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A new look at a vortical dynamics of a substance in the Universe

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Abstract The science at the present stage of developing of a civilization describes the initiation of the Universe (of time and space) as the Big Bang from a certain ultra-dense "point" (as a "primeval atom" [1]) 13.7 milliard years ago. It is considered, that from the moment of the explosion the Universe has started to enlarge and, then the stars, galaxies, nebulas and planets were formed already from enormous clouds of the intergalactic gas which has formed at the explosion, that all these are explained with reasonable facility from the observational facts.

However, the situation, in which the galaxy as if it had been consumed the gas surrounding it and used it as a building material, that one is not observed. Moreover, all the observational facts are based on fixing of fluxes of radiation of various lengths of waves from emitted objects. As it is known, any body only being in its excited state emits the light; thus, in the cold gravitational state it has not the ability to emit it, so the substance is being in the cold state, for example, in the form of the nebulas, planets and their satellites which are visible for us only due to a reflected or diffused light emitted by other objects. This fact speaks that all magnificent pictures of various forms of clusters of a substance in the Universe observed by researches in the form of galaxies, nebulas, stars and comets, that are created by the substance being in the excited state, which forms the compact formations. That fact is interesting, that all objects of the Universe emit their radiation radially and evenly in all directions as well as our Sun. But, even at the Sun we do not see the beams which are emitted by it in the planes, perpendicular to the ray of our vision; in result, we see it not as the "hedgehog" radiating the light in all directions, but as a luminous disk. Its radial radiations can be observed by the solar eclipse by the Moon or in a coronagraph.

On the other hand, the fact, that the light reaches us from the sources which are being on distance of milliards light years, one testifies that the part of the Universe on which the light from the observed object reaches us is empty, i.e. there is not present any dark mater, capable to absorb the light, i.e. there is the deep space between separate objects containing the substance. The space is empty and transparent. The evidence received by means of *the Hubble Space Telescope*, that is served for the best proof of this. The telescope, making flight in a vacuum of space around the Earth, observes and researches the objects, which cannot be found from the Earth because of a preventing influence of an atmosphere. During 19 years of its exciting "Hubble" has opened so many new ones in the Universe, that only for the description of its observations it was required about several thousands scientific papers already. One from the major its discoveries that was recently found by the WMAP satellite ("*Wilkinson Microwave Anisotropy Prober*") the enormous absolutely empty space in the constellation *Eridanus* - "holes", where it is nothing, even the cosmic microwave background which had arisen, as it is considered, at the very first stage of initiation of the Universe and exciting up to now and, which "reveals itself" by the extremely small temperature. But, here, it is a full zero! Thus, this "here" has

a size of a milliard light-years. Astronomers are amazed by it, so nothing of the kind has happened to them early. That wrecks all modern notions of a structure of the Universe.

Based on the hypotheses which is put forward and elaborated by us, the main form of existence of a substance in the Universe is the fluid rotating self-closed spherical vortex, in which the inner dynamics of the substance is responsible for all forms of an electromagnetic radiation in the various regions of the spectrum, we have analyzed the observational material on different manifestation of a state of the substance in space surrounding us [2-4].

The analysis shows:

- The *Nature* has introduced to us a unique microscope of a cosmic scale, in which the phenomena, being beyond the reach of researching at micro level, may be studied;
- All dense substance in the Universe is contained in the form of spherical vortices and it is within the halo, created by an electromagnetic field of the same vortices;
- The different kinds of the pictures of a vortical state of a substance in the Cosmos, observed by us, that reflect the stairs of evolution of the researched object at this moment of time, in which we are studying;
- Both a substance, and an anti-substance, that both ones exist in the Universe concurrently;
- The observed pictures of motion of the substance in separate clusters show the absence of a dense medium at the place of their action even in the center of clusters;
- The cosmic space is penetrated with the streams of magnetic force lines, created by objects of the Universe of various size (as by the Universe itself, so by separate its objects), with which the interaction reveals itself in initiations of the planetary nebulas and in outbursts of supernovas and comets (in particular, in the outburst of the comet *17P/Holmes*, that had occurred on October 23-24, 2007);
- The noted vortical pictures of the state of the distributed substance in the Cosmos that reflect the stage of the life of a pulsation character of the observed object, which has reached us;
- Scientists using *NASA's Chandra X-ray Observatory* have detected an extensive halo of hot gas around a quiescent spiral galaxy NGC 5746 (it is at the distance of 100 millions light-years from the Earth in the constellation *Virgo*). "This discovery is evidence that galaxies like our Milky Way are still accumulating matter from the gradual inflow of intergalactic gas" [5], which was remained from the time of formation of the galaxy. But we propose that the halo is excited by X-ray radiation generated by the core itself of the disk
- All observational manifestations of the presence of different chemical elements in an atmosphere of galaxies, nebulas, stars, comets and planets, that are not induced by thermonuclear reactions, and here they are being the product of dissipation of the substance of the same vortex and it indicates about the extent of its excitation;
- The various pictures of a state of separate objects of the Universe that testify about the presence of the pulsation character of exciting of such Universe like that which is observed at the Sun, of which the period of pulsations, as it has been discovered by Academician A.B. Severnyi in 1974, that composes 160 min. In this case the observed expansion of the Universe is caused namely by this stage of expansion, but not from the "point", and from a certain state of the system possessing other energy.

Keywords Vortex · Substance · Radiation · Vortical State · Astrophysics

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References

1. Lemaître, G.: The evolution of the universe: discussion, *Nature* 128: suppl.: 704, (1931)
2. Miliute, E., Miliuvene, V.: The Dynamics of Substance in a Spherical Vortex and Fields of Interaction. In: International EUROMECH 448 Conference "Vortex Dynamics and Fields Interactions", Paris, France, September 6 - 10, 2004, Theses of Reports, pp. 104 - 106, École Supérieure de Physique et de Chimie Industrielles (ESPCI) (2004)
3. Milyute, E. A., Milyuvene, V. A., Milyus, A.J.V.: The Nature of Charge, the Mechanisms of Radiation and the Internal Morphology of Interacting Objects, *Mokslo Aidai, Vilnius* (2005) (in Russian)
4. Milyute, E., Milyuvene, V., Milyus, A.J.V.: Some Questions of Dynamics of Substance in the Spherical Vortex. In: IUTAM Symposium on "Hamiltonian Dynamics, Vortex Structures, Turbulence", Moscow, Russia, August 25-30, 2006, pp. 116-117. Institute of Computer Science, Izhevsk (2006)
5. http://chandra.harvard.edu/press/06_releases/press_020306.html