N E W S
OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN
PHYSICO-MATHEMATICAL SERIES
ISSN 1991-346X
Volume 6, Number 310 (2016), 36 – 45

A.M. Drozdov[1], A.L. Zhokhov[2], A.A. Yunusov[3], A.A. Yunusova[3]

[1] Ukraine, Krivoy Rog pedagogical Institute, branch of National University Email: lmzn.vkt@gmail.com;
[2] K.D.Ushinskiy Yaroslavl State Pedagogical University, Yaroslavl, Russia. ya.lvovich2012@yandex.ru;
[3] International Humanitarian and Technical University, Yunusov1951@mail.ru

SOLUTION OF THE COSMOLOGICAL PROBLEM IN THE APPROXIMATIONS. (PART-2)

Abstract. To determine the state of the Universe at any pre-specified time it is possible only to a cyclic model in which the entropy of a cycle is equal to zero, and the mechanism of evolution works exactly obeying the principles of Kant-Laplace determinism. The loop with extremely high probability can be established by boundaries quantitative applications of General relativity. As this area manifests itself for a huge period of time, it is impossible to determine it empirically. The article suggests the mediate path based on the determination of the structural transformations limits of dynamic variant of Minkowski geometry, which group of transformations is invariant. Taken as a basis instead of the Riemann geometry, it is possible to carry out the solution of the cosmological problem in six approximations with the definition of the most important quantitative indicators of the Universe evolution.

Key words: cosmological problem, the scope of the general theory of relativity, n-dimensional version of the Minkowski geometry, cyclic model of the evolution of the Universe, the range of values of variables, speed of light, evolution of the periodic table of chemical elements, metaperiod "arrow of time" cycle of the Universe, Absolute Universe, the physical nature phenomena of life and intelligence.

… IN THE THIRD APPROXIMATION

Only singular state of matter (electromagnetic and neutron) and the areas located near them, do not represent the nuclear state of matter. All other evolution stages of the Universe are represented by the atomic structure of matter. It determines the next most important aspect of the cosmological problems concerning the evolution of the chemical elements, because this process comprises the organic unity of the evolution process of the Universe.

Currently, there is a tendency among scholars to consider the periodic law and the DI Mendeleev periodic system of chemical elements justified by only quantum mechanical theory of atomic structure. It explained the cause of the periodicity in the structure of atoms and elements and found space correlation of element, group and period of quantum numbers. But this theory did not find a correlation to the largest structural unit of the periodic system - dyads established by Rydberg in the early 20th century, [14] [Rydberg 1914: 145]. Probably, such a justification of dyad to be expected on the part of the evolutionary theory of the periodic system, not yet created, but intuitively formulated at the end of the XIX century as the doctrine of inorganic Darwinism [10] [Cedars 1976: 52-56].

In the second half of the XX century, there was a question about the upper boundary of the periodic system, which undoubtedly is also a matter of the evolution of the chemical elements. The method of Mendeleev "atom-analogy" makes it impossible to predict its upper border. The forecast is carried out based on the phenomenon of radioactivity and hypothetical nuclear shell model, as well as stemming from it "magic numbers" of nucleons. Blur periodicity in heavy atoms, allegedly shows the exhaustion of the total volume of the system in the area of the second hundred of the chemical elements.

The quantum-mechanical theory, in Bohr's testimony [3] [Bohr 1970: 291] and Sommerfeld [9] [Sommerfeld 1956: 134], was based on the chemical systematics and spectroscopic data material. Of them spectroscopic data was only subjected to statistical processing, as chemical systematics of the periodic system had already contained the results of the previous statistics (time, group and element place). In the