physics, ideas on space and time have changed the course of physics a number of times; this is another such event. This time, we postulate 'space and time' as a flow of quantum gravity energy, having the absolute velocity  $c$  (same as velocity of light), where time is the delay in the spread of space (delay from infinite velocity flow, when there would be no time), such a flow has to have a reverse cycle, as energy creating it (howsoever large it might be has to be limited and limited energy can only create a limited space and time energy spread) and the reverse cycle is that of the creation of fundamental particles. This explanation of the universe (space and time not spacetime), as energy flow having a reverse cycle as its base, tells us that the idea of an expanding universe is prime facie wrong.

The problem has been that we have gone along too far with the perception of the relativistic world that Einstein built over 100 years. Einstein had no hesitation in accepting the idea of absoluteness of the velocity of light but never thought of giving the same absoluteness to space (and time) as a flow having the same absolute velocity  $c$  (the universal constant of nature). We change it to add that space (and time) is an absolute flow of quantum gravity. With this change, relativity dependent cosmology, also has to change and change drastically. This new reasoning on space and time—as a flow of energy—leads us to show that expansion of the universe is only an appearance, reality is far away from it. And why is it only an appearance? The argument, in brief, is as follows: One, the universe is so large that we cannot see the edges, light from the edges takes far too long to reach us, there is a theoretical limit to possible visibility, thus, we have to refute its unlimitedness by theoretical considerations only; the reality is non-observable. Two, the process is dark, it is beyond observation, the process of creation of charge (the reflection of light starts with it), the space energy flow process is in the range of invisible (before charge emerged); it is the elusive dark energy that constitutes 74% of the total energy of the universe; we never connected space and time to flow of energy, and so did not find its connection either to its limitedness or to its dark nature (dark energy). Three, the space energy flow has a reverse process which leads to the formation of fundamental particles we have not included it in the totality of the processes of the universe, the former is the dark energy and the initial part of the reverse process—till it reaches the state of ionisation— is dark matter. In the continuity of the cycle of space flow and its reversal to matter forms, ionisation happens at a particular point and visibility comes through along with; ionisation here is a later event (which is a part of the reverse process, enters visibility). It is this reverse process which creates fundamental particles (no big bang, the creation of particles is here and now). With no idea of space as energy flow and no idea of the reverse process, physicists could never take the step in the direction of the correct understanding of the 'dark energy' or 'dark matter'. Along with the correct understanding of the dark matter and the dark energy, enters another conclusion of great importance: the limitedness of the universe means it is closed from all ends, it is like a crucible of huge dimensions, thus CMB is not radiation from primordial past, it is something which is happening here and now. Thus, one correction—space is an absolute flow of quantum gravity, emerging probably from the binary black holes— changes every understanding of cosmology.

This is one stone—space is an absolute flow of quantum gravity—kills (correctly explains) four birds (issues): explains the not expanding universe, explain what dark energy is, explain what dark matter is and it tells us that CMB is not radiation from primordial past. The lack of one entity—absoluteness of space and time—has led us to the wrong conclusion on each of the four issues, biggest of all being: the inflationary universe (and its subsequent conclusion to its Big Bang creation).

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